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PLANNING FOR HEALTH

TRENDS AND PRIORITIES TO INFORM
HEALTH SERVICE PLANNING 2017

FOREWORD



FOREWORD

I am pleased to welcome the publication of Planning for Health: Trends and Priorities to Inform Health Service Planning 2017. This is the second publication designed to support service planning in the Health Service. It was our intention in this report to build upon and augment the data and analyses in the 2016 report setting out current and future healthcare demands and needs. The objective of this report is to build, over time, a robust evidence base that will support a more evidence informed approach to estimates and resource assessment linked to service planning and resource allocation decisions. As with last year's report, it provides a detailed population focused analysis of current and future needs and demands in terms of demographic pressures for 2017 and also provides a five year forecast to 2022.

The Health Service in Ireland will see a rise in demand of between 20% and 30% over the next 10 years. Ireland continues on a trajectory of significant demographic change, with people living longer than ever before. Our population aged 65 years and over is growing by approximately 20,000 each year and is projected to increase by over 110,000 in the next five years. Life expectancy is now greater than the EU average. These very positive developments also present the health service with significant challenges that need to be addressed, in part through better planning and evidence-based resource allocation models. This report marks a further step to utilising current demographic projections, disease prevalence, and service utilisation data and knowledge to support decision-making and inform service design so that we can improve health outcomes in the longer term.

An over-arching element of this year's paper is the population age-specific cohort approach to analysis across all service lines in all the HSE divisions profiled. This year's paper includes an analysis of Health Inequalities specific to service areas. The report also contains a chapter on Pre-Hospital Care (National Ambulance Service). There is additional data within service chapters, facilitating stronger analysis and forecasting, for example, the Primary Care chapter has a more comprehensive analysis of age-specific utilisation of Primary Care Therapy and Nursing Services and waiting lists (unmet need).

I would like to thank Dr. Breda Smyth and the Planning for Health Team for all their work in producing this paper and to acknowledge the contributions of the many staff across service divisions who participated in consultation sessions, provided data, expert advice and suggested content. I am also very grateful to the Information Unit in the Department of Health, the Central Statistics Office and the Health Research Board for their continued collaboration and support.

Knowledge and intelligence gained from analysis of robust health information is the cornerstone of evidence-led Health Service planning and this paper, building on its predecessors, provides further progress in this regard. I very much look forward to working with colleagues and continuing to build capacity for this important work within the health service.



Dr. Stephanie O'Keeffe
National Director
Health and Wellbeing

INTRODUCTION

Translation of health data, evidence and intelligence into a utility of knowledge is essential to enrich the planning process and ensure the direction of travel at this time of reform in our health system is population focused. The aim of this paper is to set out a clear and comprehensive overview of the imminent demographic pressures which our Health Service will encounter in 2017 and continue to do so over the next five years to 2022. In addition we have examined areas of service that are growing and highlighted elements of unmet demand and need where appropriate and possible. All current and relevant population and Health Service datasets are examined, interrogated and translated. This is achieved by applying a standardised approach using consistent methodologies and population projections across all areas of service at a national level. This is essential for equity based Health Service planning.

We have developed this paper in partnership with our colleagues across HSE Divisions and I would like to thank them for their valuable input into this process. This year we are presenting this information in two separate formats. The comprehensive document which includes all chapters and appendices is available online at the following link (www.hse.ie/eng/services/publications/planningforhealth.pdf) Our print version incorporates the key messages only from each of the chapters. It is important when reading 'Key Messages' to be cognisant of the assumptions and contextual basis of these analyses.

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KEY MESSAGES



ASSUMPTIONS

- The aim of this paper is to project the impact of demographic change on the short term (2017) and medium term (2022) demand for health services funded by the HSE.
- No new service improvement initiatives are included in projections of activity or costs. Projections only reflect the effect of demographic pressure on current service provision.
- Population projections are based on the CSO M2F2 scenario.
- Acute hospital in-patient and day case utilisation rates are based on Hospital In-patient Enquiry (HIPE) activity for 2015, the HIPE dataset used at the time of analysis was approximately 98% complete and figures may be subject to slight change. The HIPE file used for all analyses was “HIPE_2015_AsOf_0216_V15”.
- In producing estimates of activity and associated costs, it is assumed that hospital discharge rates, unit costs and the ratios between in-patients and day cases will remain stable between 2016 and 2017.
- Projections do not take into account changes in activity due to models of care, disease patterns, medical inflation, changes in policy on eligibility, the health of the population, the expectations of the public or the state of the national economy.
- Population projections by Community Healthcare Organisation (CHO) are based on CSO regional population projections and use the ‘recent’ internal migration scenario.
- Analysis by CHO Area involving rates are crude - per 1,000 or 100,000 where applicable - and are not standardised to a national population. Standardisation requires further analysis.
- Future demand for community services was derived from key performance indicator data collated by the Business Intelligence Unit. Various indicators of utilisation were provided and “referrals accepted” was chosen as the basis for projection since it best reflects overall service capacity and was common across these service lines.
- Data on claims made under the various Primary Care Reimbursement Schemes was obtained from PCRS via The Department of Health and analysed using PHIS; it has been cross validated with PCRS. Monthly trends were analysed to determine the basis for projections. Note that, in keeping with the rest of this report, PCRS projections illustrate the impact of demographic change only, the assumption being that existing levels of service will be maintained.
- The utility of the estimates reported depend on the quality of these data. Where specific issues have been highlighted to the authors by the data controllers, these are reported in the text.
- Current utilisation of healthcare services provide useful insights into population health needs. However it does not measure unmet need (for example, when there is a waiting list for services or when a service is not provided) and sometimes services are provided which are ineffective in meeting needs.
- National Psychiatric In-patient Reporting System data was used to calculate utilisation rates and excludes data from private hospitals, Central Mental Hospital, Carraig Mór Cork, St Joseph’s IDS and Phoenix Care Centre.

DEMOGRAPHY, HEALTH STATUS & LIFESTYLE

DEMOGRAPHY

- Our total population is projected to increase by 0.7%, or 34,800 people between 2016 and 2017. This is projected to further increase by 4%, or 190,600 people, between 2017 and 2022.
- All Community Healthcare Organisation (CHO) areas will see an increase in population between 2016 and 2017, varying between 1,400 and 5,300, with Areas 4, 6, 7, 8 and 9 having population increases between 4,600 and 5,300 people.
- Children aged 0-17 years represent 26.2% of the total population. This cohort is projected to increase by 0.7%, or 8,600 children in 2017. By 2022 it projected the child population will rise by 1.4% or 17,142 children. CHOs 7 and 9 will experience the greatest short and medium term growth in numbers of children.
- Between 2016 and 2017 the population of children aged five years and younger is projected to decrease by 2%.
- Adults aged 18-64 years are projected to increase by 0.2% or 6,412 in 2017. The adult population will increase by 77,680 (2.7%) between 2016 and 2022. CHOs 6, 7, 8 and 9 will experience the greatest increase in adult population in the medium term.
- However, the rate of growth in the population aged 65 years and older is significant. In 2017 a total of 644,000 are projected. This cohort will increase by 19,800 (3.2%) in 2017. The largest increase will be in the 70-74 year old age group (5.7% or 8,940 people). CHO 6, 7 and 9 will experience the greatest growth in population of older adults in the medium term.
- Adults 65 years and over will increase by up to 21% (131,000) by 2022.
- The population aged 85 years and over is projected to increase by 3.7%, or 2,600 people, between 2016 and 2017. There will be 16,100 additional people aged 85 years and over by 2022.

COSTS

- By 2016 the healthcare budget had decreased by 14.6% from 2010 and, within this timeframe, our demographic pressure has increased by 9%.
- In 2017, it is projected that there will be a cumulative reduction of the total healthcare budget of 24.7% from 2009, inclusive of demographic pressure of 10.3% and a budget reduction of 14.4%.
- A 1.4% upward adjustment in the public health budget would be required to meet the 'pure demographic effect' in order to deliver the same level and quality of service from 2016 to 2017.

HEALTH STATUS

- In Census 2011, 88.3% of our population reported their general health was either very good or good. This equates to 4.17 million people in 2017.
- Life expectancy in Ireland has increased and currently stands at 79 years for males and 83.1 years for females.
- Between 2005 and 2014 mortality rates for circulatory system diseases fell by 32% and for cancer by 8%.
- In 2012, mortality rates from chronic lower respiratory diseases (including cancer of the trachea, bronchus and lung) were 42% higher than the EU average.
- In 2015 chronic diseases accounted for 16.5% of discharges (day case and inpatient) from our acute hospitals and took up 41% of all inpatient bed days.

CHILD HEALTH

- Prevalence of low birth weight has increased slightly to 5.8% (2014) from 5.3% (2010).
- 25% of children aged 3, 5 and 9 years are overweight or obese.
- 13% of children experience consistent poverty.
- 17% of children are starting to smoke compared to 25% in 2010.
- Alcohol and drug consumption among children has not changed significantly.
- 27% of teenagers (15-17 years) report sexual activity, an increase from 23% in 2010 but the number of teenage births is continuing to decrease.

ADULTS AGED 18-64 YEARS

- The prevalence of smoking reduced by 20% between 2007 and 2015.
- In the period 2007 to 2015 there was a 40% increase in the prevalence of adults who binge drink.
- There was a 56% increase in obesity among males and a 70% increase in obesity among females between 2007 and 2015.

ADULTS AGED 65 YEARS AND OVER

- In 2016, approximately 542,400 people aged 65 years and over, had at least one chronic condition. There will be an additional 17,220 people with at least one chronic disease in 2017. By 2022 it is projected that there would be a further 96,670 additional people with at least one chronic condition.
- Approximately 65% of people 65 years and over have two or more chronic conditions, which equates to 404,470 people. By 2017 this will rise by 12,830 and a further 72,080 by 2022.
- The prevalence of some cardiovascular diseases (hypertension, angina and atrial fibrillation) has decreased. However, the prevalence of diabetes and stroke has increased.
- Arthritis affects 43.7% of those aged 65 years and over.
- Since 2007, the prevalence of smoking has decreased by 14%.
- In 2015, 22% of adults aged 65 years and over reported binge drinking.
- Obesity levels have doubled in males and females aged 65 years and over, since 2007.

NATIONAL IMMUNISATION PROGRAMME

- In 2017 it is projected that the total vaccine costs will be €37.5 million, an increase of €9.3 million from 2016.

NATIONAL SCREENING SERVICE

- 163,900 women will attend BreastCheck in 2017, based on a participation rate of 70%.
- 250,000 women will attend CervicalCheck in 2017, based on a participation rate of 80%.
- From January 1st 2016, BowelScreen moved to a two year screening round and in 2017 it will invite approximately 273,100 men and women.
- The lack of a national diabetes register makes it difficult to forecast demand. The National Screening Service will screen approximately 150,000 people with diabetes in Ireland. An annual growth in demand of approximately 10,000 is anticipated into 2017 and beyond.

RESEARCH AND DATA NEEDS

DEMOGRAPHY

- Accurate population projections by Community Healthcare Organisation Area and, if possible, by Primary Care Network, are vital for accurate planning of health services into the future.
- A central data resource to update population health determinants and indicators from population surveys and datasets is required.
- A suite of Irish based population-attributable fractions for common risk factors and chronic diseases should be developed.
- Population based health indicators at a regional/ CHO level are required e.g. Life Expectancy, Health Life Years, Disability Adjusted Life Years, Health Inequality indicators.
- Irish population health cost data is required, similar to other European countries as demonstrated in the EU Ageing Report.

ACUTE HOSPITALS

COSTS

- It is projected that there will be a total in-patient and day case cost pressure of 1.7% from 2016 to 2017.
- There will also be an average annual demographically driven cost pressure of approximately 1.8% from 2015 to 2022, reflecting the acceleration in population ageing.

ACTIVITY

- In 2015, adults aged 65 years and over represented 13% of our population but used 54% of total hospital in-patient bed days and approximately 37% of day case and same day bed days.
- Adults aged 85 years and over represented 1.4% of our total population but used approximately 14% of the in-patient bed days.
- It is projected that there will be an overall increase of 11,900 adult in-patient discharges between 2015 and 2017. This equates to approximately 344 additional adult hospital in-patient beds at 100% utilisation of seven day beds.
- A diagnosis related group (DRG) analysis of admissions in the over 65s showed that the top DRGs which accounted for 20% of all bed days in this group included hip replacement, respiratory disease, heart failure and stroke. These were also the most resource intensive conditions in an analysis of the top DRGs in the over 85s.
- There has been an increase in hospital activity in recent years which is largely related to increased day case activity. Day case admissions have been increasing annually by 3-4% since 2009.
- Adult day cases are projected to increase by 35,280 between 2015 and 2017.
- 67% of surgical cases were admitted on the day of surgery in 2015, compared to the national target of 70%. There was, however, wide variation in day of surgery admission rates between hospitals.
- 746 patients were waiting 15 months and over for in-patient or day case treatment at the end of December 2015.

EMERGENCY DEPARTMENTS

- In 2015 there were 865,057 adult Emergency Department (ED) attendances in 26 adult hospitals. Of these, 68% were 17-64 years old, 21% were 65-84 years and 5% were 85 years and over.
- Approximately 1 in 2 adults 65 years and over presenting to ED were admitted, compared to 1 in 5 adults aged 17-64 years.
- During 2015 approximately 62% of ED attendees spent less than 6 hours in the ED and 77% spent less than 9 hours in the ED. The HSE targets were 95% and 100% respectively.
- In 2017, if ED attendance rates remain constant, it is projected that ED attendances will increase by over 3,200 for those aged 85 and over and by 11,581 for those aged 65-84.

TROLLEYS

- In 2015 the average number of patients on trolleys per day was 292 which increased from 241 in 2014 and 230 in 2013. This figure increased to 326 in 2016.
- Over the last three years, the highest trolley numbers are seen during the months of February, March and April. This rise is related to winter pressures, which include peaks in influenza notifications and outbreaks of norovirus. During this time the trolley numbers increase by 70-80 on average.

ACUTE MEDICAL ASSESSMENT UNITS

- From 2013 to 2015, there has been an increase of 20% in attendances at registered Acute Medical Assessment Units (AMAU).
- In 2015 there were 95,300 attendances at registered AMAUs.
- In 2015, 53% of AMAU attendances were adults aged 17-64 years and 46% were adults aged 65 years and over.

OUTPATIENT DEPARTMENTS

- There were 2,887,592 adult OPD attendances in 2015 which included 789,327 new patients.
- Based on the throughput of 2015, it is projected that, in 2017 there will be over 11,000 additional new patients seen in OPD if referral rates remain constant.
- In 2015, waiting lists reduced in the most in-demand OPD specialties, including orthopaedics, dermatology, ENT and general surgery. This was due to a HSE initiative to tackle those waiting 15 months and over. 2,652 GI endoscopies were outsourced to private hospitals in 2015.
- 9,887 patients were waiting longer than 15 months for an outpatient appointment at the end of December 2015, with 5,262 waiting longer than 18 months.
- Waiting lists for top procedures, particularly colonoscopy, cataract surgery and gastroscopy, are increasing every year.

- A recent HSE demand capacity report found that, if referral rates remain constant, 5,800 additional scopes would be required for 2016, just to maintain waiting lists at their current level.
- The numbers referred for urgent scopes increased in 2015 in all age groups.

DELAYED DISCHARGES

- In 2015, the average number of delayed discharges (648) was lower than the 2014 average (692) but never reached the 500 target.
- In 2015, 48% of delayed discharges, aged 65 years and over, were awaiting the Nursing Home Support Scheme (NHSS) or a home care package.
- Increasing availability of rehabilitation beds could potentially free up 12% of delayed discharge beds in those aged 65 years and over.

PAEDIATRICS

- For paediatric patients the likelihood of admission decreases with increasing age, with highest admission rates in those aged under 1.
- According to 2015 Patient Experience Time (PET) data, 51% of all children aged under 1 attended EDs.

HEALTH INEQUALITIES

- Deprived populations have a higher 30-day in-hospital mortality after an emergency medical admission, a higher rate of emergency medical admissions and a higher rate of admissions for Ambulatory Care Sensitive Conditions.
- Mental illness, homelessness, alcohol and substance abuse were associated with significantly higher ED attendance rates. 60% of the most frequent attenders were, or had recently been, homeless. The most frequent attender presented to the ED 404 times in 2014.

RESEARCH AND DATA NEEDS

- Focused data analysis can be carried out with hospitals experiencing specific difficulties where national metrics can mask individual hospital metrics.
- Hospital patient outcomes dataset should be developed and piloted to demonstrate a profile of hospital patient outcomes.
- Existing hospital activity data can be mined more extensively and be more readily available in a user friendly platform to assist with service planning.
- Hospital bed costings by DRG is an essential requirement for planning and should be made available for economic analysis and business case development.
- Innovative pilot schemes that are currently underway as part of the integrated programmes should be evaluated to demonstrate if scalability is feasible and thus assist in business case development.
- Hospital group level data will assist greatly with hospital group level needs assessments.
- It is essential that a standard methodological approach is taken in the development of Hospital Group specific denominators.
- It is recommended that Hospital Group needs assessments are carried out in collaboration with CHOs to assist with a co-ordinated integrated programme of care approach.
- Regular bed utilisation surveys are required to examine appropriate use of hospital beds and to identify specific discharge barriers by hospitals.
- An age-specific patient journey map from primary through secondary and tertiary care will inform the needs and requirement of specific age cohorts.
- Whenever relevant and possible, HIPE data should include socio-economic status and socially excluded groups, to enable equality monitoring of all services and to monitor progress towards a reduction in health inequalities.

PRIMARY CARE

CONTEXT AND POLICY CHANGE

- The Primary Care Division was allocated a budget of €3,624.4 million in 2016, which was 28% of the HSE net determination for that year.
- In 2015 the HSE provided free GP Visit Cards (GPVC) to all children under 6 years and all adults 70 years and older. While coverage of GPVCs for adults over 70 reached maximum, it was estimated that at the end of 2015 about 86,500 children under 6 had not availed of their free GPVC entitlement.
- As expected, a rise in GPVC capitation fees to GPs was observed but fees to GPs for out-of-hours services have doubled for children under 6 years, indicating a rise in usage.
- Removing out-of-pocket payments through free GPVCs has increased GP consultation rates. However it is not possible to comprehensively and accurately measure this effect because of the absence of GP activity data during daytime working hours.
- Further steps towards universal access to primary care will be critically dependent on scaling-up GP capacity in line with the HSE's medical workforce plan. This in turn requires immediate expansion of GP training.

COMMUNITY HEALTHCARE ORGANISATIONS FACE VARYING CHALLENGES

- The HSE established Community Healthcare Organisations (CHOs) in 2015, to support health system reform. A comparative analysis of indicators shows that CHOs face varying challenges in responding to population health need. At the same time, the resources to meet these needs vary across CHOs.

CHILD HEALTH

- The population of children (0-1 years) requiring newborn and infant primary care service in 2017 is projected to be 66,400. This is a reduction of 2,100 (-3.0%) from 2016 and a further reduction in the infant population is expected by 2022 (57,500 infants, 8,900 (-13.5%) less than 2016).
- Demand for children's nursing services will increase in the short term - up 3.4%, from 2016 to 2017. In the medium term, i.e. by 2022, the projected increase is 9.3%.
- Between 2015 and 2017 the rise in demand for Physiotherapy, Occupational Therapy and Psychology services will be 431 (1.7%), 270 (1.7%) and 189 (1.4%) respectively.
- There is a significant unmet need for child health services. In December 2015, wherein age-specific data on waiting lists is available, there were 11,237 children waiting for Occupational Therapy assessment (69.2% of 2015 referrals); 13,099 waiting Ophthalmology assessment (74.3% of 2015 referrals accepted), of which 9,412 were waiting more than 12 weeks (53.4% of 2015 referrals accepted).
- Variation in current primary care utilisation by children highlights potential opportunities to better align service planning with population health need. For example, given that 25% of our children aged 9 years are either overweight or obese, increased utilisation of dietetics services by children aged 5-17 years could provide better population health outcomes.

ADULTS 18-64 YEARS

- Demand for most primary care services by adults aged 18 to 64 years will increase minimally from 2015 and 2017 (<1%). A more moderate increase is expected in the medium term to 2022 (approximately 3%).
- In December 2015, there were 1,638 adults waiting Ophthalmology assessment (73.2% of 2015 referrals accepted), of which 1,275 were waiting more than 12 weeks (56.9% of 2015 referrals accepted). 1,436 adults were waiting Audiology assessment (71.7% of 2015 referrals accepted), of which 865 were waiting more than 12 weeks (43.2% of 2015 referrals accepted). Planning should take account of this significant unmet need.

ADULTS 65 YEARS AND OVER

- The projected increase in demand for primary care services among older adults, arising from demographic change, will significantly challenge health planning.
- Compared with 2015, demand for primary care services by adults aged 65 years and older, will increase moderately in 2017 (6.5% increase) and will increase significantly in 2022 (24.9% increase). For larger services, the increased demand will be challenging. Between 2016 and 2017, physiotherapy referrals (adults aged 18 years

and older) will increase by 2,229; occupational therapy referrals will increase by 3,617; and nursing referrals accepted will increase by 3,990.

- There is also significant unmet need for primary care services among older adults. In December 2015, 2,318 older adults were waiting Ophthalmology assessment (94.5% of 2015 referrals accepted), of which 1,758 were waiting more than 12 weeks (71.6% of 2015 referrals accepted). 5,252 were waiting Audiology assessment (75.7% of 2015 referrals accepted), of which 3,084 were waiting more than 12 weeks (44.5% of 2015 referrals accepted).
- Only 273 referrals to psychology services were reported in 2015 for adults aged 65 years and older. However, at least half of all people with long-term conditions suffer from multiple co-existing conditions, with mental health problems being one of the most common forms of co-morbidity (Barnett et al, 2012). Addressing co-morbid mental health problems in primary care can improve health outcomes and reduce health system costs (Naylor 2012).
- Similarly, for Ophthalmology services, a lower than expected rate of utilisation was observed for adults aged 65 years and older. Decreased visual acuity in older people is often remediable and is, for example, a critical factor in fear of falling, restriction of physical activity and falls (Lord 2006).

PRIMARY CARE REIMBURSEMENT SERVICE

COST

- For the 10 Primary Care Reimbursement Service (PCRS) payment headings, demographic changes alone are estimated to drive an increase in total expenditure of €75.2 million from 2015 to 2017 and €290.6 million in 2022.
- Expenditure across most selected PCRS payment headings will increase by 1.6% - 4.9% from 2015 to 2017. A larger increase can be expected by 2022 (5.0% - 19.3%).
- At the end of 2015, pharmaceutical fees (ingredient costs and pharmacy fees) comprised the largest proportion of expenditure for the 10 payment headings (57.4%).
- Ongoing active management of expenditure on drugs is necessary, to both control overall PCRS costs and to provide fiscal space for implementation of government policy to support universal access to primary care. Small changes in the cost or volume of commonly prescribed drugs offer potential to significantly impact expenditure.

ACCESS

- In total, at the end of 2015, 46.4% of the population had access to either a GPVC or a medical card (9.1% had access to GPVC scheme, or 424,862 people, and 37.2% had access to Medical Card scheme, or 1,732,555 people). This compares with 41.4% at the start of 2015.
- Compared with pre-implementation of free GPVCs for children under 6 years, in 2017 demand for GP consultations in this population is estimated to increase by 65.7% (842,796 additional consultations) and in 2022 it will increase by 42.4% (562,814 additional consultations).
- Across all diseases, the number of Long Term Illness scheme claimants increased by 87% from the start of 2014 to the end of 2015. In the case of Diabetes Mellitus for example, the number of claimants increased by 40,446, thereby doubling the number of claimants with this illness.

PALLIATIVE CARE

- With population ageing, needs for palliative care services are growing and will challenge existing services. For example, patients experiencing end-of-life with cancer alone, will increase by 5.8% and 23% in 2017 and 2022 respectively.
- Demographic and epidemiologic trends point to significant unmet need for palliative care services in the short and medium term, which will not be addressed through planning on an existing level of service basis. Considerable capacity expansion in palliative care services is required to bridge this gap.

STRATEGIC INITIATIVES IN PRIMARY CARE

- It is essential that appropriate information systems are developed, so that strategic initiatives in primary care can be evaluated to inform future planning.

SOCIAL INCLUSION

- There is a strong link between poverty, socio-economic status and health.
- Mental and physical health problems can be both a cause and consequence of homelessness and social deprivation.

- Excluded and disadvantaged groups within the population carry a disproportionate burden of mental and physical ill-health and disability (and for homeless people – addiction). This results in frequent health service utilisation.
- The health system should adopt a strong and integrated poverty and equality proofing approach when formulating all policies, strategies and actions, and not just those specifically targeted at reducing health inequalities. A coherent HSE cross-divisional approach is needed in relation to health equity.

HOMELESS

- The number of people experiencing homelessness is increasing year on year in Ireland. In February 2016, 5,811 people were recorded as experiencing homelessness, an increase from 2015. This number consisted of 3,930 adults and 1,881 children, comprising 2,706 single adult homeless and 912 homeless families.
- Most single homeless adults and homeless families are in Dublin.
- Homelessness is a marker for complex tri-morbidity: the combination of physical ill-health with dual diagnosis (co-existing mental ill-health and substance abuse), and consequent high health care needs.

ADDICTION SERVICES

- In 2014, 3,744 new and 5,779 return (total 9,523) entrants were recorded in the National Drug Treatment Reporting System (NDTRS) in Ireland.
- The number of clients registered for Opioid Substitution Treatment (OST) on 31st December each year reported by the Central Treatment List (CTL) has increased from 3,689 in 1998 to 9,537 in 2015. Between 2008 and 2014, the rate of increase was less than 4% annually.
- In 2013, 3,578 new and 3,971 return (total 7,549) clients were treated for problem alcohol use in alcohol treatment facilities in Ireland.
- Between 2011 and 2013, the number of new cases treated and the number of cases returning for treatment for problem alcohol use decreased. Among 15-64 year olds, the incidence and prevalence of treated problem use decreased.

TRAVELLERS AND ROMA

- The 2011 Census recorded 29,495 Travellers living in the Republic of Ireland (0.6% population). The population pyramid for Travellers from 2011 Census data demonstrates the stark difference in the age profile of Travellers compared to the Irish general population. This reflects a high birth rate, a primarily young population, and the effects of premature mortality.
- Compared to other children aged 10-17 years, Traveller children are more likely to report smoking, being drunk, cannabis use or drinking sugary drinks.
- There are no official statistics on the number of Roma in Ireland, with the estimated population between 2,500 and 6,000.

VULNERABLE MIGRANTS: ASYLUM SEEKERS AND REFUGEES

- Up to 4,000 Irish Refugee Protection Programme (IRPP)/EU Relocation & Resettlement Programme refugees & asylum seekers will arrive in Ireland by end 2017, as well as the increasing numbers presenting routinely in Ireland seeking asylum. This will put significant pressure on provision of health assessment/screening and routine health services. It is likely that all CHOs will be impacted.
- Health Services to date have been expected to provide a range of services (including interpreting services) to IRPP Programme Refugees from existing resources, resulting in significant challenges and an unmet need. No extra funding has been allocated within the health budget for healthcare provision for this vulnerable group to date, although some Dormant Account funding has recently been made available.
- The current health assessment models for Asylum Seekers and Programme Refugees are not sustainable even for current numbers.

RESEARCH AND DATA NEEDS

PRIMARY CARE

- Primary care development is pivotal to health system reform in Ireland. However, information systems to support the planning, monitoring and evaluation of primary care services are not developed in proportion to their importance to the HSE nor are they commensurate with current levels of expenditure.

- Where it is feasible and appropriate, a more standardised approach should be taken to measurement of the primary care service utilisation across service lines, using similar definitions for units of activity (new referrals received, new referrals accepted, new referrals seen, in-treatment, discharges etc) and using similar approaches to measuring characteristics of service users.
- Consultation with a GP is a key element of primary care. Robust information on the volume, process and outcome of GP consultations will be necessary to support ongoing health system reform and strengthening of primary care.
- The utility of information maintained by the PCRS for wider health system planning should be recognised, with capacity and capability developed to maximise its potential positive impact.
- A number of important strategic initiatives are underway in primary care. Criteria for business case approval and funding should include a requirement for appropriate evaluation, to ensure that envisaged benefits are realised and to inform future health planning.

SOCIAL INCLUSION

- Whenever relevant and possible, health service indicators should be reported by sex, age, socio-economic status and vulnerable/socially excluded group, to enable equality monitoring of all services.
- Ethnicity data (an ethnic identifier) – as part of ethnic equality monitoring – should be routinely and systematically collected across all health and social care data systems, including: HIPE, performance monitoring, National Cancer Screening Service data, immunisation coverage data and the new National Maternity Healthcare Record. This will facilitate assessment of ongoing health needs and service utilisation, enable monitoring of health outcomes and inform commissioning to address health inequalities for Irish Travellers and other ethnic minority groups.
- Ethnicity should be included in the standard clinical form for notification of infectious disease.
- Collection of ethnicity data needs to be strengthened in local datasets, where ethnicity is currently included as a variable.
- Rollout of the individual health identifier (IHI) should be prioritised, to enable sharing of information across the continuum of health and social care.
- Robust data is required at a national level on health outcomes for homeless people, including those in emergency accommodation – this could be collated via the Pathway Accommodation Support System (PASS).
- Data collection for problem drug use needs to be strengthened to enable counting of: (1) individuals rather than episodes of treatment - an IHI would enable this; (2) cases treated within psychiatric hospitals; (3) cases remaining in treatment without a break from one year to the next.
- Standardisation of data sources and data collection methodologies between Opioid Substitution Treatment (OST) and Treatment Demand Indicator (TDI) data should be considered, to enable meaningful collation & comparison.
- Data should be collected from Needle Exchange programmes within HSE clinics, as it is for Pharmacy-based NEX programmes.

SOCIAL CARE

SERVICES FOR THE OLDER PERSON

- Old age dependency will increase from 18.1 in 2012 to 21.2 in 2017 and rising to 24.3 in 2022. This will give rise to an increased demand on services for older people.
- Residential bed capacity is not meeting projected demand for our projected population growth. In 2017 it is projected that there will be a deficit of 1,460 long stay and 2,650 short stay beds. This deficit will increase to 5,910 long stay and 3,600 short stay by 2022.
- The greatest long stay bed deficits at the end of 2015 were in counties Dublin (930 beds), Donegal (331 beds) and Louth (226 beds).
- Using the rate of 3.76%, the Nursing Homes Support Scheme (NHSS) will provide residential support to 24,200 people aged 65 years and over in 2017 and 28,400 in 2022.
- Applications to NHSS for nursing home support are projected to increase by 360 in 2016 (3.6%), a further 330 (3.2%) in 2017 and a further 1,980 (18.5%) by 2022.

- Based on 2015 utilisation rates and current models of care, there will be 50,875 Home Help clients in 2017, an increase of 1,565 clients from 2016. This will rise to 59,660 in 2022. This will require 300,000 (0.3 million) additional Home Help hours in 2017 and additional 2.27 million by 2022.
- To maintain the 2015 level of Homecare Package provision, an additional 520 home care packages will be required in 2017.
- Increasing complexity of need, as reflected in the casemix index of older people already in acute hospitals demonstrates the increased need for more specific rehabilitation services and complex home care packages.
- The population aged 75 years and over are the fastest growing group providing informal care. Greater support is required for this cohort as they are at greater risk of developing health problems themselves. In 2017 there will be 29,620 carers aged 65 years and over, rising to 34,740 in 2022.

SERVICES FOR THOSE WITH DISABILITY

INTELLECTUAL DISABILITY (ID)

- It is predicted that by 2017 there will be an estimated 29,040 people living with intellectual disability.
- In line with general population trends, life expectancy for people with ID has increased. There were 5,580 people over 50 years of age with intellectual disability recorded on the National Intellectual Disability Database in 2014.
- 20.8% of the total population recorded on the National Intellectual Disability Database have an identified need for respite care.
- TILDA identified higher levels of multi-morbidity in those with intellectual disability compared to the general population. This group requires greater levels of service input, especially in the areas of mental health and neurological services.

PHYSICAL AND SENSORY DISABILITY (PSD)

- In 2014, there were 22,908 people recorded on the National Physical and Sensory Disability Database (NPSDD). The estimated coverage of the NPSDD is 67%, which would equate to an estimated 34,200 people nationally living with physical and sensory disability.
- While only 4% of those on the NPSDD are recorded as being in residential care, of these, 34% are living in nursing homes. Residents aged less than 65 years occupy approximately 5.5% of nursing home beds equating to 1,670 residents.
- In both children and adults (people over 18 years) the recorded use of respite care is about 10% (9% in children and 11% in adults).
- There is considerable demand for therapeutic services across all ages and the need for personal support services, while low for those less than 18 years, increases in the adult population.

DISABILITY

- 13% of the population reported at least one disability in Census 2011. This equates to 613,760 people in 2017.
- It is estimated that, on average, 3.5% of the population aged 0-17 years have a disability.
- There is significant demand for speech therapy in the age group 0-17 years. This is as a result of a cumulative demand from children with an intellectual/learning disability and children with an isolated speech disability.
- It is estimated that 3% of children aged 0-18 years with a disability require a multi-disciplinary (MDT) service.
- In 2017, this equates to 12,960 children in the 0-5 year age group and a further 25,990 children in the 6-18 year age group.
- The greatest demand for MDT service to children is in CHO Areas 4, 6, 7 and 9.
- The number of children and adolescents living with disability in the 6-18 year age group is projected to increase by 1.9% in 2017 and continue increasing up to 2022, giving rise to an increased demand for school support teams and placements for school leavers.
- Appropriate residential placement for those over 18 years of age continues to be a challenge with people inappropriately placed in nursing homes for the elderly and psychiatric inpatient facilities.

HEALTH INEQUALITIES

- Disability brings with it significant additional costs which increase the risk of poverty.

- Excluded and disadvantaged groups within the population carry a significant burden of disability.
- Inaccessible and inadequate support for disability may generate and sustain long-term homelessness and multi-morbidity.
- The definition of 'older homeless' should include those aged 50 years and over, as people who have experienced long-term homelessness (especially rough sleepers) die at a much younger age than the general population.
- In the 2011 Census, 17.5% of Irish Travellers had one or more disabilities compared with 13% of the general population.

RESEARCH AND DATA NEEDS

- Implementation of the single assessment tool for older people is required.
- An international evidence review of models of care for the delivery of homecare should be carried out.
- Revalidation of the current models used to predict demand for services among those aged 65 years and over is necessary.
- Exploration of the concept of reduced demand for residential services due to healthier ageing is required. This exploration should include the impact on demand for home support services.
- Development of an indicator (index) to describe activity and complexity of care in residential facilities both for older persons and persons with disabilities is required. A costing model should be developed in parallel.
- Development of an indicator (index) to describe complexity of care needs among people with a disability, based on a standardised assessment tool is recommended. The data generated should be web-enabled and available in a timely manner to inform service planning and development.
- A unified, complete and timely database for people living with disabilities to incorporate the data generated above is required.
- Whenever relevant and possible, Social Care indicators should be reported by socio-economic status and socially excluded grouping, to enable equality monitoring of all Social Care services and monitor progress towards a reduction in health inequalities.

MENTAL HEALTH

CHILD AND ADOLESCENT MENTAL HEALTH SERVICE (CAMHS)

- In 2017 it is projected that the admissions of children aged 0-17 years to HSE Psychiatric in-patient services will increase slightly to 299 admissions; and referrals to Community Child and Adolescent Mental Health Teams will increase by 221 (projected total referrals = 13,577 referrals).
- There were 2,319 patients on the waiting list for Community CAMHS at the end of 2015, which represents a drop of 550 from 2014.
- There is a considerable variation in referral to Community Mental Health Services across CHOs.

GENERAL ADULT PSYCHIATRY (GAP)

COMMUNITY TEAMS

- It is projected that from 2015 to 2017 there will be an increase of 105 accepted referrals to Community Adult Mental Health Teams in the 18-64 age cohort (38,857 accepted referrals).
- By 2022 this will increase to 39,833 accepted referrals in the 18-64 age cohort, assuming current models of care continue.

HOSPITAL ADMISSION

- The total number of admissions to psychiatric units continues to decrease, from 402/100,000 in 2013 to 388/100,000 in 2014. The majority of adult admissions (88%) in 2014 were in the 18-64 years cohort.
- In 2017, it is projected that there will be 11,649 admissions of patients aged 18-64 years, which is largely unchanged from 11,642 in 2014.
- The leading disorders among those aged 18-64 years, admitted in 2014, were: depression (24%), schizophrenia (24%), mania (12%), personality disorders (9%) neuroses (8%) and alcoholic disorders (6%).

PSYCHIATRY OF OLD AGE (POA)

COMMUNITY TEAMS

- From 2015 to 2017 it is projected that accepted referrals to the Psychiatry of Old Age Community Mental Health Teams will increase by 676, to 11,120 accepted referrals for those aged 65 years and over.
- By 2022 this is projected to increase to 13,041 referrals in those aged 65 years and over, assuming current models of care remain.

HOSPITAL ADMISSIONS

- It is projected that there will be 1,745 admissions of adults aged 65 years and over in 2017, which would represent an increase of 158 from 2014.
- The leading mental health conditions in this age group admitted to our psychiatric hospitals in 2014 were: depression representing 31% of admissions, schizophrenia (21%) and organic mental disorders including dementia (20%).
- Organic mental disorders (including dementia) are the leading condition among adults aged 85 years, representing 52% of admissions.

SUICIDE & DELIBERATE SELF HARM

- The number of suicides has reduced from 554 in 2011 to 459 in 2014.
- In 2014, 8,708 people presented to hospital services with deliberate self-harm (National Suicide Research Foundation, 2015). This is a 1.5% reduction on 2013. The age-standardised rate of individuals presenting to hospital following self-harm in 2014 was essentially unchanged from 2013 (200 per 100,000).

HEALTH INEQUALITIES

- In 2014 the unskilled occupational group had the highest rate of all admissions (670 per 100,000) to adult psychiatric units and first admissions (181.6 per 100,000). 41% of all admissions were categorised as unemployed.
- Mental ill-health may be a cause or consequence of homelessness. In 2013, there were 245 admissions of people with No Fixed Abode (a proxy for homelessness) to psychiatric units and hospitals across the country, a 37% increase since 2006.
- People with a mental health disability are nine times more likely to be out of the labour force than those of working age without a disability, the highest rate for any disability group in Ireland.
- The co-existence of mental ill-health with substance misuse problems (dual diagnosis), and significant mental health issues emerging among the newly arriving asylum seekers and refugees, highlights the importance and benefits of an integrated cross-divisional service approach.

RESEARCH & DATA NEEDS

- An ethnic identifier should be routinely and systematically collected across all Mental Health data systems, and not just within the psychiatric hospital dataset.
- Wherever relevant and possible, Mental Health Service indicators should include socio-economic status and socially excluded groups to enable equality monitoring of services. Currently no data exists to identify deprivation or marginalised groups.
- Although significant data exists within the Jigsaw projects, there is a research resource requirement to mine this data.
- Demographic profiling of data for Counselling in Primary Care is required.
- Age specific costs or casemix indices for acute mental health services are not currently available.

NATIONAL AMBULANCE SERVICE

- In 2015 just under 340,000 calls were received by the pre-hospital emergency care services. Of these calls, 22% (75,387) were responded to by DFB and the remaining 78% (264,319) were responded to by the National Ambulance Service (NAS).
- There has been an annual incremental increase in emergency calls (AS1 calls), an 8% increase from 2013-2014 and a further 9% increase from 2014-2015.

- The majority of emergency calls originate from the North Leinster region (32% of the total call volume), with the other three areas contributing equally to the call volume (22%-23%).
- Applying the 2015 utilisation rate of 73.0/1,000 of the population, total AS1, AS2 and AS3 calls would be expected to increase by approximately 5,000 calls in 2017 and by a further 14,000 calls by 2022. This does not allow for the 8-9% rate of growth in emergency calls.
- Applying the same method to AS1 calls alone, and using the 2015 utilisation rate of 58.4/1,000, AS1 calls would be expected to increase by approximately 4,000 calls in 2017 and by a further 11,000 calls by 2022.
- Prolonged hospital turnaround times, caused by ED pressures, are limiting availability of emergency ambulances. In 2015 only 63% of vehicles and crews were available within the target turnaround time of 30 minutes or less. NAS estimates that during the first part of 2016, the delays in turnaround times were the equivalent of 10 ambulances out of service every day.
- Emergency ambulance usage for patient transfers increased by 7% between 2013 and 2014 but decreased by 26% between 2014 and 2015.
- Ireland has a low number of emergency calls per head of the population when compared to the UK and countries further afield.
- Ireland's call mix is unique, with a high proportion of calls arising from rural areas. In comparison to the Scottish Ambulance Services where 80% of calls arise in urban areas and 20% in rural areas, the NAS manages a much higher proportion of rural calls at 40% and a lower proportion of urban calls at 60%.
- A significant increase in demand for the Emergency Aeromedical Service and the Irish Coastguard service has been seen in 2015. This upward trend is expected to continue due to reconfiguration of hospital services within hospital groups.
- Pre-hospital emergency care services should consider expansion of their Community First Responder Schemes in rural areas, in order to improve patient outcomes.

RESEARCH AND DATA NEEDS

- The paper-based pre-hospital patient care record does not facilitate in-depth analysis of service user data by age and gender. However, the introduction of the electronic patient care record from quarter four 2016, will address this deficit and the first year of data will be available for analysis in late 2017.
- There is a need to analyse data collected from the new electronic patient care record, relating to demographic, socio-economic and health-related factors in order to predict and manage future demand for the emergency ambulance services in Ireland.
- Research is required to understand patterns of Irish ambulance service use and its users.
- Clinical outcome indicators should be developed as a matter of priority.

02

OVERVIEW



In Ireland we have successfully tackled certain diseases and improved health outcomes in the recent past, for example:

- Our life expectancy at birth is 83.1 years for a female and 79 years for a male, which is greater than the EU average (Department of Health, 2015).
- Mortality from circulatory system diseases has reduced by over 30% from 462.2/100,000 in 2005, to 316.5/100,000 in 2014 (Department of Health, 2015).
- National stroke thrombolysis rate of 12% is three percentage points above the National Stroke Programme target of 9% (BIU, 2015).
- Early childhood immunisation uptake rates are reaching the target and WHO recommendation of 95% (NIO, 2015).
- Our smoking rate has decreased from 28% in 2003 to 19% in 2015 (HSE, 2015).

Notwithstanding these achievements, our health system continues to face the challenges of lifestyle and age-related conditions, in conjunction with an increasing population. It is vital that our response anticipates the challenges of this growing need. Robust evidence-based epidemiological-oriented planning is the cornerstone of this process. This document outlines the health needs and demands of the Irish population, insofar as is possible, to support service planning 2017. It must be emphasised that all projections and underlying assumptions are based on demographic pressure only and do not take into account any changes in policy, models of care, medical inflation and/or eligibility.

HEALTH CHALLENGES

AGEING POPULATION

The number of people aged 65 years and over is growing by approximately 20,000 each year and will increase by over 110,000 people in the next five years. Is our health system adequately prepared for this challenge? Service use by older populations differs significantly from use by younger healthier populations. A person aged 65 years and over attends a GP practice on average 7 times a year (Department of Health, 2016). A person aged between 15 and 64 years attends on average between three and five times a year, with the number of consultations increasing with age. One in every two people 65 years and over attending ED is admitted. In comparison one in every five people aged 18-64 years is admitted. In 2017 it is projected that there will be an overall increase in adult inpatient discharges of almost 12,000 from 2015. This is largely as a result of predicted increases in adults 65 years and over and equates to approximately 344 additional adult hospital in-patient beds at 100% utilisation of seven day beds. At the beginning of 2016, we have a deficit of 2,485 short stay Nursing Home beds and this shortfall will increase to 2,653 in 2017. Overall we are experiencing an extremely resource intensive time and we are struggling to create appropriate quality infrastructure to provide healthcare for our ageing population. This is the most expensive period in terms of investment and will reap rewards in terms of quality and access if adequately funded.

PREVENTION

The economic impact of chronic diseases, many of which are avoidable, amounts to billions of Euro per year. Nevertheless, European governments currently spend on average 2.8% of their health sector budget on prevention (WHO, 2014). In the recent CSO publication 'System of Health Accounts' preventative care represents 1% of our total health care expenditure (CSO, 2016). This includes public and private spend on preventative care and is significantly less than our European counterparts. Prevention is the most cost-effective way to maintain the health of the population in a sustainable manner, and creating healthy populations benefits everyone.

CHILD HEALTH

Although our birth rate is decreasing, in 2017 our child population aged 0-17 will represent 26.2% (1,238,938/4,721,232) of our total population - 7.4% above the EU average of 18.8% (Department of Children and Youth Affairs, 2014). Infant mortality is a fundamental indicator of any health system. Our infant mortality rate has been marginally increasing from 3.3/100,000 in 2009 to 3.7/100,000 in 2014 (Department of Health, 2015). A healthy pregnancy and birth weight are positive predictors of good health throughout life. Although our rate of smoking during pregnancy has decreased to under 20%, low birth weight continues to affect approximately 1-in-17 births with a slight increase in prevalence from 2010 (5.3%) to 2014 (5.8%). Access to effective antenatal care remains important to securing the future health of children. Currently 26% of our nine year old population are either overweight or obese (Growing up in Ireland, 2011). Investing in the early years of life is an economically effective strategy in producing improved health, as evidenced by the first 1,000 days project (Black et al, 2013).

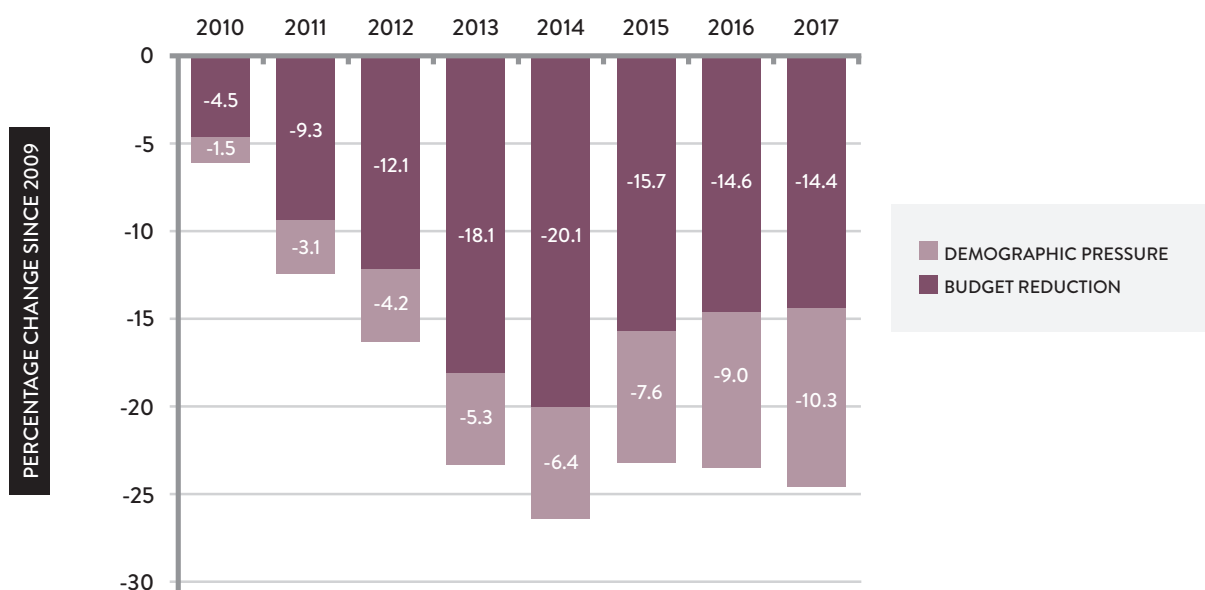
CHRONIC DISEASE

In 2017 559,620 people will have at least one chronic disease. Three quarters of the 29,095 deaths in 2014 were due to four chronic diseases - cancer, cardiovascular, respiratory and diabetes (Dept Health, 2015). 17% of all hospitalisations in 2015 occurred due to these four chronic conditions. The mounting burden of chronic disease is largely attributed to a well described set of modifiable risk factors. This is compounded by our ageing population, with increasingly complex health needs. Although smoking rates have declined from 28% in 2003 to 19% in 2015, we have a long way to go to reach our target of less than 5% smoking by 2025. Adult obesity is rising at an alarming rate. By 2030, 57% of women and 48% are men are projected to be obese according to the WHO, leading to the increasing incidence of diabetes and accompanying complications. Meanwhile, the prevalence of age-related diseases, such as dementia, is also increasing. By 2017 it is projected that there will be as many as 53,000 living with this condition. (Pierce et al, 2014).

DEMOGRAPHIC CHANGE & COST

Our cumulative budget reductions and demographic pressure, combined from 2009 to 2016, is almost 24% - Figure 2.1. This is unsustainable. Estimating our healthcare costs for 2017 using a top down approach, indicates an upward adjustment of 1.4% from 2015 to 2016, and 1.4% from 2016 to 2017 is required to provide the same service to our growing population. This adjustment will not provide investment for improved models of care, new medicines, technologies or unmet demand.

FIGURE 2.1: CUMULATIVE BUDGET REDUCTIONS AND DEMOGRAPHIC PRESSURES COMBINED 2010-2017



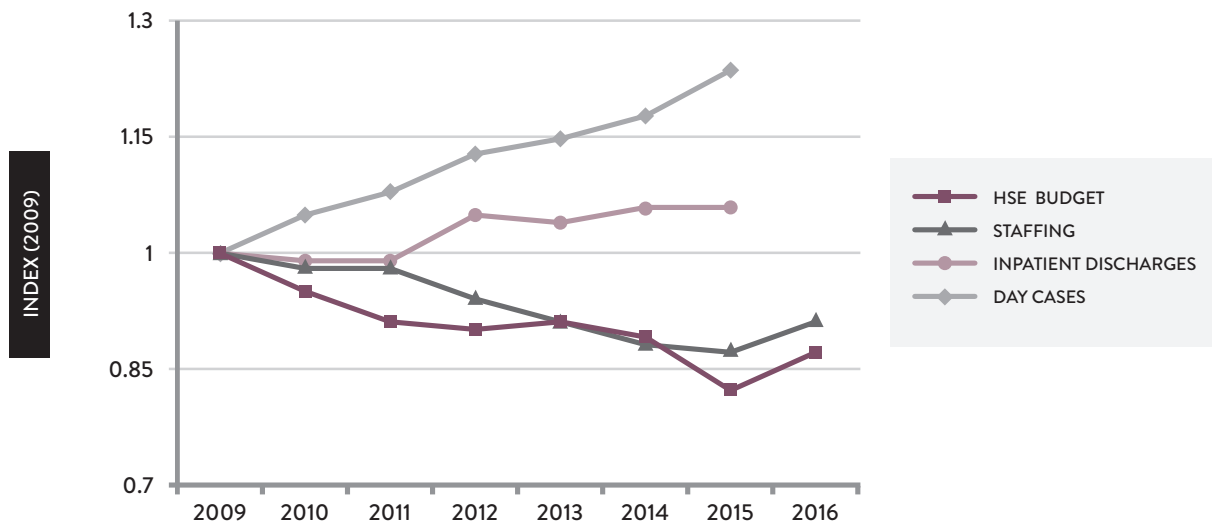
Source: Finance Unit, Department of Health for budget data, Central Statistics Office and European Commission Ageing Report 2015 for demographic effect

ARE WE DOING MORE WITH LESS? YES WE ARE.

Since 2009, HSE budget and staffing have witnessed a steady decline. Our total budget was reduced by 14.6% and staff numbers reduced by 15,006 (13%). Day cases have increased by 18%. The average length of hospital stay (AvLOS) has decreased from 6.63 days to 6 days and the numbers of medical cards have increased by 256,300 in the same period.

In recent years, increased hospital activity is largely related to increased day case activity. Day cases have been increasing annually, by approximately 3-4% since 2009. This large increase in day case activity is evidence of the acute system continuing to manage increased demand by delivering care in lower cost settings. At this incremental rate of increase, it is possible that we will reach maximum efficiency gain in the near future. Prediction of the timeline of this saturation point will benefit from further evaluation of current caseload and demographic profiling.

FIGURE 2.2: HSE BUDGET, STAFFING, IN-PATIENT DISCHARGES AND DAY CASES 2009-2016



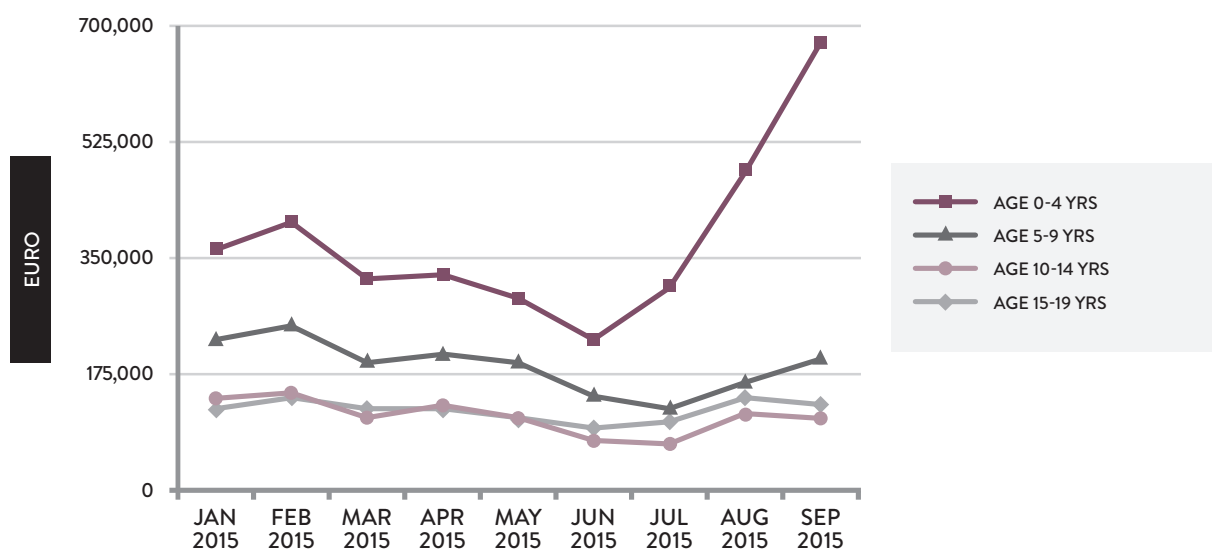
Source: Health Service Executive Service Plans 2009-2016, Healthcare Pricing Office

IMPACT OF POLICY CHANGE

UNDER 6 YEARS

In July 2015 access to 'General Practice (GP) care without fees at the point of use', was introduced for all children under 6 years. This is the first phase in providing access to 'GP care without fees at the point of use' to the entire population of the Republic of Ireland. The impact of the introduction of this policy is visible, though not measurable, across our services. In 2015, there was almost a 22 fold increase (€1,896,603) in fees for GP Visit Card Capitation for 0-4 year olds. Since the introduction of the free GPVC there has been a 2.4 fold increase (€524,581) in fees for out-of-hours attendances for 0-4 year olds. However, there is no routine national data available to evaluate the impact this policy has had on the rate of GP consultations during normal working hours. This is a significant information gap and highlights the need to ensure information systems are in place which enable key policy interventions to be evaluated to inform future planning.

FIGURE 2.3: TRENDS IN OUT OF HOURS PAYMENT FEES 2015



Source: Primary Care Reimbursement Service

INTEGRATED CARE

Integrating health and social services is a major focus of European policymakers. Integrated services can be powerful tools in preventative care. Older people need help not only with their disease or medical problem, but also with activities of daily living and this in turn may help slow the deterioration in the medical condition. These two elements are inter-related and there's a preventative element in social care. For example, the Torbay Care Trust, a health care organisation based in south Devon, has pooled budgets for health and social care and established integrated care teams that work closely with general clinicians. As a result, the use of hospital beds, care homes and emergency services has fallen for people over the age of 65 years. HSE Clinical Strategies and Programmes have identified integrated care as the direction of travel with the establishment of five integrated care programmes: Children; Maternity; Prevention and Management of Chronic Disease; Older Persons; and Patient Flow. Our health system is synergistic and interdependencies exist across the divisions. Essential factors considered necessary for integrated care include: defined clinical and social care pathways, integrated funding models and, most importantly, moving gradually towards outcomes based healthcare budgeting.

We, as a health service, are looking for possible solutions in the integration of services, whereby health and social care providers collaborate to ensure that individuals get the right treatment and care. In 2017, we project that we will be discharging 210,200 episodes of care, for persons aged 65 years and over, from our hospitals. Fifteen percent of these episodes of care will require a nursing home bed, 24% will require a home care package, and up to 90% of adults aged 65 years and over will require ongoing primary care for chronic diseases. Continuous care and efficiently managed resources depend on effective communication, collaboration and joint responsibility for patient care across our services, ultimately facilitating flow of patient care, services and funding. These fundamental principles will be pre-requisites in the imminent commissioning funding model based on strategic purchasing of programmes of care.

POPULATION HEALTH NEEDS & RESOURCE ALLOCATION

In line with Future Health and Healthy Ireland, the HSE is committed to the reform agenda. The HSE Corporate Plan 2015-2017 sets out the vision of a healthier Ireland, with a quality health service valued by all and underpinned by the core values of: Care, Compassion, Trust, and Learning. The HSE Programme for Health Improvement and the Reform agenda will change how healthcare services will be commissioned and delivered. Retaining our core values through this transformation is of paramount importance.

Internationally, to improve effectiveness and efficiency, many countries are transitioning from the historic process of passive budget allocation to a more strategic approach of health purchasing and planning. In this approach, decisions about resource allocation are linked to information about health needs, clinical effectiveness, cost-effectiveness and provider performance (Figueras, Robinson & Jakubowski, 2005). Transitioning to strategic health purchasing and planning has been identified as a priority within Future Health, with early adoption planned for purchasing of hospital care (Department of Health, 2012). Success in achieving equity and value as part of population based budget allocation is underpinned by robust data systems and meaningful stakeholder engagement. This will allow needs-based strategic control to be applied and population health services and outcomes to be planned, evaluated, improved and rewarded.

RESEARCH AND DATA

The consistent application of evidence to prioritise interventions and programmes of care positively impacts health behaviours, health service redesign, and health outcome. Quality research and robust data plays a very important integral part of the continuous improvement cycle. As an organisation, the HSE requires a research and data framework identifying priority data gaps and research questions in the short, medium and long term. It is essential that ongoing health service data and research needs of the HSE are fulfilled in a timely fashion, so that results and evidence generated are an integral part of the population health needs assessment cycle.

Many areas of our service would benefit greatly from quality data and research programmes to support specific research questions. Our long term residential facilities (nursing homes and residential disability services) consume 20% (€3.6 billion) of the total healthcare expenditure (CSO, System of Health Accounts). However, we have no data describing the variation or complexity of care in these facilities. Research is required to assist in the development of a dataset to facilitate the exploration of a quantitative index to describe this variation and complexity. PCRS collects vast amounts of data from Primary Care however, as a service delivery unit there is no resource dedicated to mine this data as part of a continuous improvement cycle. Economic evaluation is of paramount importance and many unit costs-per-service provided particularly in Primary Care, need to be explored. This would assist the creation of a standardised resource allocation model at a population level. Research needs

for service planning can be identified as part of a yearly cycle, so that focused exploration of phenomenon may be progressed in a timely manner and relevant outcomes integrated into service improvement and re-design.

HEALTH INEQUALITIES

Evidence identifies that deaths and ill health caused by health inequalities account for up to 20% of total healthcare costs (Mackenbach et al., 2011). Reducing health inequalities is one of the four goals of Healthy Ireland. As a health service are we prioritising health inequalities within each element of our service delivery? Currently this is not possible to measure. There is no coding of data that allows measurement of health inequalities in our hospital data (HIPE) or our performance data across all divisions. The number of medical card holders is the only indication of deprivation and inequality currently collected. This is a data gap that needs to be addressed immediately to initiate a meaningful commitment to addressing health inequalities within our health service.

Robust health information and intelligence is the foundation of evidence-based population health service planning. All current and relevant population and health service data resources were examined and interrogated to produce this paper. Consequently this presents a standardised approach to health service analysis, using consistent methodologies and population projections across all areas of service at a national level. This is essential for equity based planning.

It is necessary to expand this analysis from a national perspective to regional analysis by CHO Area and Hospital group. Standardisation of regional assessment, using consistent methodologies, is imperative to allow for inter group/ area analysis. This requires ongoing partnerships to develop relevant data capture and needs assessment structures. However, this in turn will produce strategic benefits allowing equity based planning and commissioning at area level. In addition, a population approach can also be used to identify benefits, limitations and costs in service re-design facilitating the development of a fair and explicit model for strategic purchasing of programmes of care.

03

**DEMOGRAPHY,
HEALTH STATUS
& LIFESTYLE,
IMMUNISATION
& SCREENING**



DEMOGRAPHICS

<p>TOTAL POPULATION INCREASE</p> <p>↑10.7%</p> <p>BY 34,800 BETWEEN 2016-2017</p>	<p>CHILDREN REPRESENT</p> <p>26%</p> <p>OF THE POPULATION</p>	<p>OVER 65'S WILL INCREASE BY</p> <p>↑13.2%</p> <p>19,800</p> <p>[IN 2017 TO TOTAL 644,000]</p>	<p>OVER 85'S WILL INCREASE BY</p> <p>↑13.7%</p> <p>2,600</p> <p>[IN 2017 THE TOTAL WILL BE 72,500]</p>
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COSTS

<p>HEALTHCARE BUDGET</p> <p>BY 2016 BUDGET DOWN FROM 2010</p> <p>↓14.6%</p>	<p>€ € € €</p> <p>↑9%</p> <p>DEMOGRAPHIC PRESSURE</p>	<p>BUDGET INCREASE REQUIRED</p> <p>↑1.4%</p> <p>TO MEET DEMOGRAPHIC EFFECT ONLY AND KEEP SERVICES AS THEY ARE</p>
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HEALTH STATUS

<p>LIFE EXPECTANCY</p> <p>83.1 YEARS (WOMEN)</p> <p>79 YEARS (MEN)</p>	<p>CIRCULATORY SYSTEM MORTALITY RATES BETWEEN 2005 AND 2014</p> <p>↓32%</p> <p>CANCER MORTALITY RATES</p> <p>↓8%</p>	<p>CHRONIC LOWER RESPIRATORY DISEASES MORTALITY RATES</p> <p>42%</p> <p>HIGHER THAN THE EU AVERAGE IN 2012</p>	<p>IN 2015 CHRONIC DISEASES ACCOUNTED FOR</p> <p>41% OF ALL HOSPITAL BED DAYS</p> <p>16.5% OF HOSPITAL DISCHARGES</p>
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CHILD HEALTH ADULT HEALTH 18-64

<p>A QUARTER OF CHILDREN AGED 3, 5 & 9 ARE OVERWEIGHT OR OBESE</p> <p>25%</p>	<p>THE PREVALENCE OF SMOKING DECREASED BETWEEN 2007 & 2015</p> <p>DOWN BY ↓20%</p>	<p>THE PREVALENCE OF BINGE DRINKING INCREASED BY</p> <p>↑40%</p> <p>BETWEEN 2007 & 2015</p>	<p>THERE WAS AN INCREASE IN OBESITY BETWEEN 2007 & 2015</p> <p>↑56% MALES</p> <p>↑70% FEMALES</p>
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ADULT HEALTH 65+

<p>IN 2017 PEOPLE WITH AT LEAST 1 CHRONIC DISEASE WILL INCREASE BY</p> <p>↑17,220</p> <p>IN 2022 THIS WILL INCREASE BY</p> <p>↑96,670</p>	<p>IN 2017 PEOPLE WITH AT LEAST 2 OR MORE CHRONIC DISEASES WILL INCREASE BY</p> <p>↑12,830</p> <p>IN 2022 THIS WILL INCREASE BY</p> <p>↑72,080</p>	<p>OBESITY LEVELS IN THIS AGE GROUP HAVE DOUBLED SINCE 2007</p> <p>X2</p>
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ASSUMPTIONS

- Population projections are based on the Central Statistics Office (CSO) M2F2 scenario and rounded to the nearest hundred in some tables.
- Population projections by Community Healthcare Organisation (CHO) are based on CSO regional population projections with the 'recent' internal migration scenario.
- Age standardised mortality rates are now calculated using the new European standard population. Any comparison with previous years' should include this change in statistical methods.

DEMOGRAPHY

- Our total population is projected to increase by 0.7%, or 34,800 people between 2016 and 2017. This is projected to further increase by 4%, or 190,600 people, between 2017 and 2022.
- All Community Healthcare Organisation (CHO) areas will see an increase in population between 2016 and 2017, varying between 1,400 and 5,300, with Areas 4, 6, 7, 8 and 9 having population increases between 4,600 and 5,300 people.
- Children aged 0-17 years represent 26.2% of the total population. This cohort is projected to increase by 0.7%, or 8,600 children in 2017. By 2022 it projected the child population will rise by 1.4% or 17,142 children. CHOs 7 and 9 will experience the greatest short and medium term growth in children.
- Between 2016 and 2017 the population of children aged five years and younger is projected to decrease by 2%.
- Adults aged 18-64 years are projected to increase by 0.2% or 6,412 in 2017. The adult population will increase by 77,680 (2.7%) between 2016 and 2022. CHOs 6, 7, 8 and 9 will experience the greatest increase in adult population in the medium term.
- However, the rate of growth in the population aged 65 years and older is significant. In 2017 a total of 644,000 are projected. This cohort will increase by 19,800 (3.2%) in 2017. The largest increase will be in the 70-74 age group (5.7% or 8,940 people). CHO 6, 7 and 9 will experience the greatest growth in population of older adults in the medium term.
- Adults 65 years and over will increase by up to 21% (131,000) by 2022.
- The population aged 85 years and over is projected to increase by 3.7%, or 2,600 people, between 2016 and 2017. There will be 16,100 additional people aged 85 years and over by 2022.

COSTS

- By 2016 the healthcare budget had decreased by 14.6% from 2010 and within this timeframe, our demographic pressure has increased by 9%.
- In 2017, it is projected that there will be a cumulative reduction of the total healthcare budget of 24.7% from 2009, inclusive of demographic pressure of 10.3% and a budget reduction of 14.4%.
- A 1.4% upward adjustment in the public health budget would be required to meet the 'pure demographic effect' so as to deliver the same level and quality of service from 2016 to 2017.

HEALTH STATUS

- In Census 2011, 88.3% of our population reported their general health was either very good or good. This equates to 4.17 million people in 2017.
- Life expectancy in Ireland has increased and currently stands at 79 years for males and 83.1 years for females.
- Between 2005 and 2014 mortality rates for circulatory system diseases have fallen by 32% and for cancer by 8%.
- Mortality rates for chronic lower respiratory diseases in 2012 (including cancer of the trachea, bronchus and lung) were 42% higher than the EU average.
- In 2015, chronic diseases accounted for 16.5% of discharges (day case and inpatient) from our acute hospitals and took up 41% of all inpatient bed days.

CHILD HEALTH

- Prevalence of low birth weight has increased slightly to 5.8% (2014) from 5.3% (2010).

- 25% of children aged 3, 5 and 9 years are overweight or obese.
- 13% of children experience consistent poverty.
- 17% of children are starting to smoke, compared to 25% in 2010.
- Alcohol and drug consumption among children has not changed significantly.
- 27% of teenagers (15-17 years) report sexual activity, an increase from 23% in 2010 but the number of teenage births is continuing to decrease.

ADULTS AGED 18-64 YEARS

- The prevalence of smoking fell by 20% between 2007 and 2015.
- In the period 2007 to 2015 there was a 40% increase in the prevalence of adults who binge drink.
- There was a 56% increase in obesity among males and a 70% increase in obesity among females between 2007 and 2015.

ADULTS AGED 65 YEARS AND OVER

- In 2016, approximately 542,400 people aged 65 years and over, had at least one chronic condition. There will be an additional 17,220 people with at least one chronic disease in 2017. By 2022 it is projected that there would be a further 96,670 additional people with at least one chronic condition.
- Approximately 65% of people 65 years and over have two or more chronic conditions, which equates to 404,470 people. By 2017 this will rise by 12,830 and a further 72,080 by 2022.
- The prevalence of some cardiovascular diseases (hypertension, angina and atrial fibrillation) has decreased. However, the prevalence of diabetes and stroke has increased.
- Arthritis affects 43.7% of those aged 65 years and over.
- Since 2007, the prevalence of smoking has decreased by 14%.
- In 2015, 22% of adults aged 65 years and over reported binge drinking.
- Obesity levels have doubled in males and females aged 65 years and over since 2007.

NATIONAL IMMUNISATION PROGRAMME

- In 2017 it is projected that the total vaccine costs will be €37.5 million, an increase of €9.3 million from 2016.

NATIONAL SCREENING SERVICE

- 163,900 women will attend BreastCheck in 2017, based on a participation rate of 70%.
- 250,000 women will attend CervicalCheck in 2017, based on a participation rate of 80%.
- In January 1st 2016, BowelScreen moved to a two year screening round and in 2017 it will invite approximately 273,100 men and women for screening.
- The lack of a national diabetes register makes it difficult to forecast demand. The National Screening Service will screen approximately 150,000 people with diabetes in Ireland. An annual growth in demand of approximately 10,000 is anticipated into 2017 and beyond.

RESEARCH AND DATA NEEDS

- Accurate population projections by Community Healthcare Organisation Area and, if possible, by Primary Care Network, are vital for the accurate planning of health service into the future.
- A central data resource to update population health determinants and indicators from population surveys and datasets is required.
- A suite of Irish based population-attributable fractions for common risk factors and chronic diseases should be developed.
- Population-based health indicators at regional/CHO level are needed, e.g. Life Expectancy, Health Life Years, Disability Adjusted Life Years, Health Inequality indicators.
- Irish population health cost data is required, similar to other European countries as demonstrated in the EU Ageing Report.

