EXTERNAL REVIEW OF DRUG SERVICES FOR "THE EASTERN HEALTH BOARD"

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1 Introduction

The provision of services for drug users has grown dramatically in most European countries over the past decade. In the initial half of the decade the threat of HIV had a significant impact on the overall direction of policy priorities and service expansion. By the latter part of the decade a broader mix of health and criminal justice imperatives has come to dominate the policy agenda. The challenge for policy is to find a sound and rational policy mix between public health and criminal justice priorities and to develop new and innovative methods of integrating these approaches in a manner that has been rigorously evaluated and has clear evidence of effectiveness.

As with other areas of health care delivery, the challenge for services is to ensure equity of access, high quality and efficient services, and provide evidence that the services deliver the impact that they aim for.

Drug misuse is a complex psychosocial problem which requires a multifaceted response. There is a special challenge in constructing appropriate multidisciplinary and multi-sectoral responses that effectively incorporate differing priorities and result in teams that have clarity of purpose, high morale and effective management and outcomes.

1.1 Terms of Reference

- An external review of the Drug Services in the Eastern Health Board was requested in June 1999 and the key terms of reference agreed were "having regard to the national policies within which services are provided".
- To review the current policies and practices in relation to the provision of services for drug users in the Eastern Health Board area.
- To review the development of services form the starting point of the previous review conducted in 1995.
- To review the service provision and the service mix.
- To review and make recommendations on items such as:-

  (i) Movement of clients from Centres to clinics and general practice.
  (ii) Case management and client focussed approach in EHB service.
  (iii) Staffing and skill mix in the services provided by the EHB.

- To review partnerships with other agencies.
- To review practices of EHB linked services for drug users.
- To comment on service response in the EHB area in the context of trends and practices elsewhere.

1.2 Methods

Michael Farrell was contracted as an external consultant with a special expertise on the organisation and delivery of drug services. Claire Gerada is a general practitioner with major policy interest and expertise on the delivery of drug treatment as a part of Shared care. John Marsden is a principle investigator on the National Treatment Outcome Research Project.

Key Policy Makers, Teams and individuals, including GP coordinators, Consultant Psychiatrists, Area Managers, Counsellors, Education Officers, Outreach Workers, Nurses, voluntary sector agencies and individuals, were interviewed as part of a key informant process. Site visits were conducted to a wide range of services to gain an overall picture of the spread of services.

The aim of the interviews and site visits was to ascertain how key strategic and operational policies had been implemented. It was not the aim or the terms of reference to conduct detailed individual site operational evaluation.

2 Background to current service provision

There has been a remarkable degree of activity and expansion within the services in the EHB over the past four to five years. The EHB identified that there was a need for urgent expansion of services and were also clear that there was a need to develop services that were local and tailored to the needs of particular communities. To this end a programme of service expansion was embarked on that is probably one of the more innovative community drug service programmes in Europe. It has taken the core of the evidence on the effectiveness of methadone maintenance and attempted to develop a range of services to ensure higher levels of treatment access. This has resulted in a major expansion in the levels of provision of methadone treatment with over 4000 individuals in treatment by mid 1999. In addition, this also achieved a distribution of services into small community satellite clinics and a range of other community based services. This innovation directly addressed the issue of community resistance to the delivery of drug treatment services through insistence that such services would be focussed for designated geographic patches.

Thus the services have expanded from three locations to over 50 locations in the space of five years. Over the past decade the budget for the service has increased more than 10 fold. This level of rapid expansion is a major achievement that involves an all-consuming level of managerial and administrative involvement. The services are now likely to require an opportunity for consolidation and planning for the next level of development. The development of services has occurred against a background of ongoing growth and development of drug problems and a high political profile on drug

problems. For the future integrity of the services there is a critical need for close collaborative working with broader preventative interventions.

Current level of drug problems is difficult to ascertain, but there is robust data to indicate that the heroin problem is primarily confined to the Eastern Health Board Region of the country. However if international experience is to be replicated it is likely that heroin use will eventually extend itself into other metropolitan areas and also into deprived rural localities.

The Two Reports of the Ministerial Task Force on Measures to Reduce the Demand for Drugs looked at the problems of both heroin and other drug misuse and concluded that heroin abuse was by far the most serious aspect of the drug problem confronting not only the statutory authorities but Irish society in general at the time.

As a result of this the Ministerial Task Force recommended the establishment of Local Drugs Task Forces in the areas most severely affected by a combination of deprivation and drug dependence. A National Drugs Strategy Team with a policy and an operational component is in place as part of the overall coordination of local drug task forces.

