Scottish Government
Riaghaltas na h-Alba

Learning from 25 years of Preventative Interventions in Scotland

PUBLIC SERVICES AND GOVERNMENT

social research

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1. Executive Summary

This report includes 15 case studies of preventative interventions introduced in Scotland in the period since devolution. Cross-cutting observations relating to these case studies are set out below:

- There are a large number of post devolution examples of preventative interventions that have been shown to improve outcomes, reduce costs and reduce demands on public services.

- There is evidence to suggest that some of these interventions have been successful at reducing socio-economic disadvantage and health inequalities.

- There are several examples where Scotland has led the way in introducing new and innovative approaches to prevention. There are also examples of successful international interventions being adopted and adapted in Scotland. Many of these are in public health.

- There are a wide range of preventative 'levers' that policy makers have at their disposal. Those discussed within the case studies include population level policies and regulations, cash transfers, vaccination programmes, financial incentives, intensive support programmes, community engagement, changes to the physical environment, and income maximisation advice and support.

- Investment in the evaluation of preventative interventions has been mixed. It appears that there is a stronger culture of evaluating these interventions in some policy areas than in others. There are a limited number of evaluations that include full economic analysis or examine longer term impacts.

- The lack of investment in evaluation means there is insufficient evidence to assess the impact or value for money associated with some preventative interventions.

- Introducing preventative interventions can be challenging. These approaches often require organisations to work together in new ways, involving closer multi-agency working that closely aligns with current priorities relating to public service reform.

- There is evidence that preventative interventions have been successfully targeted to meet the needs of particular groups and provide more intensive support to those with greater need.

- There are examples of preventative interventions being informed by behavioural research, resulting in changes in behaviours and attitudes.

2. Introduction

Within Scotland, there has been a long standing interest in preventative approaches and a recognition of the important role that prevention can play in improving outcomes, realising longer term savings and reducing future demand on services.

“Prevention” is often used in different contexts to mean slightly different things. Broadly speaking it refers to intervening to prevent problems from arising in future, or reducing their severity when they do.

While recognising that there are several definitions of prevention, this report uses the public health definition, but adapts it to a broader context that goes beyond health.[1] This definition describes prevention in relation to:

- **Primary prevention:** Action that tries to stop problems happening either through actions at a population level or actions to address the cause of the problem.

- **Secondary prevention:** Action which focuses on early detection of a problem to support early intervention and treatment and reduce the level of harm.

- **Tertiary prevention:** Action that attempts to minimise the harm of a problem through careful management.

The aim of this work was to create a bank of examples of preventative interventions that have been successfully introduced in Scotland and draw out some overarching observations.

It is important to acknowledge that there is a large body of work which discusses prevention in the context of public service reform and the challenges and barriers that have prevented a more radical shift towards prevention.[2] It is hoped that this report will add to and complement this knowledge base, but also root it within the context of some of the more successful preventative interventions that have been implemented within Scotland over recent years.

This report is split into two parts. Part 1 draws together overarching observations from 15 case studies of post devolution preventative interventions. Part 2 sets out the 15 case studies. The case studies have been carefully selected to highlight a range of interventions introduced over the last 25 years and reflect a mix of national and local projects (Figure 1). They were drafted between November 2024 and March 2025.

[1] See Public Health Scotland Website

[2] Recent reports published on prevention include: IPPR (2024) Delivering sustainable public services through prevention, RSE & Audit Scotland (2024) Public service reform in Scotland: how do we turn rhetoric into reality?, Institute for Government (2024) A preventative approach to public services: How the government can shift its focus and improve lives and ‘Prevention Watch’ briefings from the Scottish Health Equity Research Unit.

Figure 1: Case studies of successful preventative interventions in Scotland since devolution

The case studies follow a standard format and have been designed to provide a descriptive and evidence based account of each of the interventions. They are largely descriptive in nature and do not seek to provide a critical appraisal of either the intervention or the associated evidence.

This report is also an opportunity to recognise, learn from and celebrate some of the important preventative interventions that have been introduced in Scotland and build the case to further prioritise prevention.

3. Benefits of Preventative Approaches

The case studies within this report begin to demonstrate the value that Scotland has derived from its investment in preventative interventions over the years. Benefits include:

- **Improved health outcomes.** Many of the interventions included in this report have directly led to measurable improvements in health outcomes. Examples include (amongst others): vaccination programmes such as the Covid-19 vaccines programme which have saved tens of thousands of lives; the National Naloxone Programme (NNP) which was associated with a reduction in opioid-related deaths of between one third and one half in the four weeks following release from prison; the introduction of 20 mph limits in Edinburgh; and improved road markings for motorcyclists which have resulted in large reductions in collisions and casualties.

- **Improved economic outcomes.** Preventative interventions have also resulted in improved economic outcomes. The latest statistics show that Fair Start Scotland (Scotland's first fully devolved employability service) has supported over 26,000 people into employment since its introduction in 2018. The Scottish Child Payment (SCP) is projected to reduce the relative child poverty rate by four percentage points, keeping 40,000 children out of relative poverty and reducing debt amongst low income families.

- **Improved longer term outcomes.** A number of the case studies have begun to demonstrate progress in improving longer term outcomes. An example of this is the Family Nurse Partnership (FNP) which is starting to evidence improvements in outcomes amongst participants on the programme over time. Demonstrating longer term impact takes time but evidence from the United States (US) where FNP has been delivered and evaluated over a much longer timeframe shows evidence that the programme has resulted in improvements in mental health, fewer interactions with the justice system and reductions in use of welfare and other Government assistance.

- **Reduced Inequalities.** Many of the preventative interventions introduced in Scotland have been successful at reducing inequalities. Examples include; Minimum Unit Pricing of alcohol (MUP) which has had a positive impact on health outcomes, particularly for men and those living in the most deprived areas, contributing to tackling alcohol related health inequalities; and Breastfeeding Friendly North Lanarkshire, a recent local initiative that has helped to increase breastfeeding rates in the most deprived areas from 16% to 26% after 6-8 weeks, improving infant and maternal health.

- **Progress in addressing complex social problems.** Several of the preventative interventions included as case studies in this report have demonstrated progress in addressing complex social problems. Scotland's HFP Programme which ran from 2019 to 2022 was successful in providing sustainable housing solutions for homeless people with complex needs. The Caledonian System effectively took a

‘whole systems’ approach to address domestic abuse, improving the safety of women and children.

- **Cost savings and reduced demand on public services.** Evidence from the case studies suggests that preventative interventions have resulted in cost savings and reduced demand on public services. For example, it has been estimated that smokefree legislation in Scotland will result in a net present value of £4.6bn over a 30 year timeframe. The internationally recognised Childsmile programme has led to large improvements in children’s oral health and cost benefit analysis found that by the eighth year of the toothbrushing programme the expected savings were more than two and a half times the costs of the programme implementation.

4. Case Study Selection

4.1 Selection process

Case studies were selected for inclusion where there was good quality evidence of impact in Scotland.[3] Case studies with particular relevance for public service reform were also prioritised for inclusion. This included case studies which involved system change, were cost-effective and potentially scalable.

The selection process began with a longlist of nearly 50 relevant case studies complied following discussion with Scottish Government analysts, a review of the literature and engagement with organisations including Public Health Scotland and the Improvement Service. Following a review of the evidence and discussions with analysts, the long list was distilled down to 15 case studies.

The final selection of case studies includes a breadth of different preventative approaches drawing on examples of primary, secondary and tertiary prevention and including examples from across a range of policy areas. For each case study, policy and analytical leads in the area were consulted to better understand the policy context and provide available evidence.

4.2 Case studies not included

The aim of this work was to highlight examples of successful preventative interventions. Therefore this report does not consider examples of preventative interventions that were ineffective, as this was out with the remit of the work.

There were some potentially good examples of preventative interventions which were not included in this study because:

i. there was a lack of robust evaluation evidence from Scotland demonstrating impact

ii. the evaluation was at an early stage and on-going (e.g. Young Persons' Free Bus Travel Scheme)

iii. the intervention was not unique to (or delivered in a distinctive way) in Scotland and had not been fully evaluated in Scotland (e.g. Bowel and Cervical Screening)

iv. the intervention was too similar to other programmes included as case studies (e.g. the Human Papillomavirus immunisation programme at age 12-13 in Scotland provided a highly effective example of prevention but the Covid-19 vaccination case study already provided an example of a vaccination programme).

[3] Case studies of a range of preventative interventions introduced in England can be found in: A preventative approach to public services by the Institute for Government

There are some exceptions to this, where case studies have been included despite not meeting all of the criteria above. This was either because the intervention was of particular interest to learning around public service reform (e.g. Breastfeeding Friendly North Lanarkshire – BFNL - which is not an impact evaluation), or because examples of impact in that policy area are hard to find, but the intervention was evidence-informed and showed some evidence of impact (e.g. see case study on the Caledonian System).

4.3 Observations on the range of case studies identified

4.3.1 Intervention types

The interventions included a mix of national programmes/ large scale programmes (e.g. Covid-19 Vaccines, FNP, the NNP and HFP) and policies (e.g. Smoking ban in Scotland, MUP, SCP), as well as smaller scale local projects (e.g. Access to Welfare Advice in Schools in Edinburgh and BFNL). The case studies included several examples of interventions that started from local pilot studies within a small number of local authorities / health boards but were then successfully scaled up to national level interventions as a result of positive evaluation evidence.

Both 'upstream' and 'downstream' interventions are included. The former focus on the root causes of a problem before it manifests (e.g. FNP, Access to Welfare in Schools), whereas 'downstream' interventions manage the consequences of problems once they have occurred (e.g. the Caledonian System, the NNP). These broadly correspond to prevention levels (Figure 2), but in reality this is more nuanced, and arguably some of the interventions could have been considered to cover more than one level of prevention (for example the case study on Housing First).

There is an established literature that outlines the additional benefits of primary prevention and early intervention in the pre-birth period and the early years of life. Investing in preventing negative outcomes for children and young people, means that the positive benefits of prevention activity have the potential to be realised across the life course and can impact on subsequent generations. In other words, the "return on investment" is typically higher for primary prevention in the early years of life.

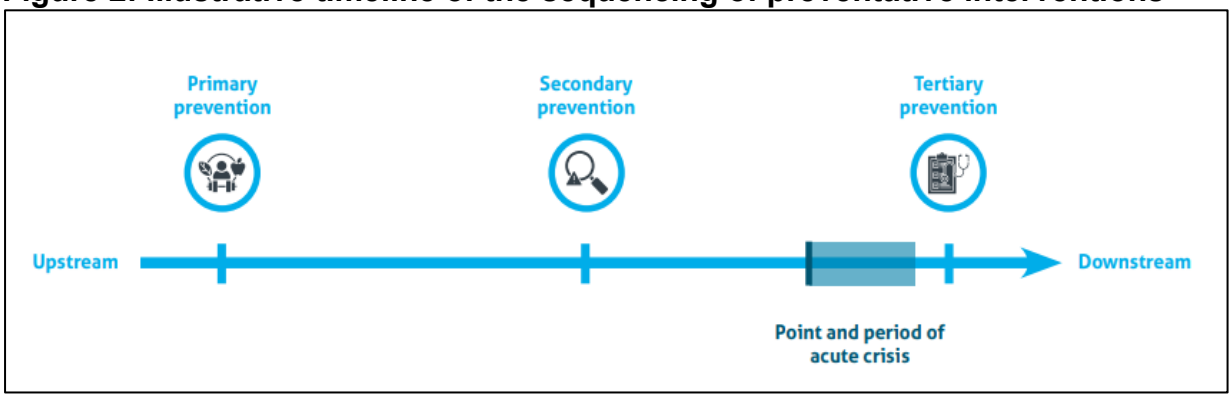
The vast majority of the case studies (11 out of 15) are examples of primary prevention. One third of the case studies were focussed early in the life course and directly aimed at pregnant women, babies and/ or young children: Financial Incentives for Smoking Cessation in Pregnancy[4], FNP, Breastfeeding Friendly North Lanarkshire, Childsmile and the Scottish Child Payment.

However, while return on investment may be lower for older age groups, there is still a positive return on investment, in many instances, to be had from investing in prevention further up the age range. Examples of secondary prevention (FSS and financial incentives for smoking cessation in pregnancy) and of tertiary prevention

[4] Primary prevention for babies, secondary prevention for pregnant women

(NNP and the Caledonian System) are included as there will be an ongoing need for effective secondary and tertiary preventative interventions.

Figure 2: Illustrative timeline of the sequencing of preventative interventions



Source: Institute for Government analysis

4.3.2 Timing and duration of interventions

The case studies highlight examples of effective preventative interventions in the period since Scottish devolution. The earliest example is smokefree legislation (2005), followed by financial incentives for smoking cessation in pregnancy (from 2007), the Caledonian System (2011) and NNP (2011).

A number of the interventions were affected by the Covid-19 pandemic and had to adapt over this time, and in several cases this also affected the evaluation. The majority of the case studies cover ongoing interventions, although in many cases the programme or delivery model has evolved over time.

4.3.3 Policy areas

Over half of the case studies relate to public health interventions, which in part reflects the stronger culture of research and evaluation that exists within health. Several more of the case studies sought to address health outcomes, such as road accident deaths/injuries or mental and physical wellbeing outcomes among long-term homeless.

The remaining case studies were drawn from; transport; early years; crime and justice; employability; housing; and social security. As might be expected, several of these cut across multiple policy areas, such as transport and health (20 mph limits, Safeguarding Vulnerable Road Users) and housing and justice (HFP).

This work did not aim to be comprehensive and there are some notable gaps in the cases studies selected. For example none of the case studies consider prevention in the policy areas of the environment or education (although the Access to Welfare in Schools case study is about an intervention situated within schools).

4.3.4 Innovative approaches to prevention in Scotland

There are several examples of where Scotland has developed new and innovative approaches to prevention. For example:

- In 2005 Scotland was the first part of the UK to introduce legislation to make it a legal right to breastfeed in any public place where children are allowed.

- In 2006 Scotland was also the first UK nation to bring in legislation to ban smoking in enclosed public spaces.

- In 2011 the Scottish Government implemented the world's first NNP, providing take-home naloxone kits to people who use drugs likely to witness an overdose.

- In 2018 Scotland became the first country in the world to implement its model of a minimum unit price for alcohol, with the World Health Organisation recommending that other countries learn from Scotland's approach.

- In 2021, the Scottish Government introduced the SCP. The SCP has been described by Professor Danny Dorling as the single policy intervention that has created the largest fall in child poverty anywhere in Europe for at least 40 years.[5]

- Safeguarding Vulnerable Road Users is another innovative approach to casualty reduction that sets out to 'prime' rider behaviour by developing unique road markings for motorcyclists which prevent them being killed or seriously injured.

- The Scottish Childsmile approach has been internationally recognised, being awarded a certificate of best practice by the European Commission in 2019.

[5] Scottish Government (2023) Building a New Scotland: Social security in an independent Scotland

5. The Prevention Evidence Base

Evaluation is essential for evidence-based policy making, as it provides an assessment of whether policies and interventions are being delivered as intended, producing the intended results and helps identify ways to improve them.[6,7] The recently published Evaluation Action Plan sets out the Scottish Government's vision for evaluation. In the forward the Minister for Parliamentary Business states:

'By helping us learn what works, and what doesn't, evaluation can give us insights, help us improve the delivery of our programmes, and help us ensure we are providing value for money. Better evaluation can mean better outcomes for the people of Scotland.'[8]

However, it also needs to be acknowledged that evaluating preventative interventions is not always straightforward. Evaluation Support Scotland point out that evaluating prevention is difficult, in particular, measuring something that has not yet happened.[9]

5.1 Strength of the evidence

While a critical appraisal of the quality of the evidence [10] was not conducted, a 'traffic light' classification of confidence in the evidence was used to inform the selection of case studies. The classification included whether a policy/ programme was evidence-informed, whether there was robust evidence on the preventative impact of the intervention, or else good process evaluation evidence and some evidence of impact. Consideration was also given to whether an evaluation had led to the improvement of programme delivery, or to additional funding for an intervention.

5.2 Types of evaluation evidence in the case studies

The case studies include interventions evaluated using a range of different methods and include qualitative, quantitative and mixed-method study designs. The case studies were selected primarily on the basis of the strength of the evidence, as their principal aim is to demonstrate examples of the actual preventative impacts (social and economic) of a policy, intervention or programme. Therefore the vast majority of case studies include some type of impact evaluation, including, for example: randomised control trials (e.g. financial incentives for smoking cessation in pregnancy, Childsmile); quasi-experimental designs with before/ after measures (e.g. NNP, 20 mph limits) and comparison sites (e.g. 20 mph limits, Safeguarding Vulnerable Road Users); theory-based evaluations (MUP, Childsmile) and natural experiments (MUP).

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[6] Scottish Government (2024) Conducting evaluation during times of change: Lessons from policy and community responses to the pandemic in Scotland
[7] What Works Growth, Understanding impact evaluation
[8] Scottish Government (2024) Scottish Government Evaluation Action Plan
[9] Evaluation Support Scotland (2020) Evaluating Prevention
[10] Such as the Nesta Standards of Evidence

It was also important to include economic evaluation, in order to highlight the cost effectiveness of preventative interventions, and whether the preventative benefits of the policy or programme justify the costs. There are fewer of these evaluations (as highlighted in a recent review of evaluations of Covid-19 interventions),[11] but they are instrumental in providing evidence on cost effectiveness, informing funding decisions and increasing accountability and transparency. Around half of the case studies included some form of economic evaluation, e.g. Childsmile, Covid-19 Vaccines, FSS, financial incentives for smoking cessation in pregnancy, MUP, the NNP and smokefree legislation.

While the focus was on the impact of preventative interventions, process evaluations were also important in demonstrating how a preventative intervention was implemented/ the extent to which it was delivered as intended, as well as exploring the range and diversity of experiences and the programme outputs. The vast majority of case studies included some form of process evaluation. These were used to inform and refine the programme (e.g. Caledonian System, Breastfeeding Friendly North Lanarkshire), to inform the impact evaluation (e.g. financial incentives for smoking cessation in pregnancy), and to help interpret the results from the impact evaluation (e.g. MUP).

Most of the case studies used multiple evaluation methods, with around half combining impact, economic and process evaluations. Case studies with all three types of evaluation are better able to provide a full understanding of whether an intervention worked, how, why and for whom, and at what cost.[12]

Only a minority of case studies took a single evaluation approach (Safeguarding Vulnerable Road Users, BFNL and Access to Welfare Advice in Schools). The most common approach was a combination of impact and process evaluations, or of impact, economic or process evaluation.

5.3 Examples of high quality, innovative and robust evaluation

Several of the case studies include examples of innovative evaluation methods, such as pioneering data linkage approaches. The effectiveness of the Covid-19 vaccines was demonstrated by EAVE II (Early Pandemic Evaluation and Enhanced Surveillance of Covid-19), which was one of the first national scale healthcare surveillance platforms in the world. EAVE II has received international recognition for its work investigating the real-world effectiveness of the early COVID-19 vaccines.

The financial incentives for smoking cessation in pregnancy case study shows how multiple studies of incentive schemes that began in Scotland influenced policy in England, informed an international evidence-base and were included in Cochrane reviews. The studies also directly resulted in a change in NICE guidance from 2021.

[11] Scottish Government (2024) Conducting evaluation during times of change: Lessons from policy and community responses to the pandemic in Scotland
[12] Scottish Government (2024) Scottish Government Evaluation Action Plan

MUP was the focus of an extensive multi-component evaluation coordinated by Public Health Scotland (PHS), which included 12 evaluations and over 40 publications.

Outcomes from the Childsmile intervention are also being investigated via a data linkage project, which involves linking multiple routine administrative national health and education datasets to evaluate the effectiveness of the programme. The evaluation of FNP also involved an innovative approach to data linkage using a natural experiment methodology.

The case study on Safeguarding Vulnerable Road Users was the first road trial of its kind and has become the largest known study of motorcyclist behaviour in the world.

5.4 International learning

Some of the case studies were based on rigorous high quality international evaluation evidence before being implemented in Scotland. Whilst programmes do not always transfer and adapt well from one geographic or cultural setting to another, there are several examples of preventative policies developed in other countries that have been successfully adopted in Scotland.

For example the FNP started in the US in the 1970s (known as Nurse-Family Partnership). It is underpinned by a body of academic literature and has received the highest possible evidence rating from the Early Intervention Foundation.[13] FNP was brought to Scotland under license and rolled out in 2010.

The Housing First approach was also developed in the US and is underpinned by compelling international evidence on the effectiveness of the approach in ending homelessness for people with co-occurring mental health and/or substance misuse issues.[14] Between 2010 and 2013, Turning Point Scotland delivered the first pilot Housing First approach in the UK.

The Caledonian System was developed from 2004, following a call from the Scottish Executive Effective Practice Unit to develop an accredited domestic violence intervention. It is informed by international evidence and best practice on what works to prevent domestic violence.

5.5 Other characteristics of the evaluations

Several of the evaluations were commissioned by the Scottish Government (SG) or an agency of the SG. There is not a complete record of the costs/ overall investment in evaluations, but where this information is available it ranges from £20,000 to several hundred thousand pounds. Putting an exact price on the cost of some of the larger programmes of evaluation work is difficult due to the mix of evaluative work underway.

[13] See Early Intervention Foundation website
[14] Mackie, P., Johnsen, S. & Wood, J. (2017) Ending rough sleeping: what works?

Many of the evaluations include examples of collaborations often (but not exclusively) with University researchers. Examples include the EAVE II collaboration for the Covid-19 vaccination evaluation and the Scottish Collaboration for Public Health Research and Policy for the 20 mph limits evaluation. Partnership approaches between evaluators and organisations such as local authorities and health boards are also common across the case studies.

The scale of the evaluations are influenced in part by the size, impact and profile of the policy or intervention. Some of the evaluations are part of a larger suite of co-ordinated studies, covering a number of study designs (e.g. FSS, MUP, SCP) or else different aspects of the intervention have been evaluated separately a number of times (e.g. Smokefree Legislation, Covid-19 vaccines, NNP, Childsmile, 20 mph limits). However, many of the evaluations are standalone / one-off evaluations of an intervention (e.g. Safeguarding Vulnerable Road Users, the Caledonian System, Access to Welfare in Schools).

While many of the case studies highlight evaluations that have now concluded, for some the evaluation programme is ongoing (e.g. Childsmile), or it is likely that the intervention will be evaluated again in the future (e.g. Caledonian System).

One of the challenges is understanding the impact of a preventative intervention over time. While some evaluations were run over a longer time frame and better able to capture this (e.g. the evaluation of Smokefree Legislation between 2005-2011, the evaluation of 20 mph limits between 2017-2020, or through longitudinal research[15] designs such as Childsmile and MUP), others took place over a much shorter timeframe and were not able to demonstrate longer term preventative impact (e.g. Caledonian System, Access to Welfare in Schools, BFNL, SCP).

There is evidence to suggest that with some more complex preventative interventions, it may take several years for the benefits to be felt. For example early evaluation evidence from Sure Start in England[16] (a network of children's centres and other services to support local families with children under 5) showed increased service usage in the early years, however longer term evaluations have demonstrated significant service demand reduction across health care usage and additional education needs alongside increased educational attainment.

[15] The following article discusses ways in which longitudinal study designs can be useful for preventative policy making: Patal, R (2020) Common policy problems and what researchers can do about them

[16] IFS (2024) The short- and medium-term impacts of Sure Start on educational outcomes

6. Approaches to Prevention

The case studies include a range of examples of different types of interventions, some of which are highlighted below:

- **Providing targeted cash transfers.** Direct cash transfers, predominantly made through the welfare system, are a key policy lever that governments can use to alleviate poverty, prevent short term hardship and improve medium and longer term outcomes.[17] The SCP case study illustrates how direct payments act as a mechanism to improve outcomes for children and families and could reduce future demand on public services.

- **Legislation and regulation.** Regulatory levers prevent, mandate or limit certain behaviours.[18] Several of the case studies show how laws were passed to introduce preventative public health measures, with accompanying regulation to aid implementation. The MUP case study shows how the Alcohol (Minimum Pricing) (Scotland) Act 2012 set a floor price below which alcohol cannot be sold, which led to changes in alcohol consumption and is estimated to have contributed to reductions in alcohol-related deaths and hospital admissions for alcohol-related causes.

  The Smoking, Health and Social Care (Scotland) Act 2005, (Smokefree legislation) is another policy case study. The law prohibits smoking in wholly or substantially enclosed public spaces to protect people from the health harms of second-hand smoke, and has led to reductions in second-hand smoke exposure, health improvements and cost savings.

- **Delivering vaccination programmes.** Vaccination programmes are the most effective way to prevent many infectious diseases. The Covid-19 vaccination programme in Scotland case study shows the concentrated focus on vaccination as part of health protection in a crisis situation which required immediate and direct action. The programme prevented tens of thousands of deaths and many more admissions to hospital.

- **Providing incentives to facilitate behaviour change.** The smoking cessation in pregnancy case study is an example of how financial incentives in the form of shopping vouchers, given to mothers at key points in their attempt to give up smoking, combined with support from existing smoking cessation services, is both effective and cost-effective. The Childsmile case study shows how the programme is designed to instil good toothbrushing habits from an early age, and includes the distribution of free toothbrush and fluoride toothpaste packs for home use.

- **Providing income maximisation advice and support**. Welfare and other/wider advice services play an important role in helping to address the complex problems associated with poverty and inequality. The Access to Welfare in

[17] Institute for Government (2024) A preventative approach to public services: How the government can shift its focus and improve lives
[18] Lowi, T. (1972) Four Systems of Policy, Politics, and Choice

schools case study shows how ‘Maximise!’ – a service embedded in schools across Edinburgh - offered parents and carers accessible welfare advice and wider services at an early stage and prevented families from reaching a crisis point. It was a cost-effective way of addressing social, economic and health inequalities by improving a range of outcomes amongst parents, carers, children and young people.

- **Delivering intensive support programmes.** Intensive support programmes are approaches which support high risk groups with multiple needs, or include the option of intensive support for particular groups. They are a key attribute of ‘person-centred approaches’ (see section 8).[19] Several of the case studies involved intensive support programmes. FNP is an example of an intensive one-to-one home visiting programme for young first time mothers, which shows measurable improvements in outcomes for children and families. Housing First is another example of a programme which gives people with high support needs settled accommodation with intensive support. It has been successful in providing sustainable housing solutions for homeless people with complex needs.

- **Conducting community engagement and outreach.** A number of components were integral to the success of increasing breastfeeding rates in North Lanarkshire, one of which was community engagement. The BFNL case study shows how nine community-based ‘Breastfeeding Champions’ were established in Community Learning and Development to promote and support breastfeeding, particularly in deprived areas. Similarly the Childsmile Community and Practice Programme is designed to address oral health inequalities, through embedding support workers within the more disadvantaged communities and offering oral health support to families with young children, in the family home.

- **Improving outcomes through changes to the physical environment.** This can be a very direct way of improving outcomes and was central to the case study on Safeguarding vulnerable road users. This road safety intervention was developed in collaboration with riders alongside academic, engineering, and government partners and led to reductions in motorcycle injury collisions at the sites where these had been installed.

Many of the types of interventions set out above led to changes in the ways in which services were delivered and organisations work together and link to wider work around public service reform.

There are other approaches available to policy makers that were not covered in the case studies. This includes interventions related to education, enforcement, screening programmes, mentoring programmes or new technologies.

[19] Scottish Government (2023) Learning from Person-Centred Approaches

7. Building Support and Collaboration for Prevention

Introducing preventative interventions can be challenging and often requires organisations to work together in new ways. The case studies highlight a number of approaches that have been taken to build support and collaboration for preventative approaches. This includes:

- **Developing evidence for change.** Many of the case studies outline how, prior to implementation, extensive work was conducted to marshal and collect evidence in order to build a case for change. For example the implementation of FNP was informed by the evidence from multiple randomised control trials in the US and England. For Smokefree legislation, research was commissioned to estimate the number of deaths from second hand smoke in Scotland, and a review of workplace smoking policies and an international evidence review of the health and economic impact of regulating smoking in public places was conducted. This evidence helped inform the public and stakeholders about key issues relevant to the proposed legislation.

- **Building political consensus and strong alliances.** In 2017 the Scottish Government passed the Child Poverty (Scotland) Act. The Act was unanimously supported by all of the political parties in Holyrood. Political consensus around the need to address child poverty paved the way for the introduction of the SCP which was championed by a range of anti-poverty organisations. The level of cross party support for the SCP is notable in the context of significant spending challenges. For example, all five of the main political parties in Scotland pledged, in their manifestos for the 2021 election, to double the SCP weekly payment. A broad consensus was central to the success of Smokefree legislation. In the lead up to the Act and in its implementation, powerful alliances were built involving a range of charities and organisations.

- **Conducting extensive public consultation.** The case studies illustrate how the introduction of new prevention interventions have often been supported by extensive public engagement. For example, prior to the introduction of Smokefree legislation a detailed public consultation had been conducted, with around 600,000 questionnaires distributed. Twelve public forum meetings were also held in different cities as part of the consultation, and an international conference was hosted. These activities likely helped build public understanding of the issues the legislation was intended to address, and opinion polls in the period leading up to the passage of the law demonstrated a steady increase in public support.

- **Co-designing interventions with users.** Some of the interventions included within the case studies were carefully developed with direct input from end users. For example, the design process for PRIME (a road safety intervention designed to improve the safety of motorcyclists) involved direct input from motorcyclists in order take a “user-centred” approach and ensure that motorcyclists accepted and used the approach. Co-design can also be an important means of improving accessibility and maximising take up. The SCP was designed in consultation with members of each of the six priority groups identified in the 2018 Child Poverty Delivery Plan. Detailed considerations in relation to how to maximise impact and take up were set out in the Equality and Fairer Scotland impact assessments.

- **Developing clear communications.** In North Lanarkshire, local media, signage, materials for families and community events were all used to communicate that the local authority was breastfeeding friendly. For the introduction of the smoking ban a cross-sector communication team was established with marketing and comms colleagues within the SE and in major charities (including ASH Scotland, Cancer Research UK, Macmillan Cancer Research, British Heart Foundation, and Chest, Heart and Stroke Scotland) and organisations (like the British Medical Association). A wide-ranging suite of communications campaigns and media was developed. A flyer to raise awareness of the legislation was sent to every household in Scotland, and a pack was also developed for MSPs to use in engaging with constituents which helped sustain political co-operation.

- **Incremental rollout and expansion.** Many of the case studies (such as FNP and Childsmile) set out how preventative interventions have been rolled out incrementally over a number of years and the model has evolved over time in response to evaluation evidence and local experience.

- **Engaging constructively with opponents.** Whilst the majority of Edinburgh residents were in favour of 20 mph limits the consultation highlighted some opposition and concern from bus operators and taxi drivers about the impact of 20 mph limits on their operations and journey times, as well as concerns over enforcement of 20 mph limits. The City of Edinburgh Council pledged to work with bus operators and road safety partners to resolve these issues.

7.1 New Ways of Working

Many of the case studies have involved new ways of working and several have involved what could be classified as complex interventions. For example, Childsmile involves a large number of stakeholders from across healthcare, education, community and the voluntary sector, with the shared goal to improve the oral health of young children and reduce socio-economic inequalities.

FNP is another example of a complex intervention, the aim of which is to improve outcomes for children and families through the development of a relational, therapeutic relationship between the nurse and the client.

Several of the preventative interventions involved breaking down silos between organisations and organisations working together in new ways. For example, the Housing First case study describes how the pathfinder programme was seen to have acted as a sector ‘disruptor’: changing how services worked together to address complex needs.

The importance of multi-agency working was clear within a number of the case studies and was integral to their success. For example, BFNL established a ‘whole system’ programme involving joint working between the North Lanarkshire council, NHS Lanarkshire, Scottish Government, and community and voluntary sector organisations. The integration element focused on embedding breastfeeding support into existing services. This included early years education, community hubs and via revised workplace policies.

This wider system of multi-agency working was also central to the success of the Caledonian System which involved working with a wide range of services, including: Children and Families Social Work, Police Scotland, the Court service and also housing, health services, drug and alcohol support services, Victim Support, Women's Aid and a range of other voluntary and statutory services.

8. Targeting Preventative Interventions

The majority of the case studies (10 out of 15) highlight interventions which have either been targeted at particular groups, or are a mix of targeted and universal support (e.g. Childsmile, Access to Welfare in Schools and BFNL). Examples of particular groups targeted in the case studies include; homeless people with complex needs (HFP), young first-time mothers (FNP), domestic abuse perpetrators and their (ex-) partners and children (the Caledonian Programme), and pregnant women living in deprived communities (smoking cessation in pregnancy).

A recent Scottish Government review set out the key attributes of person-centred approaches, which are: holistic; ethical; relational; strengths/ assets based and intensive.[20] There were a number of examples of holistic support, meaning that they 'start from a holistic understanding of the person and their needs, acknowledging the complexity and individuality of people's lives.'[21] Examples include the HFP - a holistic intervention that not only addresses housing needs but also the complex wider needs that drive homelessness, and FNP – which provides support services for families with very young children at risk of poor outcomes.

Many of the case studies describe examples of person-centred or family-centred interventions (family-centred interventions fall under the umbrella term of person-centred interventions 'views the family as a whole, understanding the dynamics between its members, and the influence of this on their experiences). Examples of these include the FNP, the HFP, FSS, the Caledonian System and Access to Welfare in Schools). BFNL emphasised person-centred care by focusing on the individual needs of breastfeeding mothers and their families.

8.1 Prevention as a means of addressing inequalities

Several of the case studies illustrate how both targeted and universal programmes have been successful at reducing socio-economic inequalities. Examples include:

- The Childsmile programme which has supported a reduction in socio-economic health inequalities by reducing the gap in oral health inequalities between the most and least deprived quintiles of primary one aged children.

- The MUP case study which showed that the greatest reduction in deaths wholly attributable to alcohol was seen amongst men and those living in the 40% most socio-economically deprived areas in Scotland, indicating a strong potential to address health inequality.

- Financial incentives for smoking cessation - smoking in pregnancy is highly concentrated in more deprived communities, and the incentives for smoking cessation during pregnancy were found to be effective for women living in these communities.

[20] Scottish Government (2023) Learning from Person-Centred Approaches
[21] Scottish Government (2023) Learning from Person-Centred Approaches

8.2 Behaviour change

A number of the interventions described in the case studies were informed by behavioural research, or were designed to lead to changes in attitudes and behaviours. For example:

1. The delivery of the Childsmile programme was informed by behavioural science, used to introduce changes to incentivise dentists to apply fluoride varnishes and improve training and guidance for people working with disadvantaged families.

2. The BFNL case study shows how the model was designed to enable changes to attitudes to breastfeeding at the community level and over time, working with the youngest generation to build that knowledge from the start, develop, design and build local facilities to accommodate breastfeeding mothers and promote breastfeeding wherever possible.