CONTEXT

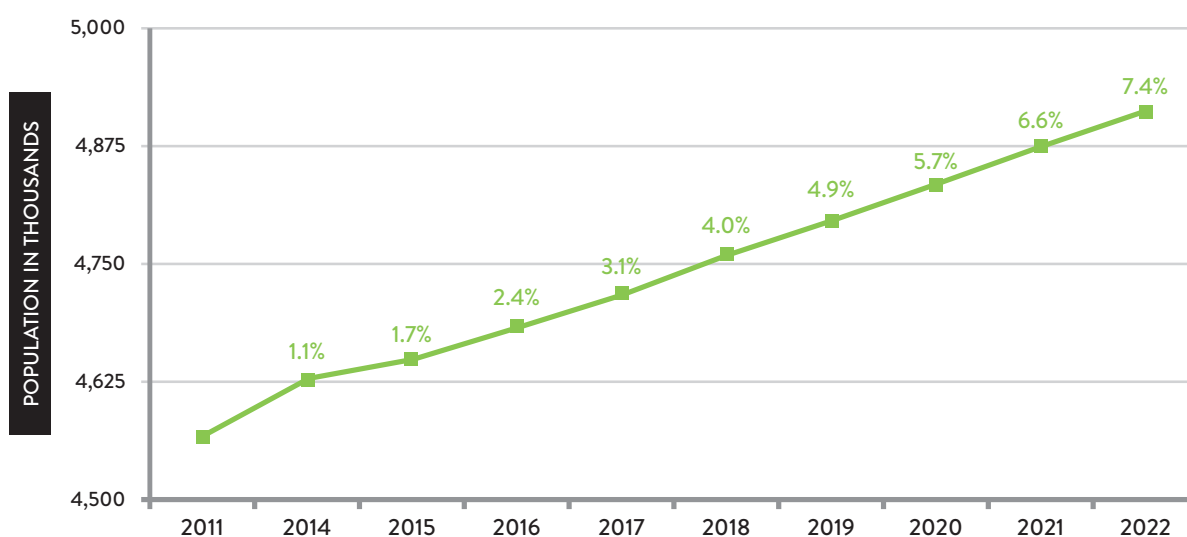
Demographic data on the population sets the context for health and for the planning and delivery of health services. This chapter outlines the population change expected in 2017 and a five year projection to 2022 in numbers, proportions and geographical distribution by Community Healthcare Organisation (CHO). In addition, it presents the current health status of our population and projects the numbers with chronic disease in 2017. The implications of this demographic pressure on our health services is not considered in this chapter but is discussed in detail in following chapters.

The population of Ireland has grown rapidly in recent decades with an 8.2% increase in total population between 2006 and 2011. It continues to grow, albeit at a slower rate, with population projections estimating a further 3.1% growth between 2011 and 2017 (146,000 people).

TOTAL POPULATION

The actual and projected total population, together with cumulative percentage increases over the period 2011 – 2022, are displayed in Figure 3.1.

FIGURE 3.1: PERCENTAGE CUMULATIVE CHANGE IN POPULATION FOR IRELAND 2011 – 2022 (M2F2)



Source: Central Statistics Office

- The population is due to increase by 34,800 people, or 0.7%, between 2016 and 2017.
- The cumulative increase of our population between 2011 and 2022 will be 7.4%.

Between 2016 and 2017 the following changes are projected;

ADULTS

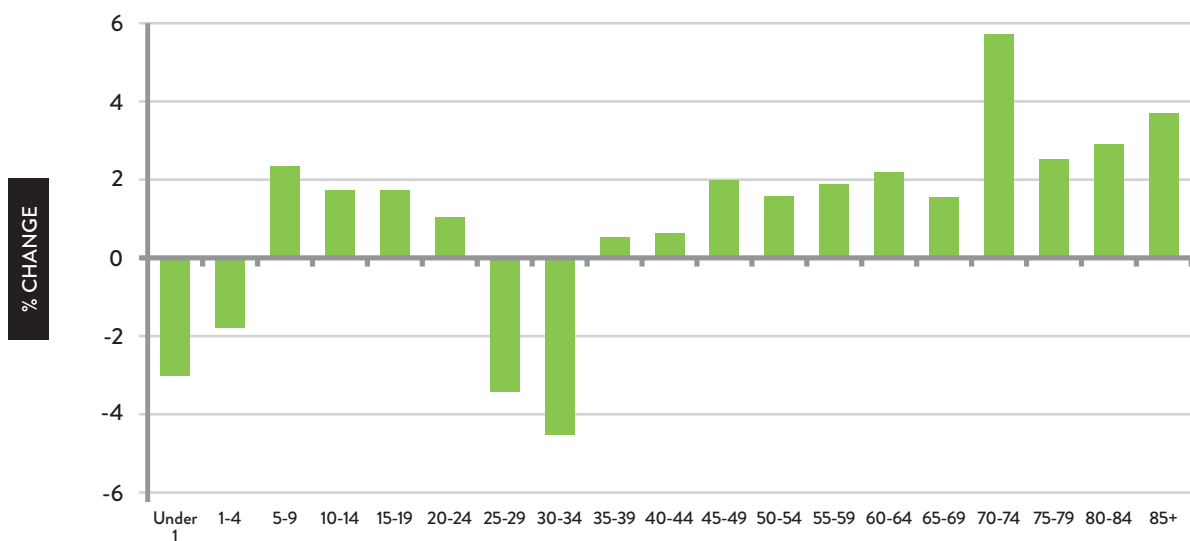
- There is a continuing trend of increasing population in the older age groups.
- In 2017, 13.6% of the population are projected to be aged 65 years and over.
- The population aged 65 years and over will increase by 3.2%.
- The population aged 65-84 is projected to increase by 3.1%, or 17,200 people.
- The greatest increase is in the 70-74 age group - a 5.7% increase or 8,940 people (157,750 in 2016 to 166,690 in 2017).
- The population aged 85 years and over is projected to increase by 3.7% or 2,600 people.

- The population of 'working age' (20-64) remains relatively unchanged increasing by 0.1% or 3,100 people.
- Decreases are noted across the 25-34 years age groups in the order of 4% or 25,000 people.

CHILDREN

- The birth rate has continued to fall, with a 3% decrease predicted amongst those aged less than one year – a trend that is projected to continue further.
- There are over 1.2 million children aged 17 years and younger and the rate of population increase is projected to decline in this age group.
- Between 2016 and 2017 the population of children aged five years and younger is projected to decrease by 2%.
- Between 2016 and 2017 the population of 5-19 year olds is projected to increase by 2%.

FIGURE 3.2: PERCENTAGE CHANGE BY AGE GROUP 2016-2017



Source: Central Statistics Office

Figure 3.2 represents the percentage change in each five year age groups 2016-2017. Table B1 in Appendix B gives further detail on this data.

While analysis by five year age groups is useful, from a health service planning point of view there are generally five main age groups that the population can be grouped into: – the under 5s, adolescents, the population of working age¹, the over 65s and the over 85s. Table 3.1 outlines the projected population change between 2016 and 2017 across these age groups and their proportion within the population.

¹The population of working age is usually described in population analyses as people aged between 15-64 years. However, health services for children and adolescents are provided up until 17 or 18 years of age. This analysis groups the population of working age as 20-64 to align with the age groups used by the CSO for population projections.

TABLE 3.1: POPULATION PROJECTIONS AND PROPORTIONS 2016 AND 2017 FOR SELECTED AGE GROUPS (THOUSANDS)

AGE GROUP	2016 (N)	2016 (%)	2017 (N)	2017 (%)	ACTUAL CHANGE	% CHANGE
0-4 years	364.0	7.8	356.6	7.6	-7.4	-2.0
5-19 years	977.7	20.9	997.1	21.1	19.4	2.0
20-64 years	2,720.5	58.0	2,723.6	57.7	3.1	0.1
65-84 years	554.3	11.8	571.5	12.1	17.2	3.1
85+ years	69.9	1.5	72.5	1.5	2.6	3.7
TOTAL	4,686.4		4,721.3		34.8	0.7

Source: Central Statistics Office

POPULATION BY COMMUNITY HEALTHCARE ORGANISATIONS

There are nine Community Healthcare Organisations (CHO), as described in the 'Community Healthcare Organisations' report published by the HSE in 2014. Population projections by CHO area were carried out using the methodology described in Appendix B.

Table 3.2 outlines the projected total population of each CHO area for 2017, with the actual change in population from 2016.

TABLE 3.2: PROJECTED TOTAL POPULATION BY CHO AREA 2016 AND 2017 (THOUSANDS)

	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
2016	396.3	443.3	381.6	679.5	515.4	398.7	673.5	612.5	596.5
2017	398.1	444.9	383.0	684.5	519.2	403.3	678.8	617.8	601.4
Actual Diff	1.8	1.6	1.4	5.0	3.8	4.6	5.2	5.3	4.9
% CHANGE	0.5	0.4	0.4	0.7	0.7	1.2	0.8	0.9	0.8

Source: Central Statistics Office

Table 3.2 shows that percentage change in population across the CHO areas ranges from 0.4% in CHO Areas 2 and 3 to 1.2% in CHO Area 6. The more heavily populated areas around the greater Dublin area will see the largest increases in people ranging from 4,900 in CHO Area 9 to 5,300 in CHO Area 8 which contains the Midlands counties as well as Meath and Louth. CHO Area 4 (Cork/Kerry) will see a similar increase in people (5,000).

ESTIMATE OF TOTAL DEMOGRAPHIC CHANGE ON HEALTHCARE COSTS 2016-2017

CONTEXT

By 2016 the healthcare budget had decreased by 14.6% from 2010 and, within this timeframe, our demographic pressure increased by 9% (see Figure 2.1 page 22). If this pattern persists, there will be a cumulative reduction of the total healthcare budget from 2010 of 24.7% in 2017, including demographic pressure of 10.3% and budget reduction of 14.4%.

TOP DOWN PROJECTED DEMOGRAPHIC EFFECT ON HEALTH SERVICE COSTS

The 2015 Ageing Report, produced by the European Commission, collected data on age-specific healthcare costs across the EU and demonstrated significant agreement on relative per capita healthcare costs, by age and gender. The cost pressures for Ireland were derived by averaging data from across the EU 15 countries. The data was then normalised, so that the average expenditure per capita equated to a value of 1. There is a caveat which is that, while the data is based on a number of EU countries, it is still a proxy for the Irish population.

This analysis is useful as it provides a measure of incremental cost pressure, based on the size and increasing age of our population. Irrespective of budgetary change, medical inflation and utilisation of services, our changing demographic profile is a constant cost pressure that accumulates over time.

Table 3.3 shows the estimated age-specific relativities for Ireland and also shows the derived 'cost pressures' when these relativities are applied to the projected population for 2016, 2017 and onward to 2022.

Cumulative increases in cost pressures directly attributable to demographic change will rise by 10.8% by 2022.

From 2016 to 2017 a demographically driven cost pressure of 1.4% is calculated. This is twice the projected rate of growth in the population (0.7%) over the same time period. This means a 1.4% upward adjustment in public health spending will be required to meet the pure demographic effect and maintain delivery of service at the same level.

- In monetary terms, based on the allocated budget for the HSE in 2016 in the National Service Plan, this would equate to an additional minimum funding requirement of €182 million (based on budget of €12,987million in 2016). This does not take into account the budget deficit position the 2016 budget represents as outlined above.

TABLE 3.3: PROJECTION OF HEALTH COST UNITS BY AGE CATEGORY, 2015-2022

AGE CATEGORY	RELATIVE EXPENDITURE	2015	2016	2017	2022
Under 1 year	1.74	100,451	97,309	94,401	81,640
1-4 years	0.78	180,197	179,386	176,099	152,118
5-9 years	0.48	158,911	162,954	166,721	164,427
10-14 years	0.46	148,292	150,348	153,050	174,429
15-19 years	0.54	149,196	152,364	155,079	168,968
20-24 years	0.56	127,333	124,618	125,965	153,047
25-29 years	0.65	183,654	177,520	171,346	164,506
30-34 years	0.72	255,481	243,265	232,276	193,710
35-39 years	0.73	272,613	276,728	278,347	240,259
40-44 years	0.79	276,701	278,432	280,157	296,618
45-49 years	0.92	288,218	294,178	300,126	321,361
50-54 years	1.09	323,192	327,401	332,538	360,287
55-59 years	1.30	340,125	349,236	355,979	393,278
60-64 years	1.58	359,336	365,721	373,568	414,335
65-69 years	1.93	385,458	392,543	398,762	440,015
70-74 years	2.32	347,182	367,943	388,879	455,061
75-79 years	2.77	304,334	310,019	317,522	409,280
80-84 years	3.11	237,427	243,575	250,860	288,550
85 + years	3.42	216,052	225,496	234,225	288,465
TOTAL HEALTH UNIT COSTS		4,654,154	4,719,035	4,785,900	5,160,355
% Increase from 2015		0.0%	1.4%	2.8%	10.8%
65 years +		1,490,453	1,539,575	1,590,249	1,881,371
% Increase from 2015		0.0%	3.3%	6.7%	26.2%

Source: 2015 Ageing Report, European Commission (2015) and Healthcare Pricing Office

FIVE YEAR POPULATION PROJECTIONS 2017 – 2022

Our population is expected to grow by 4% between 2017 and 2022, or 190,600 people. Table 3.4 outlines the five year forecast (2017-2022) for the five previously selected age groups. Table B2 in Appendix B. gives further detail on this in five year age cohorts.

TABLE 3.4: POPULATION PROJECTIONS 2017 AND 2022 FOR SELECTED AGE GROUPS (THOUSANDS)

AGE GROUP	2017 (N)	2017 (%)	2022 (N)	2022 (%)	ACTUAL CHANGE	% CHANGE
0-4 years	356.6	7.6	308.1	6.3	-48.5	-13.6
5-19 years	997.1	21.1	1,064.7	21.7	67.6	6.8
20-64 years	2,723.6	57.7	2,783.8	56.7	60.2	2.2
65-84 years	571.5	12.1	666.6	13.6	95.1	16.6
85+ years	72.5	1.5	88.6	1.8	16.1	22.2
TOTAL	4,721.3		4,911.8		190.6	4.0

Source: Central Statistics Office

BY 2022

- It is projected that 15.4% of the population will be aged 65 years and over.
- The population aged 65-84 is projected to increase by 16.6%, or 95,100 people.
- The population aged 85 years and over is projected to increase by 22.2%, or 16,100 people.
- The population of 'working age' (20-64) is projected to increase by 2.2%, or 60,200 people.

CHILDREN

- The population of children aged four years and younger is projected to decrease by 13.6%, or 48,500 children.
- The population of 5-19 year olds is projected to increase by 6.8% (67,600).

POPULATION PROJECTIONS 2017 – 2022 BY COMMUNITY HEALTHCARE ORGANISATIONS

Table 3.5 outlines the population projections and relevant change in population for 2017 and 2022 for the nine CHO areas.

TABLE 3.5: PROJECTED TOTAL POPULATION BY CHO AREA 2017 AND 2022 (THOUSANDS)

	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
2017	398.1	444.9	383.0	684.5	519.2	403.3	678.8	617.8	601.4
2022	409.0	454.3	390.4	711.4	538.0	433.9	716.7	645.7	638.6
Actual Diff	10.9	9.4	7.4	26.9	18.8	30.6	37.9	27.9	37.2
% CHANGE	2.8	2.1	1.9	3.9	3.6	7.6	5.6	4.5	6.2

Source: Central Statistics Office

Table 3.5 shows that percentage change in population across the CHO areas ranges from 1.9% in CHO Area 3 to 7.6% in CHO Area 6. The more heavily populated areas around the greater Dublin area will continue to see the largest increases in people ranging from 30,600 in CHO Area 6 to 37,900 in CHO Area 7. CHO Area 8, which contains the Midlands counties, and CHO Area 4 (Cork/Kerry) will also see a large increase in people, 26,900 and 27,900 respectively. Much smaller growth is projected for the CHO Areas along the Western seaboard with increases ranging from 7,400 in CHO Area 3 to 10,900 for CHO Area 1.

HEALTH STATUS OF OUR POPULATION

LIFE EXPECTANCY

- In census 2011 88.3% of our population reported their general health was either very good or good. This equates to 4.17 million people in 2016.
- Life expectancy in Ireland has increased by almost two and a half years since 2004 and is now above the average for the EU (Dept. of Health, 2015).
- Life expectancy at birth is now 79 years for males and is 83.1 years for females.
- 87% of the over 65 population are living with one chronic disease, with 65% living with two or more chronic diseases.

MORTALITY

- Provisional mortality data for 2014 shows a decrease in the overall age-standardised death rate from 1049.2/100,000 in 2013 compared to 983.5/100,000 in 2014 (Dept. Health 2015).
- Mortality rates from circulatory system diseases have fallen by 32% between 2005 and 2014 and this is 9.2% lower than the EU28 average.
- Cancer deaths decreased by 8% between 2005 and 2014.
- Mortality from respiratory diseases (including cancer of trachea, bronchus and lung) was 42% higher than the EU 28 average in 2012.
- Mortality rates from transport accidents, infant mortality and suicide rates have fallen by 55%, 4% and 10% respectively in the past 10 years.
- Deaths from circulatory system diseases (18%) and cancer (31.2%) remain significant causes of premature mortality but deaths from injury and poisoning are much more prominent in this age group than for those aged 65 years and over.
- Deaths from circulatory system diseases contribute to 33.6% of mortality in those aged 65 years and over, followed by cancer at 22.3% (Table 3.6)

TABLE 3.6: DEATHS BY PRINCIPAL DIAGNOSIS FOR 0-64 AND 65 YEARS AND OVER, 2014

CAUSE OF DEATH	0-64 YEARS (%)	AGED 65 YEARS AND OVER (%)
Cancer (non respiratory)	31.2	22.3
Respiratory disease (including respiratory cancers)	11.7	19.7
Diseases of the circulatory system	18.4	33.6
External causes of injury and poisoning	18.5	2.1
ALL OTHER CAUSES	20.1	22.3

Source: Central Statistics Office

MORBIDITY AND MULTIMORBIDITY

It is estimated that most of the major chronic diseases will increase by approximately 20% by 2020. This is primarily driven by the ageing population. The number of people with cancer, cardiovascular disease, diabetes, stroke, respiratory disease etc., will all increase by between 4% and 5% per annum. For some of these diseases, the increases are exacerbated by increased obesity and previously high levels of smoking.

ACCORDING TO WAVE 2 OF TILDA (2014);

- Hypertension and diabetes are the most prevalent cardiovascular conditions in Irish adults aged 65 years and over, affecting 46.1% (287,700 people in 2016) and 11.8% (73,650 people in 2016) respectively. For hypertension, the prevalence increases with age to 52.6% for those aged 80 years and over, or 78,100 people in 2016.
- The prevalence of most cardiovascular conditions has decreased between 2010 and 2014 for those aged 65 years and over: Hypertension from 51.4% to 46.1%; angina from 10.2% to 7.8%; and atrial fibrillation from 5.6% to 3.2%. However, there have been increases in the prevalence of diabetes (10.9% to 11.8%) and stroke (2.9% to 3.3%) (TILDA).
- Arthritis affects 43.7% of those aged 65 years and over.
- The proportion of the older population who report their health as 'excellent' or 'very good' increased from 41% to 44% from 2010 to 2014.
- During the same period polypharmacy (i.e. taking five or more medications) increased from 21% to 26%.

Table 3.7 outlines the projected number of cases of chronic disease in people aged 65 years and over in 2016, 2017 and onward to 2022.

TABLE 3.7: PREDICTED NUMBER OF CASES OF CHRONIC DISEASE IN PEOPLE AGED 65 YEARS AND OVER

DISEASE	PREVALENCE (%) (TILDA)	2016	2017	2022
Angina	7.8	48,700	50,200	58,900
Hypertension	46.1	287,750	296,900	348,200
Atrial Fibrillation	3.2	20,000	20,600	24,200
Stroke	3.3	20,600	21,250	24,900
Diabetes	11.8	73,650	76,000	89,100
COPD/Lung Disease	6.0	37,450	38,600	45,300
Arthritis	43.7	272,800	281,400	330,00

Source: *The Irish Longitudinal Study on Ageing*

The impact of chronic disease on acute hospital activity can be assessed by analysing both inpatient and day case discharges with a principal diagnosis of cardiovascular disease, diabetes, respiratory disease and cancer. Such analysis of all discharges for those aged 35 years and older, shows that in 2015 chronic disease accounted for 16.5% of total discharges and 41% of hospital inpatient bed days.

CHILD HEALTH

PREVALENCE AND PREVENTION

- Table B3 in Appendix B illustrates the recent estimates of prevalence of priority health and wellbeing risk factors. It also provides estimates of the numbers of children affected by these in 2017 and 2022.

- A healthy pregnancy and birth weight set children up for good health throughout their lives. Currently, 17.6% of women smoke during pregnancy. However, low birth weight continues to affect 5.8% of births with a slight increase from 2010 (5.3%) to 2014. Access to effective antenatal care remains important in securing the future health of children.
- While the prevalence of children at risk of poverty remains relatively constant, 11.2% of children experience consistent poverty, an increase since 2010.
- Significantly, approximately one in four children aged 3, 5 and 9 years, are classified as overweight or obese (25%, 20% and 26% respectively). Besides impacting on a child's health, this is a significant challenge for future health, as many overweight and obese children will become overweight and obese adults. Even if these rates of overweight and obesity remain constant among children, given the increasing numbers of children, tackling these risk factors will remain a key priority for the future of the population's health.
- Fewer children (16%) are starting to smoke compared to in 2010 (28%). The number of people smoking, however, will continue to grow due to increasing population numbers. Alcohol and drug consumption among children have not changed significantly but binge drinking among children appears less common in 2014 compared with 2013.
- More teenagers (aged 15-17 years) are reporting sexual activity (27%) but the number of teenage births is continuing to decrease (4.4 per 1,000 births).

ADULTS AGED 18-64 YEARS

DETERMINANTS OF HEALTH

- Recent trends and projections in the prevalence of factors affecting population health and wellbeing for this age group are shown in Table B4 in Appendix B.
- While the risk of poverty has remained constant for adults between 2007-2014, at approximately 15%, the number experiencing consistent poverty has almost doubled – 4.7% in 2007 to 8% in 2014.
- The prevalence of smoking has reduced by 20% in the period 2007 to 2015.
- A 40% increase in the number of adults who binge drink has been observed.
- While the prevalence of adults engaged in high levels of physical activity has increased from 24% in 2007 to 32% in 2015, there has been a 56% increase in obesity among males aged 15 to 64 years and a 70% increase in obesity among females in the same age group, in the same time period.

ADULTS AGED 65 YEARS AND OVER

PREVALENCE, CHRONIC DISEASE MANAGEMENT AND PREVENTION

- Recent trends and projections in the prevalence of factors affecting population health and wellbeing for this age group are shown in Table B5 in Appendix B.
- Since 2007, the proportion of older adults at risk of poverty has reduced, though the prevalence of consistent poverty in older adults is constant.
- There has been a 14% reduction in smoking among older adults.
- Some aspects of drinking behaviour remain constant, 22% of older adults binge drink.
- While high levels of physical activity are increasing, just 15% of those aged 65 and over are physically active enough to meet the recommendations for health benefits. Levels of obesity among males and females aged 65+ years have doubled since 2007 and, if current rates persist, there will be approximately 260,000 people aged 65 and over obese by 2022.
- Information on the prevalence of various chronic diseases among older adults in Ireland is now available through TILDA – see Table 3.7.
- In total, 46.1% of older adults have high blood pressure, and it is estimated that within two-years 13.5% of these older adults will develop high blood pressure for the first time. Similarly, 43.7% of these older adults have arthritis, and it is estimated that within two years, 14.1% of these older adults will develop arthritis for the first time. Regarding falls, 11.3% of older adults experience recurrent falls and 12.7% adults experience injurious falls.

NATIONAL IMMUNISATION PROGRAMME

The National Immunisation Office (NIO) manages the procurement of all vaccines required for national immunisation programmes. The purchase of vaccines accounts for over 90% of the NIO budget. Since 2005 a number of new vaccines have been added to the primary childhood immunisation (PCI) and school immunisation programmes including a number of catch-up campaigns which have given rise to a significant increase in the budget.

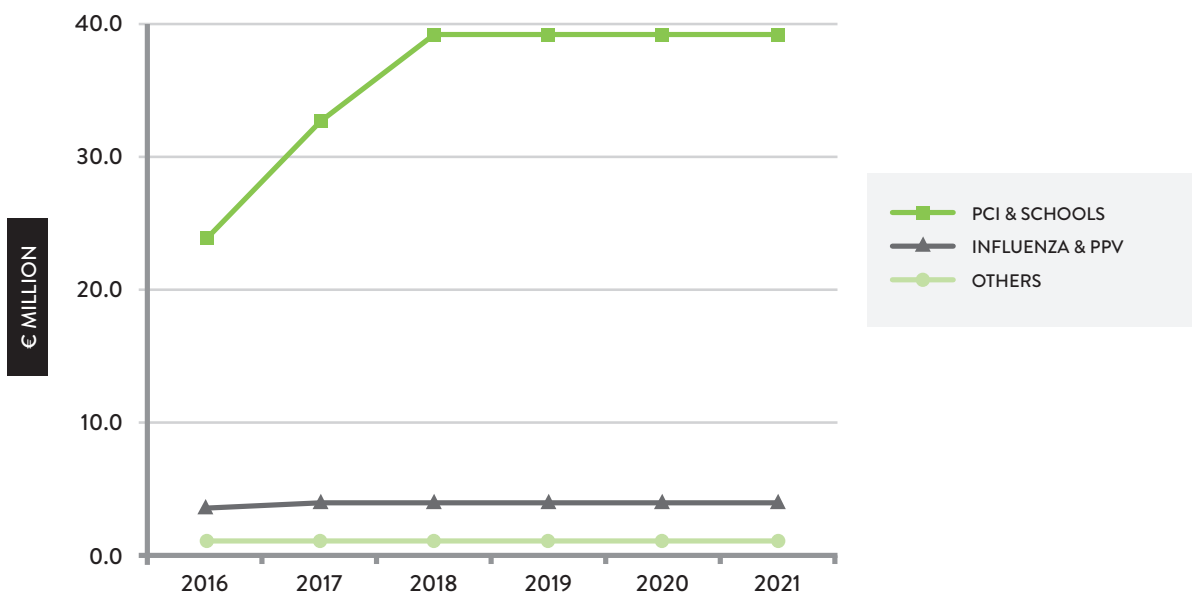
FORECASTED EXPENDITURE 2016 -2021

The 2016 Budget allocated funding for the procurement of meningococcal B and rotavirus vaccines to the PCI programme for babies born on or after October 1st 2016. There is a commitment to increase the additional annual allocation in 2017 and again in 2018 when full year costs will apply.

The NIO has forecast vaccine procurement to the end of 2021, based on the cohort population, vaccine schedule, target vaccine uptake, previous usage and current cost of vaccines. Census data from the Central Statistics Office is used to determine the cohorts (Figure 3.3).

- In 2017 it is projected that the total vaccine costs will be €37.5 million, an increase of €9.3million from 2016.

FIGURE 3.3: FUTURE VACCINE EXPENDITURE BY PROGRAMME 2016-2021



Source: National Immunisation Office

There is evidence from recent tender competitions that shows that vaccine prices continue to rise by approximately 10%.

The forecasted expenditure does not take into account additional funding required for possible further changes to the immunisation schedule including:

- Replacement of adolescent meningococcal C booster with meningococcal ACWY booster (recommended by the National Immunisation Advisory Committee, (NIAC) in 2015),
- Removal of infant meningococcal C vaccine (recommended in UK from July 2016),
- Extension of HPV vaccination to include boys,
- Replacement of HPV4 vaccine with HPV9 vaccine to provide additional protection,
- Introduction of varicella zoster (shingles) vaccine (currently under NIAC consideration).

OTHER ISSUES

It is recommended that the Mother and Infant Scheme is reviewed to include provision for the administration of seasonal influenza and pertussis vaccines in pregnancy.

NATIONAL SCREENING SERVICE

BACKGROUND

The National Screening Service manages the following four population-based, call-recall, screening programmes: BreastCheck, CervicalCheck, BowelScreen, and Diabetic RetinaScreen.

BREASTCHECK

- BreastCheck offers screening once every two years for women aged 50-64 years. In 2015, the programme commenced the extension to women aged 65-69 years, which will take three rounds (six years) to be fully implemented.
- The National Screening Service is planning a phased roll out of this extension to the 65-69 age cohort, with 1,000 women invited in 2015, 11,230 for 2016, approximately 23,000 to be invited each year for the years 2017-2020 and approximately 11,500 to be invited in 2021.
- Table 8 shows the eligible screening population for 2015 to 2017 - 50% of the total age cohort is offered screening every two years. The uptake rate for 2015 was 71.1%, based on a denominator consistent with the CSO M2F2 population projections.
- The Health and Wellbeing Operational Plan for 2016 outlines a target of 149,500 women aged 50-69 to be screened.
- Using a target uptake rate of 70%, it is projected that, in 2017, 163,900 will be screened in the 50-69 age cohort. Due to the natural timing between invitations and attendance for screening, a proportion of those invited in 2016 will be screened in 2017 and so on.

TABLE 3.8: BREASTCHECK SCREENING DATA FOR 2015 AND PROJECTIONS FOR 2016 AND 2017

YEAR	AGE GROUP	ELIGIBLE POPULATION (50% OF COHORT)	NO. SCREENED	%
2015	50-69*	203,380	144,700	71.1
2016	50-69*	218,090	149,500**	70.0
2017	50-69*	234,100	163,900	70.0

Source: National Screening Service BreastCheck Programme, Central Statistics Office, Health Service Executive Performance Assurance Report December 2015, Health Service Executive Health and Wellbeing Operational Plan 2016

*As per age range extension implementation plan 2015-2021

**Target number to be screened with approximately 70% participation rate as per Operational Plan 2016

CERVICAL CHECK

- The CervicalCheck programme is provided to women aged 25-60 years.
- The current five year coverage rate (1 January 2011-31 December 2015) is 78.9%.
- The projected number of women that will be screened in 2016 and 2017 is indicated in Table 3.9 (both new women and previously screened women). This projects a coverage rate of 80% of the target population.

TABLE 3.9: CERVICALCHECK SCREENING DATA AND PROJECTIONS FOR 2016 AND 2017

YEAR	AGE GROUP	ELIGIBLE POPULATION	NO. SCREENED	%
2015	25-44	241,470		
	45-60	94,300		
		335,800	250,000	78.9
2016	25-44	239,730		
	45-60	92,250		
		335,980	255,000*	80.0
2017	25-44	236,450		
	45-60	96,230		
		335,680	250,000	80.0

Source: Central Statistics Office, Health Service Executive Performance Assurance Report December 2015, Health Service Executive Health and Wellbeing Operational Plan 2016

*Target number to be screened as per Operational Plan 2016

BOWEL SCREEN

- Bowel Screen – The National Bowel Screening Programme is currently available to men and women aged 60-69 years.
- The programme completed the initial round of screening at the end of 2015, which took three years to complete.
- From January 1st 2016, the programme commenced a two year screening round.
- As with all screening programmes, uptake cannot be calculated until after the completion of the screening round, when all data have been entered and evaluated. In the case of BowelScreen, this will be circa July 2016.
- The eligible population for the two year round (2016-2017) is estimated at 500,000.
- Invitations and estimated numbers to be screened in 2016, 2017 are set out in Table 3.10.

TABLE 3.10: BOWELSCREEN SCREENING DATA AND PROJECTIONS FOR 2016 AND 2017

YEAR	AGE GROUP	ELIGIBLE POPULATION	NO. SCREENED
2015	60-69	226,210	85,690
2016	60-69	231,650	106,875*
2017	60-69	273,100	123,000**

Source: Central Statistics Office, Health Service Executive Performance Assurance Report December 2015, Health Service Executive Health and Wellbeing Operational Plan 2016

*Target number to be screened as per Operational Plan 2016

**Estimated number based on participation rate of 45%

DIABETIC RETINASCREEN

- The National Diabetic Retinal Screening Programme invites people with diabetes, aged 12 and over, to be screened for diabetic retinopathy annually from 2015.
- The National Diabetic Retinal Screening Programme will invite in excess of 150,000 people with diabetes in 2016.
- However, in the absence of any prevalence data regarding the number of people aged 12 and above with diabetes, it is very difficult to project the demand for diabetic retinal screening.
- The National Diabetic Retinal Screening Programme is projecting a growth in demand of approximately 10,000 people per annum, which has been informed by the experience of other established National Diabetic Retinopathy Screening Programmes.

SCREENING OF MINORITY GROUPS

- All four screening programmes described above are population-based and target specific cohorts of men and women between the eligible age ranges. Ethnicity data is not collected so it is not possible to determine uptake of screening among certain population sub-groups, e.g. Travellers or Black and Minority Ethnic (BME) groups.
- The National Screening Service (NSS) employs Screening Promotion Officers (SPOs) who reach out to community groups to educate them about the benefits of screening. Such groups would include Traveller organisations (usually via the HSE's Traveller Health Units), other groups in socially deprived areas and other areas or counties where they have identified lower uptake than expected (for BreastCheck, this uptake data is available at DED level). For the population where English is not their first language, some NSS literature is translated into other languages, especially where consent is required. The NSS have access to external translators if needed.

RESEARCH AND DATA NEEDS

- Accurate population projections by Community Healthcare Organisation Area and, if possible, by Primary Care Network, are vital for accurate planning of health services into the future.
- A central data resource to update population health determinants and indicators from population surveys and datasets is required.
- Development of a suite of Irish based population attributable fractions for common risk factors and chronic diseases would also be beneficial.
- Population based health indicators at a regional/ CHO level e.g. Life Expectancy, Health Life Years, Disability Adjusted Life Years, Health Inequality indicators are needed.
- Irish population health cost data, similar to other European countries as demonstrated in the Ageing Report should be available.

04

ACUTE HOSPITALS



ACUTE HOSPITALS

PROJECTED **COST PRESSURE** IS  FROM **2016 TO 2017**

1.7%

PROJECTED INCREASE IN ADULT IN-PATIENT DISCHARGES FROM **2015 TO 2017**


OF ALMOST **12,000**

≈


340 ADULT IN-PATIENT BEDS

TROLLEYS

OVER THE LAST 3 YEARS THE HIGHEST TROLLEY NUMBERS ARE SEEN DURING **FEB MAR & APR**



DURING THIS TIME TROLLEY NUMBERS INCREASE BY **70-80** ON AVERAGE



DELAYED DISCHARGES

ALMOST **50%** OF DELAYED DISCHARGES OF PEOPLE AGED **65+** ARE WAITING FOR COMMUNITY SUPPORT



IN 2015 ADULTS AGED **65 & OVER** REPRESENT **13%** OF THE POPULATION BUT USED **54%** OF THE TOTAL HOSPITAL IN-PATIENT BED DAYS

ADULTS AGED **85 & OVER** REPRESENT **1.4%** OF THE POPULATION BUT USED APPROX **14%** OF THE IN-PATIENT BED DAYS

DAY CASE INCREASING ANNUALLY BY **3 TO 4%**



EMERGENCY DEPARTMENTS



IN **2015** THERE WERE **>860,000** ADULT EMERGENCY DEPARTMENT (ED) ATTENDANCES

IN **26** ADULT HOSPITALS

75% WERE UNDER **65** YEARS OF AGE

MORE THAN **HALF** OF OVER **65's** ARE ADMITTED


51% OF ALL CHILDREN UNDER 1 YEAR ATTENDED EDs

OPPATIENT DEPARTMENTS

IN 2015 THERE WERE NEARLY **3 MILLION** ADULT OPD ATTENDANCES WHICH INCLUDED ALMOST **800,000** NEW PATIENTS

WAITING LISTS FOR TOP PROCEDURES, **COLONOSCOPY CATARACT SURGERY & GASTROSCOPY** ARE **INCREASING EACH YEAR**



ASSUMPTIONS

- An assumption is made that hospital discharge rates, unit costs, models of care and the ratio of in-patients to day cases, will remain stable between 2016 and 2017.
- The population projections used are the CSO M2F2 assumptions.
- The Healthcare Pricing Office (HPO) produced age-specific utilisation rates for in-patient discharge and day case discharge rates for 2015. This was applied to our population projections, to project activity (numbers of discharges and bed days) for 2017 and 2022 under the assumption that hospital discharge rates for in-patients and day cases remain stable and models of care remain unchanged between 2015 and 2017.
- The HIPE file that was used for all analyses was “HIPE_2015_AsOf_0216_V15”.
- No new service improvement initiatives are included in projections of activity or costs. These reflect only the effect of demographic pressure.

COSTS

- It is projected that there will be a total in-patient and day case cost pressure of 1.7% from 2016 to 2017.
- There will also be an average annual demographically driven cost pressure of approximately 1.8% from 2015 to 2022, reflecting the acceleration in population ageing.

ACTIVITY

- In 2015, adults aged 65 years and over represented 13% of our population but used 54% of total hospital in-patient bed days and approximately 37% of day case and same day bed days.
- Adults aged 85 years and over represented 1.4% of our total population but used approximately 14% of the in-patient bed days.
- It is projected that there will be an overall increase of 11,900 in adult in-patient discharges between 2015 and 2017. This equates to approximately 344 additional adult hospital in-patient beds at 100% utilisation of seven day beds.
- A diagnosis related group (DRG) analysis of admissions in the over 65s showed that the top DRGs, which accounted for 20% of all bed days in this group, included hip replacement, respiratory disease, heart failure and stroke. These were also the most resource-intensive conditions in an analysis of the top DRGs in the over 85s.
- There has been an increase in hospital activity in recent years which is largely related to increased day case activity. Day case admissions have been increasing annually by 3-4% since 2009.
- Adult day cases are projected to increase by 35,280 from 2015 to 2017.
- 67% of surgical cases were admitted on the day of surgery in 2015, compared to the national target of 70%. There was, however, wide variation in day of surgery admission rates between hospitals.
- 746 patients were waiting 15 months and over for in-patient or day case treatment at the end of December 2015.

EMERGENCY DEPARTMENTS

- In 2015 there were 865,057 adult Emergency Department (ED) attendances, in 26 adult hospitals. Of these, 68% were 17-64 years old, 21% were 65-84 years and 5% were 85 years and over.
- Approximately 1 in 2 adults aged 65 years and over presenting to ED were admitted, compared to 1 in 5 adults aged 17-64 years.
- During 2015 approximately 62% of ED attendees spent less than 6 hours in the ED and 77% spent less than 9 hours in the ED. The HSE targets were 95% and 100% respectively.
- In 2017, if ED attendance rates remain constant, it is projected that ED attendances will increase by over 3,200 for those aged 85 and over and by 11,581 for those aged 65-84.

TROLLEYS

- In 2015 the average number of patients on trolleys per day was 292 which increased from 241 in 2014 and 230 in 2013. This figure has increased to 326 in 2016.
- Over the last three years, the highest trolley numbers are seen during the months of February, March and April. This rise is related to winter pressures, which include peaks in influenza notifications and outbreaks of norovirus. During this time the trolley numbers increase by 70-80 on average.

ACUTE MEDICAL ASSESSMENT UNITS

- From 2013 to 2015, there has been an increase of 20% in attendances at registered Acute Medical Assessment Units (AMAU).
- In 2015 there were 95,300 attendances at registered AMAUs.
- In 2015, 53% of AMAU attendances were adults aged 17-64 years and 46% were adults aged 65 years and over.
- Because the AMAU is a relatively new care setting, with new hospitals providing the service each year, the data are not stable enough at a national level to project levels of service for 2017.

OUTPATIENT DEPARTMENTS

- There were 2,887,592 adult OPD attendances in 2015, which included 789,327 new patients.
- Based on the throughput of 2015, it is projected that, in 2017, there will be over 11,000 additional new patients seen in OPD if referral rates remain constant.
- In 2015, waiting lists reduced in the most in-demand OPD specialties, including orthopaedics, dermatology, ENT and general surgery. This was due to a HSE initiative to tackle the number of those waiting 15 months and over. 2,652 GI endoscopies were outsourced to private hospitals in 2015.
- 9,887 patients were waiting longer than 15 months for an outpatient appointment at the end of December 2015, with 5,262 waiting longer than 18 months.
- Waiting lists for top procedures, particularly colonoscopy, cataract surgery and gastroscopy, are increasing every year.
- A recent HSE demand capacity report found that 5,800 additional scopes will be required for 2016 to maintain waiting lists at their current levels if referral rates remain constant.
- The numbers referred for urgent scopes increased in 2015 in all age groups.

DELAYED DISCHARGES

- In 2015, the average number of delayed discharges (648) was lower than the 2014 average (692) but never reached the 500 target.
- In 2015, 48% of delayed discharges aged 65 years and over were awaiting the Nursing Home Support Scheme (NHSS) or a home care package.
- Increasing availability of rehabilitation beds could potentially free up 12% of delayed discharge beds in those aged 65 years and over.

PAEDIATRICS

- For paediatric patients the likelihood of admission decreases with increasing age, with highest admission rates in those aged under 1.
- According to 2015 Patient Experience Time (PET) data, 51% of all children aged under 1 attended EDs.
- Using HIPE data, 30% of the total population aged under 1 were admitted to hospital via the ED in 2015.

HEALTH INEQUALITIES

- Deprived populations have a higher 30-day in-hospital mortality after an emergency medical admission, a higher rate of emergency medical admissions and a higher rate of admissions for Ambulatory Care Sensitive Conditions.
- Mental illness, homelessness, alcohol and substance abuse were associated with significantly higher ED attendance rates. 60% of the most frequent attenders were, or had recently been, homeless. The most frequent attender presented to the ED 404 times in 2014.

RESEARCH AND DATA NEEDS

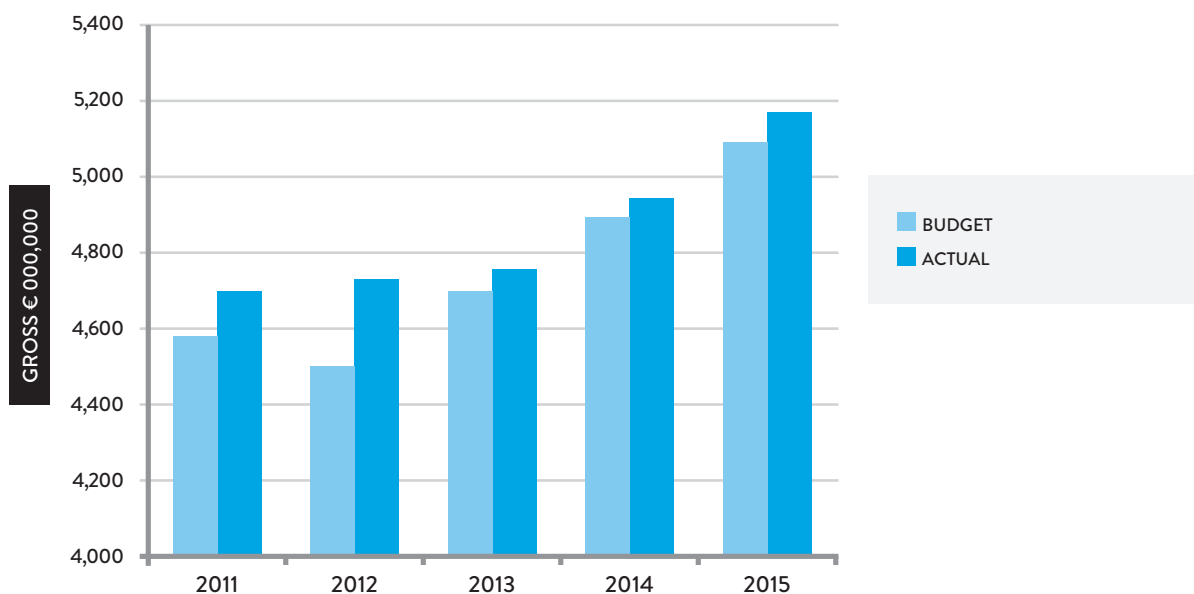
- Focused data analysis can be carried out with hospitals experiencing specific difficulties where national metrics can mask individual hospital metrics.
- Hospital patient outcomes dataset should be developed and piloted to demonstrate a profile of hospital patient outcomes.
- Existing hospital activity data can be mined more extensively and be more readily available in a user friendly platform to assist with service planning.
- Hospital bed costings by DRG is an essential requirement for planning and should be made available for economic analysis and business case development.
- Innovative pilot schemes that are currently underway as part of the integrated programmes should be evaluated to demonstrate if scalability is feasible and thus assist in business case development.
- Hospital group level data will assist greatly with hospital group level needs assessments.
- It is essential that a standard methodological approach is taken in the development of Hospital Group specific denominators.
- It is recommended that Hospital Group needs assessments are carried out in collaboration with CHOs to assist with a co-ordinated integrated programme of care approach.
- Regular bed utilisation surveys are required to examine appropriate use of hospital beds and to identify specific discharge barriers by hospitals.
- An age-specific patient journey map from primary through secondary and tertiary care will inform the needs and requirement of specific age cohorts.
- Whenever relevant and possible, HIPE data should include socio-economic status and socially excluded groups, to enable equality monitoring of all services and to monitor progress towards a reduction in health inequalities.

ECONOMIC CONTEXT

The Planning for Health 2016 report described hospital activity for 2015 at all stages of the patient journey. It highlighted the pressure on our hospitals from Emergency Department (ED) attendance, through admission to discharge, in the context of constrained and diminishing budgets. Many of the trends described in the last report, in particular the demographic pressure, have continued through 2016 into 2017.

- In 2017 we can expect a population increase of 34,800, with an additional 19,800 aged 65 years and over, and 2,600 aged 85 years and over. The effects of this ageing population, many of whom suffer from multiple chronic diseases, are highlighted in this chapter.
- Since 2011 there has been a consistent underestimation of the budget necessary to fund Acute Hospitals. Every year a supplementary budget has been required for a deficit of 3% and 5% in 2011 and 2012, to a consistent 1% underestimation of the budget from 2013 onwards. (Figure 4.1).

FIGURE 4.1: ACUTE HOSPITAL FUNDING, BUDGET VS. EXPENDITURE, 2011 TO 2015

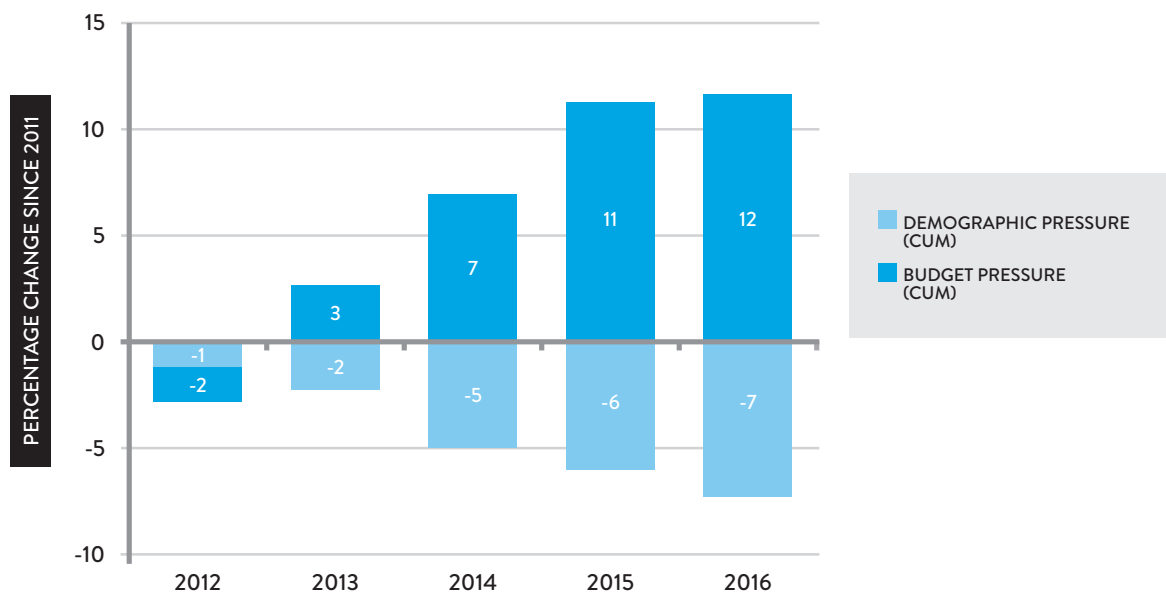


Source: Health Service Executive Performance Reports 2011 – 2015

Note: In the period of analysis there has been some reclassification of what constitutes Acute Services

- If we add the effect of population growth on the demand for acute hospital services we can see that, in real terms, yearly gains in funding are being impacted by the “pure” demographic effect. This is shown in Figure 4.2

FIGURE 4.2: EFFECTIVE CUMULATIVE COST PRESSURES: HOSPITALS GROSS BUDGET AND “PURE” DEMOGRAPHIC EFFECT



Source: Health Service Executive Performance Reports 2011-2016 - 2016 latest PR, Central Statistics Office Population Projections

Note: In the period of analysis there has been some reclassification of what constitutes Acute Services

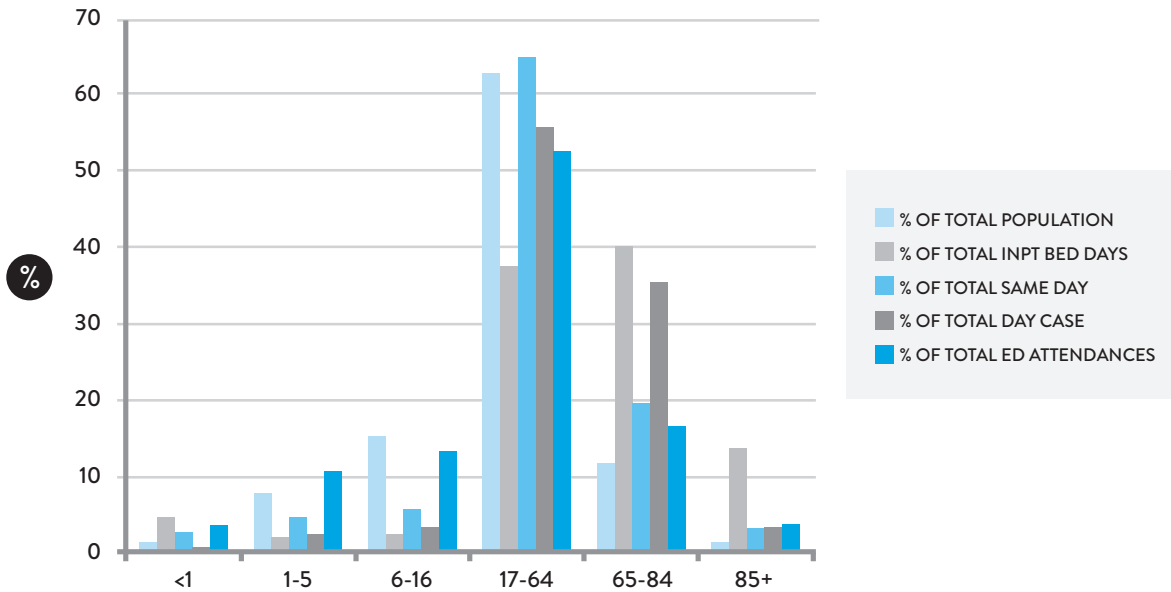
WHAT LEVEL OF SERVICE WILL BE REQUIRED 2017-2022?

PROJECTED SERVICE UTILISATION 2017-2022

The implication of the ageing population is that the demand for health services is growing disproportionately, as health service utilisation by this group is greater than that of the general population. There has been a steep increase in in-patient bed days, from approximately 1.72 million in 2011, to over 1.88 million bed days in 2014 in the cohort aged 65 years and over.

- In 2015, our population aged 65 years and over represented 13% (604,825 people) of our population but 53.4% of total hospital in-patient bed days and approximately 39% of day cases were in this group (Figure 4.3).
- Similarly, the frail elderly aged 85 years and over represented 1.4% (67,062 people) of our total population, but used 13.6% of in-patient bed days.

FIGURE 4.3: HOSPITAL ACTIVITY BY AGE GROUP IN 2015

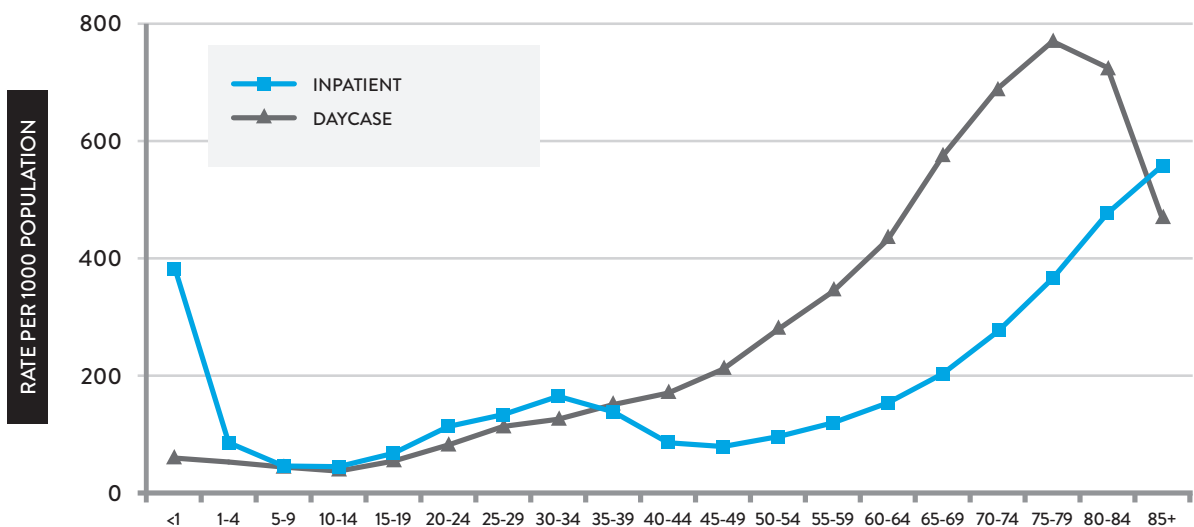


Source: Healthcare Pricing Office, Central Statistics Office, Business Information Unit
 Note: The utilisation rates are based on Healthcare Pricing Office, Central Statistics Office, Business Information Unit activity in 2015. Hospital Inpatient Enquiry dataset used was approximately 98% complete at the time of analysis

The utilisation of acute hospital services can be best displayed as age specific discharge rates per 1,000 population. The discharge rate per 1,000 population allows us to understand which age groups are the predominant users of our acute in-patient services.

- It is evident that acute hospital in-patient utilisation increases dramatically among those aged 65 years and over – Figure 4.4.
- The day case discharge rates increase from the age of 30 but more steeply between 60-80 years, dropping dramatically after that – Figure 4.4.

FIGURE 4.4: AGE SPECIFIC DISCHARGE RATES PER 1000 IN 2015-IN-PATIENTS AND DAY CASES



Source: Healthcare Pricing Office

- It is projected that in 2017 there will be an overall increase in the number of adult in-patient discharges of 11,900 over the 2015 figure (Table 4.1). This is largely a result of predicted increases in the group aged 65 years and over.
- It is projected that an approximate increase of 125,400 adult bed days will be required from 2015 to 2017, to provide for the demographic pressure of our growing population. This equates to approximately 344 additional adult hospital in-patient beds, at 100% utilisation of seven day beds.
- A forecast for 2017-2022 outlines an overall increase in adult discharges of approximately 42,000 from 2017 if current utilisation rates remain constant (Table 4.1).

TABLE 4.1: ADULT IN-PATIENT DISCHARGES AND BED DAY UTILISATION IN 2015 AND PROJECTED TO 2017 AND 2022

	2015		2017		2022	
	DISCHARGES	BED DAYS	DISCHARGES	BED DAYS	DISCHARGES	BED DAYS
17-64 years	343,947	1,350,218	342,585	1,344,870	345,390	1,355,885
65-84 years	159,402	1,419,149	169,573	1,509,700	199,800	1,778,810
85+ years	37,469	476,592	40,633	516,830	50,074	636,920
TOTAL	540,818	3,245,959	552,791	3,371,400	595,264	3,771,615

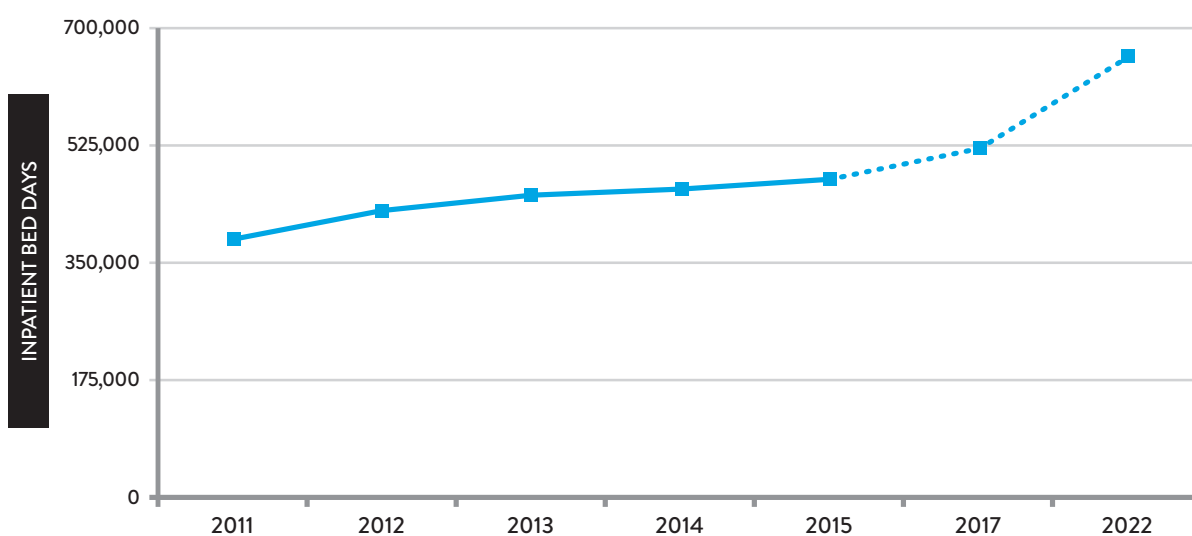
Source: Healthcare Pricing Office, Central Statistics Office

Note: 2015 Hospital Inpatient Enquiry file provisional and subject to change. Same day in-patients receive a bed day of 0.5

ADULTS 85 YEARS AND OVER

Figure 4.5 shows the bed days used by the 85+ age group since 2011. The number of bed days rose by 20% between 2011 and 2015. This number is projected to increase by a further 34% between 2015 and 2022.

FIGURE 4.5: IN-PATIENT BED DAYS USED BY THE 85+ AGE GROUP 2011-2015 AND PROJECTED TO 2017 AND 2022



Source: Healthcare Pricing Office

In recent years there has been significant movement from in-patient care to day cases, but there will always be patients that need to be treated as same day in-patients or overnight in-patients, due to frailty or pre-existing co-morbidities.

- In 2017, it is projected that there will be an overall increase in adult day case discharges of 35,280. This is largely as a result of predicted increases in the over 65 age group. A forecast to 2022 outlines an overall increase in adult day case discharges of approximately 136,500, from 2015 if current utilisation rates remain constant (Table 4.2).

TABLE 4.2: ADULT DAY CASE DISCHARGES IN 2015 AND PROJECTED TO 2017 AND 2022

	2015 (N)	2017 (N)	2022 (N)
17-64 years	566,155	575,310	601,660
65-84 years	359,291	383,574	449,240
85+ years	31,393	34,235	42,706
TOTAL	956,839	992,119	1,093,606

Source: Healthcare Pricing Office, Central Statistics Office. Note: 2015 Hospital Inpatient Enquiry file is provisional and subject to change

HOW MUCH WILL IT COST?

DEMOGRAPHIC EFFECT ON ACUTE HOSPITAL COSTS

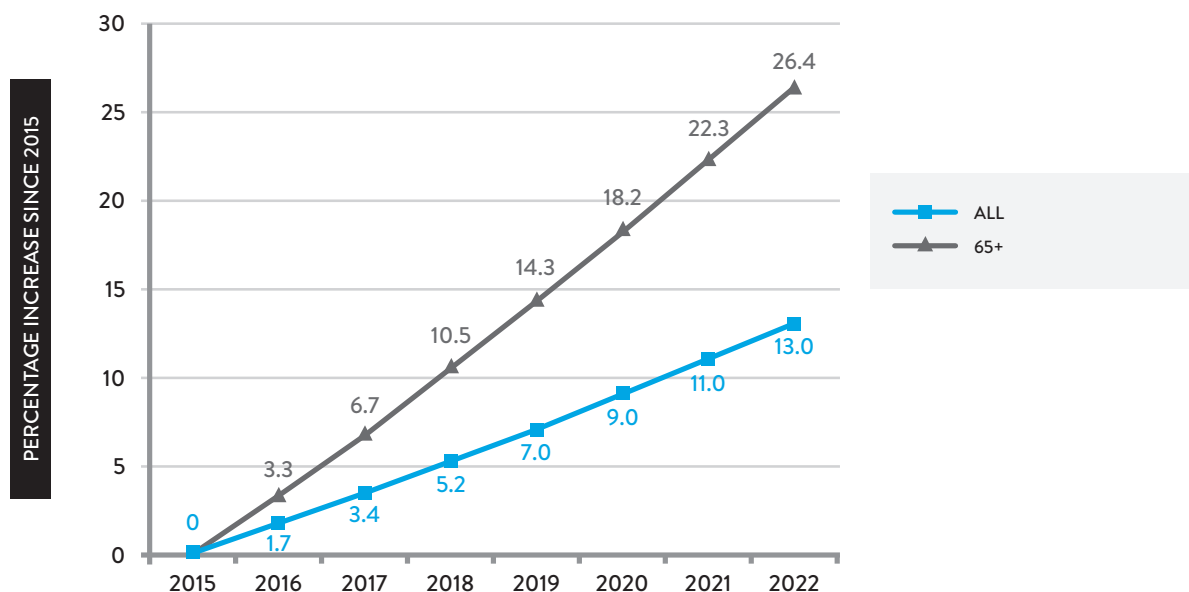
The complexity of health care makes expenditure projections a challenge but using casemix indices provides a best estimate. Casemix provides a means for standardising data collected on activity and costs within acute hospitals, so that meaningful comparisons can be made between different areas of activity, type of activity and hospitals. The casemix index represents a unit measurement of the relative complexity of the patients treated.

Casemix data can be matched with data on age-specific discharge rates in order to obtain estimates of total in-patient and day case costs for each age group (Figure 4.6). It is apparent that healthcare costs directly increase with age. Keeping the casemix indices and the age-specific discharge rates constant, the values for each age group can be applied to the projected populations for 2017 and up to the year 2022.

Combining in-patient and day case discharges provides a view of total cost pressures facing publicly funded acute hospitals, in managing their in-patient and day case workloads for 2017 and over the five year period to 2022.

- From 2016 to 2017 a total cost pressure of 1.7% is predicted for acute hospitals.
- In addition there will be an average annual demographically driven cost pressure of approximately 1.85% from 2015 to 2022, with a rising rate reflecting the acceleration in population ageing over the period.
- The cost pressures that have been building in the system from 2009 should also be considered when taking any views on service planning. The 1.7% change from 2016 to 2017 is the additional cost necessary driven by “pure” demographic effect - this does not take into account the pre-existing known deficits or any new initiatives being implemented in the system.

FIGURE 4.6: PROJECTED TOTAL IN-PATIENT AND DAY CASE PERCENTAGE COST CHANGES, ALL AGES AND 65 YEARS AND OVER, 2015 TO 2022



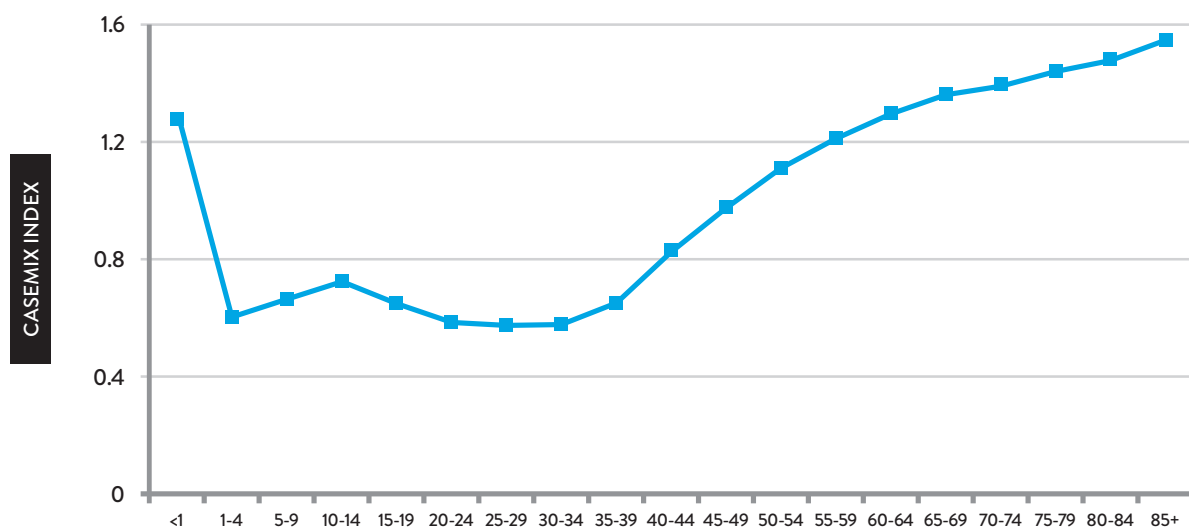
Source: Healthcare Pricing Office, Central Statistics Office

PROJECTED IN-PATIENT COSTS

Figure 4.7 shows the relative cost of providing in-patient care by age group. The relative cost of care is described in terms of the casemix index. A casemix value of 1 represents the overall average cost. The casemix index is approximately 1.3 for infants under 1 year of age, then falls steeply to values of around 0.6 for ages up to 39 years, followed by a steady rise to a value of just under 1.6 for those aged 85 years and over. This is similar to what was reported in 2014.

- After the age of 40 the casemix index increases significantly with age as demonstrated below

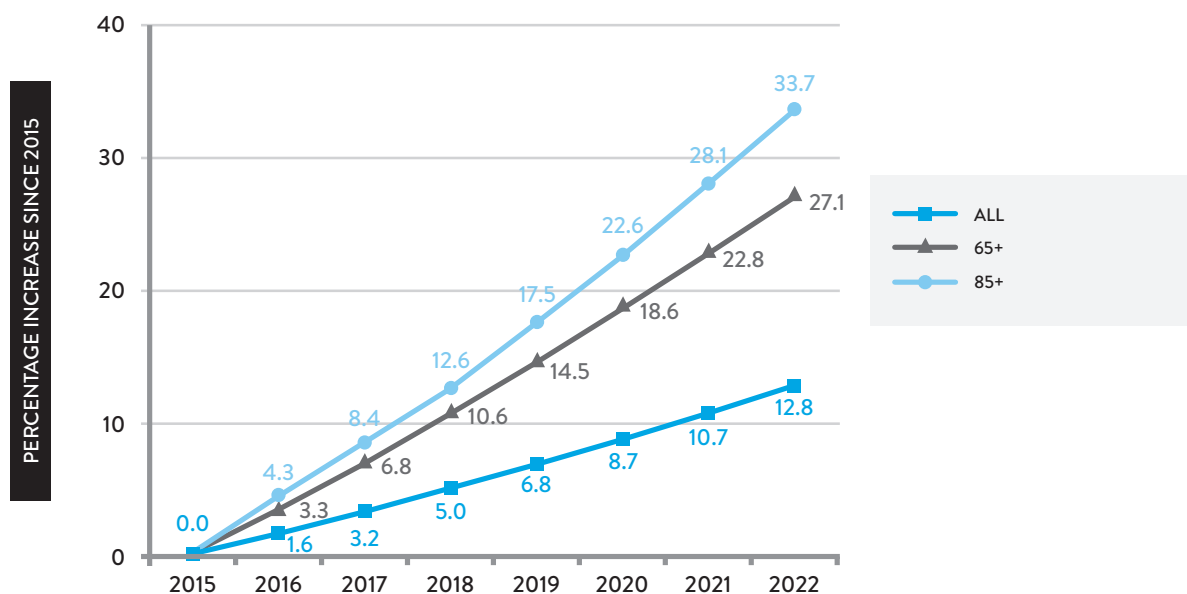
FIGURE 4.7: RELATIVE COST OF IN-PATIENT TREATMENT (CASEMIX INDEX) BY AGE CATEGORY 2015



Source: Healthcare Pricing Office, Hospital Inpatient Enquiry

- The projected total change in in-patient costs from 2016 to 2017, for the total population, shows an increase of 1.6% on the 2016 budget – Figure 4.8.
- The steepest rises in cost pressures occur in the older groups, reflecting the combination of higher utilisation rates with age, higher treatment costs with age and rapid population ageing.
- Those aged 65 years and over are showing a 3.3% increase for 2015-2016 and a 3.5% increase for 2016-2017. Those aged 85 years and over are showing 4.3% and 4.1% increases for the same time periods.

FIGURE 4.8: PROJECTED PERCENTAGE INCREASES IN IN-PATIENT COST PRESSURES BASED ON DEMOGRAPHIC PROJECTIONS: ALL AGES, 65+ AND 85+, 2015 TO 2022



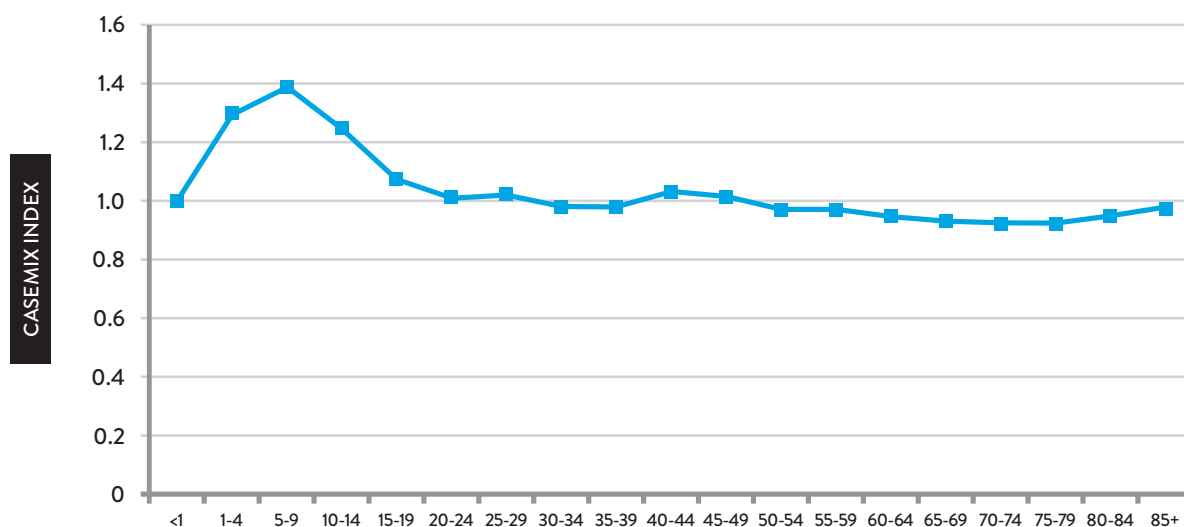
Source: Healthcare Pricing Office, Central Statistics Office

PROJECTED DAY CASE COSTS

The pattern of relative costs and hospital discharge rates by age group is very different for day cases. Relative costs decline with age (with the exception of the very young) as demonstrated in Figure 4.9. Analysing the utilisation rates and the casemix index together for day cases, it can be seen that a high percentage of patients aged 65 years and over are treated as day cases but for treatment that is less complex than the average day patient. Given the likelihood of co-morbidities and frailty with age, patients with higher complexity and morbidity are more likely to be treated as in-patients resulting in a lower casemix index for those aged 65 years and over treated as day cases.