3 Evolution of Current Services

Drug problems are a relatively new phenomenon, which have appeared over the past three decades and have continued to grow over that period. The nineteen fifties and early sixties were periods of minimal non-prescribed drug problems. The sixties saw the growth of an international youth culture and counterculture, which was strongly associated with psychoactive drug use. However, even at that period the levels of problems were extremely modest by today's standards.

In a city the size of Dublin the growth of the drug problem has had a high profile even from its earliest stage.

The first services established in the EHB area were established through the Department of Health. This was the Drug Treatment and Advice Centre in Jervis St Hospital in 1969, which had in-patient and outpatient facilities. The Coolmine therapeutic community in North County Dublin was opened in 1973. Subsequently, a range of other voluntary sector bodies established some community and residential facilities. Jervis St was transferred to Trinity Court in the late 1980s and the in-patient facilities were transferred to Beaumount Hospital. For much of the 1980s the overall capacity of the system to respond to problem drug users was primarily located in a small number of facilities which experienced great difficulty in meeting treatment demand. The mid to late nineteen eighties saw the development and expansion of the voluntary sector agencies providing non-residential facilities, including needle exchange programmes and other health and harm reduction activities.

The mid eighties also saw substantial development of EHB activity in drug services with the development of drug services in Baggot Street, Cherry Orchard and in Amiens Street. Much of this activity was in response to the major concerns around

the spread of HP/ through injecting drug use. At the same time a range of community workers were developed including outreach workers, community addiction counsellors and educational officers.

The Strategic Objectives of the AIDS/Drugs Service, in line with Ministerial Task Force Reports on the Measures to Reduce the Demand for Drugs are to provide in conjunction with voluntary agencies where appropriate:

- Education and prevention programmes.
- Services aimed at delivering advice and harm minimisation programmes to drug misusers not in contact with services including advice on safer drug use, ways to reduce the risk of HP/, Hepatitis transmission, safer sex and advice on good health.
- Treatment programmes which have as their objective in the short term control of the drug misusers addiction within the context of the long-term aim of a return of the drug misuser to a drug free lifestyle.
- Aftercare and rehabilitation programmes to assist misusers access education, training or employment opportunities.
- Evaluation of the various service responses to ensure maximum effectiveness.

In 1999 Drugs services were part of the Health Promotion, Mental Health, Addiction and Social Development Programme which the Programme Manager has overall responsibility for the service development and delivery. There are three geographical regions headed by an Area Operational Manager, Consultant Psychiatrist, GP Coordinator and Liaison Pharmacist. Head of disciplines report to the Area Operations Manager. The overall budget for the entire programme in 1999 was 100.660 million pounds with 17.5 million being allocated to the AIDS/Drugs services but this includes capital development costs. Thus, the AIDS/Drugs service is allocated nearly 15% of the overall programme costs.

In 1996 the Government established a Ministerial Task Force on Measures to Reduce the Demand for Drugs and this task force made recommendations to deal with the heroin problem through a strategic, locally based, integrated response in the areas where the problem was most severe. New national and local structures were put in place with the twin objectives of involving communities in the process and ensuring a more coordinated approach at national and local levels. These committee structures included a Cabinet Drugs Committee (subsequently re-constituted into a wider Committee on Social Inclusion), a National Drugs Strategy Team (comprising representatives of relevant Government Departments and Statutory agencies and individuals from the voluntary community sectors to bring a voluntary community perspective to the work of the Team), and Local Drugs Task Forces (13) in areas where drug misuse was most prevalent.

3.1 Current Needs Assessment

Over the past 5 years there has been substantial activity to determine the level of problem drug misuse in the EHB area and in Ireland as a whole. As in other parts of Europe social survey data indicate a substantial growth in the use of non-opiate drugs such as Cannabis, Ecstasy, Amphetamine, LSD. It is reasonable to estimate that the growth in experimental or occasional drug use will result in a growth in the number of regular drug users and as a result of regular drug use increased numbers of individuals with problematic or dependent drug use. The relationship of such broad population patterns of use and the evolution of hard core heroin use, poly-drug use and severe chronic opiate dependence is not clear. The existence of a core of chronic opiate addicts provides the framework for a sustained opiate problem and necessitates appropriate treatment provision as part of an overall humanitarian approach to this condition that carries high levels of social, physical and psychological morbidity and also increased mortality. In addition, the third party costs of drug use such as theft and other forms of criminality need to be ameliorated through the provision of treatment interventions.