3. Project PRIME is a collaborative intervention which brought together behavioural research, engineering design and government policy to improve motorcycle rider behaviour and prevent them being killed or seriously injured.

Examples of preventative case studies that are either informed by behavioural research or have demonstrated changes in behaviour span across legislation and regulation (MUP, 20 mph limits, Smokefree legislation), financial incentives (smoking cessation in pregnancy), examples of changes to the physical environment (e.g. safeguarding vulnerable road users) and holistic and intensive support programmes (e.g. BFNL, FNP).

Many of the case studies also highlight attitudinal changes, illustrated by some of the following quotes:

‘While the ultimate aim of the Caledonian Men’s Programme is behaviour change, given the relationship between behaviour, feelings and values, it also works intensively around men’s beliefs and attitudes.’ [22]

‘One of the teachers spoke about the need for young people to have the confidence to overcome the generational poverty that existed in the community and to see that employment could provide both a source of income and a sense of achievement and fulfilment. This was echoed by several parents who said that their attitude to employment had changed and they felt more comfortable in considering opportunities beyond the zero hours contacts they had been offered.’ [23]

[22] Scottish Government (2016) Caledonian System Evaluation: Analysis of a programme for tackling domestic abuse in Scotland
[23] Improvement Service (2021) Access to Welfare advice in schools

9. Conclusion

The importance of making the shift to prevention has long been recognised. The Christie Commission report in 2011 stated "A cycle of deprivation and low aspiration has been allowed to persist because preventative measures have not been prioritised."[24] And more recently the First Minister has re-iterated his support for prevention stating '"We must change the model of service delivery to promote positive outcomes, prioritise prevention and reduce demand for future services."[25]

Preventative policy making and implementation is challenging.[26] Whilst recognising this, and that there is clearly much more that can be done, it is important to acknowledge the progress that has been made over the last 25 years in Scotland. The case studies within this report illustrate that there is a strong foundation of preventative interventions that can be learnt from and built upon.

The 15 case studies illustrate how preventative interventions introduced in Scotland have led to improvements in outcomes, cost savings and reduced demands on public services. The case studies are taken from a range of policy areas, and include a mix of primary, secondary and tertiary interventions.

They include examples of fresh policy thinking, where Scotland has led the way internationally. They also illustrate an ability to learn from, introduce and scale up interventions that have been successful in other countries.

Collectively the case studies demonstrate the range of preventative tools available to policy makers and underline the importance of good quality monitoring and evaluation to understand the short, medium and long term impact of interventions and fine tune policy delivery.

Often the preventative interventions have involved organisations working together in different ways to provide person-centred support in order to address complex social problems. But perhaps most importantly, they demonstrate the value of preventative approaches in addressing ingrained, sometimes intergenerational, patterns of poverty and inequality.

[24] The Christie Commission on the future delivery of public services (2011)
[25] Introduction to 2024-25 Programme for Government
[26] Scottish Health Equity Research Unit (2025) Prevention Watch - March 2025

Part 2: Case Studies

1. 20 mph Limits

20 mph speed limits in Edinburgh: reducing speeds across the city to improve public health outcomes

In 2016 Edinburgh was the first city in Scotland to introduce 20 mph limits on a citywide basis. The intervention has been robustly evaluated and shown to reduce speed, leading to reductions in collisions and casualties. Public perceptions of safety and compliance with the speed limits also increased. The findings suggest that 20 mph limits can be implemented at scale, lead to positive public health benefits and are likely to be cost-effective.

Introduction

The roll out of 20 mph speed limits in Edinburgh is a primary preventative road safety and public health intervention. The intervention involved the implementation of 20 mph legislation, signage, enforcement, education and awareness-raising. The aims of the intervention were to reduce deaths and casualties, encourage walking and cycling and create a calmer, more pleasant environment. The intervention was designed, implemented and enforced in collaboration with a range of partners from across the public sector.[1]

Context

There is a well evidenced relationship between traffic speed and road safety. Both the number of accidents and the severity of accidents increases with speed.[2] The 2014 City of Edinburgh Council (CEC) Local Transport Strategy (LTS) sets out evidence that the risk of fatal injury to pedestrians is eight times higher at 30 mph than 20 mph, and the chance of survival halves again between 30 mph and 40 mph.[3] Similarly for motorists, the probability of serious injury to a belted front seat car occupant is three times higher at an impact speed of 30 mph than at 20 mph.[4]

The main policy goal of 20 mph limits is to reduce road traffic collisions and casualties by slowing down traffic. One of the Scottish Government's primary visions in the 2009 Road Safety Framework to 2020 was to:

'…[reduce] the numbers of those killed and those seriously injured, with the ultimate vision of a future where no-one is killed on Scotland's roads, and the injury rate is much reduced.' [4]

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[1] City of Edinburgh Council, 20-mph toolkit Edinburgh
[2] Fondzenyuy, S. K, Turner, B. M, Burlacu, A. F, & Jurewicz, C. (2024). The contribution of excessive or inappropriate speeds to road traffic crashes and fatalities: A review of literature.
[3] City of Edinburgh Council Local Transport Strategy 2014–2019. Edinburgh: City of Edinburgh Council; 2014.
[4] Scottish Government (2009) Scotland's Road Safety Framework to 2020

Traffic speed was a key component of Vision Zero',[5] set out in Edinburgh's LTS in 2014, which emphasised that vehicle speed is 'the most important single factor in the severity of road collisions, and urban speeds need to reduce if the Council is to move towards Vision Zero.'[3]

Scotland's Road Safety Framework to 2030 (published in 2021) states that 'the costs of preventing casualties are usually substantially less than the actual costs of treating these casualties.'[6] In 2019 the cost of collisions in Scotland was estimated to be over £1.1billion, highlighting the economic benefits to preventative interventions which reduce the risk of casualties on Scotland's roads.[6]

Reduced traffic speeds also have wider health and environmental objectives. Lower speeds contribute to 'place making' and improving the 'liveability'[7] of an area and can encourage walking and cycling and create a calmer, more pleasant environment.[8] These objectives were also integral to 'Vision Zero' in Edinburgh's LTS.[3]

There has been a gradual move towards implementing 20 mph speed limits in Scotland over time. The Scottish Government provided almost £50 million funding to local authorities between 2003 and 2008 for the introduction of 20 mph schemes at schools, and by March 2008, 20 mph speed limits were in place at 83% of schools.[4] In 2009, the Scottish Government encouraged local authorities to implement 20 mph schemes by schools and in residential areas in its Road Safety Framework to 2020.[4]

There is a longstanding road safety inequality due to socio-economic disadvantage, whereby the overall casualty rate in the most deprived 10% Scottish Index of Multiple Deprivation (SIMD) is higher than for the least deprived SIMD.[6] Scotland's Road Safety Framework to 2030 states that lower speeds, especially in 20 mph speed zones, reduce the number of casualties, and this is particularly true for disadvantaged areas and communities, and could therefore help to reduce inequalities.[6]

Response

In Edinburgh, discussions about 20 mph speed limits had been happening since around the year 2000, and were subject to public and stakeholder consultations.[3]

In March 2012, a pilot project of 20 mph speed limits was trialled in south Edinburgh, to assess the viability of relying mainly on signs rather than on physical traffic calming measures (such as speed humps, chicanes, road narrowing etc.)[9] The results of the trial were positive, with 79% of the 1,000 people surveyed in the pilot

[5] Vision Zero means the overarching road safety vision is to work towards the provision of a modern road network where all users are safe from the risk of being killed or seriously injured.
[6] Scottish Government (2021) Scotland's Road Safety Framework to 2030
[7] Urban liveability describes communities that are safe, attractive, socially cohesive and inclusive, and environmentally sustainable.
[8] ROSPA (2023) Road safety factsheet: 20mph zones and speed limits
[9] City of Edinburgh Council, Our story so far – 20mph toolkit Edinburgh

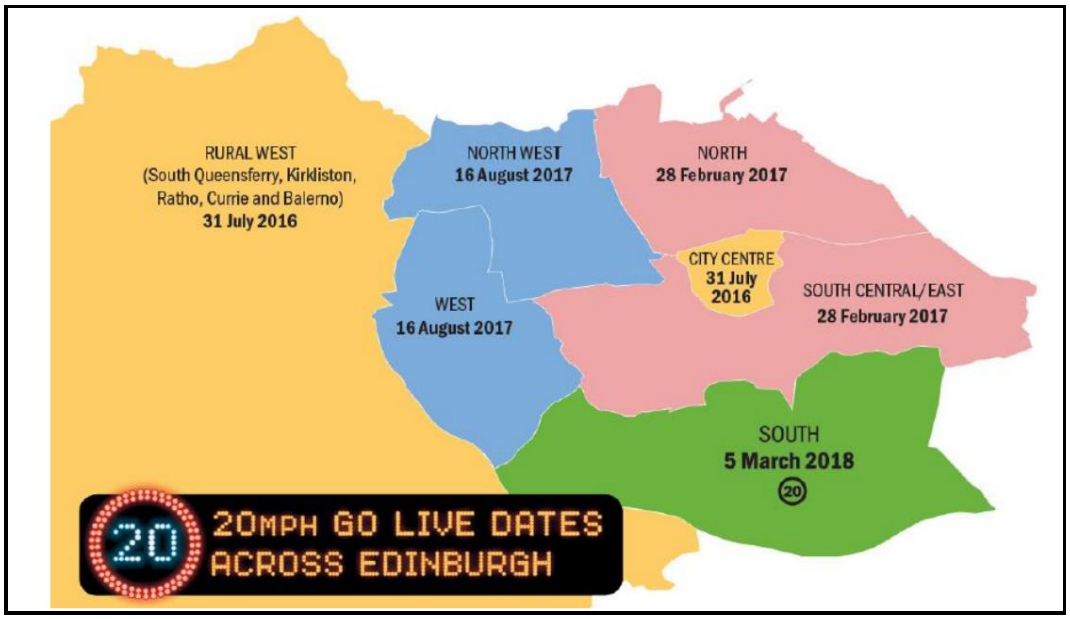
area supportive of the new speed limit and 4% opposed to it. This pilot was critical in gaining widespread public support for the wider roll-out in Edinburgh.[10]
In June 2014, Edinburgh residents were consulted on extending the pilot to a citywide scheme. The majority of the respondents were in favour and in January 2015 a public consultation was held to determine which roads to include.[9] The consultation highlighted some opposition and concern from bus operators and taxi drivers about the impact of 20 mph limits on their operations and journey times, as well as concerns over enforcement of 20 mph limits. The City of Edinburgh Council pledged to work with bus operators and road safety partners to resolve these issues.[3]

Intervention

The intervention involved the implementation of 20 mph legislation, signage, enforcement and education and awareness-raising across all streets that fell within the CEC 'citywide' area. This is distinct from 20 mph zones which include traffic-calming measures like speed bumps.

The 20 mph network was implemented under one citywide speed limit order, approved in January 2016 which allowed works to start.[9] Twenty mph limits became law and enforceable on 31 July 2016, and the roll out began in July 2016 and was complete by March 2018.[10] Prior to the intervention, half of Edinburgh's streets already had 20 mph speed limits but the intervention increased this, and the city was split into seven implementation zones, implemented over phases. Each phase lasted around 16 weeks, over a period of 24 months.[10]

Figure 1: Timing and location of the 20 mph limit's introduction by phase



Source: City of Edinburgh Council Transport and Environment Committee (2019) Evaluation of the 20mph Speed Limit Roll Out

[10] Jepson, R. et al (2022) Developing and implementing 20-mph speed limits in Edinburgh and Belfast: Mixed-methods study

The cost of the scheme in Edinburgh was £2.81 million,[11] and it was jointly funded by the CEC's Transport Capital Budget, the Scottish Government and SUSTRANS.[10] Over 29 public sector stakeholder groups were involved in the implementation, decision-making and evaluation processes, including: the council, charitable organisations (Sustrans, Living Streets), public transport companies (bus and taxi), driver groups, the local health board, Transport Scotland, the Scottish Fire and Rescue Service and 159 members of the general public.[10,1]

Twenty mph speed limit interventions had been introduced in other UK cities and were expected to result in both lower traffic speeds and fewer casualties, and an improvement in the perception of safety and a subsequent increase in active travel. However, there was a limited evidence base on the effectiveness of 20 mph speed limits prior to the intervention in Edinburgh, and improving this was a key reason for the evaluation.

Monitoring and Evaluation

An independent evaluation of the public health impacts of the introduction of 20 mph limits in (a comparative study of) Edinburgh and Belfast was conducted by the Scottish Collaboration for Public Health Research and Policy (SCPHRP). The evaluation involved researchers from a number of Universities as well as partners from Public Health Scotland and SUSTRANS.

The evaluation was funded by the National Institute for Health and Care Research (NIHR), and the funding ran from March 2017 until August 2020. A lengthy study allowed data to be collected a year after the implementation of the 20 mph limits in Edinburgh. Driver behaviour can take time to change and stabilise so this enabled sufficient time to have passed to ascertain whether the behavioural changes were temporary or more enduring.[10]

The evaluation was a robust mixed-methods study that included a process, impact, policy and economic evaluation of two natural experiments.[10] These comprised before-and-after (controlled when possible) studies in Edinburgh and Belfast, using matched geographic control zones whenever possible. Twenty mph limits had been introduced in Belfast city centre (in contrast to citywide) from 2000 to 2018. When the study results were published in 2022, this was the most extensive evaluation of 20 mph limits in the UK.[10]

The objective was to evaluate and understand the processes and effects of developing and implementing 20 mph speed limits in both cities. The evaluation examined:

(1) the political decision-making that led to the schemes;
(2) how the schemes were delivered (the 'how' and 'what' of implementation);
(3) the impact of the schemes on speed, collisions and casualties, perceptions of the safety and pleasantness of people's home and work environments, and impact on active travel;

[11] City of Edinburgh Council (2015) Transport and Environment Committee. 20 for Edinburgh: 20-mph Network Implementation.

(4) whether or not the schemes were a sensible financial investment.

The main outcomes measured were; speed, type and severity of road collisions, public perceptions of safety, mode of travel, driver behaviour and attitudes, and liveability.

There were some limitations. For example, the data did not allow for an analysis of: active travel outcomes; the impact on health inequalities; and an economic evaluation.[10]

Key Findings

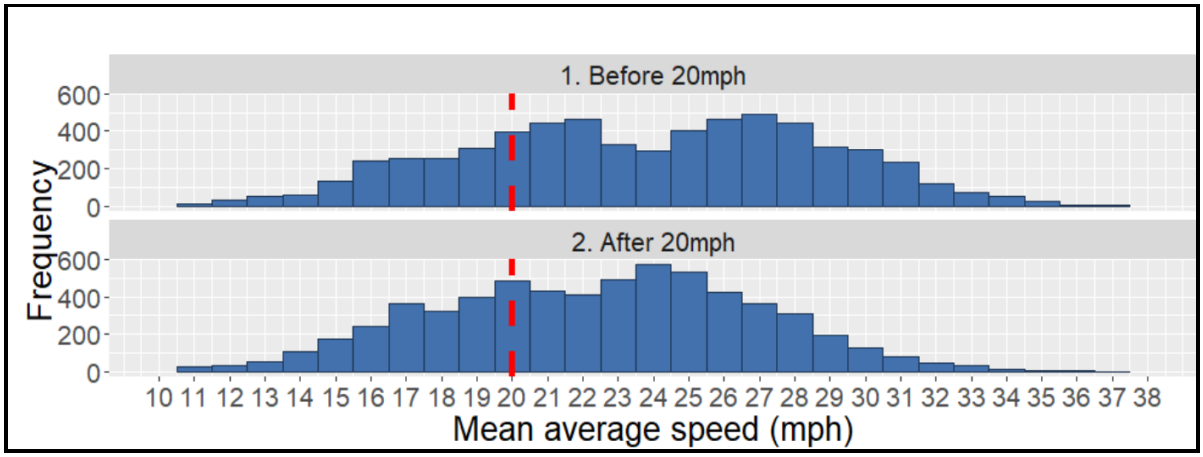
The evaluation found that the citywide implementation of 20 mph limits was effective at reducing speed in Edinburgh, leading to reductions in collisions and casualties. It found that 20 mph limits can lead to similar public health outcomes as 20 mph zones, and have the advantage of being less costly and less intrusive. However, to be most effective they may need to be implemented at a citywide level, or in areas where speeds are high, and be combined with significant education and awareness-raising.[10]

'These findings suggest that 20 mph limits can be implemented at scale, lead to positive public health benefits and are likely to be a sensible financial investment.' [10]

a) Reductions in speed

The speed data used in the analysis covered 66 streets where the speed limit was reduced from 30 mph to 20 mph as part of the roll out. Mean speeds reduced by 1.34 -mph (from 23.63 mph 'before' to 22.29 mph 'after'), at 12 months. Figure 1 below shows how the number of vehicles with average speeds of 20 mph or less increased following the rollout.

Figure 2: Average speeds on 20mph streets in the City of Edinburgh[12]



Source: City of Edinburgh Council Transport and Environment Committee (2019) Evaluation of the 20mph Speed Limit Roll Out

[12] Data for this histogram consists of 12672 observations; average speed observations for 192 time points for each of the 66 monitored sites.

b) Reductions in collisions and casualties

The overall percentage reduction in casualty rates was 39%, and in collision rates was 40%. The percentage reduction for each level of severity was 23% for fatal casualties, 33% for serious casualties and 37% for minor casualties.

c) Cost savings

It was not possible to produce a full economic evaluation, however, the interim economic evaluation suggested that it is likely that the benefits of the 20 mph limits in Edinburgh, associated with the reduction in collisions and casualties, would exceed the costs. There was a small increase in liveability, and these observed increases strengthen this conclusion.[10]

Separate analysis by the CEC in 2022 applied Department for Transport estimates of the monetary value that can be attached to types of road traffic collision involving personal injury (fatal, serious and slight), at 2020 prices. It found the total monetary saving as a result of the reduction in collisions in Edinburgh since implementation of the 20 mph limits, equates to £38,582,514.[13]

d) Public perceptions

There was an increase in support for 20 mph and rule-following after implementation which was supported by the qualitative data.

e) Implementation

The Edinburgh scheme was broadly implemented as intended in terms of signage, education and enforcement. The pre-implementation phase and pilot schemes were found to be important in gaining public support, and framing political attitudes.

The evaluation found that important factors in the implementation of the scheme (in both cities) included local histories, the political context, local policy goals, local priorities and strong leadership, (individual politicians were pivotal in progressing the 20 mph limits).[10] Opposition parties did not provide strong opposition to the intervention and community councils were actively supportive, and considered critical in giving the politicians sufficient 'weight' to drive the initiative forward.[10]

A dedicated '20 mph team' within CEC was created to help navigate challenges in the roll-out of the intervention. The report wrote: 'the creation of a dedicated official, and strong partnership and joined-up working, were identified as key facilitators of broad implementation and the delivery of a tailored education and awareness-raising campaign in Edinburgh'.[10]

[13] City of Edinburgh Council Transport and Environment Committee (2022) Evaluation of the 20mph Speed Limit Roll Out - Three Years Post-Implementation

Learning and Next Steps

Recent evidence from Wales further demonstrates the impact of 20 mph speed limits on reducing accidents and improving community safety. The latest police recorded collision statistics from Wales (from January 2025), covering the period of July to September 2024, provide the first year of statistics since the default 20mph speed limit was introduced. These show collisions on Welsh roads at their lowest level for that quarter since records began.[14]

Scotland's Road Safety Framework to 2030 commits to giving all appropriate roads in built up areas a speed limit of 20 mph by the end of 2025.[6,15] The roll out is intended not only to enhance road safety but also to encourage more walking and cycling, supporting healthier, more sustainable travel choices.[16,17]

This was a complex intervention involving many partners, and collaboration was instrumental to the successful delivery of the rollout of this policy. A 20 mph task group has been exploring the most effective way of achieving that commitment in Scotland, and in December 2023 it was agreed to support local authorities to expand 20 mph speed limits where appropriate as the optimum route to implement.

The Scottish Government published guidance and provided £4 million of funding in 2024-25 to local authorities to enable them to deliver this. This is supported by a comprehensive Implementation Guidance to ensure consistency and effectiveness across Scotland.

[14] Welsh Government (2025) Police recorded road collisions: July to September 2024
[15] Global Road Safety Partnership, International Federation of Red Cross and Red Crescent Societies (2023) Speed management: a road safety manual for decision-makers and practitioners
[16] Scottish Government (2022) A Stronger & More Resilient Scotland: The Programme for Government 2022-23
[17] Scottish Government (2023) Equality, Opportunity and Community: Our Programme for Government

2. Access to Welfare Advice in Schools

Maximise! – A cost effective early intervention of holistic welfare advice and support services in Edinburgh schools

Maximise! was a service embedded in schools across Edinburgh that offered holistic welfare support to parents and carers. It was delivered in partnership with local clusters of schools and specialist advice services, in a non-judgmental and person-centred way. The evaluation found that the service provided a cost-effective way of addressing social, economic and health inequalities through improving a range of outcomes amongst parents, carers and children and young people.

Introduction

Maximise! was a primary preventative intervention which delivered welfare and money advice, family support and employability services in primary and secondary schools across Edinburgh. The intervention offered parents and carers accessible and person-centred welfare advice and wider services at an early stage, with the aim of improving outcomes and preventing families from reaching a crisis point. The project was based on a set of core principles but delivered flexibly in a way that best met the needs of local people. It was delivered in partnership with schools, health services, children's services and the third sector, with the shared goal of tackling poverty and inequality.

Context

Welfare and other/wider advice services can play an important role in helping to address the complex problems associated with poverty and inequality. Yet there is evidence that people often encounter multiple barriers accessing these services. Barriers are often related to the design and delivery of services, for example:

- a lack of awareness about services
- concerns around the complexity of the application process (e.g. to access non-universal benefits and services)
- stigma, associated with take up
- language/cultural/social barriers
- a perception of ineligibility
- the calculation that claiming is not worthwhile [1]

However, there is a strong evidence base regarding what works in terms of overcoming these barriers and increasing the take up of services. Consideration of where advice services are provided and who provides them is key to this. For example, evidence suggests that there are additional advantages to an advice worker being co-located in a familiar community setting such as a GP practice or

[1] Unpublished Scottish Government paper 'Maximising uptake of targeted interventions'

school, even when there are existing advice services in the locality.[1,2] A recommendation from a trusted professional like a health professional or teacher also encourages access. Co-located local services are also more accessible and convenient for parents/ carers due to the familiarity of the setting, and also for those who have difficulty in attending more 'centralised' services due to poor health, poverty, lack of transport or psychological barriers.[3]

Response

The Tackling Child Poverty Delivery Plan 2018-22 emphasised the importance of income maximisation and financial checks as a means of reducing inequalities and making progress towards Scotland's child poverty targets.[4] In 2021 the Scottish Government refreshed its strategy to increase benefit uptake including a commitment to make additional funding available to support income maximisation.[5]

A number of similar approaches began to emerge in different local authorities across Scotland.[6] While approaches differed, they shared similar core underpinning principles, which included a focus on ensuring:

- services are person-centred and developed using co-production methods
- services are flexible and adaptable to meet individual needs
- services are accessible and non-judgemental
- access and referral routes are simple and facilitate engagement
- staff providing services are able to build effective relationships and are embedded in the school team and have the right attitude
- services are connected to the local community.[7]

Intervention

The Maximise! model was developed in August 2018 through a partnership between Edinburgh Health and Social Care Partnership (HSCP), City of Edinburgh Council (CEC), Community Health and Advice Initiative (CHAI), Children 1st and Capital City Partnership (CCP). Their shared aim was to produce 'a long term, holistic model for assisting families out of poverty'.[8]

Maximise! in Edinburgh was developed from an earlier pilot in South East Edinburgh (Liberton Cluster)[9] in 2018. In 2019 it was expanded into a city-wide intervention,

[1] NIHR (2024) The benefits of co-locating mental health interventions in communities
[2] Improvement Service (2024) Welfare and Health Partnerships 'Test and Learn' Programme Evaluation
[3] Improvement Service (2021) Access to welfare advice in schools
[4] Scottish Government (2018) Every child, every chance: tackling child poverty delivery plan 2018-2022
[5] Scottish Government (2021) Maximising incomes and increasing access to benefits
[6] Improvement Service (2020) Tackling Child Poverty in Scotland: Examples of Policy and Practice - Income from Benefits
[7] Improvement Service (2021) Access to welfare advice in schools
[8] Improvement Service (2021) Access to welfare advice in schools
[9] City of Edinburgh Council services are organised into four localities. In each locality there are 'cluster'; in which primary schools are organised or clustered around a secondary school.

covering primary and secondary schools across 4 school clusters. These were selected on the basis of level of deprivation and on local willingness to participate.

The intervention ran over one school year, from August 2019 until June 2020. Schools closed in March 2020 due to the COVID-19 pandemic, and so the service continued either by telephone or digitally between March and June 2020. The cost of the Edinburgh wide initiative was £426,500, and it was co-funded by CEC Education Service 'Care Experienced Attainment Fund' (£358,500) and Pupil Equity Funding from participating schools (£68,000 with each cluster committing around £16k each). Maximise! in Edinburgh involved a welfare rights worker embedded within primary and secondary schools who provided parents/carers with access to wide-ranging support,[10] and/or connected them to other services, either directly or through a referral. The model supported those who might not otherwise have sought help, particularly care experienced families and those experiencing health, social and economic inequalities. It sought to promote the financial resilience, health and wellbeing of families and to contribute to increasing the attainment of children and young people.[11]

Maximise! involved new styles of integrated partnership working at the school 'cluster' level and took a person-centred[12] approach, providing holistic support.

The intervention was novel in that it was delivered in partnership with the voluntary sector and provided access to three pillars of support in schools: welfare and money advice, family support, and employability services. There was an integrated team of three staff in each locality cluster. It was delivered by specialist workers based within the school and part of the school team, but employed and managed by Children 1st (intensive family support) and CHAI (advice on income maximisation and employability).[13]

Access and referral routes were also tailored to individual schools based on local needs. Specialist workers targeted parents/ carers by attending parents nights, school fairs etc. or referrals from staff following pre-existing knowledge/concerns about a child/ family, and teachers acted as early intermediaries.

Monitoring and Evaluation

A Social Return on Investment (SROI)[14] evaluation of Maximise! in Edinburgh measured the social and economic benefits of providing parents/ carers with access to a range of support services provided by specialist workers embedded in schools. Pre-existing evidence shows the effectiveness of providing welfare advice in community based settings, as a non-stigmatising approach to early intervention.[15]

[10] Includes: Family Support; Welfare Rights Advice; Money/Debt Advice; Housing Advice/Tenancy sustainment; Support with/Representation at appeals or tribunals and Employability Advice/Support.
[11] Improvement Service (2021) Access to welfare advice in schools
[12] Scottish Government (2023) Learning from Person-Centred Approaches
[13] Improvement Service (2021) Access to welfare advice in schools
[14] An evaluative SROI measures the changes that a project or activity has delivered.
[15] Scottish Government (2021) Covid Recovery Strategy : For a fairer future

This analysis built on this evidence base by examining the benefits from the perspective of parents / carers, children, staff and funders.[16]

The study was conducted during 2019 and 2020 by the evaluation manager at the Improvement Service (IS) who specialises in SROI evaluations, with support from Maximise! staff. It was funded by the Partners (EHSC partnership and CEC), and an advisory group with representatives from all key partners provided support to the IS. SROI is an approach underpinned by a set of principles that measures and accounts for a broad concept of value. It systematically incorporates social, environmental, economic and other values into decision-making processes. The approach measures the social and economic change/ benefits that a service or activity delivers from the perspective of the key beneficiaries, and so the perspectives of the different stakeholders are at the centre of the valuation process. [17]

The evaluation included collecting qualitative, quantitative and financial information:

- 68 parents/carers were consulted using structured questionnaires, 2 focus groups and an SMS survey
- 18 individual interviews with teachers and parent/carers were carried out as proxies for children/young people
- 6 structured individual interviews and 1 focus group with staff
- 6 structured individual interviews were conducted with funders

The closure of schools due to the COVID-19 pandemic meant the intervention could not run as intended over the course of the full academic year, and the delivery model was adjusted between March and June 2020. This affected data collection for the evaluation. The authors concluded that further benefits would have been observed had the program ran as intended, and the interruption is likely to have led to an underestimation of the value of Maximise! in 2019/20.[18]

Outcomes for children and young people were proxies, based on observations from parents/ carers and teachers, and so there is less confidence in these results.

Key Findings

a) Improved outcomes

The outcomes measured are presented by group, in Table 1.

[16] Improvement Service (2021) Access to welfare advice in schools
[17] Better Evaluation, Social return on investment
[18] Improvement Service (2021) Access to welfare advice in schools

Table 1: Outcomes by group

Outcome	Group	Numbers reporting
Improved relationship and feeling safe and secure	Parent/carer	213 out of 301
Being more positive about the future and having an increased ability to attain goals	Parent/carer	210 out of 301
A reduction in stress and worry	Parent/carer	222 out of 301
Improved chances by better engagement with school (for example, attendance, concentration, attainment, etc.)	Children/young people	220 out of 901
Better family relationships in a secure and safe setting	Children/young people	504 out of 901
Improved wellbeing (e.g. child feeling less stressed, more able to understand and deal with their emotions, feeling more positive about the future, etc.)	Children/young people	549 out of 901
Increase in skills and job satisfaction	Staff	13 out of 13

All schools noted the Maximise! team's ability to connect and engage with parents who were unlikely to have accessed support in the absence of the programme, empowering and increasing the confidence of those they supported. One school staff member said:

"Sometimes parents refuse help at first as they are too proud - the service is an open door and parents can drop in and get confidential advice - and keep this to themselves."

Operating in clusters schools facilitated strong relationships and networks both within local communities and amongst the staff team. This was a new way of working for most of this staff, and positively received: 'Being based within a school cluster, offers a whole family, trauma-informed and person-centred approach via one single gateway to address the complex issues that often impact families who are affected by poverty.'[19]

A person-centred approach meant that different local needs and issues could be addressed in each school, with families able to select the areas of support they needed and 'move through and engage with' the model of support in a manner and pace which suits their situation.'[20] Advice staff also provided training and briefings for school staff on relevant topics.

The Maximise! model of service delivery was universally welcomed. However, some staff reported that while once established, relationships with schools were generally good, it could be difficult to make the initial contact, depending on the size of the area covered and the personalities involved.

[19] Improvement Service (2021) Access to welfare advice in schools
[20] Improvement Service (2021) Access to welfare advice in schools

b) Cost savings /social return on investment

Financial proxies were identified and agreed by stakeholders or their proxies (children and young people), which allow a monetary value to be placed on the changes experienced by different groups. The analysis considered the length of time that changes would be sustained, 'deadweight' (whether an outcome may have occurred to some extent without the intervention), 'attribution' (external factors which could have contributed to the outcome), and 'displacement' (when an outcome is achieved but at the expense of another).

The SROI analysis found that every £1 invested would generate around £24 of benefits. The authors applied a 'sensitivity analysis'[21] which adds robustness to the findings, which showed the value of the benefits derived ranges from £20 to £28.[22]

The SROI calculation is expressed as a ratio of return from investment. It is derived from dividing the monetised value of the sum of all the benefits by the total cost of the investment. In this report the total value is £10,357,625; the total investment figure in the same period to generate this value is c£ £426,500.[23]

For an investment of around £420,000 funders are able to deliver benefits for parents/ carers valued at just over £4 million. The potential value for children/young people is significantly more and equates to around £6 million.[24]

The funders also mentioned the 'preventative spend' to the public sector of taking early action to help families to support and care for their children thereby reducing the need for more expensive or intensive action associated with going into the care system.

Some of the benefits of the programme may continue to have a preventative impact and result in longer term benefits, although measuring these was out with the scope of the analysis, and so a conservative estimate (between 1 and 3 years) was taken to the duration of outcomes. The report [25] notes:

'However investment is not justified solely on the 'best value' or the economic advantages that it delivers in the short term. The nature of the outcomes experienced by families will result in earlier intervention and reduced inequalities which research shows in the long term reduces health costs and lowers demand for welfare benefits.'

Learning and Next Steps

The Maximise! programme in schools was an upstream preventative intervention with an emphasis on early intervention through innovative partnership working, to prevent a range of social issues from escalating to crisis point. The analysis

[21] This tests which assumptions have the greatest effect on the model.
[22] Improvement Service (2021) Access to welfare advice in schools
[23] Improvement Service (2021) Access to welfare advice in schools
[24] Improvement Service (2021) Access to welfare advice in schools
[25] Improvement Service (2021) Access to welfare advice in schools

demonstrates a cost effective intervention with the potential to generate longer term preventative savings, and be scaled up to schools across Scotland.

The Scottish Government has funded the Advice in Accessible Settings (AiAS)[26] and Welfare Advice and Health Partnerships[27] that deliver similar approaches in wider health and community settings, as well as some education settings (for AiAS).

SROI analysis is a helpful approach to understanding the potential benefits of preventative interventions, particularly in light of the lack of long term and methodologically robust economic evaluation evidence. Emerging evidence from the evaluation has been used to inform the development of the programme through, for example, better targeting interventions and improving guidance for working with seldom heard families.[28] SROI evaluations on welfare advice in GP practices and schools in Dundee are currently underway, and will help to inform the development of this model.

Variations of the Maximise! model, tailored to local needs have been introduced in the Calton Ward in Glasgow and in Stirling.[29] The Intensive Family Support Service (IFSS) is another adaptation of the Maximise! model, now implemented across six local authorities within the Edinburgh City Region.

In 2020 funding was secured to develop Maximise! Early Years, which was offered to families in North West Edinburgh who have a child aged between 0-5 years in early years centres. It was extended to a further 5 early years centres in South Edinburgh for a two year period, ending in 2024.[30] The service in North Edinburgh is funded until March 2026. The funding is situated within employability and takes a whole-family, holistic approach, integrating family support, advice and employability/progression work.

A repeat survey of local authorities on providing advice services in accessible settings by the IS in November 2024 showed that delivering advice services in schools had been maintained and in some cases expanded.[31] However, while the Maximise! delivery model and partners remain consistent, with Children 1st and CHAI continuing to play key roles, it is not currently delivered in Edinburgh schools (due to a lack of sustainable funding), but operates instead in Early Years centres.[32]

[26] Scottish Government, Financial advice where people need it
[27] Improvement Service, Welfare Advice and Health Partnerships
[28] Improvement Service (2021) Access to welfare advice in schools
[29] Improvement Service (2021) Access to welfare advice in schools
[30] Joined Up For Families
[31] Unpublished survey by the Improvement Service, 2024
[32] Children First, Support for Children and Families in Edinburgh

3. Breastfeeding Friendly North Lanarkshire (BFNL)

Breastfeeding Friendly North Lanarkshire: improving maternal and child health

Breastfeeding Friendly North Lanarkshire (BFNL) is a local initiative, unique in the UK, that aims to address historically low breastfeeding rates by developing a supportive environment and culture for breastfeeding. It increased breastfeeding rates, including in the most deprived areas, and was the first to be awarded a Breastfeeding Friendly Scotland Local Authority Award at Gold level in 2024.