While the shift to day cases represents a more efficient use of resources overall, it is important to recognise the impact that this has on the in-patient and day case unit costs. The activity that was previously considered in-patient but is now carried out on a day case basis tends to be the less complex in-patient work. However, this work tends to be more complex than the previous day case activity. By shifting this less complex in-patient work to a day case setting, the overall level of complexity of both in-patient and day case work increases. This then has the knock-on effect of placing upward pressure on the unit cost of both in-patient and day case activity.

FIGURE 4.9: CASEMIX INDEX BY AGE GROUP, DAY CASES 2015

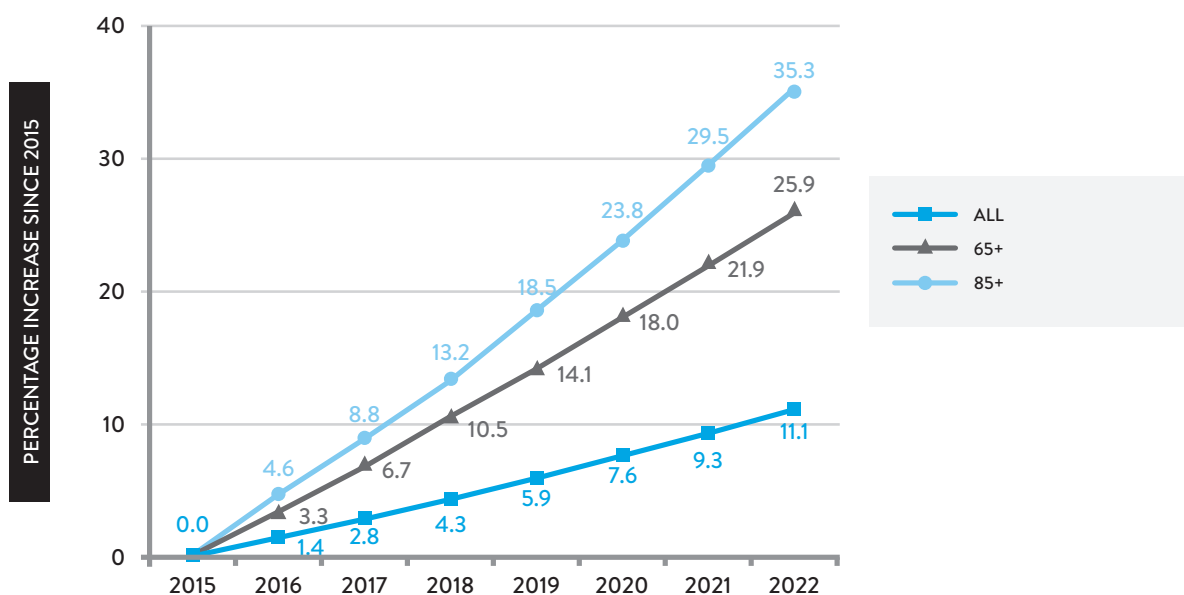


Source: Healthcare Pricing Office

Projected day case costs for 2017 and up to 2022 results in a trend very similar to that of in-patient costs for all ages. The reason for this, despite the very different cost structure and pattern of discharges, is the very marginal decline in relative cost by age is offset by the steep rise in discharge rates in the large age cohorts up to the age of 79. Projecting these statistics forward highlights a significant population ageing effect.

- The projected change in day case costs for the total population shows an increase of 1.4% on the 2016 budget.
- Those aged 65 years and over are showing a 3.4% increase for 2016-2017.

FIGURE 4.10: PROJECTED PERCENTAGE INCREASE IN DAY CASE COSTS BASED ON DEMOGRAPHIC EFFECT: ALL AGES, 65+ AND 85+, 2015 TO 2022

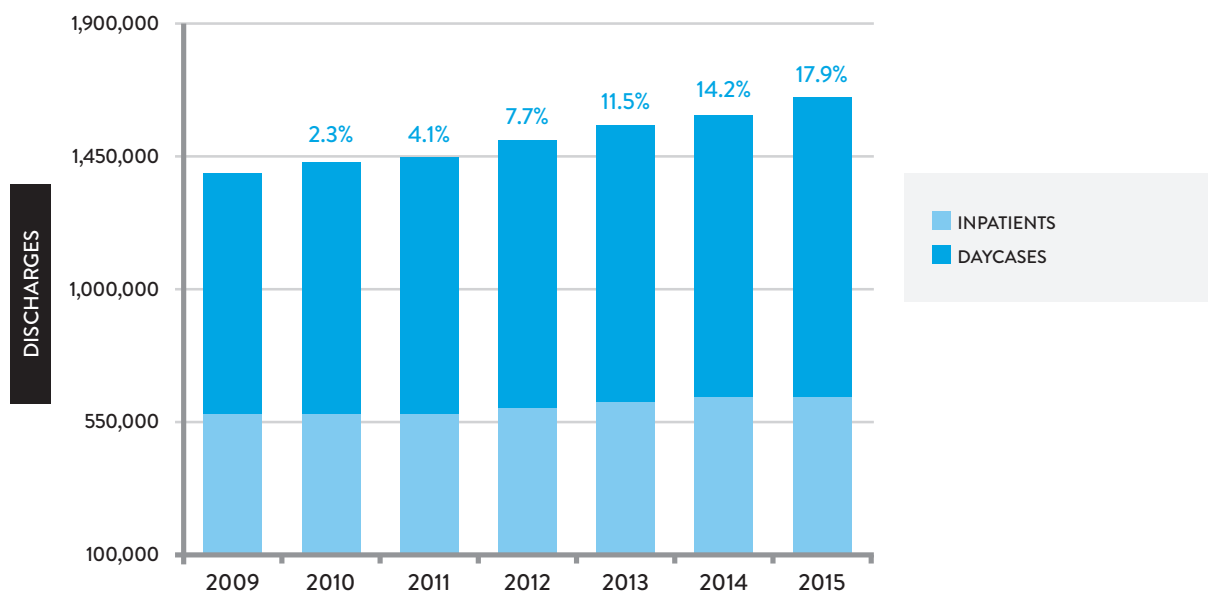


Source: Healthcare Pricing Office, Central Statistics Office

EFFICIENCY REACHING SATURATION POINT

Using a number of indicators, examination of hospital data continues to show increased hospital activity. It can be seen from Figure 4.11 below, that in recent years the increased hospital activity is largely related to increased day case activity. This large increase in day case activity is evidence of the acute system continuing to manage increased demand by delivering care in lower cost settings.

FIGURE 4.11: TOTAL IN-PATIENT AND DAY CASE DISCHARGES AND CUMULATIVE PERCENTAGE INCREASE 2009-2015



Source: Healthcare Pricing Office

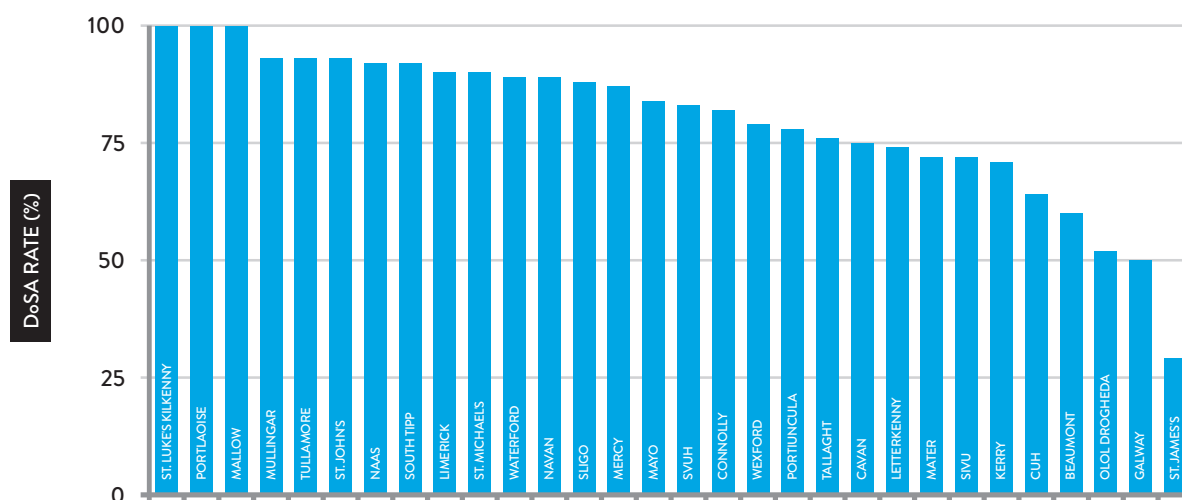
Note: Percentages refer to cumulative percentage increase in total discharges from 2009
2015 Hospital Inpatient Enquiry file is provisional and therefore subject to change

- Day cases have been increasing annually by approximately 3-4% since 2009.
- At this incremental rate of increase, it is possible that we will have reached maximum efficiency gain in the near future. Prediction of the timeline of this saturation point will benefit from further evaluation of current caseload and demographic profiling.

DAY OF SURGICAL ADMISSIONS (DOSA)

- Where possible, surgical admissions are on the day of surgery, with 67% of all patients admitted on the day of surgery in 2015, compared to the HSE target of 70%. The Irish definition of DoSA, which defines the specific surgical procedures, does not allow for international comparisons.
- The national DoSA target for 2016 is 75%.
- There is, however, a huge variation in DoSA rates between hospitals (range 29%-100%). In addition, hospitals are not directly comparable because of issues such as complexity of cases. Targets ranging from 5-15% of 2015 performance have been set on a hospital-by-hospital basis for 2016, taking individual hospital factors into account and setting more realistic targets.

FIGURE 4.12: PERCENTAGE OF DAY OF SURGERY ADMISSIONS BY HOSPITAL: JAN 2016 (ONE MONTH IN ARREARS)



Source: Compstat

COMPLEXITY AND MEDICAL NEEDS OF THE FRAIL ELDERLY

DIAGNOSIS RELATED GROUPS (DRGS)

DRGs are a patient classification scheme consisting of classes of patients who are clinically similar and have similar resource usage. Each case treated by an acute hospital can only be assigned to one, and only one DRG. Assignment is based on a complex algorithm, using six items of information: Age, Sex, Principal Diagnosis, Secondary Diagnosis, Procedures performed and Discharge Status. The weighted unit is a representative of the unit cost - e.g. the DRG I03B Hip Replacement had 3,252 cases, but the weighted units were 8,041. This tells us the relative complexity of patients in DRG I03B is almost 2.5 times that of an average patient. Therefore they have higher resource needs. A DRG analysis for 2015, as ranked by weighted units, shows the top 10 DRGs for in-patients aged 65 years and over (Table 4.3).

- The number of bed days for overnight in-patients aged 65 years and over in these top 10 DRGs is approximately 375,900, approximately 20% of total overnight bed days in this age cohort.
- Six of the top ten DRGs relate to respiratory disease and heart failure, two chronic medical conditions.
- Hip fracture is the most resource-intensive grouping in this age cohort. Primary prevention initiatives to reduce falls in the elderly would reduce the number of these admissions. Initiatives to prevent strokes and treat patients quickly after a stroke, also lead to reductions in hospital bed days in these top DRGs.

TABLE 4.3: OVERNIGHT IN-PATIENT DRGS (AGED 65 AND OVER) RANKED BY WEIGHTED UNITS, 2015

DRG	DESCRIPTION	VOLUME	WEIGHTED UNITS	BED DAYS
I03B	Hip replacement without catastrophic complications or comorbidities	3,252	8,041	29,168
E62A	Respiratory infections/inflamations with catastrophic complications or comorbidities	3,116	7,541	56,207
E65B	Chronic Obstructive Airways Disease without catastrophic complications or comorbidities	7,443	5,498	54,561
B70A	Stroke and other cerebrovascular disorders with catastrophic complications or comorbidities	1,059	5,414	42,668
L63A	Kidney and urinary tract infections with catastrophic or severe complications or comorbidities	3,024	5,045	48,665
E62B	Respiratory infections/inflamations with severe or moderate complications or comorbidities	3,159	4,100	32,535
E75B	Other respiratory system diagnosis with severe or moderate complications or comorbidities	3,856	3,559	34,379
F62B	Heart failure and shock without catastrophic complications or comorbidities	3,329	3,413	27,625
F62A	Heart failure and shock with catastrophic complications or comorbidities	1,260	3,383	24,004
B70B	Stroke and other cerebrovascular disorders with severe complications or comorbidities	1,252	3,294	26,064

Source: Healthcare Pricing Office

Note: Excludes tracheostomy and rehabilitation

A further DRG analysis for 2015 shows the top 10 DRGs for in-patients aged 85 years and over as ranked by weighted units (Table 4.4).

- Respiratory infections/inflammation are the most resource-intensive grouping in this age cohort.
- Six of the top ten DRGs relate to respiratory disease and heart failure.
- Hip fracture/stroke and kidney/urinary tract infections also feature in the top ten DRGs.

TABLE 4.4: OVERNIGHT IN-PATIENT DRGS (AGED 85 AND OVER) RANKED BY WEIGHTED UNITS, 2015

DRG	DESCRIPTION	VOLUME	WEIGHTED UNITS	BED DAYS
E62A	Respiratory infections/inflamations with catastrophic complications or comorbidities	1,252	3,040	23,270
B70A	Stroke and other cerebrovascular disorders with catastrophic complications or comorbidities	395	1,962	15,434
L63A	Kidney and urinary tract infections with catastrophic or severe complications or comorbidities	1,097	1,862	18,980
I03B	Hip replacement without catastrophic complications or comorbidities	512	1,384	7,313
E75A	Other respiratory system diagnosis with catastrophic complications or comorbidities	706	1,315	12,677
E62B	Respiratory infections/inflamations with severe or moderate complications or comorbidities	1,003	1,304	10,910
F62A	Heart failure and shock with catastrophic complications or comorbidities	439	1,170	8,356
I08B	Other hip and femur procedures without catastrophic complications or comorbidities	480	1,161	8,406
F62B	Heart failure and shock without catastrophic complications or comorbidities	1,052	1,127	9,726
E75B	Other respiratory system diagnosis with severe or moderate complications or comorbidities	1,155	1,088	11,608

Source: Healthcare Pricing Office

Note: excludes rehabilitation DRGs as per the 65+ DRG tables

Table 4.5 describes the top 10 DRGs in those aged 17-64 by weighted unit volume:

- The top DRGs in this age group are principally surgical procedures, with the exception of COAD and cellulitis. These are both medical conditions suitable to treatment in the community by community intervention team or supported primary care. More research and modelling is necessary to examine the cost benefit of care for these conditions in a primary care setting.

TABLE 4.5: OVERNIGHT IN-PATIENT DRGS (AGED 17-64) RANKED BY WEIGHTED VOLUME, 2015

DRG	DESCRIPTION	VOLUME	WEIGHTED UNITS	BED DAYS
I03B	Hip replacement without catastrophic complications or comorbidities	1,651	3,891	7,978
G07B	Appendectomy without malignancy or peritonitis without catastrophic or severe complications or comorbidities	3,068	2,882	8,054
I13B	Humerus, tibia, fibia and ankle procedures without complications or comorbidities	2,457	2,882	7,377
G02B	Major small and large bowel procedures without complications or comorbidities	945	2,711	9,461
H08B	Laparoscopic cholecystectomy without closed CDE without catastrophic or severe complications or comorbidities	2,088	2,516	4,365
E65B	Chronic obstructive airways disease without catastrophic complications or comorbidities	2,570	1,809	14,424
L04C	Kidney, ureter and major bladder procedures for non-neoplasm without catastrophic or severe complications or comorbidities	888	1,799	3,822
J06Z	Major procedures for breast conditions	1,283	1,775	3,319
N04B	Hysterectomy for non-malignancy without catastrophic or severe complications or comorbidities	1,294	1,770	5,627
J64B	Cellulitis without catastrophic or severe complications or comorbidities	2,986	1,740	11,115

Source: Healthcare Pricing Office

Note: Excludes tracheostomy

EMERGENCY DEPARTMENTS (EDS)

EDs receive a lot of attention, largely because of the difficulties faced by - and posed by - patients on trolleys who are unable to access beds on the wards and other problems associated with ED overcrowding. Although patients on trolleys place considerable pressure on the EDs, the solution requires a whole hospital system approach.

ED ATTENDANCES

In 2015 Patient Experience Time (PET) data coverage improved with data returned from 29 hospitals, including three paediatric hospitals. PET data describes what happens to all ED attendees with regard to time spent in and discharge from the ED or admission to hospital. The age breakdown of the adult attendees and admission rates by age groups are shown in Table 4.6. The likelihood of admission increases with increasing age.

TABLE 4.6: EMERGENCY DEPARTMENT ATTENDANCES AND ADMISSIONS 2015

AGE GROUP	NO. OF ATTENDANCES	% OF ED ATTENDANCES	% ADMITTED
All Ages	865,057	100	26
17-64	591,909	68	20
65-84	183,827	21	45
85+	40,721	5	59

Source: Business Information Unit, Health Service Executive

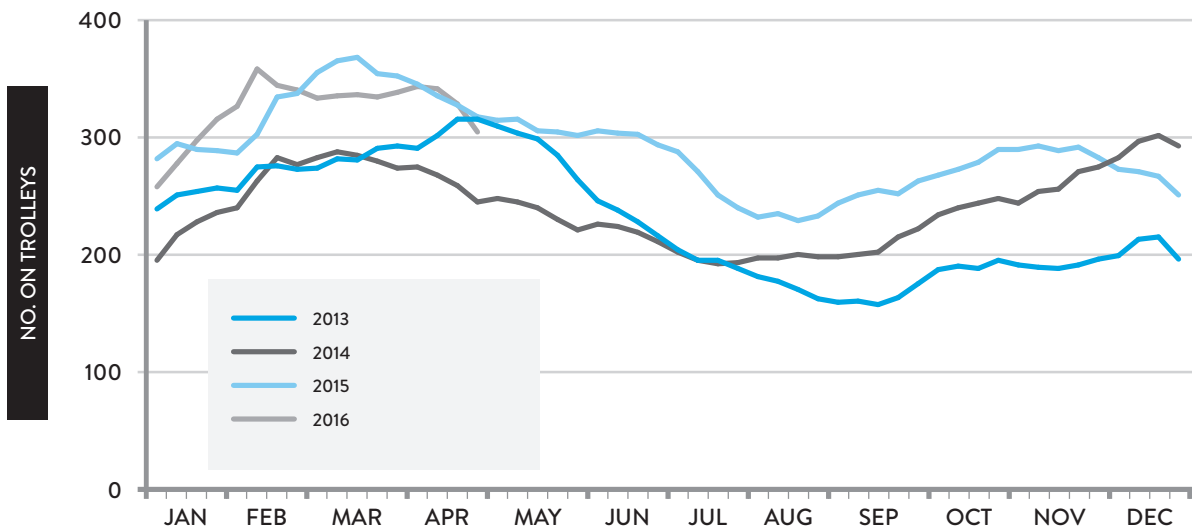
- In 2015 there were 865,057 attendances, with two thirds (68%) representing adults 17-64 years.
- Approximately 1 in 2 adults aged 65 years and over presenting to ED are admitted, in comparison to 1 in 5 adults aged 17-64 years.
- There was a proportional increase of 8% in ED attendances from 2014-2015 in the PET hospitals; approximately an 11% increase in ED attendances among adults aged 65-84 years and a 14% increase in ED attendances among adults aged 85 years and over.
- If rates continue at 2015 levels into 2017, it is projected that ED attendances will increase by over 3,200 for those aged 85 years and over and by 11,581 for those aged 65-84 years.

TROLLEYS

Figure 4.13 shows the 30 day moving averages for adults on trolleys, from 2013 to 2016:

- In 2015 the average number of patients on trolleys was 292 per day, which represented an increase from 241 in 2014 and 230 in 2013. This increased to 326 in 2016 but only for four months, which are traditionally the busiest months of the year for trolleys.
- Over the last four years the highest trolley numbers are seen from February to April. This rise is related to 'winter pressures', which include peaks in influenza notifications, outbreaks of norovirus and exacerbations of COPD. During this time the trolley numbers increase by 70-80 per day on average. This increase in trolleys is a sign of a system under pressure and is often accompanied by containment measures, such as the implementation of the full capacity protocol in hospitals and a reduction in elective surgical admissions.
- 201 additional hospital beds were added to the system by the end of 2015.
- Approximately 150 further beds are currently being deployed during 2016, which includes both reopened beds and new beds funded under the Winter Initiative. It is hoped that the impact of these beds will be seen over the coming months.

FIGURE 4.13: TROLLEY NUMBERS 2013-2016



Source: Department of Health. The data refer to the number of patients on trolleys in EDs, as counted at 8am by the INMO (Monday - Friday only, excluding bank holidays). 30 day moving averages.

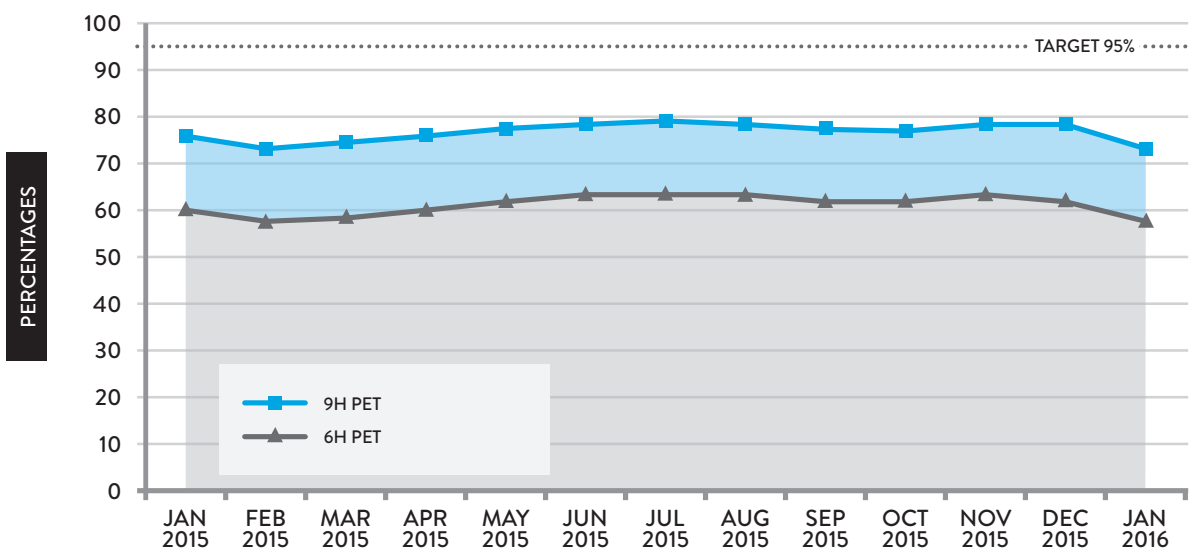
EMERGENCY DEPARTMENT TARGETS

- In 2015 the HSE target was that 95% of ED attendees should spend less than six hours in the ED and 100% should spend less than nine hours in the ED. The target for six hours for 2016 was 75%. Figure 4.14 uses PET data to show the percentage of patients who spent less than six hours and less than nine hours, by week, for 2015.

Approximately 62% reached the six hour target and 77% reached the nine hour target.

- The HSE also has a performance target that no patient should spend more than 24 hours in the ED. In December 2015 97.3% of ED attendees achieved this target.

FIGURE 4.14: NATIONAL ED MONTHLY PERFORMANCE TO PET TOTAL TIME TARGETS (ADULTS) JAN 2015-2016



Source: Business Information Unit, Health Service Executive

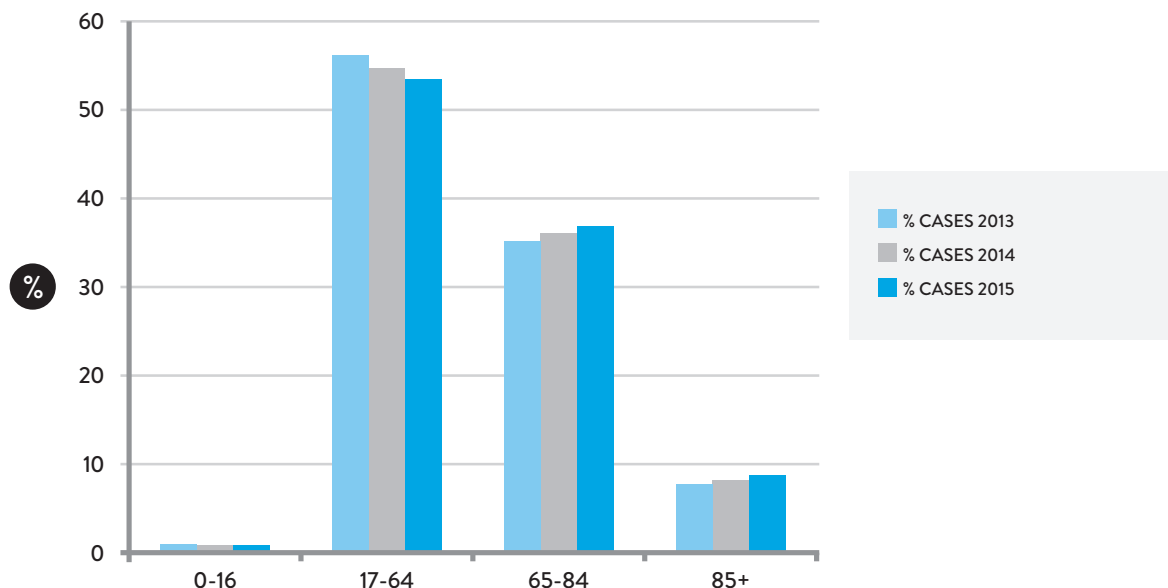
- Initiatives, such as the expansion of the catchment area for GPs referring to the Smithfield rapid access clinic on the northside of Dublin, may reduce some pressure on Dublin city EDs, particularly for patients with minor injuries.
- The Community Case Management Initiative piloted in Connolly Hospital, which provides enhanced community support to elderly patients with complex needs, has resulted in a 40% reduction in admissions from nursing homes. Four pioneer sites have been identified to further explore this model of care. Data is currently being collected and will allow for modelling in the future.

ACUTE MEDICAL ASSESSMENT UNITS (AMAUs)

All attendances at registered Acute Medical Assessment Units AMAUs/MAUs (referred to as AMAUs in this report), from the 1st June 2012, have been coded on the HIPE system, including those admitted and discharged on the same day. The number of AMAUs has increased from 25 HIPE hospitals at the end of 2012, to 32 in 2015 with new hospitals joining every year.

- In 2015 there were 95,300 attendances to an AMAU.
- From 2013 to 2015, there was an increase of 20% (16,000) in attendances at registered AMAUs.
- The cohorts of those aged 65 to 84 years and aged 85 years and over are increasingly using AMAUs as a means of accessing hospital care (Figure 4.15). From 2013-2015 adults aged 65 years and over represented 46% of attendances.
- The cohort of those aged 17-64 years using the same day AMAU facilities, are less likely to require admission than the elderly.
- Because the AMAU is a relatively new care setting, with new hospitals providing the service each year, the national dataset is evolving and not stable enough to define capacity or to project levels of service at a national level for 2017.

FIGURE 4.15: AMAU DISCHARGES BY AGE COHORT 2013-2015



Source: Healthcare Pricing Office: Based on hospitals that have a registered AMAU

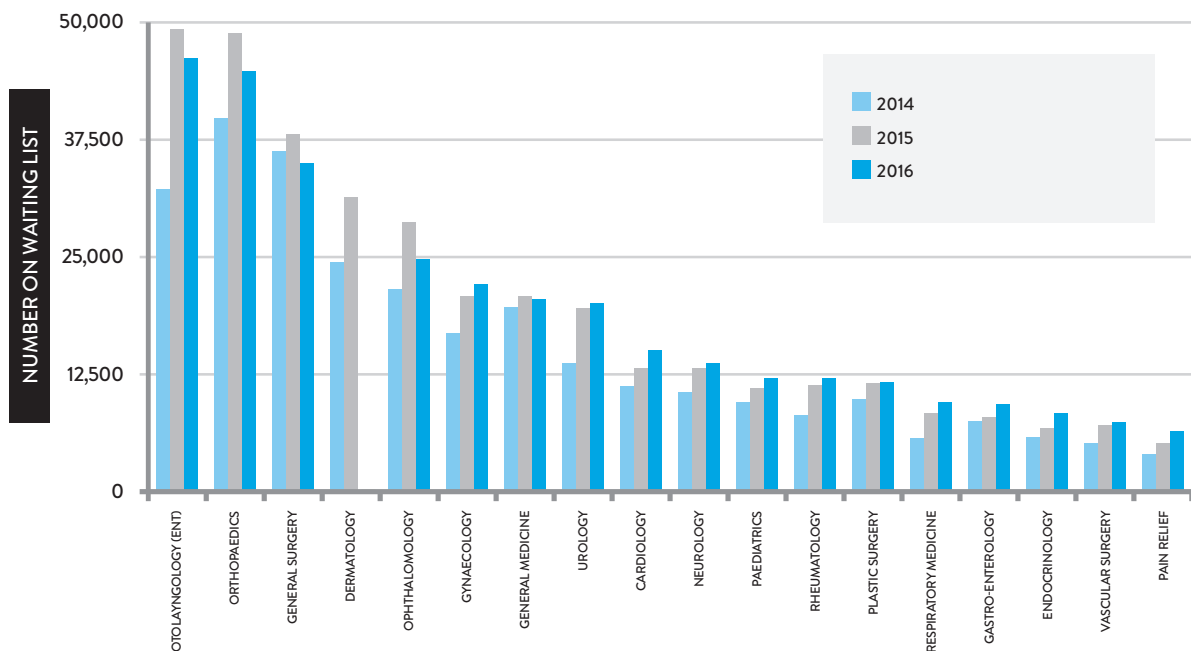
OUTPATIENT DEPARTMENTS

- In 2015, there were 2,887,592 adult OPD attendances which included 789,327 new patients and 2,098,265 return patients.
- Based on the throughput of 2015, it is projected that there will be over 11,000 additional new patients seen in OPD in 2017, if referral rates remain constant.

WAITING LISTS

- The numbers on waiting lists for the top outpatient specialities (ENT, orthopaedics, general surgery, dermatology and ophthalmology) reduced during 2015 (Figure 4.16). This was helped by a HSE initiative to outsource those waiting over 15 months for an outpatient appointment.
- There were small increases in waiting lists for other specialities, including urology, neurology, rheumatology and cardiology.
- The HSE target states that no patients should wait over 52 weeks for an outpatient appointment. In December 90.1% of patients reached this target.
- 9,887 patients were waiting longer than 15 months for an outpatient appointment at the end of December 2015. 5,262 patients were waiting longer than 18 months.

FIGURE 4.16: NUMBERS ON OPD WAITING LIST BY SPECIALTY, JANUARY 2014 TO JANUARY 2016

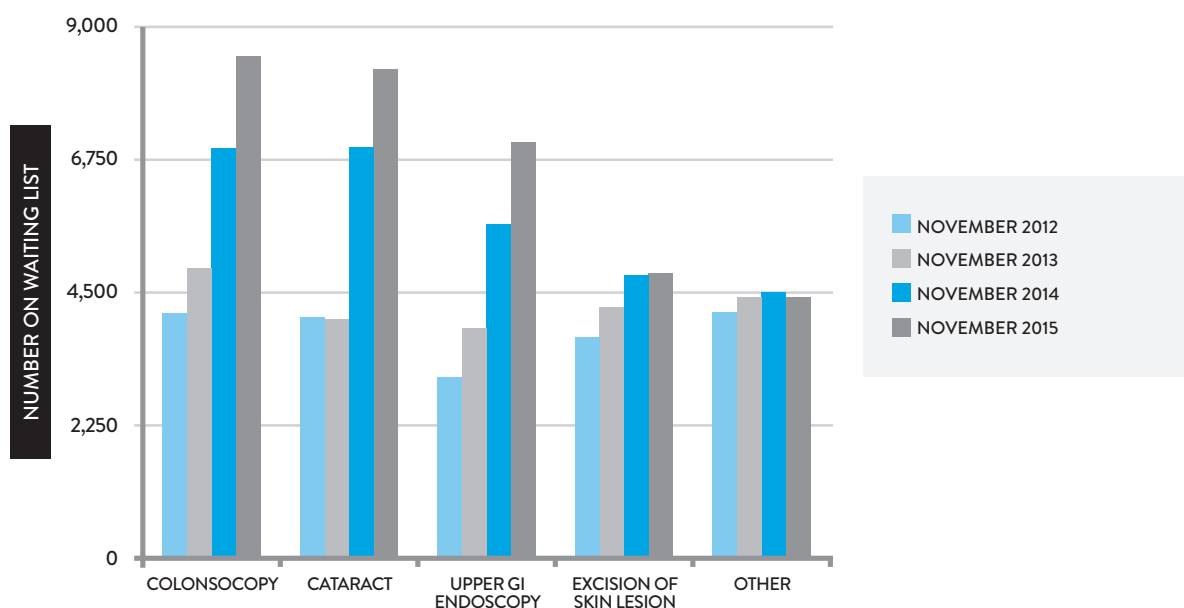


Source: National Treatment Purchase Fund

PROCEDURE WAITING LISTS

- The waiting lists for the top procedures have increased each year since 2012. (Figure 4.17).
- In 2015 colonoscopy overtook cataract surgery as the procedure with the largest waiting list. The third largest waiting list was for Upper GI endoscopy. Two of these top three procedures are diagnostic rather than surgical procedures, which may in turn require the patient having further procedures.

FIGURE 4.17: PROCEDURE WAITING LIST FOR TOP FIVE PROCEDURES: NOVEMBER 2012 TO NOVEMBER 2015

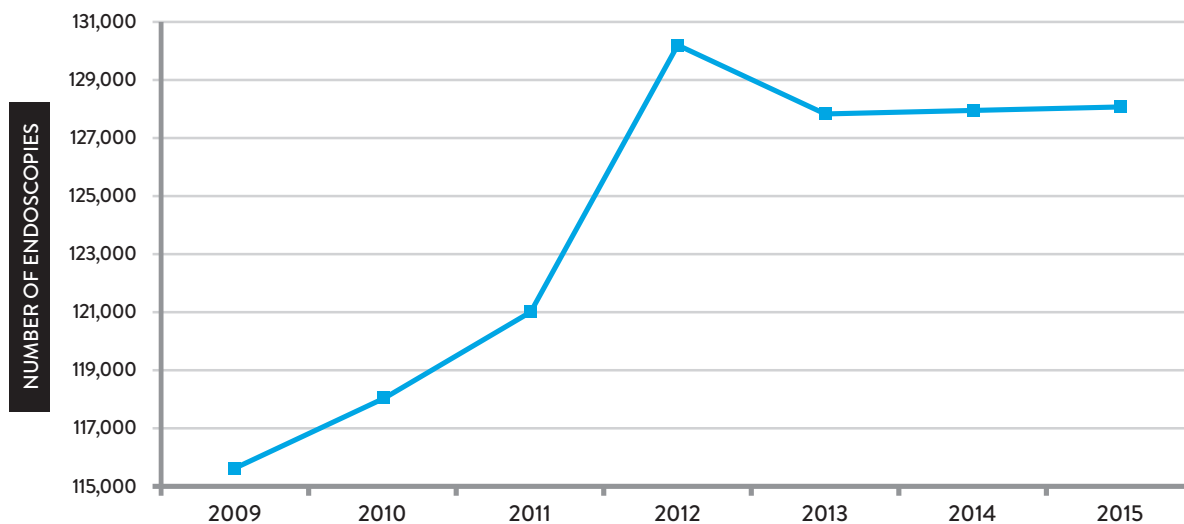


Source: National Treatment Purchase Fund

ENDOSCOPY (COLONOSCOPY AND GASTROSCOPY)

Endoscopy activity has increased by 11% since 2009. However there has been a reduction in the number of scopes carried out since 2012. 128,160 endoscopies were performed in 2015, which included 60,864 colonoscopies.

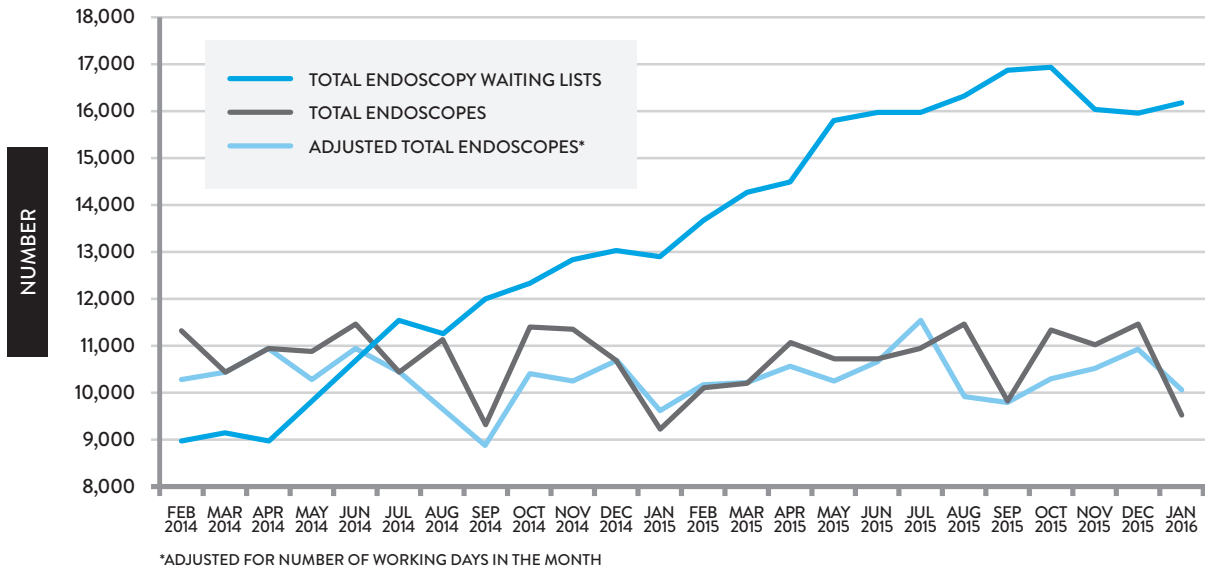
FIGURE 4.18: NUMBER OF ENDOSCOPIES CARRIED OUT PER YEAR 2009-2015



Source: Health Service Executive Endoscopy Demand Capacity Report, Feb 2016

In spite of initiatives to in-source and outsource, the numbers waiting for scopes have increased year on year - Figure 4.19.

FIGURE 4.19: TOTAL ENDOSCOPES, ADJUSTED TOTAL ENDOSCOPES AND ENDOSCOPY WAITING LIST FEB 2014- JAN 2016

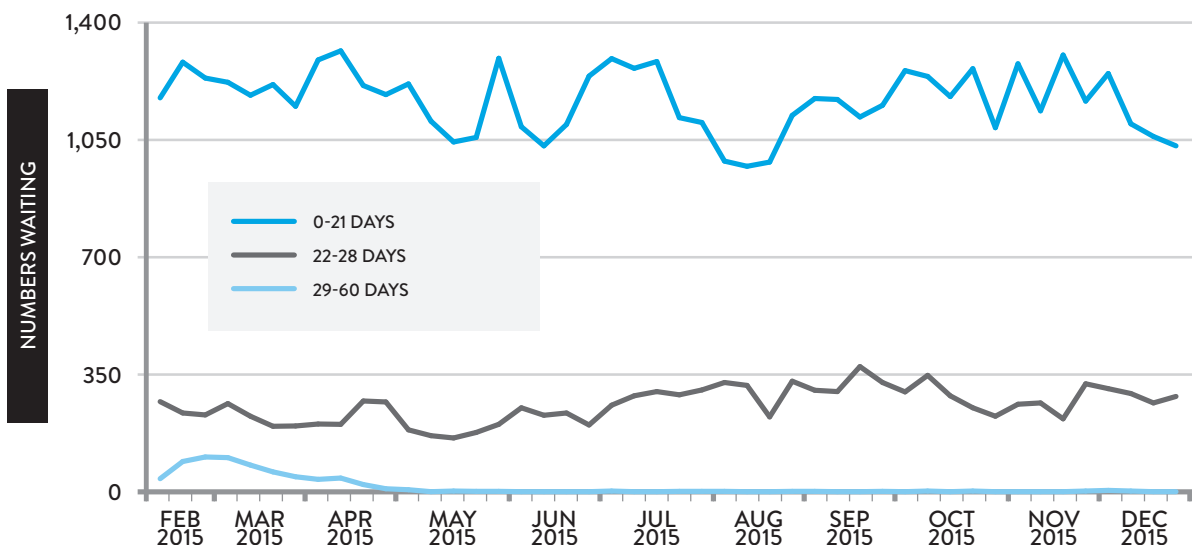


Source: Health Service Executive Endoscopy Demand Capacity Report, Feb 2016

A GI Endoscopy Initiative, targeting patients waiting over 12 months, was commenced by the NTPF at the end of September 2015.

- Of the target cohort of 2,652 GI scope patients waiting over 12 months, a total of 2,438 (92%) were treated by the end of December 2015.
- Figure 4.20 is a snapshot per week of the numbers waiting for urgent scopes during 2015. The numbers waiting from 1-28 days at any one time, varied from 1,202 to 1,594 with a mean of 1,429. There have been very few breaches of the four week target waiting time since April 2015.

FIGURE 4.20: NUMBERS WAITING FOR URGENT SCOPES PER WEEK BY TIME WAITING, 2015

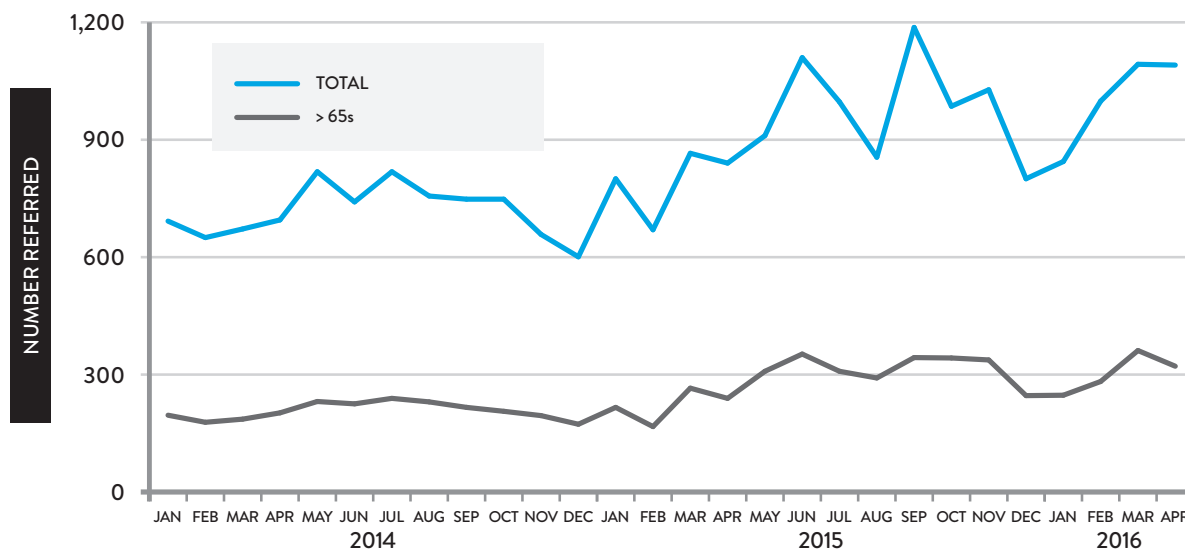


Source: Business Information Unit

Note: Snapshot of numbers waiting by length of time by week. The same patient may therefore appear on the waiting list and be counted for a number of weeks.

Figure 4.21 shows the total number of discrete referrals for urgent scopes, from January 2014 to April 2016. The referrals in those patients aged 65 and over are also shown. The numbers referred for urgent scopes increased by approximately 400 (50%) from January 2015 to January 2016, highlighting a considerable increasing demand. Further research and analysis is required to evaluate the drivers of this demand.

FIGURE 4.21: REFERRALS FOR URGENT SCOPES JANUARY 2014 TO APRIL 2016 - TOTAL AND AGED 65+



Source: National Treatment Purchase Fund

Note: First occurrence of each referral counted and given a unique episode number.

Some hospitals have changed the episode number on an instance of care which has led to double counting. Two hospitals had an issue with this in 2015. The assigning of routine/urgent may be incorrect in two hospitals.

- In December 2015, 56.9% of patients referred for routine colonoscopy were scoped within 13 weeks; target is 100% as per NSP, 2015.
- A recent HSE Demand Capacity Report found that there was a requirement for an additional 5,800 endoscopes during 2016 just to maintain the current waiting list, assuming no significant population changes. This is based on referral patterns using 22 months of waiting list data. However this report notes that increased capacity requirements could be offset by demand reductions, e.g. the implementation of rigid referral guidelines.

TABLE 4.7: ADDITIONAL SCOPES REQUIRED IN 2016 TO ADDRESS THREE SCENARIOS

OBJECTIVE	ESTIMATED TOTAL ADDITIONAL SCOPES REQUIRED
Maintain current waiting list numbers	5,800
Reduce current waiting list numbers by 25%	9,835
Reduce current waiting list numbers by 50%	13,871

Source: HSE Endoscopy Demand Capacity Report, Feb 2016

A National Working Group for Endoscopy has been set up and a National Review of Endoscopy Services is currently being commissioned. The imminent appointment of an Endoscopy National Clinical Lead should help drive initiatives to reduce waiting lists.

DELAYED DISCHARGES

In 2015 the average length of stay (AvLOS) for an overnight inpatient aged 65 years and over, was 11.1 days and for those aged 85 years and over it was 14 days. If access to beds in long term care improves, these average lengths of stay may decrease. The AvLOS for patients admitted for less than 30 days (as a proxy for excluding delayed discharges) was 4.5 days.

Figure 4.22 shows the monthly delayed discharge numbers from January 2015 to March 2016. The 2015 ED task force set a target to reduce delayed discharges to 500 or less by end 2015. During 2015 this target was not achieved in any month, although the average number of delayed discharges per month was lower at 648 for 2015, compared to 692 per month for 2014.

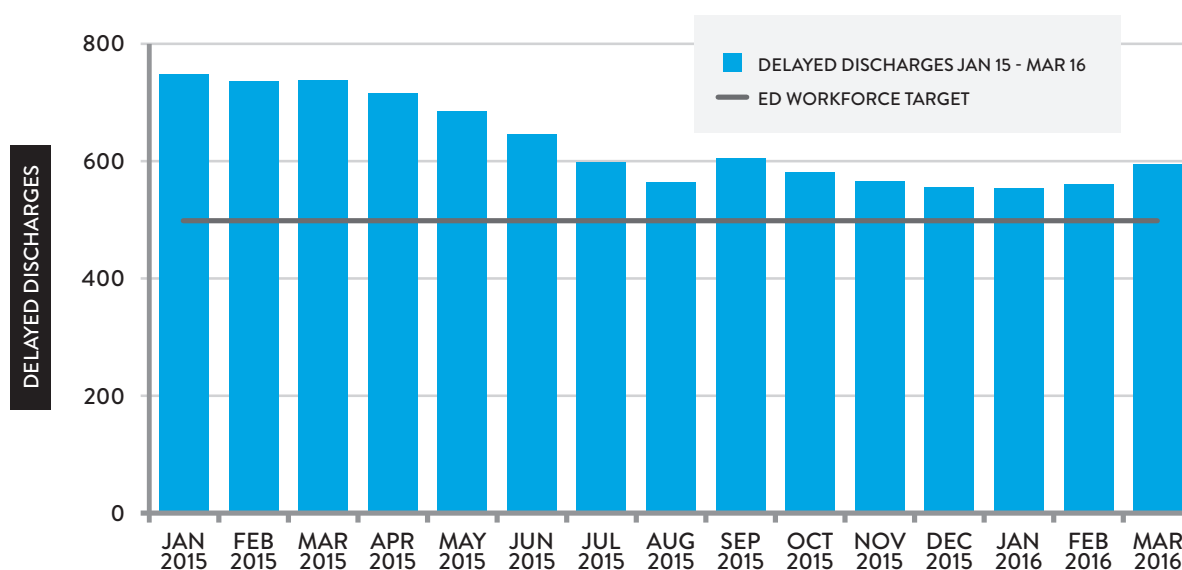
- The average number of delayed discharges for the first three months of 2016 was 572, which was significantly lower than the 745 average for the first three months of 2015.
- 90% of the delayed discharges from May 2013 to December 2015 were over 65 years of age.

NURSING HOME SUPPORT SCHEME (NHSS 'FAIR DEAL') AND DELAYED DISCHARGES

In 2015 35% of total delayed discharges were discharged to an NHSS funded bed and 13% were discharged with a home care package/home help. In addition, 12% of delayed discharges were discharged to rehabilitation services.

- The ED task force set a target to maintain the NHSS waiting time of four weeks, through the provision of adequate funding in 2015. The NHSS are achieving this target and no one has waited more than four weeks on the national placement list since April 2015, when additional funding was made available.
- The expected number of people to be supported under the NHSS in 2016 is 23,450. In January 2016, there were 23,093 people supported under the scheme.

FIGURE 4.22: DELAYED DISCHARGES BY MONTH JANUARY 2015 – MARCH 2016



Source: Business Information Unit, Health Service Executive

PAEDIATRICS

EMERGENCY DEPARTMENTS

PET data are available for Paediatric ED attendances in 29 hospitals for 2015. In this group, the likelihood of an admission to the ward decreased with increasing age.

- PET data from Temple Street Children's University Hospital and Our Lady's Children's Hospital Crumlin; have only been recorded since August 2014. Therefore, comparisons between 2014 and 2015 and predictions for 2017 were not possible as the data is not yet stable enough for these purposes.

- According to PET data, 51% of all children aged under 1 (35,812/70,775) attended EDs.
- Using HIPE data, 30% of the total population aged under 1 (21,387/70,775) were admitted to hospital via the ED in 2015. (These data are event-based rather than person-based and so some patients may have been admitted on a number of occasions).

TABLE 4.8: PAEDIATRIC EMERGENCY DEPARTMENT ATTENDANCES (NEW AND RETURN) AND ADMISSIONS 2015

AGE GROUP	NO OF ATTENDANCES	% OF ED ATTENDANCES	NUMBER OF ADMISSIONS VIA ED*
All children 0-16	304,251	100	
<1	38,914	13	21,387
1 – 5	118,184	39	34,480
6 – 16	147,153	48	36,503

Source: Business Information Unit, Health Service Executive, Healthcare Pricing Office

Note: attendance data is from 29 hospitals only but discharge data is for all Hospital Inpatient Enquiry reporting hospitals

HOSPITAL IN-PATIENTS

It is predicted that paediatric in-patient discharges will decrease by 1% between 2015 and 2017, and by 5% from 2017 to 2022 – as per Table 4.9. In reality, demographic ‘gains’ in the younger age groups cannot be combined with estimated increases in the older age groups.

Paediatric beds are not interchangeable with adult beds and maternity beds are not interchangeable with acute hospital beds. The marginal cost savings that might be gained in these areas are not realisable in adult and acute services. However significant development will be taking place, with the introduction and implementation of the new paediatric model of care.

TABLE 4.9: IN-PATIENT DISCHARGES AND BED DAYS 2015 AND PROJECTED TO 2017 AND 2022

	2015		2017		2022	
	DISCHARGES	BED DAYS	DISCHARGES	BED DAYS	DISCHARGES	BED DAYS
< 1 year	27,609	157,419	25,940	147,925	22,440	127,930
1 - 5 years	30,119	64,467	31,280	66,940	27,750	59,400
6 – 16 years	34,127	82,733	33,950	82,310	36,570	88,650
TOTAL	91,855	304,618	91,170	297,175	86,760	273,980

Source: Healthcare Pricing Office, Central Statistics Office

Note: 2015 Hospital Inpatient Enquiry file is provisional and subject to change

- In 2015, 100 scoliosis surgeries were carried out (67 full spinal surgeries carried out in Crumlin and a further 33 patients on the Crumlin waiting list were treated at other hospitals). This compares to 66 such surgeries carried out in 2014. At the end of December 2015, there were no patients waiting 15 months or more for spinal surgery at Our Lady’s Children’s Hospital, Crumlin.

IMPACT OF HEALTH INEQUITIES ON SECONDARY & TERTIARY CARE

- Patients from deprived areas attend EDs more frequently and for less serious conditions. They tend to access outpatient care often through emergency channels and regularly fail to attend their outpatient appointments (McCormick et al., 2012).
- Deprived populations have a higher 30-day in-hospital mortality after an emergency medical admission, a higher rate of emergency medical admissions and a higher rate of admissions for Ambulatory Care Sensitive Conditions (Conway et al, 2015).
- Mental illness, homelessness, alcohol and substance abuse were associated with significantly higher ED attendance rates (Ramasubbu et al, 2016). 60% of the most frequent attenders were, or had recently been, homeless. The most frequent attender presented to the ED 404 times in 2014. Many were complex patients with dual diagnosis (co-existing mental ill-health with substance misuse problems) or complex tri-morbidities (dual diagnosis plus chronic illnesses e.g. COPD, renal/liver disease).

RESEARCH AND DATA NEEDS

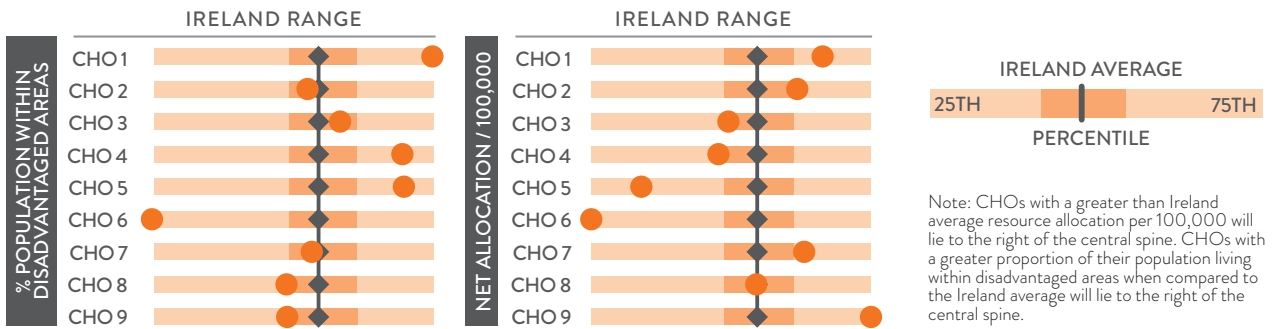
- Focused data analysis can be carried out with hospitals experiencing specific difficulties where national metrics can mask individual hospital metrics.
- Hospital patient outcomes dataset should be developed and piloted to demonstrate a profile of hospital patient outcomes.
- Existing hospital activity data can be mined more extensively and be more readily available in a user friendly platform to assist with service planning.
- Hospital bed costings by DRG is an essential requirement for planning and should be made available for economic analysis and business case development.
- Innovative pilot schemes that are currently underway as part of the integrated programmes should be evaluated to demonstrate if scalability is feasible and thus assist in business case development.
- Hospital group level data will assist greatly with hospital group level needs assessments
- It is essential that a standard methodological approach is taken in the development of Hospital Group specific denominators.
- It is recommended that Hospital Group needs assessments are carried out in collaboration with CHOs to assist with a co-ordinated integrated programme of care approach
- Regular bed utilisation surveys are required to examine appropriate use of hospital beds and to identify specific discharge barriers by hospitals.
- An age-specific patient journey map from primary through secondary and tertiary care will inform the needs and requirement of specific age cohorts.
- Whenever relevant and possible, HIPE data should include socio-economic status and socially excluded groups, to enable equality monitoring of all services and to monitor progress towards a reduction in health inequalities.

05

PRIMARY CARE



PROFILE OF ALLOCATION OF RESOURCES TO CHO_s - 2016



PRIMARY CARE SERVICES

CHILD HEALTH	ADULTS 18-64	ADULTS 65+
<p>BABIES REQUIRING PRIMARY CARE SERVICES</p> <p>68,500 (2016) → 66,400 (2017)</p> <p>FROM 2016, A DECREASE OF ↓2,100</p>	<p>PROJECTED SLIGHT INCREASE IN DEMAND FOR PCS FOR ADULTS 18-64 YEARS IN 2017</p> <p><1%</p>	<p>PROJECTED INCREASE IN DEMAND FOR PCS FOR ADULTS 65+ YEARS IN 2017</p> <p>↑6.5%</p>

PRIMARY CARE REIMBURSEMENT SERVICE (PCRS)

<p>MONTHLY INCREASE IN COSTS AT PCRS</p> <p>GP VISIT CARD ↑300%</p> <p>↑200% OUT OF HOURS & OTHER PAYMENTS TO GPs FOR CHILDREN AGED 0-4</p>	<p>FOR DEMOGRAPHIC CHANGE ALONE IN 10 PCRS PAYMENT SCHEMES - AN ADDITIONAL AMOUNT IS REQUIRED</p> <p>€75.2 MILLION</p>	<p>PHARMACEUTICAL FEES MAKE UP OVER HALF THE EXPENDITURE ACROSS THE 10 PCRS PAYMENT SCHEMES</p> <p>57%</p>
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PALLIATIVE CARE	AT THE END OF 2015	GP CONSULTATIONS DEMAND WILL INCREASE IN 2017
<p>EXPECTED INCREASE IN PEOPLE RECEIVING END OF LIFE CANCER CARE IN 2017</p> <p>↑5.8%</p>	<p>1.73m HAVE MEDICAL CARDS</p> <p>424,900 HAVE GP VISIT CARDS</p> <p>46.4% OF THE POPULATION COVERED</p>	<p>↑66%</p> <p>↑187% INCREASE IN LONG TERM ILLNESS CLAIMANTS BETWEEN 2014-15</p>

<p>HOMELESS</p> <p>IN FEB 2016 THERE WERE 5,811 PEOPLE HOMELESS</p>	<p>TRAVELLERS</p> <p>TRAVELLER CHILDREN MORE LIKELY TO REPORT BEING DRUNK, USING CANNABIS, DRINKING SUGARY DRINKS</p> <p>SELF REPORTED RISK FACTORS (10-17YRS)</p> <table border="1"> <thead> <tr> <th>Factor</th> <th>Travellers</th> <th>National Pop</th> </tr> </thead> <tbody> <tr> <td>Cigarette smoking every week</td> <td>23%</td> <td>8%</td> </tr> <tr> <td>Drunk in the last 30 days</td> <td>34%</td> <td>18%</td> </tr> <tr> <td>Have used Cannabis at least once</td> <td>27%</td> <td>11%</td> </tr> <tr> <td>Drink sugary drink at least once a day</td> <td>33%</td> <td>21%</td> </tr> </tbody> </table> <p>Data sources: HBSC 2010, (Kelly et al, 2012)</p>	Factor	Travellers	National Pop	Cigarette smoking every week	23%	8%	Drunk in the last 30 days	34%	18%	Have used Cannabis at least once	27%	11%	Drink sugary drink at least once a day	33%	21%	<p>VULNERABLE MIGRANTS ASYLUM SEEKERS & REFUGEES</p> <p>AS PART OF THE EU RELOCATION AND RESETTLEMENT PROGRAMME ALMOST 4,000 ADDITIONAL REFUGEES & ASYLUM SEEKERS WILL ARRIVE IN IRELAND IN 2017</p> <p>+4,000</p>
Factor	Travellers	National Pop															
Cigarette smoking every week	23%	8%															
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<p>ADDICTION SERVICES</p> <p>CLIENTS REGISTERED FOR OPIOID SUBSTITUTION INCREASED BY 4% ANNUALLY BETWEEN 2008 & 2014</p> <p>+4% +4% +4% +4% +4% +4%</p> <p>'08 '09 '10 '11 '12 '13 '14</p>																	

ASSUMPTIONS

- Population projections are based on the CSOs M2F2 scenario. Community Healthcare Organisation level population estimates were constructed in liaison with the Central Statistics Office, using its sub-national population estimates.
- All underlying assumptions and projections are based on demographic change only, and do not take into account unmet need or any changes in policy, models of care, eligibility and service provision since 2015. Also it does not include services that are supplied but are ineffective.
- Analysis by CHO Area involving rates are crude rates per 1,000 or 100,000 where applicable and not standardised to the national population.
- Projections of activity from community services are derived from key performance indicators collated by the Business Intelligence Unit. In some cases (notably, nursing, occupational therapy, psychology, podiatry, ophthalmology, audiology, dietetics, speech and language therapy) various indicators of utilisation were provided. And “Referrals accepted” was chosen as the basis for projection, since it best reflects overall service capacity and was common across these service lines. Data collected from pilots of strategic initiatives (GP diagnostics and GP minor surgery) were provided by the Primary Care Division.
- Data on claims made under the various Primary Care Reimbursement Service (PCRS) payment headings was obtained from PCRS via Department of Health and analysed using PHIS. It was then cross-validated with PCRS. Monthly trends were analysed to determine the basis for projections. Note that, in keeping with the rest of this report, PCRS projections illustrate the impact of demographic change only, assuming existing levels of service will be maintained.
- The usefulness of the estimates reported depends on the quality of these data. Incidences where specific issues have been brought to the authors’ attention by the data controllers are reported in the text.

CONTEXT AND POLICY CHANGE

- The Primary Care Division was allocated a budget of €3,624.4 million in 2016, which was 28% of the HSE net determination for that year.
- In 2015 the HSE provided free GP Visit Cards (GPVC) to all children under 6 years and all adults 70 years and older. While coverage of GPVCs for adults over 70 years old reached maximum, it was estimated that at the end of 2015 about 86,500 children under 6 years of age had not availed of their free GPVC entitlement.
- As expected, a rise in GPVC capitation fees to GPs was observed, but, fees to GPs for out-of-hours services have doubled, for children under 6 years, pointing to a rise in usage.
- Removing out-of-pocket payments through free GPVCs has increased GP consultation rates. However it is not possible to comprehensively and accurately measure this effect because of the absence of GP activity data during daytime working hours.
- Further steps towards universal access to primary care will be critically dependent on scaling-up GP capacity in line with the HSE’s medical workforce plan. This in turn requires immediate expansion of GP training.

COMMUNITY HEALTHCARE ORGANISATIONS FACE VARYING CHALLENGES

- The HSE established Community Healthcare Organisations (CHOs) in 2015, to support health system reform. A comparative analysis of indicators shows that CHOs face varying challenges in responding to population health need. At the same time, the resources to meet these needs also vary across CHOs.

CHILD HEALTH

- The population of children (0-1 years) requiring newborn and infant primary care service in 2017 is projected to be 66,400. This is a reduction of 2,100 (-3.0%) from 2016 and a further reduction in the infant population is expected by 2022 (57,500 infants, 8,900 (-13.5%) less than 2016).
- Demand for children’s nursing services will increase in the short term - up 3.4%, from 2016 to 2017. In the medium term, i.e. by 2022, the projected increase is 9.3%.
- Between 2015 and 2017 the rise in demand for Physiotherapy, Occupational Therapy and Psychology services will be 431 (1.7%), 270 (1.7%) and 189 (1.4%) respectively.

- There is a significant unmet need for child health services. In December 2015, wherein age-specific data on waiting lists is available, there were 11,237 children waiting for Occupational Therapy assessment (69.2% of 2015 referrals); 13,099 waiting Ophthalmology assessment (74.3% of 2015 referrals accepted), of which 9,412 were waiting more than 12 weeks (53.4% of 2015 referrals accepted).
- Variation in current primary care utilisation by children highlights potential opportunities to better align service planning with population health need. For example, given that 25% of our children aged 9 years are either overweight or obese increased utilisation of dietetics services by children aged 5-17 years could provide better population health outcomes.

ADULTS 18-64 YEARS

- Demand for most primary care services by adults aged 18 to 64 years will increase minimally from 2015 to 2017 (<1%). A more moderate increase is expected in the medium term to 2022 (approximately 3%).
- In December 2015, there were 1,638 adults waiting Ophthalmology assessment (73.2% of 2015 referrals accepted), of which 1,275 were waiting more than 12 weeks (56.9% of 2015 referrals accepted). 1,436 adults were waiting Audiology assessment (71.7% of 2015 referrals accepted), of which 865 were waiting more than 12 weeks (43.2% of 2015 referrals accepted). Planning should take account of this significant unmet need.

ADULTS 65 YEARS AND OVER

- The projected increase in demand for primary care services among older adults, arising from demographic change, will significantly challenge health planning.
- Compared with 2015, demand for primary care services by adults aged 65 years and older, will increase moderately in 2017 (6.5% increase) and will increase significantly in 2022 (24.9% increase). For larger services, the increased demand will be challenging. Between 2016 and 2017, physiotherapy referrals (adults aged 18 years and older) will increase by 2,229; occupational therapy referrals will increase by 3,617; and nursing referrals accepted will increase by 3,990.
- There is also significant unmet need for primary care services among older adults. In December 2015, 2,318 older adults were waiting Ophthalmology assessment (94.5% of 2015 referrals accepted), of which 1,758 were waiting more than 12 weeks (71.6% of 2015 referrals accepted). 5,252 were waiting Audiology assessment (75.7% of 2015 referrals accepted), of which 3,084 were waiting more than 12 weeks (44.5% of 2015 referrals accepted).
- Only 273 referrals to psychology services were reported in 2015 for adults aged 65 years and older. However, at least half of all people with long-term conditions suffer from multiple co-existing conditions, with mental health problems being one of the most common forms of co-morbidity (Barnett et al, 2012). Addressing co-morbid mental health problems in primary care can improve health outcomes and reduce health system costs (Naylor 2012).
- Similarly, for Ophthalmology services, a lower than expected rate of utilisation was observed for adults aged 65 years and older. Decreased visual acuity in older people is often remediable and is, for example, a critical factor in fear of falling, restriction of physical activity and falls (Lord 2006).

PRIMARY CARE REIMBURSEMENT SERVICE

COST

- For the 10 PCRS payment headings (approximately 75% of the PCRS budget) demographic changes alone are estimated to drive an increase in total expenditure of €75.2 million from 2015-2017 and €290.6 million from 2017-2022.
- Expenditure across most selected PCRS payment headings will increase by 1.6% - 4.9% from 2015 to 2017. A larger increase can be expected by 2022 (5.0% - 19.3%).
- At the end of 2015, pharmaceutical fees (ingredient costs and pharmacy fees) comprised the largest proportion of expenditure for the 10 payment headings (57.4%).
- Ongoing active management of expenditure on drugs is necessary, to both control overall PCRS costs and to provide fiscal space for implementation of government policy to support universal access to primary care. Small changes in the cost or volume of commonly prescribed drugs offer potential to significantly impact expenditure.

ACCESS

- In total, at the end of 2015, 46.4% of the population had access to either a GPVC or a medical card (9.1% had access to GPVC scheme, or 424,862 people, and 37.2% had access to Medical Card scheme, or 1,732,555 people). This compares with 41.4% at the start of 2015.
- Compared with pre-implementation of free GPVCs for children under 6 years, in 2017 demand for GP consultations in this population is estimated to increase by 65.7% (842,796 additional consultations) and in 2022 it will increase by 42.4% (562,814 additional consultations).
- Across all diseases, the number of Long Term Illness scheme claimants increased by 87% from the start of 2014 to the end of 2015. In the case of Diabetes Mellitus for example, the number of claimants increased by 40,446, thereby doubling the number of claimants with this illness.

PALLIATIVE CARE

- With population ageing, needs for palliative care services are growing and will challenge existing services. For example, patients experiencing end-of-life with cancer alone, will increase by 5.8% and 23% in 2017 and 2022 respectively.
- Demographic and epidemiologic trends point to significant unmet need for palliative care services in the short and medium term, which will not be addressed through planning on an existing level of service basis. Considerable capacity expansion in palliative care services is required to bridge this gap.

STRATEGIC INITIATIVES IN PRIMARY CARE

- It is essential that appropriate information systems are developed, so that strategic initiatives in primary care can be evaluated to inform future planning.

SOCIAL INCLUSION

- There is a strong link between poverty, socio-economic status and health.
- Mental and physical health problems can be both a cause and consequence of homelessness and social deprivation.
- Excluded and disadvantaged groups within the population carry a disproportionate burden of mental and physical ill-health and disability (and for homeless people – addiction). This results in frequent health service utilisation.
- The health system should adopt a strong and integrated poverty and equality proofing approach when formulating all policies, strategies and actions, and not just those specifically targeted at reducing health inequalities. A coherent approach is needed - HSE Divisions' policies should complement rather than contradict each other, in relation to health equity.

HOMELESS

- The number of people experiencing homelessness is increasing year on year in Ireland. In February 2016, 5,811 people were recorded as experiencing homelessness, an increase from 2015. This number consisted of 3,930 adults and 1,881 children, comprising 2,706 single adult homeless and 912 homeless families.
- Most single homeless adults and homeless families are in Dublin.
- Homelessness is a marker for complex tri-morbidity: the combination of physical ill-health with dual diagnosis (co-existing mental ill-health and substance abuse), with consequent high health care needs.

ADDICTION SERVICES

- In 2014, 3,744 new and 5,779 return (total 9,523) entrants were recorded in the National Drug Treatment Reporting System (NDTRS) in Ireland.
- In 2014, 88% of people who sought treatment for problem drug or alcohol use subsequently entered treatment, an increase from 86% in 2010.
- The number of clients registered for Opioid Substitution Treatment (OST) on 31st December each year, reported by the Central Treatment List (CTL), has increased from 3,689 in 1998 to 9,537 in 2015. Between 2008 and 2014, the rate of increase was less than 4% annually.
- In 2013, 3,578 new and 3,971 return (total 7,549) clients were treated for problem alcohol use in alcohol treatment facilities in Ireland.

- Between 2011 and 2013, the number of new cases treated and the number of cases returning for treatment for problem alcohol use decreased. Among 15-64 year olds, the incidence and prevalence of treated problem use decreased.

TRAVELLERS AND ROMA

- The 2011 Census recorded 29,495 Travellers living in the Republic of Ireland (0.6% population). The population pyramid for Travellers from 2011 Census data demonstrates the stark difference in the age profile of Travellers compared to the Irish general population. This reflects a high birth rate, a primarily young population, and the effects of premature mortality.
- Compared to other children aged 10-17 years, Traveller children are more likely to report smoking, being drunk, cannabis use or drinking sugary drinks.
- There are no official statistics on the number of Roma in Ireland, with the estimated population between 2,500 and 6,000.