A recent capture-recapture study conducted has estimated that there are approximately 13,000 heroin addicts in Dublin. Such studies are useful at providing rough estimates but there are serious methodological problems in using such figures as reliable baseline denominators in broader needs assessment approaches because of the width of the confidence intervals in such studies and the paucity of data on which to base case ascertainment. For this reason such studies need to be combined with other forms of multi-enumerator methods to gain data that can be used to provide more confident interpretation for service planning and development.

Despite such limitations current service data and data from prison studies indicate that there is a continuing shortfall between the demand for treatment and its current level of supply. Such shortfall can have significant impact on the overall functioning and rationale of service organisation where services are modified or adapted to meet immediate local circumstances and responses. Figures quoted for prevalence of opiate dependence range from 0.25% to 0.5% but the clustering of problems in high deprivation localities can result in much higher rates in some high deprivation localities.

There is a need to be clear that counting of prevalence within the population does not necessarily equate with actual treatment need and it is the estimates of the numbers in the population who are actually in need of clinical treatment that is critical for service planning.

4 The development of services from the starting point of the previous review conducted in 1995

The previous report conducted by Farrell and Buning recommended that the services develop a broad range of prevention, treatment and rehabilitation services in order to meet the complex demands of the target population. In a short space of time the EHB, in the face of substantial community opposition has developed and diversified its level of treatment provision for drug addicts at a breathtaking rate. The pace and scale of change must have presented major logistical and manpower challenges and the readiness, flexibility and adaptability of the workers to this pace of change is very impressive. It is likely that the challenge of putting so many new services in place over a short period of time has absorbed considerable energy of the management and of the different teams.

The pace of change more latterly has been particularly pressurised with the introduction of the legislative change and the implementation of the methadone protocol with the transfer of large volumes of cases into the EHB service from private general practice. This appears to have been achieved with a minimum of disruption despite the scale of the change.

The EHB area has been effectively divided into three regions and the responsibilities of the senior staff including consultant psychiatrists, GP co-ordinators, Liaison Pharmacists and Outreach Workers. Organisational restructuring has divided the activities of the EHB into three regions and this process of change was underway during the review period. This change is likely to consolidate the sectorisation of the AIDS and Drugs Services. As the three-area structure evolves there will be a budget for common services and there is a need for these to be integrated within community services. There will be a need for rules and protocols to ensure equal access for all community services where shared services exist.

The introduction of the Methadone Protocol has enabled the formal organisation of the relationship between primary care and secondary care delivery of methadone treatment. At the same time the Pharmacy Coordinators have developed a large network of community pharmacists who are trained and experienced in the delivery of services to drug misusers. Over 50 different treatment sites have been established with a mixture of larger on-site services such as Castle St and St James Hospital to smaller satellite clinics in North, South and West County Dublin.

The commencement of the methadone bus has provided an opportunity to deliver methadone treatment in communities where there has been strong opposition to the establishment of treatment clinics. The mobile bus has also operated as part of the outreach and needle exchange service.

There has been substantial investment in senior trained staff through the appointment of two new consultant psychiatrists and a network of GP coordinators.

The appointment of a training officer and an assistant training officer has enabled the development of a training strategy.

Virtually all of the key recommendations from the previous report have been implemented with the exception of two things. There has been limited progress in the implementation of a comprehensive needle exchange programme. There has been limited links between the DRUGS/AIDS service and other related services such as alcohol treatment services.

The prison services remain underdeveloped and subject to criticism. There is a need for an integrated mental health and drugs addiction treatment service for the prison that ensures continuity with community based programmes. Some of the more recent projects within the criminal justice system will require development of a detailed needs assessment of effective responses to problems within the prisons and a subsequent development of services to meet such a needs analysis.

5 The current policies and practices in relation to the provision of services for drug users in the Eastern Health Board area.

5.1 Clinic Performance

The development of a range of clinics should allow for good performance measurement where benchmarks or standards can be set which allow for performance management evaluation (PME). Issues such as the case-mix of the treatment population would need to be accounted for. There are critical parameters such as amount of heroin use as indicated by urine positivity, social adjustment as indicated by numbers returning to employment, rehabilitation indices such as the numbers in training programmes or other parameters that are determined by the priorities of the clinic or of the locality.

One example of comparison across a number of clinics indicates, substantial variation on some of the measures of urine drug testing. However, overall, it must be stated that where reduction of heroin use has been the key priority there is a striking similarity with high levels of opiate negative urines in all of the five clinics reported here.

The following table shows the results of urine test for opiates, benzodiazepines and tricyclics carried out in five addiction clinics across the EHB area. The data are based on tests conducted over a four-month period in 1999. The total number of tests and the percentage of positive and negative results are shown per clinic and an aggregate overall figure combining tests from all five clinics is also provided.