Introduction

BFNL is a primary preventative intervention to increase breastfeeding rates, improve the experiences of mothers, bring about intergenerational changes to long held attitudes and perceptions of breastfeeding and improve maternal and child health. It provides a local example that integrates multi-agency collaboration and community involvement to address cultural and socioeconomic barriers to breastfeeding.

Context

Breastfeeding is among the most important contributors to infant health. It provides a range of benefits for the infant's growth, immunity, and development; improves maternal health and contributes economic benefits to the family, health care system, and workplace.[1]

In 2005 the Scottish Parliament passed the Breastfeeding etc Scotland Act[2], making it illegal to prevent someone from breastfeeding or bottle feeding a child in public if the business or venue is open to the public and allows children. The Bill's policy memorandum drew on survey evidence showing that often the reason why carers decide to bottle feed their child is because of negative social and cultural attitudes. The Bill was an attempt to address negative attitudes to breastfeeding in Scotland.[3]

Between 2005 and 2016, many attempts were made to increase historically low breastfeeding rates. This included a country-wide commitment to the accreditation framework within the UNICEF UK Baby Friendly Initiative[4] (BFI) for core settings, maternity, neonatal and community, and for a short period of time adopting a national target. It was recognised that the foundation of the UNICEF BFI was key to improving knowledge and skills to support pregnant women and new mothers through evidence-based practice, but targets were not successful in driving up breastfeeding rates everywhere.

The development of the Maternal and Infant Nutrition Framework[5] in 2011 set a blueprint for action, including valuing the importance of infant feeding teams and

[1] Section 1 of the State of Washington's Second Substitute House Bill 1590 (2001)
[2] Scottish Parliament (2005) Breastfeeding etc (Scotland) Act 2005
[3] Scottish Parliament (2023) Policy Memorandum: Breastfeeding etc. (Scotland) Bill
[4] Unicef (2024) The Baby Friendly Initiative
[5] Scottish Government (2011) Improving maternal and infant nutrition: a framework for action

annual funding to support local activity, and a national summit on breastfeeding in 2014. The 2017/18 Programme for Government committed to providing additional funding (in addition to the £2.3 million provided annually to Health Boards) dedicated to improving breastfeeding experiences. This additional funding was up to £1.8 million each year since 2018. Improving the duration of breastfeeding was supported by a stretch aim (to reduce the drop off in breastfeeding rates between birth and six to eight weeks after birth by 10% by 2025) set out in the 2018 Diet and Healthy Weight Action Plan.[6] A national maternal and infant nutrition survey was carried out in 2017,[7] alongside using evidence in a 2016 Lancet series of breastfeeding[8] to prioritise areas for action.

Work at national and local level began, with the recognition that changing the culture around breastfeeding was key, alongside a robust infrastructure and a committed and well-trained workforce. That led to the co-design and development of the National Breastfeeding Friendly Scotland Scheme (BFS) to support progress towards normalising breastfeeding in communities, and the subsequent testing of this in North Lanarkshire.

The BFS scheme was launched in 2019. Though Government led, Health Boards administer BFS. Businesses and organisations from different sectors can apply to be part of the scheme and, if they qualify, display an award with the BFS logo. The administration of BFS by Health Boards led to the development and delivery of a range of local activities and the initiation of several local breastfeeding welcome schemes. The establishment of local versions of BFS was a key part of the programme of activities that were implemented across Scotland to increase levels of breastfeeding.

Response

North Lanarkshire has some of the highest levels of deprivation in Scotland and historically had one of the lowest breastfeeding rates. Building on the national developments set out above since the Breastfeeding Act of 2005, the council and its partners developed and implemented an ambitious programme of activity from 2018 to improve breastfeeding rates and support maternal and child health.

Working with NHS Lanarkshire and the Scottish Government's Supporting Maternal and Child Wellbeing policy team, priorities for action were developed that led to a paper[9] tabled in November 2018 at the Policy and Resources Committee of the North Lanarkshire council. This outlined initial plans to increase efforts to support awareness and engagement for breastfeeding across the local authority area. These plans included the provision of facilities for employees who wished to continue breastfeeding on their return to work from maternity leave and provision in public-facing buildings to support breastfeeding.

[6] Scottish Government (2018) A healthier future: Scotland's diet and healthy weight delivery plan
[7] Scottish Government (2018) Scottish maternal and infant nutrition survey 2017
[8] Lancet (2016) Breastfeeding: achieving the new normal
[9] North Lanarkshire Council (2018) Policy and Resources Committee: Breastfeeding Support and Awareness

This was closely followed in June 2019 by a 'Breastfeeding Summit' convened by NHS Lanarkshire.[10] The North Lanarkshire Council Chief Executive attended this summit with colleagues and almost 200 professionals and volunteers. Following on from this meeting a more detailed strategy for action was developed, again involving joint working with NHS Lanarkshire and the Scottish Government policy team.

Intervention

The strategy developed from 2019, with initial components in place by 2020[11] and the main intended actions outlined in the Integrated Joint Board (Health and Social Care North Lanarkshire) three-year strategic commissioning plan 2020-2023.[12] However, the strategy was not formally approved by the Council's Policy and Strategy Committee until June 2021[13] due to delays caused by the Covid-19 pandemic. The key components of the initiative were:

- **Policy Development**: Implementation of a comprehensive breastfeeding policy for council employees, providing facilities for breastfeeding and expressing milk in workplaces.
- **Education and Training**: Development of e-learning modules for managers and training sessions for staff, focusing on supporting breastfeeding in workplaces and communities.
- **Community Engagement**: Establishment of nine community-based *Breastfeeding Champions* in Community Learning and Development (CLD) to promote and support breastfeeding, particularly in deprived areas.
- **Infrastructure Support**: Inclusion of breastfeeding facilities in new community hubs and public spaces, ensuring welcoming environments for breastfeeding mothers and establishing 'Baby Connections' groups that provide information, workshops, activities (like baby massage and sensory play) and mutual support.
- **Accreditation Framework**: Introduction of a tiered accreditation system (see below) to recognise and encourage breastfeeding-friendly practices across various sectors. North Lanarkshire was the first council in Scotland to test a whole of council approach to a BFS Award, and working with Scottish Government colleagues the intention is for this model to be used in other council areas.

The initiative was both universal and targeted. It aimed to normalise breastfeeding across all communities while specifically addressing the needs of mothers in more deprived areas to reduce health inequalities. For the latter, a particular focus was placed on embedding the different elements of the initiative in settings in these areas.

The model was designed to enable changes to attitudes to breastfeeding at the societal level and over time, working with the youngest generation to build that

[10] HealthandCare.Scot (2019) Lanarkshire hosts breastfeeding summit
[11] North Lanarkshire Council (2020) Education and Families Committee Report: Protecting, Promoting and Supporting Breastfeeding
[12] Health and Social Care North Lanarkshire (2020) Strategic Commissioning Plan 2020-2023
[13] North Lanarkshire Council (2021) Policy and Strategy Committee – Breastfeeding Friendly North Lanarkshire

knowledge from the start, develop, design and build local facilities to accommodate breastfeeding mothers and promote breastfeeding wherever possible.
This was a cost neutral intervention as existing resources were mobilised to bring about change. This included using existing local government and health service budgets to invest in policy development, training, community engagement, and infrastructure improvements.

It was established as a 'whole system' programme involving joint working between the council, NHS Lanarkshire, Scottish Government, and community and voluntary sector organisations. The integration element focused on embedding breastfeeding support into existing services. This included early years education, community hubs and via revised workplace policies. Cultural change was also required. This involved normalising breastfeeding by emphasising it was a public health priority, addressing any concerns or questions from staff, service users or members of the public (for example emphasising that it was about choice – not stigmatising women who couldn't or chose not to breastfeed). It involved training and policy changes that encouraged organisations to consider how their services could support breastfeeding.

The programme emphasised person-centred care by focusing on the individual needs of breastfeeding mothers and their families. There were also community engagement elements. The breastfeeding champions were drawn from local community staff embedded in CLD. There were specific community activities such as celebrating the annual Scottish Breastfeeding Week across the council area, with events to raise awareness and increase community buy-in.

Monitoring and Evaluation

There was no independent evaluation of this initiative, and no formal economic evaluation. Instead, evidence of impact can only be assessed by findings generated from local evaluation activities but also by tracking routinely available public health data on breastfeeding including by age and deprivation.

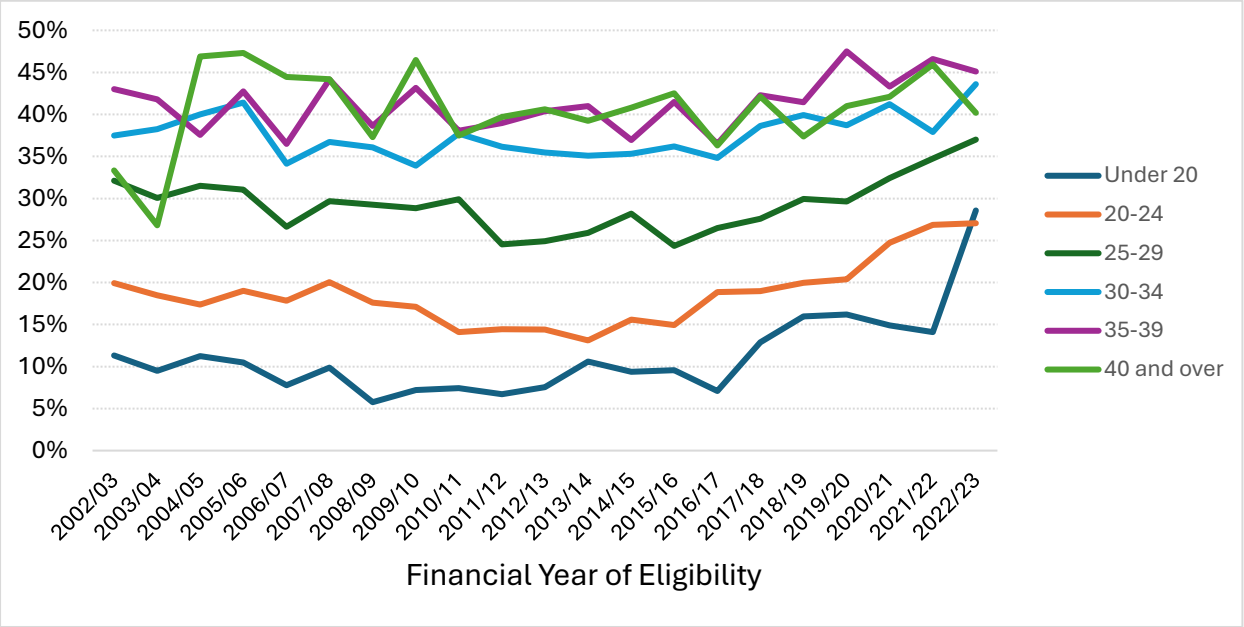
The local evaluation did involve a monitoring framework and a process evaluation. North Lanarkshire served as the pilot area for the BFS Local Authority Accreditation Framework which has a tiered system (Bronze, Silver, Gold) and provided the structure with specific criteria. The council and partners reported against this, and submitted evidence to demonstrate that criteria had been met. The local Infant Feeding Advisor and their public health counterparts in NHS Lanarkshire formed part of the assessment team along with a national lead in Scottish Government. Annual progress reports were provided to council committees in August 2022 and June 2023.[14] Based on North Lanarkshire's experience of reporting against the criteria in the BFS Local Authority Accreditation Framework, this is currently being refined with plans for publication and application in other areas in future.

[14] North Lanarkshire Council (2024) Wellbeing and Tackling Poverty Committee: Resilient People, Breastfeeding Friendly Scotland Local Authority Award – Gold

Key Findings

Increase in Breastfeeding Rates: The breastfeeding rate at 6-8 weeks increased in North Lanarkshire[2] to 30.4% in 2023, marking a 3.8-point rise since the previous year and an 8.8-point increase since 2016/17.

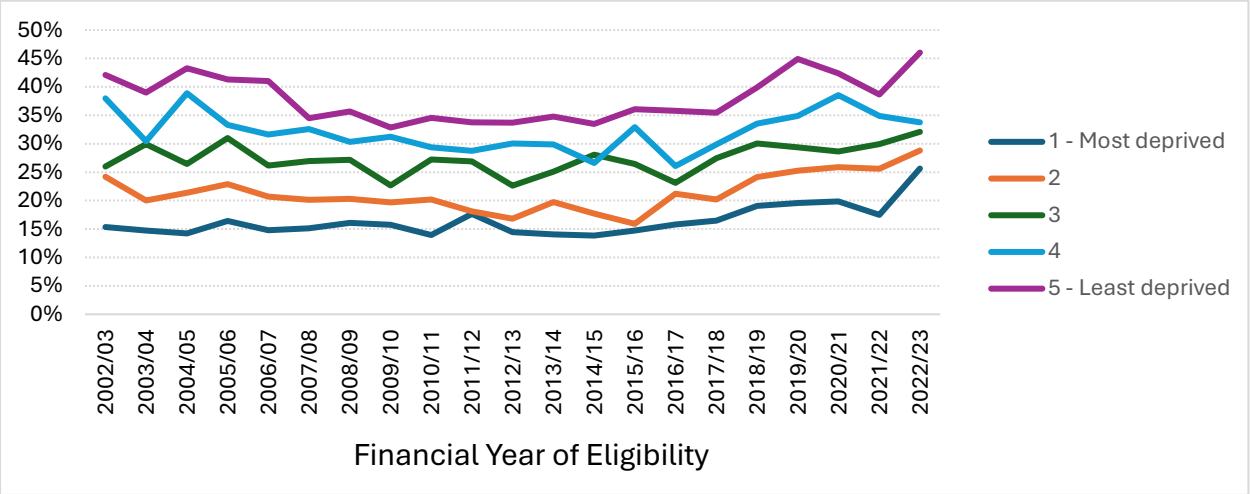
Figure 1: Overall Breastfeeding at First Visit by age group - North Lanarkshire



Source: CHSP Pre-School August 2023, Public Health Scotland

Improvement in Deprived Areas: There was a notable increase in breastfeeding in the most deprived areas (SIMD 1). First visit rates increased to 33.5%, a 12.3-point rise since 2016/17. At 6-8 weeks, they increased to 25.6% by 2023, a 9.8-point rise.[2]

Figure 2: Overall Breastfeeding at 6-8 Week Review by deprivation level - North Lanarkshire



Source: CHSP Pre-School August 2023, Public Health Scotland

Uptake of training: In depth training has been delivered to date to 874 staff members including those in education and early years. Within schools, staff were able to volunteer to be breastfeeding champions after completing the training and there are 131 of these to date. A further 78 staff members from various council departments including: libraries; social work; environmental services; health; housing; creative communities; and business management, completed training on breastfeeding policy. The policy training is particularly targeted at managers who have a member of staff who will be commencing or is returning from maternity leave. For children and young people, lessons on infant nutrition were embedded in curricula from nursery to secondary schools. For the latter, via Personal, Social and Health Education (PSHE) in Curriculum for Excellence third and fourth levels.

Integration of Breastfeeding Support in Public Services: Existing evidence emphasised the need for embedding breastfeeding support within existing public services. As a result, breastfeeding support was integrated into CLD, early years, education, and local health services:

- All Early Years establishments in North Lanarkshire achieved the *Breastfeeding Friendly Scotland Early Learning and Childcare Award*
- Over 80% of all school establishments achieved Breastfeeding Friendly Schools Awards
- All public-facing premises are breastfeeding friendly

Box 1 provides examples of how parents and professionals involved experienced the programme and what it achieved from their perspective.

Box 1: Testimonials

“Before I became a mother to Lilli, I knew very little about breastfeeding. No one in my family had breastfed, and I didn't have any friends who had either. Attending the Baby Connections support group was a game-changer for me. Meeting other mums and receiving guidance from the staff provided invaluable tips and reassurance. It eased my worries. I've noticed that others around me are now

considering breastfeeding after the incredible experience I've had. The benefits for both Lilli and I have been amazing, especially in terms of bonding and the physical and financial advantages that breastfeeding has."
Kerri – parent from Baby Connections

"As a dad, I see breastfeeding as vital for our baby's health, providing immunity and the best start in life. I have seen a close bond between my wife and our baby, allowing me to support them both. We researched the health benefits together and are proud of our commitment to breastfeeding. I've seen a positive change in the culture around breastfeeding, making it feel more visual and normalised - groups such a Dad's Baby Group has helped. Despite the challenges, we are dedicated to giving our baby the best chance to thrive, and I've learned so much through this journey."
Iain – parent from Dads- Baby Connections

"I have noticed a significant increase in breastfeeding. Previously, most babies were bottle-fed, but now more parents are choosing breastfeeding and attending baby massage classes, where we direct them to further support groups. It's exciting to see that up to half, and sometimes most, of the babies at the Baby Connections group in Airdrie are now breastfed, highlighting a cultural transformation that I have not seen in my 20 years as a CLD Homelink worker."
Geraldine Stevenson – CLD HomeLink worker & NLC Breastfeeding Champion

The initiative led to breastfeeding became a normalised and accessible part of community support systems, recognised by becoming the first local authority in Scotland to receive BFS Local Authority award at Gold level in February 2024.[15]

Learning and Next Steps

BFNL is an example of a locally led programme of activity progressed without new funding, instead mobilising existing resources to achieve change to support families with babies and young children. The initiative is still in place.[16] It continues to involve breastfeeding champions, improved workplace policies, and community engagement efforts. In September 2024 North Lanarkshire was awarded a COSLA *Excellence Award*[17] in the Tackling Inequalities and Improving Health and Wellbeing Category, for working to create a cultural change in promoting breastfeeding friendly environments.

Evidence to date suggests that the initiative has improved breastfeeding rates including in more deprived communities. Progress will continue to be tracked via routinely available public health data on breastfeeding rates including by age and deprivation, as well as local monitoring. The initiative will continue to provide regular updates to the council and NHS Lanarkshire to ensure the key elements remain active, are supported and result in continuous improvement.

[15] The Pulse (2024) North Lanarkshire leads the way with Breastfeeding Friendly Scotland accreditation
[16] North Lanarkshire Council (2024) Breastfeeding Friendly North Lanarkshire
[17] North Lanarkshire Council (2024) Double Success at COSLA Excellence Awards

4. Childsmile

Childsmile: Improving Scotland's Oral Health and Reducing Healthcare Costs

Childsmile is a national, system wide programme to improve oral health amongst children. It was introduced in Scotland in 2006. Childsmile has been evaluated and shown to have led to large measurable improvements in children's oral health and generated significant cost savings for NHS Health Boards.

Introduction

Childsmile is an example of a downstream primary preventative intervention which involves healthcare, education, community and voluntary sector professionals working together to deliver a universal programme of advice, treatment and support with additional targeted measures.

Context

Childsmile has played a key role in the story of Scotland's improved oral health. The change in Scotland's oral health has come about as a result of sustained and targeted interventions that have been maintained over several Parliamentary terms.

In the early 2000s, almost 60% of 5 year olds in Scotland had visually obvious signs of tooth decay[1] and this figure had remained broadly unchanged over the previous decade. Scotland's oral health was poorer than in many other European countries and it was widely acknowledged that, in the words of the then Deputy Minister for Health and Social Care 'Our children have some of the worst teeth in Europe.'[2]

Scotland's poor oral health resulted in significant short term costs for the NHS in relation to dental extractions, fillings and treatments for decay.
There were also pronounced and concerning socio-economic inequalities, with children from the most disadvantaged communities commonly demonstrating the highest levels of tooth decay.

The problem was compounded due to issues over access to NHS dental services in many parts of Scotland, with only around half of all Scottish adults and two thirds of children registered with an NHS dentist.

Response

In 2005, a Scottish Government Action Plan[3] identified the need to improve Scotland's dental health. The plan recognised the need for early preventative intervention and the need to:

[1] Ross, A. et al (2023) Evaluating childsmile, Scotland's National Oral Health Improvement Programme for children
[2] Ministerial Foreword to An Action Plan for Improving Oral Health and Modernising NHS Dental Services in Scotland, 2005.
[3] Scottish Government (2005) An Action Plan for Improving Oral Health and Modernising NHS Dental Services in Scotland

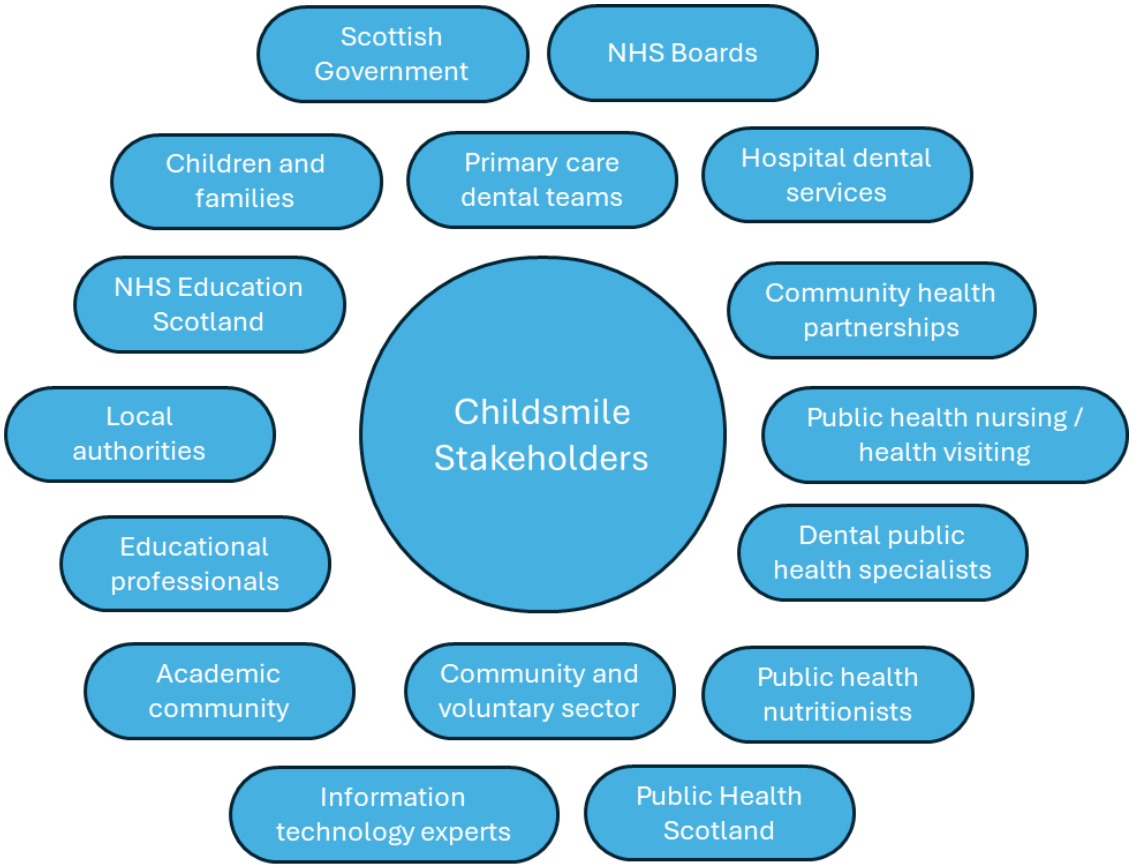
‘Ensure that children from all communities in Scotland access care regimes which emphasise the importance of good dental health and healthy eating habits from early childhood’. This required a partnership between a range of professionals and the parents of young children’.

Intervention

Childsmile developed largely from two national demonstration programmes in 2006-2008 set up in the East and West of Scotland. In 2008 these programmes were expanded into a national evidence informed Scottish Childsmile programme. The Childsmile programme continues to run across all NHS Boards in Scotland.

Childsmile is a complex public health intervention involving a large number of stakeholders with a shared goal to improve the oral health of young children and reduce socio-economic inequalities. Figure 1 below sets out the key stakeholders involved in Childsmile.[4]

Figure 1: Key stakeholders involved in the design and delivery of Childsmile



The Childsmile programme has evolved over time and is currently based around three key elements.[5]

[4] Adapted from Macpherson, L. et al (2010) Childsmile: the national child oral health improvement programme in Scotland. Part 1: establishment and development
[5] Childsmile Website

1. **Delivering a universal and targeted programme of supervised toothbrushing in nurseries and schools**

The Childsmile Toothbrushing Programme is available throughout Scotland. As part of this programme toothbrushing advice and instruction is provided at all nurseries and targeted toward schools in areas of higher deprivation. The programme is designed to instil good toothbrushing habits from an early age. The programme also includes the distribution of toothbrush and fluoride toothpaste packs for home use.

2. **Working with disadvantaged communities to offer oral health support to families**

The Childsmile Community and Practice Programme is designed to address oral health inequalities, through embedding support workers within the more disadvantaged communities and offering oral health support to families with young children, in the family home. This involves working closely with health visitors, dental teams, Education, community groups and other partners (and includes helping families to attend dental practices).

3. **Applying fluoride varnishes to children's teeth to slow decay**

Fluoride varnishes have been shown to be effective in reducing tooth decay in children.[6]

The Childsmile Community Fluoride Varnishing programme is targeted to children from disadvantaged communities. Fluoride varnishes are applied by Childsmile dental teams. Children are able to join the programme when they start nursery (from two-years-of-age) and remain in the programme, receiving six-monthly fluoride varnish applications for the duration of their time at nursery, often continuing in school.

In addition all children from the age of two are eligible to receive fluoride varnish treatments from their registered dentist and this also forms part of the Childsmile programme.

The delivery of the programme has been informed by behavioural science which has been used to introduce changes to incentivise dentists to apply fluoride varnishes and improve training and guidance for people working with disadvantaged families.

Monitoring and Evaluation

The Childsmile programme has been extensively and robustly evaluated since its outset by academics at the University of Glasgow, School of Medicine, Dentistry and Nursing[7] with funding provided by the Scottish Government.

[6] Marinho, V., Worthington, H., Walsh, T., Clarkson, J. (2013) Fluoride varnishes for preventing dental caries in children and adolescents

[7] Research relating to Childsmile conducted by the University of Glasgow, School of Medicine, Dentistry and Nursing can be accessed here

The on-going evaluation is guided by a theory based model and includes elements of process, economic and impact evaluation. Outcomes from the programme are being investigated via a pioneering data linkage project. This involves linking multiple routine administrative national health and education datasets to evaluate the effectiveness of Childsmile in relation to short term health and educational outcomes.

There has also been a randomised control trial of the effectiveness of the nursery fluoride varnish programme.

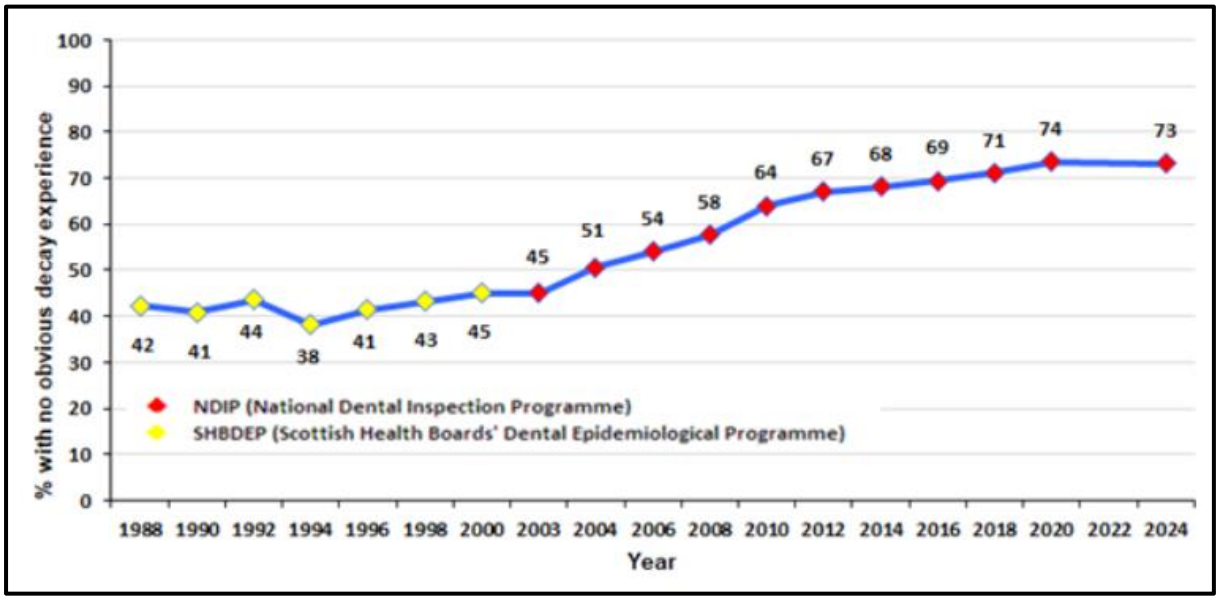
Emerging evidence from the evaluation has been used to inform the development of the programme through, for example, better targeting interventions and improving guidance for working with seldom heard families.

Key Findings

a) Improved outcomes

The research team at Glasgow University have demonstrated via the longitudinal data linkage study that nursery toothbrushing and regular dental practice visits (two key universal elements of the Childsmile programme) were independently and most strongly associated with reduced likelihood of tooth decay.[8] Data from the National Dental Inspection Programme shows a sustained improvement in the percentage of primary school children with no obvious decay experience in the period since the Childsmile programme was implemented.

Figure 2: The percentage of P1 children in Scotland with no obvious decay experience; 1988-2024



Source: National dental inspection programme Report of the 2024 Detailed Inspection Programme of Primary 1 Children and the Basic Inspection of Primary 1 and Primary 7 Children

[8]Jamie BR Kidd, Alex D McMahon, Andrea Sherriff, Wendy Gnich, Ahmed Mahmoud, Lorna MD Macpherson, David I Conway (2020) Evaluation of a national complex oral health improvement programme: a population data linkage cohort study in Scotland

b) Cost savings

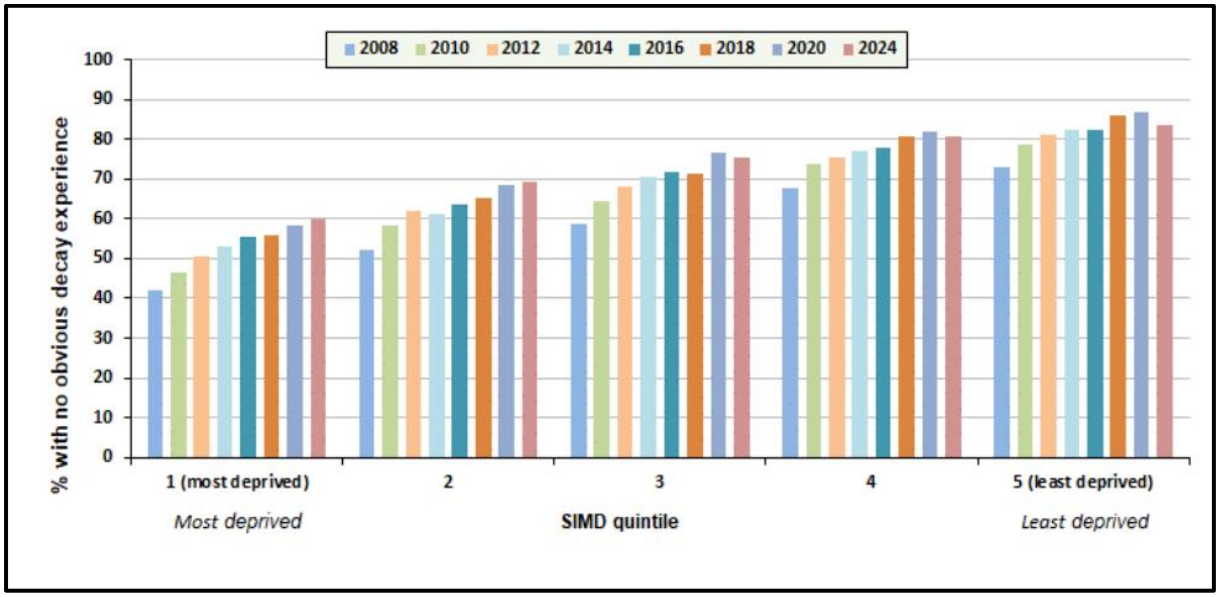
The economic evaluation of Childsmile compared the cost of providing toothbrushing in nurseries with the expected savings resulting from actual and anticipated dental treatments. The study[9] found NHS costs associated with the dental treatments for five-year-old children decreased over time. In the eighth year of the toothbrushing programme the expected savings were more than two and a half times the costs of the programme implementation.

c) Reduced inequalities

The Childsmile programme has supported a reduction in socio-economic health inequalities. Oral health inequalities are reducing and the gap between the most and least deprived quintiles of P1 children decreased from 32.2 percentage points in 2010 to 23.6 in 2024.

However, in 2024, P1 children living in the most deprived areas were still considerably less likely to have no obvious decay experience compared to those in the least deprived areas. The challenge of reducing health inequalities was acknowledged in the 2018 Scottish Government Oral Health Improvement Plan[10] which stated 'Despite the considerable success of the Childsmile programme in improving the oral health of young children through intervention by health visitors, education staff and dental teams, it remains particularly difficult to achieve good oral health in some of our most deprived communities in Scotland'.

Figure 3: Percentage of P1 children in Scotland with no obvious decay experience, by SIMD quintile and year; 2008-2024



Source: National dental inspection programme Report of the 2024 Detailed Inspection Programme of Primary 1 Children and the Basic Inspection of Primary 1 and Primary 7 Children

[9] Anopa Y, McMahon AD, Conway DI, Ball GE, McIntosh E, Macpherson LMD (2015) Improving Child Oral Health: Cost Analysis of a National Nursery Toothbrushing Programme
[10] Scottish Government (2018) Oral Health Improvement Plan

Learning and Next Steps

The Childsmile programme is a complex intervention involving many partners. The programme involves a mix of universal and targeted provision. It is an example of a preventative cost effective intervention that has been scaled up to be introduced across all of Scotland's NHS Boards. Over the last 20 years the programme has continued to evolve. The Childsmile programme has resulted in considerable cost savings with the Public Health Minister claiming in 2015 that Childsmile was saving the NHS almost £5m per year in treatment costs.[11] Childsmile has contributed to an increase in the percentage of P1 children reported to be free from obvious decay experience, which has risen from 45% in 2003 to 73% in 2024.[12]

The Scottish Childsmile approach has been internationally recognised. In 2019, Childsmile was awarded a certificate of best practice by the European Commission for progress in achieving Sustainable Development Goal 3.4 "by 2030 reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and wellbeing".[13]

A 2020 a report by the Royal College of Paediatrics and Child Health, stated that oral health progress in Scotland 'markedly' outstripped that of England and put this down to the introduction of Childsmile. The report recommended that England should introduce a 'preventative support programme for children and families to enable them to take up positive oral health habits' learning from the Childsmile programme in Scotland. Since August 2013, the Scottish Childsmile approach has been adopted by a range of countries.[14]

Whilst the programme has successfully improved health outcomes the latest data from the National Dental Inspection Programme has shown a slowdown in improvements in oral health amongst children – this is likely to be related to access to nurseries and schools being reduced during the Covid-19 pandemic. In 2022, as part of the national payment reform programme the Scottish Government took the opportunity to extend the scheme to older children in an attempt to address the increase in oral health inequalities that may have arisen in children and young people during the pandemic.[15]

Looking ahead, the Childsmile programme will continue to be refined over the course of this Parliamentary term in order to maximise its preventative impact and to further address inequalities. This will involve taking an intersectional approach particularly focusing on those children and their families who will most benefit from the programme.'