VULNERABLE MIGRANTS: ASYLUM SEEKERS AND REFUGEES

- Up to 4,000 Irish Refugee Protection Programme (IRPP)/EU Relocation & Resettlement Programme refugees & asylum seekers will arrive in Ireland by end 2017, as well as the increasing numbers presenting routinely in Ireland seeking asylum. This will put significant pressure on provision of health assessment/ screening and routine health services. It is likely that all CHOs will be impacted.
- Health Services to date have been expected to provide a range of services (including interpreting services) to IRPP Programme Refugees from existing resources, resulting in significant challenges and an unmet need. No extra funding has been allocated within the health budget for healthcare provision for this vulnerable group to date, although some Dormant Account funding has recently been made available.
- The current health assessment models for Asylum Seekers and Programme Refugees are not sustainable even for current numbers.

RESEARCH AND DATA NEEDS

PRIMARY CARE

- Primary care development is pivotal to health system reform in Ireland. However, information systems to support the planning, monitoring, and evaluation of primary care services are not developed in proportion to their importance to the HSE nor are they commensurate with current levels of expenditure.
- Where it is feasible and appropriate, a more standardised approach should be taken to measurement of the primary care service utilisation across service lines, using similar definitions for units of activity (new referrals received, new referrals accepted, new referrals seen, in-treatment, discharges etc) and using similar approaches to measuring characteristics of service users.
- Consultation with a GP is a key element of primary care. Robust information on the volume, process and outcome of GP consultations will be necessary to support ongoing health system reform and strengthening of primary care.
- The utility of information maintained by the PCRS for wider health system planning should be recognised, with capacity and capability developed to maximise its potential positive impact.
- A number of important strategic initiatives are underway in primary care. Criteria for business case approval and funding should include a requirement for appropriate evaluation, to ensure that envisaged benefits are realized and to inform future health planning.

SOCIAL INCLUSION

- Whenever relevant and possible, health service indicators should be reported by sex, age, socio-economic status and vulnerable/socially excluded group, to enable equality monitoring of all services.
- Ethnicity data (an ethnic identifier) – as part of ethnic equality monitoring – should be routinely and systematically collected across all health and social care data systems, including: HIPE and performance monitoring, National Cancer Screening Service data, immunisation coverage data and the new National Maternity Healthcare Record. This will facilitate assessment of ongoing health needs and service utilisation, enable monitoring of health outcomes and inform commissioning to address health inequalities for Irish Travellers and other ethnic minority groups.

- Ethnicity should be included in the standard clinical form for notification of infectious disease.
- Collection of ethnicity data needs to be strengthened in local level datasets, where ethnicity is currently included as a variable.
- Rollout of the individual health identifier (IHI) should be prioritised, to enable sharing of information across the continuum of health and social care.
- Robust data is required at a national level on health outcomes for homeless people, including those in emergency accommodation – this could be done via the Pathway Accommodation Support System (PASS).
- Data collection for problem drug use needs to be strengthened to enable counting of: (1) individuals rather than episodes of treatment - an IHI would enable this; (2) cases treated within psychiatric hospitals; (3) cases remaining in treatment without a break from one year to the next.
- Standardisation of data sources and data collection methodologies between Opioid Substitution Treatment (OST) and Treatment Demand Indicator (TDI) data should be considered, to enable meaningful collation & comparison.
- Data should be collected from Needle Exchange (NEX) programmes within HSE clinics, as it is for Pharmacy-based NEX programmes.

CONTEXT AND TRENDS

Strong primary care improves health outcomes, enhances quality of care, addresses health inequalities and lowers health-care costs (Starfield & Shi, 2002; Macinko et al., 2003; Shi et al., 2005; Starfield et al., 2005; Saltman, Rico & Boerma, 2006). Reforming primary care is key to delivering an integrated care approach (Kringos et al., 2010), as envisaged in Future Health (Department of Health, 2012) and the HSE Corporate Plan 2015-2017 (HSE, 2015). The primary care team (PCT) is the central point for service delivery to address the medical and social care needs of its defined population, in conjunction with a wider range of Health and Social Care Network (HSCN) services. Primary care services include community services, general practice, PCRS, social inclusion and palliative care.

PRIMARY CARE BUDGET

The Primary Care Division was allocated a budget of €3,624.4 million in 2016 (28% of the HSE net determination). Table 5.1 illustrates budget distribution by divisional area and change versus 2015.

TABLE 5.1: OVERVIEW OF PRIMARY CARE BUDGET

	2015 NSP BUDGET €M	2016 NSP BUDGET €M	% PRIMARY CARE TOTAL 2016	% NET ALLOCATION 2016	CHANGE 2015-2016	% CHANGE 2015-2016
Primary Care	747.6	764.8	21.1%	5.9%	17.20	2.3%
PCRS	2,268.1	2,417.1	66.7%	18.7%	149.00	6.6%
Local Demand Led Schemes	217.8	242.6	6.7%	1.9%	24.80	11.4%
Social Inclusion	125.7	127.1	3.5%	1.0%	1.40	1.1%
Palliative Care	71.9	72.8	2.0%	0.6%	0.90	1.3%
TOTALS	3,431.1	3,624.4	100.0%	28.0%	193.30	5.6%
NET HSE ALLOCATION	12,131.0	12,928.4		100.0%	797.40	6.6%
Population (1,000s)	4,654	4,686			32.33	0.7%
Primary Care budget per 100,000	73.7	77.3			3.60	4.9%
Net HSE determination per 100,000	260.6	275.9			15.30	5.8%

Source: Primary Care Operational Plan 2016 and National Service Plan 2016

ACTIVITY IN PRIMARY CARE IN 2015

Health care activity in primary care is very extensive and diverse (Table C1, Appendix C) provides a summary).

- In 2015, 59,354 new born babies were visited by Public Health Nurses within 72 hours of discharge from hospital and there were 159,694 referrals to primary care nursing.
- There were 386,732 referrals to physiotherapy, occupational therapy, psychology, podiatry, audiology, dietetics, and speech and language therapy.

- Specialist palliative care services in the community were provided to 8,968 new patients and 11,399 patients in total.
- In adults 15 years and older, it is estimated that there were 11,043,809 GPs consultations and 980,917 contacts with GP Out of Hours Services.
- In total, 1,262,368 treatments were provided through the Dental Treatment Services Scheme and 844,007 Community Ophthalmic Scheme treatments.
- There were 57,861,630 and 7,169,019 items dispensed through the General Medical Services (GMS) Scheme and the Drug Payment Scheme (DPS) respectively. In addition there were 1,872,784 claims through the Long Term Illnesses (LTI) Scheme and 550,078 claims via the Hi Tech Scheme.

VARIATION IN PRIMARY CARE SERVICE UTILISATION BY AGE GROUP

Through good planning, healthcare utilisation should be aligned with health need, to maximise health gain for the population. Variation in primary care utilisation across age groups highlights potential opportunities to better align service planning and population health need (see Table C2, Appendix C).

- For example, only 273 referrals to psychology services were reported in 2015 for adults aged 65 years and older. Utilisation was more than double that among adults aged 18 to 64 years, and 10-15-fold higher among children. However, at least half of all people with long-term conditions suffer from multiple co-existing conditions, with mental health problems being one of the most common forms of co-morbidity (Barnett et al, 2012). Addressing co-morbid mental health problems in primary care can improve health outcomes and reduce health system costs (Naylor 2012).
- Similarly, for Ophthalmology services, a lower than expected rate of utilisation was observed for adults aged 65 years and older. Decreased visual acuity in older people is often remediable and is, for example, a critical factor in fear of falling, restriction of physical activity and falls (Lord 2006).
- In the case of Dietetics service, utilisation among children - especially those aged 5 to 17 years - is particularly low. This may merit examination in the context of the rising tide of overweight and obesity in children.

PROFILING CHO HEALTH NEEDS AND RESOURCE ALLOCATION – TOWARDS STRATEGIC HEALTH PURCHASING AND PLANNING

- In 2015, following a review of its Integrated Service Area structures, the HSE established Community Healthcare Organisations (CHOs) (HSE, 2014). Within CHOs, it is recommended that the fundamental unit of organisation for the delivery of services will be the Primary Care Network, serving an average population of 50,000 people. For 2016, service delivery and resource planning has been designed to take account of recently established CHOs, though there is currently no explicit model for resource allocation. In the context of scarce resources, transitioning towards strategic healthcare purchasing and planning in primary care is required, to achieve allocative efficiency, maximising population health and minimising inequity (Thomson et al 2014). Table 5.2 and Figure 5.1 profile health need across the CHOs, using various readily accessible and well-established indices. Variability in health need is evident. Compared with other CHOs, CHO 7 has low dependency ratio, while CHO 1 has a high proportion of Electoral Divisions (EDs) in the disadvantaged range and a relatively high proportion of the population who are eligible for a medical card.
- Table 5.3 and Figure 5.1 also profile the allocation of budget and human resources across CHOs for 2016. Variability is evident. A strategic purchasing and health planning approach to maximize population health would allocate resources in proportion to health need. However, a comparison of indices of health need against resource allocations across CHOs raises the question of fair, explicit and needs-based resource allocation to support strong and effective development of primary care services, which will maximize health outcomes for the population today and into the future. Effective and efficient commissioning capability, through national primary care structures, will require a programme of strategic development of information systems to link resource allocation to information about health needs, clinical effectiveness, cost-effectiveness and provider performance (Figures et al 2005). It will involve choices for additional investment or disinvestment across programmes of health and social care. Commissioning capability should be supported with systematic, explicit, fair and evidence-based approaches to priority setting, such as Programme Budgeting and Marginal Analysis (PBMA) (Edwards RD et al 2014). This confirms the need for design and implementation of a fair and explicit model for resource allocation in primary care, which has previously been highlighted (Staines et al, 2010) and is identified through the process to establish CHOs (HSE, 2014).

TABLE 5.2: PROFILE HEALTH NEED ACROSS CHO_s IN 2016

CHO	TOTAL POPULATION (1,000s)	0-17 YEARS	18-69 YEARS	70+ YEARS	DEPENDENCY RATIO	DISADVANTAGED %*	MEDICAL CARD ELIGIBLE %**
1	396	105	251	40	59%	31.6%	46.1%
2	443	114	285	44	58%	22.6%	42.1%
3	382	99	245	37	58%	24.8%	39.7%
4	679	174	441	65	56%	20.4%	36.9%
5	515	135	331	50	57%	29.5%	42.9%
6	399	97	261	41	55%	11.4%	22.4%
7	674	179	449	46	50%	22.9%	34.7%
8	612	175	389	49	57%	26.1%	40.2%
9	596	153	396	47	51%	21.1%	32.3%
ALL	4,697	1,232	3,046	419	55%	23.3%	37.4%

*Disadvantaged defined as a negative relative HP index; **Medical card data relates to 2015

Source: Primary Care Operational Plan 2016, Central Statistics Office, Health Atlas Ireland and Primary Care Reimbursement Service

TABLE 5.3: PROFILE OF ALLOCATION OF RESOURCES TO CHO_s, 2016

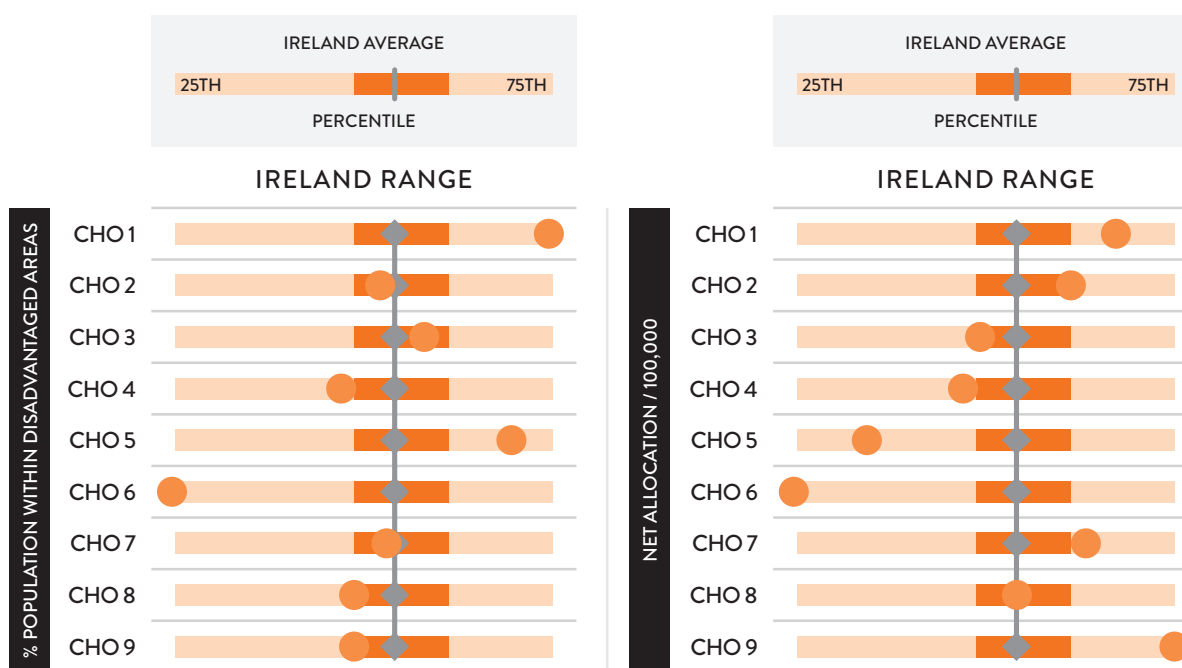
CHO	NET ALLOCATION (€MILLIONS)	NET ALLOCATION (€MILLIONS) PER 100,000 POPULATION	END 2015 OUTTURN WTE	END 2015 OUTTURN WTE PER 100,000 POPULATION
1	106.6	26.9	1,104	278.7
2	111.7	25.2	1,095	247.0
3	84.0	22.0	669	175.4
4	146.8*	21.6	1,066**	156.9
5	101.7	19.7	839	162.8
6	70.5*	17.7	633**	158.8
7	173.5*	25.8	1,221**	181.2
8	145.8	23.8	1,538	251.1
9	174.4	29.2	1,181	198.1
ALL	1,115	23.7	9,347	199.0

*Allocation to Cork Dental Hospital, Dublin Dental Hospital and Our Lady's Hospice removed from CHO allocation

**Section 38 WTE removed from projected 2015 outturn WTE

Source: Primary Care Operational Plan 2016, personal communication from Primary Care Division and Central Statistics Office

FIGURE 5.1: PROFILE OF ALLOCATION OF RESOURCES TO CHOs, 2016



Note: CHOs with a greater than Ireland average resource allocation per 100,000 will lie to the right of the central spine. CHOs with a greater proportion of their population living within disadvantaged areas when compared to the Ireland average will lie to the right of the central spine.

GENERAL PRACTICE – DEVELOPING CAPACITY TO MEET INCREASING UTILISATION

There is no routine information system available for analysis of activity in general practice in Ireland and so estimates of utilisation must be derived from surveys. The Healthy Ireland Survey 2015 is the most up to date source of information on utilisation of GP consultations nationally. It only collects data from the population aged 15 years and older so it does not measure utilisation of GP consultations by children. Table 5.4 shows the current and projected utilisation of GP consultations 2015, 2017 and 2022 for the population aged 15 years and older.

- Compared with 2015 (11,687,269 consultations), there will be a 2.8% increase in demand for GP consultations in 2017 (327,896 additional GP consultations) and an 8.4% increase in 2022 (985,172 additional consultations) for the population aged 15 years and older.
- As discussed above, compared with pre-implementation of free GPVCs for children under 6 years, in 2017 demand for GP consultations in this population is estimated to increase by 65.7% (842,796 additional consultations) and in 2022 it will increase by 42.4% (562,814 additional consultations).
- Previous reports have highlighted challenges with the sustainability of the current GP workforce (Medical Council, 2015). There are 58.4 specialist-certified GPs per 100,000 people in Ireland, which is less than the number required to meet population health needs today and into the future. 35.7% of GP specialists are aged 55 years and older, which is high compared with other specialties (31.9% are aged 55 years and older). Furthermore, there is significant variation in the availability of GPs across the country, with a two-fold difference between the most over-served (Galway, Cork, Waterford and Westmeath) and most under-served counties (Monaghan, Kilkenny, Longford and Kildare). The HSE has already estimated that, by 2025, the predicted shortage of GPs in Ireland will range from 493 to 1,380, depending on increased levels of access to free GP care (HSE, 2015). Measures to ensure implementation of workforce planning to escalate GP capacity in Ireland are required.

TABLE 5.4: CURRENT AND PROJECTED FUTURE GP UTILISATION – POPULATION 15 YEARS AND OLDER

			CHANGE			CHANGE	
	2015	2017	2015 - 2017		2022	2015 - 2022	
	n (1,000s)	n (1,000s)	n (1,000s)	%	n (1,000s)	n (1,000s)	%
15-24 years	811	824	14	1.7%	944	133	16.4%
25-34 years	1,459	1,342	-116	-8.0%	1,202	-256	-17.6%
35-44 years	1,763	1,790	28	1.6%	1,711	-52	-3.0%
45-54 years	1,609	1,666	57	3.5%	1,794	185	11.5%
55-64 years	2,138	2,231	93	4.4%	2,470	332	15.5%
65 years and older	3,908	4,161	253	6.5%	4,879	972	24.9%
ALL	11,687	12,015	328	2.8	8,121	985	8.4%

Source: Healthy Ireland Survey 2015 and Central Statistics Office

CHILD HEALTH

Child health is the foundation to future population health and wellbeing. This begins in pregnancy, as evidence states that chronic disease in adulthood is linked with prenatal in-utero wellbeing and a healthy birth weight (Barker et al, 2002). The first 1,000 days of life from the start of pregnancy until the child's second birthday, are now recognised as pivotal to the well-being of both the individual and the society in which he or she lives (Adair LS et al, 2013). Easy access to strong, effective and appropriate primary care services in early life makes an important contribution to public health.

DEMOGRAPHY

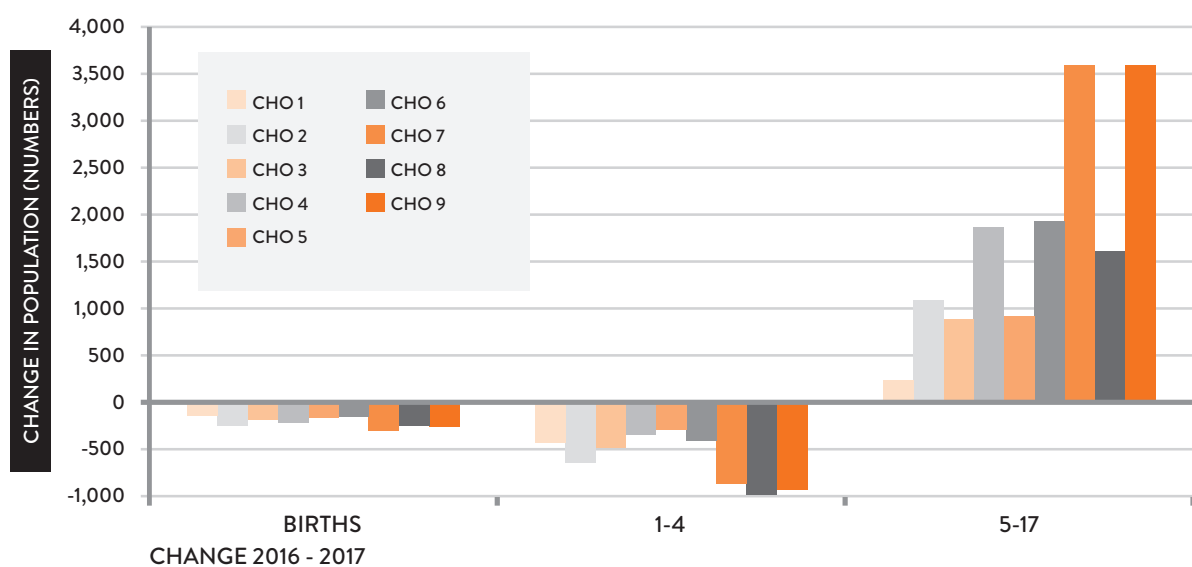
- The child population in Ireland will reach 1,240,633 in 2017 (22.3% increase over 2002). In 2013, Ireland had the highest percentage of children in the European Union, representing over a quarter of our population (25.6%) compared to the EU-28 average of 18.8% (Department of Children and Youth Affairs, 2014). Current projections predict, however, that the rate of child population growth will slow down in the next five years. Nevertheless, Ireland will continue to have a relatively high percentage of children in 2022 (25.4%).
- As shown in Table 5.5, it is projected that the Primary Care Division will deliver primary care services to 1,240,633 children in 2017. This is a net increase of 8,605 (0.7%) children versus 2016. In the medium term, the child population will continue to rise, albeit moderately, with an increase of 17,142 (1.4%) expected by 2022 versus 2016.
- Expected change in the child population is variable between age groups. Numbers of births and younger children (aged 1 to 4 years) are decreasing moderately, while numbers of older children (aged 5 to 17 years) continue to grow. This trend is relevant to the planning of services across the child age groups, especially for older children.
- The expected change in child population across CHO is also variable (Figure 5.2 shows 2016-2017 change and Table C3, Appendix C provides 2016-2022 change). Compared with 2016, some CHOs will see a reduction in total numbers of children in 2017 (CHO 1) and in 2022 (CHO 1, 2, 3 and 5), while most will see an increase in numbers of children. Growth in the population of children will be greatest in CHOs 6, 7 and 9.

TABLE 5.5: PROJECTED CHILD POPULATIONS 2016, 2017, 2022 PER CHO - ABSOLUTE AND RELATIVE CHANGE

CHO	CHILD POPULATION, 0-17 YEARS						
	2016	2017	2022	CHANGE 2016 - 2017		CHANGE 2017 - 2022	
	n (1,000s)	n (1,000s)	n (1,000s)	n (1,000s)	%	n (1,000s)	%
1	105.4	105.0	101.5	-0.4	-0.4%	-3.9	-3.7%
2	114.1	114.3	110.9	0.1	0.1%	-3.2	-2.8%
3	99.3	99.5	97.8	0.2	0.2%	-1.5	-1.5%
4	173.9	175.2	178.4	1.3	0.7%	4.5	2.6%
5	134.8	135.2	134.2	0.4	0.3%	-0.6	-0.4%
6	97.2	98.6	102.1	1.3	1.4%	4.9	5.0%
7	178.9	181.3	186.8	2.4	1.3%	7.9	4.4%
8	175.2	176.1	175.5	0.9	0.5%	0.3	0.2%
9	153.2	155.6	161.9	2.4	1.5%	8.7	5.7%
ALL	1,232.0	1,240.6	1,249.1	8.6	0.7%	17.1	1.4%

Source: Central Statistics Office

FIGURE 5.2: PROJECTED CHANGE IN CHILD POPULATION IN EACH CHO BY AGE-GROUP, 2016-2017



Source: Central Statistics Office

PRIMARY CARE SERVICES TO CHILDREN

SERVICES TO INFANTS (0-1 YEARS)

Newborns in Ireland are offered neonatal screening, which comprises a heel-prick blood test for Phenylketonuria (PKU), Homocystinuria, Maple Syrup Urine Disease, Classical Galactosaemia, Cystic Fibrosis and Congenital Hypothyroidism and a hearing test. From birth to 12 months, infants are visited by public health nurses and receive a Child Health Development Screening at 10 months. Demand for these services is driven by birth rates.

- Table 5.6 provides an overview of projected demand for services to infants. Some CHOs (for example CHO 2, 7, 8 and 9) are projected to experienced larger net decreases in births in 2017. Decreases in births are also projected in the medium term (2022).

TABLE 5.6: PROFILE OF CURRENT UTILISATION AND PROJECTED DEMAND FOR INFANT HEALTH SERVICES 2016-2022

CHO	CHILD POPULATION, 0-1 YEAR						
	2016	2017	CHANGE 2016 - 2017		2022	CHANGE 2017 - 2022	
	n	n	n	%	n	n	%
1	5,200	5,000	-200	-3.1%	4,500	-570	-11.3%
2	5,900	5,700	-200	-4.4%	4,500	-1,100	-20.0%
3	5,450	5,300	-150	-3.6%	4,400	-800	-15.5%
4	9,900	9,600	-300	-2.4%	8,600	-1,050	-10.9%
5	7,400	7,200	-200	-2.4%	6,500	-700	-9.9%
6	5,350	5,200	-150	-3.1%	4,400	-750	-14.4%
7	10,500	10,200	-300	-3.0%	8,700	-1,500	-14.7%
8	9,500	9,200	-300	-2.8%	8,300	-970	-10.5%
9	9,300	9,000	-300	-3.0%	7,600	-1,430	-15.8%
ALL	68,500	66,400	-2,100	-3.0%	57,500	-8,900	-13.5%

Source: Central Statistics Office

OTHER NURSING SERVICES TO CHILDREN

Table 5.7 illustrates current utilisation and projected demand for nursing services by children. Compared with 2015, while demand among younger children (aged 0-4 years) is expected to decrease, demand from older children (5-17 years) will increase by 3.7% and 10.3% in 2017 and 2022 respectively. Overall, however, net increases in service demand (including disability nursing) are projected.

TABLE 5.7: CURRENT AND PROJECTED FUTURE UTILISATION OF NURSING SERVICES BY AGE GROUP

SERVICE	POPULATION	2015 ACTUAL	2017 PROJECTION	CHANGE 2015 - 2017		2022 PROJECTION	CHANGE 2015 TO 2022	
		n	n	n	%	n	n	%
Nursing referrals accepted	Total 0-17 years	45,688	47,253	1,565	3.4	49,953	4,265	9.3
Nursing referrals (disability) accepted	5-17 years	1,404	1,456	52	3.7	1,549	145	10.3

Source: Business Information Unit. BIU advise 2015 data incomplete for Nursing due to IR issues

OTHER PRIMARY CARE SERVICES

The change in projected demand for other primary care services by children, primarily therapy services, will be small in the short to medium term based on current utilisation rates only (Table C4, Appendix C). This does not address unmet need or demand.

MAINTAINING EXISTING LEVELS OF SERVICE

- In 2017, demand for physiotherapy, occupational therapy and psychology will increase by 431 (1.7%), 270 (1.7%) and 189 (1.4%) respectively. Audiology and ophthalmology demand will increase by 57 (0.6%) and 102 respectively (0.6%). Podiatry and speech and language therapy demand will increase by 6 (1.7%) and 431 (1.7%) respectively.
- Based on existing levels of service, compared with 2015, demand for dietetics will decrease by 7 (-0.1%) in 2017 and decrease by 265 (-4.7%) in 2022. However, Chapter 3 highlights the rising tide of obesity and the importance of stemming this in early life. As shown in Table C4, Appendix C, the age specific utilisation of dietetics falls between early and late childhood (8.7/1,000 in children aged 0 to 4 years versus 2.8/1,000 in children aged 5-17 years). In summary, dietetics is a primary care service which would benefit from review, to ensure that the current resource is best aligned with health need among older children to maximize health gain.

UNMET DEMAND

- Planning of other primary care services in 2017 should also take into account unmet demand, since this is significant as a proportion of current capacity. As of December 2015, wherein age specific data on waiting lists is available, there were:
 - 11,237 children waiting for occupational therapy assessment (69.2% of 2015 referrals),
 - 4,900 patients waiting orthodontic assessment (7.2% of 2015 in active treatment total) and 15,830 waiting orthodontic treatment (23.4% of 2015 in active treatment total),
 - 8,727 waiting psychology assessment (57.8% of 2015 referrals accepted), of which 3,456 were waiting more than 12 weeks (39.6% of 2015 referrals accepted),
 - 106 waiting podiatry assessment (29.4% of 2015 referrals accepted) of which 34 were waiting more than 12 weeks (11.9% of 2015 referrals accepted),
 - 13,099 waiting ophthalmology assessment (74.3% of 2015 referrals accepted), of which 9,412 were waiting more than 12 weeks (53.4% of 2015 referrals accepted),
 - 5,918 waiting audiology assessment (33.6% of 2015 referrals accepted), of which 3,541 were waiting more than 12 weeks (20.1% of 2015 referrals accepted),
 - 1,182 waiting dietetic assessment (21.1% of 2015 referrals accepted), of which 448 were waiting more than 12 weeks (8.0% of 2015 referrals accepted).

ADULTS 18-64 YEARS

Following childhood, health and wellbeing continues to be developed in adult life. As highlighted in Chapter 3, however, factors such as increasing prevalence of obesity and excess alcohol consumption in adulthood, present significant threats to health. Easy access to strong, effective and appropriate primary care in adult life continues to be important, not only in responding to emerging ill-health, but also in preventing disease and supporting good health. For society, maintenance of good health in adulthood is also a driver of continuing economic development (Sachs, 2001).

DEMOGRAPHY

Table 5.8 shows the current and projected adult population aged 18 to 64 years per CHO 2016 to 2022. A very small increase in adults aged 18 to 64 years is projected between 2016 and 2017 across CHOs, with some CHOs (CHO 2 and 3) estimated to see a small reduction. In the medium term to 2022, modest increases in adults aged 18 to 64 years is projected across CHOs; CHOs 6, 7, 8, and 9 will see greater growth while CHO3 is projected to see a small reduction.

TABLE 5.8: ADULT POPULATION 18-64 YEARS BY CHO 2016-2022 – ABSOLUTE AND RELATIVE CHANGE

CHO	2016	2017	2022	CHANGE 2016 - 2017		CHANGE 2016 - 2022	
	n	n	n	n	%	n	%
1	231,600	231,600	236,700	16	0.0%	5,150	2.2%
2	263,200	262,700	264,200	-450	-0.2%	1000	0.4%
3	226,500	225,950	225,600	-520	-0.2%	-900	-0.4%
4	409,300	410,000	417,200	720	0.2%	7,900	1.9%
5	307,200	308,200	315,400	1,005	0.3%	8,240	2.7%
6	241,500	242,400	254,500	940	0.4%	13,000	5.4%
7	424,500	424,600	440,400	110	0.0%	15,900	3.7%
8	363,600	365,400	378,900	1,780	0.5%	15,250	4.2%
9	372,900	372,850	387,200	-50	0.0%	14,300	3.8%
TOTAL	2,831,900	2,838,300	2,909,600	6,410	0.2%	77,700	2.7%

Source: Central Statistics Office

PRIMARY CARE SERVICES

- Demand for most primary care services by adults aged 18 to 64 years is projected to slightly increase between 2015 and 2017; a more moderate increase can be expected in the medium term to 2022 (Table C5, appendix C).

MAINTAINING EXISTING LEVELS OF SERVICE

- Compared with 2015, to maintain existing levels of service, in 2017: physiotherapy referrals (adults aged 18 years and older) are projected to increase by 2,229 (1.4%); occupational therapy referrals by 42 (0.3%); psychology referrals accepted, podiatry referrals accepted, ophthalmology referrals accepted and audiology referrals accepted by less than 10 each (0.3%); dietetic referrals accepted by 31 (0.3%); speech and language therapy referrals accepted by 12 (0.3%); and nursing referrals by 91 (0.3%).

UNMET DEMAND

- Planning of primary care services in 2017, for adults aged 18 to 64 years, should also take into account unmet demand expressed as waiting lists, since this is significant as a proportion of current service capacity. As of December 2015, wherein age specific data on waiting lists is available, there were:
 - 2,104 adults waiting for occupational therapy assessment (13.6% of 2015 referrals),
 - 3,264 waiting psychology assessment (36.0% of 2015 referrals accepted), of which 787 were waiting more than 12 weeks (24.1% of 2015 referrals accepted),
 - 836 waiting podiatry assessment (29.2% of 2015 referrals accepted) of which 551 were waiting more than 12 weeks (19.2% of 2015 referrals accepted),
 - 1,638 waiting ophthalmology assessment (73.2% of 2015 referrals accepted), of which 1,275 were waiting more than 12 weeks (56.9% of 2015 referrals accepted),
 - 1,436 waiting audiology assessment (71.7% of 2015 referrals accepted), of which 865 were waiting more than 12 weeks (43.2% of 2015 referrals accepted),
 - 3,074 waiting dietetic assessment (27.2% of 2015 referrals accepted), of which 1,608 were waiting more than 12 weeks (14.2% of 2015 referrals accepted).

OLDER ADULTS AGED 65 YEARS AND OVER

Health in later life is a consequence of experiences from childhood through adulthood. The impact of ill-health and disease is greatest among older adults as noted in Chapter 3. As a consequence, healthcare use increases with age. If the incidence of chronic disease stays the same or increases, and as treatments and secondary prevention of chronic diseases improve, greater numbers of older people will live longer with ill-health (expansion of morbidity). Investing in health and primary prevention of chronic disease is essential if the health system is to defer chronic disease onset. This will enable increasing numbers of older people living longer in good health, with less healthcare use (compression of morbidity).

DEMOGRAPHY

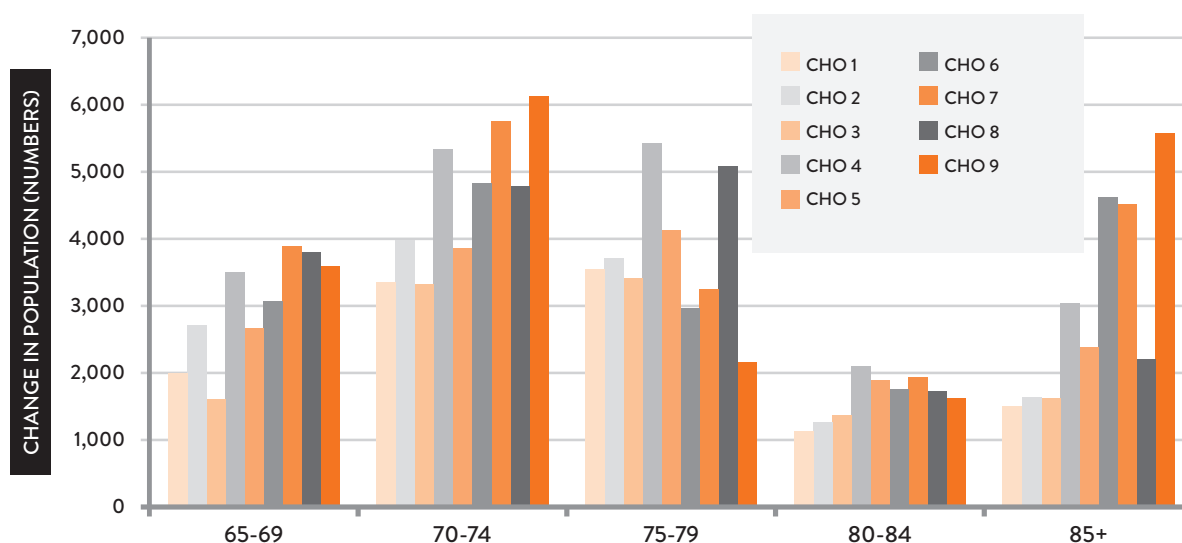
- As shown in Table 5.9, compared with 2016, the population of older adults will increase by 19,800 (3.2%) in 2017 and 131,000(21.0%) in 2022. All CHOs will see an increase in older adults in the short and medium term, some CHOs (4, 7 and 9) will see greater increases (Figure 5.3).

TABLE 5.9: CURRENT AND PROJECTED OLDER ADULT POPULATION PER CHO – ABSOLUTE AND RELATIVE CHANGE

CHO	2016	2017	2022	CHANGE 2016 TO 2017		CHANGE 2016 TO 2022	
	n	n	n	n	%	n	%
1	59,300	61,000	70,800	1,663	2.8	11,500	19.4
2	65,900	67,900	79,200	1,952	3.0	13,300	20.1
3	55,800	57,600	67,100	1,763	3.2	11,300	20.3
4	96,300	99,300	115,700	3,019	3.1	19,400	20.2
5	73,500	75,800	88,400	2,322	3.2	14,900	20.3
6	60,000	62,300	77,200	2,369	3.9	17,300	28.8
7	70,200	72,900	89,500	2,741	3.9	19,400	27.6
8	73,700	76,300	91,300	2,595	3.5	17,600	23.9
9	70,400	73,000	89,500	2,664	3.8	19,100	27.1
TOTAL	624,200	644,000	755,200	19,802	3.2	131,000	21.0

Source: Central Statistics Office

FIGURE 5.3: PROJECTED CHANGE IN POPULATION IN EACH CHO BY AGE-GROUP, 2016-2022



Source: Central Statistics Office

PRIMARY CARE SERVICES

Compared with 2015, based on existing levels of service, demand for primary care services by older adults is projected to increase moderately in 2017 (6.5% increase) and will increase significantly in 2022 (24.9% increase) (Table C6, Appendix C).

MAINTAINING EXISTING LEVELS OF SERVICE

- In the case of services with moderate current utilisation by older adults (podiatry, ophthalmology, audiology, dietetics and speech and language therapy), the absolute increase in projected demand between 2015 and 2017 will be 159 to 598 patients. However, for primary care services with higher utilisation by older adults, the absolute increase in demand between 2015 and 2017 will be a substantial challenge for service planning: physiotherapy referrals (adults aged 18 years and older) will increase by 2,229; occupational therapy referrals will increase by 3,617; and nursing referrals accepted will increase by 3,990.

UNMET DEMAND

- Planning of primary care services in 2017 for older adults, should also take into account unmet demand expressed as waiting lists, since this is significant as a proportion of current service capacity. As at December 2015, wherein age specific data on waiting lists is available, there were:
 - 28,397 adults aged 18 years and older waiting for physiotherapy assessment (17.3% of 2015 referrals), of which 9,976 (6.1%) were waiting more than 12 weeks,
 - 9,579 older adults waiting for occupational therapy assessment (17.1% of 2015 referrals),
 - 59 older adults waiting for psychology assessment (21.6% of 2015 referrals accepted), of which 28 were waiting more than 12 weeks (10.3% of 2015 referrals accepted),
 - 1,735 waiting podiatry assessment (26.1% of 2015 referrals accepted), of which 1,022 were waiting more than 12 weeks (15.4% of 2015 referrals accepted),
 - 2,318 waiting ophthalmology assessment (94.5% of 2015 referrals accepted), of which 1,758 were waiting more than 12 weeks (71.6% of 2015 referrals accepted),
 - 5,252 waiting audiology assessment (75.7% of 2015 referrals accepted), of which 3,084 were waiting more than 12 weeks (44.5% of 2015 referrals accepted), 2,252 waiting dietetic assessment (25.6% of 2015 referrals accepted), of which 1,330 were waiting more than 12 weeks (15.1% of 2015 referrals accepted).

As previously highlighted (Table C6, Appendix C), the utilisation of psychology services among older adults is relatively low compared to utilisation of these services by other age groups. This is not a consequence of less mental health need among older people and it points to a need to review alignment of primary care psychology services with mental health need of older adults.

²Data for this indicator is only available for adults aged 18 years and over

PRIMARY CARE REIMBURSEMENT SERVICE

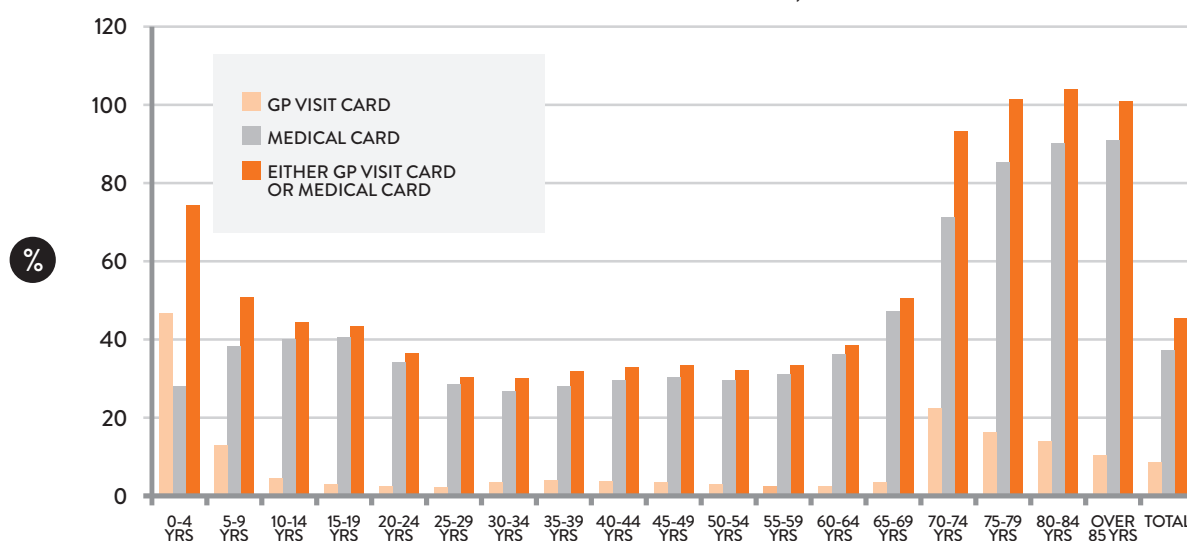
The Primary Care Reimbursement Service (PCRS) provides access to primary care services for the eligible population. Access to many schemes is enabled through eligibility for either a GP Visit Card (GPVC) (access to free GP consultations and various GP services) or a Medical Card (access to free primary care services including free medications).

Data for the analyses in this section were derived from PCRS and accessed via PHIS through Department of Health. Cross validation with data provided direct from PCRS was conducted to confirm the PCRS data accessed via PHIS was valid.

- PCRS expenditure is reported as monthly totals across various payment headings. Data in this paper relates to the period from 1st January 2015 to 1st December 2015, and for convenience in this paper is generally referred to as 2015. The 2015 totals refer to the sum of monthly expenditure reported in 2015.
- Projections of Medical Card and GPVC coverage were based on coverage at 1st of December 2015. In the case of GPVC, there was significant fluctuation, owing to a policy change in 2015 (3.4% on 1/1/2015 to 9.1% on 1/12/2015). Therefore for the purpose of projections, the coverage rate on 1st December 2015 was determined to best represent future trends. For consistency, projections in Medical Card coverage were also made based on coverage at 1st December 2015. There was, in fact, a small reduction in Medical Card coverage over 2015 from 38% to 37.2% (-36,145), although the number of beneficiaries was generally stable with very minimal change between 1st June 2015 to 1st December 2015.
- DPS payments to pharmacists include copayments by the public and thus do not equal actual PCRS expenditure on DPS.
- Monthly totals were carefully analyzed to identify significant trends in expenditure.
- Where the monthly trends were relatively stable within a defined payment heading, projections were based on the 2015 total.
- Where the monthly trends were not stable, it would not be valid to project future expenditure based on 2015 total. In these cases, most recent monthly expenditure was factored up to provide the annual total for the purpose of projection:
 - DPS payments to pharmacists – based on 12 months 2015
 - GMS Pharmaceutical Pharmacy Fees - based on last 6 months 2015
 - GP Visit Card Capitation Fee - based on December 2015
 - Medical Card Capitation Fee - based on last 6 months 2015
 - Other GMS Fees paid to GPs - based on last 6 months 2015
 - Out of Hours Service Fee - based on last 3 months 2015
 - DTSS - Total payments to Dentists - based on last 6 months 2015
 - LTI payment to pharmacists - based on last 3 months 2015
 - Payments to Optometrists / Ophthalmologists - based on last 6 months 2015

Figure 5.4 illustrates the age-specific coverage of GPVC and Medical Card on 1st December 2015. In total 46.4% of the population had access to either scheme (9.1% had access to GPVC scheme - 424,862 people - and 37.2% had access to Medical Card Scheme - 1,732,555 people). This is an increase from 41.4% at the start of 2015 and an increase from 28.1% in 2005.

FIGURE 5.4: POPULATION COVERAGE OF GPVC AND MEDICAL CARD, 1ST OF DECEMBER 2015



Source: Primary Care Reimbursement Service data 2015 accessed via Public Health Information System

Projecting population coverage of GPVC and Medical Cards is complex. More than other health services, these entitlements are subject to a range of influences broader than demographic change. In particular, coverage of these schemes is impacted by government policy and by macroeconomic trends, since eligibility is generally linked with means. Holding all these other factors constant and understanding pure demographic pressures is, nevertheless, one useful facet of analysis, discussion and decision-making that will determine future demand for GPVC and Medical Card.

TABLE 5.10: ACTUAL COVERAGE OF GP VISIT AND MEDICAL CARDS 2006-2015 AND PROJECTIONS FOR 2017 AND 2022

	n	MEDICAL CARD %	n	GPVC %
2006	1,221,695	28.8%	51,760	1.2%
2007	1,276,178	29.2%	75,589	1.7%
2008	1,352,120	30.1%	85,546	1.9%
2009	1,478,560	32.6%	98,325	2.2%
2010	1,615,809	35.5%	117,423	2.6%
2011	1,694,063	37.0%	125,657	2.7%
2012	1,853,877	40.4%	131,102	2.9%
2013	1,849,380	40.3%	125,426	2.7%
2014	1,768,700	38.4%	159,576	3.5%
2015	1,732,555	37.2%	424,862	9.1%
2017	1,775,997	37.2%	429,399	9.1%
ABSOLUTE INCREASE 2015-2017	43,442	-	4,537	-
% INCREASE 2015-2017	2.5%	-	1.1%	-
2022	1,898,951	37.2%	424,871	9.1%
ABSOLUTE INCREASE 2015-2022	166,396	-	9	-
% INCREASE 2015-2022	9.6%	-	0.0%	-

Source: Department of Health; Health in Ireland – Key Trends 2015, and Primary Care Reimbursement Service via Public Health Information System

TABLE 5.11: GP VISIT CARD AND MEDICAL CARD PROJECTIONS, 2017 AND 2022 BY AGE GROUP

		COVERAGE END 2015 %	2017 n	2022 n
UNDER 6's	Medical Card	29%	126,984	113,189
	GPVC	46%	194,790	169,596
	GPVC*	71%	311,406	275,579
6-69 YEAR OLDS	Medical Card	33%	1,290,489	1,352,958
	GPVC	4%	149,699	153,313
70 YEARS AND OVER	Medical Card	82.6%	358,524	432,804
	GPVC	19.4%	84,910	101,962

*Projected numbers of GPVC beneficiaries (i.e. those not already eligible for a Medical Card) assuming full uptake of the scheme

- As shown in Table 5.10, based on coverage of these schemes at the end of 2015, taking account of demographic pressure and holding all other factors constant, it is projected that, in 2017, demand for GPVCs and Medical Cards would be 429,399 (1.1% increase) and 1,775,997 (2.5% increase) respectively.
- In 2022, projected demand would be 424,871 (1.1% decrease) and 1,898,951 (9.6% increase) people will be covered by GPVCs and Medical Cards respectively.
- Table 5.11 illustrates the projected coverage by age group, based on coverage of these schemes at the end of 2015. It also presents the expected numbers of children benefiting from a GPVC in a scenario where coverage of this scheme becomes maximal (assuming that a constant proportion retains a Medical Card, i.e. 29%). Based on demographic change, if coverage of these schemes remains at Dec 2015 levels, large increases in actual numbers of beneficiaries are projected in the 6-69 year old and 70 years and older age groups. There will be reductions in the number of beneficiaries among under 6s.
- The above projections highlight that, even if the percentage of the population covered by GP Visit Cards and Medical Cards remain constant, changing population size and structure – especially increasing numbers of older adults – will mean that the absolute numbers of people covered by these schemes will increase. These changes will have significant impact for PCRS expenditure, especially drug expenditure.

IMPACT OF POLICY CHANGE - UNDER 6'S GP VISIT CARD

In June 2015, in line with government policy, a scheme to provide all children under the age of six years with a GP visit card (GPVC) was opened. In addition to free GP visits, the GPVC for a child under six years covers specific assessments at aged two years and five years and care for children with asthma. These assessments are preventative checks that include charting age, weight and height and taking appropriate follow-up action. The asthma checks will assess the child's asthma and review their medications, including ensuring that the child is using inhalers correctly. Budget 2016 included provision to extend the free GPVC to all children under 12 years of age, a commitment which is reiterated in the recent coalition for government and implementation will follow.

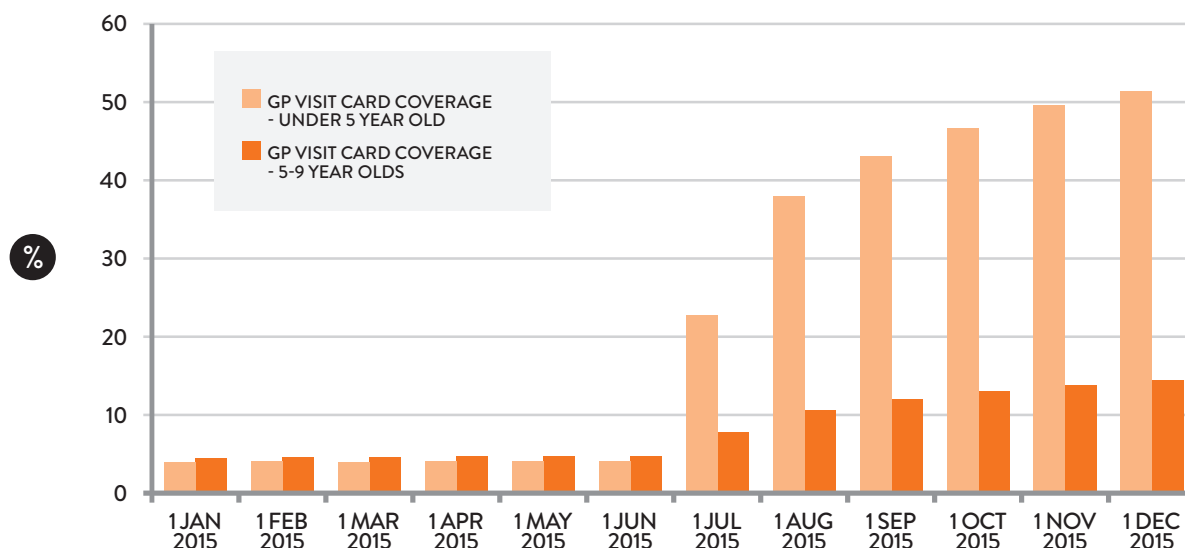
COVERAGE FOLLOWING INTRODUCTION OF UNDER 6s GPVC

Figure 5.5 shows trend in coverage of the GPVC for targeted age groups in 1/1/15 to 1/12/15.

- In 2015, there was a 13-fold increase in children age 0-4 years recorded accessing a GPVC. The number of children aged 5-9 years accessing a GPVC doubled.
- By Dec 1st 2015, 79.3% of children aged 0-4 years received either the GPVC or a Medical Card (51.7% for GPVC and 27.6% for Medical Cards).

- This indicates that uptake of the GPVC for under 6s has not reached maximum and it is estimated that an additional 20.7% of children aged 0-4 years (76,098 children) have yet to access their entitlement under this scheme. Assuming the gap in access is the same for children aged five years, it is estimated that an additional 86,496 children under six years of age had not accessed their entitlement to a free GPVC at the end of 2015.
- Health planning for 2017 should take account of further uptake of GPVCs for under 6s.

FIGURE 5.5: TRENDS IN GPVC COVERAGE FOR UNDER 6s, 2015



Source: Primary Care Reimbursement Service data 2015 accessed via Public Health Information System

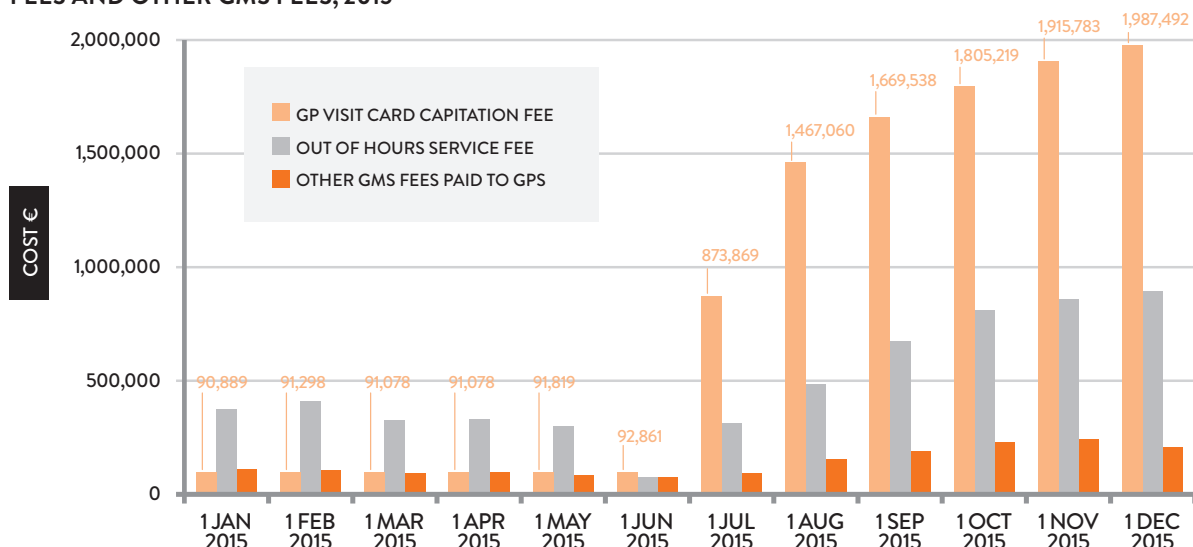
EXPENDITURE IMPLICATIONS OF POLICY CHANGE

Figure 5.6 shows the expenditure implications of increased access to the GPVC. Introduction of the GPVC has given rise to a notable increase in capitation fees, out-of-hours fees and other GMS fees:

- In 2015, there was almost a 22 fold increase (€1,896,603) and just over seven fold increase (€369,254) in fees for GP Visit Card Capitation for 0-4 year olds and 5-9 year olds respectively.
- Since the introduction of the free GPVC there has been a 2.4 fold (€524,581) and 1.7 fold increase (€101,423) in fees for out-of-hours attendances for 0-4 year olds and 5-9 year olds respectively.
- Finally, the GPVC contract also provides other payments to GP for specified and special activities. Increases were also seen in this PCRS budget line.

CHANGE IN CONSULTATION RATE FOLLOWING POLICY CHANGE

There is no routine national data available for evaluating the impact of the introduction of free GPVC to the under 6s on the rate of GP consultations during normal working hours. It is not possible to provide a comprehensive and accurate measure of the impact of the policy of free GPVCs for children under six years, in relation to the increase of GP consultations. This is a significant information gap and highlights the need to ensure information systems are in place, which enable key policy interventions to be evaluated, so as to inform future planning.

FIGURE 5.6: TRENDS IN EXPENDITURE FOR 0-4 YEAR OLDS IN GPVC CAPITATION FEE, OUT-OF-HOURS FEES AND OTHER GMS FEES, 2015

Source: Primary Care Reimbursement Service data 2015 accessed via Public Health Information System

Our best estimate is using data from a study carried out prior to the introduction of the free GPVC by Behan et al (2014), which examined GP utilisation by children aged under 6 years in Cork for patients with a Medical Card, patients with a GPVC and for private patients. The study used medical records to control for potential problems with parental recall. While Growing Up in Ireland is also a source of GP utilisation data, it is based on recall. Furthermore, it only reports GP consultation rates for three year olds. As per Behan et al., the mean annual consultation rate among all children under 6 years was 3.01. However, consultation rates differed by group as follows: 4.91 for patients with a Medical Card; 5.07 for patients with a GPVC; and 2.03 for private patients. Extrapolating these findings nationally, assuming 30% of children under 6 have a medical card and the remaining 70% of children aged under six years hold a Doctor's Visit card from 2016, the projected increase in the number of GP consultations is outlined in Table 5.12 and Figure 5.7.

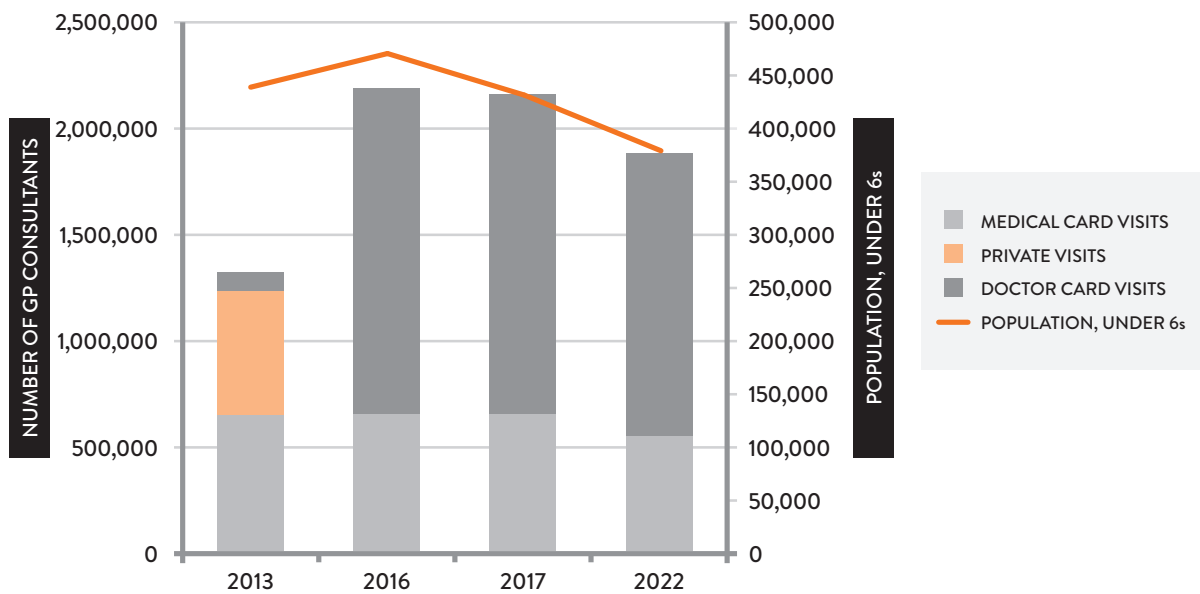
- The demand for GP consultations per year among this cohort is projected to increase by 65.7% between 2013 and 2016 (from 1,326,195 per year to 2,196,874 consultations per year).
- In 2017, projected demand is 2,168,991 GP consultations with under 6s.

TABLE 5.12: PROJECTED IMPACT OF GP VISIT CARD FOR UNDER 6s ON GP CONSULTATIONS

YEAR	POPULATION 0-5 YEARS	MEDICAL CARD		PRIVATE		DOCTOR VISIT CARD		
		%	MEAN VISITS	%	MEAN VISITS	%	MEAN VISITS	
2013	439,778	30%	4.91	66%	2.03	4%	5.07	
			131,933	647,793	290,253	589,215	17,591	89,187
		30%	4.91	0%	0	70%	5.07	
2016	437,450	131,235	644,364	0	0	306,215	1,552,510	
2017	431,898	129,569	636,185	0	0	302,328	1,532,806	
2022	376,147	112,844	554,064	0	0	263,302	1,334,945	

Source: Behan et al 2014 and Central Statistics Office
Behan et al (2014) was assessed to be the most useful source of estimate

FIGURE 5.7: PROJECTED IMPACT OF GP VISIT CARD FOR UNDER 6s ON GP CONSULTATIONS



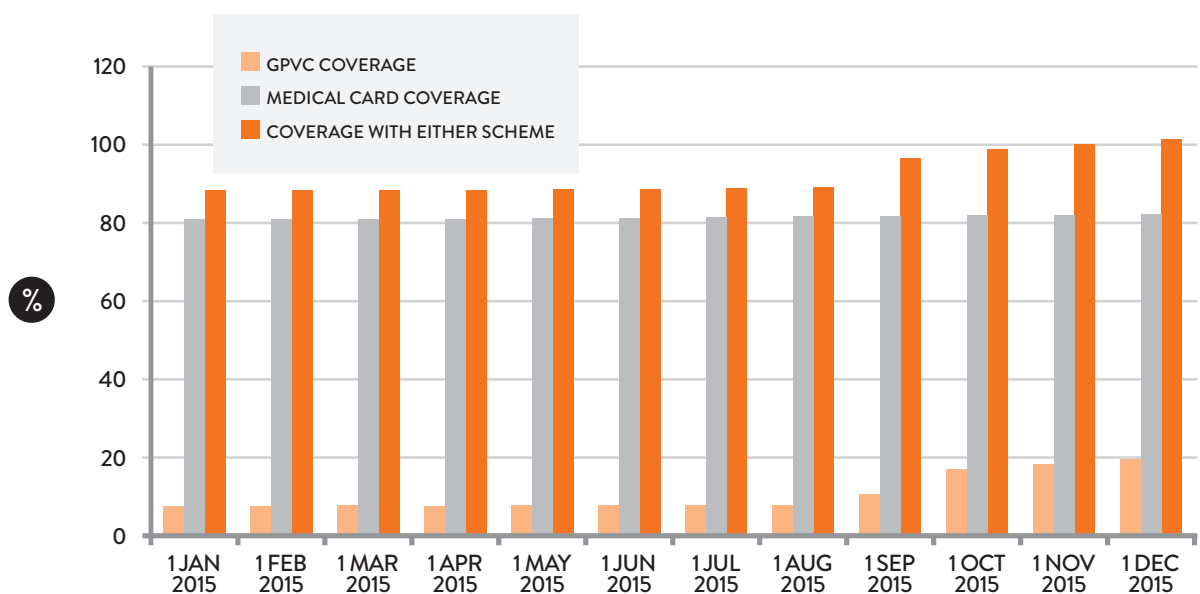
Source: Behan et al 2014 and Central Statistics Office

IMPACT OF OVER 70s GP VISIT CARD

In August 2015, a scheme to provide access to free GP visit cards (GPVC) to all adults 70 years and older was launched. Figure 5.8 shows the trend in change in GPVC coverage in 2015.

- The coverage of GPVCs among adults aged 70 years and older increased from 7.3% to 19.4% over 2015. By the end of 2015, all adults aged 70 years or older had access to either a GPVC or Medical Card.
- In 2015, there was a 1.6 fold increase in GPVC capitation fees for adults aged 70 years and older (from €709,617 to €1,824,284). While there was some variation, no significant change in Out-Of-Hours fees or Other Fees to GPs was noted for adults aged 70 years and older.

FIGURE 5.8: TREND IN COVERAGE WITH GPVC AND MEDICAL CARD FOR ADULTS 70 YEARS AND OLDER, 2015



Source: Primary Care Reimbursement Service data 2015 accessed via Public Health Information System

PROFILE OF PRIMARY CARE REIMBURSEMENT SERVICE

Table 5.13 provides an overview of the total cost of the 10 selected payment headings reported by the PCRS in 2015, for which age-specific data was provided. These payment headings comprise various schemes and represent approximately 75% of the total PCRS budget. Pharmaceutical fees (ingredient costs and pharmacy fees) comprised the largest proportion of expenditure for the selected payment headings (57.4%).

TABLE 5.13: 2015 EXPENDITURE ON SELECTED PCRS PAYMENT HEADINGS

INDICATOR 2015	TOTAL (€)	% TOTAL
GMS Pharmaceutical Ingredient Costs	682,408,054	39.2%
GMS Pharmaceutical Pharmacy Fees	316,891,597	18.2%
GP Visit Card Capitation Fee	34,791,912	2.0%
Medical Card Capitation Fee	207,662,535	11.9%
Other GMS Fees paid to GPs	33,026,556	1.9%
Out of Hours Service Fee	33,355,851	1.9%
DPS payment to pharmacists	152,526,273	8.8%
DTSS - Total payments to Dentists	66,771,627	3.8%
LTI payment to pharmacists	183,845,239	10.6%
Optical - Total payments to Optometrists / Ophthalmologists	29,771,176	1.7%
TOTAL OF ABOVE PAYMENT HEADINGS	1,741,050,820	100.0%

Source: Primary Care Reimbursement Service data 2015 accessed via Public Health Information System

Projecting PCRS expenditure is complex. Demographic change is a driver of changing expenditure but PCRS fees are also significantly impacted by other influences such as government policy, pharmaceutical market forces, new drugs and prescribing and dispensing behaviours. For the purpose of Planning for Health, pure demographic effects have been examined only and all other factors have been assumed to stay constant. The recent trends and pure demographic effect on expenditure across various payment headings in the short and medium terms, are shown in Table 5.14.

- For the 10 selected payment headings outlined below, demographic changes are estimated to drive an increase in total expenditure of €75.2 million from 2015 to 2017 (4.2%) and €290.6 million (16.2%) by 2022.
- Expenditure across most payment headings will increase moderately (1.6% - 4.9%) in the short term.
- A larger increase can be expected by 2022 (5.0% - 19.3%).
- As previously highlighted, potential coverage of the free GPVC for children aged under 6 years has not reached maximum. It is estimated that maximum coverage in this population group would add €33.4m to GP Visit Card Capitation costs in 2015, €14.4m to GP Out-of-Hours payments and €3.0m to other GP fees (in total, an additional €50.8m).

It is also evident from Table 5.14 that a reduction of about €160million in drug costs, between 2013 and 2015, has been achieved. This reflects the outturn of various interventions implemented to control drug costs, including the Financial Emergency Measures in the Public Interest (FEMPI) Act 2009, renewed agreements with the pharmaceutical industry, the Health (Pricing and Supply of Medical Goods) Act 2013, and the HSE Medicines Management Programme.

Ongoing active management of drug costs is necessary to both control overall PCRS costs and to provide fiscal space for implementation of government policy in support of universal access to primary care. Small changes in the cost or volume of commonly prescribed drugs offer potential to significantly impact expenditure. For example, in the context of our ageing population, it is estimated that 1-in-5 adults aged 50 years and older use five or more medications (polypharmacy), which carries risks of inappropriate prescribing, non-adherence and adverse drug reactions and accounts for over half of the annual costs of prescribing to the entire population aged over 50 years (Richardson et al, 2012).

TABLE 5.14: RECENT TRENDS AND PROJECTIONS IN EXPENDITURE (€MILLIONS) ACROSS SELECTED PCRS PAYMENT HEADINGS

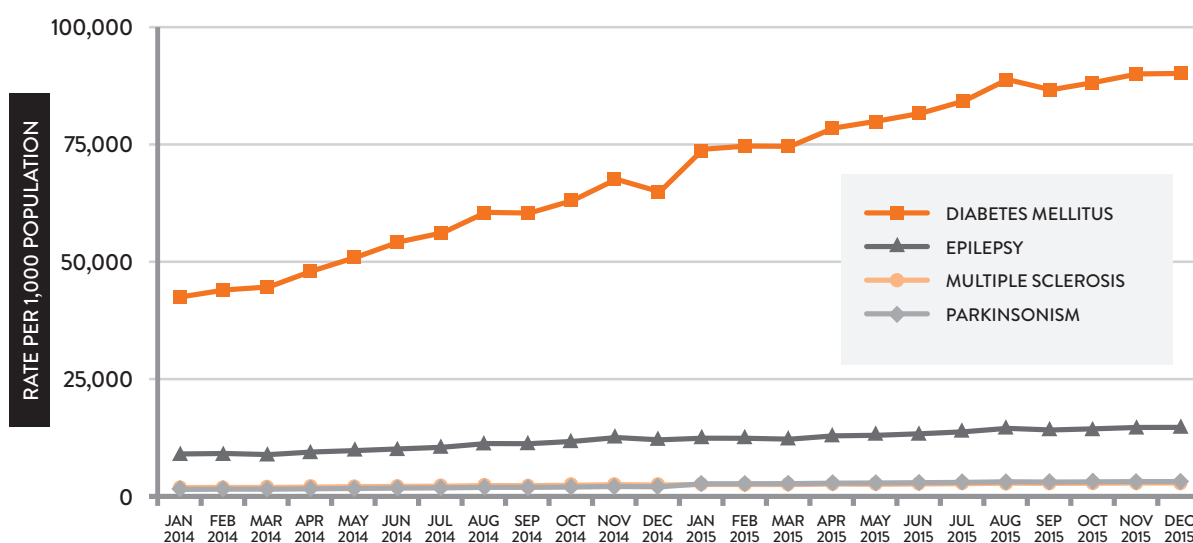
	2013	2015	2017	CHANGE 2015-2017		2022	CHANGE 2015-2022	
	n	n	n	n	%	n	n	%
GMS Pharmaceutical Ingredient Costs	840	682	713	31	4.5%	804	122	17.9%
GMS Pharmaceutical Pharmacy Fees	320	321	337	16	4.9%	383	62	19.3%
GP Visit Card Capitation Fee	11	61	63	2	2.6%	65	4	5.9%
Medical Card Capitation Fee	222	211	219	9	4.1%	244	33	15.7%
Other GMS Fees paid to GPs	34	40	41	1	3.6%	45	6	14.6%
Out of Hours Service Fee	34	39	40	0.6	1.6%	41	2	5.0%
DPS payment to pharmacists	168	153	159	6	4.2%	176	23	15.1%
DTSS - Total payments to Dentists	65	62	63	2	2.9%	69	7	12.0%
LTI payment to pharmacists	100	198	205	7	3.5%	224	26	13.1%
Optical	32	31	33	2	4.8%	37	6	18.9%
TOTAL	1,825	1,797	1,872	75	4.2%	2,088	291	16.2%

Source: Primary Care Reimbursement Service via Public Health Information System except 2013 which is from Alan Cahill, Dept of Health personal communication
Note: Methods applied for these analyses are described in a note at the end of the Chapter

LONG TERM ILLNESS SCHEME

It's notable from Table 5.14 above that Long Term Illness scheme expenditure has increased significantly - by €98,408,554 from 2013 to 2015. Figure 5.9 shows the trend in numbers of claimants on the most common disease-specific Long Term Illness Schemes.

FIGURE 5.9: TRENDS IN CLAIMANTS ON LONG TERM ILLNESS SCHEME FOR SELECTED CONDITIONS



Source: Personal communication, Primary Care Reimbursement Service

- Across all diseases, the number of Long Term Illness Scheme claimants increased by 87% from the start of 2014 to the end of 2015.
- In the case of Diabetes Mellitus for example, over 2014-2015 the number of claimants increased by 40,446, thereby doubling the number of claimants with this illness. Routine information does not enable the drivers of this trend to be fully elucidated. While the prevalence of chronic disease is increasing, this is unlikely to be the cause of increasing numbers of Long Term Illness Scheme claimants. The trend may be due to increased awareness of the scheme and the advent of user charges for prescriptions applicable to medical card holder incentivising a switch to the Long term Illness Scheme wherein there is dual eligibility.

PALLIATIVE CARE

The Primary Care Division is also responsible for end-of-life care in the community through its palliative care services. €72.8 million (2%) of the Primary Care Division budget 2016 was allocated in this area. Improving primary care management of end-of-life care is a key priority for improving health system performance, since it improves experience for patients and their families while avoiding the interventions and costs that are associated with end-of-life care in a secondary care setting (Kings Fund 2015). While palliative care can meet the needs of patients at end-of-life due to a wide range of conditions, utilisation among patients with cancer represents the majority of service activity with the median proportion of new patients with a primary diagnosis of non-malignant diseases accessing palliative care support beds reported as low as 10%. Palliative care development is an important focus for the Primary Care Division. Recent funding has been allocated to provide 15 new beds for Kerry Hospice and 6 new beds for Galway Hospice, funded via 2015 Winter Initiative. The rate of growth in need for palliative care services will challenge existing services.