		Clinic 1	**Clinic 2**	**Clinic 3**	**Clinic 4**	**Clinic 5**	**Aggregated clinic total**
Opiates	% Positive	31%	30%	27%	30%	33%	30%

	% Negative	69%	70%	73%	70%	67%	70%
	Total	**7558**	**3173**	**4657**	**5277**	**4237**	**24902**
Benzodiaz-epines	% Positive	65%	46%	72%	76%	73%	65%
	% Negative	35%	54%	28%	24%	27%	35%
	Total	**6816**	**3171**	**4649**	**1418**	**2088**	**18142**
Tricyclics	% Positive	18%	3%	17%	9%	18%	14%
	% Negative	82%	97%	83%	91%	82%	86%
	Total	**7476**	**3170**	**4655**	**5218**	**1934**	**22453**

It is appropriate to state that by international standards of assessment of methadone clinics the rates of both positive and negative tests indicate clinics that are operating to a very high standard of performance on this particular parameter. However on the negative side the high rates of benzodiazepine positivity indicate a major problem of poly drug misuse which requires urgent and concerted attention.

It is important to note that the urinalysis data as currently gathered provides robust data to indicate that the current treatment programmes have managed to effect approximately a 70% reduction in heroin consumption on aggregate in those attending treatment. Such a reduction in heroin use has been reported to be associated with a similar reduction in offending behaviour and it would be reasonable to estimate that the treatment for these individuals has effectively reduced levels of criminal offending by a similar 70%.

A number of the satellite clinics informally reported rates of 40% plus returning to work, such levels of beginning or returning to work indicate the positive work climate that exists in Dublin but is also very striking as evidence of successful social habilitation or rehabilitation. It is worth further exploring these variations to determine whether programme or clinic characteristics are associated or facilitate these positive outcomes. Rates of 30% return to work are remarkable by current international standards and full attention should be paid to this phenomenon. A process should be put in place to properly monitor and document the performance of the clinics on this parameter. Such an exercise should formally establish through documented and objective procedures the social welfare and occupational status of individuals in treatment. The EHB should consider choosing a range of key performance parameters and ensure that data on these parameters are collected and analysed across the entire service.

In the previous report considerable reservation was expressed about the value of expending substantial resource on urine testing. Such an activity

continues to be a high item of expenditure in the manner in which it is organised currently, with substantial staff time spent gathering and processing such tests. Within the time scale of this review it was not possible to determine how much and how consistently such results were used in day to day management that would justify the expenditure. However, on the available urine test data the results are impressive and if these could be correlated with other parameters of progress they would appear to provide some reasonable justification for continuing this approach. However urine testing should be viewed as one dimension of an overall approach to monitoring and quality control within treatment programmes. Currently, the costs of urine testing in both laboratory costs and human resources costs are disproportionately high and needs to be reviewed. It is recommended that clinical leaders explore options for a range of quality and performance measures beyond urine testing and that the resource be more broadly spread. Such an approach could include detailed systematic monitoring of a range of outcome measures with central support to assist in the processing of such data. Overall, it is desirable to cut back on expenditure on urine testing and invest in a broader range of quality controls activities.

5.2 Primary Care Services and the treatment of drug misusers

The drug misuse service involving primary care has been designed and planned in a systematic manner to produce a delivery of care that is innovative and has been one of the major developments of the past five years. This has been done with clear commitment and major time investment of a broad range of individuals but in particular has been championed by a number of key general practitioners.

The service arose primarily out of the need to expand the overall capacity for methadone maintenance treatment in Dublin and also from a situation of inappropriately high prescribing by a small number of GPs treating drug users; many of whom lacked the necessary training and support to do this sort of work safely. There were concerns around drug diversion. Overall, there was a limited number of GPs involved in the care of drug users and the work was seen as unattractive and poorly paid by the main stream of primary care.

Through a series of negotiations between the Health Board, the Irish Medical Organization and the RCGP (I) a service was developed to help overcome some of these issues. The current organizational structure, therefore, was designed in order to overcome the historical difficulties in both managing these patients and in providing support, expertise, training and resources to GPs involved in this work.

The service, training requirements, accreditation criteria and payment structure has in the most part been primary care led which has both advantages and disadvantages attached to it.

The movement of patients from specialist clinics into primary care is an important and core part of the future development of the service in its ability to create capacity and to develop a tiered service where high intensity treatment is delivered within the secondary care service and ongoing stabilised individuals are managed within primary care. To date there has been limited movement and the explanations for this are not altogether clear. It is possible that the specialist services are not being proactive enough in moving stabilised patients on. It is also possible that there has not been an adequate concentration of promoting and supporting the involvement of level 1 GPs as much of the patient load has moved to GP co-ordinators (see further in section on Primary Care).