[11] BBC (2015) Childsmile Dental Scheme 'saves NHS £5m a year'
[12] Public Health Scotland (2024) National Dental Inspection Programme (NDIP) 2024
[13] Oral Health Platform - ChildSmile recognised as best practice by European Commission
[14] Royal College of Paediatrics and Child Health (2020) State of Child Health 2020
[15] Scottish Government Press Release (2022) Dental services for all

5. Covid-19 Vaccines

The Covid-19 vaccination programme: preventing severe disease

The Covid-19 vaccination programme was the largest immunisation effort in Scotland's history. The first vaccine was administered in December 2020 and by August 2022, four in five adults had received at least three doses. This mass vaccination programme saved tens of thousands of lives and prevented many more admissions to hospital.

Introduction

The Covid-19 vaccination programme is an example of a primary preventative intervention. The Covid-19 pandemic presented an unprecedented public health challenge. At its start, there were no evidence-based therapeutic interventions or vaccines to prevent or treat Covid-19. The development of these substantially altered the course of the pandemic. Delivering them to the population of Scotland was the result of rapid and collaborative work, with effectiveness demonstrated by one of the first national scale healthcare surveillance platforms in the world.

Context

Cases of a novel coronavirus (SARS-CoV-2) were first detected in China in December 2019, followed by a rapid spread to other countries. This led the World Health Organisation (WHO) to declare a Public Health Emergency of International Concern (PHEIC) on January 30th, 2020, and on the 11th of March, to characterise the outbreak as a global pandemic.[1] The first case of Covid-19 in Scotland was confirmed on March 1st 2020.[2]

It was apparent early on that effective vaccines would be required as part of the response to the pandemic. Scientists from around the world worked collaboratively to develop these, assisted by existing knowledge and approaches along with rapid funding. Rollout of these in Scotland was achieved by a complex programme involving four nations' collaboration and multi-agency working at national and local level.

Response

Immunisation policy in Scotland is determined by Scottish Ministers and guided by advice from the Joint Committee on Vaccination and Immunisation (JCVI). Four nations' engagement and decision-making led to the creation of the UK Vaccines Taskforce, which procured Covid-19 vaccines on behalf of all four UK administrations, to achieve economies of scale. There was associated close joint working on vaccine supply, demand and logistics.

[1] WHO (2023) Coronavirus diseased (Covid-19) pandemic
[2] Scottish Government (2020) Coronavirus (Covid-19) confirmed in Scotland

By July 2020, several vaccine candidates had found positive results in clinical trials. The UK's Medicines and Healthcare products Regulatory Agency (MHRA) gave approval to the Pfizer-BioNTech vaccine on 2nd December 2020[3], accompanied by interim advice from the JCVI. This was closely followed by regulatory approval for the Oxford-AstraZeneca vaccine[4], followed by several others. In anticipation of imminent approval of the first vaccines, the then Cabinet Secretary for Health and Social Care set out in a parliamentary statement on 19th November the initial plans for roll out.

Intervention

The vaccination programme began in Scotland on 8 December 2020. The roll out followed JCVI advice on prioritisation, beginning with the most vulnerable - older adults including in care homes. Over time this extended to all adults over the age of 18; young people aged 12 to 17 who had underlying health conditions that put them at higher risk of severe illness; and children and young people aged 12 and over who were household contacts of people who were immunosuppressed. The programme was later further extended in line with JCVI advice to take in children aged from 5 to 11, and to offer booster vaccinations.

The Scottish Government published its Vaccine Deployment Plan on 14 January 2021, with updates published on 26 March 2021 and 23 July 2021.[5] An autumn/winter vaccination strategy was published on 30 September 2021 and updated on 21 December 2021.[6] NHS Scotland worked to ensure the greatest possible uptake and that the vaccination programme was accessible and equitable. This involved an integrated programme of public health communications, flexible delivery models, accessible transport and venues for vaccination, and engagement and co-production with specific groups and communities. Co-production was particularly important, as evidence from other vaccine programmes suggested that uptake would be unequal, and that certain groups and communities may not be reached or engage. Uptake was carefully monitored from the outset, with the programme adapting over time to tailor communication and outreach to groups with lower rates of vaccination. A dedicated workstream on vaccine inclusion[7] was part of the response, involving joint working with local authorities and the voluntary sector as well as the NHS.

The scale of delivery was rapid and substantial. By August 2022, four in five adults living in Scotland had received at least three vaccine doses (79%, around 3.5 million people).[8]

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[3] MHRA (2020) Archive: Information for Healthcare Professionals on Covid-19 vaccine Pfizer/BioNtech (Regulation 174)
[4] MHRA (2020) Archive: Conditions of Authorisation for Covid-19 vaccine AstraZeneca (Regulation 174)
[5] Scottish Government (2021) Coronavirus (Covid-19): Vaccine Deployment Plan
[6] Scottish Government (2021) Coronavirus (Covid-19): Scotland's Autumn/Winter Vaccination Strategy
[7] Scottish Government (2022) Coronavirus (Covid-19) vaccine inclusion: vaccination programme
[8] Shahul, S et al (2022) Characterising adults in Scotland who are not vaccinated against Covid-19

Monitoring and Evaluation

A wide range of studies were conducted to evaluate different interventions to address the effects of the Covid-19 pandemic. For the vaccine programme, a national research programme was carried out using the EAVE surveillance platform. The original EAVE study was established during the 2009 swine flu pandemic to assess the effectiveness of vaccines. The researchers involved recognised that their work could be useful in future epidemics or pandemics and received permission from the funder (the National Institutes for Health Research – NIHR) to put it into hibernation, which involved modest funding to maintain it until it was needed again.[9]

When the Covid-19 pandemic began, the team 're-awakened' the platform which became EAVE II (Early Pandemic Evaluation and Enhanced Surveillance of Covid-19), funded by NIHR, the Medical Research Council and Health Data Research UK. It involved a multi-disciplinary team led by the Usher Institute at the University of Edinburgh, along with Public Health Scotland (PHS) and four other Universities in Scotland. It was supported by the Scottish Government and involved everyone registered with a GP in Scotland – around 98% of the population[10], making it one of the first national scale healthcare surveillance platforms in the world.

EAVE II involved a prospective observational cohort which was used for two main purposes: to contribute to monitoring the progress of the pandemic; and to evaluate the effectiveness of therapeutic interventions and vaccines.[11] This involved a linked dataset using Scotland's national patient identifier (the CHI number). Data about patient characteristics and medical conditions, GP consultations, prescriptions, results from Covid-19 tests, hospital admissions, deaths, maternity and birth records and a range of other information was linked to examine different research questions. The data were anonymised and held securely on a server hosted by PHS where only trained and approved analysts could access it.[12] Findings were made available to decision-makers in real time and before publication, via briefings, submissions and involvement in relevant advisory groups. This rapid access to results informed the pandemic response.

Key Findings

a) Improved outcomes

Prior to the launch of the Covid-19 vaccine programme, the EAVE II team conducted several studies that identified which groups were most at risk, helping to determine

[9] Usher Institute (2024) The history of EAVE II
[10] Usher Institute (2024) An introduction to EAVE II
[11] Simpson, C et al (2020) Early Pandemic Evaluation and Enhanced Surveillance of Covid-19 (EAVE II): protocol for an observational study using linked Scottish national data
[12] Public Health Scotland (2020) Covid-19 EAVE II study

who would benefit most from the vaccine roll out.[13,14,15] Once the vaccines began to be administered, the researchers were able to examine their effectiveness. An interim analysis[16] focused on the first vaccine dose. It involved 1.33 million people who were vaccinated between 8th December 2020 (the start of the programme) and 22nd February 2021, focusing on the period 28-35 days after the first dose, by which time it would have taken effect. For both vaccines being delivered at the time (Pfizer-BioNTech and Oxford-AstraZeneca) they found an 89% reduction in the risk of hospitalisation. They also identified that the vaccines were equally effective for people aged 80 and older. These were landmark results, the first to demonstrate vaccine efficacy outside of clinical trials, and the first national study in the world.

A subsequent paper[17] examined adverse events from the first dose of vaccination, following reports to the MHRA and other regulators relating to some patients who had received the Oxford-AstraZeneca vaccine. These reports resulted in some countries restricting the use of this vaccine, including all of the UK (to certain age groups) following JCVI advice. The EAVE II analysis found small increases in the risk of clotting and bleeding events, but these events were very rare. The risk of them was similar to other common vaccines given for Hepatitis B and influenza, for example. These findings emphasised the benefit of having both doses and resulted in several countries altering their vaccine policy positions.

Other studies from EAVE II provided more information about: trends and forecasting in terms of hospitalisations and deaths from Covid-19 as the pandemic continued[18]; the effectiveness of vaccines against new variants[19,20,21]; waning of vaccine doses (helping to inform the roll out of boosters)[22]; how obesity accelerates the loss of vaccine immunity[23]; and the effectiveness of Covid-19 vaccines in pregnancy[24], among many other analyses.

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[13] Clift, A et al (2020) Living risk prediction algorithm (QCOVID) for risk of hospital admission and mortality from coronavirus 19 in adults: national derivation and validation cohort study
[14] Simpson, C et al (2021) External validation of the QCovid risk prediction algorithm for risk of Covid-19 hospitalisation and mortality in adults: national validation cohort study in Scotland
[15] Agrawal, U (2021) Association between multimorbidity and mortality in a cohort of patients admitted to hospital with Covid-19 in Scotland
[16] Vasileiou E et al (2021) Interim findings from first-dose mass COVID-19 vaccination roll-out and COVID-19 hospital admissions in Scotland: a national prospective cohort study
[17] Simpson, C et al (2021) First-dose ChAdOx1 and BNT162b2 COVID-19 vaccines and thrombocytopenic, thromboembolic and hemorrhagic events in Scotland
[18] Simpson, C et al (2021) Temporal trends and forecasting of Covid-19 hospitalisations and deaths in Scotland using a national real-time patient-level data platform: a statistical modelling study
[19] Sheikh, A et al (2021) BNT162b2 and ChAdOx1 nCoV-19 vaccine effectiveness against death from the Delta variant
[20] Kerr, S et al (2022) Severity of BA.2 variant and vaccine effectiveness against symptomatic disease in Scotland
[21] Robertson, C et al (2023) Severity of Omicron BA.5 variant and protective effect of vaccination: national cohort and matched analyses in Scotland
[22] Kerr, S et al (2022) Waning of first and second dose ChAdOx1 and BNT162b2 Covid-19 vaccinations: A pooled target trial study of 12.9 million individuals in England, Northern Ireland, Scotland and Wales
[23] Van der Klaauw, A et al (2023) Accelerated waning of humoral response to Covid-19 vaccines in obesity,
[24] Lindsay, L et al (2023) Neonatal and maternal outcomes following SARS-CoV-2 infection and Covid-19 vaccination: a population based matched cohort study

b) Cost savings

The roll out of Covid-19 vaccines in Scotland was based on advice from the JCVI along with additional national considerations. The JCVI advice did not involve the use of cost-effectiveness assessments given that the alternative to vaccine roll-out was ongoing, highly costly restrictions on social and economic activities via distancing measures.

EAVE II was not designed to examine cost-effectiveness and did not include an economic evaluation. However, there is international evidence in terms of reductions in hospitalisations and mortality following the roll out of Covid-19 vaccines. A recent systematic review of the cost-effectiveness of these vaccine programmes[25] in multiple countries concluded that these programmes were cost-effective or cost saving regardless of vaccine type. Mass vaccination was identified in the review as particularly cost-effective when there was a system of prioritisation (based on clinical need) in place, adequate supply and when the programme was delivered at pace – all elements that characterised the programme in Scotland.

PHS contributed to a Europe wide analysis[26] of deaths averted due to the roll out of Covid-19 vaccines in people aged 25 and over in 33 countries between December 2020 and March 2023, updating an earlier analysis[27] up to November 2021. This found that 22,138 deaths were averted in total, 71% of expected deaths if vaccines had not been available. This was one of the highest in Europe due to the early implementation of the programme, that it covered large parts of the population and had high vaccine coverage. Although the study did not quantify cost savings due to averted deaths, these would be substantial.

c) Addressing inequalities

Significant effort was made during the pandemic to ensure that all eligible groups had access to vaccination. This work included the vaccine inclusion workstream mentioned above[7], as well as reports and recommendations from the PHS Vaccine Confidence and Equity team.[28] Despite these efforts, EAVE II and other studies identified inequalities in the uptake of Covid-19 vaccines in Scotland, which had been noted in previous vaccine programmes and UK and international evidence during the pandemic. In an analysis published in September 2022[8], EAVE II researchers and collaborators identified the factors most likely to predict inequalities in vaccine uptake among adults. Excluding those with expected reasons for not receiving a vaccine (including contraindications) they found that men, people living in the 20% least affluent areas, those living in large urban areas, people with no underlying health conditions and people under aged 50 were most likely to be unvaccinated. However, a significant number had three or more underlying

[25] Fu, Y et al (2023) Cost-effectiveness of Covid-19 vaccination: a systematic review
[26] Mesle, M et al (2024) Estimated number of lives directly saved by COVID-19 vaccination programmes in the WHO European Region from December, 2020, to March, 2023: a retrospective surveillance study
[27] Mesle, M et al (2021) Estimated number of deaths directly averted in people 60 years and older as a result of COVID-19 vaccination in the WHO European Region, December 2020 to November 2021
[28] Public Health Scotland (2021) An inclusive approach to flu and Covid-19 vaccination service delivery in Scotland – Recommendations from the 2020 and 2021 report

conditions. This analysis did not include ethnicity, which studies elsewhere in the UK[29] identified was a significant factor in inequalities in vaccination. Other analysis found the risk of Covid-19 hospitalisation or death was higher in certain ethnic minority groups in Scotland.[30] The vaccine programme (for both flu and Covid-19) in Scotland began routinely collecting ethnicity data from November 2021 and continues to do so.

Learning and Next Steps

The development and delivery of vaccines transformed the trajectory of the pandemic and saved countless lives. The quality and extent of the research conducted alongside the vaccine programme provides invaluable lessons for the future. This learning also serves as the foundation for a longer-term programme of work. Covid-19 vaccines continue to be delivered by NHS Scotland to those most at risk of severe disease.

EAVE II has received international recognition. This includes, among other awards: the Royal Statistical Society's Florence Nightingale award for excellence in healthcare data analytics; the Royal Society of Edinburgh Mary Sommerville Medal for exceptional teamwork and collaborations; and both the Liley Medal from New Zealand's Royal Society Te Apārangi and Health Research Council and HDRUK's impact of the year award (2021) for work investigating the real-world effectiveness of the early COVID-19 vaccines.[31] The EAVE II platform has now been adapted so that it can continue to serve as a valuable source of data for the ongoing surveillance and assessment of respiratory infections in Scotland.

[29] Gaughan, C et al (2022) Covid-19 vaccination uptake amongst ethnic minority communities in England: a linked study exploring the drivers of differential vaccination rates
[30] Amele, S et al (2023) Ethnic inequalities in positive SARS-CoV-2 tests, infection prognosis, Covid-19 hospitalisations and deaths: analysis of 2 years of a record linked national cohort study in Scotland
[31] Usher Institute (2024) Awards and Recognitions: A summary of the awards and achievements made by EAVE II and its team members

6. Fair Start Scotland (FSS)

Fair Start Scotland (FSS): Improving Employment Outcomes

FSS was a voluntary employability support service providing personalised support for disabled people and those at risk of becoming long term unemployed. The service supported individuals towards and into sustained employment through help and one-to-one support, tailored to an individual's circumstances. Evaluation of FSS indicated that the service had a positive impact on the wellbeing of participants and improved labour market outcomes. Participants also felt that the service operated in line with its principles and values of providing a personalised service that treated people with dignity and respect.

Introduction

FSS was the Scottish Government's first fully devolved employability service. The service was launched in April 2018 and closed to new referrals in March 2024. It will stop providing support to those currently enrolled in 2026-27. Learnings from FSS informed the next step of delivery of Scottish Government funded employability provision which is now commissioned through Local Employability Partnerships, under the No One Left Behind approach.

FSS is an example of a secondary preventative intervention as it is designed to prevent long term unemployment which is associated with a range of negative social, economic and health outcomes and can result in additional costs for public services.

FSS marked a major departure from previous UK Government employability programmes as it operated as a voluntary rather than mandatory basis. FSS is one of the first polices to arise from the extension of devolved powers as a result of the Scotland Act 2016.

Context

The 2016 Scotland Act devolved powers to the Scottish Parliament for employment support services for disabled people and people who were at risk of long term unemployment.

Prior to these powers being devolved the Scottish Government had been critical of the employability programmes run by the Department for Work and Pensions (DWP). Criticism related to the use of benefit sanctions for people refusing to participate in the Work Programme (the UK Government's main welfare to work programme) and concerns over 'creaming and parking' (whereby services focus resources on easier-to-help individuals at the expense of those who are further from employment) which applied to both the Work Programme and Work Choice (the UK Governments disability employability programme).

Response

The Scottish Government was keen to take a different approach to employability service support and make the most of the further devolved powers granted within the 2016 Scotland Act.

FSS was designed to place fairness, dignity and respect at the centre of employability support and provide tailored and person-centred support to people who were furthest removed from the labour market.[1] It also aimed to deliver higher quality, more extensive support for clients, and a more integrated and coherent system of support through providers.

FSS was developed following extensive consultation and based on a 'Scottish Approach' to employability which was underpinned by a number of principles as set out in Figure 1 below: [2]

Figure 1: Six Key Principles underpinning the Scottish Approach to employability

[1] Scottish Parliament (2018) Statement by Minister for Employability and Training on the launch of Fair Start Scotland
[2] Scottish Government (2016) Creating a Fairer Scotland: A New Future for Employability Support in Scotland

Intervention

DWP contracts for both Work Programme and Work Choice expired on 31 March 2017, and devolved services commenced from 3 April 2017. In the first instance devolved services were delivered through transitional services but in April 2018 FSS was launched. Since its launch there have been 104,208 referrals to FSS up to March 2024.[3] It aims to provide tailored and personalised support to people and the annual cost of the programme has fluctuated between £14m and £28m. The key elements of FSS, at the point it was initiated are set out below:

- Participation will be entirely voluntary;
- All participants can expect to receive in-depth action planning to ensure the support they receive is tailored for them and suits their individual needs and circumstances;
- The service will offer pre-work support of 12-18 months;
- The service will offer high quality in-work support for up to 12 months;
- Those who require specialist support to help them find work can expect to receive it;
- There will be national standards to ensure everyone is supported consistently across the nine geographic contract areas across Scotland;
- For disabled customers who require intensive support, Supported Employment (SE) and Individual Placement and Support (IPS) will be available.

The FSS service delivery model is based on evidence of what works in employability support and was developed in consultation with delivery partners, employability providers and the Scottish public.[4]

Scottish Ministers have committed to a 'test and learn' approach to the long-term development and continuous improvement of devolved employability services and both the FSS service design and evaluation reflect this approach.

For example, in response to feedback on participants' needs, starting from Year 4 of service delivery (April 2021) a change to the inclusion criteria for joining the FSS service was introduced to allow those who already took part in the service to rejoin the service if they still require support.

Eligibility and early entry groups

Potential participants must be in receipt of a reserved UK working age benefit unless they are disabled, and will be either:

- aged 18 years old and over, out of work and living in Scotland; or
- aged 16 or 17 years old and either disabled or in receipt of Employment and Support Allowance/Universal Credit (UC) (work-focussed interview group, work prep group or no work requirements).

[3] Scottish Government (2025) Scotland's Devolved Employment Services: Fair Start Scotland Statistical Summary February 2025
[4] Scottish Government (2016) Creating a Fairer Scotland: A New Future for Employability Support in Scotland

The Service aims to support individuals who:

- have a disability or additional support need (with disability as defined in the Equality Act 2010).
- have been unemployed for a long time (those reaching 2 years on Job Seekers Allowance/ UC equivalent).

In addition certain groups are eligible for FSS from the first day[5] of unemployment including lone parents, care experienced young people, people with a conviction, refugees, ethnic minorities, residents in the 15% most deprived Scottish Index of Multiple Deprivation (SIMD) areas and individuals who are unemployed with a health condition that is a barrier to work.[6]

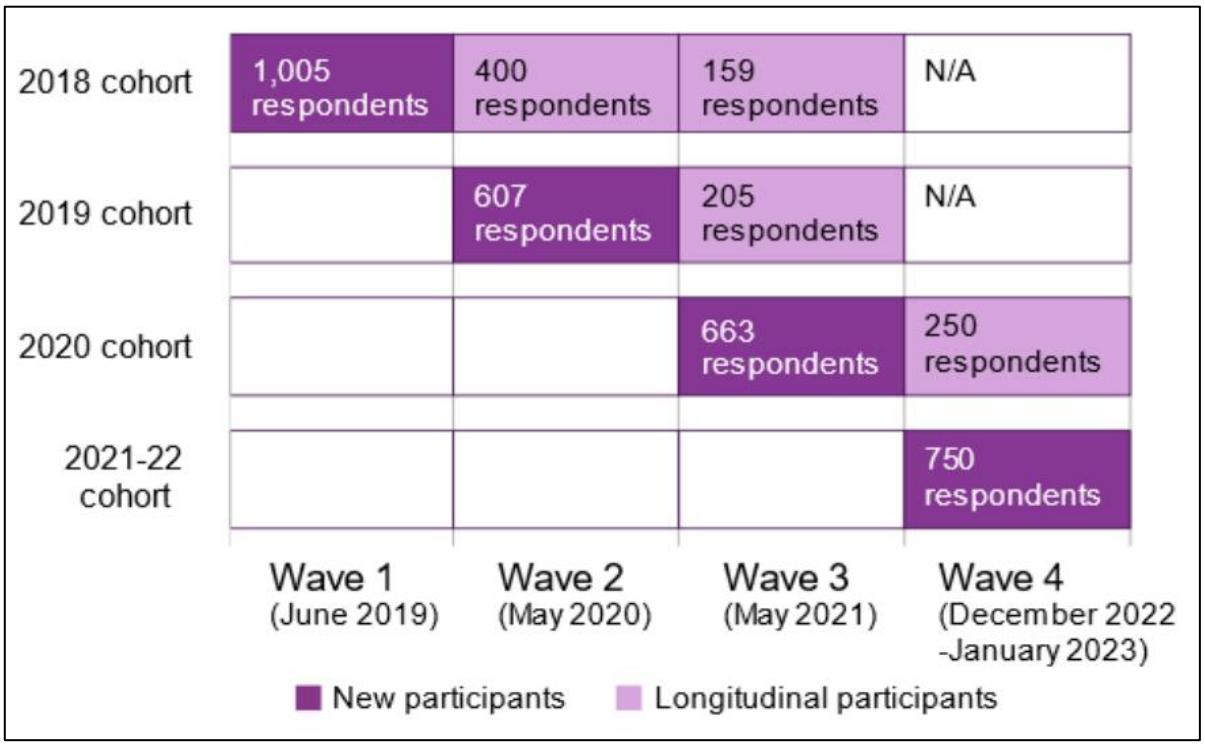
Monitoring and Evaluation

FSS has been evaluated since its introduction in 2018 and several research outputs have been published. Overall this constitutes a significant investment in evaluation. Key outputs include an implementation review[7] relating to the early delivery of FSS in the first 6 months and subsequent evaluation reports for year one,[8] year two,[9] year three[10] and year four and five[11] as well as an economic evaluation of first three years of service delivery.

The programme of FSS evaluation activities included regular phone surveys with FSS participants. The phone surveys looked into experiences of taking part in the service, whether the service had been delivered as intended and the outcomes associated with taking part. To date the evaluation has consisted of four survey 'waves'. From the Wave 2 survey onwards the survey had a longitudinal element, meaning that a proportion of the earlier cohorts were recontacted in the subsequent wave. Figure 1 below shows which respondents were surveyed over the four survey waves.

[5] Originally these groups were eligible after six months of unemployment, but this was changed from the third year of the programme.
[6] Scottish Government (2022) Fair Start Scotland Factsheet
[7] Scottish Government (2019) Fair Start Scotland evaluation report 1: implementation and early delivery review
[8] Scottish Government (2019) Fair Start Scotland evaluation report 2: overview of year one - November 2019
[9] Scottish Government (2020) Fair Start Scotland - evaluation report 3: year two - overview
[10] Scottish Government (2021) Fair Start Scotland: evaluation report 4 - year 3 overview
[11] Scottish Government (2023) Fair Start Scotland - evaluation report 5: participant phone survey - years 4 and 5 - November 2023

Figure 1: Cohorts Surveyed Across the Four Survey Waves



Source: Scottish Government (2023) Fair Start Scotland - evaluation report 5: participant phone survey - years 4 and 5 - November 2023

In 2021, an independent economic evaluation[12] of the delivery and outcomes of FSS was commissioned looking at the first three years of operation. The three broad objectives for the economic evaluation were to understand:

- The value for money of the service by comparing costs and benefits
- The value for money of the service by employing wider measures such as unit costs
- The wider social impact of the service, including wellbeing and inclusive growth.

In addition to the evaluation activities discussed above the Scottish Government also collects and publishes quarterly statistics for FSS including information on the socio-demographic characteristics of those who took part in FSS and employment outcomes for service participants.

Key Findings

a) Improved outcomes

The most recent quarterly statistical publication from February 2025[13] shows that there have been 70,513 starts to FSS since April 2018, including 6,999 re-joins

[12] Scottish Government (2022) Fair Start Scotland: Economic Evaluation
[13] Scottish Government (2025) Scotland's Devolved Employment Services statistics

which were possible from April 2021.[14] Overall, there have been 26,565 job starts since FSS launched. For job starts where enough time has passed in pre-employment support and for outcomes to be achieved, 38% have entered employment, 28% have sustained employment for 3 months, 23% have sustained employment for 6 months and 18% have sustained employment for 12 months. Of the 11,537 job starts (those where enough time has passed in pre-employment support and for outcomes to be achieved), 78% went on to reach at least 12 months employment.

Overall, findings from the latest survey wave (Wave 4) of the evaluation demonstrate broadly positive results for participants. Of those survey participants who were in-work at the time of the survey, the majority (74 per cent) reported earnings that indicated they were earning at least the National Living Wage rate, with 30 per cent reporting earnings that indicated that they were earning at least the level of the Real Living Wage.

Almost three in five (57 per cent) of participants in the 2021-22 cohort who had worked within the last week had a permanent employment contract, while less than one in five (18 per cent) had a temporary contract.

Overall satisfaction with the support received from FSS has remained consistently high across all waves. For example, 72 per cent of participants agreed that participating in FSS had a positive impact on their wellbeing. Of the 2021-22 cohort, 93 per cent felt they were treated with dignity and respect.

FSS support also helped build participants' motivation to find work. The majority of the 2021-22 cohort who were not working (or working less than 16 hours per week) at the time of the survey wanted to return to work (86 per cent) and almost two-thirds (64 per cent) reported that their motivation to find work had increased since receiving FSS support.

b) Economic analysis

Analysis conducted by Alma Economics using the DWP Social Cost Benefit Analysis (SCBA) model, found that the program has had a net positive economic impact, with societal, fiscal, and participant benefits outweighing the costs, thus offering good value for money.

The results of the cost-benefit analysis estimated that for every £1 spent on the service, the estimated benefits are £3.60 from society's perspective, £1.60 from a public finance perspective, and £2.60 from the perspective of participants. These measures take into account not just the financial benefits of the service, but also improved wellbeing for those who moved into employment and the benefits from redistribution in favour of those with the lowest incomes.[15]

The economic evaluation concludes that: "Conducting direct comparisons between Fair Start Scotland and other employment programmes is difficult given differences

[14] As FSS closed to new referrals on the 31st March 2024, this represents the final number of starts on FSS

[15] Scottish Government (2022) Fair Start Scotland: Economic Evaluation

in design, target groups, scope of operation and evaluation methodologies. Therefore, conclusions need to be drawn carefully. Overall, Fair Start Scotland performs well in comparison with other programmes, achieving relatively similar results across key performance metrics. In terms of value for money, while the costs compared to the benefits were slightly higher for Fair Start Scotland than for other programmes, this can be attributed to its voluntary nature, the type of participant it aims to help, and its narrower scope and timescale in comparison to UK-wide programmes."

Learning and Next Steps

The Evaluation of FSS suggests that the programme has had some success in improving outcomes, and has an overall benefit to society, public finances and for participants. However, because of the lack of a control group it is difficult to fully quantify the impact of FSS. Given the differences in design, delivery and approach to measuring outcomes it is also not possible to make direct comparisons with the previous DWP delivered schemes that FSS replaced.

Building on the past four waves of phone survey evaluations with service participants, the Scottish Government is planning to undertake a fifth wave of a phone survey evaluation. This evaluation will look into the experiences and outcomes associated in taking part for the final cohort of FSS participants including those who joined in the period of 12 months before the service closed for new referrals in April 2024.

FSS had a 'payments by results model' whereby 'fees' (paid to employability support providers) are higher for achieving sustained employment outcomes for people with greater support needs who are further from the labour market. This graduated incentive system has been designed to attempt to overcome issues associated with service providers concentrating efforts on those people who are more likely to find and sustain employment. However, the evaluation found that there was 'room for improvement' in relation to supporting those further from the labour market.[16]

It is important to recognise the significant challenges associated with supporting some of the most vulnerable people in society into sustainable employment outcomes. However, evaluation outputs, over the last six years show that a large proportion of people participating in FSS have achieved positive and sustainable employment outcomes and that FSS is overwhelming viewed in a positive light by participants. Furthermore, the vast majority of participants feel they are treated with dignity and respect.

FSS closed to new referrals at the end of 2023-24 however continues to deliver support to those who have already started on the service and will finish in 2026-27. Once the period of support concludes for those who joined the service prior to April 2024, the service will end. Disabled people and those at risk of long term unemployment are now supported through No One Left Behind.

[16] Scottish Government (2021) Fair Start Scotland: evaluation report 4 - year 3 overview

7. Family Nurse Partnership (FNP)

Family Nurse Partnership: Improving outcomes for children and families

The Family Nurse Partnership (FNP) is an intensive, preventative, one-to-one home visiting programme for young first time mothers. FNP has been evaluated and shown to have led to measurable improvements in outcomes for children and families. Scotland is the first country in the world to deliver the programme at a national level.

Introduction

FNP is an example of a primary preventative intervention. FNP provides a one-to-one home visiting programme for first time mothers aged 19 and under, as well as some aged 25 and under where local capacity exists. It is delivered by a specially trained Family Nurse from early pregnancy until the child is aged 2.

Context

There is a growing international body of evidence which demonstrates that a child's first years are critical in influencing later life outcomes.[1] In summer 2007 a Ministerial Task Force on Health Inequalities chaired by the Minister for Public Health was set up by the Scottish Government to agree priorities for cross government activity to reduce health inequalities.

The Task Force's report (published in June 2008), set out evidence on the wide ranging and deeply damaging inequalities that existed within Scotland and emphasised the importance of the early years in determining future health outcomes. The report set out how:

*'*Future health inequalities are, to a large extent, determined from a child's earliest years. This is down to biological factors as well as life circumstances generally. Early responses to what is happening shape future physical and psychological functioning. To help the brain develop children need secure and consistent relationships with others, or else they will not thrive, learn, adapt and form good future relationships'. [2]

Many of the Task Force's conclusions were related to the importance of providing the best possible environment for children's earliest years and ending cycles of poverty and poor health passed down from parent to child.

Response

The September 2008 Programme for Government committed to 'work together with local government and other partners to lead a profound shift in culture and service delivery around implementation of the early years/ early intervention framework'.[3]

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[1] Scottish Government (2009) The Early Years Framework
[2] Scottish Government (2008) Equally Well: Report of the Ministerial Task Force on Health Inequalities
[3] Scottish Government (2008) Moving Scotland Forward: The Government's Programme for Scotland 2008-09.

Following this the Scottish Government published the Equally Well Implementation Plan.[4] The Plan included a recommendation to introduce a Nurse Family Partnership pilot in NHS Lothian to provide holistic support services for families with very young children at risk of poor health and other outcomes.

This recommendation was based on evidence gathered to inform a UK Government 2006 Action Plan on tackling social exclusion. The Action Plan set out evidence that the Nurse Family Partnership was 'highly cost effective' and 'effective with families suffering high levels of deprivation'.[5] A pilot was set up in England in 2007 with some adaptations including changing the name to the Family Nurse Partnership (FNP) in recognition it should be a family led approach.[6]

Within Scotland FNP was seen as a key intervention to improve outcomes in the early years and break the repeating cycle of poor outcomes often associated with teenage pregnancy. Commitment to this programme, in Scotland, was also discussed as part of the development of the Early Years Framework,[7] which was focused on giving every child the best possible start in life and was launched alongside Equally Well.

Intervention

The Nurse Family Partnership was developed in the US by Professor David Olds. It is a highly intensive, complex clinical intervention, with the purpose of achieving three core outcomes through development of a relational, therapeutic relationship between the nurse and the client:

- Improving pregnancy and birth outcomes, through improved prenatal health behaviours;
- Improving child health and development, through positive, responsive caregiving; and
- Improving the economic stability of the family, through developing their vision and realising their plans for the future.

The Nurse Family Partnership (in the US) which evolved from the 1970s has been rigorously evaluated through three randomised control trials (RCTs) examining the effects of the programme on first-time, low income mothers. These RCTs have shown significant improvements in the health and lives of first time mothers.[8] FNP has received the highest possible evidence rating from the Early Intervention Foundation[9].