Table 5.15 illustrates the increasing need for palliative care services:

- Deaths from cancer alone will increase by 552 (5.8%) from 2015 to 2017, and will increase by 2,168 (23%) from 2015 to 2022.
- Deaths from non-malignant conditions are projected to increase by 1,206 from 2015 to 2017.
- Based on existing service levels at the end of 2015, demographic change will see demand for admission to specialist palliative care inpatient unit's increase by 49 in 2017 and 189 in 2022.
- Patients seen or admitted to specialist palliative care services in the community will increase by 129 in 2017 and 496 in 2022.

TABLE 5.15: DEMOGRAPHIC EFFECT ON PALLIATIVE CARE BUDGET, POTENTIAL DEMAND AND UTILISATION

	2015 OUTTURN	2016 ALLOCATION	2017 PROJECTION	CHANGE 2015 TO 2017	2022 PROJECTION	CHANGE 2015 TO 2022
Budget (millions)	€71.90	€72.80	€73.34	€1.44	€76.30	€4.40
Deaths from Cancer	9,375	9,647	9,927	+552	11,543	+2,168
Deaths from Non-Malignant Conditions	19,973	20,573	21,179	+1,206	24,909	+4,936
No of admissions to specialist palliative care inpatient units	3,411	3,310	3,460	+49	3,600	+189
No. of new patients seen or admitted to specialist palliative care services in the community	8,968	9,353	9,097	+129	9,464	+496
POPULATION	4,654,154	4,686,484	4,721,232	+67,078	4,911,821	+257,667

Source: Health Service Executive Primary Care Operational Plan 2016 and Health Service Executive National Service Plan NSP and DOP Full KPI Suite 2016. Note: Estimate of budget derived by applying total demographic change to 2016 allocation; utilisation estimates derived by applying total demographic change to 2015 outturn. Deaths from cancer are ICD 10 C00-D48; Death from Non-Malignant Conditions are all other ICD 10 Codes except External Causes ICD10 V01-Y98. Deaths derived from PHIS 2014 and projected using Central Statistics Office age specific population projections.

STRATEGIC INITIATIVES IN PRIMARY CARE

In addition to taking forward the vision of Future Health, through its corporate and service planning processes, the HSE has identified various actions for strengthening and developing primary care, including: implementing integrated care programmes; improving access to diagnostics; rolling out minor surgery in general practice; and expanding the coverage and services of Community Intervention Teams.

COMMUNITY INTERVENTION TEAMS

Community Intervention Teams provides high quality nursing care in the community for a short period of time by working together with patients, carers and other professionals to enable suitable patients return to their own homes after hospital admission or to provide the option of care in the community in order to avoid hospitalisation. In 2015, Community Intervention Team activity was 19,675. To maintain existing level of service it is projected to increase to 19,812 in 2017 (137, 0.7% increase); and increase of (5,867, 29.8%) is expected between 2015 and 2022 (25,542).

MINOR SURGERY

The Primary Care Division has commissioned the ICGP to undertake a research accreditation project examining minor surgery in General Practice. The final number of relevant procedures undertaken by the 20 practices participating in the study was 4,231 (a mean per centre of 211). Of these 55.3% were on GMS patients. The total number of GMS procedures was 2,338 (a mean on 117 per centre). An evaluation report is expected in 2016 which will inform further decision regarding developing of minor surgery.

GP DIAGNOSTICS

The Primary Care Division is facilitating GP access to ultrasound, so as to enhance the quality of primary care services and to reduce avoidable referral to secondary care. The initiative is currently ongoing in Cork, Kerry, Limerick, Galway, Mayo, Sligo, Leitrim, Roscommon and Donegal. For the 7 month period October 2015 to April 2016, there were 5,032 referrals made, of which 4,222 were accepted (83.9%), and 3,000 ultrasounds carried out (71.7% of referrals accepted). The most common types of ultrasound requested were abdomen (40.2%), pelvis

(40.0%) and renal (10.5%). Examining monthly data, it is evident that utilisation of the service has increased month-on-month since it commenced. Extrapolating from the most recent month's data it is possible to derive an estimate of GP ultrasound population utilisation for CHO 2 (Galway, Mayo and Roscommon) and CHO 4 (Cork and Kerry), which can be applied to the whole population of Ireland. It is estimated that demand (referrals accepted) for a national service in 2015 would have been 34,084. Using the same assumptions, projected demand (referrals accepted) for a national service in 2017 and 2022 would be 34,576 and 35,971 respectively.

CHRONIC DISEASE MANAGEMENT

In line with its corporate plan, and responding to emerging disease trends, the HSE is developing a Chronic Disease Management programme. An integrated model of care is planned, which will comprise various levels of complexity building up from GP-led chronic disease management in primary care. Demonstration projects are underway across the country, focusing on various diseases including Asthma, COPD, Heart Failure and Diabetes. Evaluation of these demonstrators will inform future planning for health decisions regarding final models of care and scaling-up.

SOCIAL INCLUSION

Health inequities are avoidable. There is a strong link between poverty, socio-economic status and health. The social gradient in health means that health inequities affect everyone, but the gap in health outcomes particularly burdens socially excluded groups and lower socio-economic classes.

Lower socio-economic groups are less empowered to avail of health interventions, due to the accumulation of disadvantage throughout the life course (WHO, 2016).

Mental and physical health problems can be both a cause and consequence of homelessness and social deprivation. Failure to reach marginalised populations and address health inequalities is costly. Applying UK costing data on health inequalities at a population level to the Irish context, a crude estimate³ suggests the direct Irish health service costs of treating (or failing to treat) health inequalities could be £398 million (approx. €508 million) annually.

BUDGET ALLOCATION

- In 2016, HSE Social Inclusion received €127.1 million (0.98%) of the €12,987 million total health budget allocation. Almost two-thirds (65%) of this was allocated to Addiction Services (~€82.6 million), 25% to direct Homeless services (~€32 million), 8% to Traveller Health (~€10.17 million). The remaining 2% (~€2.5 million) went to other remits, including Asylum seekers & Refugees, Domestic /Sexual & Gender-based Violence, LGBT health, and Community Development, Social Inclusion support to HIV/AIDS, Sexual Health, Anti Human Trafficking, Sex Offender programmes etc, working across statutory and voluntary sectors.
- Between 2010 and 2014, the average annual spend on direct Homeless services was €32 million⁴ i.e. not including spend on acute hospital inpatient/outpatient services, community based services, general practitioner services/medical cards, addiction and mental health services etc. (HSE National Social Inclusion Office, 2015a).
- Additional funding from the Dormant Accounts Fund to the Department of Health (to be allocated to HSE Social Inclusion) has been approved (4th May) for two health-related projects (HSE, 2016):
 - Mobile Health Screening Unit (€1,460,000): to provide an accessible, targeted screening and primary care service to marginalised service users, such as homeless, asylum seekers & refugees, Travellers, Roma, in settings such as hostels, prisons, Direct Provision Centres and Refugee Reception and Orientation Centres.
 - Intercultural Health Project for Refugees (€450,000): to identify the health needs of residents of the Emergency Reception and Orientation Centres (EROCs) established in Clonea and Monasterevin to provide a range of services (screening and public health services, interpreting services, GP services and out of hours, dental services, mental health, transport to hospital), and to deliver intercultural awareness training to health and social care staff.

HOMELESS

Accurately quantifying the true extent of homelessness is difficult. The most reliable and consistent data source is the Pathway Accommodation & Support System (PASS), which captures data relating to all homeless services in receipt of State funding (S.10-funded services) and is used to provide monthly and quarterly data to the DECLG. In addition, a 6-monthly Rough Sleeper count which enables the identification of additional individuals who are

³In Census 2011, UK population was 63.182 million, 13.8 times the size of the Irish population (4,577 million); with many caveats, including different health service structure etc; also limited data available in the Irish context

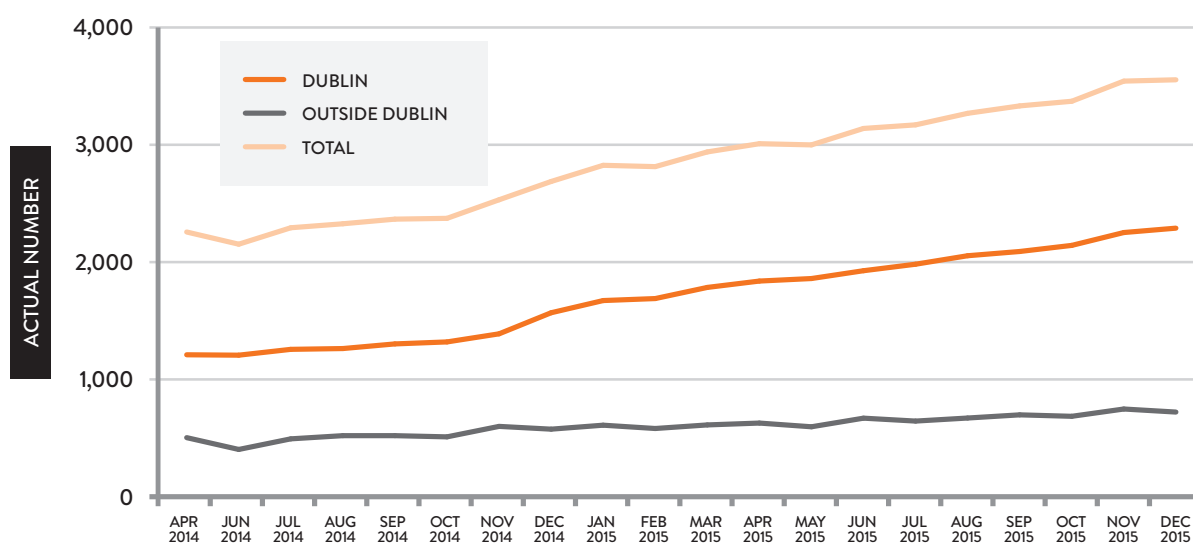
⁴€33,183,572 (in 2010), €31,823,675 (in 2011), €33,011,998 (in 2012), €33,004,720 (in 2013) and €29,700,720 (in 2014; when €3.3million transferred to Tusla for Domestic Refugees)

sleeping rough but are not on PASS, is carried out by the Dublin Region Homeless Executive (DRHE). The majority of those enumerated as sleeping rough are known to homeless services and included in the PASS data. While there are a limited number of services that are not included on the PASS system, many of the service users also combine access to these services with engagement with other S.10 funded services and consequently are captured on PASS. Both Census 2011 and 2016 attempted to identify and enumerate homeless people.

EMERGENCY ACCOMODATION

- In February 2016, 5,811 persons were recorded as experiencing homelessness and accessing Emergency Accommodation in Ireland – 3,930 adults and 1,881 children, comprising 2,706 single homeless adults and 912 homeless families (DECLG, 2016b). This was a 32% increase in the year between February 2015 and 2016 (DECLG, 2016a).
- In January 2016, most homeless adults nationally were male (60%), aged 25-44 years (60%) and in Dublin (69%). While nationally, 47% were in Supported Temporary Accommodation⁵, 52% of the homeless in Dublin were in Private Emergency Accommodation.
- The proportion with dependents (homeless families – single parents or couples with dependents) increased during 2015, from 407 to 775 families (a 90% increase), and from 19% to 29% of all homeless adults. There was an 84% increase in homeless lone parent families between December 2014 and 2015 (DECLG, 2016a), most markedly in Dublin.

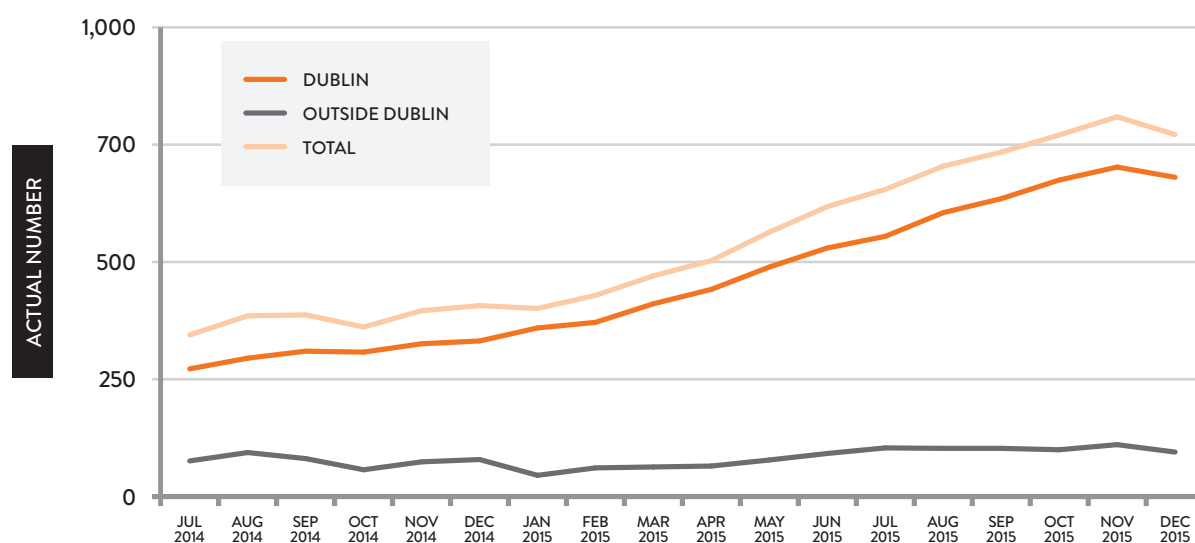
FIGURE 5.10: NUMBER OF HOMELESS ADULTS IN EMERGENCY ACCOMMODATION APRIL 2014 – DECEMBER 2015



Source: Department of Environment, Community and Local Government

⁵Private Emergency Accommodation (PEA) includes accommodation rented directly from landlords, B&Bs and hotels. Supported Temporary Accommodation (STA) is hostel accommodation with onsite support from e.g. Focus Ireland, Simon, Crosscare. Temporary Emergency Accommodation (TEA) is hostel accommodation with low or minimal support

FIGURE 5.11: NUMBER OF HOMELESS FAMILIES IN IRELAND, JULY 2014 TO DECEMBER 2015



Source: Department of Environment, Community and Local Government

ROUGH SLEEPERS

- Official 6-monthly 'street counts' by DRHE identified 102 rough sleepers in Dublin (Spring 2016), 91 (Winter 2015), 105 (Spring 2015), 168 (Winter 2014) and 127 (Spring 2014). These counts represent the minimum number of people sleeping rough. Of those sleeping rough on the night of 24th April 2016, most were male (74%), Irish (63%), 26% aged 31-40 and 29% 41+years (DRHE, 2016).
- In Cork, in the three months to the end of March 2016, a total of 141 different people were recorded sleeping rough on at least one night – an increase of 9% compared to the same three-month period in 2015, and an increase of 93% compared to January to March 2014 (Cork Simon, 2016).

HEALTH NEEDS OF HOMELESS

- Homelessness is an independent risk factor for premature mortality (Morrison, 2009) with a reported average age of death for a single adult homeless man of 47 and 43 years for a woman.
- Chronic homelessness is a marker for tri-morbidity, the combination of physical-ill health with dual diagnosis (co-existing mental ill-health and drug or alcohol misuse) (O'Connell et al, 2010; Hewett, 2011). This complex tri-morbidity is often associated with advanced illness at presentation (Hewett, 2011). For many people substance misuse and mental ill-health becomes a significant barrier to moving out of homelessness.
- Compared with 1997 and 2005 studies, the homeless in Dublin and Limerick in 2013 had more diagnosed ill health, more were treated with prescribed medication, and more reported mental health diagnoses and treatment (O'Reilly et al, 2015).
- Children born to homeless mothers are more likely to have low-birth weight, acute and chronic health problems, behavioural disorders and to suffer accidental injury (O'Carroll, 2013).
- HIV, hepatitis and TB are all more common among homeless people than the general population (O'Reilly et al, 2015). From 2002 to 2015, between 1.7% and 6.1% of all TB cases nationally have been homeless or hostel residents. In 2015, 10.8% of TB cases nationally had a known history of substance abuse (HPSC, 2016).
- Homeless patients have high utilisation of emergency and other hospital services, and mental health services, but low utilisation of planned outpatient facilities and are a difficult group to engage in health promotion initiatives.
- The use of primary care services (specialised or mainstream) has increased over time, with increased use in Dublin facilitated by specialised services for homeless people (O'Reilly et al, 2015).

MODELS OF BEST PRACTICE FOR CARE OF HOMELESS PATIENTS

- There are two well recognised and evaluated international models of care for hospitalised homeless patients. Both of them involve primary care being delivered and fully integrated within a hospital setting, as distinct from specialised GPs within the community, or an Emergency Department Consultant who has a liaison role. The Pathway model has a significant 'peer educator' (Care Navigator) component:
 - Pathway (UK) <http://www.pathway.org.uk/>
 - Boston Health Care for the Homeless Program's (BHCHP) model of care <http://www.massgeneral.org/cchi/services/treatmentprograms.aspx?id=1473>
- In Ireland, specialised primary care services, developed and led through HSE Social Inclusion, have proven successful e.g. the Low threshold primary healthcare clinic, established by the Partnership for Health Equity (PHE)⁶ in Limerick city for marginalised groups such as the homeless, drug users, migrants and others who have difficulties in accessing and availing of primary care (2015).

ADDICTION SERVICES

- Between 2010 and 2014, the number of people who sought treatment for problem drug or alcohol use increased nationally from 17,824 to 18,801, and the number who subsequently entered treatment rose from 15,259 to 16,127. Cork-North Lee had the highest numbers seeking treatment in all years and the highest numbers entering treatment in 2010, 2011 and 2013, with Waterford highest in 2012 and NW Dublin in 2014 (2nd highest Cork-North Lee). Overall 86-88% of those who sought treatment entered treatment, with the highest conversion rate in all years in Waterford (95-98%) and lowest in Limerick in 2010-2011 (71-73%), Cork-North Lee in 2012 (75%) and Wicklow in 2013-2014 (68-61%). The commonest reason (40%) for not progressing to treatment, as reported to the NDTRS, was that the client declined (HSE National Social Inclusion Office, 2015b, 2015c).
- In 2014, 3,774 new and 5,749 return (total 9,523) entrants were recorded in the National Drug Treatment Reporting System (NDTRS) in Ireland (HRB Irish National Focal Point to the EMCDDA, 2016).
- In 2013, 3,578 new and 3,971 return (total 7,549) clients were treated for problem alcohol use in alcohol treatment facilities in Ireland (HRB, 2016).
- Assuming no change in the incidence of new clients attending the services, projected numbers of clients (for population aged 15-64 years) attending the services in 2017 and 2020 can be seen in Table 5.16.

TABLE 5.16: PROJECTED NUMBER OF SERVICE USERS ATTENDING DRUG AND ALCOHOL TREATMENT SERVICES IN 2017 AND 2020

CLIENT GROUP		2017	2020
PROBLEM ALCOHOL USE	2013		
Total clients	7,549	7,543	7,659
New clients	3,578	3,575	3,630
PROBLEM DRUG USE	2014		
Total client	9,523	9,548	9,694
New client	3,774	3,784	3,842

Source: Treatment Demand Indicator for problem drug use (Health Research Board Irish National Focal Point to the EMCDDA, 2016); Health Research Board for problem alcohol use

⁶The PHE is a collaboration of clinicians, medical educators, social scientists, healthcare policy makers and planners, co-funded by the University of Limerick, the North Dublin City General Practice Training Programme and the HSE (Social Inclusion and Primary Care Services)

SUBSTANCE ABUSE

- Data on drug treatment in Ireland are collected through two national data collection tools – the Central Treatment List (CTL) and the National Drug Treatment Reporting System (NDTRS). Data on total clients in treatment for problem drug use comes from the NDTRS (EMCDDA Treatment Demand Indicator (TDI) Protocol) and data on total OST clients comes from the CTL, and are collected using different methodologies, also with some duplication, and cannot be combined or compared meaningfully (HRB Irish National Focal Point to the EMCDDA, 2016).
- The majority (>75%) of drug treatment is provided through publicly funded and voluntary out-patient services. Outpatient services include low threshold and specialised OST GPs in the community. In-patient treatment is mainly provided through residential centres run by voluntary agencies.
- The proportion of clients attending in-patient services (excluding prisons) has dropped slightly over the past 11 years, from 15.3% in 2004 to 13.5% in 2014 (HRB Irish National Focal Point to the EMCDDA, 2016).
- Opiates (49.8%) are the main problem drug used by entrants to treatment - mainly heroin (89.2%), followed by cannabis (29%) and cocaine (8.7%) (HRB Irish National Focal Point to the EMCDDA, 2016).

OPIOID DEPENDENCE

- There were 13,132 opioid substitution treatment (OST) client episodes⁷ reported by the Central Treatment List (CTL) during 2015. 11,338 individuals had 13,012 Methadone Maintenance Treatment (MMT) episodes (National Drug Treatment Centre, 2016a) and 115 individuals had 120 Suboxone treatment episodes (National Drug Treatment Centre, 2016b). OST was provided by 77 HSE clinics, 11 prison clinics and 350 GPs.
- The number of clients registered for OST on 31st December each year has increased from 3,689 in 1998 to 9,537 clients in 2015, when 43% (4106) were in treatment with 350 GPs and 57% in HSE drug treatment clinics. Between 2008 and 2014 the rate of increase was less than 4% annually (HRB Irish National Focal Point to the EMCDDA, 2016).
- In 2015, most (54%) methadone substitution treatment episodes occurred in drug treatment clinics, with 4,559 (35%) in general practice and 1,434 (11%) in prison services - the majority were return patients. Where length of time in treatment data was available, a significant number of clients (9,940) are on methadone for more than 10 years.
- Assuming no change in the incidence and prevalence of those attending for opioid substitution treatment, and the OST location type, projected numbers (for population aged 15-64 years) of clients on OST, and OST treatment episodes in 2017 and 2020 can be seen in Table 5.17 and Table 5.18.

TABLE 5.17: PROJECTED NUMBER OF CLIENTS ON OPIOID SUBSTITUTION TREATMENT IN 2017 AND 2022

CLIENT GROUP	2015	2017	2022
No. of clients registered for OST on 31 December	9537	9573	9720
No. of clients on Methadone during the year	11,338	11,381	11,556
No. of clients on Suboxone treatment during the year	115	115	117

Source: Central Treatment List (National Drug Treatment Centre, 2016b, National Drug Treatment Centre, 2016a)

⁷As episodes of treatment are counted, clients leaving and re-entering the service within the year are counted twice, and 'previously treated cases' could appear more than once in the database, in a calendar year, if for example they receive treatment at more than one centre or at the same centre more than once per year

TABLE 5.18: PROJECTED NUMBER OF OPIOID SUBSTITUTION TREATMENT EPISODES IN 2017 AND 2022

CLIENT GROUP	2015	2017	2022
ALL OPIOID SUBSTITUTION TREATMENT EPISODES	13,132	13,182	13,385
New* MMT episode	752	755	766
New* Suboxone treatment episode	35	35	36
OST by type & location:			
METHADONE MAINTENANCE TREATMENT (MMT) EPISODES	13,012	13,062	13,262
MMT in drug treatment clinics	7019	7046	7154
MMT in general practice	4559	4576	4647
MMT in prisons	1434	1439	1462
SUBOXONE TREATMENT EPISODES	120	120	120

*New = first time patient on Central Treatment List

Source: Central Treatment List (National Drug Treatment Centre, 2016b, National Drug Treatment Centre, 2016a)

PROBLEM ALCOHOL USE

- 7,549 cases of problem alcohol use were treated in Ireland in 2013, a drop of 12.3% from 8,604 in 2011. This decrease was seen both in the number of new cases treated (20.8% decrease to 3,578) and in the number of cases returning for treatment (9.8% decrease to 3,801) (HRB, 2014).
- Among 15-64 year olds living in Ireland, both the incidence and prevalence of treated problem alcohol use decreased between 2011 and 2013, with incidence decreasing from 141.2 to 112 per 100,000 population, and prevalence from 269.8 to 237.1 per 100,000 population (HRB, 2014). While the proportion of cases under the age of 18 remained small (3%), the number of new cases in that age group has fallen also, from 6.4% in 2010 to 5% in 2013 (HRB, 2014).
- In 2014, a primary diagnosis of Alcoholic Disorders accounted for 80 admissions (3.5% of all admissions) to Irish psychiatric units, an admission rate of 1.7/100,000 population. It should be noted that numbers are likely to underestimate the number of problem alcohol use-related admissions to psychiatric hospitals, as alcohol disorders frequently co-exist with other psychiatric disorders e.g. depressive disorders (Daly et al, 2015).
- Nearly one fifth (18.8%) of those treated for problem alcohol use in 2013 also reported using at least one other drug, a similar proportion to that observed in previous years (HRB, 2014). In 2013, the most common drugs used by treated alcohol cases in conjunction with alcohol were cannabis, followed by cocaine, benzodiazepines and ecstasy (HRB, 2014).

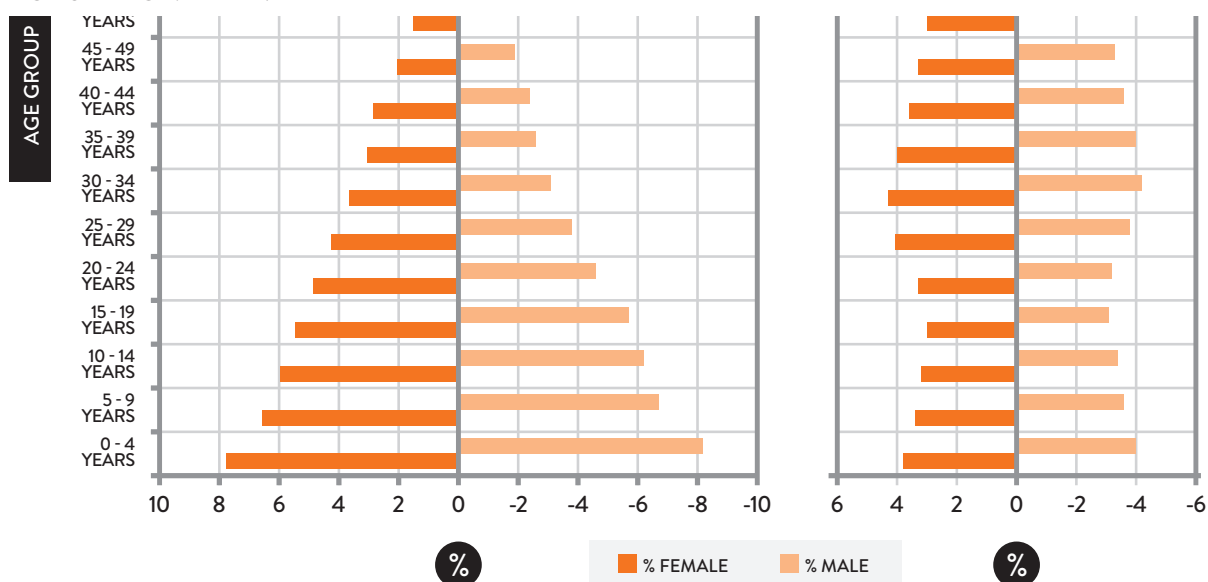
IRISH TRAVELLERS

DEMOGRAPHY

- There are 29,495 Travellers living in the Republic of Ireland (0.6% of the population; Census 2011), an increase of 32% from the previous Census in 2006.
- Ten local authority areas accommodate over 1,000 Travellers in their catchment area, with Galway City, Longford County, Galway County and Offaly having the largest Traveller population and Traveller child population per 1000 total population.
- CHO Area 2 (Galway, Mayo, and Roscommon) has the largest Traveller population per 1000 total population.
- The population pyramid for Travellers from 2011 Census data (Figure 5.12) demonstrates the stark difference in the age profile of Travellers compared to the Irish general population. This reflects a high birth rate, primarily young population (almost 30% of the Traveller population were under 9 years of age compared to 14.8% of the general population), and the effects of premature mortality (2.5% of the Irish Traveller population were aged 65 years and over compared to 11.7% of the general population).

FIGURE 5.12: AGE PROFILE OF IRISH TRAVELLERS VERSUS THE GENERAL POPULATION (CENSUS 2011)

POPULATION PYRAMID



Source: Central Statistics Office Census 2011

- Social determinants (Census 2011): compared to the general population, Irish Traveller families had more lone parent households (20.5% compared with 11.9%), high unemployment rates (84.3% in 2011) and low education levels. 67% Traveller children lived in families where the mother had either no formal education or primary education only (Department of Children and Youth Affairs, 2014). Almost 1 in 3 Traveller households (30.3%) living in mobile or temporary accommodation had no sewerage facilities (Census 2011).

HEALTH DETERMINANTS AND OUTCOMES

- The mortality rate amongst Travellers is 3.5 times higher than the general population and the infant mortality rate is 3.6 times higher -14.1/1000 live births compared to 3.9/1000 in general population (All Ireland Traveller Health Study, 2010).
- Irish Travellers have lower life expectancy - 15 years lower for male, 11.5 years for females (All Ireland Traveller Health Study, 2010).
- Compared to other children aged 10-17 years, Traveller children are more likely to report smoking, being drunk, cannabis use or drinking sugary drinks (Table 5.19) (Kelly et al, 2012).

TABLE 5.19: SELF REPORTED RISK FACTORS AMONG CHILDREN AGED 10-17 YEARS

AGE COHORT	RISK FACTOR (SELF-REPORTED)	TRAVELLERS	NATIONAL POPULATION
CHILDREN AGED 10-17 YEARS	Cigarette smoking every week	23%	8%
	Being drunk at least once in the last 30 days	34%	18%
	Cannabis use at least once in their lifetime	27%	11%
	Drink soft drinks that contain sugar at least once a day	33%	21%

Data sources: *Health Behaviour in School Aged Children 2010*, (Kelly et al, 2012)

- Irish Travellers have a higher incidence rate of TB than the general population (approximately 3-fold higher than that of the white Irish-born population in 2011 and 2012). However, data is limited due to lack of routine use of ethnic identifiers in data collection systems.
- This population requires specialised access to health promotion, preventative and healthcare services for infectious disease, mental health and social care, e.g.
 - Pilot mental health outreach nurse for the Carlow/Kilkenny area recruited with funding from National HSE Social Inclusion (Traveller Health Unit South-East Community Health Organisation).
 - Asthma education/health promotion project for Traveller Health (Kenny et al, 2016).
- Priority areas for action have been identified by the Traveller Health Advisory Committee and include: mental health, suicide, men's health, addiction/alcohol, domestic violence, diabetes, cardiac health and mapping of Traveller Health Unit work to Primary Care Teams and Networks (Department of Justice and Equality).

ROMA

- Similarly to other European countries, there are no official statistics on the number of Roma in Ireland, with the estimated population between 2,500 and 6,000 (Jacob and Kirwan, 2016).
- Members of the Roma community generally have lower life expectancy, higher infant mortality and higher levels of poor nutritional related illness than the majority population (Pavee Point, 2016).
- Since 2009, the Tallaght Roma Integration Project (TRIP) has worked with the Roma community to address their needs (Jacob and Kirwan, 2016). They established the Roma Primary Care Initiative along with SafetyNet

Primary Care Network and Tallaght Hospital initially providing a specific GP service to members of the Roma Community in South West Dublin, with screening for chronic and acute illness, childhood vaccinations and antenatal care. Cultural mediation and interpreting are provided as well as signposting to other services. A Roma Community Worker played a significant role in implementation (Jacob and Kirwan, 2016). The Roma GP service has seen a 17% increase in all contacts, and doubling of contacts of Roma children (under five years old) from 2013 to 2014. The majority (70-71%) of all contacts are with female Roma (Jacob and Kirwan, 2016).

- HSE Social Inclusion funds two pilot Roma Health projects in counties Waterford (since 2014) and Wexford (since 2015). These projects aim to facilitate development of health initiatives, provide advocacy, translation services and support Roma access to health services and health-related activities. A Roma Health Advocate has been funded in each county (1 WTE each since early 2016). An external evaluation of this work has been undertaken and an interim report was due at the end of May 2016 which could inform scaling up/rollout. Similar work has begun in Carlow.
- HSE Social Inclusion have worked in partnership with local statutory and voluntary organisations in Kilkenny, Wexford and Waterford, to develop a 20-week Roma Men's Training and Diversion Programme ('Atelier'). The aim is to engage men from Waterford and Wexford Roma communities, not currently in employment/training, in developing English language, awareness of health issues and health literacy, and vocational skills, as initial preparation for entry to the workforce. An external evaluation of the first 10 week pilot is due to be completed by end of May 2016, which could inform scaling up/rollout.

VULNERABLE MIGRANTS

- Up to 4,000 Irish Refugee Protection Programme (IRPP)/EU Relocation & Resettlement Programme refugees & asylum seekers will arrive in Ireland by end of 2017, in addition to the increasing numbers presenting routinely in Ireland seeking asylum. This will put significant pressure on provision of health assessment/screening and routine health services. It is likely that all CHOs will be impacted.
- Refugees and asylum seekers have complex health and social care needs.
- To date, Health Services provide a range of services to IRPP Programme Refugees, including interpreting services, from existing resources. This has resulted in significant challenges and an unmet need. No extra funding has been allocated for healthcare provision for this vulnerable group to date.
- The current health assessment models for Asylum Seekers and Programme Refugees are not sustainable, even for current numbers without additional staffing and resources.
- Between Jan-April 2016, 16 people were referred to the Anti Human Trafficking Team, a 57% increase on the same time period in 2015 (7 referrals). These included alleged victims of sexual exploitation (11), 2 of forced criminality (2), labour exploitation (2), and forced marriage (1) (HSE National Social Inclusion Office, 2016).

ASYLUM SEEKERS

- There has been a considerable variation in the number of applications for asylum over the last decades, with a peak occurring between 1999 and 2003 and a subsequent reduction thereafter.
- However, in 2015 Ireland received 3,276 new applications for refugee status – a 126% increase since 2014 (Figure C1, Appendix C), i.e. there is a rising trend in “normal” asylum applications.

ASYLUM SEEKERS WITHIN THE 'DIRECT PROVISION' SYSTEM

Note: Unaccompanied minors are accommodated outside of the Direct Provision system within the care of the HSE

- There are 35 Reception and Integration Agency (RIA) centres across 17 counties with 4,811 residents recorded, within a contracted capacity of 5,429 residents (88.6% occupancy). The majority are resident in Dublin, Meath and Cork (Figure C2, Appendix C).
- RIA residents are predominantly young males, with 67.5% aged between 18-45 years and a further 25.4% under the age of 18 years. There were 0.4% residents over the age of 65 years, this compares with approximately 13% in the general population (Figure C3, Appendix C).
- Most (70%, 2,497) residents of RIA Direct Provision Centres are single, with 83% of these single males. 98% of lone parent families are female-headed households.
- 15% (709) of RIA residents are more than seven years and 17% (802) are 3-6 years in Direct Provision (Figure C4, Appendix C) (Reception & Integration Agency, 2015). In Feb 2015, it was reported that 21% of those in Direct Provision more than 5 years were children (McMahon, 2015).

ASYLUM SEEKERS OUTSIDE THE DIRECT PROVISION SYSTEM

- The McMahon report estimated that there are 4,330 asylum seekers in Ireland living outside Direct Provision. Of these, 66% (2,870) have been in the system for over five years, 56% (2,453) are at the 'leave to remain' stage, 40% (1,736) are in the protection process and 15% (649) are children (McMahon, 2015).
- A significant proportion of those with 'leave to remain' status are living in Direct Provision Centres because of lack of available housing.

PROGRAMME REFUGEES

- Since a Government decision in 1998, Ireland takes an annual quota of predetermined refugees, under a Resettlement Programme arrangement agreed with the UNHCR. Initially it was about 40 persons per year but it was increased to 200 people per year in June 2005 (Office for the Promotion of Migrant Integration (2016), so-called "Programme Refugees").
- Numbers are augmented under the Family Reunification Scheme, where a family member, who has refugee status in Ireland, commits to looking after the family members that s/he brings in (Quilty and Nurse, 2015).
- There is a Government commitment to accept four or five refugees with significant medical needs each year. These are often complex and can place significant pressure on Acute and Community Services (Quilty and Nurse, 2015).
- In September 2015, the Government established the Irish Refugee Protection Programme (IRPP), committing to Ireland taking, by end 2017, up to 4,000 people overall under the EU Resettlement and Relocation Programmes. This figure is a combination of (a) 2,620 asylum seekers under the EU Relocation Mechanism, (b) 520 UNHCR Resettlement Programme refugees, and (c) 860 others (entry mechanism yet to be determined) (Minister for Justice and Equality, 2016). Timescale and proportions may fluctuate.
- It is expected that the pace of arrivals will increase in coming months, as greater numbers of migrants apply for relocation (Minister for Justice and Equality, 2016) and that these numbers will be augmented by further family reunifications (Department of Justice and Equality (2015). The "numbers expected to enter the country are significant and it is likely, therefore, that all CHOs will be impacted" in 2015-2016 (Quilty and Nurse, 2015).
- IRPP Programme Refugees are accommodated initially in Emergency Reception and Orientation Centres (EROCs), where they receive orientation and await re-housing in permanent accommodation in the community. To date, EROCs are located in Monasterevin, Co Kildare (120-140 person capacity) and Clonea, Co. Waterford (max 120 person capacity), i.e. outside main urban centres. While it is planned that the refugees' stay in the EROC is as short as possible, their permanent relocation is dependent on the availability of housing in selected areas throughout the country.
- Experience with the 2014 Refugee Resettlement Programme highlighted the difficulties in placing people in towns, even with considerable planning and organisation prior to resettlement (Quilty and Nurse, 2015).
- During 2015, a total of 176 Programme Refugees arrived via the Resettlement component of the IRPP, with 13 people arriving in Jan 2016. A further 97 people (21 families) arrived in March 2016. It is expected that these families will be resettled in counties Limerick and Clare.

HEALTH NEEDS OF ASYLUM SEEKERS AND REFUGEES

- Migrant health is a complex, multifaceted area which includes infectious and chronic diseases, mental health and socioeconomic considerations (Migrant Health Assessment Sub-committee of HPSC Scientific Advisory Committee, 2015). There is a vulnerability to STIs, hepatitis B and potentially HIV. Crisis pregnancy and the risk of physical and psychological harm from Sexual and Gender-based Violence (SGBV) are very real problems for many refugees en route and within Europe (Finnerty & Shahmanesh, 2016).
- Significant mental health issues are emerging among newly arriving refugees and asylum seekers, underlining the importance of cross-divisional working. For example, 65% of Syrian refugees in the Lebanon have some sort of psychological trauma (Sahloul Z, 2016).
- In Ireland, asylum seekers attend general practice twice as much as their Irish counterparts (McMahon et al, 2007).
- All these challenges result in significant pressures on health services.

HEALTH ASSESSMENT (SCREENING) AND PROVISION OF ONGOING HEALTHCARE

There are two significant elements to be considered:

A. HEALTH NEEDS ASSESSMENT: includes basic infectious disease screening, appropriate immunisations in accordance with the Irish national immunisation guidelines, and assessment of acute medical and psychological needs.

- Refugees and asylum seekers coming to Ireland have their health needs assessed through different processes, depending on their route of entry into the country.
- Asylum seekers ('routine' mechanism): Baleskin Reception Centre (in CHO 9/Co. Dublin) acts as the main reception centre for asylum seekers. It has a well-developed, comprehensive model of health needs assessment/screening provided by a team of experienced Medical Officers, nurses, midwives, GPs and psychologists, with established formal links to necessary tertiary services. When Baleskin is at capacity, asylum seekers are sent elsewhere, where screening services are not as developed, with additional implications for provision of adequate screening (Quilty and Nurse, 2015).
- There is no national standardised approach to screening or follow-up of initial screening results after relocation of asylum seekers from a Reception Centre to a RIA Direct Provision Centre. In the past the Baleskin type of specialised service was replicated in many other parts of the country, linked to Direct Provision centres.

Services were often delivered by Community Health Senior Medical Officers (SMOs). Most of these peripheral services no longer exist, with erosion of staff previously employed in Asylum seeker services to other prioritised services during staffing moratoriums and budget restrictions having significant impact (HSE Migrant Health Group, 2016). As a result, across most of the country, local GPs have been tasked with this follow-up.

- Programme Refugees: The International Office for Migration (IOM) undertakes pre-departure health check and screening - to cover mental and physical health and nutritional status - for Programme Refugees before resettlement to Ireland, and invoices the Irish Government for costs. However, experience to date suggests that this screening is limited in approach (e.g. doesn't reliably include assessment of immunisation status or Hep B screening). Upon arrival, they may undergo further medical assessment but this is not always done in a systematic way.
- A specialised service in each EROC similar to the Baleskin model has been recommended by the HSE Migrant Health group (HSE Migrant Health Group, 2016).
- EU Relocation Programme Asylum Seekers: it is not yet clear what processes will exist for the medical assessment of the approx. 2620 people who will arrive in Ireland as part of this programme. €1,460,000 Dormant Account Funding (DAF) funding has been allocated for the development of a mobile health screening and primary care service to marginalised service users, including asylum seekers & refugees, in settings such as Direct Provision Centres and EROCs.

B. PROVISION OF IMMEDIATE AND ONGOING MEDICAL CARE: Care is required for identified conditions and for acute medical/psychological needs. This is delivered in routine general practice.

- Asylum seekers: are entitled to services available free of charge under the Medical Card Scheme, as well as maternity services, immunisation services and health screening (Citizens Information, 2016). In 2015, the Minister for Health gave approval for the exemption of people living in the Direct Provision process from paying prescription charges (Quilty and Nurse, 2015).
- IRPP Programme Refugees: while refugees in the EROC are allocated a local GP, provided with a medical card and a basic monetary allowance (HSE Migrant Health Group, 2016), GPs have not been provided additional resources to deliver care to this vulnerable population group. Consultations can be complex and time-consuming, due to the need for an interpreter (HSE Migrant Health Group, 2016).
- The current EROC locations in areas outside cities result in access issues, in terms of local transport to and from health services (Quilty and Nurse, 2015) and geographical access to other healthcare services (e.g. Tertiary Acute Services or Mental Health services for often complex needs). The lack of certainty with regard to how long refugees will be in temporary EROC accommodation, also impacts on the situation (HSE Migrant Health Group, 2016). Significant pressures are also experienced in delivery of Public Health Nursing services and immunisations.

FEMALE GENITAL MUTILATION (FGM)

- In 2013, there were an estimated⁸ 3,780 women between the ages of 15 and 44, residing in Ireland, who had undergone FGM, with 59% of these from Nigeria and 11% from Somalia (Bansal et al, 2013). Despite a decline in inward migration to Ireland the prevalence of FGM in Ireland continues to increase (Bansal et al, 2013).
- FGM is now included in the new Irish National Maternity Healthcare Record under Risk Factors, making national data collection possible.
- Since May 2014, girls and women who have undergone FGM can access a free specialized primary care service based at the IFPA's Dublin city centre clinic, which was developed with the support of the HSE National Social Inclusion Office and AkiDwA - the Migrant Women's Network IFPA, 2014).

RESEARCH AND DATA NEEDS

PRIMARY CARE

- Primary care development is pivotal to health system reform in Ireland. However, information systems to support the planning, monitoring, control and evaluation of primary care services are not developed in proportion to their importance to the HSE, or commensurate with current levels of expenditure.
- Where it is feasible and appropriate, a more standardised approach should be taken to take measurement of the primary care service utilisation across service lines, using similar definitions for units of activity (new referrals received, new referrals accepted, new referrals seen, in-treatment, discharges etc) and using similar approaches to measuring characteristics of service.
- Consultation with GPs is a key element of primary care. Robust information on the volume, process and outcome of GP consultations will be necessary to support ongoing health system reform and strengthening of primary care.
- The utility of information maintained by the PCRS for wider health system planning should be recognized and capacity and capability should be developed to maximize its potential positive impact.
- A number of important strategic initiatives are underway in primary care. Criteria for business case approval and funding should include a requirement for appropriate evaluation to ensure that envisaged benefits are realized to inform future health planning.

SOCIAL INCLUSION

- Whenever relevant and possible, health service indicators should be reported by sex, age, socio-economic status and vulnerable/socially excluded groups, to enable equality monitoring of all services and monitor progress towards a reduction in health inequalities - e.g. coding for 'homeless' rather than using the proxy of No Fixed Abode (NFA) in HIPE data.
- Ethnicity data (an ethnic identifier⁹) - as part of ethnic equality monitoring - should be routinely and systematically collected across all health and social care data systems, including HIPE and performance monitoring, National Cancer Screening Service data, immunisation coverage data and the new National Maternity Healthcare Record.
This will facilitate assessment of ongoing health needs and service utilisation, enable monitoring of healthcare outcomes and inform commissioning to reduce health inequalities for Irish Travellers and other ethnic minority groups.
- Ethnicity should be included in the standard clinical form for notification of infectious disease.
- Collection of ethnicity data needs to be strengthened in local level datasets where ethnicity is currently included as a variable e.g. ethnicity was recorded for only 34% of events for 13 notifiable diseases which specifically ask for information on ethnicity within CIDR in 2015.
- Rollout of the individual health identifier (IHI) should be prioritised to enable sharing of information across the continuum of health and social care.
- Robust data is required at a national level on health outcomes for homeless people, including those in emergency accommodation – this could potentially be done via the PASS system.

⁸Estimated by obtaining CSO 2011 and other relevant population data on the number of women residing in Ireland, originally from FGM-practicing countries and synthesising these with global FGM prevalence data

⁹By the application of a universal question on ethnicity – same as that in Census forms but with Roma as an additional category – through voluntary self-identification

- Data collection for problem drug use needs to be strengthened to enable counting and/or specifying of: (1) individuals rather than episodes of treatment – an IHI would enable this; (2) cases treated within psychiatric hospitals¹⁰; (3) cases remaining in treatment without a break from one year to the next.
- Standardisation of data sources and data collection methodologies between opioid substitution treatment (OST) and Treatment Demand Indicator (TDI)¹¹ data, should be considered, to enable meaningful collation and comparison.
- Data should be collected from Needle Exchange Programmes within HSE clinics, as it is for Pharmacy-based NEX programmes.
- Outcome evaluation of the integrated pathway for Homeless and Addiction Services in Cork would be beneficial in terms of informing a standardised approach and potential scaling up /national rollout.
- The health system should adopt a strong and integrated poverty and equality proofing approach when formulating all policies, strategies and actions, and not just those specifically targeted at reducing health inequalities. A coherent approach is needed - HSE Divisions' policies should complement rather than contradict each other in relation to health equity.

¹⁰Currently it is not possible to estimate the total number of clients in the national in-patient network as there is no information on those centres that do not report to TDI

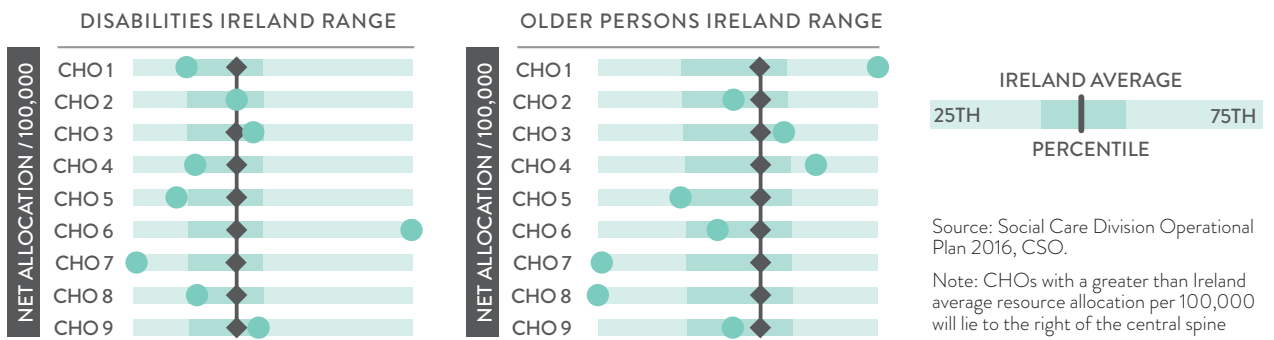
¹¹TDI = Treatment Demand Indicator protocol for European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) data

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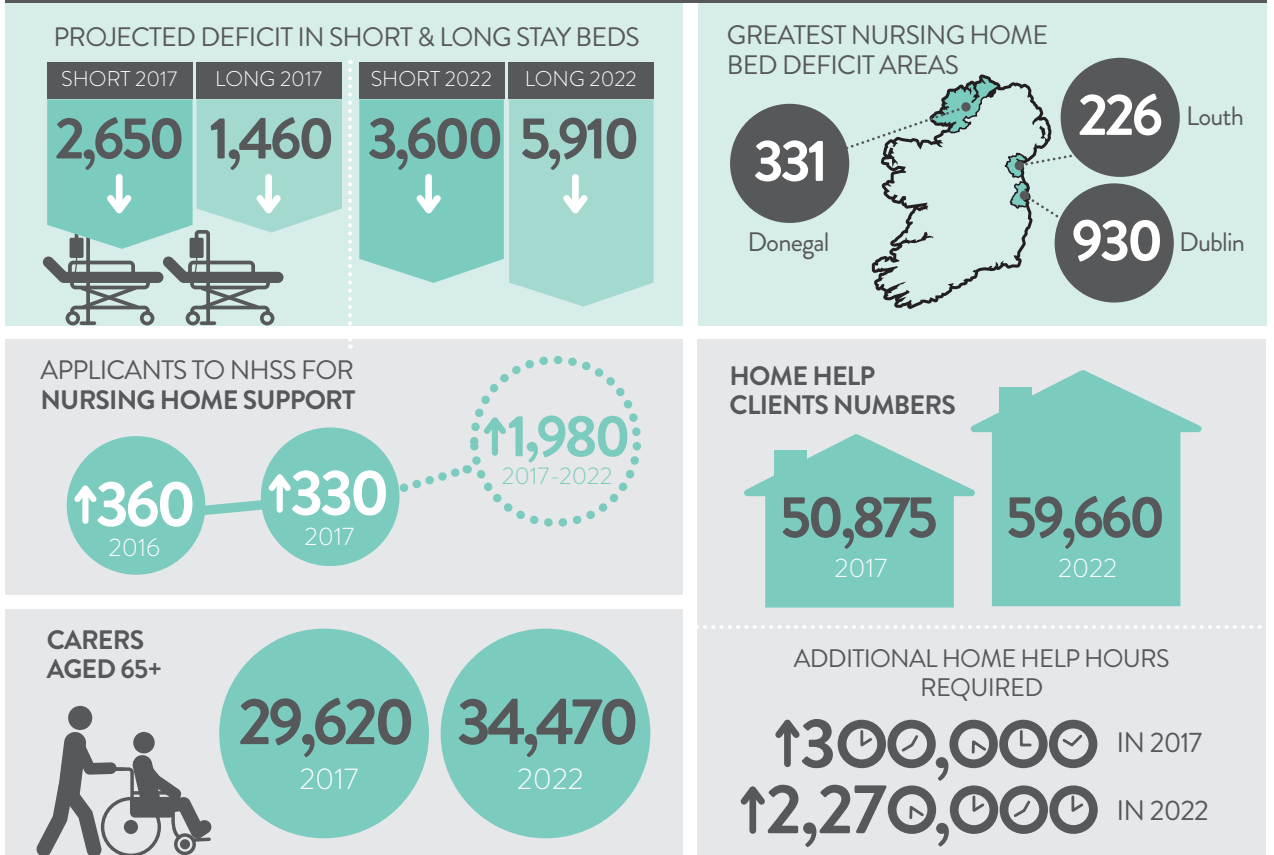
SOCIAL CARE



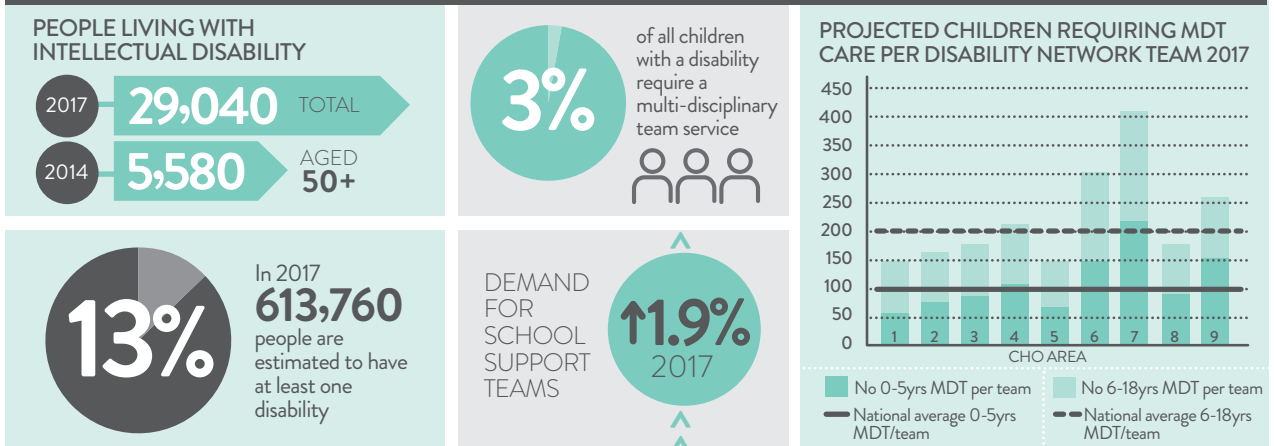
PROFILE OF ALLOCATION OF RESOURCES PER 100,000 BY CHO_s - 2016



SERVICES FOR THE OLDER PERSON



SERVICES FOR THOSE WITH DISABILITY



ASSUMPTIONS

- Population projections are based on the CSOs M2F2 scenario.
- Analysis by CHO Area involving rates are crude rates per 1,000 or 100,000 where applicable and not standardised to the national population.
- All underlying assumptions and projections are based on demographic change only, and do not take into account unmet need or any changes in policy, models of care, eligibility and service provision since 2015.

SERVICES FOR THE OLDER PERSON

- Old age dependency will increase from 18.1 in 2012 to 21.2 in 2017, rising to 24.3 in 2022, resulting in an increased demand on services for older people.
- Residential bed capacity is not meeting projected demand for projected population growth. In 2017 it is projected that there will be a deficit of 1,460 long stay and 2,650 short stay beds. This deficit will increase to 5,910 long stay and 3,600 short stay by 2022.
- The greatest long stay bed deficits at the end of 2015 were in counties Dublin (930 beds), Donegal (331 beds) and Louth (226 beds).
- Using the rate of 3.76%, the Nursing Homes Support Scheme (NHSS) will provide residential support to 24,200 people aged 65 years and over in 2017 and 28,400 in 2022.
- Applications to NHSS for nursing home support are projected to increase by 360 in 2016 (3.6%), a further 330 (3.2%) in 2017 and a further 1,980 (18.5%) by 2022.
- Based on 2015 utilisation rates and current models of care, there will be 50,875 Home Help clients in 2017, an increase of 1,565 clients from 2016. This will rise to 59,660 in 2022. This will require 300,000 (0.3 million) additional Home Help hours in 2017 and additional 2.27 million by 2022.
- To maintain the 2015 level of Homecare Package provision, an additional 520 home care packages will be required in 2016 and a further 500 required in 2017.
- Increasing complexity of need, as reflected in the casemix index of older people already in acute hospitals demonstrates the increased need for more specific rehabilitation services and complex home care packages.
- The population aged 75 years and over are the fastest growing cohort providing informal care. Greater support is required for this cohort as they are at greater risk of developing health problems themselves. In 2017 there will be 29,620 carers aged 65 years and over, rising to 34,740 in 2022.

SERVICES FOR THOSE WITH DISABILITY

INTELLECTUAL DISABILITY (ID)

- It is predicted that by 2017 there will be an estimated 29,040 people living with intellectual disability.
- In line with general population trends, life expectancy for people with ID has increased and there were 5,580 people over 50 years of age with intellectual disability recorded on the National Intellectual Disability Database in 2014.
- 20.8% of the total population recorded on the National Intellectual Disability Database have an identified need for respite care.
- TILDA identified higher levels of multi-morbidity in those with intellectual disability, compared to the general population. This group requires greater levels of service input, especially in the areas of mental health and neurological services.

PHYSICAL AND SENSORY DISABILITY (PSD)

- In 2014, 22,908 people were recorded on the National Physical and Sensory Disability Database (NPSDD). The estimated coverage of the NPSDD is 67%, which would equate to an estimated 34,200 people nationally living with physical and sensory disability.
- While only 4% of those on the NPSDD are recorded as being in residential care, of these, 34% are living in nursing homes. Residents aged less than 65 years occupy approximately 5.5% of nursing home beds equating to 1,670 residents.

- In both children and adults (people over 18 years) the recorded use of respite care is about 10% (9% in children and 11% in adults).
- There is considerable demand for therapeutic services across all ages and the need for personal support services, while low for those less than 18 years, increases in the adult population.

DISABILITY

- 13% of the population reported at least one disability in Census 2011. This equates to 613,760 people in 2017.
- It is estimated that, on average, 3.5% of the population aged 0-17 years have a disability.
- There is significant demand for speech therapy in the age group 0-17 years. This is as a result of a cumulative demand from children with an intellectual/learning disability and children with an isolated speech disability.
- It is estimated that 3% of children aged 0-18 years with a disability require a multi-disciplinary team (MDT) service.
- In 2017, this equates to 12,960 children in the 0-5 year age group and a further 25,990 children in the 6-18 year age group.
- The greatest demand for MDT service to children is in CHO Areas 4, 6, 7 and 9.
- The number of children and adolescents living with disability in the 6-18 year age group is projected to increase by 1.9% in 2017 and continue increasing up to 2022, giving rise to an increased demand for school support teams and placements for school leavers.
- Appropriate residential placement for those over 18 years of age continues to be a challenge, with some people inappropriately placed in nursing homes for the elderly and psychiatric inpatient facilities.

HEALTH INEQUALITIES

- Disability brings with it significant additional costs which increase the risk of poverty.
- Excluded and disadvantaged groups within the population carry a significant burden of disability.
- Inaccessible and inadequate support for disability may generate and sustain long-term homelessness and multi-morbidity.
- The definition of 'older homeless' should include those aged 50 years and over, as people who have experienced long-term homelessness (especially rough sleepers) die at a much younger age than the general population.
- In the 2011 Census, 17.5% of Irish Travellers had one or more disabilities compared with 13% of the general population.

RESEARCH AND DATA NEEDS

- Implementation of the single assessment tool for older people is required.
- An international evidence review of models of care for the delivery of homecare should be carried out.
- Revalidation of the current models used to predict demand for services among those aged 65 years and over is necessary.
- Exploration of the concept of reduced demand for residential services due to healthier ageing, and the impact this would have on demand for home support services is required.
- Development of an indicator (index) to describe activity and complexity of care provision in residential facilities both for older persons and persons with disabilities. A costing model should be developed in parallel.
- Development of an indicator (index) to describe complexity of care needs among people with a disability, based on a standardised assessment tool. The data generated should be web-enabled and available in a timely manner to inform service planning and development.
- A unified, complete and timely database for people living with disabilities to incorporate the data generated above is required.
- Whenever relevant and possible, Social Care indicators should be reported by socio-economic status and socially excluded grouping, to enable equality monitoring of all Social Care Services and monitor progress towards a reduction in health inequalities.

SOCIAL CARE BUDGET 2016

The 2016 Social Care budget is given in Table 6.1. The total Social Care budget for 2016 is €3,201.5m which is a 3.4% increase on 2015 projected outturn (HSE Social Care Division Operational Plan, 2015).

Figure 6.1 provides an analysis of the allocation of budget per 100,000 population by CHO for Older Persons Services and Disability Services.

TABLE 6.1: SOCIAL CARE BUDGET 2016

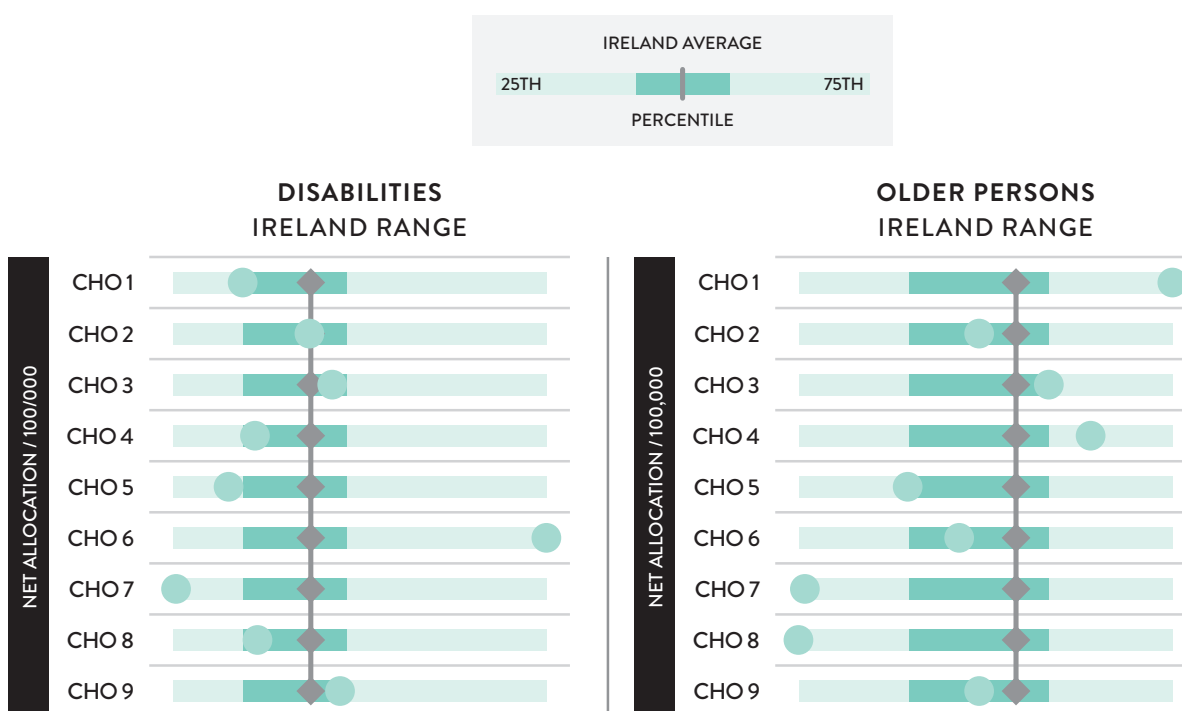
SOCIAL CARE	2015 PROJECTED OUTTURN €M	2015 CLOSING BUDGET €M	2016 NSP BUDGET	2016 BUDGET VS 2015 PROJECTED OUTTURN %
Disability service	1,498.5	1,460.5	1,558.2	4.0%
NHSS	905.0	873.8	940.0	3.9%
Older persons services	693.2	658.6	683.3	-1.4%
Home Care and transitional Care	-	-	20.0*	0.0
Total available funding older persons	693.2	658.6	703.3	1.5%
TOTAL	3,096.7	2,992.9	3,201.5	3.4%

€8.0 m additional funding held by the Department of Health

**This funding is available on a once-off basis in 2016 and includes expected time-related savings from €58.5m new initiatives monies held by the Department of Health*

Source: Social Care Operational Plan 2016, Health Service Executive Service Plan 2016

FIGURE 6.1: PROFILE OF ALLOCATION OF RESOURCES PER 100,000 POPULATION BY CHO_s, 2016



Source: Social Care Division Operational Plan 2016, Central Statistics Office

Note: CHO_s with a greater than Ireland average resource allocation per 100,000 will lie to the right of the central spine

This chapter is divided into two sections. The first section will focus on services for the older person and the second section will focus on services for people with disabilities. In each section we will examine the pressures that will be placed on services, considering our population size, geographic distribution and rate of change by relevant life-course cohort.

SERVICES FOR OLDER PEOPLE

DEMOGRAPHIC CHANGE IN THE OLDER POPULATION

- Between 2016 and 2017, the older population aged 65 years and over is forecast to increase with the greatest change (5.7% increase) occurring in adults aged 70-74 years.
- A 3.7% increase is projected in adults aged 85 years and over between 2016 and 2017.

TABLE 6.2: PROJECTED POPULATION AGED 65 YEARS AND OVER BY AGE GROUP, 2016, 2017, 2022 (THOUSANDS)

AGE GROUP	2016	2017	ACTUAL CHANGE 2016-2017	% CHANGE 2016-2017	2022	% CHANGE 2017-2022
65 - 69 years	205.7	209.0	3.3	1.6	230.8	10.4
70 - 74 years	157.8	166.7	8.9	5.7	195.1	17.0
75 - 79 years	112.2	114.9	2.7	2.4	147.9	28.7
80 - 84 years	78.6	80.9	2.3	2.9	92.8	14.7
85+ years	69.9	72.5	2.6	3.7	88.6	22.2
TOTAL	624.2	644.0	19.8	3.2	755.2	17.3

Source: Central Statistics Office Population and Labour Force Projections 2016-2046

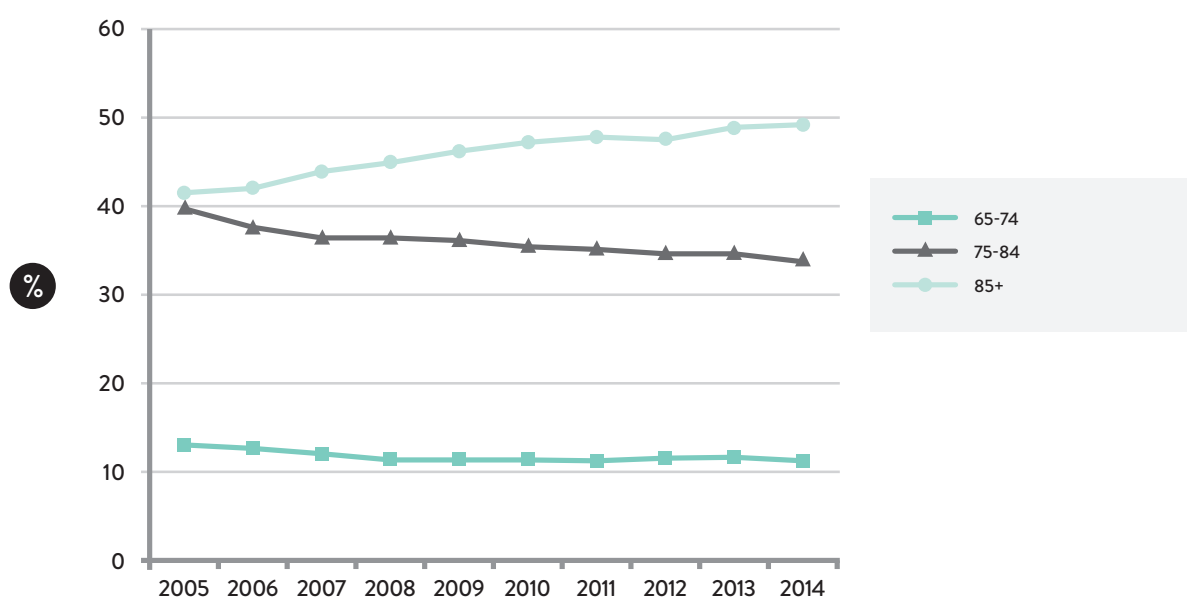
AGE DEPENDENCY

- The old age dependency ratio is the ratio of those aged 65 years and older to the working population (15-64 years).
- It is projected that the old age dependency ratio will increase from 18.1 in 2012, to 21.2 in 2017, rising to 24.3 in 2022 and 26.7 in 2026. This will generate additional demand for services for older people and has implications in terms of the need for carer support.

RESIDENTIAL BED UTILISATION AND CAPACITY

- Residents aged less than 65 years occupy approximately 5.5% of nursing home beds equating to 1,670 residents. (Department of Health, 2015).
- In 2014, the proportion of those aged 85 years or older in long stay care had increased from 42% in 2005 to 49% in 2014. There has been a decline in the proportion of those aged 75-84 years from 40% in 2005 to 34% in 2014. The proportion of those aged 65-74 years has remained relatively stable since 2005 (13% in 2005 and 11.2% in 2014 – Department of Health Key Trends 2015).

FIGURE 6.2: LONG STAY CARE RESIDENTS BY AGE 2005-2014



Source: Department of Health, 2015

For planning purposes, it is estimated that 4% of the population aged 65 years and over will require a long stay bed – i.e. those who cannot live at home independently; 0.85% will require a short stay bed for respite, rehabilitation or assessment. These estimates have been guided by two studies of long term care in Ireland (Layte, 2009, Wren et al, 2012).

- There are currently 30,304 long and short stay beds (as of April 2016, personal communication, HIQA, 2016).
- In 2017, 27,199 beds will be available for adults aged 65 years and over (excluding beds occupied by adults aged 65 years and under).

Based on the estimated population requiring long stay (4.0%) and short stay (0.85%) beds, and bed availability data (HIQA), Table 6.3 shows the projected long stay and Table 6.4 shows the projected short stay beds required for 2017 and 2022. These two tables also show the projected deficit (assuming no increase in capacity) which is displayed in Figure 6.3.

- In 2017 it is projected that there will be an estimated deficit of 4,113 nursing home beds (1,460 long stay and 2,653 short stay).
- It is projected that this estimated deficit will increase to 9,509 nursing home beds by 2022 (5,910 long stay and 3,599).

TABLE 6.3: PROJECTED LONG STAY BEDS FOR 2017 AND 2022

YEAR	4% OF >65s	LONG AND SHORT STAY BEDS	BEDS FOR >65s [†]	*LONG STAY BEDS >65	LONG STAY BED DEFICIT
2015	24,193	30,106 [^]	26,970	24,273	80
2016	24,967	30,304 [§]	27,199	24,299	-668
2017	25,759	30,304 [§]	27,199	24,299	-1,460
2022	30,209	30,304 [§]	27,199	24,299	-5,910

[^]Source: Health Information and Quality Authority annual overview report on the regulation of designated centres for older people 2015 (April 2016)

[§]Number of designated beds as of April 2016 (Health Information and Quality Authority, personal communication)

[†]Accounting for 95% occupancy and for beds occupied by those under 65 years

*Estimated utilisation rate long stay beds equating to 89.6% of beds for aged 65 years and over

TABLE 6.4: PROJECTED SHORT STAY BEDS FOR 2017 AND 2022

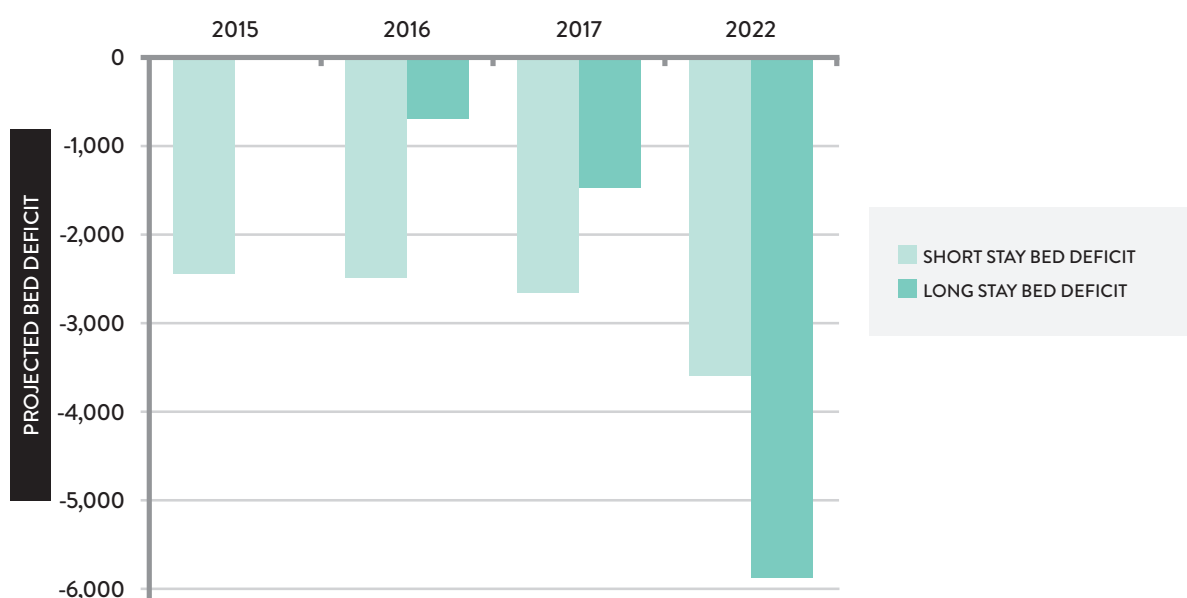
YEAR	0.85% OF >65s	LONG AND SHORT STAY BEDS	BEDS FOR >65s [†]	SHORT STAY BEDS >65*	SHORT STAY BED DEFICIT
2015	5,141	30,106 [^]	26,970	2,697	-2,444
2016	5,306	30,304 [§]	27,199	2,820	-2,486
2017	5,474	30,304 [§]	27,199	2,820	-2,653
2022	6,419	30,304 [§]	27,199	2,820	-3,599

[^]Source: Health Information and Quality Authority annual overview report on the regulation of designated centres for older people 2015 (April 2016)

[†] Accounting for 95% occupancy and beds occupied by those under 65 years

*Estimated utilisation rate short stay beds equating to 10.4% of beds for aged 65 years and over

FIGURE 6.3: PROJECTED DEFICIT IN SHORT AND LONG STAY BEDS FOR 2017 AND 2022

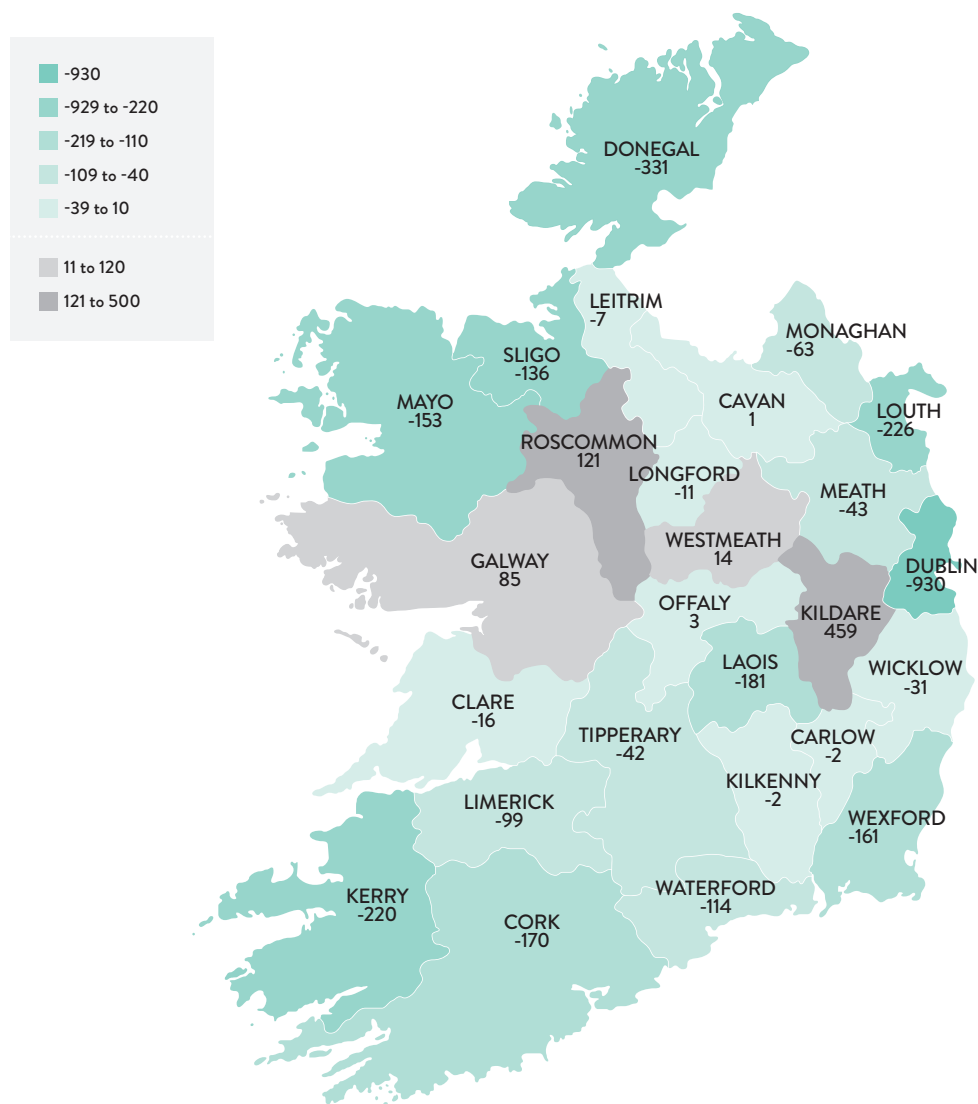


Source: Health Information and Quality Authority, Central Statistics Office

Figure 6.4 shows the difference between demand for nursing home beds at the end of 2015, based on the estimated 2015 population aged 65 years and over by county, versus the supply of HIQA approved nursing home beds by county. These figures probably underestimate the current situation, given the previously discussed growth in the cohort requiring nursing home care. Data are not currently available by county for the population aged 65 years and over to allow projections for 2017.

- The availability of long stay beds varies considerably by county. There is a deficit of beds in 20 counties with six experiencing a surplus.
- The greatest bed deficits are in counties Dublin (930 beds), Donegal (331 beds) and Louth (226 beds), while the greatest surpluses are in county Kildare (459 beds), Roscommon (121 beds) and Galway (85 beds).

FIGURE 6.4: VARIANCE BETWEEN NH BED AVAILABILITY (LONG STAY AND SHORT STAY) AND PROJECTED DEMAND IN ADULTS AGED 65 YEARS AND OVER IN 2015

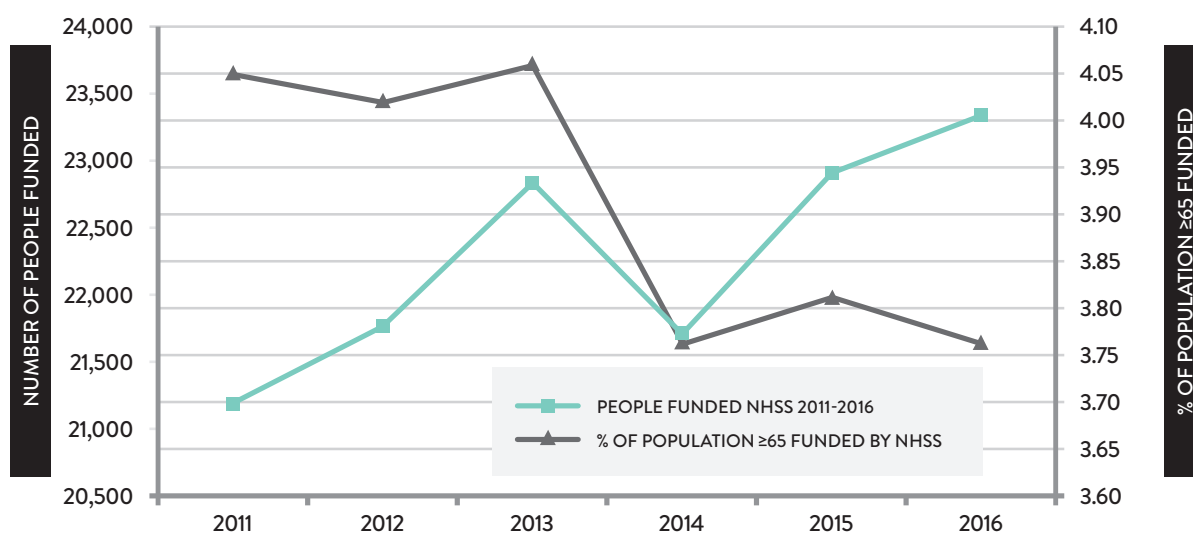


Source: Health Information and Quality Authority
(Health Information and Quality Authority designated beds as of December 2015, 2015 estimated population over 65 years by county)

NURSING HOME SUPPORT SCHEME

The Nursing Home Support Scheme (NHSS) provides funding support for public and private long stay care. Figure 6.5 shows trends in NHSS funding since 2011.

- At the end of 2015 there were 23,073 people funded or 3.8% of those aged 65 years or over (HSE December 2015 Performance Report).
- In 2016, NHSS estimate that it will fund 23,450 people or 3.76% of the population aged 65 years and older. If the rate of support remains at 3.76% it is projected that 24,200 people will need to be supported in 2017 and 28,400 in 2022.

FIGURE 6.5: NUMBER OF PEOPLE AND PERCENTAGE OF POPULATION AGED 65 YEARS AND OVER FUNDED BY NHSS 2011 – 2015

Source: Nursing Home Support Scheme, Central Statistics Office

- In 2017, applications to NHSS are projected to increase to 10,685 and 12,660 in 2022, assuming that the models of care and demand remain constant.
- In 2015 there were 509 applications to NHSS from those under 65 years. Projecting forward, assuming that the models of care and demand remain constant, this would rise to 540 in 2022.

TABLE 6.5: APPLICATIONS TO NHSS BY AGE GROUP 2015 AND PROJECTIONS TO 2016, 2017 AND 2022

	2015	% OF 2015 POPULATION	2016	2017	2022
< 65	509	0.013	528	530	540
65 – 84	5,005	0.93	5,155	5,315	6,200
>85	4,482	6.68	4,670	4,840	5,920
TOTAL	9,996		10,353	10,685	12,660

Source: Nursing Home Support Scheme

HOME CARE

Wren et al (2012) estimate that in Ireland 8.9% of the population 65 years or older have Home Help Services. Similarly, Murphy et al (2015) found that 8.2% of those aged 65 years and older use Home Help Services in Ireland.

Table 6.6 shows projected home help demand for the population aged 65 years and over in 2017 and 2022, based on the 2015 utilisation rate of 7.9% for home help. This is an underestimate of the demand reflected in recent Irish studies.

- There will be 50,875 Home Help clients in 2017; an increase of 1,565 clients from 2016. This will rise to 59,660 in 2022.
- This will require 300,000 (0.3 million) additional Home Help hours in 2017, rising to an additional 2.27 million required by 2022.

- If the proportion of older people receiving the service was extended to 10.1% (the level of service provision in 2011, and more reflective of the actual need as estimated by OECD), there would be an increase in clients of 65,040 in 2017 and 76,280 in 2022.

TABLE 6.6: PROJECTED HOME HELP HOURS AND HOME CARE PACKAGES 2017 AND 2022

	2011	2012	2013	2014	2015	2016 [†]	2017 [†]	2022 [†]
Pop >65 years	531,560	549,010	567,160	585,825	604,830	624,180	643,990	755,220
HH Hours (million)	11.98	9.83	9.74	10.3	10.46 [‡]	10.8	11.1	13.07
HH clients (excl HCP)	54,000	44,387	46,454	47,061	47,915	49,310	50,875	59,660
% Pop over 65 yrs with HH	10.1%	8.1%	8.2%	8.0%	7.9%	7.9%	7.9%	7.9%

Source: Health Service Executive Performance Report January 2016

[‡]2015 Out turn figure was 10,455,452

[†]Extrapolated from 2015 figures assuming the same level of population coverage (7.9%) and model of care

HOME CARE PACKAGES

Home care package clients have increased from 10,230 in 2011 to 15,272 in 2015 (HSE, 2016). To maintain the same levels of population coverage would require provision of an additional 520 home care packages in 2016 and an additional 500 packages in 2017.

However the level of provision does not reflect unmet need. It is recognised that increasing complexity of need, as reflected in the dependency ratios and casemix of those older people already identified in acute hospital transition, will reflect increased need for more specific rehabilitation services and complex home care packages. In addition, the provision of appropriate home care packages can serve to prevent unnecessary admission to acute facilities.

CARERS

Overall in 2011, 4.6% of those aged 65 years or older provided unpaid care. If this proportion remains unchanged, there will be 29,620 carers aged 65 years or older in 2017, rising to 34,740 in 2022. With many carers experiencing long term sickness and disability themselves, the need for support services may be great, particularly for older carers (Yumiko et al, 2012).

SERVICES FOR THOSE LIVING WITH DISABILITY

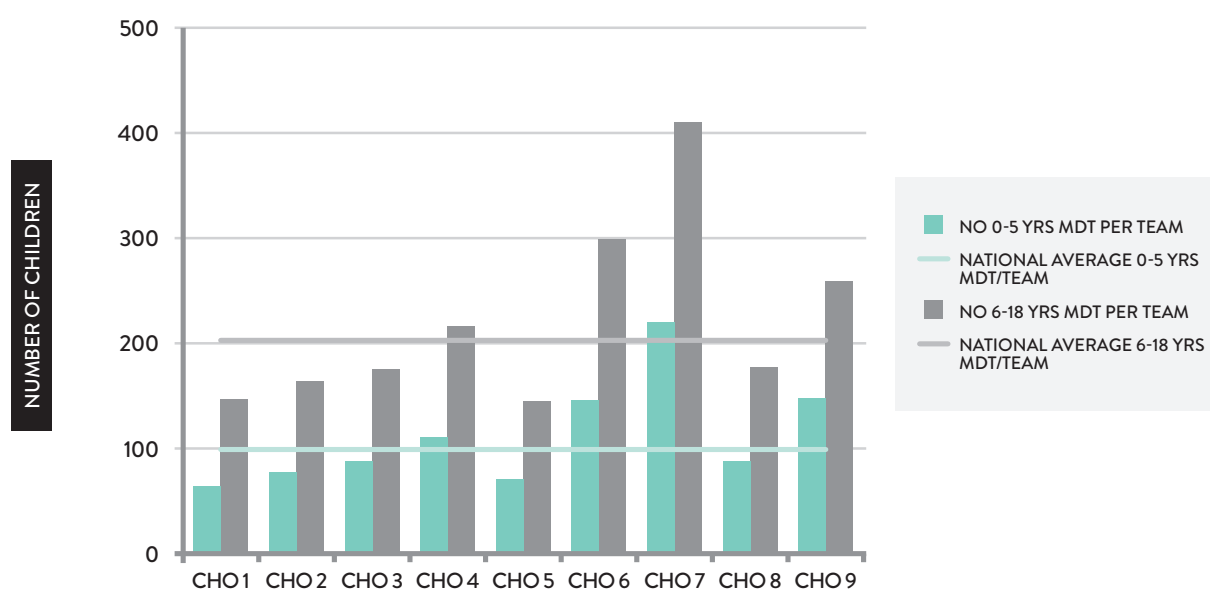
IMPLICATIONS OF DEMOGRAPHIC CHANGES ON DISABILITY SERVICES

- Combining data from the Central Statistics Office (CSO, 2012) and the National Disability Survey (CSO, 2008), it can be estimated that between one-in-five and one-in-six people in Ireland are living with disability.
- In 2011 (CSO, 2012), 13% of the population reported having at least one disability, this would equate to an estimated 613,760 people in 2017. Rates of reported disability increase with age, from 5.4% in the 0-14 age group to 72.3% in people aged 85 and over.
- The population aged 85 years and over is estimated to grow by 22% between 2017 and 2022, which has implications for service provision given the high levels of disability in this age cohort.

CHILDREN LIVING WITH DISABILITY

- Disability prevalence in children increases up to the age of 18 years (NDA, 2015).
- There is significant demand for speech therapy in this age group 0-17 yrs. This is as a result of a cumulative demand from children with an intellectual/learning disability and children with an isolated speech disability.
- The estimated number of children with a disability requiring MDT intervention is 3% of the population (0-18) (NDA, personal communication).
- In 2017 it is projected there will be 38,950 children requiring MDT care, rising to 39,320 in 2022 (Table 6.7).
- There is considerable variation in numbers of children requiring MDT service across CHOs.
- CHO Areas 4, 6, 7, and 9 have the greatest numbers of children requiring multi-disciplinary team service per network team. (Figure 6.6 and Table D1 Appendix D).

FIGURE 6.6: PROJECTED CHILDREN REQUIRING MDT CARE PER DISABILITY NETWORK TEAM, 2017



Source: (National Disability Authority, 2015)

TABLE 6.7: NUMBER OF CHILDREN 0-5 YEARS AND 6-18 YEARS WITH ANY DISABILITY AND NUMBERS REQUIRING MDT CARE, 2017 AND 2022

	2017 (N)	2022 (N)	% CHANGE 2017-2022
National Population 0-5 years	431,890	376,150	-12.9
Population with any Disability 0-5 yrs (n)	20,730	18,055	-12.9
Population requiring MDT 0-5 yrs (n)	12,960	11,285	-12.9
National Population 6-18 years	866,150	934,820	7.9
Population with any Disability 6-18 yrs (n)	92,680	100,030	7.9
Population requiring MDT 6-18 yrs (n)	25,990	28,040	7.9

Source: Central Statistics Office, National Disability Authority (2015)

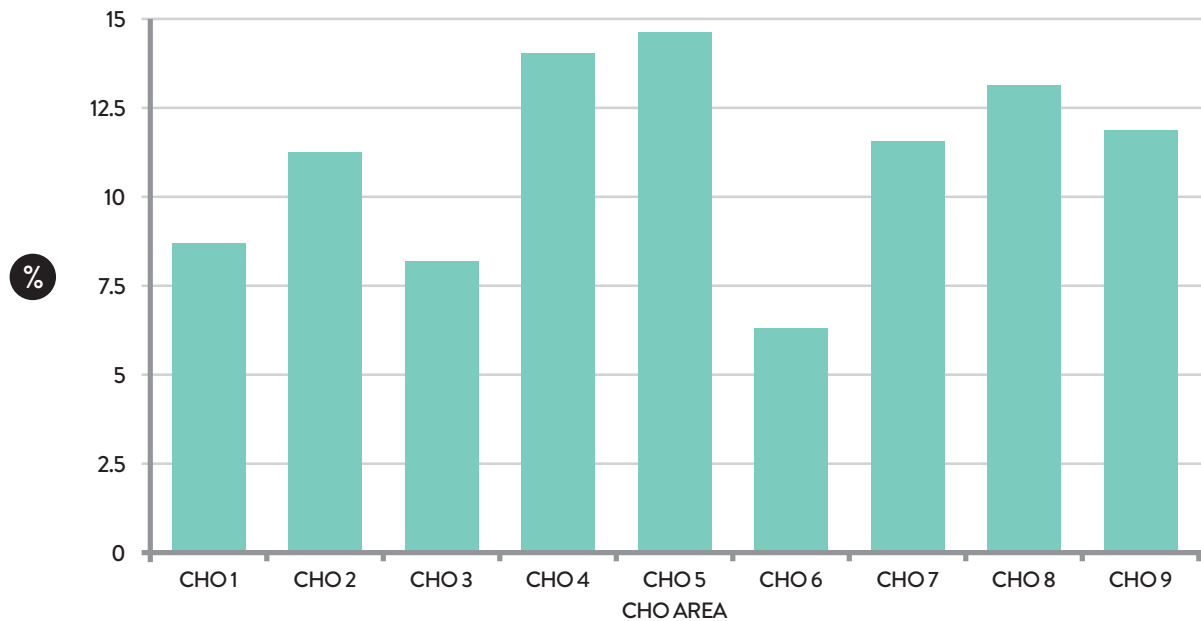
SCHOOL LEAVERS LIVING WITH DISABILITY

- Disability prevalence estimates indicate that there would be 1,840 seventeen year olds and 1,800 eighteen year olds in 2017 who would be receiving MDT input. These adolescents are most likely to transition to day services in 2017 and 2018.
- 1,340 people in 2015 and 1,443 people in 2016 will require a HSE funded adult day service. This equates to a yearly increase of 7.7% (2015-2016).
- Given that the data on children with disability shows an increase in the school age population of 7.9% between 2017 and 2022, it can be expected that this increase will continue.

PEOPLE LIVING WITH INTELLECTUAL DISABILITY

- In 2017 it is projected there will be 29,040 people with an intellectual disability.
- Currently there are 5,576 older people (over 50 years) with an intellectual disability recorded on the NIDD (NIDD, 2014).
- The population with intellectual disability like the general population is not evenly distributed across CHOs, with the greatest proportion living in CHOs 4 & 7 (13.8% and 14.6% respectively) and the lowest proportion living in CHO 6 (4.6%).
- There are 8,989 children (0-17 years) living with intellectual disabilities recorded on the NIDD.
- Figure 6.7 shows that children (0-17 years) with intellectual disabilities are not evenly distributed across CHOs, with the greatest proportion living in CHOs 4 and 5 (14% and 15% of the population 0-18 with ID respectively) and the lowest proportion living in CHO 6 (6% of national population).

FIGURE 6.7: PERCENTAGE OF NATIONAL POPULATION AGED 0-17 YEARS LIVING WITH INTELLECTUAL DISABILITY IN EACH CHO

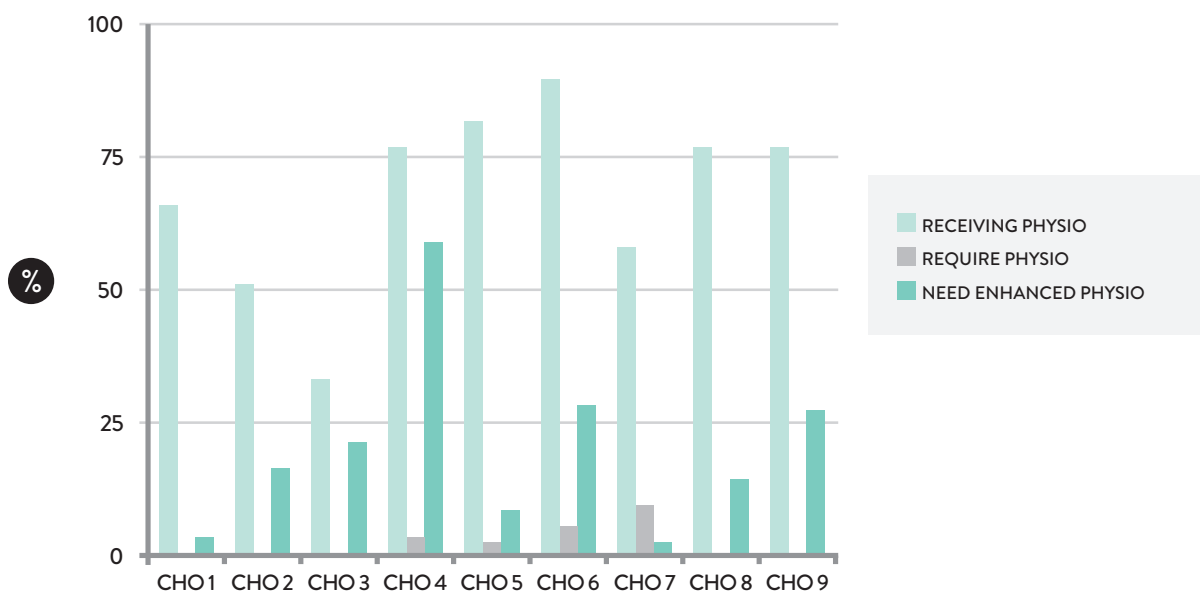


Source: National Intellectual Disability Database, Health Research Board, 2014

SUPPORT FOR CHILDREN AGED 0-5 AND AGED 6-17 YEARS LIVING WITH INTELLECTUAL DISABILITY

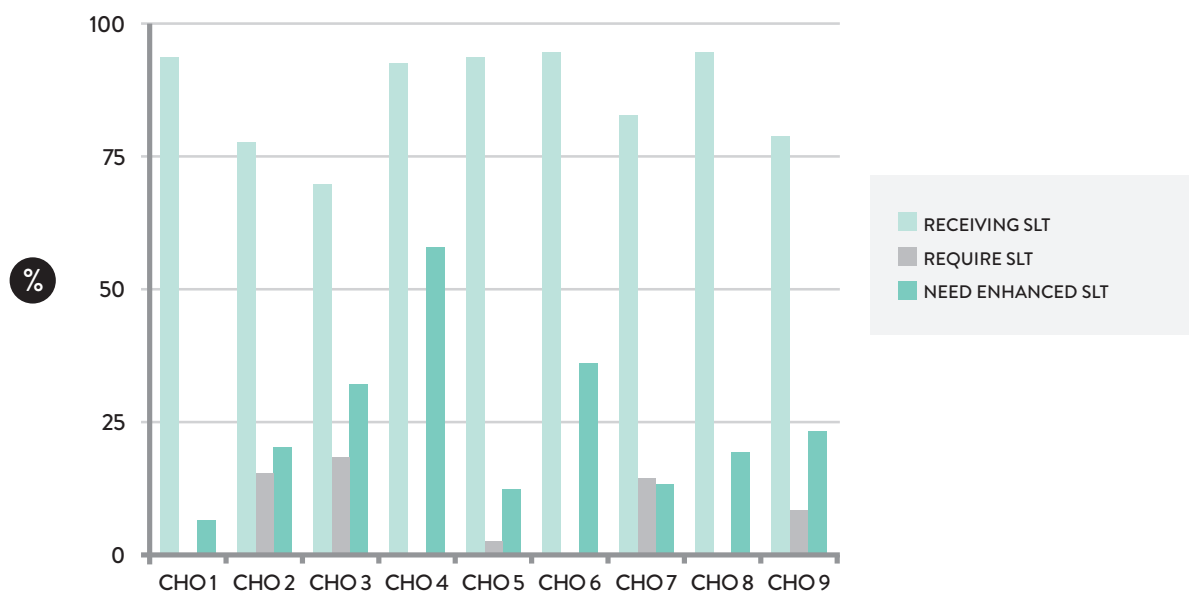
Figures 6.8 to 6.10 outline utilisation and unmet demand for therapy services among children aged 0-5 years, living with intellectual disability. The figures for each therapeutic intervention show those currently receiving therapeutic intervention (receiving service), those identified as requiring a therapeutic service but not receiving it (require service) and those in receipt of a therapeutic service but identified as needing an enhanced service (need enhanced service).

FIGURE 6.8: PHYSIOTHERAPY SERVICES FOR THOSE AGED 0-5 YEARS LIVING WITH INTELLECTUAL DISABILITY



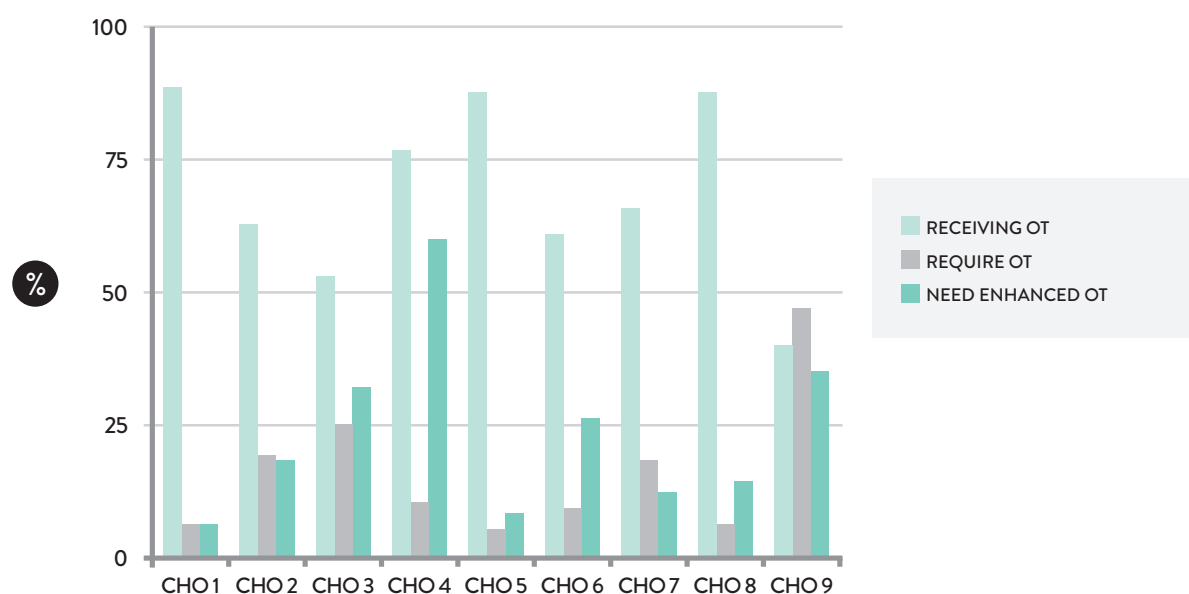
Source: National Intellectual Disability Database, Health Research Board, 2014

FIGURE 6.9: SPEECH AND LANGUAGE SERVICES FOR THOSE AGED 0-5 YEARS LIVING WITH INTELLECTUAL DISABILITY



Source: National Intellectual Disability Database, Health Research Board, 2014

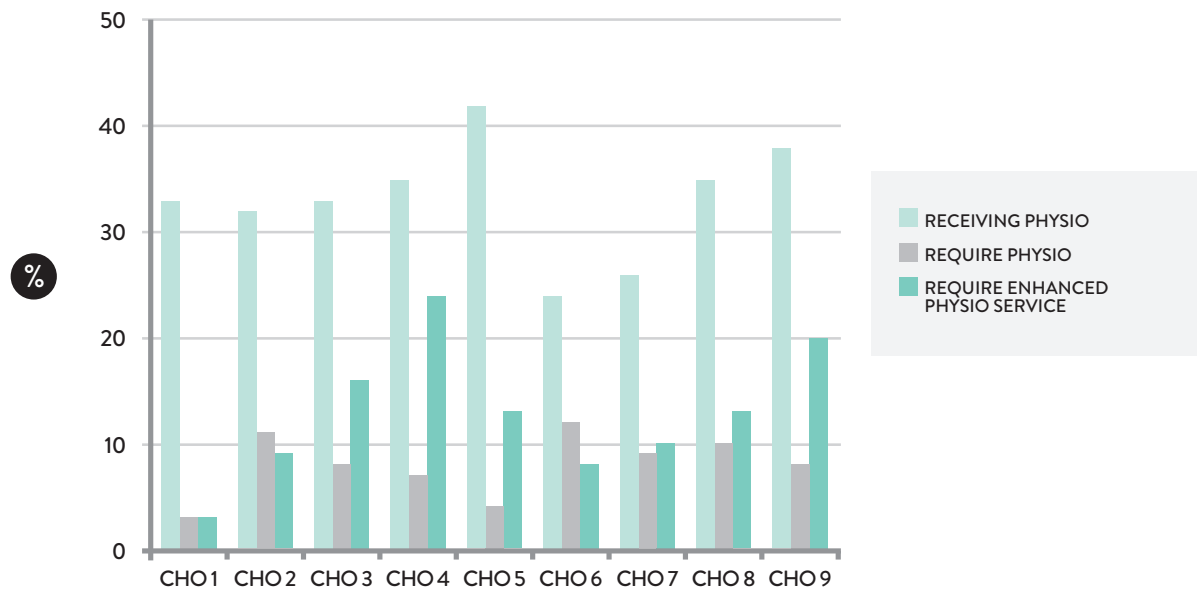
FIGURE 6.10: OCCUPATIONAL THERAPY SERVICES FOR THOSE AGED 0-5 YEARS LIVING WITH INTELLECTUAL DISABILITY



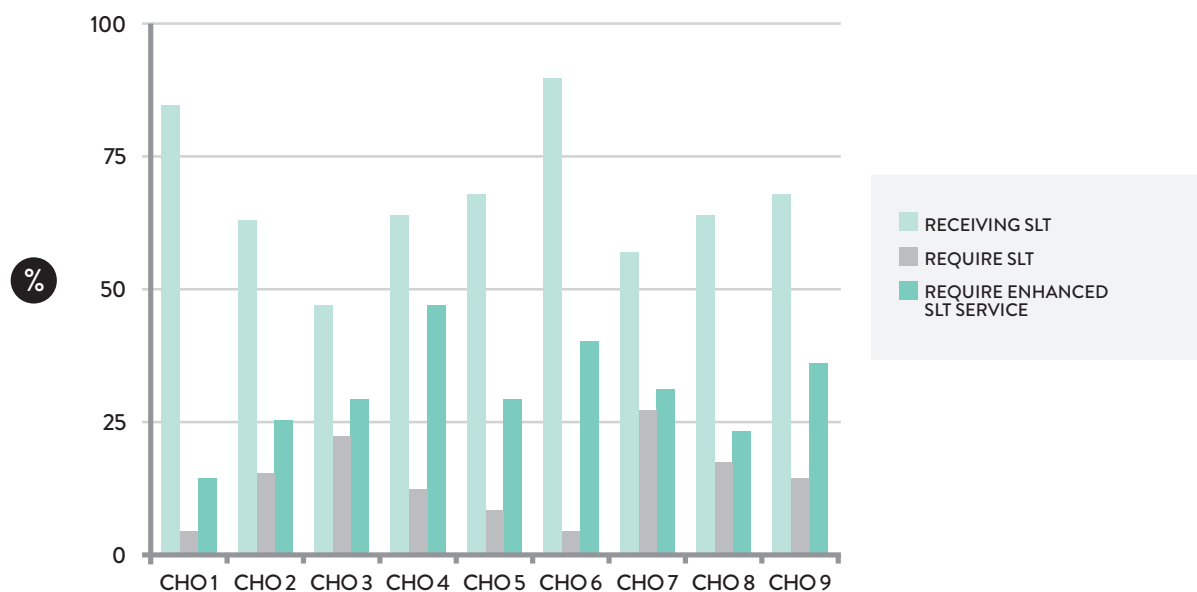
Source: National Intellectual Disability Database, Health Research Board, 2014

- For children aged 0-5 years recorded on the NIDD, data demonstrates that the greatest need (met and unmet) is for speech and language therapy services (ranging across CHOs between 88% and 97% of those aged 0 to 5 years on the NIDD) followed by occupational therapy (range across CHOs of 70-95%) and physiotherapy (range across CHOs of 33-85%).

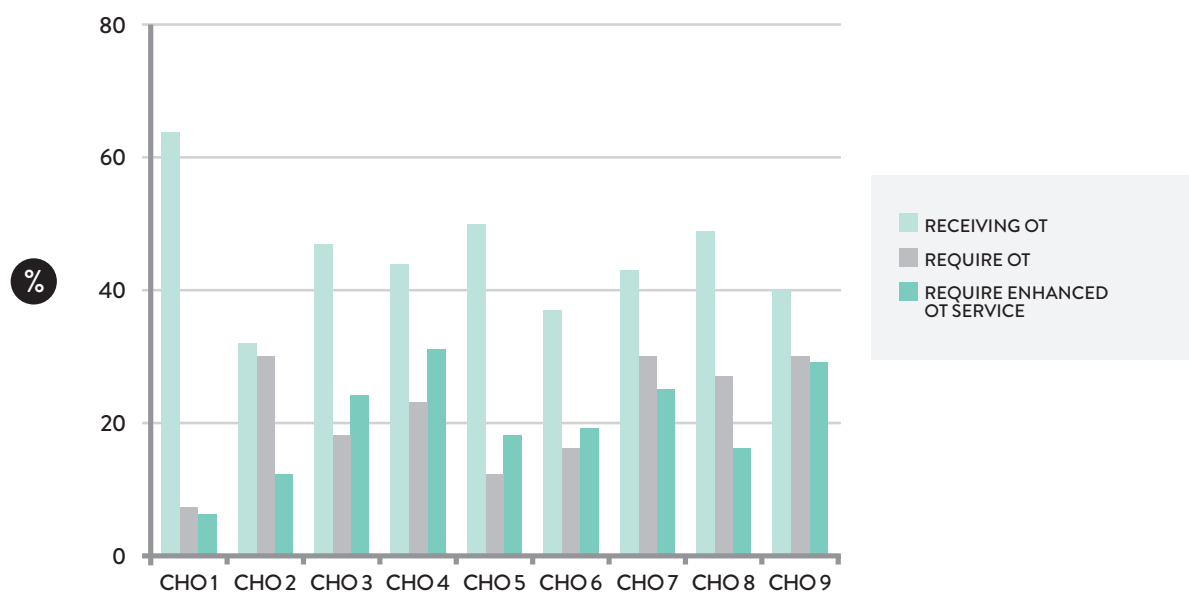
Figure 6.11 to 6.13 outline utilisation and unmet demand for therapy services for children aged 6-17 years. The categories used are the same as those described above for the 0-5 year olds.

FIGURE 6.11: PHYSIOTHERAPY SERVICES FOR THOSE AGED 6-17 YEARS LIVING WITH INTELLECTUAL DISABILITY

Source: National Intellectual Disability Database, Health Research Board, 2014

FIGURE 6.12: SPEECH AND LANGUAGE SERVICES FOR THOSE AGED 6-17 YEARS LIVING WITH INTELLECTUAL DISABILITY

Source: National Intellectual Disability Database, Health Research Board, 2014

FIGURE 6.13: OCCUPATIONAL THERAPY SERVICES FOR THOSE AGED 6-17 YEARS LIVING WITH INTELLECTUAL DISABILITY

Source: National Intellectual Disability Database, Health Research Board, 2014

- For children aged 6-17 years recorded on the NIDD, the graphs demonstrate that the greatest need (met and unmet) is for speech and language therapist services (range across CHOs of between 69-94%), followed by occupational therapy (range across CHOs of 53-76%) and physiotherapy (range across CHOs of 36-46%).

RESPITE SERVICES

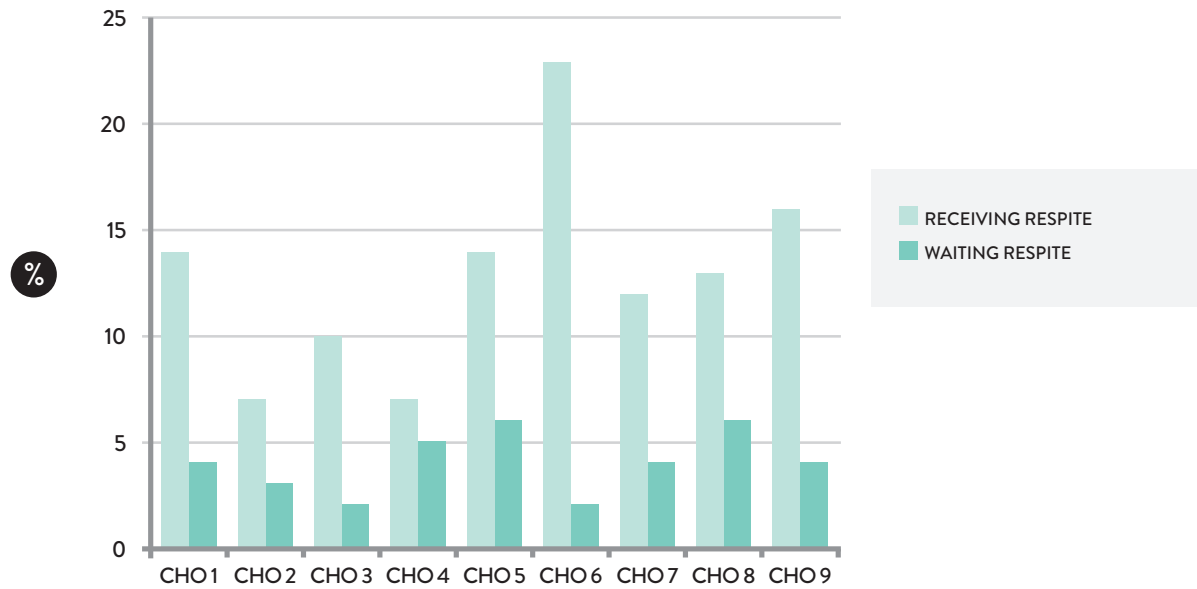
Respite services are essential services for persons with an intellectual disability and their carers. There is no international or European standard level of provision for respite services for people with intellectual disability. Across our CHO's it is evident that varying levels of demand and service provision exist.

In addition, the changing demography of those with intellectual disability means that this population is enjoying greater life expectancy, which translates into higher demand for residential placement. This demand has resulted in a number of respite beds being utilised for residential care and therefore they are not available for respite.

In 2014, 4,610 people living with intellectual disability received respite services (planned and crisis) which is a reduction of 7% compared to 2013 (NIDD, 2014). In addition, a further 1,309 people (4.7% of those with an intellectual disability) were identified as having an unmet need for respite services. The total need (met and unmet) for respite identified equated to 21.2% of people recorded on the NIDD.

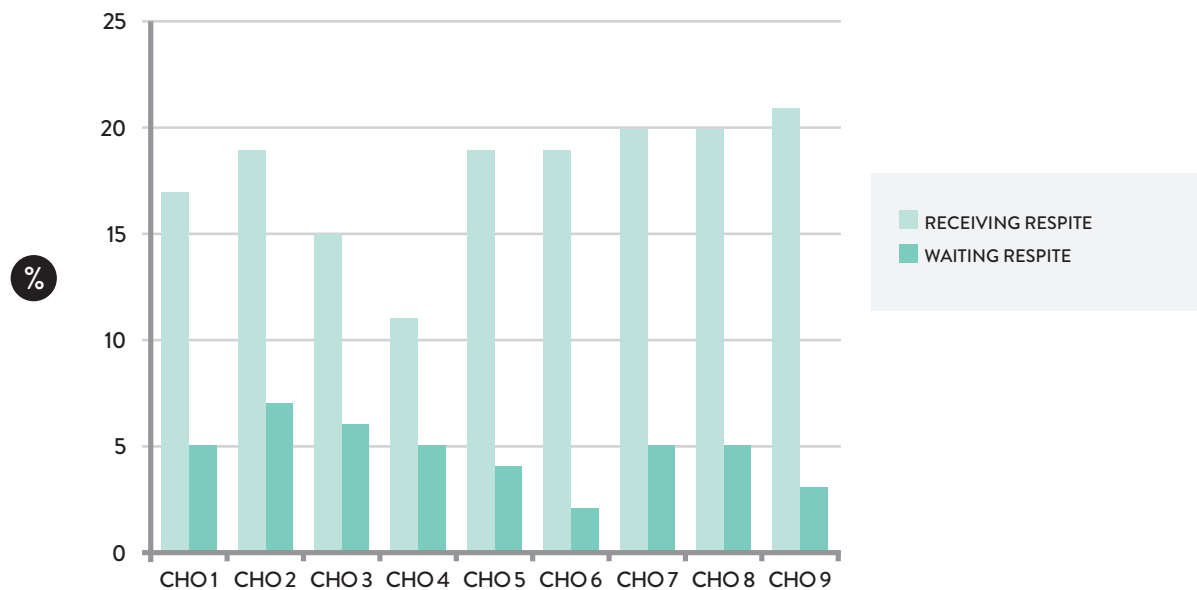
- To meet the total demand for respite services for people with intellectual disabilities in 2017, it is projected that an additional 1,546 places are required and a further 1,794 places by 2022.
- Variation exists across CHOs in the provision of respite to people with ID, both in number of people provided with respite and in the number of days of respite provided per year.

FIGURE 6.14: POPULATION AGED LESS THAN 18 YEARS WITH ID IN RECEIPT OF AND WAITING FOR PLANNED RESPITE BY CHO



Source: National Intellectual Disability Database, Health Research Board, 2014

FIGURE 6.15: POPULATION AGED 18 YEARS AND OVER WITH ID IN RECEIPT OF AND WAITING FOR PLANNED RESPITE BY CHO



Source: National Intellectual Disability Database, Health Research Board, 2014

RESIDENTIAL SERVICES FOR PEOPLE LIVING WITH INTELLECTUAL DISABILITY

- Approximately fifty per cent of people aged 18 years or over with an Intellectual Disability (48-57% across CHOs) live in residential care. Almost all of those aged under 18 years live at home (96-100% across CHOs).
- However, the proportion of those aged 18 years and over accommodated in institutional residential centres, varies from 6% in CHOs 2 and 6 to 22% in CHO 7.

In 2014 there were 165 people with an intellectual disability residing in psychiatric hospitals (NIDD, 2014). This is contrary to current policy, and priority is being given to transferring them to more appropriate settings.

CO-MORBIDITIES IN THOSE WITH INTELLECTUAL DISABILITIES

The TILDA survey of older people found higher rates of multi-morbidity among those with intellectual disability, with the most prevalent conditions being mental health and neurological conditions. The cardio-metabolic risk, osteoporosis, and constipation risk was significantly higher compared to the study population overall. Lifestyle risk factors were better except for physical activity. Focused action on physical activity has the potential to reduce cardio-metabolic risk profile, decrease the prevalence of constipation and the risk of osteoporosis (Burke et al, 2014).

PEOPLE LIVING WITH PHYSICAL AND SENSORY DISABILITY

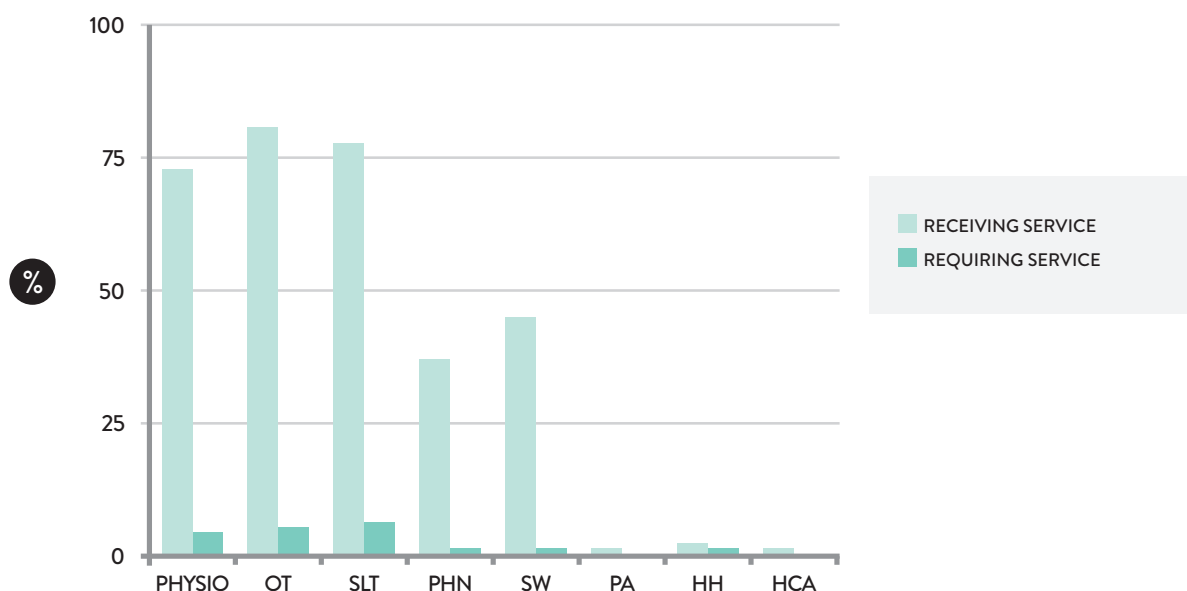
It is estimated that the coverage of the National Physical and Sensory Disability Database (NPSDD) is approximately 67%, based on a population estimate of 10.8 people with a physical/sensory disability per 100,000 population (Department of Health, 2012). In 2014, 22,908 people were recorded on the National Physical and Sensory Disability Database. Extrapolating this figure, based on the estimated coverage level of 67%, gives an estimated population of 34,200 living with physical and sensory disability. Due to the low coverage levels and the national variation in data completeness and timeliness, the NPSDD is currently not robust enough to support service planning. However a number of key issues can be determined.

- There is significant unmet need for therapeutic services and personal support services among people living with a physical and sensory disability.
- The information across CHOs is not directly comparable, due to the varied coverage of the NPSDD between different areas, for that reason national data is shown in Figures 6.16 and 6.17.

CHILDREN LIVING WITH PHYSICAL AND SENSORY DISABILITY

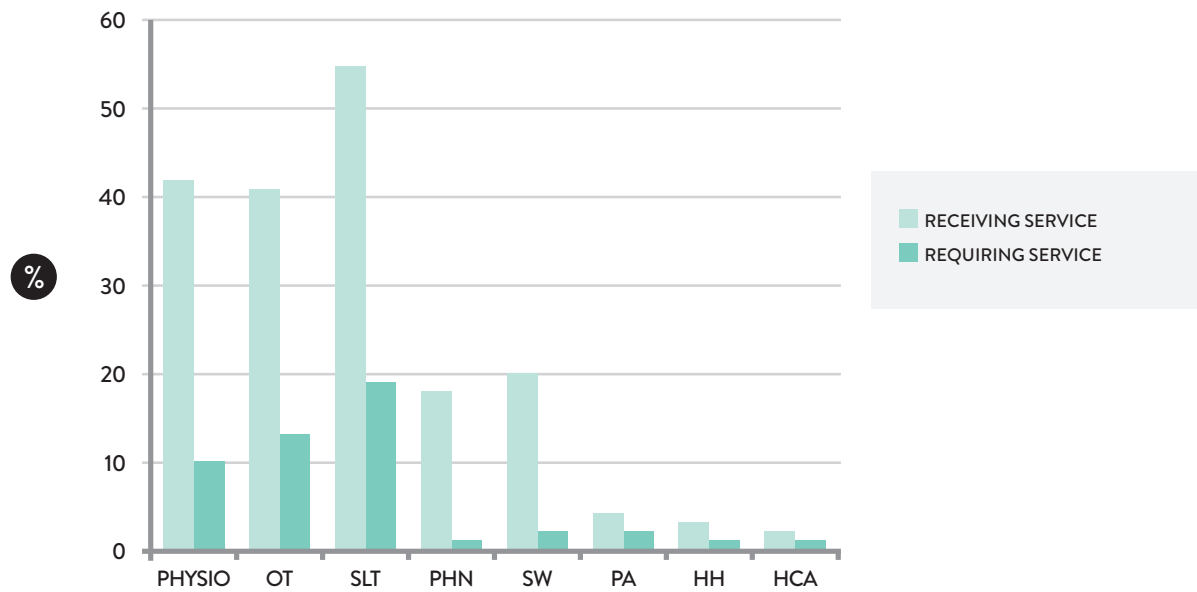
- There are high levels of need for therapeutic intervention services in children with physical and sensory disability.
- The level of unmet need increases with increasing age.
- There are low levels of need for personal support services among children with physical and sensory disability as most live with their families.

FIGURE 6.16: NEED FOR THERAPEUTIC AND SUPPORT SERVICES IN CHILDREN AGED 0-5 YEARS



Source: National Physical and Sensory Database, Health Research Board, 2014

FIGURE 6.17: NEED FOR THERAPEUTIC AND SUPPORT SERVICES IN CHILDREN 6-17 YEARS

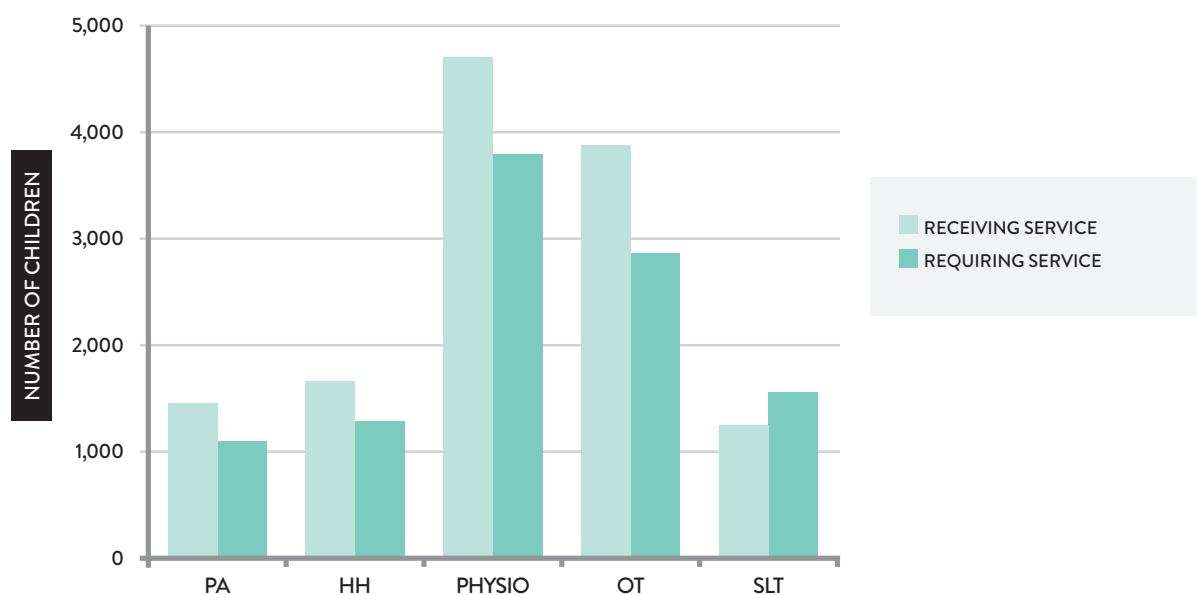


Source: National Physical and Sensory Database, Health Research Board, 2014

ADULTS LIVING WITH PHYSICAL AND SENSORY DISABILITY

- There remains a substantial level of need for therapeutic services in those aged 18 years and over.
- There is considerable unmet need for all therapeutic services, with the greatest need for physiotherapy and occupational therapy.
- The need for personal support services increases in those aged 18 years and over, as people naturally progress to independent living.

FIGURE 6.18: NEED FOR THERAPEUTIC AND SUPPORT SERVICES IN THOSE OVER 18 YEARS

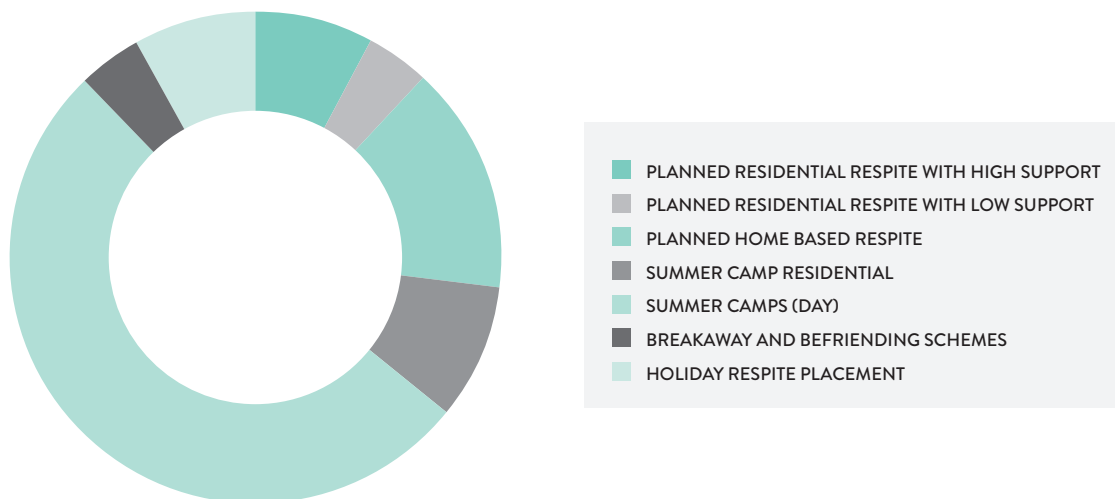


Source: National Physical and Sensory Database, Health Research Board, 2014

RESPITE SERVICES FOR THOSE LIVING WITH PHYSICAL AND SENSORY DISABILITY

- About one in ten of those aged between 0 and 18 years with a physical and sensory disability use respite services.
- The most frequent form of respite accessed is day summer camps.

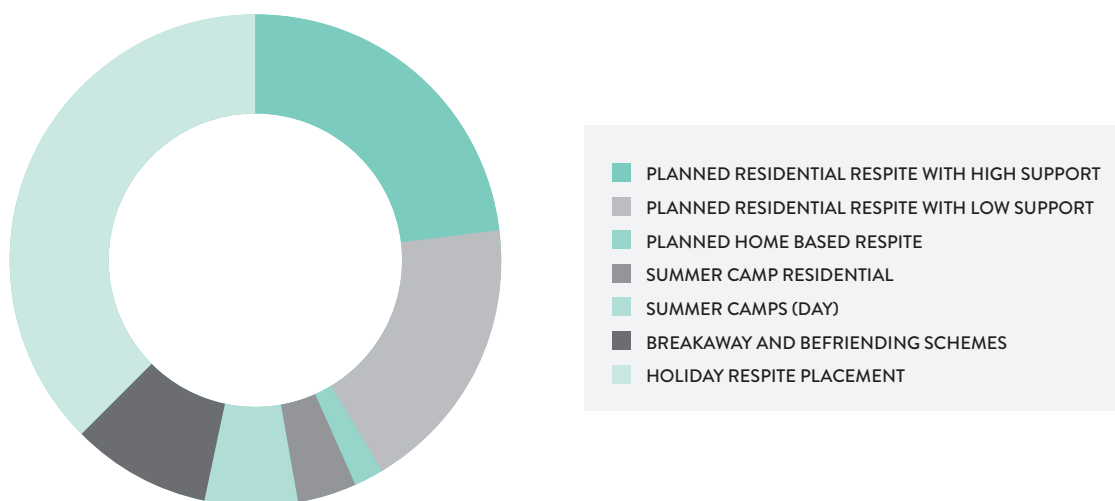
FIGURE 6.19: TYPE OF RESPITE SERVICE USED BY THOSE AGED LESS THAN 18 YEARS



Source: National Physical and Sensory Database, Health Research Board, 2014

- About one in ten of those over 18 years with a physical and sensory disability use respite services.
- The pattern of respite use changes in this age group, with holiday respite placement the most commonly accessed service.

FIGURE 6.20: TYPE OF RESPITE SERVICE USED BY THOSE AGED 18 YEARS AND OVER



Source: National Physical and Sensory Database, Health Research Board, 2014

RESIDENTIAL SERVICES FOR THOSE LIVING WITH PHYSICAL AND SENSORY DISABILITY

- There is no use of residential services recorded on the NPSDD for those aged less than 18 years.
- For those aged 18 years and over, 4% are recorded as living in residential facilities.
- The most frequently recorded setting is a nursing home (34%) which may not be an appropriate placement for a person under 65 years of age.
- In addition, the Department of Health (2015) has identified that 5.5% of nursing home beds are occupied by those less than 65 years, equating to 1,670. The majority of these residents are likely to be living with physical and sensory disability.
- A research project to explore the issue of adults with physical and sensory disability being accommodated in nursing homes is currently underway.

ACQUIRED DISABILITY

As the data presented earlier has demonstrated, most disability is acquired over the life course rather than being present from birth. About one in eight of those with a disability, have had it since birth, with the remainder of those living with a disability acquiring it after birth. The exception to this is intellectual or learning disability and speech disability, where the disability is present at birth for about 40% of this cohort. Disease or illness is given as the cause of disability by 41% of people and accident, injury or a fall by a further 10% (Watson and Nolan, 2011).

HEALTH INEQUALITIES

- Disability brings with it significant additional costs, which increase the risk of poverty for households. It has been found that the estimated cost of disability is equal to 30-33% of average weekly income (Cullinan, Gannon and Lyons, 2010).
- Excluded and disadvantaged groups within the population carry a significant burden of disability.
- Inaccessible and inadequate support for disability may generate and sustain long-term homelessness and multi-morbidity.
- The 2011 CSO Census of homeless people (CSO, 2012) found that 42% had some form of disability (compared to 13% for the general population), with 3.2% blind/visually impaired, 3.3% deaf/hearing impaired, 5% intellectual disability, 11.2% difficulty with basic physical activities, 16% experiencing difficulties with pain, breathing, or other chronic illnesses, and 17% of all disabilities being those of 'psychological or emotional conditions' (CSO, 2012).
- In the 2011 Census, 17.5% of Irish Travellers had one or more disability compared with 13% of the general population.

RESEARCH AND DATA NEEDS

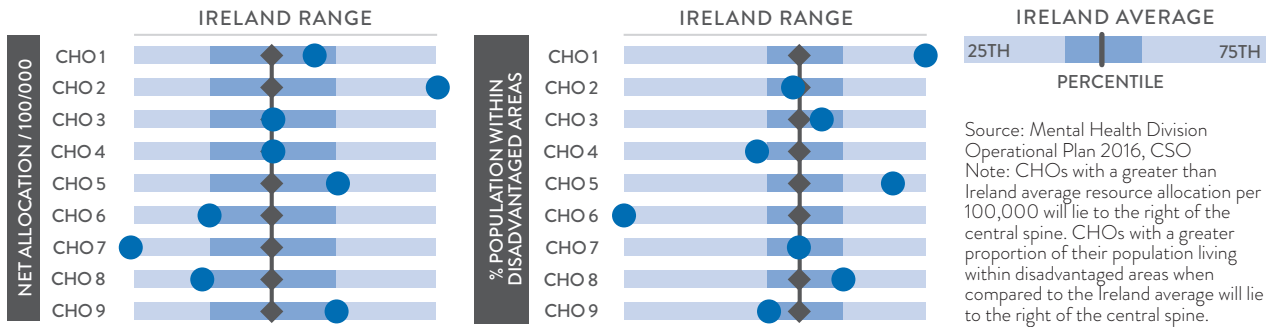
- Implementation of the single assessment tool for older people is required.
- An international review of best practice models of care for the delivery of homecare packages should be carried out.
- Revalidation of the current models used to predict demand for services among those aged 65 years and over is necessary.
- Exploration of the concept of reduced demand for residential services due to healthier ageing is recommended. This should include the impact on demand for home support services.
- Development of an indicator (index) to describe activity and complexity of care provision in residential facilities both for older persons and persons with disabilities is required. A costing model should be developed in parallel.
- Development of an indicator (index) to describe complexity of care needs among people with a disability, based on a standardised assessment tool is needed. The data generated to be web-enabled and available in a timely manner to inform service planning and development.
- A unified, complete and timely database for people living with disabilities to incorporate the data generated above is required.
- Whenever relevant and possible, Social Care indicators should be reported by socio-economic status and socially excluded grouping, to enable equality monitoring of all Social Care services and monitor progress towards a reduction in health inequalities.
- An ethnic identifier should be routinely and systematically collected across all Social Care data systems, to assess ongoing health needs and service utilisation, enable monitoring of health outcomes and inform commissioning of social care and disability services to address health inequalities for Irish Travellers and other ethnic minority groups.

07

MENTAL HEALTH

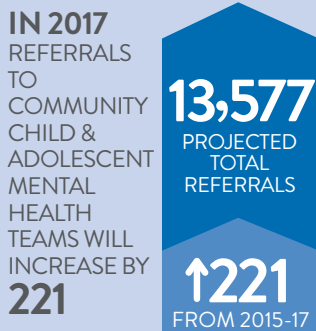


PROFILE OF ALLOCATION OF RESOURCES TO CHO_s - 2016

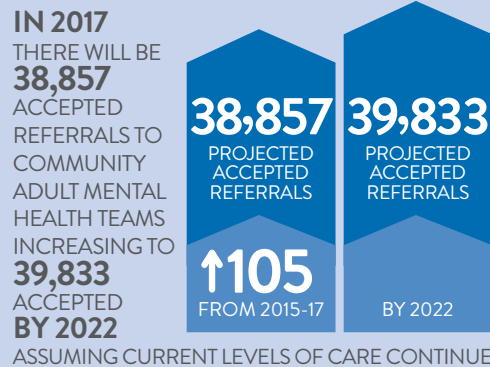


COMMUNITY MENTAL HEALTH TEAMS

CHILD & ADOLESCENT MENTAL HEALTH SERVICES



GENERAL ADULT PSYCHIATRY (AGED 18-64)

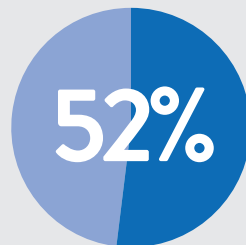
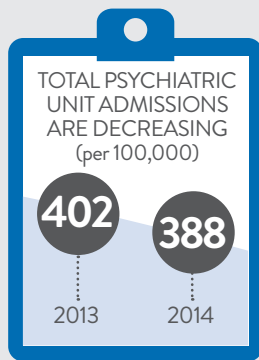


PSYCHIATRY OF OLD AGE

IN 2017 THERE WILL BE 11,120 ACCEPTED REFERRALS TO PSYCHIATRY OF OLD AGE COMMUNITY MENTAL HEALTH TEAMS - IN 2022 THIS WILL INCREASE TO 13,041 ACCEPTED REFERRALS



HOSPITAL ADMISSIONS



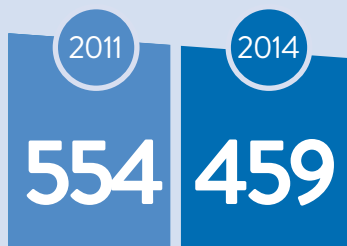
52% OF PSYCHIATRIC HOSPITAL ADMISSIONS AGED 85+ ARE FOR DEMENTIA



IT IS PROJECTED THAT THERE WILL BE 1,745 ADMISSIONS OF ADULTS AGED 65+ IN 2017, REPRESENTING AN INCREASE OF 158 FROM 2014

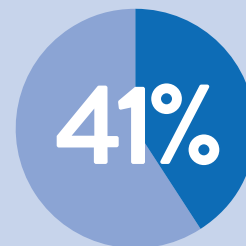


NUMBER OF SUICIDES



NUMBER OF SUICIDES DECREASED FROM 554 IN 2011 TO 459 IN 2014

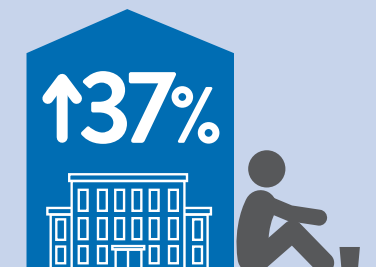
HEALTH INEQUALITIES



41% OF ADMISSIONS TO PSYCHIATRIC UNITS IN 2014 WERE UNEMPLOYED



37% INCREASE IN ADMISSIONS TO PSYCHIATRIC HOSPITALS OF HOMELESS PERSONS FROM 2006 TO 2013



ASSUMPTIONS

- National Psychiatric In-patient Reporting System data was used to calculate utilisation rates and excludes data from private hospitals, Central Mental Hospital, Carraig Mór Cork, St Joseph's IDS and Phoenix Care Centre.
- All underlying assumptions and projections are based on demographic change only and do not take into account any changes in policy, models of care, eligibility and service provision since 2015.
- In this chapter, the utilisation rates from 2014 were used to calculate projections for hospital admission rates in 2017 and 2022. The utilisation rates for 2015 were used to calculate the projected referrals to community services.
- Rates used in analysis by CHO Area are crude rates: per 1,000 or 100,000, where applicable, and not standardised to the national population.

CHILD AND ADOLESCENT MENTAL HEALTH SERVICE (CAMHS)

- In 2017 it is projected that the admissions of children aged 0-17 years to HSE psychiatric in-patient services will increase slightly to 299 admissions; and referrals to Community Child and Adolescent Mental Health Teams will increase by 221 (projected total referrals = 13,577 referrals).
- There were 2,319 patients on the waiting list for Community CAMHS at the end of 2015, which represents a drop of 550 from 2014.
- There is a considerable variation in referral to Community Mental Health across CHOs.

GENERAL ADULT PSYCHIATRY (GAP)

COMMUNITY TEAMS

- It is projected that from 2015 to 2017 there will be an increase of 105 accepted referrals to Community Adult Mental Health Teams in the 18-64 age cohort (38,857 accepted referrals).
- By 2022 this will increase to 39,833 accepted referrals in the 18-64 age cohort, assuming current models of care continue.

HOSPITAL ADMISSIONS

- The total number of admissions to psychiatric units continues to decrease, from 402/100,000 in 2013 to 388/100,000 in 2014. The majority of adult admissions (88%) in 2014 were in the 18-64 years age cohort.
- In 2017, it is projected that there will be 11,649 admissions of patients aged 18-64 years, which is largely unchanged from 11,642 in 2014.
- The leading disorders among those aged 18-64 years, admitted in 2014, were: depression (24%), schizophrenia (24%), mania (12%), personality disorders (9%) neuroses (8%) and alcoholic disorders (6%).

PSYCHIATRY OF OLD AGE (POA)

COMMUNITY TEAMS

- From 2015 to 2017 it is projected that accepted referrals to the Psychiatry of Old Age Community Mental Health Teams will increase by 676, to 11,120 accepted referrals for those aged 65 years and over.
- By 2022 this is projected to increase to 13,041 referrals in those aged 65 years and over, assuming current models of care remain.

HOSPITAL ADMISSIONS

- It is projected that there will be 1,745 admissions of adults aged 65 years and over in 2017, which would represent an increase of 158 from 2014.
- The leading mental health conditions in this age group admitted to our psychiatric hospitals in 2014 were: depression representing 31% of admissions, schizophrenia (21%) and organic mental disorders including dementia (20%).
- Organic mental disorders (including dementia) are the leading condition among adults aged 85 years, representing 52% of admissions.

SUICIDE AND DELIBERATE SELF HARM

- The number of suicides has reduced from 554 in 2011 to 459 in 2014.
- In 2014, 8,708 people presented to hospital services with deliberate self-harm (National Suicide Research Foundation, 2015). This is a 1.5% reduction on 2013. The age-standardised rate of individuals presenting to hospital following self-harm in 2014 was essentially unchanged from 2013 (200 per 100,000).

HEALTH INEQUALITIES

- In 2014 the unskilled occupational group had the highest rate of all admissions to adult psychiatric units (670 per 100,000) and first admissions (181.6 per 100,000). 41% of all admissions were categorised as unemployed.
- Mental ill-health may be a cause or consequence of homelessness. In 2013, there were 245 admissions of people with No Fixed Abode (a proxy for homelessness) to psychiatric units and hospitals across the country, a 37% increase since 2006.
- People with a mental health disability are nine times more likely to be out of the labour force than those of working age without a disability, the highest rate for any disability group in Ireland.
- The co-existence of mental ill-health with substance misuse problems (dual diagnosis), and significant mental health issues emerging among the newly arriving asylum seekers and refugees, highlights the importance and benefits of an integrated cross-divisional service approach.