[4] Scottish Government (2008) Equally Well Implementation Plan
[5] UK Government (2007) Reaching Out: An Action Plan on Social Exclusion
[6] David Hall and Susan Hall (2007) The "Family-Nurse Partnership": developing an instrument for identification, assessment and recruitment of clients
[7] The Scottish Government (2009) The Early Years Framework.
[8] See Nurse Family Partnership website
[9] See Early Intervention Foundation website

FNP has been introduced in a number of countries including England where it has been evaluated through a RCT[10] and subsequent follow-up evaluation.[11] FNP is supported by a detailed logic model which includes a wide range of short, medium and long term outcomes to be achieved during programme delivery, at the point of graduation and post programme completion.[12] FNP is underpinned by a body of academic literature and draws heavily on human ecology theory, attachment theory and self-efficacy theory.

FNP was brought to Scotland under license and piloted in NHS Lothian from late 2009 with client enrolment beginning in 2010. Following successful early implementation[13] the programme was gradually rolled out across mainland Scotland. Table 1 below shows the roll out of FNP in Scotland.

Table 1: Implementation of FNP across Scottish Health Boards

NHS Health Board	Date Recruitment began
NHS Lothian	Jan 2010
NHS Tayside	July 2011
NHS Fife	August 2012
NHS Greater Glasgow and Clyde	October 2012
NHS Ayrshire and Arran / NHS Highland	February 2013
NHS Lanarkshire	July 2013
NHS Forth Valley	March 2014
NHS Grampian	May 2015
NHS Borders	August 2015
NHS Dumfries and Galloway	October 2018

FNP in mainland Scotland is offered to all young first-time mothers aged 19 or under and some mothers under 25, where there is local capacity to reach them. The programme is delivered from early pregnancy until the child reaches two years old, recognising the important *'window of opportunity'* during pregnancy, particularly first pregnancy, and capacity to influence child development during early key life stages. FNP is a voluntary programme, in that it is the decision of the young mother as to whether they want to enrol onto FNP.

FNP is a focused, preventative approach that seeks to support both the mother and her partner (or other adults involved in the child's care) to develop their own coping skills and strategies to enable them to nurture, care and protect themselves and their children. Family Nurses are experienced, qualified nurses and midwives who undergo extensive, additional training to take on the role of a Family Nurse.

The FNP client group is complex and because of this, the changes they wish to make in their lives are diverse. Programme delivery, therefore, aims to be robust but also flexible. The FNP programme sets out a schedule of structured home visits, with

[10] Cardiff University (2015) The Building Blocks Trial
[11] Cardiff University (2019) Building Blocks 2-6
[12] Scottish Government (2020) Family Nurse Partnership evaluation: methods and process (See Appendix 1)
[13] Ormston, R. McConville, S. and Gordon, J. (2012) Evaluation of the Family Nurse Partnership Programme in NHS Lothian, Scotland: 3rd Report – Infancy.

guidance on content. Family Nurses are encouraged to match their schedule of visits and the content of these to individual clients' specific needs and goals. Family Nurses are provided with an extensive suite of materials to support client engagement and the development of knowledge, skills and confidence.[14]

Monitoring and Evaluation

As noted above, the original model for the programme was previously evaluated in the US and England. Since its introduction in Scotland in 2009 several evaluations have been carried out. These have included:

- An evaluation of the original pilot of FNP in NHS Lothian (published in 2014[15]) examining the implementation and operation of the programme and the plausibility of FNP to impact on short, medium and long-term outcomes.

- A qualitative study of FNP (published in 2019) which aimed to distil learning through understanding the experiences of those providing and receiving FNP.

- A mixed methods study examining the experience of FNP clients and family nurses during the Covid-19 pandemic (published in 2021[16])

- A 10 year analysis of FNP using routine data, of over 9,000 participants that had completed the FNP programme up to 31st March 2021 (published 2022[17])

- A natural experiment using data linkage comparing the outcomes of mothers and children completing FNP to a comparable control group (published in 2024[18])

There is a systematic approach to monitoring delivery of FNP. An annual report is produced as part of the licence commitments, and provided to the International NFP Unit in the University of Colorado, Denver. Routine data is collected, in line with the licensing criteria and minimum standards, by Boards and provided for national review annually. This is a subset of the data provided to the Scotland level Annual Report. Boards also collect data monthly in relation to uptake and attrition, and routine data forms are used alongside delivery of the programme and recorded on the FNP Turas system, hosted in NHS Education for Scotland.[19]

[14] Scottish Government (2022) The Family Nurse Partnership in Scotland 10 Years On: A Detailed Analysis of FNP Data
[15] Scottish Government (2014) Evaluation of the Family Nurse Partnership Programme in NHS Lothian, Scotland: Summery of Key Learning and Implications
[16] Scottish Government (2021) Coronavirus (COVID-19) Family Nurse Partnership insights: evaluation report
[17] Scottish Government (2022) The Family Nurse Partnership in Scotland 10 Years On: A Detailed Analysis of FNP Data
[18] Cardiff University (2024) Evaluation of the Family Nurse Partnership in Scotland: A natural experiment using routine data
[19] Monitoring information is published on the Family Nurse Partnership Scotland website

Key Findings

Over the last 15 years a large body of evidence has been collected in Scotland on the effectiveness of FNP in improving outcomes for children and families. This is summarised below in relation to three questions:

1) **What value do people delivering and receiving FNP ascribe to the programme?**

Qualitative data collected through interviews, focus groups and facilitated discussions[20] shows that FNP clients, Family Nurses and other stakeholders see FNP as valuable in terms of:

- Helping clients reflect on aspects of their lives that may be negatively affecting them
- Supporting clients to make decisions and take actions that will improve their situations including client's mental and physical health; safety; self-efficacy and confidence; social and intimate relationships; and housing, education and employment
- Helping to ensure that potentially vulnerable babies are not exposed to harmful situations, and encouraging positive child development through well-informed, sensitive and positive care giving
- Facilitating and enabling positive relationships between clients and other services
- Improving inter-agency working and reducing the workloads of other services.

2) **Have the outcomes of children and families receiving FNP improved over time?**

The 10 year analysis of FNP published in 2022 reported some improvements in maternal and child outcomes for those participating on the programme. This analysis looked at improvements in outcomes amongst participants on the programme overtime and / or change in comparison to the broader population. Key findings demonstrated:

- A reduction in smoking in the two weeks after enrolment, at 36 weeks gestation and 12 months post birth
- An improvement in breastfeeding initiation and duration of feeding among younger mothers
- In recent years the majority of FNP clients had not consumed alcohol (68%) or taken drugs (94%) during pregnancy, including before they knew they were pregnant
- The majority of FNP children did not have a child development concern
- Overall 95% of FNP children had received all of their immunisations by 24 months, in line with the national average for all children.

The report also set out how, at the national level, there has been a substantial decline in the pregnancy and birth rate among younger mothers over the last 10

[20] Scottish Government (2019) Family Nurse Partnership in Scotland: revaluation report

years. The number of first time births to mothers aged 19 and under in Scotland is now a third of what it was when FNP was first delivered in 2010.

3) Is there evidence that people completing the FNP programme have better outcomes than those who don't?

The phased roll out of FNP in Scotland, across a number of years, as set out in Table 1 enabled researchers from the Centre for Trails Research at Cardiff University to conduct a natural experiment using routine data to compare the outcomes of mothers who completed FNP against a control group of mothers who met the eligibility criteria for FNP but were not offered a place on the programme. The study involved linking anonymised routine health, education and social care data comparing outcomes between FNP Clients and Controls across 39 outcomes[21]. The study found some small statistically significant, differences related to child outcomes. The study found that:

- Rates of breast feeding were statistically significantly higher in the FNP group at 10-14 days and persisted at 6-8 weeks post-partum
- There was a statistically significant reduction in the child's exposure to second hand smoke over time in the FNP group compared to the Control group, with a greater reduction seen in the FNP group earlier (between 10-14 days and 6-8 weeks) compared to Controls (between 6-8 weeks and 27-30 months).
- A significantly higher proportion of children in the Controls had any newly suspected child development concerns recorded at 27-30 months, with no other differences in any other child development outcomes.
- Statistically significantly more children in the FNP group were registered with a dentist by aged 2 years.

In addition to the differences described above there were also statistically significant differences for sub-groups in relation to child's school attainment with children that had received FNP significantly more likely to achieve early or first level in writing in NHS Greater Glasgow and Clyde and NHS Fife and Literacy in NHS Fife. This finding is similar to the later Building Blocks 2-6 evaluation in England which found that families visited by a Family Nurse were more likely to achieve a good level of development at school reception age. This effect was strengthened when accounted for child's month of birth.

The study also found some differences in relation to a range exploratory outcomes. For example, A higher proportion of children born to FNP Clients attended childcare by the 27–30-month review compared to children born to women in the Control group and FNP Clients that were recorded as leaving school after their antenatal booking date remained in school for a longer duration than Controls.

[21] Cardiff University (2024) Evaluation of the Family Nurse Partnership in Scotland: A natural experiment using routine data

Learning and Next Steps

The successful adaptation and implementation of FNP across Health Boards in Scotland demonstrates the potential to identify effective international preventative interventions and introduce them to a Scottish context.

Evaluating complex primary preventative interventions such as FNP can be methodologically challenging and expensive. It can also be difficult to identify the longer term impacts associated with interventions due to the lengthy timeframes involved and the practical and ethical issues associated with identifying a suitable control group.

However, the incremental way in which FNP was introduced in Scotland, in different Health Boards over a number of years created the conditions that enabled a natural experiment using data linkage. This supported longitudinal analysis of a large number of variables over time. This approach to evaluation generated significant cost savings. The cost of the data linkage in Scotland was £183,000 in comparison with a cost of £5.2m to evaluation the FNP RCT in England. This approach to data linkage could prove to be a model for future evaluations of similarly phased national interventions.

As the longer term benefits associated with FNP become more apparent it may be useful to undertake economic evaluation to better understand the value for money provided by FNP. In doing so it will be important to learn from other early years preventative evaluations, such as Sure Start[22] where early evaluations were limited in their findings and showed increased service usage in some elements in the early years, however longer term evaluations have demonstrated significant service demand reduction across health care usage and additional education needs alongside increased educational attainment.

In the US where the NFP has been delivered and evaluated over a much longer timeframe there is evidence of longer term positive impacts amongst children and mothers. This includes improvements in mental health, less interactions with the justice system and reductions in use of welfare and other Government assistance[23].

The majority of mothers that enroll on FNP have had significant complex challenges. FNP clients are young first time mothers, many of whom have experienced anxiety and depression, social deprivation, parental separation. A high proportion have been care experienced or on the child protection register.

Abuse and neglect, mental health issues, homelessness and poverty are much more prevalent in the FNP client group than in the general population. Within this context improving outcomes and addressing deeply entrenched, intergenerational inequalities is challenging. However, the body of evidence collected over the last 15 years provides qualitative and quantitative evidence to show that FNP is making an important difference in improving child and maternal outcomes in the short and long term.

[22] IFS (2024) The short- and medium-term impacts of Sure Start on educational outcomes
[23] NICE, The evidence base for the for the family nurse partnership

8. Financial Incentives for Smoking Cessation in Pregnancy

Smoking cessation in pregnancy: financial incentives

In 2007 Scotland was the first part of the UK to establish a financial incentive scheme for smoking cessation in pregnancy. A programme of research found that adding financial incentives to existing cessation services is effective and cost-effective, providing the basis for a change in NICE guidance, ongoing delivery in two NHS Boards in Scotland and a national incentive scheme in England.

Introduction

Smoking cessation in pregnancy programmes involve providing shopping vouchers to mothers at key points in their attempt to quit, combined with support from smoking cessation services. Research initiated in Scotland and subsequently led by researchers based in Scotland has demonstrated that financial incentives are an example of highly effective and cost-effective secondary prevention.

Context

Smoking during pregnancy harms mothers and babies. It is a leading preventable cause of premature birth, miscarriage and sudden infant death syndrome.[24] Low birth weight is associated with a range of developmental problems in childhood and adult health conditions including type II diabetes and coronary heart disease.[25] Most women who smoke and become pregnant are highly motivated to quit and aware of the potential health harms to them and their baby but find it difficult to do so. As smoking rates have declined, tobacco use has become increasingly concentrated in the most deprived groups who face multiple barriers to cessation. Around the time that incentives were first introduced in Scotland, smoking rates at the first maternity booking appointment varied from 5.8% in the least deprived communities to 29.4% in the most deprived.[26] While smoking prevalence has declined overall since then, these inequalities remain – in the latest data (2023) rates were 2.4% compared with 20.4%.[27]

Behavioural support (counselling) for smoking cessation is effective in pregnancy and there is some evidence on the effectiveness of nicotine replacement therapy (NRT). These are offered in combination by smoking cessation services in Scotland but reach and success rates can be low. Adding modest financial incentives to stop smoking support was first trialled in the USA in the late 1990s with promising evidence that it increased uptake of support and resulted in more women quitting.[28]

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[24] Salihu HM, Wilson RE (2007) Epidemiology of prenatal smoking and perinatal outcomes

[25] Stock, S and Bauld, L (2020) Maternal smoking and preterm birth: an unresolved health challenge

[26] ISD Scotland (2011) Births in Scottish Hospitals

[27] Public Health Scotland (2024) Antenatal booking in Scotland, calendar year ending 31 December 2023

[28] Donatelle, R et al (2000) Randomised controlled trial using social support and financial incentives for high risk pregnant smokers: Significant Other Supporter (SOS) program

This prevents harms during pregnancy and after birth, and if the mother remains smokefree, avoids longer term morbidity and premature mortality due to smoking.

Response

NHS Tayside was the first part of the UK to launch a financial incentive scheme 'Give it up for Baby'[29] (GIUFB) as part of their stop smoking service for pregnant women. This was motivated by low uptake of cessation services by pregnant women in that NHS Board area at the time. A local consultant pharmacist in public health had reviewed evidence from the USA on incentives and considered this a worthwhile avenue for exploration. He worked with others to develop a programme targeted particularly at pregnant women living in deprived communities that was based on social marketing techniques.[30] This approach involved engaging with a range of stakeholders including community development groups, the NHS and local authority. It led to a programme called 'Give it Up for Baby' (GIUFB).

Intervention

GIUFB was promoted in a wide range of settings including ante-natal clinics, general practices and in community settings (beyond the NHS) as well via local newspapers. All pregnant women who smoked were invited to register at a local pharmacy. Women who joined needed to set a quit date to stop smoking following a brief intervention (advice on the risk of smoking and the benefits of quitting, particularly with support) and then attended weekly sessions (for up to 12 weeks) with a member of the local pharmacy team trained in smoking cessation. Pharmacy staff provided behavioural support and NRT, in line with NHS Tayside's pharmacy based smoking cessation services. At each visit post quit date, women were asked to take a carbon monoxide (CO) breath test which provides evidence of smoking status. If their CO reading was below the cut off for active smoking, the pharmacist sent the results to an administrative officer in NHS Tayside, who provided a supermarket voucher that could be topped up to the value of £12.50 each week. The voucher was redeemable in two major supermarket chains and could be used to purchase goods excluding tobacco and alcohol. Women who were still smokefree at 12 weeks could continue to claim a monthly incentive up to 12 weeks after the birth if they provided further CO breath tests at their local pharmacy.

Following the establishment of the NHS Tayside programme, academics collaborated with the pharmacist who had set up the programme to explore the expansion of an incentive scheme to another health board area – NHS Greater

[29] NHS Tayside (2024) Give it up for Baby
[30] National Social Marketing Centre (2011) Give it Up for Baby

Glasgow and Clyde (NHSGGC). This involved a programme of research starting with feasibility work, followed by two large randomised controlled trials.
The intervention for the trials was like GIUFB but adapted to be feasible for different configurations of smoking cessation services. This was important given NHS Tayside's model was pharmacy led. Further evidence needed to be generated from other service models including in general practices, maternity units and via telephone. The same combination of behavioural support and NRT was offered with biochemical validation in pharmacies or other health care settings via a CO breath test with the addition of providing a urine sample sent to the research team at the end of pregnancy. The incentive amount and form of voucher was also modified based on feasibility work, to embed the administration of the voucher within the research team (via a procurement partner) rather than add this to the workload of health board staff.

Women involved in the trials were provided with Love to Shop vouchers (redeemable at a range of retailers) worth £50 for setting a quit date, £50 if they had stopped smoking at four weeks, £100 if still smokefree at 12 weeks and £200 at the end of pregnancy. At each point they needed to provide a CO breath test with a reading below the cut off for smoking to receive the vouchers, and at the end of pregnancy (34-38 weeks gestation), also provide a urine sample to test for cotinine, a nicotine metabolite.

Monitoring and Evaluation

The evaluation of GIUFB involved a mixed methods study[31] with two main elements. The first was analysis of routine monitoring data from March 2007 to December 2009, with the second comprising a process evaluation. The monitoring data included the Scottish National Smoking Cessation Dataset; weekly and periodic carbon monoxide (CO) breath tests; smoking cessation quit attempts; and the number of vouchers paid. The process evaluation involved 20 service users identified from client databases as well as six local pharmacists responsible for supporting the scheme.

The subsequent research in Greater Glasgow and Clyde began with a feasibility study involving qualitative interviews with pregnant women and health professionals which was funded by the Glasgow Centre for Population Health (GCPH).[32] A phase II (pilot) trial then followed which was funded by the Chief Scientist's Office, GCPH and endowments from NHSGGC and the Yorkhill Children's Charity.[33] The subsequent multi-centre phase III (definitive) trial[34] was conducted in NHS Lanarkshire and six other sites in England and Northern Ireland and funded by

[31] Radley et al (2013) Give it up for baby: outcomes and factors influencing uptake of a pilot smoking cessation incentive scheme for pregnant women
[32] Macaskill, S et al (2009) Incentives to Engage Pregnant Smokers with Specialist Smoking Cessation Services: Feasibility Study in NHSGGC, Glasgow Centre for Population Health
[33] Tappin, D et al (2015) Financial incentives for smoking cessation in pregnancy: a randomised controlled trial
[34] Tappin, D et al (2022) Effect of voucher incentives provided with UK stop smoking services on the cessation of smoking in pregnant women (CPIT III): pragmatic, multicentre, single blinded, phase 3 randomised controlled trial

Cancer Research UK, the Chief Scientist's Office, the public health agency in Northern Ireland and several small charities. Both the pilot and multi-centre trial included economic evaluations.

Key Findings

a) Improved outcomes

In the GIUFB evaluation covering the period 2007-2009[7], quit rates (validated by CO breath test) for those registering were 54% at four weeks, 32% at 12 weeks and 17% at three months post-partum. A comparison group was not established which was a limitation, but unavoidable as GIUFB resulted from service development rather than a research programme. However, the Tayside evaluation had a national audit from 2006 to compare their results to. This found that only a small proportion (13%) of women identified as smoking at maternity booking in Scotland engaged with services and 3.9% quit by four weeks, compared with 20% and 7.8% in the three areas in Tayside where GIUFB was in place.[35,7]

The process evaluation for GIUFB used the findings from interviews with participants to develop a service user typology to provide insights into why some women benefitted more from the scheme than others. The most deprived women who engaged with the scheme valued the incentives but still found it difficult to quit due to very challenging life circumstances. Those who were successful, including among these more deprived groups described the incentives as supporting engagement with the service and continuing to use it. They also noted that other aspects of the scheme were equally important including supportive relationships established with the pharmacist delivering the programme as well as regular CO breath tests. This combination of the incentive with smoking cessation service support – rather than incentives alone, is something noted in local evaluations of similar subsequent schemes in England, for example.[36]

For the pilot trial in Greater Glasgow and Clyde,[9] 612 pregnant women who smoked were recruited and randomised to the offer of 'routine care' (NRT obtained via a local pharmacy and behavioural support delivered by telephone) or the 'intervention' which involved adding incentives (using the timing and amounts described) above to routine care. The primary outcome for the trial was cessation at the end of pregnancy, with results adjusted for age, smoking years, SIMD, and cigarette dependence (Fagerstrom) score, all factors that can influence cessation outcomes. More than twice as many women quit smoking by the end of pregnancy (RR 2.63) in the intervention compared to the control group (22.5% vs 8.6%). This study had limitations as it was conducted in a single site, albeit involving a large number of participants. A more definitive trial was needed covering several locations.

The multi-centre trial[10] therefore followed, and had the same design, intervention and analysis approach as in the pilot trial but was conducted in seven different stop

[35] Tappin et al (2010) Smoking prevalence and smoking cessation services for pregnant women in Scotland

[36] Smoking in Pregnancy Challenge Group (2019) Evidence into practice: supporting smokefree pregnancies through incentive schemes

smoking service operating in a range of settings (primary care, pharmacy, maternity services) in Scotland, Wales and Northern Ireland. As in the pilot trial, more than twice as many women quit smoking by the end of pregnancy (RR 2.78) – 27% in the intervention group compared to 12% in the control group.

Taken together, these two trials provided strong evidence that adding incentives of up to £400 to the offer of stop smoking service support more than doubles quit rates – contributing to improved health and wellbeing outcomes for babies and mothers.

b) Cost savings

The economic evaluations embedded in each of the trials found that incentives were cost-effective. Both involved a cost-utility analysis using a life-time Markov model, which is an approach that compares the costs and effects of different interventions by measuring health outcomes in terms of quality and quantity.

For the pilot trial, the economic analysis[37] found that the incremental cost effectiveness ratio (ICER – which highlights the difference in costs divided by the difference in outcomes) per quitter at the end of pregnancy was £1127. When analysed over a lifetime the ICER was £482 per Quality Adjusted Life Year (QALY). This is well below recommended thresholds for cost-effective healthcare interventions. In the multi-centre trial, the findings[38] were similar although the ICER was higher in part due to the inclusion of neonatal costs in this larger trial. However, as in the pilot, the life-time analysis findings were that incentives were cost-saving and that financial incentives were highly cost-effective.

c) Addressing inequalities

Smoking in pregnancy is highly concentrated in more deprived communities. This is reflected in the baseline study characteristics from both the pilot and multi-centre trials. In the first trial, 65% of the control group and 67% of the intervention group lived in communities in SIMD 1 (among the 20% most deprived areas in Scotland) compared to just 2.6% and 3.6% respectively who lived in SIMD 5. In the second trial (which used the Index of Multiple Deprivation to cover the UK) 42.2% of women in the control group and 43% of those in the intervention group lived in IMD 1 (most deprived) and just 2.9% and 3.2% respectively in IMD 5 (least deprived). In both trials, the largest group after SIMD 1/IMD 1 were living in SIMD 2/IMD 2. The analysis in both trials controlled for SIMD/IMD. It found no significant differences, suggesting incentives for smoking cessation during pregnancy are effective even for women living in the least affluent communities.

[37] Boyd et al, 2015 Are financial incentives cost-effective to support smoking cessation during pregnancy?
[38] McMeekin et al, 2023 Financial incentives for quitting smoking in pregnancy: Are they cost-effective?

Learning and Next Steps

GIUFB is still in place in NHS Tayside. NHS Greater Glasgow and Clyde also provide incentives as part of their smoking cessation service for pregnant women and were involved in a recent study[39] that assessed the roll out after completion of the trial there. This found that financial incentives were successfully integrated into local smoking cessation services. It also found when comparing outcomes before and after the roll out, that incentives had increased routinely monitored quit rates among pregnant women using the services. Further roll out in Scotland to other health board areas has not occurred to date, but the wider applicability of this type of preventative intervention has been explored for other public health issues. This includes in a recent positive trial of incentives combined with behavioural support for weight loss among men living in more disadvantaged communities in Glasgow (as well as Bristol and Belfast).[40]

The studies of incentive schemes for smoking cessation in pregnancy that began in Scotland influenced policy in England and informed an international evidence-base. These trials were included in Cochrane reviews[41,42] (international gold standard reviews for guiding health care and health policy) which found incentives to be the most effective of all interventions for smoking cessation in pregnancy. The studies also directly resulted in a change in NICE guidance in 2021 to recommend that providers of stop smoking support offer voucher incentives to support women to quit during pregnancy in addition to NRT and behavioural support.[43,11]

This change in NICE guidance, along with several areas in England initiating incentive schemes as well as further studies (that involved the members of the Scottish research team and others) to evaluate incentives schemes in Greater Manchester,[44,45] led to a national programme in England that was announced in November 2023.[46] This is currently being rolled out[47] and any organisation providing stop smoking support to pregnant women in England can join the scheme.

[39] Too et al (2021) Are financial incentives effective and cost effective in a real life smoking cessation program for pregnant women? A phase IV 'before and after' study to provide evidence to secure long term funding
[40] Hoddinott, P et al (2024) Text messages with financial incentives for men with obesity: A randomised clinical trial
[41] Chamberlain, C et al (2017) Psychosocial interventions for supporting women to stop smoking in pregnancy
[42] Notley et al (2025) Incentives for smoking cessation (updated from 2019)
[43] NICE (2021) Guideline NG209 Tobacco: preventing uptake, promoting quitting and treating dependence

[45]Ussher, M et al (2024) Effect of 3 months and 12 months of financial incentives on 12 month postpartum smoking cessation maintenance: a randomised controlled trial
[46] Department of Health and Social Care (2023) Stopping the start: our new plan to create a smokefree generation
[47] NHS England (2024) National smoke-free pregnancy incentive scheme

9. Housing First Pathfinder (HFP)

Scotland's Housing First Pathfinder: Reducing Homelessness in Scotland

Scotland's Housing First Pathfinder (HFP) programme provided independent (self-managed) tenancies and support for 579 individuals in five urban areas to prevent homelessness. The programme ran from 2019 to 2022. An independent evaluation found the programme was positively received and was highly successful in providing sustainable housing solutions for homeless people with complex needs. However, evidence of the wider impacts of the programme on outcomes associated with homelessness within the evaluation period was mixed and complicated due to the effects of COVID-19. Initial analysis suggests that Housing First has the potential to result in significant cost savings for the Scottish Government over time.

Introduction

Housing First is an upstream primary prevention intervention aimed at people who have multiple and complex needs and who may have a history of rough sleeping and repeat homelessness. The Housing First approach ensures those with high support needs are allocated settled accommodation with intensive support. It was not designed primarily as a 'housing' intervention, but rather a more holistic service within which rapid provision of settled housing is one (crucial) ingredient.*

Context

In 2017 homelessness, though relatively stable, remained a significant problem in Scotland's four main cities despite the very strong statutory safety net introduced by the Homelessness etc. (Scotland) Act 2003.[1] Between a third and a half of people experiencing homelessness had complex needs compounding their homelessness; housing outcomes (in terms of the security of tenancy achieved and sustained) were less favourable for those people than for other homeless applicants. The time homeless people were spending in temporary accommodation was increasing, and the significant costs to the public sector of homelessness had been highlighted.[2]

The experience of homelessness was heavily concentrated amongst men aged under 45. People who had grown up in poverty and/ or had experienced poor outcomes in early adulthood, such as drug use or school exclusion, were more likely to experience homelessness.[3]

In 2017, six focus groups with representatives from stakeholder organisations were convened for research commissioned by Social Bite to develop an evidence base to

* This is the basis for considering Housing First as primary rather than secondary or tertiary prevention; although the target population are already experiencing homelessness, the intervention aims to prevent persistent homelessness and the negative outcomes that follow, such as engagement with police, justice and acute health services.

[1] Littlewood, M., Bramley, G., Fitzpatrick, S. & Wood, J. (2017) Eradicating Core Homelessness

[2] IPPR Scotland (2022) Translating ambition into outcomes: A review of three policy case studies

[3] Bramley, G. & Fitzpatrick, S. (2017) Homelessness in the UK: who is most at risk?

support action on homelessness.[1] There was a sense that the visibility of rough sleeping had heightened in tandem with more overt begging in city centres; participants emphasised the need to make progress on rough sleeping. In doing so, it was seen as important to take particular account of refugees who had no recourse to public funds, of the role of addictions as a factor in homelessness, and of the need to recognise different patterns of temporary accommodation provision between Scottish cities.

Alongside access to affordable housing, participants emphasised a need for 'assertive', 'sticky' and 'flexible' trauma-informed services working with rough sleepers and other homeless people with complex needs. Key areas of need recognised included substance use and employability. There was strong support for the Housing First model of rapid rehousing into mainstream tenancies with wrap-around support.

A 2017 research publication[1] broadly estimated the costs of implementing Housing First in the four main Scottish cities was £2.7m gross in year 1 (but only about £1m net once cost offsets to the public sector are taken into account), rising to £5.5m gross (or £1.96m net) in year 2. This was based on 470 adults with complex needs being resettled annually across all four cities, ranging from 35 cases per annum in Dundee to nearly 300 per annum in Glasgow. After those first two years an overall (net) saving to the public purse was anticipated; previous modelling[4] based on 80 cases in five other UK Housing First initiatives suggested savings of between £893 and £7,700 per head in the second year.

Response

The focus group research informed recommendations to develop a Scottish approach to Housing First from both the Scottish Parliament's Local Government and Communities Committee (following a cross-party inquiry into the scale and nature of homelessness in 2018) and the Homelessness and Rough Sleeping Action Group (a national taskforce charged with assessing how to better address and solve homelessness).[5]

In 2018, in response to these recommendations[6] the Scottish Government announced funding to support more than 800 vulnerable people with complex needs through a Housing First approach over three years, recognising that 'a safe and secure home is the best base for recovery'.[7] Housing First, therefore, was intended to accelerate access to permanent accommodation, to allow service users to engage with support on their own terms, and to better coordinate different forms of support.[2]

[4] Bramley, G., Leishman, C., Cosgrove, P. & Watkins, D. (2016) What Would Make a Difference? Modelling policy scenarios for tackling poverty in the UK, Annex G
[5] Scottish Parliament (2018) Report on Homelessness; Homelessness and Rough Sleeping Action Group (2018) Final recommendations report
[6] Scottish Government (2018) Ending homelessness and rough sleeping: action plan
[7] Scottish Government (2018) Housing First: Funding to help end homelessness

Intervention

The Housing First approach was developed in the United States and departs from orthodox 'linear' approaches to homelessness by placing homeless people with complex needs directly into independent tenancies without first insisting that they progress through transitional housing programmes, prove 'tenancy readiness' or undergo treatment. There are seven principles: [8]

- People have a right to a home
- Flexible support is provided for as long as an individual needs it
- Housing and support are separate
- Individuals have choice and control
- An active engagement approach is used
- A harm reduction approach is adopted
- The service is based on people's strengths, goals, and aspirations

Compelling international evidence indicated the effectiveness of this approach in ending homelessness for people with co-occurring mental health and/or substance misuse issues.[9] Between 2010 and 2013, Turning Point Scotland delivered the first pilot Housing First approach in the UK, providing housing and support to 22 individuals in Glasgow who were homeless and actively involved in substance misuse, with positive results.[10]

Funding for the Pathfinder was provided by the Scottish Government (£5.8 million), Social Bite (£2.16 million, including evaluation costs), and Merchants House of Glasgow (£150,000). Scotland's HFP programme was implemented in five urban areas (Edinburgh, Glasgow, Aberdeen, Dundee and Stirling) to provide independent tenancies along with flexible, non-time-limited support in homes and communities. Housing providers made available up to 830 one-bedroom flats specifically for people experiencing rough sleeping and complex support needs. Social Bite helped fund dedicated support to accompany the tenancies, appointing the Corra Foundation and Homeless Network Scotland to design and manage a collaborative commissioning structure. The programme ran from April 2019 to March 2022.

Monitoring and Evaluation

An external process, economic and impact evaluation[11] of the three year Pathfinder was commissioned from academics at Heriot Watt University by Corra Foundation with funding from Social Bite. This adopted a mixed methods approach drawing on extensive interviews, programme administrative and expenditure data, holistic needs assessments and service user surveys. The primary outcome for the intervention was housing retention; key secondary outcomes of interest included wellbeing and

[8] Homeless Link (2017) Housing First in England: the principles
[9] Mackie, P., Johnsen, S. & Wood, J. (2017) Ending rough sleeping: what works?
[10] Johnsen, S. (2013) TPS Housing First Final Report
[11] Johnsen, S., Blenkinsopp, J. & Rayment, M. (2022) Scotland's Housing First Pathfinder Evaluation: Final Report; Key Messages (blog)

engagement with the health and justice systems. The evaluation also aimed to capture value for money.

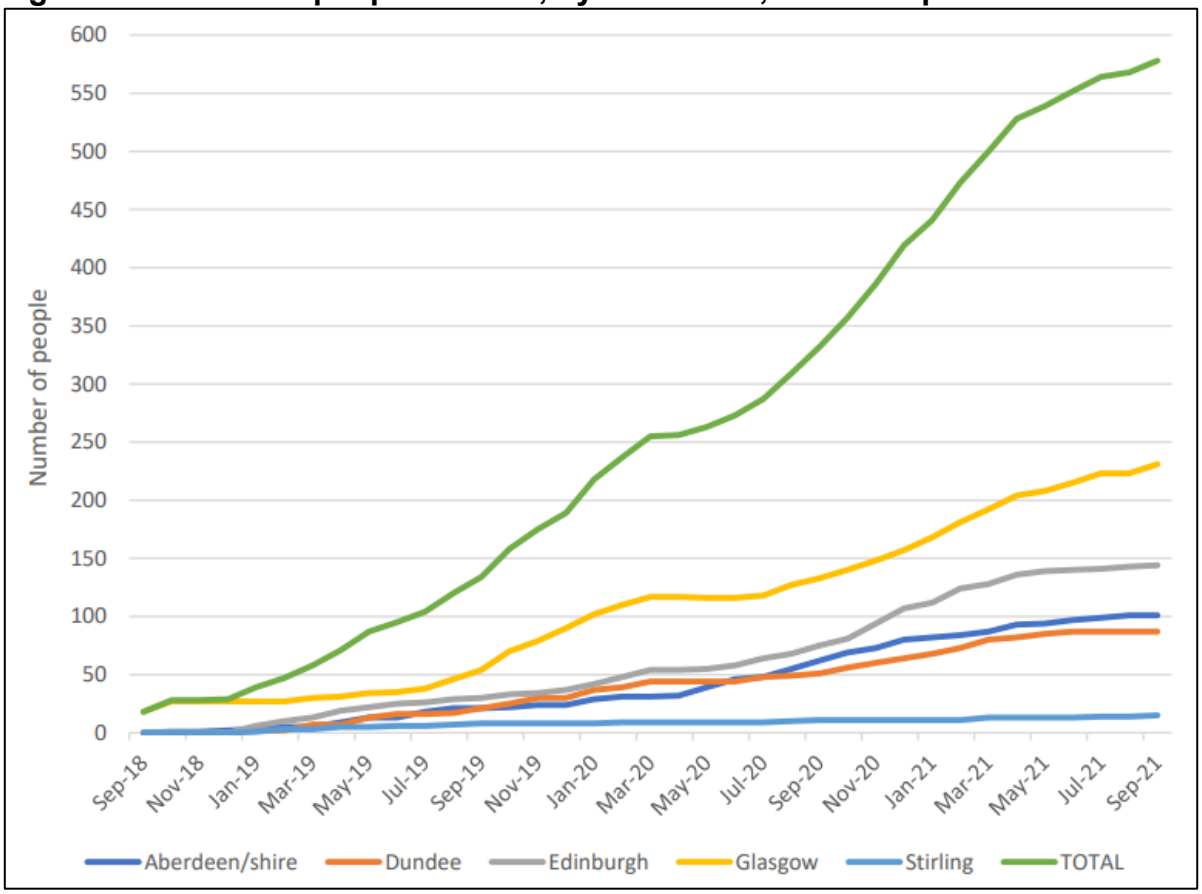
Since 2021 a monitoring framework has captured progress on the scaling up of Housing First across Scotland as well as information on all new Housing First tenancies since 1 April 2021.[12] The monitoring framework collects data on household characteristics; referral routes to Housing First; support provision; and tenancy sustainment, as well as positive outcomes such as reduced support requirements.

Key Findings

a) Improved and Sustained Housing Outcomes

The main success of Housing First was in providing sustainable housing solutions for homeless people with complex needs. 579 individuals were housed over the Pathfinder period (Figure 1), mostly male (68%), White British (99%) and aged 26-49 years (65%). The Pathfinder attained tenancy sustainment rates of 88% at 12-months and 80% at 24-months overall, commensurate with those recorded elsewhere internationally. Many interviewees were surprised at these outcomes given the challenges to service delivery caused by the COVID-19 pandemic during most of this period.

Figure 1: Number of people housed, by Pathfinder, to end September 2021



Source: Tracker monitoring data. Base 579, in Johnsen, S., Blenkinsopp, J. & Rayment, M. (2022) Scotland's Housing First Pathfinder Evaluation: Final Report

[12] Scottish Government Housing First

b) Support in Addressing People's Wider Needs

Housing First is intended as a holistic intervention that not only addresses housing needs but also the complex wider needs associated with homelessness. The evaluation therefore sought to capture impacts in outcomes for health, substance misuse, engagement with the criminal justice system and social support networks. However, the COVID-19 pandemic brought a concurrent negative impact on both service provision (e.g. through heightened staff absence) and many aspects of wellbeing (particularly mental health), as well as limiting the scope for data gathering on non-housing outcomes.

Nevertheless, some positive changes were observed. There was some reduction in service use, with a shift from the use of emergency health services toward treatment-based services. Service users emphasised the value of Housing First in enabling a sustained escape from harms associated with rough sleeping and homeless hostels, and providing a stable home to do 'normal' things which restored dignity and fostered recovery. While Housing First improved tenants' lives in many ways, it did not counteract entirely their pre-existing disproportionate risk of premature death.[13] Six percent of individuals housed by the Pathfinder sadly passed away, with most deaths reported to be substance misuse related.

Service providers interviewed emphasised the time taken to establish relationships and the significance of 'small steps' or incremental changes for an individual's recovery journey, which may not be captured by mainstream monitoring tools. Sustainable positive outcomes were felt likely to take some years to attain given the complexity of the challenges that service users faced; in the context of pandemic impacts on service provision, positive outcomes for many individuals were not necessarily seen as achievable within the Pathfinder timeframe.

c) Cost effectiveness

The combination of a small sample, the complexity of these tenants' needs and the time frame for the evaluation meant the study could not assess value for money conclusively. Over the Pathfinder period, the average *annual* costs per person housed fell to £5,632 (comparable to other UK studies). The combined annual cost of homelessness, police, criminal justice and health services per client at baseline was estimated to average at least £23,000. Findings from a small quantitative sample and qualitative data indicated a strong potential for benefits to exceed costs over time.

Learning and Next Steps

In 2021, the Scottish Government's long-term national housing strategy Housing to 2040 included a commitment to continue scaling up Housing First, with the aim for this 'to be the default option for [homeless] people with multiple and complex needs' (p35).[14]

[13] Morrison, D. (2009) Homelessness as an independent risk factor for mortality: results from a retrospective cohort study
[14] Scottish Government (2021) Housing to 2040

Rollout of the programme in collaboration with COSLA is ongoing.[12] This work is coordinated by Homeless Network Scotland, who provide coordination to monitor progress on systems change, support local authorities to design services,and collect data on the numbers of people supported. As of 31 September 2024,[15] 27 Local Authorities were operating a Housing First programme. 1,206 tenancies have commenced since 1 April 2021 (ranging from 123 in Renfrewshire to less than 5 in Highland). With an 85% sustainment rate over 12 months, the programme demonstrates effective support and housing stability for participants. Out of the 1,003 active Housing First tenancies, 17 local authorities have 109 tenancies in which 190 children are resident, an increase of 172 children in 30 months. Twenty six Housing First participants are employed either full-time or part-time, and 10 participants are engaged in voluntary work.

Scotland has been heralded as an international pioneer in Housing First implementation in an international review of best practice, with the level of political commitment the approach has commanded and pace of scale-up being noted.[16] The Scottish Drug Deaths Taskforce recommended in 2022 that the Scottish Government continue to support and expand delivery of Housing First and endorsed the application of some of its principles as best practice for other services.[17]

The Pathfinder programme was seen to have acted as a sector 'disruptor': changing how services worked together to address complex needs, raising the priority accorded to Housing First in policy debate and catalysing wider adoption. Key lessons included that the time required to develop partnerships with key stakeholders across relevant sectors should not be underestimated. This was seen to underscore the need for broader systems change to overcome the systemic and structural barriers to access housing and treatment.[11]

Despite its successes the programme has faced challenges, such as long waiting periods for tenancy placement and unmet support needs, particularly in mental health services. Changes in consortium composition and delivery in some areas during the third year – including increased caseloads or pressure to limit the duration of support – generated some concern that fidelity may have been weakened.[11]

Homelessness as a policy area has a strong focus on upstream prevention, making it more complex to demonstrate causal attribution between policy and outcomes. Policies in areas including affordable housing, anti-poverty, education, justice etc. all contribute towards homelessness prevention, and cross-sectoral funding input has been called for so that responsibility for its ongoing delivery does not fall solely to the housing/homelessness sector.

[15] Scottish Government (2025) Housing First: monitoring report - 1 April 2024 to 30 September 2024
[16] Jones, S., Albanese, F. & Revelli, M. (2022) Achieving A New Systems Perspective To Ending Homelessness Through Housing First: A policy and practice guide
[17] Scottish Drug Deaths Taskforce (2022) Changing Lives - Final Report

10. Minimum Unit Pricing of Alcohol (MUP)

Minimum Unit Pricing of Alcohol: reducing harm by reducing consumption

Minimum Unit Pricing (MUP) sets a floor price below which alcohol cannot be sold. The Scottish Government introduced a MUP of 50p per unit in 2018, which led to changes in alcohol consumption and was estimated to have contributed to reductions in alcohol-related deaths and hospital admissions for alcohol-related causes, particularly among men and those living in the most deprived areas.

Introduction

Minimum Unit Pricing (MUP) is a primary preventative intervention that aims to reduce health harms caused by alcohol consumption by setting a floor price below which alcohol cannot be sold. It targets a reduction in consumption of alcohol that is considered cheap, relative to its strength, among those who drink at hazardous and harmful levels. MUP is also intended to address alcohol-related health inequalities, given the greater harms people in lower socio-economic groups experience in relation to alcohol. It may also offer a means to reduce indirect harms associated with excessive alcohol consumption such as violence or accidents.

Context

Scotland has a high rate of hazardous and harmful drinking. In 2012, people in Scotland consumed 21.0 units of pure alcohol per adult per week compared with 17.6 units per adult per week in England and Wales;[1] 25% of men and 18% of women in Scotland were drinking at hazardous or harmful levels[2], a decline since 2003 but still a cause for concern. Rates of alcohol-related harms were also higher than in other countries, such as deaths from chronic liver disease.[3] In 2012-13, 36,222 hospital admissions in Scotland were alcohol-related and 62% of violent crimes took place under the influence of alcohol.[4] People who drink at hazardous and harmful levels in lower socio-economic groups suffer greater harms than those who drink at these levels in higher socio-economic groups due to the effects of multiple drivers of health inequality.[5]

The societal costs of such consumption are substantial. In 2007 the Scottish Government commissioned research estimated these at £3.6bn per year, comprising expenditure associated with health services (7.5%) and social work services (6.5%), crime (20.4%) and costs to productive capacity (24.3%) as well as wider social costs (41.2%).[6] In 2012, academic researchers produced a higher estimate of £7.5bn that

[1] Scottish Government (2013) Scottish Health Survey 2012 - volume 1: main report;
[2] SHAAP (2023) The Scottish Health Survey: Alcohol Use
[3] ScotPHO (2024) Chronic liver disease: international comparisons
[4] Public Health Scotland PHS Alcohol Dashboard
[5] Bellis M., Hughes K., Nicholls J., et al. (2016) The alcohol harm paradox
[6] Scottish Government (2010) The Societal Cost of Alcohol Misuse in Scotland for 2007

also accounted for morbidity (where alcohol related illness does not result in death), with 40.41% of that figure arising from the 20% most deprived areas.[7]

The low cost at which alcohol could be purchased was understood to be a driver of these trends. In 2009, alcohol was 70% more affordable in Scotland than it had been in 1980.[8] In 2017, just under half of all off-trade alcohol (sold for consumption off the premises) was estimated to have been sold under the £0.50 per unit floor proposed in the MUP legislation, and the average price was £0.54 per unit. In contrast, the average price in the on-trade was £1.08 per unit.

Response

The Scottish Government's 2009 Framework for Action recognised the need for a new approach to alcohol misuse that claimed twice as many lives in Scotland as it had 15 years previously and hit the poorest communities the hardest.[8] It proposed the introduction of a minimum price per unit as a mandatory condition of Premises Licences and Occasional Licences granted under the Licensing (Scotland) Act 2005.

The Alcohol (Minimum Pricing) (Scotland) Act 2012 ("the 2012 Act") was the Scottish Parliament's second attempt to legislate for the policy of setting a minimum price for a unit of alcohol sold.[9] An almost identical measure was included as section 1 of the Alcohol etc. (Scotland) Bill 2009 as introduced, but was left out by amendment during that Bill's Parliamentary passage.[10] The case for MUP was underpinned by modelling from the University of Sheffield. This estimated that a 50p unit price would result in a 5.7% reduction in consumption, 60 fewer deaths and 1,600 fewer hospital admissions per year.[11]

During scrutiny of the Bill which became the 2012 Act, there were opposing views about how targeted the policy impacts would be.[12] Those in favour believed it to be a targeted intervention as it would only affect low-price, high-strength products favoured by more harmful drinkers. Those opposed claimed MUP was a blunt tool that would have no effect on the heaviest drinkers, while punishing moderate drinkers and those on low incomes.

The legislation was subject to a lengthy legal challenge by alcohol producers. This concluded in the UK Supreme Court which issued a judgment in November 2017 finding that the 2012 Act was a proportionate means of targeting the use and abuse of cheap alcohol in Scotland. Following a vote in the Scottish Parliament to approve the original SSI setting the minimum unit price at 50ppu,[13] MUP was introduced on 1 May 2018 in a form that had not been implemented elsewhere. A sunset clause was

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[7] Johnson, M., Ludbrook, A. & Jaffray, M. (2012) Inequalities in the Distribution of the Costs of Alcohol Misuse in Scotland
[8] Scottish Government (2009) Changing Scotland's Relationship with Alcohol: A Framework for Action
[9] Scottish Parliament (2013) Passage of the Alcohol (Minimum Pricing) (Scotland) Bill 2011
[10] Scottish Parliament (2010) Alcohol Etc. (Scotland) Bill - Parliamentary Business: Scottish Parliament
[11] Sheffield Addictions Research Group (2012) Modelling the impact of minimum unit pricing for alcohol in Scotland
[12] The Alcohol (Minimum Pricing)(Scotland) Act 2012 (Continuation) Order 2024 | Scottish Parliament
[13] The Alcohol (Minimum Price per Unit) (Scotland) Order 2018

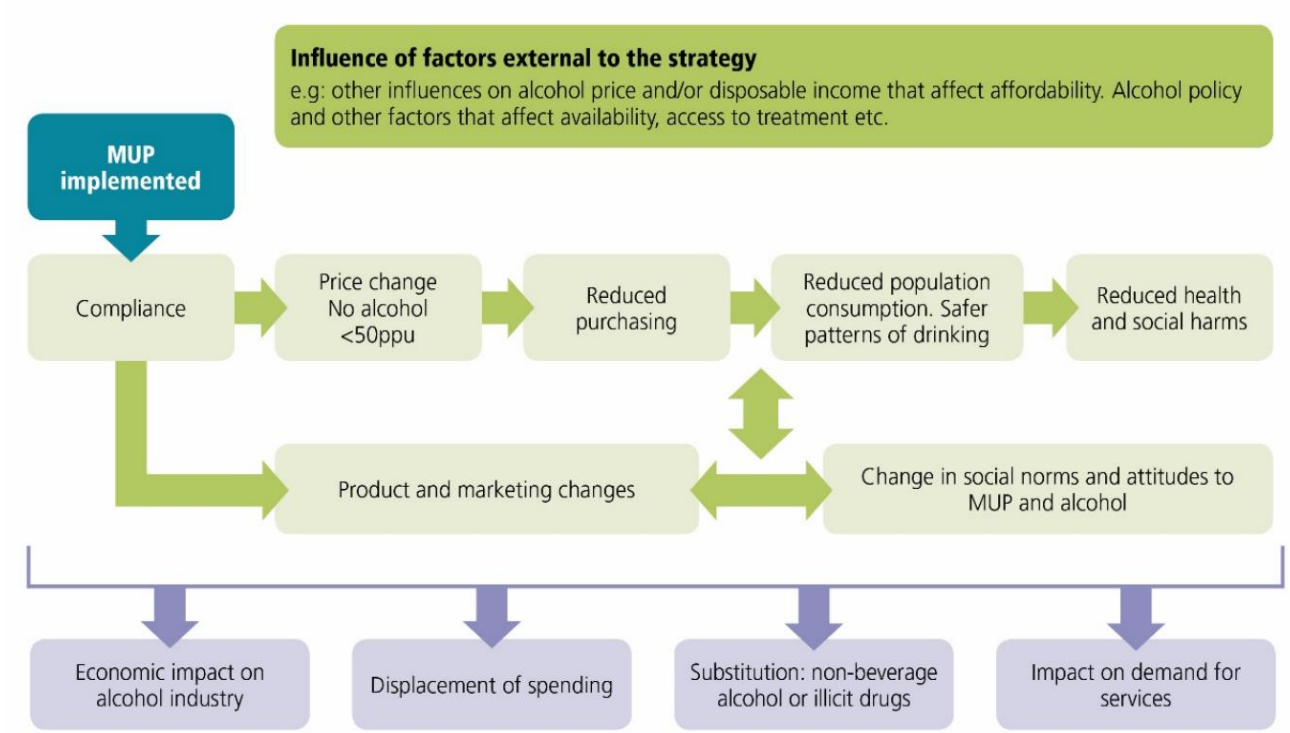
included in the 2012 Act, stipulating that the legislation would expire on 30 April 2024 unless the Scottish Parliament voted for it to continue, to ensure that Parliament could consider its effectiveness as a novel policy intervention before confirming it as a permanent intervention.

Intervention

A minimum unit price of 50p was introduced in Scotland on the basis of strong evidence from other jurisdictions that raising the price of alcohol, and doing so through a minimum price specifically (rather than via alcohol duties or taxation) reduces harms.[14,15,16,17] The modelling from Sheffield Addictions Research University also informed consideration of price level and impacts.[11]

A theory of change was developed for how this measure would influence behaviour and therefore health and other outcomes (Figure 1). Potential factors affecting this process included external influences on population-level alcohol consumption, impacts on the alcoholic drinks industry, and adverse consequences such as potential substitution of alcohol with other harmful substances.

Figure 1: Theory of change for minimum unit pricing of alcohol



Source: Protocol for the evaluation of Minimum Unit Pricing for alcohol

[14] Zhao, J., Stockwell, T., Martin, G. et al 2013 The relationship between minimum alcohol prices, outlet densities and alcohol-attributable deaths in British Columbia, 2002-2009
[15] Anderson, P., Chisholm, D., & Fuhr, D. 2009 Effectiveness and cost-effectiveness of policies and programmes to reduce the harm caused by alcohol
[16] Wagenaar, A., Salois, M., & Komro, K. 2009 Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies
[17] Wagenaar, A. Tobler, A. & Komro, K. 2010 Effects of alcohol tax and price policies on morbidity and mortality: a systematic review

Monitoring and Evaluation

MUP was the focus of an extensive multi-component evaluation coordinated by Public Health Scotland (PHS).[18] This work was commissioned to support the review of MUP and duty on Scottish Ministers to lay a report before Parliament on their assessment of the effects of MUP in advance of the sunset clause expiring. The work began with a feasibility study[19] which concluded that a mixed method approach would be needed.

Twelve studies were carried out, or commissioned, by PHS with funding provided by the Scottish Government to provide robust evidence on the steps set out in the Theory of Change, as well as the impact of MUP on protecting and improving public health, preventing crime, disorder and public nuisance, securing public safety, protecting children and young persons from harm, and on alcohol producers and licence holders. Seven additional studies that were separately funded also examined its effect, including through qualitative research, a natural experiment, a daily survey and analysis of administrative data. Where possible, studies compared any change with other parts of the UK. Qualitative evidence was used to help explain findings and understand the lived experience of different key groups including homeless individuals, children and young people and those drinking at harmful levels.

A final report was published in 2023[20] that synthesised findings from 40 publications, following a published protocol for synthesis.[21] This report was used as the basis for the production of a Scottish Government report on the operation and effect of MUP, a requirement of the sunset clause in the 2012 Act.[22]

Key Findings

There were two main questions for the evaluation and key findings relating to each of these are set out below.

1. To what extent had implementing MUP in Scotland contributed to reducing alcohol-related health and social harms?

- Following implementation, sales of alcohol below £0.50 per unit largely disappeared, with a net reduction of 3% in total per-adult sales of pure alcohol in the next three years. Reductions in alcohol purchases were greatest among households that were previously buying the most alcohol.
- There was strong evidence that MUP reduced deaths wholly attributable to alcohol consumption by an estimated 13.4%, equating to 156 deaths per year up

[18] Public Health Scotland 2021 Protocol for the evaluation of Minimum Unit Pricing for alcohol
[19] Petrie, D., Ludbrook, A., Gobey, M. et al. 2010 Scoping study of the economic impact on the alcohol industry of pricing and non-price policies to regulate the affordability and availability of alcohol in Scotland. Edinburgh: NHS Health Scotland.
[20] Public Health Scotland (2023) Evaluating the impact of minimum unit pricing for alcohol in Scotland: A synthesis of the evidence
[21] Public Health Scottland (2022) MUP Evaluation Evidence Synthesis Protocol
[22] Scottish Government (2023) Alcohol (Minimum Pricing) (Scotland) Act 2012 - operation and effect 2018 to 2023: report

to the end of 2020, compared to what would have happened had MUP not been in place.
- The benefits to society valued in monetary terms arising from partially attributable deaths prevented by MUP were estimated at approximately £215.5 million, ranging from approximately £3.6m to £428m.
- There was strong evidence that MUP reduced wholly attributable hospital admissions due to chronic causes.[23] Overall, it was likely that MUP had reduced wholly attributable hospital admissions in Scotland compared to what would have happened in the absence of MUP.
- The estimated averted costs for admissions for causes wholly attributable to alcohol were approximately £407,000 per year, and for admissions partially attributable to alcohol the estimated costs averted were £483,000 per year.
- There was no consistent evidence that MUP affected other alcohol-related health outcomes such as ambulance callouts, emergency department attendances and prescribing of medication for alcohol dependence.
- There was also no consistent evidence that the policy led to any widespread health or wider harms, or significant costs to the alcohol industry or that it had positive or negative impacts on social outcomes. Quantitative studies on crime (including drug crime), switching to non-beverage alcohol, spend on food and the nutritional value of food all found no positive or negative effects, and quantitative evidence on the impact on road traffic accidents was mixed.

2. Were some people and businesses more affected (positively or negatively) than others?

- The greatest reduction in deaths wholly attributable to alcohol was seen amongst men and those living in the 40% most socio-economically deprived areas in Scotland, indicating a strong potential to address health inequality.
- Qualitative evidence from those working with families affected by alcohol suggested that MUP helped reduce consumption in those drinking at hazardous or harmful levels but not in those with alcohol dependence
  Some people, particularly those with established alcohol dependence with limited financial or social support (a group with specific needs) may have experienced harm, such as reduced expenditure on food

Taken together, the research found that MUP had a positive impact on health outcomes, and was estimated to have reduced alcohol-attributable deaths and likely to have reduced hospital admissions. This was particularly so for men and those living in the most deprived areas, contributing to tackling alcohol-related health inequalities. The main PHS evaluation determined it was not possible to undertake a full cost benefit analysis due to both technical and resource constraints). However, the final report suggested that the balance of costs and benefits were favourable.

While the natural experiment approach employed for many of the studies was considered gold standard given that individuals could not be randomised to purchase alcohol at different prices, the evaluation report notes as a limitation that theory-based consideration was relied on to determine whether external factors or differences between areas might have contributed to outcomes.

[23] Wyper, G., Mackay, D., Fraser, C. et al. (2023) Evaluating the impact of alcohol minimum unit pricing on deaths and hospitalisations in Scotland: A controlled interrupted time series study

Learning and Next Steps

Because MUP for all alcoholic drinks represented a novel policy that had not been implemented in the same way in other countries, the legislation had contained a sunset clause that the provision would expire on 30 April 2024 unless the Scottish Parliament voted for it to continue. While consultation in 2023 on the continuation of the policy returned mixed views[24] there was strong support from all public health and local government organisations. In addition, a 2023 survey of a nationally representative sample of 1,029 adults in Scotland found that more people were in favour of MUP (43%) than against (38%).[25]

Research commissioned by the Scottish Government from University of Sheffield suggested the real-terms value of MUP had been reduced by high inflation from the original 50p price to a 2023 equivalent of 41p, and that the threshold would need to have increased to 61p/unit to maintain its real-terms value.[26] The researchers modelled that adjusting the MUP threshold in 2023 to account for deflation in its level since 2018 and then adjusting its level in line with inflation in future years could lead to around 1,200 fewer deaths, 15,000 fewer hospital admissions, 38,000 fewer years of life lost and a £17million reduction in NHS costs due to alcohol over 20 years compared to retaining a MUP of 50p/unit.

The Scottish Parliament agreed in 2023 to continue the effect of the MUP legislation beyond 30 April 2024 and to raise the level it is set at. From 30th September 2024 the minimum unit price rose to 65p per unit.

The evaluation has been influential, with the approach commended in an article in The Lancet[27] and calls in response from experts for the introduction of MUP in other jurisdictions[28]. The WHO included minimum pricing (as a complement to taxation) among its priorities for action on alcohol in 2022[29], noting in response to the 2023 evaluation report that other European countries were following Scotland's example. It stated that: "learning from Scotland's experience, countries can work towards creating safer communities and improving public health outcomes for all."[30] The Public Health Association Australia described MUP in Scotland as one of the most thoroughly evaluated public health policies in decades.[31]

In 2020 Wales became the second nation in the UK to introduce an MUP of 50p per unit for all alcohol. This has since been found to be associated with reduced alcohol

[24] Scottish Government (2023) Alcohol - Minimum Unit Pricing (MUP) - continuation and future pricing: consultation analysis
[25] Scottish Government (2023) Alcohol - minimum unit pricing: public attitudes research
[26] SARG 2023 New modelling of alcohol pricing policies, alcohol consumption and harm in Scotland
[27] Gilmore, I., Finlay, I., McKee, M. et al (2023) Commending Public Health Scotland's evaluation of minimum unit pricing
[28] Anderson, P., Stockwell, T., Natera, G. et al (2023) Minimum unit pricing for alcohol saves lives, so why is it not implemented more widely?
[29] WHO 2022 European framework for action on alcohol, 2022–2025
[30] WHO 2023 No place for cheap alcohol: Scotland's minimum unit pricing policy is protecting lives
[31] PHAA 2023 Minimum Unit Pricing for Alcohol: Lessons from Scotland for Australia

purchases, notably among drinkers under 28 favouring cheap high-strength alcohol.[32]

The potential of MUP has been demonstrated in relation to primary (rather than secondary or tertiary) prevention, to the extent that it appears less likely to affect positive outcomes for dependent drinkers, who are already experiencing harms and have distinct and complex needs. In 2024, Audit Scotland recommended that the Scottish Government should identify ways of developing more preventative approaches to tackling Scotland's long history of alcohol problems, to target people at risk of harm before problems with alcohol use develop.[33]

[32] Billan, S., Angus, C., & Collins, B. (2025) Evaluating the impact of minimum unit alcohol pricing on purchasing behaviour by different social class and age groups in Wales: A controlled interrupted time series study
[33] Audit Scotland 2024 Alcohol and drug services

11. Safeguarding Vulnerable Road Users (Project PRIME)

Project PRIME: Reducing deaths and serious accidents amongst motorcyclists on Scotland's roads

This case study demonstrates how road markings can enhance rider behaviour when approaching bends. This evidence based road safety intervention was developed in collaboration with riders alongside academic, engineering, and government partners. The evaluation found that the intervention led to significant reductions in speed, improvements in road position and reductions in braking behaviour resulting in reductions in motorcycle injury collisions at the sites where these have been installed.

Introduction

Motorcyclists are one of the most vulnerable road user groups on public roads.[1] New Perceptual Rider Information for Maximising Expertise and Enjoyment (PRIME) road markings which were trialled in the West Highlands of Scotland are an example of a primary preventative intervention designed to improve rider behaviour when approaching bends and prevent them being killed or seriously injured (KSI).

Context

Motorcyclists are around 51 times more likely to be killed on the road than car drivers in the UK.[12] In 2019, motorcyclists accounted for less than 1% of all journeys and less than 1% of traffic in Scotland, but represented 7% of casualties.[3]

Scottish data from 2019 showed that between 2018 and the 2004-08 average there had been a smaller reduction in fatal or serious motorcyclist casualties, compared to reductions in car and pedestrian fatalities and injuries.[4]

Between 2015-2019, on average the motorcyclist casualty rate was highest for the 23-25 age group (per thousand population), followed by the 16-22 year old age group.[3]

Most incidents tended to occur on rural roads at weekends, which are popular times for recreational motorcyclists to be riding.[2] UK statistics from 2020 showed that 65% of fatalities occurred in rural areas, and on roads that motorcyclists are unfamiliar with.[1]

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[1] Alex Stedmon, David McKenzie, Martin Langham, Kevin McKechnie, Richard Perry, Stuart Wilson, Safeguarding motorcyclists: Trialing new PRIME road markings for casualty reduction, Transportation Research Part F: Traffic Psychology and Behaviour, Volume 83, 2021, Pages 333-350.
[2] Stedmon, A.W. (2022). Safeguarding Vulnerable Road Users: Motorcycle Safety in Scotland using Applied Psychology to Influence Rider Behaviour - Summary Report of PRIME Road Marking Trials 2020 to 2022. Report prepared for Transport Scotland by Open Road Simulation Ltd.
[3] Transport Scotland (2021) Scotland's Road Safety Framework to 2030
[4] Transport Scotland (2018) Reported Road Casualties Scotland 2018

In 2019, 76% of motorcyclists killed were in collisions that took place on roads with a speed limit of over 40mph.[5] 'Loss of control' was the most commonly reported contributory factor for motorcycle accidents - 22% of incidents.[5] Many motorcycle accidents are classed as rider error, and motorcycle collisions are often a result of loss of control on a bend. This can be due to inappropriate speed or braking prior to the bend, or inappropriate steering or position through the bend itself.[1]

Evidence suggests that for a number of reasons, left-hand bends are particularly dangerous when riding on the left-hand side of the road, and collisions are more likely to happen on sharp bends than on gentle bends.[1]

Motorcyclists are known to be resistant to engagement and education about road safety initiatives.[1] This is particularly the case for more experienced riders who haven't undertaken further training, and may have fallen into bad riding habits, and can lack the advanced skills to keep them safe.[1] Professor Alex Stedmon who led the research on PRIMEs said:

"It is important to find new ways to engage with motorcyclists and demonstrate that initiatives are based on scientific evidence with a clear rationale for rider safety".[1]

Casualties on Scotland's roads come at a high human and monetary cost. In 2019 the cost of collisions in Scotland was estimated to be over £1.1billion, indicating the clear economic and health benefits to preventative interventions which reduce the risk of casualties on Scotland's roads.[3]

Response

Transport Scotland's Road Safety Framework to 2030 (published in 2021) identified motorcyclists as a Priority Focus Area with a target of a 30% reduction in motorcyclists KSI by 2030.[3] One of the responses developed in response to this challenge was a collaborative intervention which brought together behavioural science/human factors[6] research, engineering design and government policy. PRIMEs address the dangers experienced by motorcyclists on road bends, particularly left-hand bends by using dedicated road markings to support better riding behaviour.

The design process involved input from motorcyclists themselves ensuring a "user-centred" approach. A number of potential designs were considered in the context of rider input, engineering and relevant guidance and standards. An underpinning principle of PRIMEs is that they are designed from the motorcyclists' perspective[2] so that riders accept and use the approach.[9]

This trial built on a previous small scale trial of Perceptual Counter-Measures (PCMs) in New Zealand to support motorcycle safety on bends, which involved the

[5] Transport Scotland (2019) Reported Road Casualties Scotland 2019
[6] Human Factors is an applied field of study that brings together psychology, engineering and design to help us understand the way people behave in everyday situations and complex systems (Open Road Simulation)

lead author of the evaluation.[7] [8] PCMs have been shown to influence motorcyclists rider behaviour in relation to speed, position, and braking to reinforce better rider behaviour.[2]
'The road markings provide a tool for riders to adapt their behaviour on approach to a potential hazard therefore optimising their expertise and enjoyment while remaining safe on the road.'[2]

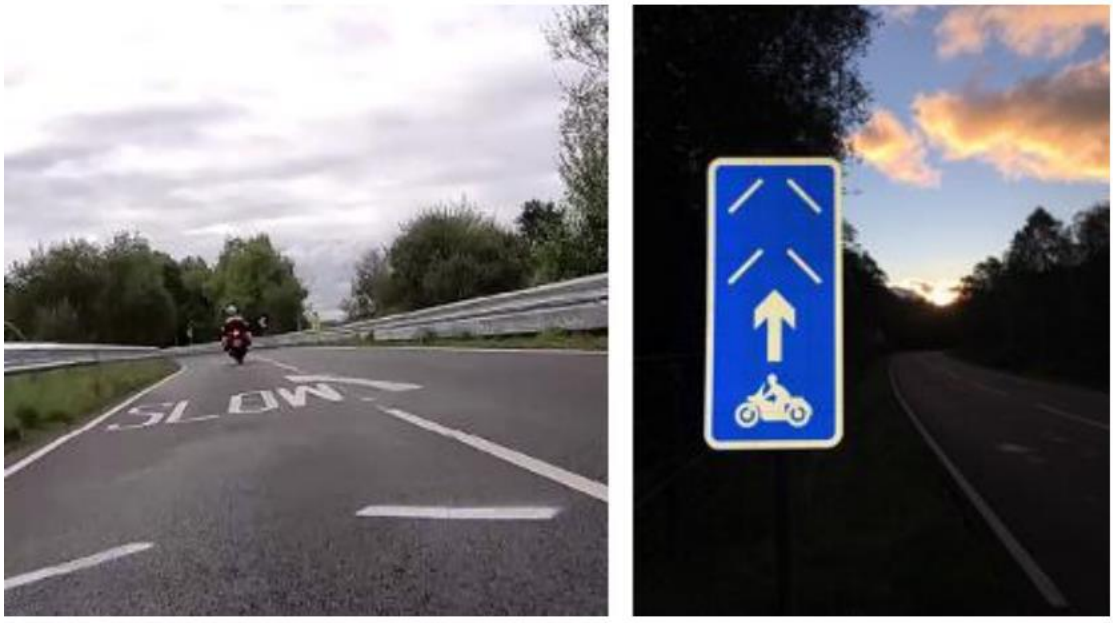
Intervention

The intervention was targeted at motorcyclists on Scotland's Trunk Road Network. PRIMEs 'help motorcyclists safely navigate approaching demanding bends where it is important that:

(i) speed is suitable for the conditions
(ii) lane position is optimised for negotiating the bend
(iii) motorcyclists do not have to initiate braking whilst negotiating the bend.[2]

The PRIME road markings are designed as a set of three 'gateways' along with road sign information (Figure 2). PRIMEs are designed to be an intuitive behaviour change intervention which primes motorcyclists to ride 'through the gap' in the gateway. By doing so this puts riders in the correct position for the bend and allows them to adjust their speed and braking prior to the bend.

Figure 2: PRIMEs 'gateway' design PRIME road marking (left) and PRIME road sign (right)[2]



[7] Hirsch, L., Moore, D., Stedmon, A.W., Mackie, H., and Scott, R. (2017). Keeping you in the loop: A human factors approach to motorcycling safety. In, Proceedings of the Human Factors and Ergonomics Society of New Zealand Annual Conference, 5-7 September 2017, Wellington, New Zealand
[8] Hirsch, L., Scott, R., Mackie, H., Stedmon, A.W., and Moore, D. (2018). Motorcycle safety on the Coromandel curves: The development and evaluation of perceptual counter -measures to influence rider speed, position and braking. Prepared for the Accident Compensation Corporation

Monitoring and Evaluation

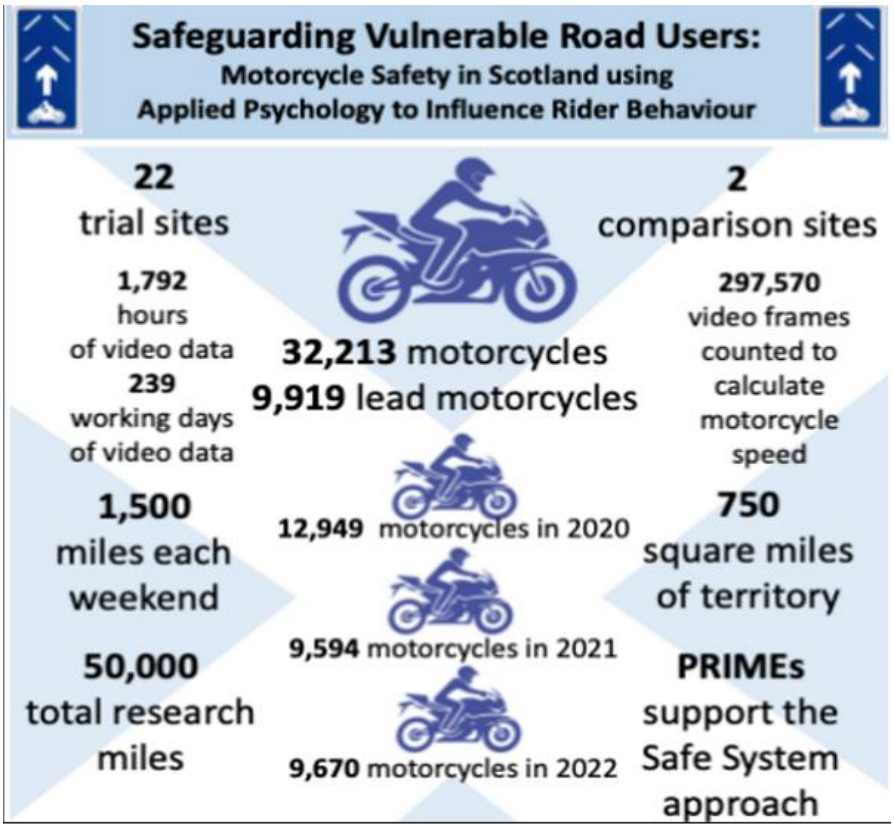
PRIME trial sites were identified through analysis of recorded injury motorcycle collisions at bends in the trial area. Project PRIME was the first road trial of its kind and has become the largest known study of motorcyclist behaviour in the world. In total it involved 32,213 motorcyclists, with 9,919 lead motorcycles analysed in detail to understand the potential influence of PRIMEs on rider behaviour.[2] Figure 3 below shows the scope of the intervention and evaluation.