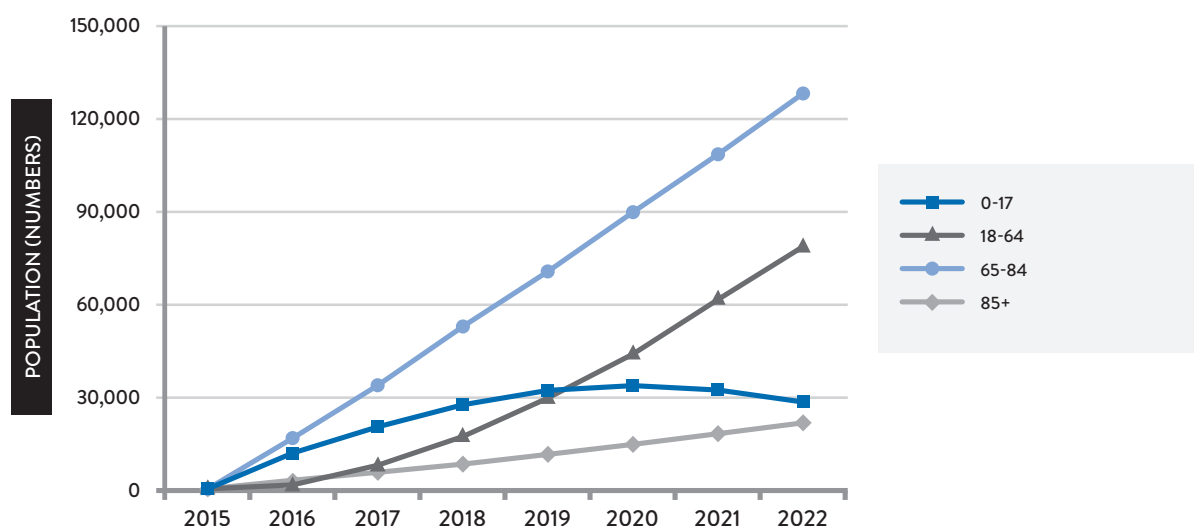
RESEARCH AND DATA NEEDS

- An ethnic identifier should be routinely and systematically collected across all Mental Health data systems, and not just within the psychiatric hospital dataset.
- Wherever relevant and possible, Mental Health Service indicators should include socio-economic status and socially excluded groups to enable equality monitoring of services. Currently no data exists to identify deprivation or marginalised groups.
- Although significant data exists within the Jigsaw projects, there is a research resource requirement to mine this data.
- Demographic profiling of data for Counselling in Primary Care is required.
- Age specific costs or casemix indices for acute mental health services are not currently available.

DEMOGRAPHY

Our population aged 0-17 years is projected to increase by 8,530 from 2016 to 2017. The population aged 18-64 years increased by 1,290 between 2015 and 2016, and is projected to increase by 6,400 between 2016 and 2017. The biggest projected increase is in the population aged 65 years and over which is expected to grow by 19,800 between 2016 and 2017.

FIGURE 7.1: POPULATION CHANGE 2015 TO 2022 BY AGE GROUP



Source: Central Statistics Office

CONTEXT

TABLE 7.1: OVERVIEW OF MENTAL HEALTH BUDGET

	2015 NSP BUDGET €M	2016 NSP BUDGET €M	% MENTAL HEALTH TOTAL 2016	% NET DETERMINATION 2016	CHANGE 2015-2016	% CHANGE 2015-2016
CHO Areas	731.6	721.2	91.1%	5.6%	-10.5	-1.4%
Central Mental Hospital	24.6	24.0	3.0%	0.2%	-0.6	-2.4%
National Office Suicide Prevention	9.5	11.9	1.5%	0.9%	2.4	25.3%
National & Regional Services	14.6	34.6	4.4%	0.3%	20.0	137%
TOTALS	780.3	791.6	100.0%	6.1%	11.3	1.5%
NET HSE DETERMINATION	12,131.0	12,928.4		100.0%	797.40	6.6%
Population (1,000s)	4,654	4,686			32,330	0.7%
Mental Health budget per 100,000	16.8	16.9			0.1	0.6%
Net HSE determination per 100,000	260.6	275.9			15.3	5.8%

Source: Mental Health Operational Plan 2016 and National Service Plan 2016

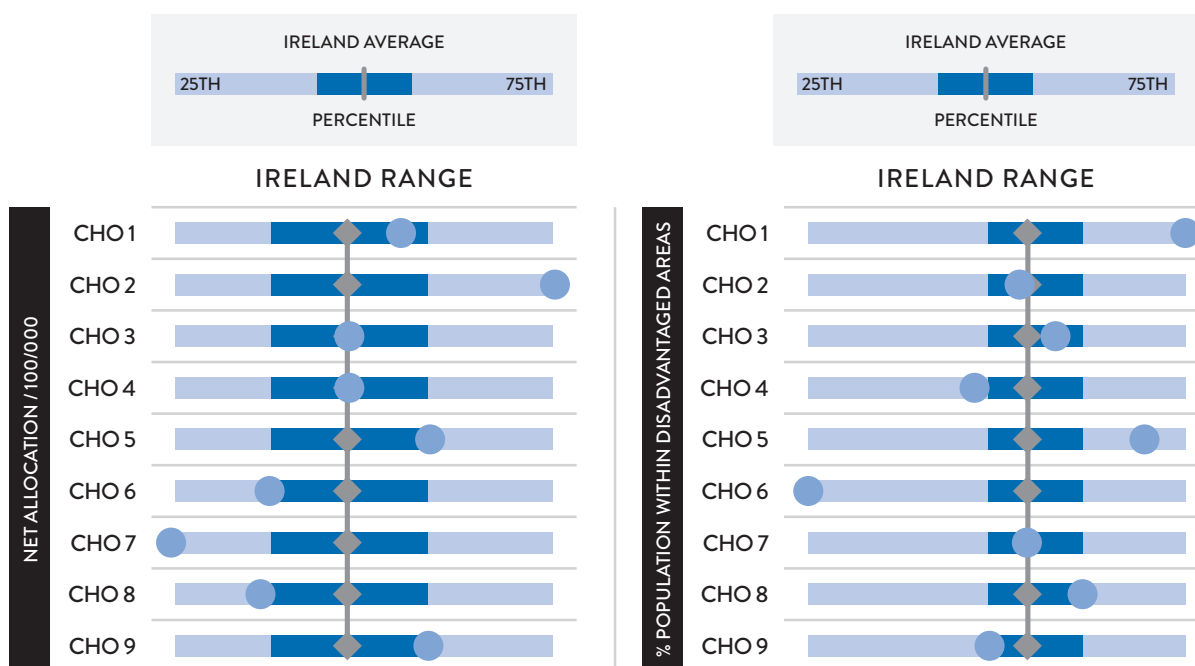
TABLE 7.2: MENTAL HEALTH BUDGET ALLOCATION PER CHO AREA

	POPULATION 2016	OPENING MENTAL HEALTH BUDGET 2016 (€)	NET ALLOCATION PER 100,000 (€)	%EDS* DISADVANTAGED
CHO 1	396,278	64,927,144	16,384,241	31.6
CHO 2	443,271	90,143,602	20,336,003	22.6
CHO 3	381,555	57,570,141	15,088,294	24.8
CHO 4	679,489	102,565,547	15,094,512	20.4
CHO 5	515,415	88,504,510	17,171,505	29.5
CHO 6	398,718	52,140,871	13,077,130	11.4
CHO 7	673,534	70,974,296	10,537,597	22.9
CHO 8	612,465	78,065,169	12,746,062	26.1
CHO 9	596,479	102,392,824	17,166,208	21.1
IRELAND	4,697,204	707,284,104	15,057,556	23.3

Source: Mental Health Division Operational Plan 2016, Central Statistics Office, Health Atlas

*Disadvantaged defined as a negative relative HP index

FIGURE 7.2: PROFILE OF ALLOCATION OF RESOURCES TO CHOs, 2016



Source: Mental Health Division Operational Plan 2016, Central Statistics Office

Note: CHOs with a greater than Ireland average resource allocation per 100,000 will lie to the right of the central spine. CHOs with a greater proportion of their population living within disadvantaged areas when compared to the Ireland average will lie to the right of the central spine.

NEW INITIATIVES 2015/2016

- Connecting for Life 2015–2020 is the new national strategy to reduce suicide in Ireland and it is currently being implemented nationally (Department of Health, 2015).
- During 2015, the Mental Health Division (MHD) developed clinical programmes for presentations to emergency departments following self-harm, early intervention for people developing first episode psychosis, and the Eating Disorders Service. During 2016, a further two clinical programmes were being progressed for children and adults with ADHD and for Dual Diagnosis (HSE, 2016).
- According to the 2016 MHD Operational Plan, one of the priorities relates to collaboration between mental health and primary care, on the continued development of early intervention and prevention counselling services by mental health and primary care, as well as improved provision of psychotherapeutic interventions for adults and children with mental illness (HSE, 2016).
- The Data Design and Optimisation Project is developing a Performance Improvement and Measurement Framework. This includes developing metrics for availability of services, access, safety, clinical effectiveness, and service user and staff experience.

MENTAL HEALTH INEQUALITIES

- In 2014, the unskilled occupational group had the highest rate of all admissions (670.0 per 100,000) and first admissions (181.6 per 100,000) to adult psychiatric units, in keeping with the trends in previous years. Forty-one per cent of all admissions were returned as unemployed (Daly and Walsh, 2015).
- Excluded and disadvantaged groups within our population (e.g. homeless, asylum seekers & refugees, Irish Travellers) carry a disproportionate burden of mental ill-health.
- In 2013, there were 245 admissions of people with No Fixed Abode (a proxy for homelessness) to psychiatric units and hospitals across the country, a 37% increase since 2006 (Mental Health Reform, 2015).
- Mental ill-health can be the cause and consequence of homelessness. Data suggests that between 47% and 58% of homeless people in Ireland have at least one diagnosed mental health condition (Walsh, 2011; O'Reilly et al, 2015).
- These conditions include anxiety, depression, schizophrenia, personality disorder (PD) or psychosis (O'Carroll, 2013; O'Reilly et al, 2015; Hewett, 2011). 19% of Simon Community Service users reported self-harm and 17% had attempted suicide in the previous 6 month period (Walsh, 2011).
- Dual diagnosis (the co-existence of mental ill-health with substance misuse problems) is common, with high levels of self-harm (O'Reilly et al, 2015).
- An audit between October 2012 and September 2013 in an acute mental health unit in Tallaght Hospital, found that on average, 38% of all patients and 98% of the long stay/delayed discharge inpatients had housing-related needs at any one time (Mental Health Reform, 2015). There was a discharge to homeless services every 9.4 days (Mental Health Reform, 2015).
- Deaths from suicide have increased among Travellers, compared to the general population (All Ireland Traveller Health Study, 2010).
- Refugees and asylum seekers have complex health, mental health and social care needs.
- The co-existence of mental ill-health with substance misuse problems (dual diagnosis), and significant mental health issues emerging among the newly arriving asylum seekers and refugees, highlight the importance of an integrated service approach and cross-Divisional working.

CHILD AND ADOLESCENT MENTAL HEALTH SERVICES

CURRENT SERVICE UTILISATION

The total number of CAMHS inpatient beds stood at 74 at the end of December 2015, not including two additional high observation beds in Linn Dara.

HOSPITAL ADMISSIONS

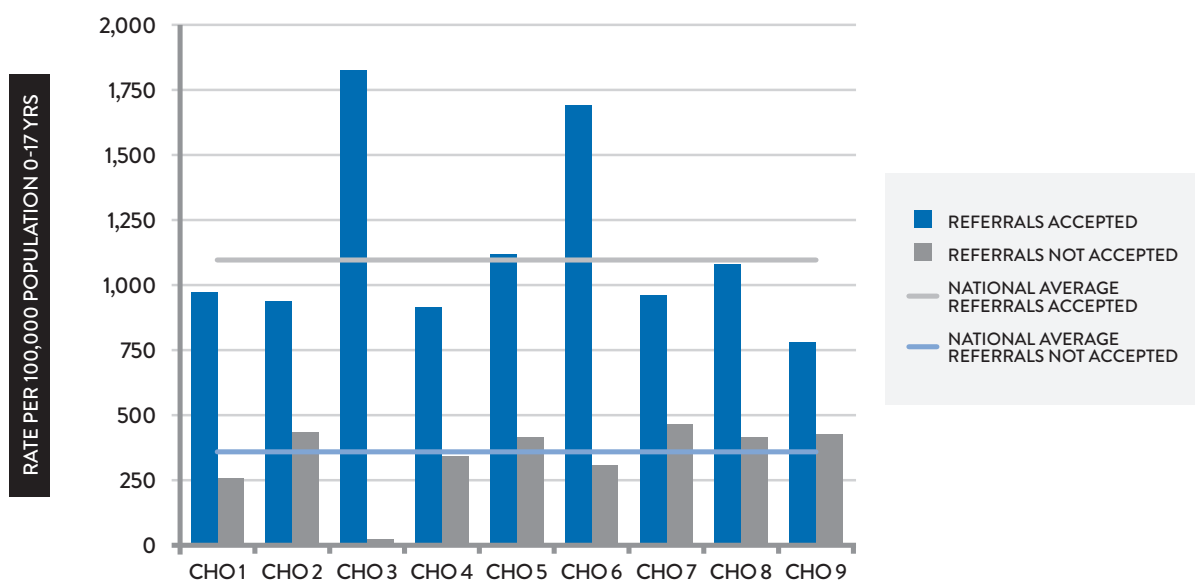
- In 2014 there were 431 admissions of 357 children to approved centres. Excluding private units, there were 290 admissions to HSE psychiatric in-patient services in 2014. In 2017 it is projected that there will be 299 admissions of children aged 0-17 years to HSE psychiatric in-patient services. This is projected to remain largely unchanged at 301 admissions in 2022.
- The average length of stay of child admissions in 2014 was 54 days (Mental Health Commission, 2015).

- The two leading primary diagnoses for child and adolescent admissions in 2014 were depression (33.7% of cases) and eating disorders (11.9%), as compared to depression and schizophrenia, schizotypal and delusional disorders in 2013.
- In 2014, there were 89 admissions of children aged 0-17 years to adult units, compared with 91 admissions in 2013.

COMMUNITY CHILD AND ADOLESCENT MENTAL HEALTH SERVICE

- There is a trend of increasing referrals to Community CAMHS. Accepted referrals increased by 743 in 2014 and by 294 in 2015.
- 1.5% of the 0-17 years of age were active cases attending CAMHS in Quarter 3 of 2015 (BIU).
- It is projected that in 2017, 13,577 children will be accepted as a referral by the community mental health service, an increase of 221 from 2015.
- In 2022 it is projected that 13,666 children will be accepted as referrals by the community mental health service, an increase of 310 from 2015.
- There is a considerable variation in referral to Community Mental Health across CHOs. The number of referrals accepted by Child and Adolescent Community Health Teams per 100,000 population varied from 1,833/100,000 of population in CHO 3, to 780/100,000 in CHO 9 - see Figure 7.3. (Table E1 appendix E).

FIGURE 7.3: REFERRALS TO COMMUNITY CHILD AND ADOLESCENT MENTAL HEALTH SERVICES IN 2015



Source: Business Information Unit

UNMET DEMAND

- Following the increases in the waiting lists for Community CAMHS in 2013 (2,602 children/adolescents) and 2014 (2,869), there was a drop of 550 in 2015 with 2,319 on the waiting list.
- In 2015, 67% of new/re-referred cases were seen within 12 weeks, against a target of 75%. Note that the DNA ('did not attend') rate for the first appointment for new or re-referred cases in 2015, was 14%.
- In 2015, 77% of new/re-referred cases were offered an appointment within 12 weeks.

JIGSAW

Jigsaw is a network of programmes across Ireland, designed to make sure every young person has somewhere to turn to and someone to talk to. There are Jigsaw projects in 10 communities, including Clondalkin, Donegal, Dublin 15, Galway, Kerry, Meath, North Fingal, Offaly, Roscommon and Tallaght, with plans for programmes in Dublin, Cork and Limerick. It is reported that (Jigsaw, 2016):

- One in five teens suffered moderate to severe depression in the last year.

- Among second level students, 21% are problem drinkers and of these a third drink at hazardous levels.
- In 2015 alone 4,101 young people were supported. The top referral pathways were parent (36%), self (23%), GP (12%) and second-level school referrals (8%).
- The top 5 issues that young people presented with were anxiety, low mood, stress, anger and sleep issues. Among adolescents, 9% were in serious distress within the previous year but did not seek help and 16% said that they had low or very low support from adults in their lives.

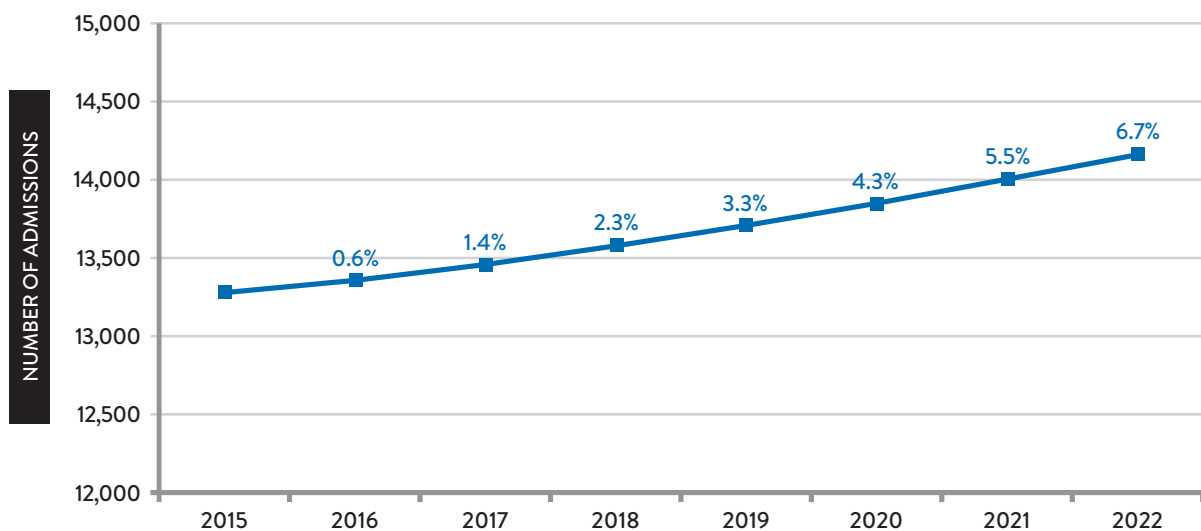
ADULT MENTAL HEALTH ACUTE IN-PATIENT SERVICES

PSYCHIATRIC UNITS

DEMOGRAPHIC PRESSURE AND COSTS

- It is projected that, from 2016 to 2017 there will be a 0.8% pure demographic pressure on the adult in-patient service (Figure 7.4).
- Age specific costs or casemix indices are not available for acute mental health services.

FIGURE 7.4: PROJECTED NUMBER OF ADULT ADMISSIONS TO PUBLIC PSYCHIATRIC HOSPITALS 2017-2022



Source: National Psychiatric Inpatient Reporting System (Health Research Board), Central Statistics Office

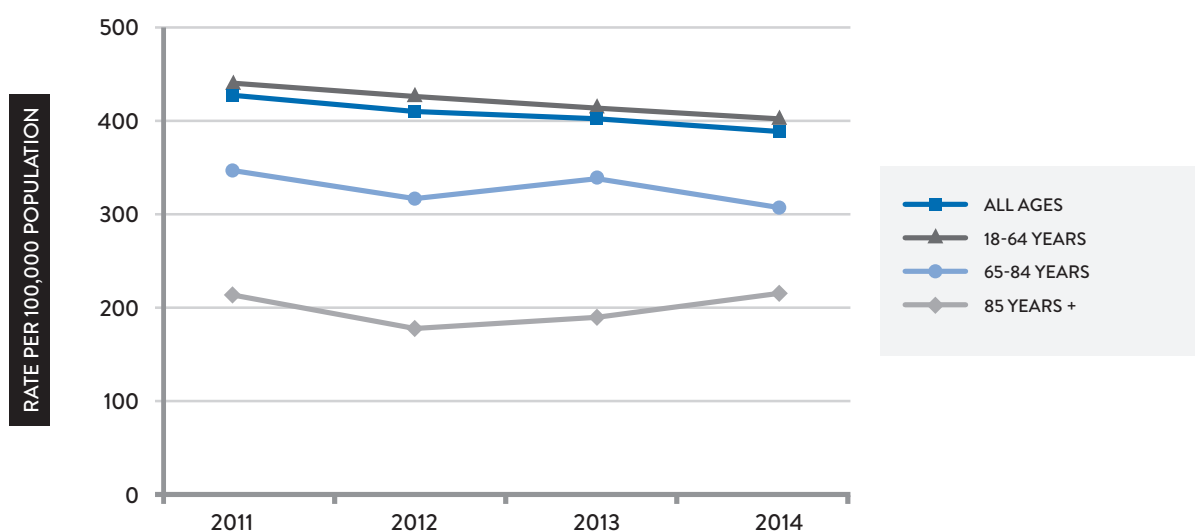
PSYCHIATRIC UNIT ADMISSIONS

The total number of admissions to psychiatric units continues to decrease, from 402/100,000 in 2013 to 388/100,000 in 2014. The majority of adult admissions (88%) in 2014 were in the 18-64 years age cohort.

Figure 7.5 demonstrates the trends in admission rates in adults 18-64 years.

- Total admissions continue to decrease, particularly the re-admission rate which decreased from 270 per 100,000 in 2013 to 258 per 100,000 population in 2014.
- This contrasts with the admission rate among those aged 85 years and over, which increased from 178 per 100,000 (n=111) in 2013 to 195 per 100,000 (n=126) in 2014.
- The average length of stay for all discharges was longest for psychiatric hospitals/continuing care units at 220.6 days (median 12 days). This was followed by independent/private and private charitable centre, at 48.3 days (median 31 days) and general hospital psychiatric units at 25.6 days (median 11 days) (Daly and Walsh, 2015).

FIGURE 7.5: PSYCHIATRIC UNIT ADMISSION RATE PER 100,000 BY AGE GROUP 2011-2014



Source: National Psychiatric Inpatient Reporting System (Health Research Board), Central Statistics Office

ADULTS AGED 18 – 64 YEARS

- The majority of adult admissions (88%) in 2014 were in the 18-64 years age cohort.
- 11,649 admissions are projected in 2017 for this age cohort, largely unchanged from 11,642 in 2014. Projected admissions for 2022 will rise modestly by 293 to 11,942
- The leading disorders in this age cohort are depression (24%), schizophrenia (24%), mania (12%), personality disorders (9%), neuroses (8%), and alcoholic disorders (6%).

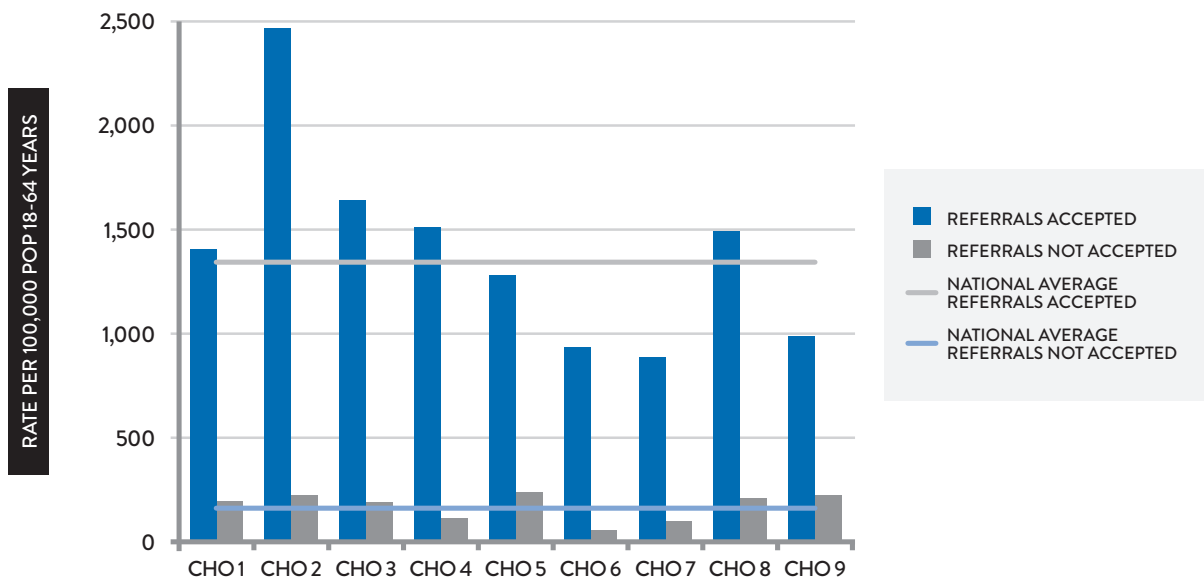
ADULTS AGED 65 YEARS AND OVER

- It is projected that there will be a total of 1,745 admissions of adults aged 65 years and over in 2017, an increase of 158 from 2014.
- The leading mental health conditions in this age group who were admitted to our psychiatric hospitals in 2014 were depression representing 31% of admissions, schizophrenia (21%) and organic mental disorders including dementia (20%) -see table E2, Appendix E.
- Notably, organic mental disorders (dementia) are the leading condition among adults aged 85 years and over. They represented 52% of admissions in 2014, which is an increase on 50% in 2013 - see table E3, Appendix E.
- It is projected that there will be 57,097 people living with dementia in 2017 and 67,771 by 2022 (Calculated using prevalence data from Pierce et al 2014).

COMMUNITY ADULT MENTAL HEALTH SERVICE

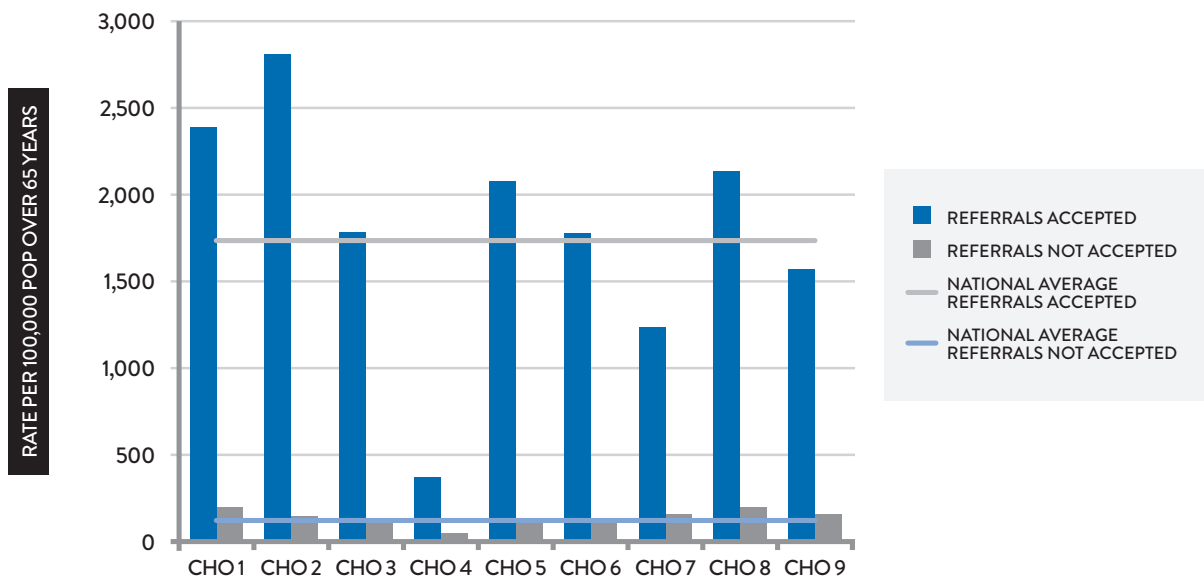
- In 2017 it is projected that there will be 38,857 accepted referrals to Community Adult Mental Health Services for the 18-64 year old cohort, a slight increase of 105 from 2015.
- Referrals for adults 65 years and over are projected at 11,120, an increase of 676 from 2015.
- By 2022 this will increase to 39,833 accepted referrals in the 18-64 year olds, and 13,041 in those aged 65 years and over - assuming current models of care remain.
- The number of referrals accepted by General Adult Community Mental Health Teams per 100,000 population, varied from 2479/100,000 population in CHO 2, to 882/100,000 in CHO 7 - see Figure 7.6.

FIGURE 7.6: REFERRALS TO GENERAL ADULT COMMUNITY MENTAL HEALTH SERVICES IN 2015 (18-64 YEARS)



Source: Business Information Unit

FIGURE 7.7: REFERRALS TO PSYCHIATRY OF OLD AGE COMMUNITY MENTAL HEALTH SERVICES IN 2015



Source: Business Information Unit

- The number of referrals accepted by Psychiatry of Old Age Community Mental Health Teams per 100,000 population varied from 2,825/100,000 population in CHO 2 to 363/100,000 in CHO 4, see Figure 7.7.

COUNSELLING IN PRIMARY CARE (CIPC)

CIPC is a HSE run counselling service for adult medical card holders who are experiencing difficulties such as depression, anxiety, panic reactions, relationship problems, loss issues or stress:

- There were 16,458 referrals to CIPC in 2015¹². Of these, 72% were female and 28% were male.
- 92% of referrals were from GPs.
- The service offered 56,663 sessions with an attendance rate of 80%.

SUICIDE AND DELIBERATE SELF HARM

SUICIDE

- The number of suicides has reduced from 554 in 2011 to 459 in 2014 (National Suicide Research Foundation, 2015).
- In keeping with previous years, 80% of deaths by suicide in 2014 were male (368) (National Suicide Research Foundation, 2016).
- A recent study (Corcoran et al, 2015) found that by the end of 2012, the rate of male suicide was 57% higher than that predicted from the pre-recession trend, whereas female suicide was almost unchanged.
- Information on area of residence for deaths by suicide indicates that Cork City and Limerick City continue to have relatively high rates when averaged over a number of years compared to the other main urban areas (National Suicide Research Foundation, 2016).

DELIBERATE SELF HARM

- In 2014, 8,708 people presented to hospital services with deliberate self-harm (National Suicide Research Foundation, 2015). This is a 1.5% reduction on 2013. The age-standardised rate of individuals presenting to hospital following self-harm in 2014 was essentially unchanged from 2013 (200 per 100,000).
- As in previous years the rate in 2014 was highest among females in the 15-19 age group (National Suicide Research Foundation, 2015).
- In 2014, the national male rate of self-harm per 100,000 was 185 - i.e. 2% higher than in 2013. There was a significant increase from 2013 in the rate of hospital-treated self-harm among boys aged 10-14 years, where the self-harm rate increased by 44% - from 34 to 49 per 100,000.
- The information on rates for deliberate self-harm by area of residence highlights the fact that rates are higher in urban areas, with Limerick City having the highest rate at more than double the national rate. (National Suicide Research Foundation, 2015).

RESEARCH AND DATA NEEDS

- An ethnic identifier should be routinely and systematically collected across all Mental Health data systems, and not just within the psychiatric hospital dataset.
- Wherever relevant and possible, mental health service indicators should include socio-economic status and socially excluded groups to enable equality monitoring of services. Currently no data exists to identify deprivation or marginalised groups.
- Although significant data exists within the Jigsaw projects, there is a research resource requirement to mine this data.
- Demographic profiling of data for Counselling in Primary Care is required.
- Age specific costs or casemix indices for acute mental health services are not currently available.

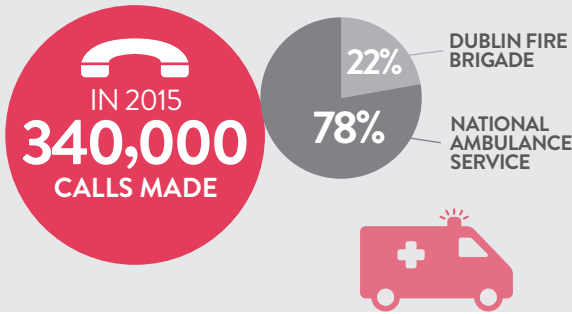
¹²These CIPC figures are an under-estimation as some areas were unable to provide complete data for some months

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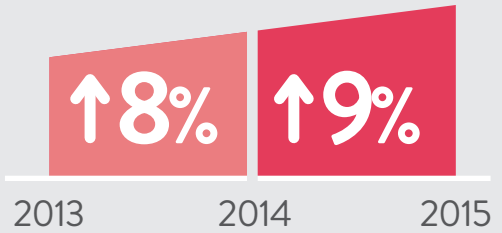
**NATIONAL
AMBULANCE
SERVICE**



KEY MESSAGES



INCREASES IN AS1 CALLS



PROJECTED ACTIVITY GROWTH 2017- 2022

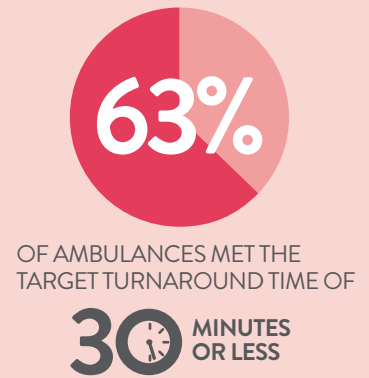
TOTAL AMBULANCE CALLS PROJECTED TO INCREASE



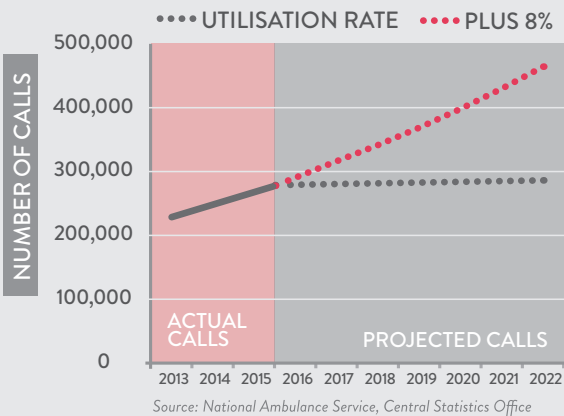
TOTAL AS1 CALLS PROJECTED TO INCREASE



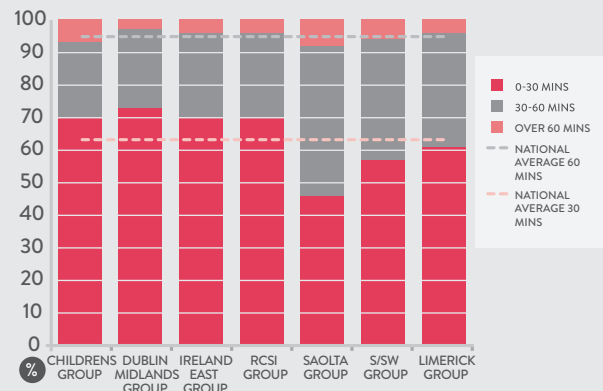
HOSPITAL TURNAROUND TIMES



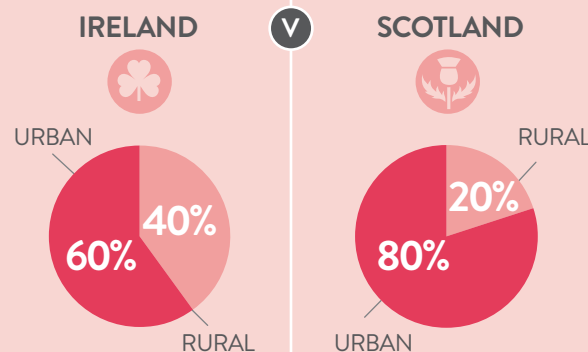
PROJECTED CALL GROWTH - AS1



AMBULANCE TURNAROUND TIMES BY HOSPITAL GROUP 2015



CALL MIX



EMERGENCY AEROMEDICAL SERVICE



ASSUMPTIONS

- Projections of call volume into the future are calculated using population projections based on the M2F2 scenario.

KEY MESSAGES

- In 2015 just under 340,000 calls were received by the pre-hospital emergency care services. Of these calls, 22% (75,387) were responded to by the Dublin Fire Brigade (DFB) and the remaining 78% (264,319) were responded to by the National Ambulance Service (NAS).
- There has been an annual incremental increase in emergency calls (AS1 calls), an 8% increase from 2013-2014 and a further 9% increase from 2014-2015.
- The majority of emergency calls originate from the North Leinster region (32% of the total call volume), with the other three areas contributing equally to the call volume (22%-23%).
- Applying the 2015 utilisation rate of 73.0/1,000 of the population, total AS1, AS2 and AS3 calls would be expected to increase by approximately 5,000 calls in 2017 and by a further 14,000 calls by 2022. This does not allow for the 8-9% rate of growth in emergency calls.
- Applying the same method to AS1 calls alone, and using the 2015 utilisation rate of 58.4/1,000, AS1 calls would be expected to increase by approximately 4,000 calls in 2017 and by a further 11,000 calls by 2022.
- Prolonged hospital turnaround times, caused by ED pressures, are limiting availability of emergency ambulances. In 2015 only 63% of vehicles and crews were available within the target turnaround time of 30 minutes or less. NAS estimates that during the first part of 2016, the delays in turnaround times were the equivalent of 10 ambulances out of service every day.
- Emergency ambulance usage for patient transfers increased by 7% between 2013 and 2014 but decreased by 26% between 2014 and 2015.
- Ireland has a low number of emergency calls per head of the population when compared to the UK and countries further afield.
- Ireland's call mix is unique, with a high proportion of calls arising from rural areas. In comparison to the Scottish Ambulance Services where 80% of calls arise in urban areas and 20% in rural areas, the NAS manages a much higher proportion of rural calls at 40% and a lower proportion of urban calls at 60%.
- A significant increase in demand for the Emergency Aeromedical Service and the Irish Coastguard service has been seen in 2015. This upward trend is expected to continue due to reconfiguration of hospital services within hospital groups.
- Pre-hospital emergency care services should consider expansion of their Community First Responder Schemes in rural areas, in order to improve patient outcomes.

RESEARCH AND DATA NEEDS

- The paper-based pre-hospital patient care record does not facilitate in-depth analysis of service user data by age and gender. However, the introduction of the electronic patient care record from quarter four 2016, will address this deficit and the first year of data will be available for analysis in late 2017.
- There is a need to analyse data collected from the new electronic patient care record, relating to demographic, socio-economic and health-related factors in order to predict and manage future demand for the emergency ambulance services in Ireland.
- Research is required to understand patterns of Irish ambulance service use and its users.
- Clinical outcome indicators should be developed as a matter of priority.

INTRODUCTION

Irish Ambulance Services are jointly provided to the Dublin metropolitan area by the National Ambulance Service (NAS) and Dublin Fire Brigade (DFB), with the rest of the country being served solely by the NAS. The care pathway delivered by the NAS/DFB begins from the moment the emergency call is received and includes the effective and efficient treatment, transportation and handover of the patient to the receiving clinical team in the hospital or emergency department.

When compared at an international level, Ireland has a low number of emergency calls per head of population (Appendix F). In Ireland, there are 60% fewer hospital calls per head of the population compared to England. Such a disparity cannot be fully explained and further research in this area is required. Caution is warranted in making comparisons with international ambulance services. It is imperative to be cognisant of the varying context, health care structures and type of health economy that a service is part of to make valid comparisons.

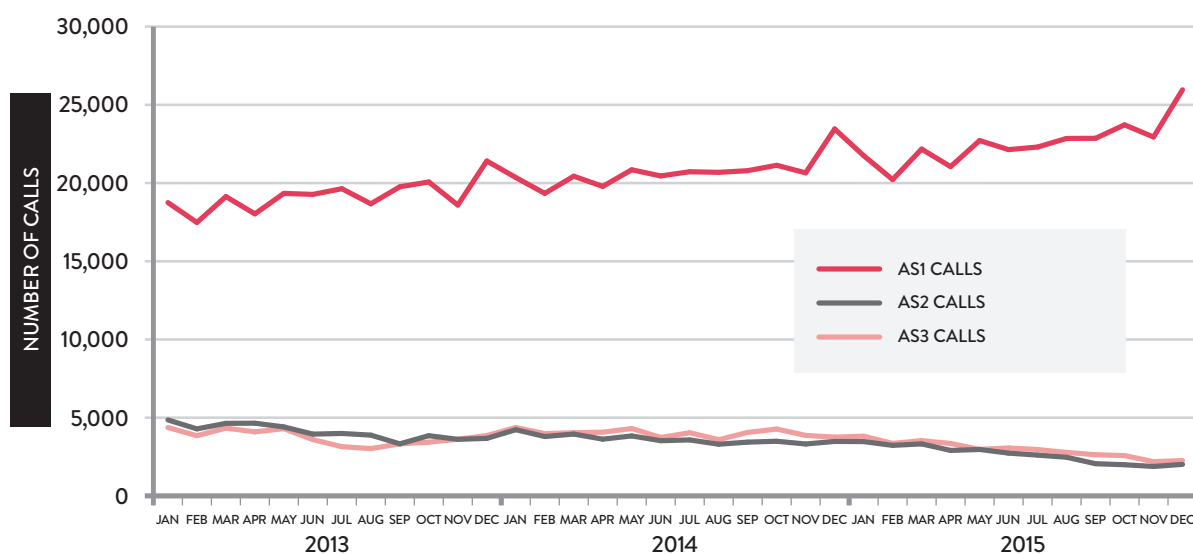
In pursuit of the aim to provide a high standard of service, the NAS recently undertook, or commissioned, reviews of various aspects of its service. Of the reports produced, the recent HIQA Report (HIQA, 2014) and the draft Capacity Review (Lightfoot, 2015) will in particular serve to inform strategy and service planning into the future. Such review processes are central to service planning in order to introduce comprehensive and effective changes that are tailored to meet the needs of a population in transition.

EMERGENCY CALLS

DESCRIPTION OF CALLS AND RECENT TRENDS

- In 2015 just under 340,000 calls were received by the pre-hospital emergency care services. Of these calls, 22% (75,387) were responded to by DFB and the remaining 78% (264,319) were responded to by the NAS.
- 80% were classified as AS1 (112/999 emergency calls requiring immediate response); 9% AS2 (Urgent calls within agreed time received from a general practitioner (GP) or hospital or other medical sources); 11% AS3 (Patient transfers. Routine within 24 hours booking).
- The number of AS1 emergency calls received by the NAS has been rising steadily for many years, with calls increasing by 8% between 2013 and 2014 and by a further 9% between 2014 and 2015. Of note, the rate of increase in the number of AS1 calls dealt with by DFB has been slower.
- Over the same time period, 2013 and 2014, AS2 calls decreased by 12% and by 27% between 2014 and 2015. This decrease may be a result of the reclassification of a proportion of AS2 calls to AS1. AS3 calls increased by 7% between 2013 and 2014 and decreased by 26% between 2014 and 2015.

FIGURE 8.1: AMBULANCE CALLS BY CALL TYPE (2013-2015)*



Source: National Ambulance Service

*Dublin Fire Brigade are not contracted to respond to AS 2 & AS3 calls

TABLE 8.1: CALL VOLUME BY CALL TYPE 2013 - 2015

CALL VOLUME	AS 1			AS 2	AS 3	TOTAL AS1, AS2 & AS3
	DFB	NAS	TOTAL			
2013	73,198	157,756	230,954	50,196	45,424	326,574
2014	72,038	177,600	249,638	44,046	48,601	342,285
2015	75,387	196,480	271,867	32,017	35,822	339,706
% CHANGE 2013-14	-1.6%	+12.6%	+8.1%	-12.3%	+7.0%	+4.8%
% CHANGE 2014-15	+4.6%	+10.6%	+8.9%	-27.3%	-26.3%	-0.8%

Source: National Ambulance Service

During July 2013 the Intermediate Care Service (ICS) was introduced to enable inter-hospital transfers and safer transfer of patients with limited mobility to step-down facilities within the community. This ensures that the resources and skills of paramedics are channelled into the most appropriate setting, in order to maximise output and optimise outcomes (HSE, 2012; HSE, 2013). The downward trend in the utilisation of emergency ambulances for transfer operations from 2014-2015 (Table 8.2) is due to the success of this service and plans are afoot to decrease this figure further. However, it is worth noting that the number of AS3 calls reported in 2015 (35,822) reflects numbers of actual transfers made and does not reflect the total demand on the service due to resource gaps and capacity restraints.

TABLE 8.2: NATIONAL AS3 (PATIENT TRANSFER) CALL VOLUMES EMERGENCY AMBULANCE AND INTERMEDIATE CARE SERVICE (NAS)

	EA TRANSFERS	ICS	TOTAL AS3 CALLS	% ICV TRANSFER
2014	11,543	37,009	48,552	76
2015	6,777	29,045	35,822	81

Source: National Ambulance Service

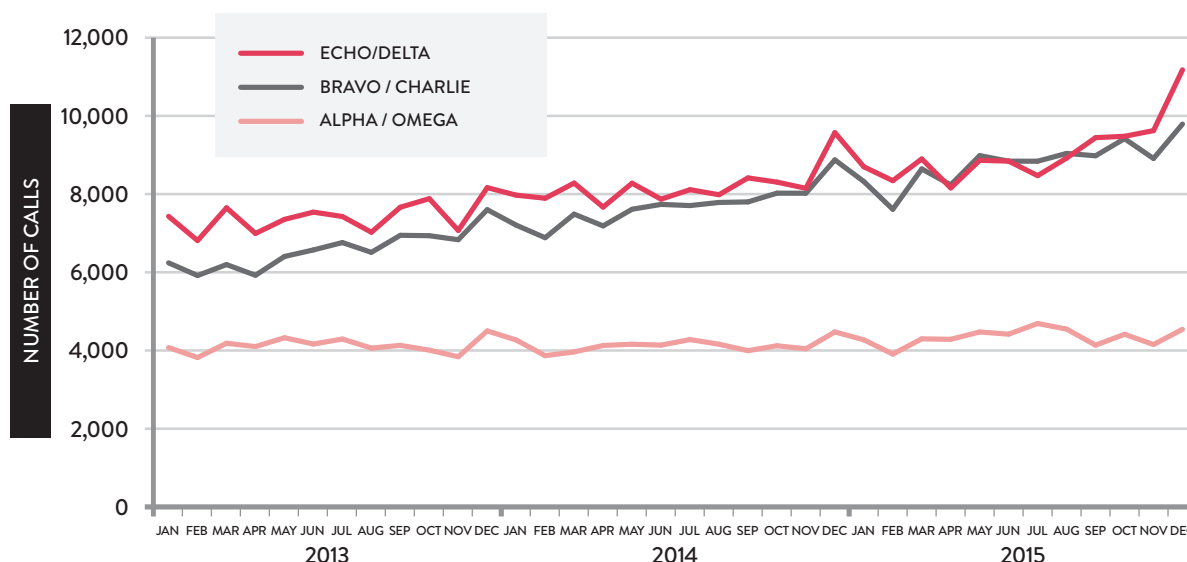
AS1 CALLS

- AS1 calls can be further broken down by clinical status and by the nature of the illness:
 - ECHO - Life-threatening cardiac or respiratory arrest
 - DELTA - Life-threatening illness or injury, other than cardiac or respiratory arrest
 - CHARLIE - Serious not life threatening - immediate
 - BRAVO - Serious not life threatening - urgent
 - ALPHA - Non serious or non-life threatening
 - OMEGA - Minor illness or injury
- During 2015 NAS/DFB received 271,867 AS1 calls of which 40% were ECHO/DELTA, 39% BRAVO/CHARLIE and 19% ALPHA/OMEGA. Of note, there is a continuous process of review and reclassification of calls within the pre-hospital emergency care services. A proportion of lower acuity calls may be upgraded to a

higher acuity status, due to experience of paramedics within the field or due to a change in call determinants. This shift from a lower acuity to a higher acuity status significantly impacts on service planning, as the number of calls requiring a response time in under 19 minutes is increasing.

- AS1 calls are rising by approximately 20,000 calls per year (Figure 8.2). Over 2014-2015, ECHO/DELTA calls increased by 10% and BRAVO/CHARLIE calls increased by 14%. The rise in ALPHA/OMEGA calls was less dramatic, increasing by 5% over the same time period.

FIGURE 8.2: NATIONAL AS1 CALLS BY TYPE FOR 2015



Source: National Ambulance Service

POPULATION DENSITY

IMPACT OF GEOGRAPHY AND ASSOCIATED CALL FREQUENCY FOR THE NAS

Ireland is unique in the distribution of its population. Outside of Dublin, the population is widely dispersed and there are no large uninhabited areas. Furthermore, a large proportion of the Irish population lives in rural areas.

NAS has a much higher percentage of activity within rural areas, namely 60% urban and 40% rural, when DFB activity is excluded. This pattern is unusual when compared with many other countries, where 80% of activity is urban and 20% is rural. This has significant implications for NAS service planning and for achievement of response time targets.

TABLE 8.3: PERCENTAGE ACTIVITY – URBAN / RURAL SPLIT BY AMBULANCE SERVICE

SERVICE	URBAN (%)	RURAL (%)
NAS (excluding DFB activity)	60	40
South East Coast England	85	15
South Western England	74	25
East of England	72	28
Scotland*	80	20

Source: Capacity Review Document (Lightfoot, page 19)

*Source: Scottish Ambulance Service. Towards 2020: Taking care to the patient (page 2)

The delivery of ambulance services is divided into four areas (Table 8.4): North Leinster; the West; the South; DFB. The majority of calls originate from the North Leinster region (32% of the total call volume), with the other three areas contributing equally to the call volume.

TABLE 8.4: CALL VOLUMES BY REGION 2015

	AS1		AS2		AS3		TOTAL CALLS	
	N	%	N	%	N	%	N	%
DFB*	75,387	28	0	0	0	0	75,387	22
NORTH LEINSTER	85,137	31	11,222	35	12,609	35	108,968	32
WEST	56,598	21	8,713	27	12,594	35	77,905	23
SOUTH	54,745	20	12,082	38	10,619	30	77,446	23
NATIONAL	271,867	100	32,017	100	35,822	100	339,706	100

Source: National Ambulance Service

*Note: Dublin Fire Brigade are not contracted to respond to AS2 and AS3 calls

The NAS regions are made up of an amalgamation of the former eight health board regions. Population projections are not available at either former health board region or by NAS area. In an attempt to provide information on call volume by population density, calculations were performed at former health board area using Census 2011 population data.

- The rate for total ambulance calls was highest in the former Eastern Regional Health Authority (ERHA) area at 81.8 calls per 1,000 of the population, followed by the South East at 76.7 calls per 1,000 of the population. Call volume was lowest in Southern area at 59.1 calls per 1,000 of the population.
- A similar trend was seen for AS1 calls, with the rate highest in the former ERHA area at 73.8 calls per 1,000 of the population. The call volume was lowest in the Southern area at 46.8 calls per 1,000 of the population.
- Interestingly, there was an increased demand compared to the other regions in the South-Eastern area for AS2 calls at 16.2 calls per 1,000 of the population, and AS3 calls at 13.0 calls per 1,000 of the population (Table 8.5).

The pattern of higher emergency medical services utilisation in Irish urban areas is reflected in the international literature, which suggests that individuals in rural areas are less likely to contact the emergency medical services at a time of need than their urban counterparts (Reed and Bendall, 2015, Beillon et al, 2009).

TABLE 8.5: RATE OF CALLS PER 1,000 POPULATION (CENSUS 2011)

AMBULANCE SERVICE AREAS	FORMER HEALTH BOARD AREA	CHO AREA	AS1	AS2*	AS3*	TOTAL CALLS
SOUTH	Southern HB	CHO 4	46.8	6.0	6.2	59.1
	South-Eastern HB	CHO 5	47.5	16.2	13.0	76.7
WEST	Western HB	CHO 2	49.9	8.1	10.9	68.9
	Mid-Western HB	CHO 3	52.0	7.4	12.9	72.2
	North Western HB	CHO 1	56.5	9.0	11.0	76.4
NORTH LEINSTER & DFB	Midland HB	CHO 8	54.6	10.3	7.9	72.8
	North-Eastern HB	CHO 1 & 8	58.3	7.4	5.5	71.3
	Eastern Regional Health Authority	CHO 6, 7 & 9	73.8	3.1	4.9	81.8
NATIONAL			59.3	7.0	7.8	74.0

Source: National Ambulance Service

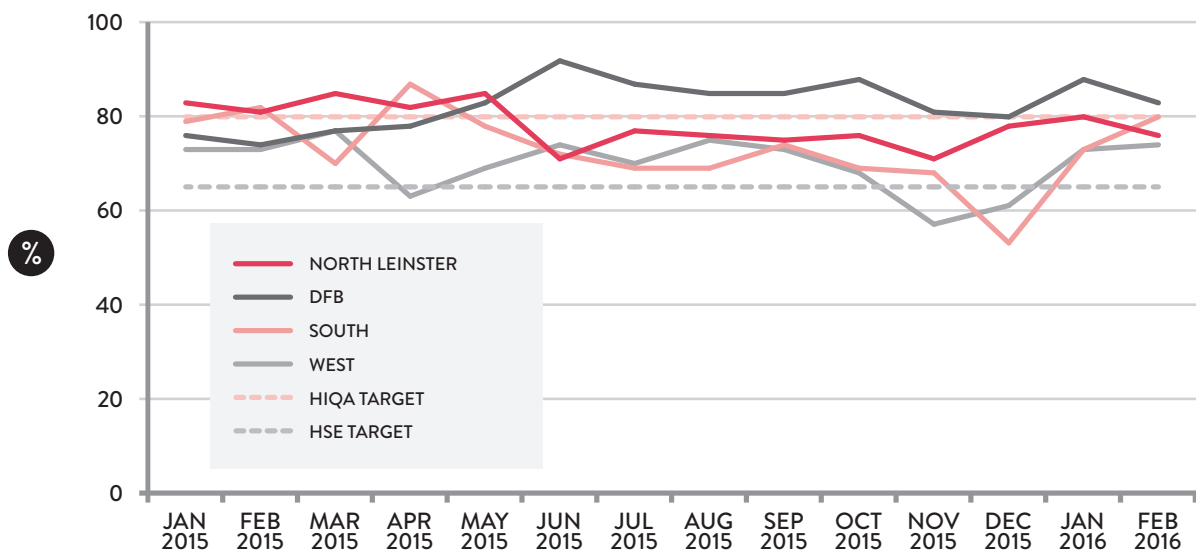
*Note: Dublin Fire Brigade are not contracted to respond to AS2 and AS3 calls

EMERGENCY RESPONSE TIMES BY AREA

While response-time indicators are in widespread use as a method of evaluating the quality of service provided by pre-hospital care services, they should not be examined in isolation (HIQA, 2014). The international evidence reflects the importance of the development of clinical outcome indicators, which appear to be a more appropriate benchmark of performance (HIQA, 2014). Clinical outcome indicators should be developed as a matter of priority. Return of spontaneous circulation (ROSC), which was introduced in 2014 by NAS, is one such example of a clinical outcome indicator. Key performance indicators are currently in development as part of the HSE's Clinical Care Programme for Emergency Medicine (HIQA, 2014).

The HIQA target response time for ECHO calls for 2016 is to respond to 80% of calls within 18 minutes and 59 seconds. During 2015, 76% of Clinical Status 1 ECHO calls were responded to within the target response time. A breakdown of the response times by region reveals that between January 2015 and December 2015, DFB was the only service able to achieve compliance for the target response time. The DFB responded within the target response times for seven of the previous 12 months, the North Leinster area met the target in five of the previous 12 months, the Southern area in two of the previous 12 months and the Western area did not meet the target during this time period (Figure 8.3). This reflects the international trend of differences in capacity to respond to incidents between urban and rural areas (Carr et al, 2006).

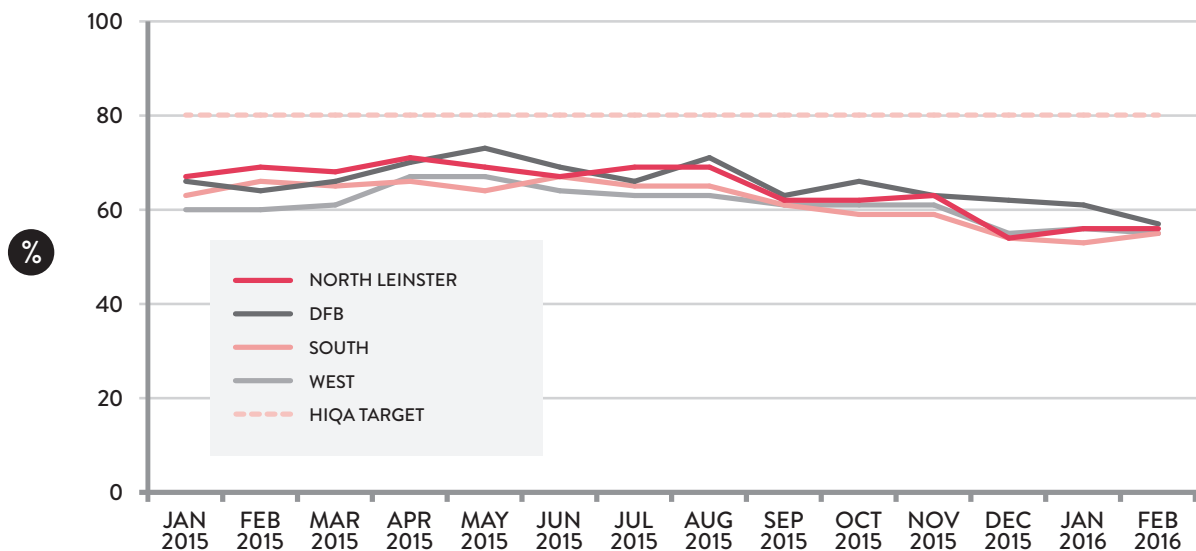
FIGURE 8.3: REGIONAL % OF CLINICAL STATUS ECHO INCIDENTS RESPONDED TO WITHIN 18 MINUTES & 59 SECONDS OR LESS



Source: National Ambulance Service

With regard to DELTA calls, no area was able to meet the HIQA target of responding to 80% of calls within 18 minutes and 59 seconds or less during 2015. Examination of the data shows a downward trend in the proportion of regions achieving target response times for DELTA incidents (Figure 8.4).

FIGURE 8.4: REGIONAL % OF CLINICAL STATUS DELTA INCIDENTS RESPONDED TO WITHIN 18 MINUTES & 59 SECONDS OR LESS



Source: National Ambulance Service

Of note, there are a number of influential factors to be considered when interpreting the above data, such as geography, demography, transport, road and health infrastructures and the amount of resources available. The recently completed capacity review of pre-hospital emergency care in Ireland, will serve to inform strategic planning in this area going forward (Lightfoot, 2015).

NAS is changing its model of service delivery towards the use of dynamic deployment points, where all resources in a region are deployed across that region as a fleet, to improve response times. Dynamic deployment has already commenced in the Roscommon area during 2015.

HOSPITAL TURNAROUND TIMES

The turnaround time is a measurement of the time from the point of arrival of the ambulance to the emergency department, up until the point when care of the patient has been handed over to the clinical staff and the ambulance and crew are ready to respond to the next incident.

A target of 30 minutes for total hospital turnaround time has been set by the NAS/DFB. However, meeting this target has been challenging and hospital turnaround times remain a complex, multi-faceted challenge (HIQA, 2014). There are many factors contributing to underperformance in this area. Difficulty with patient flow through the hospital system is one such contributing factor, leading to higher numbers of patients waiting for examination and admission in the emergency departments. Ultimately this build-up of patients leads to less available staff to accept care of patients transferred to ED by ambulance and turnaround times are prolonged as a result (HIQA 2014).

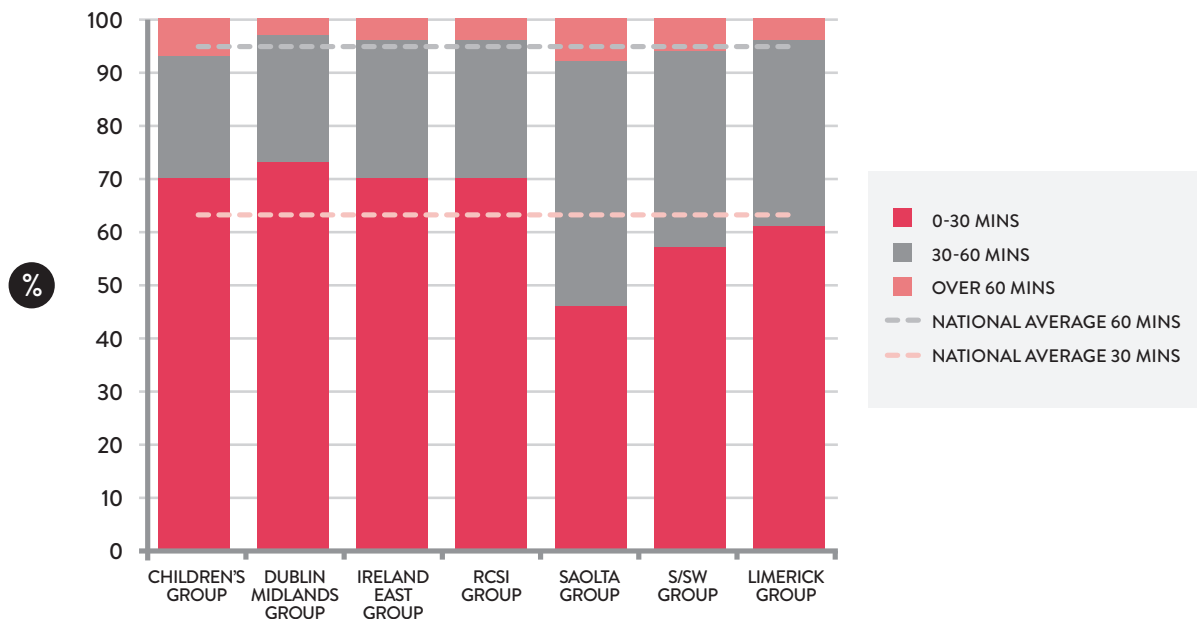
During 2015

- 63% of vehicles and crews were available within 30 minutes or less.
- 95% of vehicles and crews were available within 60 minutes or less.

At Hospital Group level (Figure 8.5):

- 4 of the 7 Hospital groups had 70% of calls cleared within 30 minutes or less.
- 5 of the 7 hospital groups had 95% of calls cleared within 60 minutes or less.

FIGURE 8.5: AMBULANCE TURNAROUND TIMES BY HOSPITAL GROUP 2015



Source: National Ambulance Service

Prolonged turnaround times constitute a significant drain on the resources of the ambulance services, as well as posing a challenge to service planning against a backdrop of a growing and ageing population. NAS estimates that during the first part of 2016, the delays in turnaround times were the equivalent of 10 ambulances out of service every day. This equates to approximately 490 hours of ambulance crews, including the DFB, waiting over 30 minutes to achieve clearance during every 24 hour period, at a cost of €14,000 per day or €420,000 per month to NAS/DFB. Furthermore, these estimates do not take into account the possible impact on patient outcome or on ambulance response times.

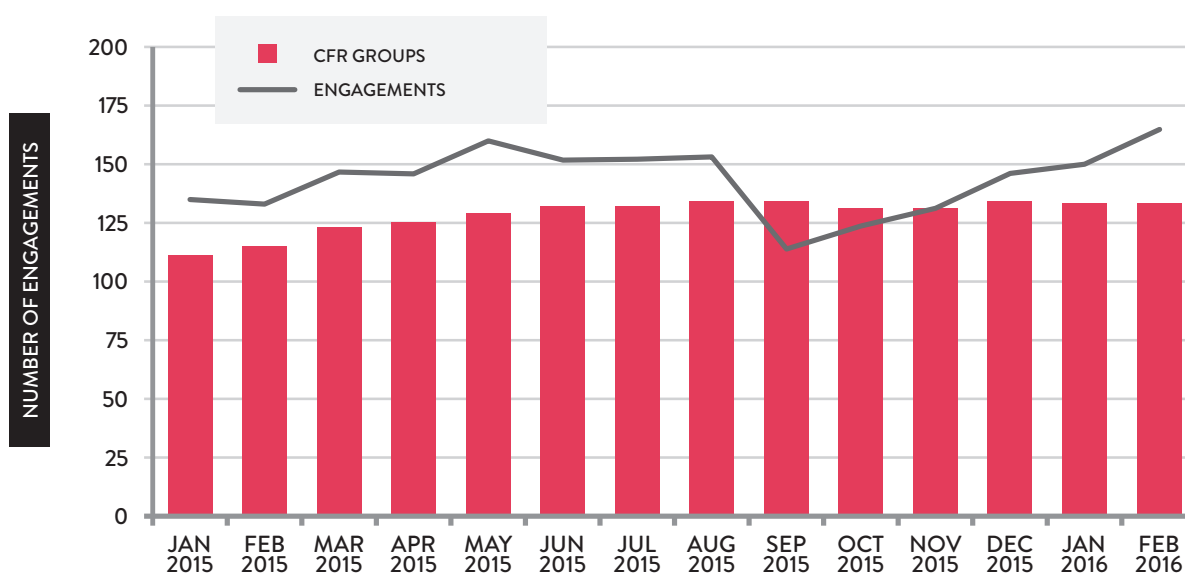
COMMUNITY FIRST RESPONDERS

A community first responder is defined as an individual, trained at a minimum in basic life support and the use of a defibrillator, who attends an actual or potentially life-threatening emergency (HSE, 2016). Community First Responder (CFR) schemes are voluntary programmes under which a local community acquires a defibrillator and receives training and support by the ambulance service (HSE, 2016).

CFRs make a vital contribution to patient care, with approximately 40% of the total number of ECHO calls confirmed to have CFR engagement in 2015. Irish CFR schemes only respond to ECHO calls at present. The recent capacity review identified scope to improve emergency service response times through more effective utilisation of such CFR schemes (Lightfoot, 2015). It has been suggested that, in addition to expanding the number of CFR schemes in Ireland, CFRs may in future be trained to respond to a small subset of DELTA calls where early focused intervention may alter outcomes. However, such an expansion of the CFR programme would require considerable time and financial investment, in order to implement a major retraining programme, and in addition, to ensure appropriate governance. Furthermore, legislative change may be required in order to permit responders to administer prescription-only medications.

Another scheme that has the potential to improve patient outcomes and shorten response times is the 'Irish Community Rapid Response' (Irish Community Rapid Response). The UCD Centre for Emergency Medical Services (CEMS), in partnership with NAS, has recruited 115 GPs to respond to cardiac arrests, with the aim of having 500 GP volunteers by 2020. The Irish Community Rapid Response provides financial support to this organisation. In the event of an emergency, one such volunteer may be dispatched to the scene in addition to an ambulance.

FIGURE 8.6: THE NUMBER OF CFR GROUPS AND ENGAGEMENTS WITH NAS, 2015



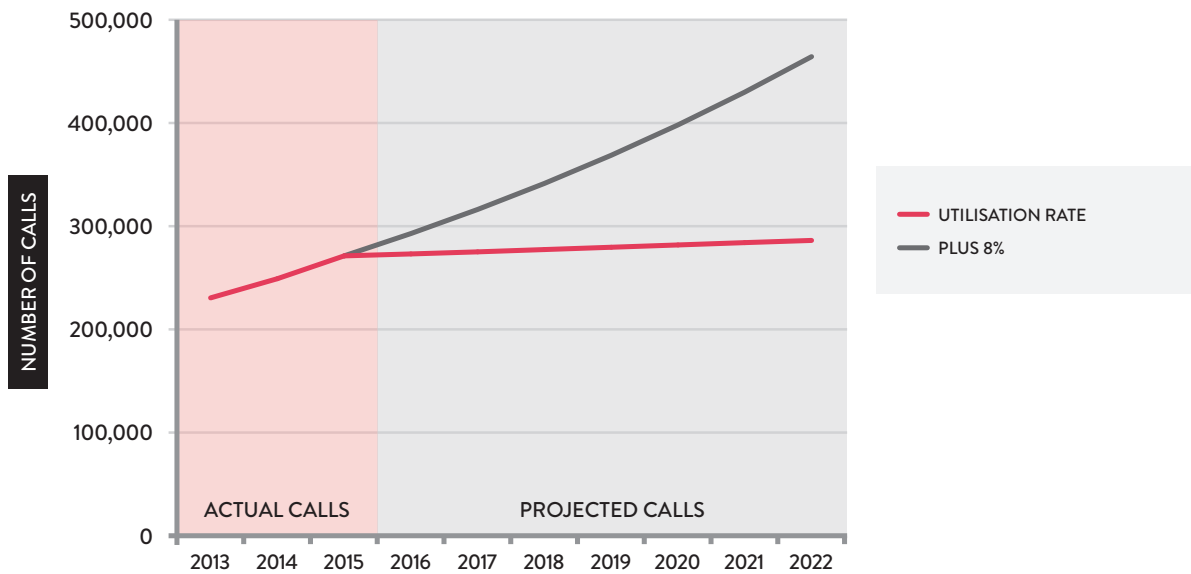
Source: National Ambulance Service

PROJECTED ACTIVITY GROWTH 2017– 2022

Applying the 2015 utilisation rate of 73.0/1,000 of the population, total AS1, AS2 and AS3 calls would be expected to increase by approximately 5,000 calls in 2017 and a further 14,000 calls by 2022.

Applying the same method to AS1 calls only, and using the 2015 utilisation rate of 58.4/1,000, AS1 calls would be expected to increase by approximately 4,000 calls in 2017 and by a further 11,000 calls by 2022 (Figure 8.7 & Table 8.6). However, if the average increase of 8% in call volume seen in 2014 and 2015 for AS1 calls continues, AS1 calls will increase by 45,000 by 2017 and by 194,000 by 2022. The drivers of this annual incremental increase are not fully understood and the authors would recommend caution when interpreting this data.

FIGURE 8.7: PROJECTED CALL GROWTH – AS1 CALLS



Source: National Ambulance Service, Central Statistics Office

TABLE 8.6: PROJECTED ACTIVITY GROWTH 2016 – 2022

	TOTAL AMBULANCE CALLS		AS1 CALLS ONLY	
	POPULATION	UTILISATION RATE	UTILISATION RATE	8% INCREASE IN CALLS
2015	4,654,154	339,706	271,867	271,867
2016	4,686,484	342,066	273,756	293,616
2017	4,721,232	344,602	275,785	317,106
2022	4,911,821	358,513	286,918	465,932

Source: National Ambulance Service, Central Statistics Office

IMPLICATIONS OF PROJECTED ACTIVITY GROWTH FOR THE NAS

The recent capacity review document estimated that, based on projected growth in activity from 2015-2016, additional resources would be required to meet the elevated workload. Such one-year projections take into account a degree of spare utilisation that is available to absorb the initial growth. Subsequent activity growth from 2016-2019 demonstrates a depleted ability to absorb the increased activity during the latter years, suggesting further pressure on NAS/DFB resources (Lightfoot, 2015).