The three-year investigation of PRIMEs was conducted over weekends during the motorcycle seasons (May to September) during 2020, 2021 and 2022. PRIME road markings were installed on the approach to bends at 22 trial sites and two comparison sites on roads covering 750 square miles across the West of Scotland. Trial sites were selected based on formal reviews and analyses of collision data, and all sites were of similar standards in relation to road surface and environment. While some right-hand bends were included in the 2020 trial, the main focus of these trials was left-hand bends. PRIME road marking and road sign designs underwent a range of design specification and user feedback prior to use at the trial sites.

The PRIME intervention required close partnership working between a range of professionals across research, management and engineering spheres, including the Road Safety Trust (RST), Transport Scotland (TS), BEAR Scotland and the academic consultancy leading the research, Open Road Simulation. The intervention was part funded by the RST, who provided research funding to TS as the project managers to test the experimental approach. To date Project PRIME has been the largest funded road safety initiative that the RST have supported. BEAR Scotland provided their expertise by offering engineering solutions to make ready the trial sites and the installation of the PRIME markings and signage across Scotland.[9] In addition an internal steering committee including a range of road safety partners was established to widen the stakeholder engagement throughout the project.

[9] Transport Scotland, New road markings transform behaviour of motorcyclists on bends

Figure 3 – Components of the intervention and evaluation [2]



The evaluation used a quasi-experiment method, combining field observation with formal experimental design.[2] Alongside the trial sites, there were two comparison sites where data were collected but PRIME road markings were not installed.

Using a pre- and post-intervention, baseline data were compared with data collected once the PRIME road markings had been installed. Video data were obtained at each site using small and inconspicuous roadside cameras to capture motorcycle speed, lateral position, braking behaviour and use of the PRIME road markings, before and after the installation of PRIME road markings. The evaluation also included 100 interviews with motorcyclists to ascertain rider's experiences of the PRIMEs and their perceptions of how the PRIMEs might have influenced their behaviour.

Key Findings

a) Positive behavioural changes amongst motorcyclists

The PRIME road markings produced statistically significant positive behavioural changes in motorcyclists' speed, lateral lane position and braking at sites around the Scottish Highlands. There were no statistically significant differences in motorcycle rider behaviour observed at the comparison sites.[2] There was also no evidence of unintended consequences or that PRIMEs had a detrimental effect on rider behaviour, such as a significant increases in speed, dangerous positioning, or increases in braking. Interviews with motorcyclists found that the majority of riders

were supportive of PRIME road markings, especially for inexperienced motorcyclists or tourists. There was evidence that most of those interviewed were unconsciously influenced by PRIMEs in the behaviours observed across the trial sites.[2]

b) Long-term effects of PRIMEs – most behaviour changes last over time

The evaluation also considered rider behaviour changes over one-year and two-year intervals. At the one-year review site the same results were observed in 2021 and 2022 indicating that the behavioural effects of PRIMEs remained constant. At the two-year review site the same results were observed in 2020 and 2022 for all statistically significant behaviours measured except for previous trends in braking that were present in 2020 but not 2022.[2]

c) Potential to reduce motorcycle casualties

At the time the evaluation report was published (2022) there had been no motorcycle injury collisions recorded at any of the actual sites where PRIME markings were deployed in Phase 1 of the trials. Ongoing analysis of all PRIME trial sites will continue to be conducted.

Learning and Next Steps

The National Transport Strategy (NTS) states “This work not only added to the evidence base of the academic theory underpinning the road markings – but offers a blueprint, which has been tested and proven in Scotland, that has potentially global implications.” [9]

The research in Project PRIME has been published in world-leading peer-reviewed journals. It should also be possible to replicate the work through additional research activities that follow the same approach. The project group have also developed an Installation Toolkit to allow other road authorities to replicate PRIMEs in their areas. The toolkit has been made publicly available.

Following on from the positive results observed in the PRIME trials, Phase 2 of Project PRIME is being conducted between 2023 and 2025 (funded by RST with all other costs met by TS), to investigate additional aspects of behaviour change and further broaden the evidence base. The findings will be published in due course but results observed in 2023 (focussing on untreated roads) and 2024 (focussing on right-hand bends) indicate a similar positive behaviour change to that observed in Phase 1. In 2023 Project PRIME received a number of awards including the prestigious Prince Michael International Road Safety Award.

The long term goal of the Road Safety Framework to 2030 is for no-one to die or be seriously injured on Scotland’s roads by 2050.[3] Central to this is the ‘Safe System’ approach to road safety delivery, set out in the first NTS Delivery Plan.[10] PRIMEs have identified important behavioural factors that support both the Framework and

[10] Transport Scotland (2020) National Transport Strategy (NTS2) - Delivery Plan – 2020 to 2022

the ‘Safe System’ approach to motorcycle casualty reduction, particularly in relation to safe road use, safe speeds and safe roads and roadsides.[3] [2]

In contrast to the significant costs of collisions in Scotland, outlined in the introduction, PRIME gateway markings provide an innovative yet low cost and scalable preventative intervention. PRIMEs have the potential to improve road safety for riders and prevent significant public sector spending associated with single vehicle crashes on Scotland’s roads - one of the main collision types for motorcycles.

This evaluation also shows promise for Human Factors approaches to road safety initiatives beyond the current work and in casualty reduction and road user behaviour more widely.[9] PRIMEs have implications for road safety, casualty reduction and education initiatives around Scotland, the UK and at international levels.

12. Scotland's National Naloxone Programme (NNP)

Scotland's National Naloxone Programme for reducing opioid-related deaths

In 2011 the Scottish Government implemented the world's first National Naloxone Programme (NNP), providing take-home naloxone kits to people who use drugs likely to witness an overdose. The programme lasted five years and cost over £1 million. The NNP was evaluated and was associated with a 36% reduction in the proportion of opioid-related deaths (ORDs) occurring four weeks following release from prison between 2011-13 and by 50% between 2011-16.

Introduction

The NNP was a tertiary preventative intervention, the aim of which was to prevent fatal opioid overdoses in Scotland. Accidental overdose is a common cause of death among people who use drugs such as heroin, morphine and similar drugs, commonly referred to as opioids.[1] Naloxone is a life-saving 'opioid antagonist' medicine, which temporarily reverses the effects of a potentially fatal opioid overdose, providing more time for emergency services to arrive and treatment to be given. The NNP ran between 2011 and 2016, and Naloxone remains a key part of Scotland's current drugs policy.[2,3]

Context

Between 2006 and 2010 in Scotland there were an average of 500 drug-related deaths (DRDs) each year, nearly 80% of which were opioid-related.[4] During that time, Scotland had higher rates of DRDs than other parts of the UK, one of the European Union's highest DRDs rates, and was closely behind the United States.[4]

Drug-related deaths can have devastating effects on individuals, families and the wider community. The estimated **economic and social costs** of problem drug use (including drug deaths) in 2008 in Scotland were estimated to be around £2.6bn every year, and people living in deprived areas were much more likely to die from drug misuse.[5]

In 2008, there was a clear association between deprivation, drugs and health inequalities, and problem drug use was identified in the Drugs Strategy at that time - 'The Road to Recovery' - as a key driver of 'economic underperformance, crime, risk to children and health inequalities'.[5] The life chances of children and young people growing up in households where parents use drugs can be negatively affected, and health inequalities exacerbated. Together this increased pressure on a range of

[1] Public Health Scotland, National Naloxone Programme Scotland - Data and intelligence
[2] Scottish Government (2018) Rights, respect and recovery: alcohol and drug treatment strategy
[3] Scottish Government (2022) National Mission on Drug Deaths: Plan 2022-2026
[4] Bird SM, McAuley A, Perry S, Hunter C (2016) Effectiveness of Scotland's National Naloxone Programme for reducing opioid-related deaths: a before (2006-10) versus after (2011-13) comparison
[5] Scottish Government (2008) The Road to Recovery: A New Approach to Tackling Scotland's Drug Problem

public services such as healthcare, emergency services, children's services, housing, and the justice system.

The Road to Recovery pointed to drugs as a cause as a well as a consequence of health inequalities in Scottish society. This was reflected, for example, in the vastly elevated rate of drug hospital admissions amongst the most deprived quintile compared to the least. The Strategy stated:

"Problem drug use is one of the most significant contributors to health inequalities. Its negative impact on health and well-being produces inequalities between individuals and communities, reducing the chances and choices for many. Drug users can also face many barriers to obtaining treatment and other services." [5]

The evidence showed the 'typical' drug death in Scotland as a male, in his thirties, who died in a home environment and where there was 'a window of opportunity for someone to intervene' demonstrating that these DRDs were preventable.[5] Taking preventative action to reduce drug deaths presented an opportunity to reduce inequality, improve outcomes and improve Scotland's ailing international reputation.

Response

In response to the increasing number of DRDs, the Scottish Government implemented the world's first NNP, providing 'Take-Home' Naloxone (THN) kits to those at risk of an ORD.[2] Pilots were introduced in three Health Board areas - NHS Greater Glasgow and Clyde and NHS Lanarkshire in 2007 and the Inverness area of NHS Highland in 2009.[6] The pilots successfully demonstrated that it was feasible to train and supply those at risk of opioid overdose with naloxone, that they were able to use it in emergency situations, and that they were able to manage it responsibly.[6]

Intervention

The NNP was a five year nationwide programme launched by the Scottish Government in November 2010 and implemented in April 2011. It was centrally funded and coordinated by the Scottish Government and cost £1 million over the five years from 2011 to 2016. The intervention allowed for the distribution of naloxone (a Prescription Only Medicine) using a Patient Group Direction (PGD)[7] through supplying THN kits to those at risk of opioid overdose, which allowed naloxone to be administered intramuscularly by anyone in an emergency to save the person's life for whom naloxone was prescribed.[8] Kits were supplied in community health settings and in prisons to prisoners on release. Over 46,000 potentially lifesaving THN kits were supplied between 2011-2012 and 2017-2018.[2]

The risk of dying from drug overdose is particularly high for those with problematic substance use soon after prison release and hospital discharge, after periods of

[6] Blake Stevenson Ltd. (2014) Service Evaluation of Scotland's National Take-Home Naloxone Programme

[7] Patient group directions allow healthcare professionals to supply and administer specified medicines to pre-defined groups of patients, without a prescription. NICE guidance.

[8] Strang J, Kelleher M, Best D, Mayet S, Manning V (2006) Emergency naloxone for heroin overdose - should it be available over the counter?

relative abstinence (which is in large part, but not exclusively, due to a loss of tolerance of opioids).[4] Participation was supported and coordinated by all but one of Scotland's Alcohol and Drug Partnerships (ADPs) and Health Boards and all 16 Scottish prisons.[6] Before anyone received a supply of naloxone, they had to have first received specialist training in its use.[6] The Scottish Government commissioned the Scottish Drugs Forum (SDF) to coordinate the programme and deliver training for trainers to staff across Scotland. Training for people who use drugs was delivered as a brief intervention. THN was then supplied by nurses or pharmacists working in community drug treatment/harm reduction services and across the prison estate, where the THN kit was placed in the person's property prior to release (if they agreed to this after training).[6]

Some areas in Scotland also used community pharmacies as a supply route, particularly those with injecting equipment provision. Another feature of the NNP was the network of peer educators across Scotland which was launched in 2012, both in the community and in prisons, who played a key role in engaging those people that services find hard to reach, and supported the development of local networks of peer volunteers to help widen the reach of the naloxone training.[9,6]

The NNP was overseen by the National Naloxone Advisory Group (NNAG), a group of expert members including stakeholders from Scottish Government, NHS Boards, Scottish Prison Service, the voluntary sector and academia. The NNAG concluded its work in March 2016. The responsibility for national oversight transferred to the Partnership for Action on Drugs in Scotland (PADS) Harms Group.

Monitoring and Evaluation

Since the NNP's inception, there have been a number of strands of monitoring and evaluation to improve understanding of how naloxone supply and distribution can reduce DRDs.

The Scottish Government supported an evaluation programme through the NNAG which examined the progress of the programme at both a national and local level.[6] This included an impact evaluation published in 2016 by members of the NNAG. It was the first attempt to evaluate a NNP at a population level with a before (2006-2010) and after (2011-2013) comparison analyses by design at three and five years.[4] The evaluation of Scotland's NNP had prison release ORDs as its primary outcome, because of the elevated DRD risk in the weeks following release from prison.

The range of evaluation evidence on naloxone in Scotland should be taken into account when assessing the success of programme. Besides the service evaluation of NNP (2014)[6] there is also evaluation evidence on the impact of NNP on ambulance attendance at overdose incidents,[10] a pilot evaluation of naloxone in

[9] Horsburgh, K. Naloxone in Scotland: A National Approach

[10] McAuley A, Bouttell J, Barnsdale L, Mackay D, Lewsey J, Hunter C, Robinson M. (2017) Evaluating the impact of a national naloxone programme on ambulance attendance at overdose incidents: a controlled time-series analysis.

Police Scotland,[11] and the implementation of the programme in prisons.[12] Public Health Scotland (PHS) are independently evaluating the National Mission,[13] and continue to publish annual monitoring reports and quarterly bulletins on the number of THN kits provided.

Key Findings

The evaluation of Scotland's NNP examined the effectiveness of the programme in reducing ORDs in the four weeks following release from prison or hospital discharge. Key results are outlined below.

a) Reduction in Opioid Related Deaths

The NNP was found to be highly effective in reducing ORDs in the four weeks following release from prison. **It was associated with a 36% reduction in the proportion of ORDs that occurred in the 4 weeks following release from prison between 2011-13 and by 50% between 2011-16.**

The 2016 evaluation found that in 2006-10, 9.8% of ORDs were in people released from prison within the previous four weeks, whereas only 6.3% of ORDs in 2011–13 followed prison release, a difference of 3.5%. This reduction in the proportion of prison release ORDs translated **into the prevention of 42 ORDs following release from prison during 2011–13**, when almost 12,000 naloxone kits were issued.[4]

Table 1 shows an updated analysis by the authors for longer term outcomes (up to 2016), showing that **ORDs in former prisoners within 4 weeks of release from prison reduced by 50% between 2011-16, preventing between 39 and 60 ORDs.**[14]

[11] Hillen, P, Speakman, E, Dougall, N, Heyman, I, Murray, J, Jamieson, M, …McAuley, A. (2022) Naloxone In Police Scotland: Pilot evaluation.
[12] Horsburgh K, McAuley A (2017) Scotland's national naloxone program: The prison experience
[13] Public Health Scotland (2024) Evaluation of the 2021–2026 National Mission on Drug Deaths. Evaluation Framework.
[14] Bird, S. McAuley, A. (2019) Scotland's National Naloxone Programme

Table 1: Outcomes of Scotland's NNP 2011-16

	2006-10	2011-13	2014-16	2011-16
Naloxone kits distributed in total	-	11850	24000	-
Naloxone kits distributed in prisons	-	2270	2600	-
ORDs	1970	1212	1592	2804
Primary outcome				
ORDs within 4 weeks of prison release	193 (10%)	76 (6%)	60 (4%)	136 (5%)
Percentage reduction in ORDs during NNP within 4 weeks of prison release	-	36%	62%	50%
Secondary outcome				
ORDs within 4 weeks of prison release or hospital discharge	374 (19%)	181 (15%)	204 (13%)	385 (14%)
Percentage reduction in ORDs during NNP within 4 weeks of prison release or hospital discharge	-	21%	33%	28%

Source: Adapted from Scotland's National Naloxone Programme (2019)

Scotland's NNP had little apparent impact on the hospital discharge component of the secondary outcome measure. Possible explanations might be that: elevated DRDs following hospital discharge were less well understood at the time; naloxone kits not being accessed by older users of methadone (people aged over 35 years); or the evaluation methodology used.[4,14]

b) Cost savings

Cost-effectiveness was assessed by comparing the costs of prescribing naloxone kits against the life-years gained from ORDs averted. Almost 12,000 kits were issued during 2011–13 and Scotland's NNP may have prevented 42 prison release ORDs at a prescription cost (at the time of writing in 2015) of less than £225,000. The evaluation found that prescription cost per quality-adjusted life-year (QALY) gained are £4900–16,900 and £560–1940 depending on whether it is being measured over one year or 10 years respectively (based on a 95% confidence interval).[4]

c) Wider Outcomes

There are likely further benefits and outcomes of the NNP beyond reducing DRDs which are not evaluated here, related to the avoidance of traumatic loss on people and communities, and reducing demand on essential public services. The service evaluation highlighted a number of "softer" outcomes for service users, including an increased sense of empowerment and greater self-esteem from the knowledge that they can potentially save lives.[6]

Learning and Next Steps

After the five year NNP ended, the Scottish Government continued to support the embedding of naloxone provision in Health Board areas. DRDs in Scotland have

continued to increase over the last few decades with over four times as many deaths in 2023 compared to 2000. ORDs make up the largest proportions of DRDs with opiates/opioids involved in 80% of drug misuse deaths in 2023.[15] The rapid increase in Scotland's ORDs over the last decade has particularly affected those aged 35 years or older. In 2023, people living in the most deprived areas were more than 15 times as likely to die from drug misuse than those in the least deprived areas.[15]

This increase in DRDs was anticipated by the evaluation authors, who suggested that the effectiveness of Scotland's NNP should not be based on a before-and-after comparison, because further increases in ORDs *despite the NNP* have occured.[14]

The use of naloxone for peer administration has been identified as an essential part of reducing DRDs in many countries worldwide, including Canada, Norway, and the USA.[14,16] It is not a silver bullet to the complex problem of ORDs but it is an important component.[16]

The service evaluation highlighted the lessons learned and implications for future implementation and/or policy, in particular the need for further 'reach' of naloxone kits to those at risk of opioid overdose.[6] Evidence shows that a key element in the success of a THN programme is the actual number of kits distributed, with research indicating this should be about 20 times the number of a country's ORDs.[16]

The National Mission on Drugs Deaths: Plan 2022-2026 sets out how the national mission will be delivered over the course of this parliament.[3] The strategy commits to 'increasing the distribution and availability of naloxone' and the distribution of naloxone remains a key priority in preventing DRDs in Scotland. The National Mission monitoring report, which accompanies the plan provides more information on how the use of naloxone is contributing to reducing risks for those who use drugs. It shows that the 'reach' of the NNP[17] has continually increased since data collection began. In 2022/23, the reach of the NNP was 70.4%, an increase of nearly six percentage points since 2021/22 (64.8%) and over 20 percentage points compared to 2019/20 (50.2%).[18]

The plan and monitoring report demonstrate the ways in which the NNP has evolved and how Scottish Government continue to identify new ways through which to distribute naloxone. While those who are highest risk of overdose remain the priority, increasing the wider reach of naloxone to peers, family members and members of the emergency services has been shown to be effective in helping to reduce DRDs. Through cross-organisational work, new avenues for naloxone distribution have been identified and implemented. This includes working with Police Scotland to have them as the first police force in the world where all front-line officers are trained in naloxone use and also carrying kits. In December 2024 Police Scotland officers had administered over 580 doses of naloxone, undoubtedly saving lives in the process.[19]

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[15] National Records of Scotland (2024) Drug-related deaths in Scotland in 2023
[16] The Lancet (2019) Take-home naloxone: a life saver in opioid overdose
[17] The percentage of people at risk of an opioid overdose who have been supplied with take home naloxone
[18] Scottish Government (2023) National Mission on Drugs: annual monitoring report 2022-2023
[19] Police Scotland (2024) Police Scotland Quarter 2 YTD Performance Report: April to September 2024

Following changes to how individuals could access drug treatment services (in response to COVID-19), Scottish Government sought to increase the availability of naloxone. This was supported by a statement of prosecution policy by the Lord Advocate, which allowed for a wide range of non-drug services to distribute naloxone to members of the public including family and friends of those who are at risk. There are now over 100 non-drug services and organisation that currently distribute naloxone including community hubs, sexual health, homeless and women's services.[20]

Due to this statement from the Lord Advocate, an award winning and confidential 'click and deliver' naloxone service was established by Scottish Families Affected by Alcohol and Drugs and which is now the second most common source of community supply, providing over 5000 kits in 2022/23 (latest annual figures).[21] Following the UK Government amendment to the naloxone legislation,[22] the Scottish Government will be setting up a new registration system, alongside the other UK administrations.

Naloxone is also likely to become more essential in the future should the detections of new synthetic opioids continue to increase. These new substances, in particular the 'nitazene' family, are significantly stronger than traditional opiates such as heroin and have already been detected in a number of DRDs in Scotland and across the UK. Naloxone is still an effective antagonist in a nitazene related overdose, however, due to the increased strength of these substances, there have been a number of reports where multiple naloxone kits have been required to reverse the effects, again very different to traditional opiates which, in the majority of cases, would only require 1 dose.

[20] Scottish Government Drugs Policy Team data
[21] Public Health Scotland (2024) National naloxone programme Scotland - monitoring report 2021/22 and 2022/23
[22] The Human Medicines (Amendments Relating to Naloxone and Transfers of Functions) Regulations 2024

13. Scottish Child Payment (SCP)

Scottish Child Payment: Reducing Child Poverty through Targeted Payments

The Scottish Child Payment (SCP) was introduced in 2021. It provides payments every four weeks to families receiving a qualifying reserved means tested benefit (e.g. Universal Credit) for each child under 16. Data and modelling indicate that SCP is acting to reduce the number of children growing up in poverty in Scotland.

Reducing child poverty will lead to improved outcomes for children and families and could reduce demand on future public services, and contribute to increased revenue from taxation through improved employment outcomes.

Introduction

The SCP is an example of a downstream primary preventative intervention. The introduction of the SCP marks a significant policy departure from the rest of the UK. It is anticipated that SCP will lead to measurable reductions in levels of child poverty in Scotland.

Context

Growing up in poverty is associated with a range of negative outcomes. Children growing up in poverty are less likely to do well at school, more likely to experience social and behavioural difficulties and more likely to have poorer mental and physical health.[1] Experiencing poverty for any period of time has an impact on children and families' outcomes and wellbeing[2] and the effects of growing up in poverty often result in worse outcomes across the life course. It has been estimated that child poverty costs Scotland around £3 billion a year.[3]

There are a number of ways of conceptualising and measuring child poverty. The most commonly used definition which is used by the Scottish Government, UK Government and EU considers children to be in poverty if they live in households with less than 60% of equivalised median household income. This is a relative measure that is affected by levels of inequality within society.

Levels of relative Child poverty have changed over time as a result of economic conditions and deliberate policy choices. After two decades of consistently low levels of child poverty in the 1960s and 1970s the percentage of children in poverty in Scotland doubled during the 1980s and by 1990, children had displaced pensioners as the single largest group in poverty. In the 1990s child poverty in the UK was higher than any other country in the EU. By 1997 around one in three children were living in poverty in Scotland.

[1] Cooper, Kerris and Stewart, Kitty (2021) Does household income affect children's outcomes? A systematic review of the evidence
[2] Audit Scotland (2022) Tackling Child Poverty
[3] Donald Hirsch (2021) The cost of Child Poverty in 2021

In the lead up to the 1997 General Election, the UK Labour Party promised to halve child poverty by 2010. In 1999 Prime Minister, Tony Blair, committed to ending it "in a generation". Once elected a series of policies were introduced which served to substantially reduce child poverty, most notably additional spending on benefits and tax credits. As a result of these interventions, and the commitment of the newly established Scottish Executive, rates of child poverty fell by over a quarter between 1999 and 2005.[4]

Since 2003-04 Scotland has had a lower rate of child poverty than the rest of the UK. In 2017 the Scottish Government passed the Child Poverty (Scotland) Act. This Act was unanimously supported by all of the political parties in Holyrood. The Act introduced challenging targets for 2030 and interim targets in 2023/24. The Act also committed the Scottish Government to publish Child Poverty Delivery plans in 2018, 2022 and 2026. No corresponding child poverty reduction targets were set for other parts of the UK.

Response

There was a recognition from Ministers and civil society that bold action would be required to meet the challenging new child poverty targets. In 2017 and 2018 anti-poverty organisations were beginning to coalesce around a campaign to increase child benefit payments in Scotland and increasingly organisations were beginning to recognise the potential role of Scotland's newly created Social Security Agency with its focus on 'dignity', 'fairness' and 'respect' as a catalyst for reducing child poverty.

The Poverty and Inequality Commission advised the Scottish Government that 'investment in social security is needed if the targets are to be met'[5] and the Scottish Government responded by committing to introduce a new income supplement for low income families in the 2018 Child Poverty Delivery Plan.[6] This announcement was warmly welcomed by anti-poverty stakeholders and marked a significant policy divergence for Scotland from the rest of the UK.

The 2019-20 Programme for Government set out a Scottish Government commitment to bring forward regulations to introduce a new Scottish Child Payment (SCP) of £10 per week.[7] Five different policy options were initially modelled to understand their effectiveness in reducing child poverty.[8] The SCP was designed in consultation with members of each of the six priority groups identified in the 2018 Child Poverty Delivery Plan. Detailed considerations in relation to how to maximise impact and take up were set out in Equality[9] and Fairer Scotland impact assessments.[10]

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[4] SPICE (2021) Child Poverty in Scotland since the 1960s
[5] Poverty and Inequality Commission (2018) Advice on the Scottish Government's Child Poverty Delivery Plan 2018
[6] Scottish Government (2018) Every Child, Every Chance: Tackling Child Poverty Delivery Plan 2018-2022
[7] Scottish Government (2019) Programme for Government 2019 to 2020
[8] Scottish Government (2019) Analysis of Options for the Income Supplement
[9] Scottish Government (2020) Equality Impact Assessment: Scottish Child Payment
[10] Scottish Government (2020) Fairer Scotland Duty Impact Assessment: Scottish Child Payment

Legislation to introduce the SCP was progressed on an accelerated timetable. The policy development included targeted engagement with stakeholders but did not include a formal public consultation and the payment was introduced through the use of regulations rather than primary legislation.[11]

Intervention

SCP is intended to deliver regular, additional financial help to low income families. Its purpose is to assist with the costs of raising a family, but it is up to recipients to choose how they spend the money. The payment began in 2021 as a weekly sum of £10 for each eligible child in the family under six, paid every four weeks. Eligibility is linked to receipt of UK Government means tested benefits.

The payment amount doubled to £20 per week in April 2022. In November 2022 the payment was extended to include eligible children under 16 and increased to £25. It was further uprated to £26.70 from April 2024 and is due to increase again in April 2025 to £27.15. The total spend on the SCP in 2023/4 was £429m. This is forecast to increase to £471m in 2025/6.[12]

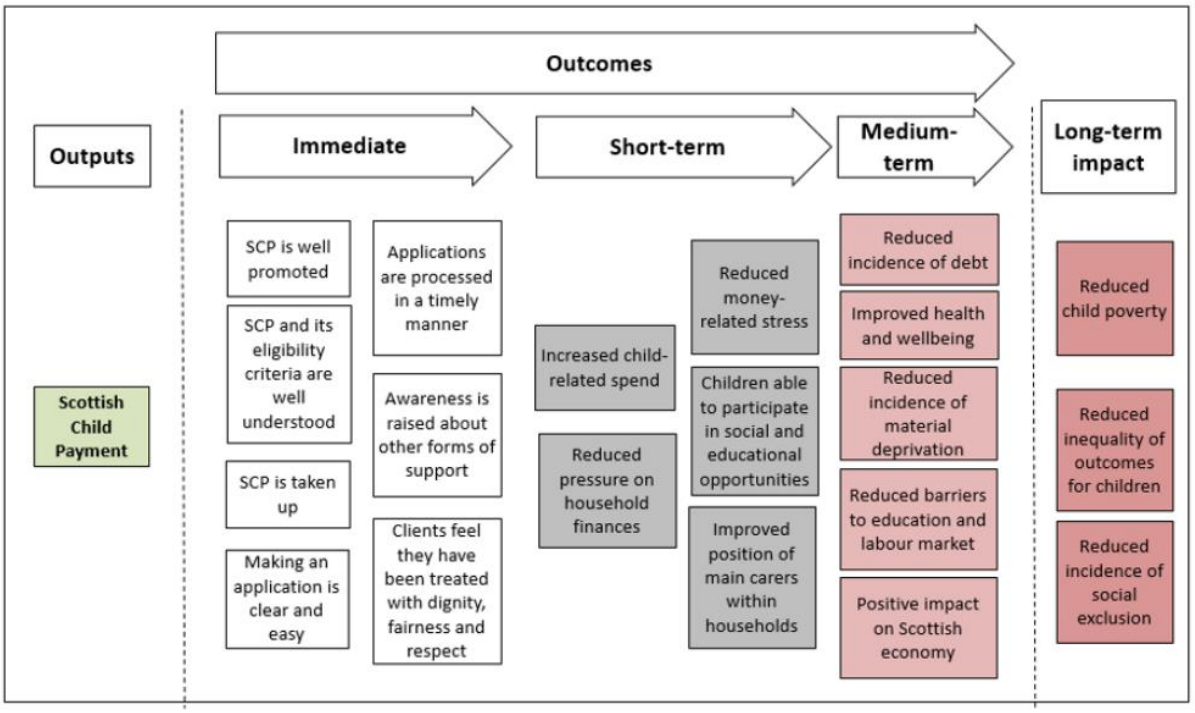
The broad aims of the SCP at the point of introduction were to:

- Achieve a reduction in child poverty of three percentage points when the benefit is fully rolled out, compared to if the benefit had not been in place
- Reduce the depth of poverty by increasing incomes of people not just below the poverty line but those further below it
- Ensure a sustainable and lasting reduction in poverty for families with children.

The short and medium term outcomes and longer term impacts associated with SCP are set out in Figure 1. These include a number of preventative outcomes.

[11] Scottish Parliament (2021) Scottish Child Payment
[12] Scottish Government (2024) Scottish Budget 2025 to 2026

Figure 1: Scottish Child Payment Logic Model



Source: Scottish Government (2022) Interim Evaluation of Scottish Child Payment

Monitoring and Evaluation

As set out above the introduction of the SCP was informed by detailed analytical work. This included work to model the impact of the new payment in reducing the number of children in poverty.

In addition to this analysis an interim evaluation was commissioned and published in July 2022.[13]

Whilst it is too early to understand fully how the SCP is supporting improvements in medium to long term outcomes the interim evaluation of the SCP concluded that it is 'likely to have contributed positively to the Scottish Government's long-term aims'.[14]

Further evaluation of the SCP is underway and will report in summer 2025. It will use quantitative data from a large-scale survey, complemented by qualitative data from interviews to assess the medium-term impact of the payment on debt, material deprivation, food insecurity, and health and wellbeing. It will measure outcomes for both households and children, and how the payment affects different groups based on factors such as demographics and household characteristics.

[13] Scottish Government (2022) Interim Evaluation of Scottish Child Payment
[14] Scottish Government (2022) Interim Evaluation of Scottish Child Payment

Key Findings

a) Reduction in Child Poverty

In 2023-24, the first full year in which SCP was rolled out to under-16s and increased in value, 22% of children in Scotland were living in relative poverty – a reduction from 26% in the previous year, when SCP was partially rolled out.[15] Scottish Government analysis has found that the child poverty rate would have been four percentage points higher in 2023-24 if SCP had not been in place.[16] A similar impact is modelled for 2025-26, with the relative child poverty rate in that year estimated to be four percentage points lower than it would be without SCP in place.

Over recent years there have been several attempts by organisations such as the Joseph Rowntree Foundation,[17,18,19] the Scottish Parliament[20,21] and the Fraser of Allander Institute[22,23] to model and quantify the impact of the SCP on child poverty. Whilst this modelling has been based on different assumptions and was conducted at different points in time they have all concluded that the SCP has a substantial impact on reducing child poverty.

b) Improved Outcomes

The interim process evaluation was largely based on qualitative interviews and identified a number of positive effects for children and families. Participants reported that they had been able to spend more money on their children, which included enabling children to participate in social and educational opportunities.

The SCP was also found to have helped reduce financial pressure on households and helped families to avoid getting into debt. Participants also reported improved parental physical and mental health through ensuring that families could afford to eat and improving mental health through reducing parents' financial worries around everyday budgeting.

Analysis from the Fraser of Allander Research Institute suggests the SCP successfully reduces food bank usage for specific types of households, particularly single-adult households.[24]

Evidence submitted to the Scottish Parliament's May 2024 inquiry on the SCP provided further qualitative examples of the impact of the SCP:

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[15] Scottish Government (2025) Child Poverty Summary
[16] Scottish Government (2025) Child Poverty Modelling: Update. Note that the change in the observed child poverty rate over time is not necessarily attributable
[17] JRF (2021) Turning the tide on child poverty in Scotland
[18] JRF (2021) Laying the foundations for a Scotland without poverty
[19] JRF (2024) Poverty in Scotland 2024
[20] Scottish Parliament (2021) Scottish Child Payment: Where next?
[21] Scottish Parliament (2024) Is Scotland going to meet its child poverty targets
[22] Fraser of Allander Institute (2021) Mission (not) impossible: How ambitious are the Scottish Government's child poverty targets?
[23] Fraser of Allander Institute (2022) Modelling packages to meet Scotland's child poverty targets
[24] Fraser of Allander Institute (2024) The Impact of the Scottish Child Payment on the need for food banks

"The Scottish Child Payment has helped so much. I have three children and felt like I was moving from one money crisis to the next. Now that I get a payment for my older son as well it's been a bit of a lifesaver. I still struggle don't get me wrong but if it wasn't there well I'd be in really bad debt." [25]

c) Scotland's relative performance

There is evidence to suggest that SCP is improving Scotland's performance on child poverty relative to other UK nations. Child poverty statistics published in March 2025 showed that for 2023-24, 22% of children living in Scotland were in relative poverty compared with 31% of children living in within the UK[26]. The latest statistics showed a four percentage point annual reduction in the percentage of children in Scotland in relative poverty. Distributional analysis for the 2025/6 Budget shows that the SCP is the largest single contributor to the improved financial resources of low income households relative to the rest of the UK.[27]

The 2023 Joseph Rowntree Foundation 'Destitution in the UK' report[28] concluded that 'Scotland had improved its position, having experienced by far the lowest increase since 2019. This may be indicative of the growing divergence in welfare benefits policies in Scotland, notably the introduction of the Scottish Child Payment.' Similarly, the Trussell Trust[29] found that Scotland saw a smaller percentage increase in the number of food parcels for children from November 2022 to March 2023 compared with the same period in 2021/22 than other UK nations. It suggested that this may be related to the extension of eligibility for SCP and the increase to £25 a week introduced in November 2022.

d) Effective implementation and high take up

The preventative impact of the SCP is also likely to have been amplified as a result of effective administration of the payment by Social Security Scotland. The latest statistics estimate that the take-up rate (the proportion of people eligible for the payment who go on to get it) of SCP for all children aged under 16 in 2023-24 is 89%. Analysis of quarterly SCP take-up rates throughout 2023-24, for June, September, December and March, show estimated take-up rates for all children aged under 16 steadily increasing over that time. The estimated take-up rate of SCP for children aged under 6 in 2023-24 is 97%.[30] The difference in these take-up rates may be explained by children aged under 6 having been eligible for SCP for longer, since February 2021, while children aged 6 to 15 have only been eligible since November 2022. The Scottish Fiscal Commission[31] expect take-up rates for children aged under 6 and under 16 to broadly converge over time.

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[25] Quote from evidence submitted to the 2024 Scottish Parliamentary Inquiry into the Scottish Child Payment
[26] Scottish Government (2025) Press release: Child Poverty in Scotland Falls
[27] Scottish Government (2024) Scottish Budget 2025 to 2026: distributional analysis
[28] Joseph Rowntree Foundation (2023) Destitution in the UK 2023
[29] The Trussell Trust (2023) Emergency food parcel distribution in Scotland: April 2022 - March 2023
[30] Scottish Government (2024) Take-up rates of Scottish benefits: November 2024
[31] Scottish Fiscal Commission (2024) Scotland's Economic and Fiscal Forecasts – December 2024 | Scottish Fiscal Commission

Learning and Next Steps

The SCP is an example of a targeted primary preventative intervention. It has been described as a ‘game changer’ by the Scottish Poverty and Inequality Commission. By increasing the disposable income of eligible families with children up to the age of sixteen, it could over time contribute to reducing levels of child poverty in Scotland. In the meantime, the evidence to date suggests that the payment is being used to cover essentials and provide opportunities for children to participate in activities that their families would not otherwise be able to afford.

The level of cross party support for the SCP is also notable. For example, all five of the main political parties in Scotland pledged, in their manifestos for the 2021 election, to double the SCP weekly payment.

Whilst the SCP has been an effective preventative intervention there will inevitably be opportunities to further refine the delivery and development of SCP.

More recently there have been calls from some stakeholders to further increase SCP and modelling to suggest that ‘increases to SCP are the most effective tool available to the Scottish Government’ to meet its child poverty targets.[32] However in reality meeting the 2030 targets is likely to require a package of measures, the Poverty and Inequality Commission have been clear in their advice that “reaching the targets through use of devolved social security powers alone is not realistic.”[33] While an income supplement for low income families will contribute towards meeting the child poverty targets, a range of other policies and programmes will also be required to meet the 2030 Child Poverty targets.

[32] Fraser of Allander Institute (2025) Meeting Scotland’s Child Poverty Targets: Modelling and Policy Packages.
[33] Poverty and Inequality Commission (2018) Advice on the Scottish Government’s Child Poverty Delivery Plan 2018

14. Smokefree Legislation

Smokefree Legislation: Protection from second hand smoke

Scotland was the first part of the UK to introduce smokefree legislation in 2006. The law prohibits smoking in wholly or substantially enclosed public spaces to protect people from the health harms of second-hand smoke (SHS). The law was evaluated in a series of studies that described its implementation and outcomes, including reductions in SHS exposure, health improvements and cost savings.

Introduction

Smokefree legislation (a 'smoking ban') involves the primary prevention of non-communicable diseases (NCDs) caused by SHS exposure. The comprehensive nature of the legislation, the ease with which it was implemented, and the demonstrable positive outcomes mean that this policy is still widely regarded as having been one of the notable successes of Scottish devolution.

Context

Smoking is the single biggest cause of preventable premature death and poor health in the world. In Scotland in 2004 before the legislation was introduced, there were around 1.2 million smokers, an estimated 13,000 people died per year from smoking-related illnesses and within that number around 1,000 deaths could be attributed to SHS.[1] Smoking is also a leading contributor to health inequalities with rates in poorer communities being double those in more affluent ones, exacerbating the difference between life and healthy life expectancy between socio-economic groups.[2] Even as smoking rates have declined overall in recent years, these inequalities have remained.

In the early 2000s, progress was slowly being made to address smoking-related NCDs. This included the three major causes of premature deaths in Scotland – heart disease, stroke, and cancer – but Scotland was still behind similar nations. Free at the point of use smoking cessation services had been introduced from the early 2000s, there were mass media campaigns relating to the health harms of smoking and other tobacco control policies were in place. However, the risks that SHS exposure caused, and especially its effects on workers and those in more deprived communities, needed much greater attention.

Response

The introduction of smokefree legislation was the culmination of many years of work including government action to reduce smoking rates, decades of lobbying from

[1] Semple, S et al (2007) Secondhand smoke levels in Scottish pubs: the effect of smokefree legislation. NB: this article cites earlier reports only available on the NHS Health Scotland archive from 2004 that were commissioned to inform the public consultation prior to the legislation.
[2] Scottish Centre for Social Research (2024) The Scottish Health Survey 2023: Volume 1, main report

health interests for more radical action, the shifting of debate and public opinion as a result of scientific evidence, opinions being aired publicly by influential individuals at different points, as well as the immediate political context in Scotland at the time.[3,4,5] Ireland had been the first country in the world to introduce a smoking ban, in 2004. Implementation had gone relatively smoothly there with high levels of compliance, which provided reassurance for policymakers that having worked in Ireland (with its social and cultural similarities), it could also work in Scotland.

Intervention

The Smoking, Health and Social Care (Scotland) Act 2005 made it an offence to smoke or to allow smoking in virtually all enclosed public areas and workplaces, including pubs and restaurants.[6] The Bill was originally introduced to Parliament on December 17, 2004, and was approved by MSPs on June 30, 2005, by a majority of 97 to 17 with one abstention. It received Royal Assent on August 5, 2005, and came into force on March 26, 2006.

Dedicated funding was provided to support local authorities to recruit additional environmental health officers (EHOs) who were responsible for monitoring and enforcement, accompanied by additional funds to NHS Boards for cessation programmes. The Scottish Executive (SE, the predecessor to the Scottish Government) developed an enforcement protocol for local authorities and their EHOs building on learning from the Irish experience.

Communication was also key. A cross-sector communication team was established with marketing and comms colleagues within the SE and in major charities (including ASH Scotland, Cancer Research UK, Macmillan Cancer Research, British Heart Foundation, and Chest, Heart and Stroke Scotland) and organisations (like the British Medical Association). A wide-ranging suite of communications campaigns and media was developed. A dedicated website and telephone helpline was set up to answer questions from the public and organisations. FAQs were also developed and information packs in various formats. A flyer to raise awareness of the legislation was sent to every household in Scotland, and a pack was also developed for MSPs to use in engaging with constituents which helped sustain political co-operation.

Achieving a broad consensus was central to the policy. In the lead up to the Act and in its implementation, powerful alliances were built involving the charities and organisations mentioned above, the Scottish Tobacco Control Alliance and the Parliament via the Cross-Party group on Tobacco Control. Within the SE, a new Tobacco Control Division was formed, bringing an existing policy team together with a Bill Team and an implementation team. In addition to political leadership, regular communication between the branch head of the substance misuse division in SE

[3] Learmouth, A (2021) 15 years off the fags: the story of Scotland's smoking ban

[4] Cairney, P (2007) Using devolution to set the agenda? Venue shift and the smoking ban in Scotland,

[5] ASH Scotland (2005) The Unwelcome Guest: How Scotland invited the tobacco industry to smoke outside

[6] The few exemptions included residential accommodation; designated rooms in adult care homes, hospices, psychiatric units and off-shore installations; designated hotel rooms, prison cells and police interview rooms; and private cars.

(where the Tobacco Control Division was based) and the Chief Executive of ASH Scotland was an important factor.

Prior to the legislation a detailed public consultation had been conducted, with around 600,000 questionnaires distributed. Research was commissioned to support the consultation. This included a study estimating the number of deaths from second hand smoke in Scotland, a review of workplace smoking policies and an international evidence review of the health and economic impact of regulating smoking in public places.[7] This evidence helped inform the public and stakeholders about key issues relevant to the proposed legislation. Twelve public forum meetings were also held in different cities as part of the consultation, and an international conference was hosted by the SE. These activities likely helped build public understanding of the issues the legislation was intended to address, and opinion polls in the period leading up to the passage of the law demonstrated a steady increase in public support.[5]

Monitoring and Evaluation

The SE with NHS Health Scotland funded an extensive national evaluation[8] of smoke-free legislation that involved researchers from several organisations and Universities. This covered the period between 2005 and 2011 and focused on a range of key indicators, including smoking-related morbidity and mortality, exposure to SHS, and economic impacts. The methods used in the evaluation varied from the secondary analysis of routine data to primary research including air quality measurements, observations, surveys and qualitative research. More recent research has also examined the longer-term effects on outcomes such as reductions in hospital admissions for stroke, and pregnancy complications.

Key Findings

a) Improved outcomes

Compliance with the legislation was very high among individuals and premises from the date of introduction, over 90%. In terms of the evaluation, in 2010 a summary was published[9] that outlined the key findings up to that point. These included:

- An 86% improvement in air quality in bars, with air quality in most bars post-legislation equivalent to outdoor air
- An 89% reduction in SHS exposure in bar workers
- A 39% reduction in SHS exposure in adults and 11-year-old children
- Improvements in the respiratory health of bar workers
- A substantial (17%) reduction in hospital admissions for acute coronary syndrome

[7] These reports were published on the NHS Health Scotland website in 2005, which has now been archived

[8] Haw, S et al (2006) Legislation on smoking in enclosed public places in Scotland: how will we evaluate the impact?

[9] Haw, S (2010). Chapter 3: Fresh Air? In Barlow, Joy (ed.) 2010, Substance Misuse: The Implications of Research, Policy and Practice.

- An increase in support for the legislation post-implementation among both smokers and non-smokers but evidence of less support in more deprived communities
- An increase in awareness of the risks associated with SHS and some evidence of changing social norms around exposing others to SHS
- Some evidence of more stringent home smoking restrictions post-legislation (for example residents only smoking outside and asking visitors to do the same)
- Some evidence that smokers, particularly women, experienced feelings of stigma associated with more visible smoking
- Some evidence of social isolation among older male smokers who no longer frequented pubs following the smoking ban.

Not covered in the 2010 summary was a study[10] published just after it, that found a mean reduction in childhood hospital admissions for asthma of 18.2% per year up to 2009, reversing a rise in admissions that had been observed from 2000 to 2006. Subsequent studies identified reductions in pregnancy complications related to smoking and SHS exposure[11].

There had been concerns about displacement of smoking into the home prior to the legislation. The evaluation could not find any evidence of this. It was also expected that more smokers would quit as a direct result, with the hypothesis that not being permitted to smoke in indoor public places would prompt quit attempts. The evaluation did not find consistent evidence to support this, although there was a rise in over-the-counter purchases of Nicotine Replacement Therapy (a stop smoking medication).[12] Studies following the smoking ban in England did find a relationship with smoking cessation[13] and the implementation of the legislation contributed to the denormalisation of smoking in Scotland.

b) Cost savings

Prior to the legislation, NHS Health Scotland commissioned the health economics unit at the University of Aberdeen (on behalf of SE) to estimate potential costs and cost savings, including effects on the hospitality sector and the NHS.[14]

The research team used international evidence to model the health and economic impacts, under a range of scenarios. The net present value of benefits and costs over 30 years was demonstrated to be positive under all the scenarios examined. There was a central estimate of +£4.6 billion (ranging from +£0.056 billion to +£7.4 billion).

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[10] Mackay, D et al (2010) Smokefree legislation and hospitalisations for childhood asthma

[11] Mackay, D et al (2012) Impact of Scotland's smokefree legislation on pregnancy complications: retrospective cohort study

[12] Lewis, S et al (2008) The impact of the 2006 Scottish smokefree legislation on sales of nicotine replacement therapy

[13] Hackshaw, L et al (2009) Quit attempts in response to smokefree legislation in England

[14] Ludbrook, A, et al (2005). International review of the health and economic impact of the regulation of smoking in public places (URL no longer live – see Improved public health: Smoke free legislation in Scotland and Report on the Financial Memorandum of the Smoking, Health and Social Care (Scotland) Bill for supporting evidence).

This evidence regarding cost savings was influential in the passage of the Act. The results of the research were submitted to the Scottish Cabinet in early November 2004 and the main finding — a net economic benefit to Scotland from banning smoking in public places — was cited in the First Minister's speech to the Scottish Parliament on 10th November 2004 announcing the proposal to introduce the legislation. The research underpinned the Regulatory Impact Assessment produced by SE for the Committee stages of the Bill.

Following the introduction of the legislation there were studies[9,10,15] that demonstrated reduced use of health services from smoking-related conditions, providing an economic benefit. However, a recent ten year follow up study[16] of the reductions in hospital admissions for acute myocardial infarction (heart attacks) found these benefits had been sustained for older people (those aged 60+) but not younger people. Unfortunately, the most likely explanation for no sustained decrease of the benefits of smokefree legislation in younger groups is that other risk factors for heart disease – specifically overweight and obesity – have overtaken smoking as the main cause of these trends in younger people.

c) Addressing inequalities

Findings regarding inequalities across the population were mixed. A study[17] that compared results from Scotland and the rest of the UK (prior to Smokefree being introduced there in 2007) did not find significant differences by socio-economic status (SES) when examining observed declines in smoking in public places, smoking in the home, support for smokefree policies and reported frequency of going to pubs and restaurants.

Studies examining children's exposure to SHS[18,19] following the introduction of the legislation found that SHS exposure was still highest and private smoking restrictions (i.e. smokefree homes) least frequently reported among lower SES children. This was despite overall reductions in SHS exposure among all children. In other words, the law did not remove or narrow the gap in such exposure between those children living in the most deprived compared to least deprived areas. Other subsequent policies and interventions did contribute to continued reductions in SHS exposure in the home, however, with a national target to reduce this to 6% overall achieved five years early, by 2015.[20]

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[15] Pell, J et al (2008) Smoke-free legislation and hospitalisations for acute coronary syndrome

[16] Mackay, D et al (2019) Ten-year follow up of the impact of Scottish smokefree legislation on acute myocardial infarction

[17] Hyland, A et al (2009) The impact of smokefree legislation in Scotland: results from the Scottish ITC Scotland/UK longitudinal surveys

[18] Akhtar et al (2010) Socioeconomic differences in second-hand smoke exposure among children in Scotland after introduction of the smoke-free legislation

[19] Moore et al (2012) Socio-economic inequalities in childhood exposure to secondhand smoke before and after smoke-free legislation in three UK countries

[20] Scottish Government (2016) Dramatic fall in second-hand smoke exposure

Learning and Next Steps

Smokefree legislation remains in force today and has been extended since. Some of the settings that were originally not included in the policy have subsequently become smokefree, including private vehicles where children are present, prisons and the introduction of legislation to enforce a ban on smoking within 15 meters of NHS hospital buildings. The Tobacco and Vapes Bill that was introduced into the UK Parliament in November 2024 includes powers to extend smokefree places to specific outdoor public places. These powers are devolved to each UK nation and will require further regulations in Scotland following consultation. The use of products other than combustible tobacco in these outdoor public places could be included, such as heated tobacco and e-cigarettes.

Part of the legacy of smokefree legislation was that it gave government the confidence and a model for ambitious public health policies in a devolved Scotland. It was a ‘game-changer’ for the acceptable and effective use of legislation to improve population health. It paved the way for subsequent tobacco control policies and minimum pricing on alcohol. The lessons from the development of the legislation, its implementation and its robust evaluation continue to provide a model for public health policy today. There is a need to apply them to address current challenges for prevention and public health that now threaten hard won progress from years past.

15. The Caledonian System

The Caledonian System: An intervention to prevent re-offending by changing the behaviour of men convicted of domestic abuse

The Caledonian System was introduced in Scotland in 2011 and takes a 'whole systems' approach to tackling domestic abuse perpetrated by men. It is an accredited programme that aims to improve the lives of women, children and men. An independent evaluation in 2016 found that women felt safer as a result of their (ex) partners participating in the programme, and men who completed the programme posed a lower risk to partners, children and others.

Introduction

The Caledonian System is an example of a tertiary preventative intervention which takes a 'whole systems' approach to addressing domestic abuse. It is a court-mandated programme which works with men convicted of domestic abuse related offences to reduce their risk of re-offending. Aligned support services for women (the men's (ex) partners) and a children's service are offered to ensure that the safety of women and children is maintained. Working together with the whole family is central to the Caledonian System's ultimate aim of reducing violence against women (VAW) and the impacts of domestic violence on children.

Context

As the World Health Organisation and Scotland's strategy to address violence against women and girls outlines, this type of violence is a major public health problem and a violation of women's human rights.[1,2] While men can be also victims, domestic abuse disproportionately affects women, with men as the primary perpetrators.[3,4] This is the case in Scotland and worldwide.[2]

In the lead up to the evaluation of the Caledonian System in 2014-15, 59,882 incidents of domestic abuse were recorded by police in Scotland, an increase of 2.5% from 2013-14. 79% of all such incidents had a female victim and male perpetrator.[5]

Victims/survivors of domestic abuse are amongst the least likely to report their victimisation to the police,[6] and thus self-reported data is important. In 2016, when the evaluation was conducted, the Scottish Crime and Justice Survey showed that

[1] Scottish Government (2023) Equally Safe: Scotland's Strategy for Preventing and Eradicating Violence Against Women and Girls
[2] World Health Organisation (2024) Violence against women
[3] Scottish Government (2016) Caledonian System Evaluation: Analysis of a programme for tackling domestic abuse in Scotland
[4] Scottish Government (2023) Violence Prevention Framework: Evidence Supplement
[5] Scottish Government (2018) Equally Safe 2018: Scotland's strategy to eradicate violence against women
[6] SCCJR (2019) Taking Stock of Violence in Scotland

since the age of 16, 14.1% of adults had experienced 'partner abuse'[7] with 2.9% experiencing it in the last 12 months. A higher proportion of women than men reported psychological abuse (16.5% of women compared to 7.5% of men), and physical abuse (12.8% women compared to 5.9% of men) in the previous year. The risk of partner abuse in the previous year had not changed between the 2012-13 and 2014-15 surveys.[8]

"In addition to the devastating impact that VAWG has on the lives of families and communities across Scotland, it negatively impacts on society as a whole, including placing a significant pressure on public services." [1]

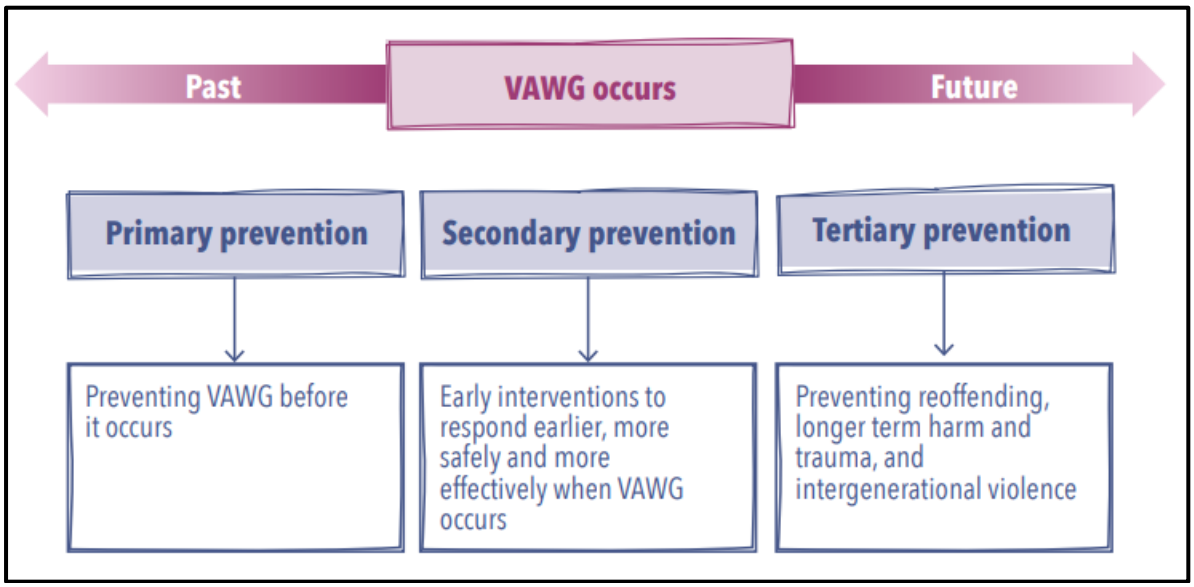
The personal and societal costs of VAW are alarmingly high.[9] Home Office analysis (2019) estimated that the social and economic cost for victims of domestic abuse in the year ending March 2017 in England and Wales was approximately £66 billion.[10] The largest component of this was the physical and emotional harms incurred by victims (£47 billion). The cost to the economy was also considerable, with an estimated £14 billion arising from lost output due to time off work and reduced productivity as a consequence of domestic abuse.

Response

VAW is preventable.[1,2] Equally Safe is Scotland's strategy for preventing and eradicating VAWG. The strategy was published in June 2014 and most recently refreshed in 2023. It was developed by the Scottish Government and COSLA in association with a wide range of organisations, and aimed to work collaboratively with key partners in the public, private and third sectors.[5] The vision of Equally Safe is 'a strong and flourishing Scotland where all individuals are equally safe and respected, and where women and girls live free from all forms of violence, abuse and exploitation - and the attitudes that help perpetuate it.' [1]

[7] Defined in the survey as 'any form of physical, non-physical or sexual abuse, which takes place within the context of a close relationship, committed either in the home or elsewhere. This relationship will be between partners (married, co-habiting or otherwise) or ex-partners.'
[8] Murray/Scottish Government (2016) Scottish Crime and Justice Survey 2014/15: Partner Abuse
[9] European Institute for Gender Equality (2014) Cost of Violence against Women largely underestimated
[10] Home Office (2019) The economic and social costs of domestic abuse

Figure 1: Preventing VAWG



Source: Equally Safe: Scotland's Strategy for Preventing and Eradicating Violence Against Women and Girls

Primary prevention is a core objective, but it also recognises that gender-based violence is a deep-rooted problem requiring significant cultural and attitudinal change, and so is likely to continue for some time to come. The strategy therefore highlights the importance of secondary and tertiary prevention (Figure 1) and the role of intervention services in achieving its vision.[1]

The Caledonian System (referred to as 'the System') helps to support the delivery of Equally Safe's strategic focus on interventions which: maximise women's safety; hold men to account for their violence; are early; and address men's re-offending.[3]

Intervention

The System was developed to address domestic abuse. It was designed to replace several local authority initiatives and has been in operation since 2011.[11] By 2016 the System was available across five regional 'hubs' (Aberdeen; Dumfries and Galloway; Lothian and Borders; Forth Valley; and North Ayrshire), covering 13 local authority areas, at an annual cost of around £2.3 million, paid for by the Scottish Government.

The System was developed by the Scottish Government, and informed by international evidence and best practice on what works to prevent domestic violence.[12] It is aimed at domestic abuse perpetrators who present as being at a moderate or above risk of re-offending. The programme is for those subject to court orders of two years or more, the purpose being to encourage perpetrators to acknowledge their behaviour is wrong and to complete a programme to reduce their risk of reoffending.

[11] Community Justice Scotland, Community Payback Order Programme: Domestic Offences
[12] In order to be accredited by SAPOR a 'theory manual' must be produced which demonstrates how the programme is based on the latest international evidence.

The Caledonian System works with the whole family.[13] The service comprises of: a men's programme - working with men convicted of domestic abuse offences to change their behaviour and address their attitudes to women and violence; a women's service; and a children's service. All elements work together to reduce VAW, and the impacts of domestic violence on children.[3]

The men's programme was the first offender-rehabilitation programme to be accredited by the former Scottish Accreditation Panel for Offender Programmes, the predecessor body to the Scottish Advisory Panel on Offender Rehabilitation (SAPOR) in 2009. SAPOR's role is to endorse interventions which support desistance from crime.[14] The programme lasts at least two years and is delivered by case managers (who deliver the one-to-one sessions and manage individual men throughout the programme) and group workers (who deliver the group work stage).[3] It involves;

(i) A **Pre-Group** stage involving a minimum of 14 one-to-one preparation and motivation sessions;
(ii) A **Group Work** stage of at least 26 group work sessions covering six themed modules (lifelong change, responsibility for and to self, relationships, sexual respect, men and women, and children and fathering);
(iii) The **Maintenance** stage comprising further post group one-to-one work.[3]

The women's service provides safety planning, information, advice and emotional support to female partners and ex-partners of men referred to the men's programme.

The children's service is supported by children's workers who ensure their rights and needs are considered within the System and by wider services.

Integral to the System's approach is that the programme is embedded in a wider system of multi-agency working. Those delivering the System work with a wide range of services, including: Children and Families Social Work; Police Scotland; the Court service; and also housing, health services, drug and alcohol support services, Victim Support, Women's Aid and a range of other voluntary and statutory services.[3] Community Justice Scotland provide national oversight and training and are funded by the Scottish Government to support an expansion of this service.[11]

Monitoring and Evaluation

The independent evaluation of the men's programme element of the System was conducted between February and June 2016 by Ipsos MORI Scotland. The evaluation was funded by the Scottish Government and cost around £45,000. The evaluation was a process and outcome evaluation that used quantitative and qualitative methods to assess the system's effectiveness, delivery, and outcomes. The main purpose was to inform its application for re-accreditation by SAPOR in September 2016, but also to:

[13] Working with men in isolation has the potential to increase the risk of harm to women partners, for example men may resent having to attend and blame their partner for the fact they are on the programme.
[14] Scottish Advisory Panel on Offending Reduction (SAPOR)

- assess to what extent, and how, the planned activities have taken place
- assess to what extent, and how, the short and medium (and, where possible, long) term outcomes have been realised, and
- propose a data collection framework for a future evaluation.[3]

The evaluation included quantitative analysis of monitoring data from the five regional Caledonian 'Hubs', qualitative interviews with 21 men participating in the Caledonian men's programme, 19 women supported by the women's Service, 42 staff delivering the service (men's, women's and children's workers and delivery managers), and a small number (four) of additional professional stakeholders.[3]

While the research team worked with staff to try to minimise recruitment bias, those interviewed were nearing the end of the Group work or Maintenance stages of the programme (so that they could comment on the impact of the programme as a whole). This inevitably meant they were also more engaged with the programme and that the experiences of others less invested in the programme may not have been captured.[3]

Uptake of the men's programme and women's service was difficult to quantify because of limitations to the System monitoring data. The evaluation was also conducted over a short timescale meaning that longer term outcomes could not be captured.

While the evaluation showed that men, women and children can benefit from the System, it did not provide conclusive evidence of its impact. This would require a different research design, ideally with a control/ comparison group, which is challenging due to costs, ethical and practical issues.[3] The study did not include any economic evaluation. [As outlined below, the Caledonian National Team are currently working to improve data collection within the Caledonian database].

Key Findings

a) Outcomes for women and children

Women reported that they felt safer and attributed this to: safety planning; support to contact the police about breaches of no-contact orders; and being better able to keep track of men's behaviour because of their involvement with the men's Programme. Besides feeling safer, other perceived benefits for women interviewed included improved self-confidence; better physical health; reductions in their own substance use and criminal behaviour; and positive impacts on income and work. There were more mixed views on the extent to which women felt the System had an impact on men's behaviour, in some cases because women were no longer in contact with their partner.

Perceived benefits for children (as reported by women) included increased safety, changes in problem behaviour, and better emotional and mental wellbeing. Both men and women reported a number of ways in which the System had improved their parenting skills.

b) Outcomes for men

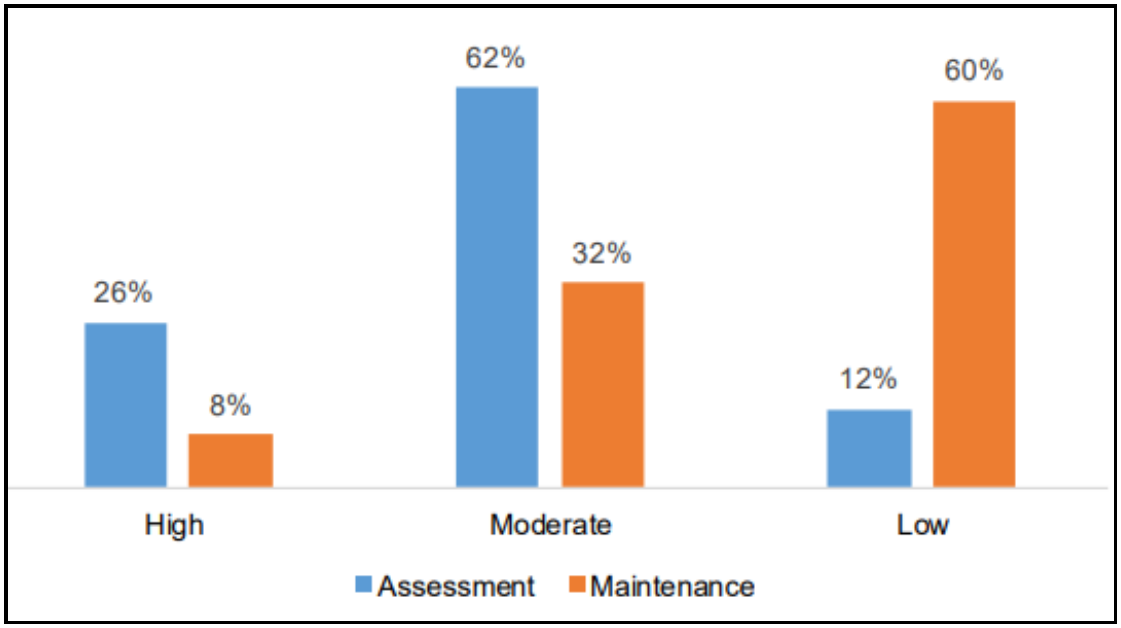
Although the monitoring data could not be used to conclusively assess the impact of the men's Programme on behaviour, it did indicate that those men who completed it posed a lower risk to partners, children and others by the end of the programme.

Men who completed the programme were judged by case workers as posing a lower risk to partners, children and others by the end of the programme. The Spousal Assault Risk Assessment (SARA) questionnaire was administered both at the initial 'Assessment' stage (which assesses men's level of imminent risk of violence to partners, children, and others) and again at the 'Maintenance' stage (defined above), and so provides an indication of behaviour change.

The risk men posed to their partners decreased substantially over time (Figure 2). The proportion assessed as 'high risk' to their partner decreased from 26% to 8%, while the proportion classed as 'moderate risk' fell from 62% to 32%. By the Maintenance stage, the proportion classed as 'low risk' increased from 12% to 60%.[3,15]

Psychometric data on changes in men's attitudes presented a more mixed picture. There was some evidence that participants made progress in terms of general attitudes and feelings that may be predictors of abuse, and in reduced tendencies to blame their problems on either chance or other people. However, there was less clear evidence of any change in whether men felt they have control over their own lives.

Figure 2: Risk to partner at the 'Assessment' and 'Maintenance' stage of the Caledonian System



Source: Caledonian System Evaluation: Analysis of a programme for tackling domestic abuse in Scotland

[15] Base: All with a SARA 1 score at Assessment and Maintenance stages (195)

As well as reducing the level of risk that men posed, men also reported improved understanding of the nature of abuse and of appropriate behaviour in relationships; a greater awareness and understanding of the inequalities that exist between men and women; and a more 'positive mindset' about both their relationships and themselves.

Learning and Next Steps

The evaluation made recommendations to improve the monitoring and evaluation of the programme, including considering a longer-term study with a control group, which could provide more conclusive evidence of impact. The Scottish Government and SAPOR are working with partners to implement an outcomes monitoring framework to provide scrutiny of the programme's effectiveness and to inform continuous improvement practices and further evaluation.

The findings from the 2016 evaluation indicated a number of areas for improvement which informed changes to the design and delivery of the programme. The evaluation also led to further investment in the Caledonian System. In 2016, Scottish Government funding of £359,372 was awarded to respond to the evaluation's recommendations for improvement and to ensure the programme was ready for reaccreditation. The funding resourced a new National Co-ordinator post and a data champion post, and a further award of £306,196 was provided by the Scottish Government to extend the scope of the IT system that supports the operation of the Caledonian System. Full accreditation of the System was ratified in June 2018 and that year a further £2.8 million was made available to local authorities to apply for support to roll out the System within their area.[16] SAPOR reaccredited the Caledonian System again in December 2022 for a further five years.

The System is currently delivered in 20 local authority areas across Scotland.[17] Following additional investment of £11.4m in Justice social work services in 2024/25 aimed at reducing reoffending, two more areas (Moray and Shetland) are preparing to deliver the System in 2025. This is timely, as the latest domestic abuse statistics recorded by the police show levels have increased since the time of the evaluation. In 2023-24 63,867 incidents of domestic abuse were recorded. Of these, 81% incidents involved a female victim and a male suspected perpetrator.[18,19]

Wider developments have occurred since the 2016 evaluation of the Caledonian System, intended to further address VAWG. The Domestic Abuse Act (Scotland) 2018 came into force on 1 April 2019, modifying portions of the Criminal Procedure (Scotland) Act of 1995. The act expands the definition of domestic abuse to include psychological abuse and coercive and controlling behaviour. When introduced the Domestic Abuse Act was the only UK legislation with a specific statutory sentencing aggravation to reflect the harm that can be caused to children growing up in an environment where domestic abuse takes place.

[16] Scottish Government, Tackling domestic abuse
[17] Community Justice Scotland, Domestic Abuse-Related Training by Local Authority
[18] Scottish Government (2024) Domestic abuse: statistics recorded by the police in Scotland, 2023 to 2024
[19] The Scottish Crime and Justice Survey results have been delayed due to Covid-19 with the last publication in 2021

social research

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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