The NAS/DFB plan to further enhance their services with the introduction of a “Hear and Treat” system, which is projected to be implemented by December 2016. The “Hear and Treat” system enables healthcare personnel, based in the ambulance control centre, to manage certain conditions over the phone rather than dispatching an ambulance to transport the patient to an emergency department. This increases availability of emergency ambulances to respond to emergency incidents in a more timely fashion, which could lead to significant cost savings for the health services. Furthermore, this system also has the potential to reduce pressure on the emergency departments, as it has been shown to divert a proportion of patients towards more appropriate healthcare services (Alberti, Department of Health UK, 2011).

IMPLICATIONS OF AN AGEING POPULATION FOR THE NAS/DFB

Our population aged 65 years and over is increasing by approximately 20,000 annually. Demography has been demonstrated as a key factor in predicting emergency medical service demand (Veser et al, 2012). There is a requirement to collect and analyse data relating to demographic, socio-economic and health-related factors, in order to predict and manage future demand for the emergency ambulance services in Ireland.

Up until late 2015, a limitation of the pre-hospital emergency care data was that it was a paper-based record system. This paper-based system has restricted the ability of NAS/DFB to perform detailed analysis on data collected up until 2015. As a result, the demographic pressures and possible future projections studied in other areas of the Irish health service cannot be demonstrated for the NAS/DFB at this point in time. To address this deficit, a new electronic patient care record system will be introduced from Quarter 4 2016, with the first year of such data projected to be available for analysis in late 2017. Implementation of this new electronic system will be invaluable in enabling accurate service planning for the pre-hospital emergency care services going forward.

EMERGENCY AERO MEDICAL SERVICE (EAS), IRISH COAST GUARD (IRCG) AND AIR AMBULANCE

A total of 1,559 requests for Emergency Aero Medical Service (EAS), Irish Coast Guard (IRCG) or Air Ambulance were made during 2015; totalling 896 completed incidents nationally (Table 8.7). The EAS is a necessary element of Ireland's emergency response to 999 calls, particularly in the West of Ireland. The EAS service was requested 844 times during 2015, with 399 missions being completed. 30% (321) of incidents were due to trauma.

In 2015 the IRCG service was requested a total of 567 times, with 394 completed incidents being recorded for the year 2015. Almost 41% (140) of incidents were as a direct result of trauma. The IRCG provide a support service to the NAS from four bases and have the ability to fly at night, which means they are capable of responding to more requests than the EAS. The IRCG covers the islands around the country shores and supplies a medical retrieval service on behalf of the NAS which also contributes to higher activity from them.

The Air Ambulance service was requested 148 times during 2015. Of these requests, 103 were completed incidents and were recorded as inter-hospital transfers.

TABLE 8.7: EAS/ IRCG/ AIR AMBULANCE- CLINICAL PROFILE OF AERO MEDICAL MISSIONS FOR 2014& 2015

	EAS		IRCG		AIR AMBULANCE		TOTAL	
	REQUESTED	COMPLETED	REQUESTED	COMPLETED	REQUESTED	COMPLETED	REQUESTED	COMPLETED
2014	634	309	504	342	150	109	1288	760
2015	844	399	567	394	148	103	1559	896
% change	33%	29%	13%	15%	-1%	-6%	21%	18%

Source: National Ambulance Service

RESEARCH AND DATA NEEDS

- The paper-based pre-hospital patient care record does not facilitate in-depth analysis of service user data by age and gender. However, the introduction of the electronic patient care record from quarter four 2016, will address this deficit and the first year of data will be available for analysis in late 2017.
- There is a need to analyse data collected from the new electronic patient care record relating to demographic, socio-economic and health-related factors in order to predict and manage future demand for the emergency ambulance services in Ireland.
- Research is required to understand patterns of Irish ambulance service use and its users.
- Clinical outcome indicators should be developed as a matter of priority.

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- Ms. Lorna Collins, (Statistician, Healthcare Pricing Office), Mr Fiachra Bane (Healthcare Pricing Office), Mr Brian Donovan (Healthcare Pricing Office)

PRIMARY CARE AND SOCIAL INCLUSION

- Dr. Chantal Migone (HSE Public Health East), Ms. Judy Cronin, Ms. Heather Hegarty (HSE Public Health South)
- Ms. Diane Nurse, Mr. Joe Doyle, Ms. Derval Howley, Mr. Joe Kirby, Ms. Suzanne Howley (HSE National Social Inclusion Office)
- Ms. Geraldine Littler, Ms. Katherine Cregan, Ms. Fiona O’Riordan (BIU)
- Ms. Aisling Heffernan, (Programme Manager, HSE Primary Care)
- Mr. Patrick Leavy, Ms. Lynn Carberry (PCRS)
- Dr. Christine McGarrigle (TCD, TILDA), Ms. Amanda Quail, (Growing up in Ireland)
- Mr. Doug Beaton, Dr. Howard Johnson, Mr. Ian Folan, Mr. Eugene Boyle (HSE Health Intelligence Unit)
- Mr. Alan Cahill, Mr. Vincent Kennedy (Department of Health)
- Dr. Angela O’Leary (Principal Medical Officer, CHO 4)
- Dr. Joan O’Donnell, Ms. Gillian Cullen, Ms. Sarah Jackson, Dr. Suzanne Cotter (HPSC)
- Mr Simon Murtagh (National Screening Services)

SOCIAL CARE

- Ms. Sarah Craig, Ms Anne Marie Carew (HRB)
- Mr. Tom O’Regan (HIQA)
- Mr. Pat Marron (Nursing Homes Support Scheme)
- Dr. Grainne Collins (National Disability Authority)

MENTAL HEALTH

- Ms. Carol Ivory (HSE Mental Health Division), Mr Philip Flanagan (BIU)
- Ms Sarah Craig, Ms. Antoinette Daly (HRB)

NATIONAL AMBULANCE SERVICE

- Ms. Joan O’Kane (HSE Public Health North West)
- Mr. Martin Dunne, Dr. Cathal O’Donnell, Ms. Noirin Bannon

DEMOGRAPHY, HEALTH STATUS CHAPTER

- Mr. Simon Murtagh, National Screening Services
- Dr. Brenda Corcoran, National Immunisation Office
- Ms. Bernie O’Loughlin, Planning and Business Information

APPENDIX A



CONSULTATION PROCESS



Initial consultations took place with relevant members of each Senior Management Team (SMT). Consultations took place with the following:

ACUTE HOSPITALS DIVISION

- Mr. Liam Woods, National Director
- Dr. Colm Henry, National Clinical Advisor and Group Lead

PRIMARY CARE DIVISION

- Mr. Brian Murphy, Head of Planning, Performance & Programme Management
- Dr. David Hanlon, National Clinical Advisor and Group Lead
- Ms. Shirley Keane, Business Planning and Development Manager
- Ms. Diane Nurse, National Lead for Social Inclusion
- Mr. Joe Doyle, National Planning Specialist, National Social Inclusion Office

SOCIAL CARE DIVISION

- Ms. Geraldine Crowley, Head of Planning, Performance and Programme Management
- Mr. Michael Fitzgerald, Head of Operations – Older Persons
- Ms. Marion Meany – Head of Operations – Disability Services
- Dr. Siobhan Kennelly – National Clinical Advisor and Group Lead

MENTAL HEALTH DIVISION SENIOR MANAGEMENT TEAM

- Ms. Anne O'Connor, National Director
- Ms. Yvonne O'Neill, Head of Planning, Performance and Programme Management
- Ms. Carol Ivory, Programme Manager
- Mr. Jim Ryan, Head of Operations and Service Improvement
- Dr. Margo Wrigley, National Clinical Advisor and Group Lead
- Mr. Gerry Raleigh, Director of National Office for Suicide Prevention

NATIONAL AMBULANCE SERVICE SENIOR MANAGEMENT TEAM

- Mr. Damien McCallion, National Director
- Mr. Martin Dunne, National Ambulance Service Director
- Ms. Noirin Bannon, Business Manager

In addition, consultations took place with:

- Dr. Aine Carroll, National Director for Clinical Strategy and Programmes
- Dr. Orlaith O'Reilly, National Clinical Advisor and Group Lead, Health & Wellbeing Division
- Ms. Orla Tracey, Ms. Terrie O'Neill Ms. Janette Dwyer (Planning and Business Information, HSE)
- Information Unit of the Department of Health (Mr. Muiris O'Connor, Mr. Alan Cahill)
- Health Intelligence (Mr. Doug Beaton, Dr. Howard Johnson, Mr. Ian Folan)
- National Healthy Childhood Programme (Dr. Kevin Kelleher, Dr. Phil Jennings and Ms. Carmel Brennan)
- National Immunisation Office (Dr. Brenda Corcoran, Dr. Cliona Kiersey)

APPENDIX B



DEMOGRAPHY



TABLE B1: PROJECTED POPULATION BY AGE GROUP 2017 AND PERCENTAGE CHANGE FROM 2016 (THOUSANDS)

AGE GROUP	2016	2017	ACTUAL CHANGE	% CHANGE
Under 1 year	68.6	66.5	-2.1	-3.0
1-4 years	295.5	290.0	-5.5	-1.8
5-9 years	360.6	368.9	8.3	2.3
10-14 years	322.0	327.8	5.8	1.8
15-19 years	295.2	300.4	5.2	1.8
20-24 years	237.6	240.3	2.7	1.1
25-29 years	281.1	271.5	-9.6	-3.4
30-34 years	343.2	327.7	-15.5	-4.5
35-39 years	375.9	377.6	1.7	0.5
40-44 years	353.3	355.5	2.2	0.6
45-49 years	325.4	332.0	6.6	2.0
50-54 years	300.9	305.6	4.7	1.6
55-59 years	267.9	273.1	5.2	1.9
60-64 years	235.3	240.4	5.1	2.2
65-69 years	205.7	209.0	3.3	1.6
70-74 years	157.8	166.7	8.9	5.7
75-79 years	112.3	114.9	2.7	2.4
80-84 years	78.6	80.9	2.3	2.9
85+ years	69.9	72.5	2.6	3.7
TOTAL	4,686.5	4,721.2	34.8	0.7

Source: Central Statistics Office

METHODOLOGY USED TO CARRY OUT CHO POPULATION PROJECTIONS

The CSO produce regional population projections using the same methodology and assumptions used for national population projections. These projections are based on NUTS areas (Nomenclature of Territorial Units) and are defined by Eurostat. In Ireland, these are the eight Regional Authority areas as established under the Local Government Act, 1991 (Regional Authorities) (Establishment) Order, 1993 which came into operation in 1994. The CSO only provides population projection data on these areas, as adequate data on internal migration is not available to support a smaller geographical unit of analysis such as by county or electoral division.

In producing the regional population projections, the CSO analysed internal migration patterns between regions and produced projections based on three internal migration scenarios. Advice received from the CSO recommended using the 'Recent' internal migration scenario.

To provide population projections by CHO area, a mapping exercise comparing Regional Authorities with CHOs was carried out. This mapping analysis showed an identical match for four CHO areas – Areas 2, 3, 4 and 5. Area 1 is similar to the Border region, with the exception of the exclusion of Louth which is in Area 8. Areas 6, 7 and 9 all represent the Mid-East and Dublin Regional Authority area with the exception of county Meath, which is in Area 8. In order to reflect the population by CHO area as accurately as possible, it was decided to use the Regional Authority population projections, where there was a direct match with a CHO. For the remaining CHO areas, a methodology was agreed with the Information Unit in the Department of Health to provide the best possible estimate of the population projections. Therefore, an element of caution needs to be exercised when interpreting the population data for these CHO areas.

TABLE B2: PROJECTED POPULATION BY AGE GROUP 2022 AND PERCENTAGE CHANGE FROM 2017 (THOUSANDS)

AGE GROUP	2017	2022	ACTUAL CHANGE	% CHANGE
Under 1 year	66.5	57.5	-9.0	-13.5
1-4 years	290.0	250.5	-39.5	-13.6
5-9 years	368.9	363.8	-5.1	-1.4
10-14 years	327.8	373.6	45.9	14.0
15-19 years	300.4	327.3	26.9	9.0
20-24 years	240.3	291.8	51.5	21.4
25-29 years	271.5	261.5	-10.0	-3.7
30-34 years	327.7	275.2	-52.5	-16.0
35-39 years	377.6	324.8	-52.8	-14.0
40-44 years	355.5	375.7	20.2	5.7
45-49 years	332.0	355.4	23.4	7.0
50-54 years	305.6	331.1	25.5	8.3
55-59 years	273.1	301.7	28.6	10.5
60-64 years	240.4	266.7	26.3	11.0
65-69 years	209.0	230.8	21.8	10.4
70-74 years	166.7	195.1	28.5	17.1
75-79 years	114.9	147.9	33.0	28.7
80-84 years	80.9	92.8	11.8	14.6
85+ years	72.5	88.6	16.1	22.2
TOTAL	4,721.2	4,911.8	190.6	4.0

Source: Central Statistics Office

TABLE B3: PREVALENCE OF PRIORITY CHILD HEALTH AND WELLBEING RISK FACTORS – 2017 AND 2022 ESTIMATES

LIFESTYLE RISK FACTOR CHILDREN	PREVALENCE 2010 (%)	PREVALENCE 2014 (%)	2017 (N)	2022 (N)
ANTENATAL RISKS AND BIRTH WEIGHT				
Low birth weight rate [◊] (2010 versus 2013)	5.3%	5.8%	3,858	3,336
Smoking in pregnancy [¥] (1997-8 versus 2014)	28.1%	17.6%	11,706	10,124
POVERTY				
% of children at risk of poverty (0-17 year olds) [×]	18.4%	18.6%	230,442	231,946
% of children experiencing consistent poverty (0-17 year olds) [×]	8.8%	11.2%	138,761	139,666
OVERWEIGHT & OBESITY				
All 3 year olds – overweight [¥]	N/A	19%	14,015	12,104
All 5 year olds – overweight [†]	N/A	15%	11,302	10,212
All 9 year olds – overweight [∞]	N/A	19%	13,762	14,704
All 3 year olds – obese [¥]	N/A	6%	4,426	3,822
All 5 year olds – obese [†]	N/A	5%	3,767	3,404
All 9 year olds – obese [∞]	N/A	7%	5,070	5,417
SMOKING – AGED 10-17 YEARS				
Ever smoked*	28%	16%	82,153	92,026
Current smoking*	12%	8%	41,077	46,013
ALCOHOL – AGED 10-17 YEARS				
Had alcoholic drink in last 30 days*	22%	20%	102,692	115,033
Drunk in the last 30 days*	20%	10%	51,346	57,516
DRUG USE				
Cannabis use in the last 12 months	9%	8%	41,077	46,013
Cannabis use in the last 30 days	5%	5%	25,673	28,758

* The Irish Health Behaviour in School-aged Children (HBSC) Study 2014

¥ Growing Up in Ireland (2011): Key Findings: Infant Cohort No. 1 The health of 3 year olds

† Growing Up in Ireland (2013): Key Findings: Infant Cohort (at 5 years) No. 3 Well-being, Play & Diet Among 5 year olds

∞ Growing Up in Ireland (2009): Key Findings: 9 year olds No.4 The Health of 9 year olds

◊ Department of Children and Youth Affairs (2014) State of the Nation's Children: Ireland 2014. Dublin. www.dcyia.ie

× Survey on Income & Living Conditions, Central Statistics Office www.cso.ie

LIFESTYLE RISK FACTOR CHILDREN	PREVALENCE 2010 (%)	PREVALENCE 2014 (%)	2017 (N)	2022 (N)
EXERCISE & PHYSICAL ACTIVITY - AGED 10-17 YEARS				
Physical activity \geq 4 times/week*	50%	52%	266,998	299,085
Physically active on 7 days in the last week*	24%	23%	118,095	132,287
Physical activity less than weekly (physical inactivity)*	10%	9%	46,211	51,765
SEXUAL HEALTH BEHAVIOURS				
Have engaged in sexual intercourse (15-17 year olds)*	23%	27%	50,138	54,417
Births to Teenage Mothers (aged 10-17 years) per 1,000 births \diamond	6.6	4.4	293	253
MENTAL HEALTH				
% with high life satisfaction at present	76%	76%	390,228	437,124

* The Irish Health Behaviour in School-aged Children (HBSC) Study 2014

¥ Growing Up in Ireland (2011): Key Findings: Infant Cohort No. 1 The health of 3 year olds

† Growing Up in Ireland (2013): Key Findings: Infant Cohort (at 5 years) No. 3 Well-being, Play & Diet Among 5 year olds

∞ Growing Up in Ireland (2009): Key Findings: 9 year olds No.4 The Health of 9 year olds

\diamond Department of Children and Youth Affairs (2014) State of the Nation's Children: Ireland 2014. Dublin. www.dcyia.ie

* Survey on Income & Living Conditions, Central Statistics Office www.cso.ie

TABLE B4: PREVALENCE OF PRIORITY BEHAVIOURAL RISK FACTORS AMONG 18 -64 YEAR OLDS – 2017 AND 2022 ESTIMATES

LIFESTYLE RISK FACTOR AMONG 18-64 YEAR OLDS	2007	2015	PREVALENCE (%) 2015	2017 (N)	2022 (N)
POVERTY\dagger					
% adults aged 18-64 years at risk of poverty	15.0%	15.3%	16.5%	498,961	513,335
% adults aged 18-64 years experiencing consistent poverty	4.7%	8.0%	7.9%	238,896	245,779
SMOKING*					
All (daily & occasional smokers)	29%	23%	24.6%	742,403	763,791
ALCOHOL*					
Drunk alcohol in the past 12 months	81%	76%	79.3%	2,399,335	2,468,457
Drinkers who binge drink (\geq 6 standard drinks) per occasion	28%	39%	41.8%	1,002,771	1,031,660

LIFESTYLE RISK FACTOR AMONG 18-64 YEAR OLDS	2007	2015	PREVALENCE (%) 2015	2017 (N)	2022 (N)
EXERCISE & PHYSICAL ACTIVITY*					
High level of physical activity	24%	32%	35.3%	1,067,582	1,098,337
OVERWEIGHT & OBESITY*					
Males, 15-64 year olds, overweight	43%	43%	42.9%	642,179	660,059
Males, 15-64 year olds, obese	16%	25%	22.9%	342,437	351,972
Females, 15-64 year olds, overweight	28%	31%	31.2%	476,281	490,454
Females, 15-64 year olds, obese	13%	22%	20.0%	305,707	314,804
MENTAL HEALTH*					
Positive mental health (EVI score) - Males, 15-64 yrs	Total 16%	19%	20.2%	302,225	310,639
Positive mental health (EVI score) - Females, 15-64 yrs	Total 16%	12%	12.0%	182,774	188,213
SEXUAL HEALTH*					
Ever previously had sexual intercourse (aged 17+ years) - Males			92%		
Ever previously had sexual intercourse (aged 17+ years) - Females			76.9%		
Used some method of contraception on most recent occasion of sex (aged 17+ years) - Males			60.9%		
Used some method of contraception on most recent occasion of sex (aged 17+ years) - Females			59.8%		

†Survey on Income & Living Conditions 2007 and 2014 (most recent year), Central Statistics Office

*Healthy Ireland Survey 2015 compared with SLAN 2007

TABLE B5: PREVALENCE OF PRIORITY BEHAVIOURAL RISK FACTORS AMONG THOSE AGED 65 YEARS AND OVER – 2017 AND 2022 ESTIMATES

LIFESTYLE RISK FACTOR AMONG 65+ YEAR OLDS	2007	2015	2017 (N)	2022 (N)
POVERTY				
% adults aged 65+ years at risk of poverty*	16.5	10.3%	66,330	77,788
% adults aged 65+ years experiencing consistent poverty*	2.0%	2.1%	13,524	15,860
SMOKING				
All	14%	12%	77,278	90,627
ALCOHOL				
Drunk alcohol in the past 12 months	59%	62%	399,271	468,238
Drinkers who binge drink (≥6 standard drinks) per occasion		22%	87,840	103,012
EXERCISE & PHYSICAL ACTIVITY				
High level of physical activity	10%	15%	96,598	113,283
OVERWEIGHT & OBESITY				
Males, 65+ year olds, overweight	45%	46%	137,025	161,812
Males, 65+ year olds, obese	17%	35%	104,258	123,118
Females, 65+ year olds, overweight	35%	34%	117,675	137,175
Females, 65+ year olds, obese	12%	34%	117,675	137,175
MENTAL HEALTH				
Positive mental health (EVI score) – Males		16%	47,661	56,283
Positive mental health (EVI score) – Females		11%	38,071	44,380
SEXUAL HEALTH				
Used a condom on most recent occasion of sex		5%		

Source: *Slan 2007, Healthy Ireland 2015 and Central Statistics Office, Survey of Income and Living Conditions*

APPENDIX C



PRIMARY CARE



TABLE C1: OVERVIEW OF PRIMARY CARE UTILISATION IN 2015

SERVICE	OUTTURN 2015
Community Intervention Team Referrals	19,675
No. of contacts with GP Out of Hours Service	980,917
Number of newborn babies visited by a PHN within 72 hours of discharge from maternity services	59,354
No of patient referrals – primary care nursing	159,694
No of patient referrals – physiotherapy, occupational therapy, psychology, podiatry, audiology, dietetics, speech and language therapy	386,732
No. of patients receiving active treatment at the end of the reporting period – orthodontics	15,460
Number of those children reaching 10 months within the reporting period who have had their Child Development Health Screening on time before reaching 10 months of age	62,048
No of patient referrals – ophthalmology	22,322
No of patients with Medical Cards	1,734,853
No of patient with GP visit cards	431,306
No of Drug Payment Scheme line items	7,169,019
No of long term illness claims	1,872,784
No of GMS line items	57,861,630
No of Hi tech claims	550,078
DTSS treatments (above and below line)	1,262,368
No of Community Ophthalmic Scheme Treatments	844,007
No of admissions to specialist palliative care inpatient units	3,411
No. of new patients seen or admitted to specialist palliative care services in the community	8,968

Source: Health Service Executive National Service Plan NSP and DOP Full KPI Suite 2016 and Health Service Executive Business Information Unit

TABLE C2: OVERVIEW OF PRIMARY CARE UTILISATION IN 2015 BY AGE GROUP

SERVICE	POPULATION	2015 UTILISATION RATE (PER 100,000)
COMMUNITY INTERVENTION TEAM ACTIVITY ¹	TOTAL	430
PHYSIOTHERAPY REFERRAL ²	0-17 years	2,133
	18+ years	4,757
	TOTAL	4,070
OCCUPATIONAL THERAPY REFERRAL ²	0-4 years	1,330
	5-17 years	1,333
	18-64 years	547
	65+ years	9,236
	TOTAL	1,882
NO. OF PATIENTS IN ACTIVE ORTHODONTIC TREATMENT	TOTAL	1,470
PSYCHOLOGY REFERRALS ACCEPTED ²	0-4 years	536
	5-17 years	794
	18-64 years	115
	65+ years	45
	TOTAL	264
PODIATRY REFERRALS ACCEPTED ²	0-4 years	28
	5-17 years	30
	18-64 years	101
	65+ years	1,099
	TOTAL	212
OPHTHALMOLOGY REFERRALS ACCEPTED ²	0-4 years	2,222
	5-17 years	1,112
	18-64 years	79
	65+ years	406
	TOTAL	480

SERVICE	POPULATION	2015 UTILISATION RATE (PER 100,000)
AUDIOLOGY REFERRALS ACCEPTED	0-4 years	1,176
	5-17 years	598
	18-64 years	71
	65+ years	1,146
	TOTAL	394
DIETETICS REFERRALS ACCEPTED ²	0-4 years	865
	5-17 years	284
	18-64 years	400
	65+ years	1,455
	TOTAL	552
NURSING REFERRALS ACCEPTED ³	0-4 years	462
	5-17 years	5,168
	18-64 years	1,180
	65+ years	10,189
	TOTAL	3,023
NURSING REFERRALS (DISABILITY) ACCEPTED ³	5-17 years	165
	18-64 years	149
	TOTAL	153
SPEECH AND LANGUAGE THERAPY REFERRALS ACCEPTED ²	0-4 years	7,074
	5-17 years	1,379
	18-64 years	156
	65+ years	1,527
	TOTAL	1,104

Source: Health Service Executive National Service Plan NSP and DOP Full KPI Suite 2016 and Health Service Executive Business Information Unit

TABLE C3: CURRENT AND PROJECTED CHANGE IN CHILD POPULATION, BY CHO

CHO	POPULATION CHANGE 2016-2017						POPULATION CHANGE 2017-2022					
	BIRTHS		1-4 YEARS		5-17 YEARS		BIRTHS		1-4 YEARS		5-17 YEARS	
	N	%	N	%	N	%	N	%	N	%	N	%
1	-163	-3.1%	-449	-2.0%	223	0.3%	-570	-11.3%	-3,014	-13.6%	67	0.1%
2	-262	-4.4%	-665	-2.5%	1,076	1.3%	-1,134	-20.0%	-4,942	-19.2%	2,688	3.2%
3	-197	-3.6%	-503	-2.1%	875	1.2%	-811	-15.5%	-3,772	-16.3%	2,884	4.1%
4	-237	-2.4%	-364	-0.9%	1,863	1.5%	-1,053	-10.9%	-4,537	-10.9%	8,869	7.1%
5	-176	-2.4%	-304	-1.0%	905	0.9%	-715	-9.9%	-3,427	-11.1%	3,135	3.2%
6	-164	-3.1%	-431	-1.9%	1,919	2.8%	-749	-14.4%	-3,181	-14.1%	7,462	10.5%
7	-319	-3.0%	-891	-2.0%	3,588	2.9%	-1,494	-14.7%	-6,241	-14.1%	13,279	10.5%
8	-262	-2.8%	-414	-2.5%	1,606	1.3%	-972	-10.5%	-4,995	-11.0%	5,385	4.3%
9	-277	-3.0%	-964	-2.4%	3,594	3.5%	-1,428	-15.8%	-5,582	-14.1%	13,385	12.5%
ALL	-2,049	-3.0%	-5,410	-1.8%	15,993	1.8%	-8,991	-13.5%	-39,491	-13.6%	56,565	6.4%

Source: Central Statistics Office

TABLE C4: CURRENT AND PROJECTED FUTURE UTILISATION OF OTHER PRIMARY CARE SERVICES - CHILDREN

SERVICE	POPULATION	2015 ACTUAL	2017 PROJECTION	CHANGE 2015 TO 2017		2022 PROJECTION	CHANGE 2015 TO 2022	
				N	%		N	%
Physiotherapy referral	Total 0-17 years	25,992	26,423	431	1.7%	26,596	604	2.3%
Occupational Therapy referral	Total 0-17 years	16,231	16,501	270	1.7%	16,610	379	2.3%
No. of patients in active Orthodontic treatment	Total All Ages	67,254	68,223	969	1.4%	70,977	3,723	5.5%
Psychology referrals accepted	Total 0-17 years	8,727	8,916	189	0.7%	9,105	378	4.3%
Podiatry referrals accepted	Total 0-17 years	360	366	6	1.7%	370	10	2.8%
Ophthalmology referrals accepted	Total 0-17 years	17,629	17,731	102	0.6%	17,282	-347	-2.0%
Audiology referrals accepted	Total 0-17 years	9,413	9,470	57	0.6%	9,238	-175	-1.9%
Dietetics referrals accepted	Total 0-17 years	5,597	5,590	-7	-0.1%	5,332	-265	-4.7%
Speech and language Therapy referrals accepted	Total 0-17 years	37,747	37,396	-351	-0.9%	34,747	-3,000	-7.9%

Source: Business Information Unit advise data gaps for a no. of therapies in 2015, these include Physiotherapy, Occupational Therapy, Podiatry, Ophthalmology, Psychology and Dietetics.

TABLE C5: CURRENT AND PROJECTED FUTURE UTILISATION OF PRIMARY CARE SERVICES – ADULTS AGED 18 YEARS AND OLDER

SERVICE	POPULATION	2015 ACTUAL	2017 PROJECTION	CHANGE 2015 TO 2017		2022 PROJECTION	CHANGE 2015 TO 2022	
				N	%		N	%
Community Intervention Team Activity ¹	Total All Ages	19,675	19,812	137	0.7%	25,542	5,867	29.8%
Physiotherapy referral ²	18+ years	163,410	165,639	2,229	1.4%	174,320	10,910	6.7%
Occupational Therapy referral ²	18-64 years	15,490	15,532	42	0.3%	15,922	432	2.8%
Psychology referrals accepted ²	18-64 years	3,264	3,273	9	0.3%	3,355	91	2.8%
Podiatry referrals accepted ²	18-64 years	2,866	2,874	8	0.3%	2,946	80	2.8%
Ophthalmology referrals accepted ²	18-64 years	2,239	2,245	6	0.3%	2,301	62	2.8%
Audiology referrals accepted	18-64 years	2,004	2,009	5	0.2%	2,060	56	2.8%
Dietetics referrals accepted ²	18-64 years	11,315	11,346	31	0.3%	11,631	316	2.8%
Speech and language Therapy referrals accepted ²	18-64 years	4,417	4,429	12	0.3%	4,540	123	2.8%
Nursing referrals accepted ³	18-64 years	33,399	33,490	91	0.3%	34,331	932	2.8%
Nursing referrals (disability) accepted ³	18-64 years	4,223	4,234	11	0.3%	4,341	118	2.8%

Source: Business Information Unit

¹No activity for CHO 1;

²BIU advise data gaps for a no. of therapies in 2015, these include Physiotherapy, Occupational Therapy, Podiatry, Ophthalmology, Psychology and Dietetics;

³BIU advise 2015 data incomplete for Nursing due to IR issues

TABLE C6: CURRENT AND PROJECTED FUTURE UTILISATION OF PRIMARY CARE SERVICES – ADULTS AGED 65 YEARS AND OLDER

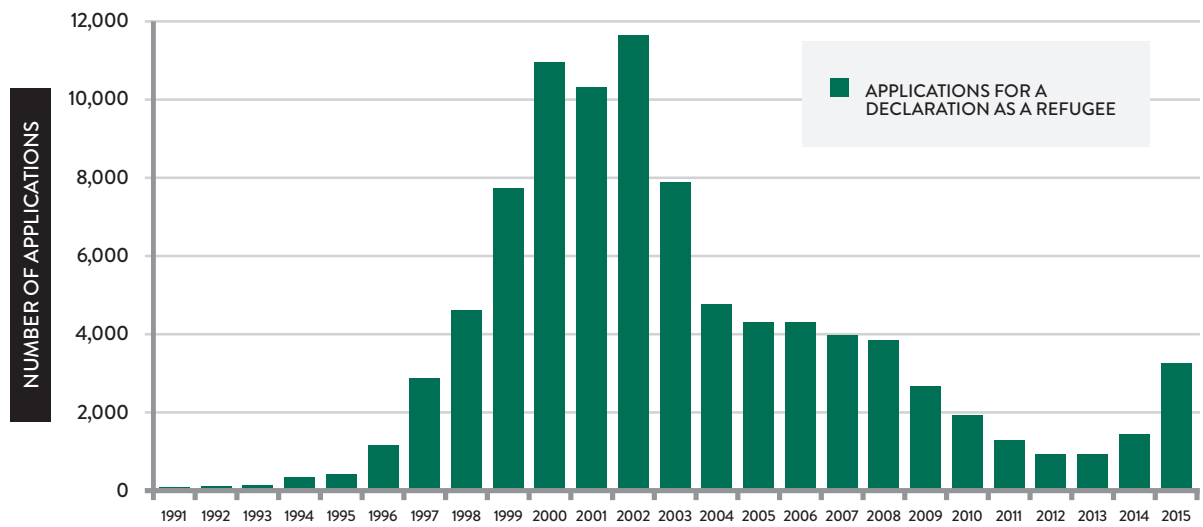
SERVICE	POPULATION	2015	2017	CHANGE 2015 TO 2017		2022	CHANGE 2015 TO 2022	
		N	N	N	%	N	N	%
Physiotherapy referral ²	18+ years	163,410	165,639	2,229	1.4%	174,320	10,910	6.7%
Occupational Therapy referral ²	65+ years	55,861	59,478	3,617	6.5%	69,752	13,891	24.9%
Psychology referrals accepted ²	65+ years	273	291	18	6.6%	341	68	24.9%
Podiatry referrals accepted ²	65+ years	6,650	7,081	431	6.5%	8,304	1,654	24.9%
Ophthalmology referrals accepted ²	65+ years	2,454	2,613	159	6.5%	3,064	610	24.9%
Audiology referrals accepted	65+ years	6,934	7,383	449	6.5%	8,658	1,724	24.9%
Dietetics referrals accepted ²	65+ years	8,800	9,370	570	6.5%	10,988	2,188	24.9%
Nursing referrals accepted ³	65+ years	61,625	65,615	3,990	6.5%	76,949	15,324	24.9%
Speech and language Therapy referrals accepted ²	65+ years	9,235	9,833	598	6.5%	11,531	2,296	24.9%

Source: Business Information Unit

²BIU advise data gaps for a no. of therapies in 2015, these include Physiotherapy, Occupational Therapy, Podiatry, Ophthalmology, Psychology and Dietetics;

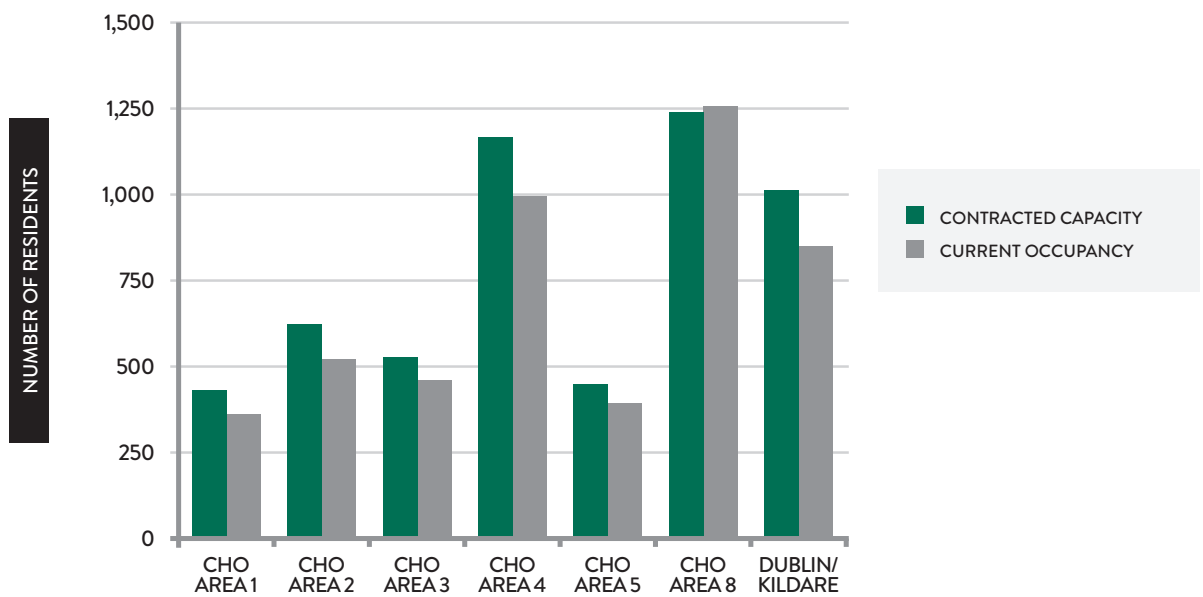
³BIU advise 2015 data incomplete for Nursing due to IR issues

FIGURE C1: NUMBER OF APPLICATIONS FOR REFUGEE STATUS (ASYLUM SEEKERS) IN IRELAND, 1991-2015



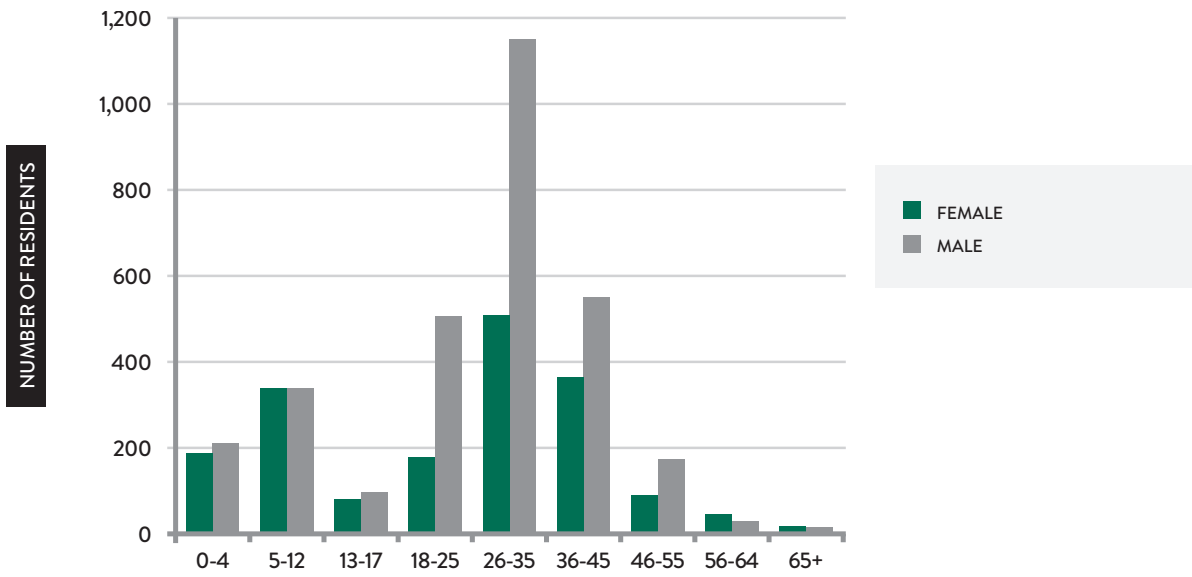
Sources: Office of the Refugee Applications Commissioner Monthly Statistical report Feb 2016 (Office of the Refugee Applications Commissioner, 2016) and Reception & Integration Agency Monthly Statistics Report, Sept 2015 (Reception & Integration Agency, 2015)

FIGURE C2: CONTRACTED CAPACITY AND CURRENT OCCUPANCY OF RIA CENTRES BY CHO



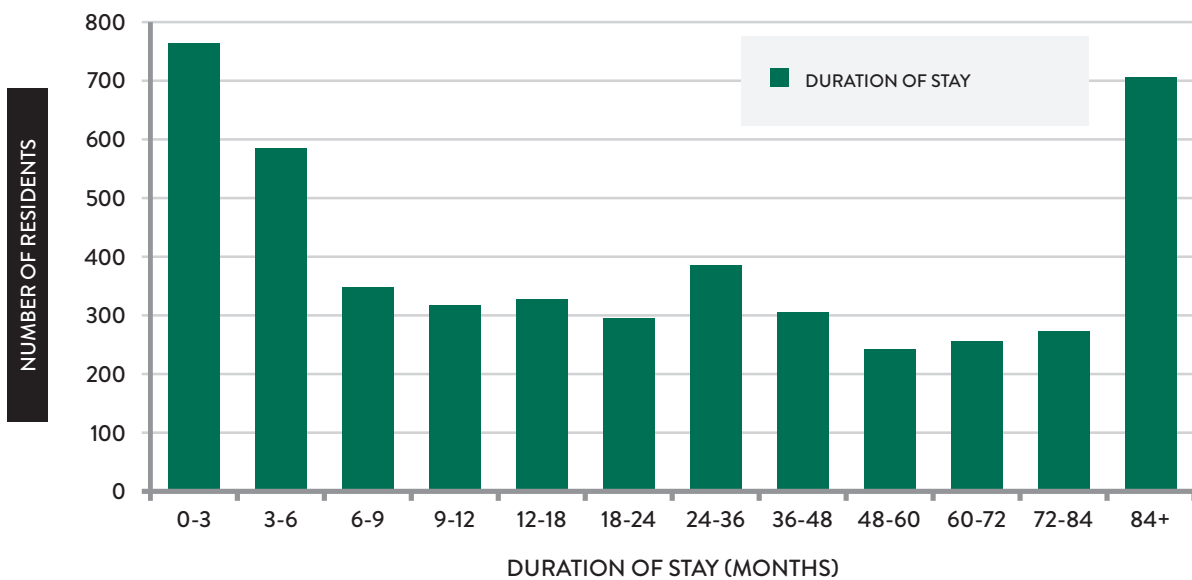
Source: Reception and Integration Agency Monthly Statistics Report September 2015 (Reception & Integration Agency, 2015)

FIGURE C3: AGE PROFILE OF RESIDENTS OF RIA ACCOMMODATION CENTRES, AT END SEPT 2015



Source: Reception and Integration Agency Monthly Statistics Report September 2015 (Reception & Integration Agency, 2015)

FIGURE C4: LENGTH OF STAY (MONTHS) OF ASYLUM SEEKERS IN DIRECT PROVISION, AT END SEPT 2015



Source: Reception and Integration Agency Monthly Statistics Report September 2015 (Reception & Integration Agency, 2015)

APPENDIX D



SOCIAL CARE



TABLE D1: ESTIMATED NUMBER OF CHILDREN 0-5 AND 6-18 LIVING WITH DISABILITY BY CHO AND ESTIMATED REQUIREMENT FOR MDT INPUT

	AREA 1		AREA 2		AREA 3		AREA 4		AREA 5		AREA 6		AREA 7		AREA 8		AREA 9	
	2017	2022	2017	2022	2017	2022	2017	2022	2017	2022	2017	2022	2017	2022	2017	2022	2017	2022
Tot pop 0-5	32,865	28,681	38,178	31,197	34,351	29,080	61,558	55,392	45,997	41,380	33,835	29,294	65,056	57,043	60,141	53,517	58,864	50,670
No any disability	1,580	1,378	1,846	1,522	1,651	1,404	2,941	2,662	2,196	1,981	1,635	1,423	3,167	2,754	2,881	2,571	2,825	2,446
MDT input need*	986	860	1,145	936	1,031	872	1,847	1,662	1,380	1,241	1,015	879	1,979	1,711	1,804	1,606	1,766	1,520
% Nat MDT cohort in CHO	8	8	9	8	8	8	14	15	11	11	8	8	15	15	14	14	14	13
Tot pop 6-18	77,625	78,552	81,714	85,807	70,143	73,812	122,202	131,937	95,951	100,005	69,884	78,604	123,738	139,249	124,020	130,936	103,644	118,999
No any disability	8,299	8,460	8,723	9,207	7,492	7,907	13,028	14,116	10,253	10,719	7,465	8,441	13,150	14,881	13,213	14,031	10,991	12,688
MDT input need*	2,329	2,357	2,451	2,574	2,104	2,214	3,666	3,958	2,879	3,000	2,097	2,358	3,712	4,177	3,721	3,928	3,109	3,570
% Nat MDT cohort in CHO	8.9	8.7	9.4	9.1	8.1	7.9	14.1	14.1	11.0	10.7	8.0	8.4	14.2	14.8	14.3	14.0	11.9	12.7
No. disability network/ teams CHO [^]	16		15		12		17		20		7		9		21		12	
No 0-5 MDT need/team	62	54	76	62	86	73	109	98	69	62	145	126	220	190	86	76	147	127
No 6-18 MDT need/team	146	147	163	172	175	185	216	233	144	150	300	337	412	464	177	187	259	297
No 0-18 MDT need/team	207	201	240	234	261	257	324	331	213	212	445	462	632	654	263	264	406	424

Source: National Disability Authority, Central Statistics Office
[^] as per National Service Plan 2016, Social Care KPI DSI 65

APPENDIX E



MENTAL HEALTH



TABLE E1: PROJECTED ACCEPTED REFERRALS TO COMMUNITY CAMHS BASED ON 2015 REFERRAL RATE

YEAR	POPULATION 0-17	PROJECTED REFERRALS	PROJECTED ACTIVE CASES
2016	1,230,400	13,484	18,702
2017	1,238,930	13,577	18,832
2022	1,247,020	13,666	18,955

Source: Central Statistics Office, Health Service Executive, Business Information Unit

TABLE E2: UTILISATION RATE FOR ADULTS AGED 65 - 84 YEARS 2014 AND PROJECTIONS FOR 2017 AND 2022

	2014 RATE PER 100,000	2014 (N)	2017 (N)	2022 (N)
All Diagnosis	280.3	1,461	1,602	1,869
Depressive Disorders	87.5	456	500	583
Schizophrenia	62.2	324	355	414
Organic Mental Disorders	47.0	245	269	313
Other	83.7	436	478	558

Source: National Psychiatric Inpatient Reporting System Health Research Board, Central Statistics Office

TABLE E3: UTILISATION RATE FOR ADULTS AGED 85 YEARS AND OVER 2014 AND PROJECTIONS FOR 2017 AND 2022

	2014 RATE PER 100,000	2014 (N)	2017 (N)	2022 (N)
All Diagnosis	194.9	126	141	173
Depressive Disorders	48.0	31	35	42
Schizophrenia	20.1	13	15	18
Organic Mental Disorders	102.1	66	73	90
Other & Unspecified	24.8	16	18	22

Source: National Psychiatric Inpatient Reporting System Health Research Board, Central Statistics Office

APPENDIX F

NATIONAL AMBULANCE SERVICE



TABLE F1: EMERGENCY CALLS PER HEAD OF POPULATION BY COUNTRY AND REGION

COUNTRY / AREA	POPULATION	NO. OF CALLS	CALLS PER 1,000 POPULATION
England	53m	9,000,000	171
Scotland	5.29m	850,000	160
N Ireland	1.811m	191,727	87
New Zealand	4.47m	380,785	85
Western Australia	2.4m	26,966	89
Ireland (incl. DFB)	4.65m	340,000	73

England: Data published in Ambulance Services, England - 2014-15 on 17.06.2015 Page 5

Scotland: www.scottishambulance.co.uk/userfiles/file/theservice/publications/sas%20STRATEGY%202013%2004.pdf

Northern Ireland: Data for Northern Ireland for 2014/2015 extracted from Hospital Statistics: Emergency Care 2014/15, Page 15

New Zealand, Western Australia and Ireland: Data from capacity review, 2014

Ireland: Call data from National Ambulance Service

REFERENCES



- Adair LS, Fall CH, Osmond C, Stein AD, Martorell R, Ramirez-Zea M, Sachdev HS, Dahly DL, Bas I, Norris SA, Micklesfield L, Hallal P, Victora CG; COHORTS group (2013). Associations of linear growth and relative weight gain during early life with adult health and human capital in countries of low and middle income: findings from five birth cohort studies. *Lancet*. 10;382(9891):525-34.
- Alberti G. Transforming emergency care in England. London: Department of Health; 2004.
- All Ireland Traveller Health Study (2010). All Ireland Traveller Health Study: Our Geels [Online]. Available: <https://www.ucd.ie/issda/data/allirelandtravellerhealthstudy/>
- Bansal S, Breckwoldt M, O'Brien Green S & Mbugua, S (2013) Female Genital Mutilation: Information for Health-Care Professionals working in Ireland. In: REILLY, C. (ed.) 2nd ed. Dublin: AkiDwA and HSE National Social Inclusion Office.
- Barker DJ, Eriksson JG, Forsén T, Osmond C (2002). Fetal origins of adult disease: strength of effects and biological basis. *Int J Epidemiol*. Dec;31(6):1235-9
- Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B (2012). 'Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study'. *The Lancet*, vol 380, no 9836, pp 37-43.
- Behan W, Molony D, Beame C, Cullen W (2014). Does eliminating fees at point of access affect Irish general practice attendance rates in the under 6 years old population? A cross sectional study at six general practices. *Ir Med J*. 2014 Apr;107(4):121-2.
- Beillon LM, Suserud BO, Karlberg I, Herlitz J (2009). Does ambulance use differ between geographic areas? A survey of the ambulance use in sparsely and densely populated areas. *Am J Emerg Med*. 2009;27:202-211
- Black RE, Victora CG, Walker SP, et al (2013). Maternal and child under-nutrition and overweight in low- income and middle-income countries. *Lancet*, 382(9890):427-451
- Bogic M, Njoku U, Priebe S (2015). Long-term mental health of war-refugees: a systematic literature review. *BMC Int Health Hum Rights*, 15, 29.
- Burke, E. Mc Callion, P. Mc Carron, M. eds. (2014). *Advancing Years, Different Challenges: Wave 2 IIDS-TILDA, Findings on the ageing of people with an Intellectual Disability*, the University of Dublin, Trinity College.
- Burnett A, & Peel M (2001). Health needs of asylum seekers and refugees. *BMJ*, 322, 544-7.
- Carr BG, Caplan JM, Pryor JP, Branas CC (2006). A meta-analysis of pre-hospital care times for trauma. *Prehosp Emerg Care* 10(2):198-206.
- Cemlyn S, Greenfields M, Burnett S, Matthews Z, Whitwell C. (2009). Inequalities experienced by Gypsy and Traveller communities: A review. Research Report 12. Equality and Human Rights Commission.
- Central Statistics Office (2015). Ireland's System of Health Accounts, Annual Results, 2013, Cork Central Statistics Office <http://www.cso.ie/en/releasesandpublications/er/sha/systemofhealthaccounts2013/>
- Central Statistics Office (2015). Survey on Income and Living Conditions, 2014 results. Cork: Central Statistics Office <http://www.cso.ie/en/releasesandpublications/er/silc/surveyonincomeandlivingconditions2014/>
- Central Statistics Office (2013). Population and labour force projections 2016-2046. Cork: Central Statistics Office
- Central Statistics Office (2012). Profile 8: Our Bill of Health. Dublin: Central Statistics Office
- CSO 2012. Homeless persons in Ireland, a special Census 2011 report. Dublin: Central Statistics Office.
- Central Statistics Office (2008). National Disability Survey 2006. Cork: Central Statistics Office
- Citizens Information (2016). Medical services and entitlements for asylum seekers [Online]. Available: http://www.citizensinformation.ie/en/moving_country/asylum_seekers_and_refugees/services_for_asylum_seekers_in_ireland/medical_services_and_entitlements_for_asylum_seekers.html

- Commission on Social Determinants of Health (2008). Closing the gap in a generation: Health equity through action on the social determinants of health [Online]. Geneva: World Health Organization. Available: http://www.who.int/social_determinants/thecommission/finalreport/en/ [Accessed April 2016]
- Conway R, Galvin S, Coveney S, O’Riordan D and Silke B (2013). Deprivation as an outcome determinant in emergency medical admissions. *QJM*, 106, 245-51
- Conway R, Byrne D, O’Riordan D, Cournane S, Coveney S, Silke B. (2015). Deprivation index and dependency ratio are key determinants of emergency medical admission rates. *Eur J Intern Med*, 26, 709-13
- Conway R, O’Riordan D, Byrne D, Cournane S, Coveney S, Silke B (2016). Deprivation influences the emergency admission rate of ambulatory care sensitive conditions. *Clin Med (Lond)*, 16, 119-23.
- Corcoran, P. et al. (2015). Impact of the economic recession and subsequent austerity on suicide and self-harm in Ireland: An interrupted time series analysis. *Int J Epidemiol*, 44(3), pp. 969-77.
- Cork SIMON. 2016. Homeless Watch: Rough Sleeping in Cork [Online]. Available: <https://www.corksion.com/about-homelessness/homeless-watch/>
- Crane M & Joly L. (2015). The situation of older people becoming homeless [Online]. Kings College London. Available: <https://www.kcl.ac.uk/sspp/policy-institute/scwru/pubs/2015/conf/crane24jun2015-older-people-becoming-homeless.pdf>
- Cullinan, J., Gannon, B. and Lyons, S. (2010), Estimating The Extra Cost of Living for People with Disabilities, *Health Economics* (2010), published online June 2010: doi: 10.1002/hec.1619
- Daly A, Walsh D, & NPIRS Team (2015). HRB Statistics Series 26: Activities of Irish Psychiatric Units and Hospitals 2014. HRB Statistics Series. Dublin: Health Research Board.
- Department of Children and Youth Affairs (2014). State of the Nation’s Children: Ireland 2014. Dublin: Government Publications. Available: www.dcyia.ie
- Department of Environment Community & Local Government (2016a). Homelessness Data [Online]. Available: <http://www.environ.ie/housing/homelessness/other/homelessness-data>
- Department of Environment Community & Local Government (2016b). Homelessness Report February 2016 [Online]. Available: http://www.environ.ie/sites/default/files/publications/files/homeless_report_-_february_2016_0.pdf
- Department of Health (2015). Health in Ireland: Key Trends 2015. Dublin: Department of Health
- Department of Health (2015). Healthy Ireland Survey 2015 – Summary of Findings. Dublin: Department of Health
- Department of Health (2015). Connecting for Life: Ireland’s National Strategy to Reduce Suicide 2015-2020, Dublin: Department of Health.
- Department of Health (2014). Projected demographic effect on health service costs. Dublin: Department of Health
- Department of Health (2013). Healthy Ireland: A framework for improved health and wellbeing 2013-2025. Dublin: Department of Health
- Department of Health (2012). Future health: A strategic framework for reform of the health service 2012-2015. Dublin: Department of Health
- Department of Health (2012). Value for money and policy review of disability services in Ireland. Dublin: Department of Health
- Department of Health UK (2001). Reforming Emergency Care. London: Department of Health
- Department of Justice and Equality. Ireland’s National Traveller / Roma Integration Strategy [Online]. Available: http://ec.europa.eu/justice/discrimination/files/roma_ireland_strategy_en.pdf
- Department of Justice and Equality (2015). Irish Refugee Protection Programme (IRPP) [Online]. Available: http://www.justice.ie/en/JELR/Pages/Irish_Refugee_Protection_Programme_%28IRPP%29 [Accessed 18 April 2016]

- Dublin Regional Homeless Executive (DRHE) (2016). Dublin Region Homeless Executive [Online]. Available: <http://www.homelessdublin.ie/>
- Edwards R, Charles JM, Thomas S, Bishop J, Cohen D, Groves S, Humphreys C, Howson H, Bradley P; Public Health Wales Health Improvement PBMA team (2014). A national Programme Budgeting and Marginal Analysis (PBMA) of health improvement spending across Wales: disinvestment and reinvestment across the life course. *BMC Public Health* 12;14:837.
- European Commission (2015). The 2015 Ageing Report: Economic and budgetary projections for the 28 EU member states (2013-2060). Brussels: European Commission
- Fazel M, Wheeler J, Danesh J (2005). Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *The Lancet*, 365, 1309-14
- Figueras J, Robinson R, Jakubowski E (2005). Purchasing to improve health systems performance. Buckingham, Open University Press.
- Finnerty F, & Shahmanesh M, (2016). Sexual and reproductive health in the European refugee crisis. *Sex Transm Infect*
- Gavin A, Keane E, Callaghan M, Molcho M, Kelly C, NicGabhainn S (2015). The Irish Behaviour in School aged children (HBSC) study 2014. Dublin: Department of Health & Galway: Health Promotion Research Centre, National University of Ireland, Galway
- Grenier A, Barken R, Sussman T, Rothwell D, Pierre Lavoie J (2013). Literature review: Ageing and homelessness conducted as part of the SSHRC project: "Homelessness in late life: growing old on the streets, in shelters and long-term care" (project no 435-2012-1197)
- Growing Up in Ireland (2013): Key Findings: Infant Cohort (at 5 years) No. 3 Well-being, Play & Diet Among 5 year olds. Growing up in Ireland: National Longitudinal Study of Children.
- Growing Up in Ireland (2011): Key findings: Infant cohort; No 1 The health of 3 year olds. Growing up in Ireland: National Longitudinal Study of Children.
- Growing Up in Ireland (2011). Overweight and obesity among 9-year-olds. Growing Up in Ireland: National Longitudinal Study of Children
- Growing Up in Ireland (2009): Key Findings: 9 year olds No.4 The Health of 9 year olds Growing up in Ireland: National Longitudinal Study of Children.
- Health Information and Quality Authority (2016). Annual overview report on the regulation of designated centres for older people – 2015. Dublin:HIQA
- Health Research Board: Irish National Focal Point to the EMCSSA (2016). Ireland: national report for 2015 - treatment. Dublin: Health Research Board.
- Health Information & Quality Authority (2014). Review of pre-hospital emergency care services to ensure high quality in the assessment, diagnosis, clinical management and transporting of acutely ill patients to appropriate healthcare facilities. Dublin, Ireland: HIQA.
- Health Protection Surveillance Centre (HPSC) (2016). National surveillance data on TB [personal communication].
- Health Research Board (2016). Irish National Focal Point to the EMCDDA.
- Health Research Board (2016). National Drug Treatment Reporting System. www.hrb.ie
- Health Research Board (2014). Treated problem alcohol use in Ireland: 2012 figures from the National Drug Treatment Reporting System. Dublin: HRB.
- Health Service Executive (2016). National Service Plan 2016.
- Health Service Executive (2016). Health and Wellbeing Division Operational Plan 2016.
- Health Service Executive (2016). Social Care Division Operational Plan 2016.

- Health Service Executive (2016). Mental Health Division Operational Plan 2016.
- Health Service Executive (2016). Acute Hospital Division Operational Plan 2016.
- Health Service Executive (2016). Primary Care Division Operational Plan 2016.
- Health Service Executive (2016). Delayed Discharges National Report.
- Health Service Executive Migrant Health Group (2016). Migrant Health Briefing Paper.
- Health Service Executive (2016). First responder schemes [Internet]. HSE.
Available from: <http://www.hse.ie/eng/services/list/3/nas/firstresponderschemes/>
- Health Service Executive (2015). Performance Assurance Report, December 2015.
- Health Service Executive (2015). Planning for Health: Trends and Priorities to inform Health Service Planning 2016. Dublin: Health Service Executive
- Health Service Executive (2015). Medical Workforce Planning - Future Demand for General Practitioners 2015-2025.
- Health Service Executive (2015). Smoking prevalence tracker 2015
http://www.hse.ie/eng/about/Who/TobaccoControl/Research/Smoking_in_Ireland_2015_Summary.pdf
- Health Service Executive National Social Inclusion Office (2015a). Parliamentary Question from Deputy Ruth Coppinger [PQ 10778/15] [Online]. Health Service Executive.
Available: <http://www.hse.ie/eng/about/Who/primarycare/socialinclusion/pqs/PQ%2010778%2015.pdf>
- Health Service Executive National Social Inclusion Office (2015b). PQ 44623/15: To ask the Minister for Health if he will provide in tabular form the number of persons who sought drug treatment and rehabilitation services, broken down by county or local health area for each of the past five years and to date in 2015; and if he will make a statement on the matter.
- Health Service Executive National Social Inclusion Office (2015c). PQ 44624/15: To ask the Minister for Health the number of persons who accessed drug treatment and rehabilitation services broken down by county or local health area for each of the past five years and to date in 2015; and if he will make a statement on the matter.
- Health Service Executive National Social Inclusion Office (2016). HSE Anti Human Trafficking Report (April 2016). IFPA. 2014. Opening of Specialist Treatment Service for FGM [Online]. Dublin: Irish Family Planning Association. Available: <https://www.ifpa.ie/node/563> [Accessed 16 May 2016].
- Health Service Executive (2014). Community Healthcare Organisations; Report and recommendations of the Integrated Service Area Review Group. Dublin: Health Service Executive
- Health Service Executive (2013). Five new intermediate care ambulances introduced in the Mid West [Internet]. Dublin, Ireland: HSE; 2013 [updated 2013; cited 2016 May 11].
Available from: <http://www.hse.ie/eng/services/list/3/nas/news/nascapitalinvestment.html>
- Health Service Executive (2012). Development of intermediate care services (ICS) [Internet]. Dublin, Ireland: HSE; 2012 [updated 2012; cited 2016 May 11]. Available from: <http://www.hse.ie/eng/services/list/3/nas/news/ICS.html>
- Hewett N, (ed.) (2011). Standards for commissioners and service providers, London: The Faculty for Homeless and Inclusion Health.
- Irish Community Rapid Response. About us [Internet]. Cork, Ireland: ICRR; undated [cited 2016 May 11].
Available from: <http://icrr.hc1.webtrade.ie/about-us.8.html>
- Irish Family Planning Association (2014). Opening of Specialist Treatment Service for FGM [Online]. Dublin: Irish Family Planning Association. Available: <https://www.ifpa.ie/node/563> [Accessed 16 May 2016]
- The Irish Longitudinal Study on Ageing (2014). The over 50s in a changing Ireland: economic circumstances, health and well-being. The Irish Longitudinal Study on Ageing (TILDA). Dublin: Trinity College Dublin
- The Irish Longitudinal Study on Ageing (2010). Fifty plus in Ireland 2011: First results from the Irish Longitudinal Study on Ageing (TILDA). Dublin: Trinity College Dublin

- Jigsaw (2016). Infographics. [Online] Available at: <https://jigsaw.reachoflouisville.com/Infographics/> [Accessed 11 April 2016].
- Jacob D & Kirwan G, (2016). The Tallaght Roma Integration Project: Working for Inclusion in Health Care through a Community Development Model.
- Kelly C, Gavin A, Molcho M, NicGabhainn S (2012). The Irish Health Behaviour in School-aged Children (HBSC) Study 2010. Galway: Health Promotion Research Centre NUIG.
- Kenny P, Doherty A & Asthma Society of Ireland (2016). Report: Asthma Education Programme for Traveller Health Projects. Dublin: HSE National Social Inclusion Office.
- Kringos DS, et al. (2010). The breadth of primary care: a systematic literature review of its core dimensions. *BMC Health Service Research*, 10:65.
- Layte et al (2009): ESRI Research Series No. 13: Projecting the impact of demographic change on the demand for and delivery of healthcare in Ireland. Dublin: Economic and Social Research Institute
- Lightfoot Solutions UK Ltd, Commissioned by Health Service Executive (2015). Draft Version 1. National Ambulance Service of Ireland Emergency Service Baseline and Capacity Review.
- Lord SR (2006). Visual risk factors for falls in older people. *Age Ageing*. Sep;35 Suppl 2:ii42-ii45.
- Machenbach J, Meerding WJ, Kunst AE (2011). Economic costs of health inequalities in the European Union. *J Epidemiol Community Health* 65:412-419
- Macinko J, et al. (2003). The contribution of primary care systems to health outcomes within organization for Economic Cooperation and Development (OECD) countries, 1970–1998. *Health Services Research*, 38(3):831–865.
- McCormick B, Hill PS and Poteliakhoff E (2012). Are hospital services used differently in deprived areas? Evidence to identify commissioning challenges. Oxford: Centre for Health Service Economics & Organisation (CHSEO)
- McMahon, B (2015). Working Group to Report to Government on Improvements to the Protection Process, including Direct Provision and Supports to Asylum Seekers
- McMahon J, MacFarlane A, Avalos G, Cantillon P, Murphy AW (2007). A survey of asylum seekers' general practice (GP) service utilisation and morbidity patterns. *Irish Medical Journal*, 100.
- Medical Council (2015). Medical Workforce Intelligence Report. Dublin, Medical Council.
- Mental Health Commission, 2015. Annual Report 2014, Dublin: Mental Health Commission.
- Mental Health Reform (2015). A Vision for Change Nine Years On: a coalition analysis of progress [Online]. Available: <https://www.mentalhealthreform.ie/wp-content/uploads/2015/06/A-Vision-for-Change-web.pdf>
- Migrant Health Assessment Sub-committee of HPSC Scientific Advisory Committee (2015). Infectious Disease Assessment for Migrants. Dublin: HSE Health Protection Surveillance Centre.
- Minister for Justice and Equality (2016). PQ 14-04-2016-320: Deputy Gino Kenny asked the Minister for Justice and Equality (Deputy Frances Fitzgerald) the number of refugees who have arrived here under the European Union refugee programme; and the schedule for future arrivals [6666/16] [Online]. Department of Justice and Equality. Available: <http://justice.ie/en/JELR/Pages/PQ-14-04-2016-320> [Accessed 06 May 2016].
- Morgan K, McGee H, Watson D, Perry I, Barry M, Shelley E, Harrington J, Molcho M, Layte R, Tully N, van Lente E, Ward M, Lutomski J, Conroy R, Brugha R (2008) SLAN 2007: Survey of Lifestyle, Attitudes & Nutrition in Ireland. Main Report. Dublin: Department of Health and Children
- Morrison D, (2009). Homelessness as an independent risk factor for mortality: results from a retrospective cohort study. *International Journal of Epidemiology*, 38, 877-883
- Murphy, C.M., Whelan, B.J. & Normand, C. (2015). Formal home-care utilization by older adults in Ireland: evidence from the Irish Longitudinal Study on Ageing (TILDA). *Health and Social Care in the Community*, 23, 408-418

- National Drug Treatment Centre (2016a). Central Treatment List Summary Report for period 1st January to 31st December 2015. HSE.
- National Drug Treatment Centre (2016b). CTL Suboxone Treatment List Summary Report for period 1st January to 31st December 2015. HSE
- National Suicide Research Foundation (2015). National Self-harm Registry Ireland: Annual Report 2014, Cork: National Suicide Research Foundation. National Suicide Research Foundation (2016). Statistics. [Online] Available at: <http://nsrf.ie/statistics/suicide-test/> [Accessed 11 April 2016].
- Naylor C, Parsonage M, McDaid, D, Knapp M, Fossey M, Galea A (2012). Long-term Conditions and Mental Health: The cost of co-morbidities. London: The King's Fund
- Newhouse JP, Insurance Experiment Group (1993). Free for all? Lessons from the RAND Health Insurance Experiment. Harvard University Press
- Nolan A, Smith A (2012). The effect of differential eligibility for free GP services on GP utilisation in Ireland, *Social Science & Medicine*, 74, 10, 1644 – 1651.
- O'Carroll, A (2013). SafetyNet Submission Framework Statutory Homeless Action Plan for the Dublin Region 2014-2016
- O'Connell et al (2010). The Boston Healthcare for the Homeless Program: A Public Health Framework. *American Journal of Public Health*, 100, 1400-1408.
- Office for the Promotion of Migrant Integration (2016). Resettlement Programme [Online]. Available: <http://www.integration.ie/website/omi/omiwebv6.nsf/page/resettlement-intro-en>
- O'Reilly F, Barror S, Hannigan A, Scriver S, Ruane L, MacFarlane A and O'Carroll A. (2015) Homelessness: an unhealthy state; health status, risk behaviours and service utilisation among homeless people in two Irish cities. Dublin: The Partnership for Health Equity
- O'Toole RF, Jackson S, Hanaway A, O'Donnell J, Comiskey CM, Rogers TR & O'Flanagan, D. (2015). Tuberculosis incidence in the Irish Traveller population in Ireland from 2002 to 2013. *Epidemiol Infect*, 143, 2849-55
- Parry G, Van Cleemput P, Peteres J, Moore J, Walters S, Thomas K, Cooper C (2004). The Health Status of Gypsies & Travellers in England. Report of Department of Health Inequalities in Health Research Initiative Project 121/7500
- PAVEE Point (2016). Roma [Online]. Available: <http://www.paveepoint.ie/what-we-do/programmes/roma/>
- Pierce M, Cahill S, O'Shea E (2014). Prevalence and projections of dementia in Ireland 2011-2046. http://www.genio.ie/system/files/publications/Dementia_Prevalence_2011_2046.pdf
- Quilty A, Nurse, D. (2015). Briefing Note for Chief Officers regarding Developments in the area of Intercultural Health. Health Service Executive
- Ramasubbu B, Donnelly A and Moughty A (2016). Profile of Frequent Attenders to a Dublin Inner City Emergency Department. *Irish Medical Journal*, 109, 381-391.
- Reception & Integration Agency (2015). Monthly Statistics Report September 2015 [Online]. RIA. Available: <http://www.ria.gov.ie/en/RIA/Pages/RMRSEPT2015> [Accessed 18 April 2016].
- Reed B, Bendall JC (2015). Rurality as a factor in ambulance use in health emergencies. *Australas J Paramed*. 2015;12(1).
- Richardson K, Moore P, Peklar J, Galvin R, Bennett K, Kenny RA (2012). Polypharmacy in adults over 50 in Ireland: Opportunities for cost saving and improved healthcare. Dublin, The Irish Longitudinal Study on Ageing.
- Sachs JD, 2001. Macroeconomics and Health – Investing in Health for Economic Development. World Health Organisation.
- Sahloul Z (2016). The consequences of conflict on migration and mental health. MSF Scientific Day 2016. London: MSF.

- Saltman RB, Rico A, Boerma W, eds. (2006). *Primary care in the driver's seat?* Maidenhead, Open University Press.
- Scottish Ambulance Service. *Towards 2020: Taking care to the patient.* Edinburgh, Scotland: NHS Scotland; 2014.
- Shi L, et al. (2005). Primary care, social inequalities and all-cause, heart disease and cancer mortality in US counties. *American Journal of Public Health*, 95(4):674–680.
- Staines A et al (2010). *Towards the Development of a Resource Allocation Model for Primary, Continuing and Community Care in the Health Services.* Dublin; Dublin City University.
- Starfield B, et al. (2005). Contribution of primary care to health systems and health. *Milbank Quarterly*, 83(3):457–502.
- Starfield B, Shi L (2002). Policy relevant determinants of health: an international perspective. *Health Policy*, 60:201–218.
- Thomson S, Jowett M, Mladovsky P (2014). *Health system responses to financial pressures in Ireland - Policy options in an international context.* Copenhagen; WHO Regional Office for Europe.
- Traveller Health Unit South-East Community Health Organisation (2015). *South East Traveller Health Unit Strategic Plan 2015-2020.* HSE Social Inclusion
- Walsh, K (2011). *Simon Snapshot Report* [Online].
Available: <http://www.simon.ie/Portals/1/Simon's%20National%20Health%20Snapshot%20Study%20Report%202011.pdf>
- Veser A, Sieber F, Groß S, Pruckner S (2015). The demographic impact on the demand for emergency medical services in the urban and rural regions of Bavaria, 2012-2032. *J Public Health*. 23:181-188.
- Watson, D and Nolan, B (2011) *A Social Portrait of People with Disabilities in Ireland* available at <http://www.welfare.ie/en/downloads/SocialPortraitPeopleWithDisabilities.pdf>
- World Health Organisation (2014). *The Case of Investing in Public Health: The strengthening public health services and capacity - a key pillar of the European regional health policy framework Health 2020.*
- World Health Organisation (2016). *Health sector reorientation towards SDH and reducing health inequities* [Online]. Geneva: World Health Organization.
Available: http://www.who.int/social_determinants/Health_sector_reorientation/en/ [Accessed April 2016]
- Wren, MA., Normand, C. O'Reilly, D., Cruise, S.M., Connolly, S. & Murphy, C. (2012). *Towards the development of a predictive model of long-term care demand for Northern Ireland and the Republic of Ireland.* Trinity College Dublin, Queen's University Belfast, National University of Ireland Galway
- Yumiko K et al (2012) *Profile of community dwelling older people with disability and their care givers in Ireland. Irish Longitudinal Study on Ageing (TILDA).* Dublin: Trinity College Dublin