There has been a well conducted evaluation of the movement of one cohort of methadone maintained patients from the specialist clinics into primary care which demonstrated that the group of stabilised patients, as defined by non use of opiates and other drugs other than those prescribed, could be equally well managed within a primary care setting. This would seem to indicate that a minimum of 25% could be transferred into primary care settings if use of both opiate and benzodiazepines are taken into account. This would result in a substantial ongoing capacity problem unless more stability can be achieved in a larger cohort of patients. It would seem reasonable to estimate that up to 50% might achieve such as status but currently it would appear that this figure is closer to 30% if the data from the urine tests is interpreted conservatively.

Between January 1999 and October 1999, 205 new patients went into primary care services. While this appears modest as a number, it is a significant proportionate increase in numbers in primary care. However, it is clear that there needs to be a substantial increase in this if the capacity problem across the service is to be adequately addressed. There were 119 general practitioners involved in the protocol at the end of October 1999, but of these 71 practitioners had less than 5 patients with nearly half having less than three patients. There is a need to expand the number of practitioners and encourage and support these practitioners to manage a reasonable workload of patients.

Within this approach there is also a need to consider briefer management approaches as exemplified in the Fortune House Project, where detoxification over a shorter period of time is delivered. Such an approach would allow for people with a shorter history of opiate dependence to attempt to achieve a drug free status and it would also be clear that multiple failed attempts at such an approach should lead to consideration of more sustained maintenance treatment. A twin track approach that combines detoxification with maintenance would also ensure some individuals could have shorter term contact with services and would in effect create some treatment capacity by having a degree of throughput for one stream of patients.

There is an important issue of deciding where to locate primary care services and it should be a key goal of all services providers to link the individual patient and their family into a local practitioner where continuity of care can be developed. Such an approach would also prevent some of the dispensing clinics from dispensing a wide range of therapeutic medication that should ideally be dispensed in a more generic community setting unless there are specific indications for clinic dispensing.

There is a need to review the roles and supports for GP coordinators to ensure that adequate time and support is available for the coordinators to complete their main function. To this end consideration should be given to some coordinators taking on a salaried post that would enable appropriate time for providing support and liaison to level one GPs with the aim of increasing overall levels of activity of level one GPs.

There is also a need to make a clearer distinction between the skills of the level one and the level 2 practitioners.

Finally there is a need to develop a mechanism to ensure that families in particular the children of drug treatment patients have access to primary care services.

5.3 Case management and client focussed approach in EHB service

There is a range of professionals involved in teams in a number of different settings and there are important differences in many of these settings as to how they are managed and organised. Overall, it is clear that in most of these settings that the teams have managed rapidly increasing work loads with enthusiasm, skill and commitment. However, there is considerable duplication of function and overlap of function within teams when it comes to the management of individual clients. Consideration should be given to the development of a key worker system where a single individual worker in the team would be responsible for the treatment of an individual who would be subject to overall review and would be reviewed and discussed within the team supervision process on at least a three monthly basis. Involvement of other team members prior to this would be on the basis of using additional assessment or intervention skills as appropriate to the case. Such an approach would be predicated on the assumption that the service was organised in a fashion where each of the team members was trained to deliver the core treatment and each member of the team would carry a case load of 30 to 40 patients. In a well-run team this would also include shared knowledge of more complex cases in order to ensure consistency of team approach to such individuals. Such an approach appears to be in operation in some clinics already.

The diversification of skill base might enable the services to expand capacity by moving beyond the situation where patients are seen on a regular basis by the clinic doctor for short periods of time. Obviously, some of the clinic capacity is also determined by dispensing capacity and issues of local impact of numbers attending clinics. The development of clear treatment protocols and prescribing protocols would require medical

involvement at the stage of assessment and initiation of treatment, at review and at a stage where medication change occurred that was not within the service protocol or where concerns for other aspects of physical or mental health required further assessment.

It is possible that within such a system that clinical nurse specialists could develop new roles and responsibilities and there could be further exploration of ways to develop and expand the capacities of the multiprofessional, multidisciplinary team.

5.4 Staffing and skill mix in the services provided by the EHB

The other possible options that could be considered are the use of care coordinators or case managers. Such individuals could be tasked with overseeing the delivery of multi-modal treatment from a range of professionals and also assessing the impact of such treatment against baseline measures. Such an approach might assist in ensuring better coordination and integration of services. Of course, such an approach would be contingent on the availability of a range of services and on the ready access of such services for these patients. The development of new Criminal Justice Based interventions such as drug courts also make the use of such Case managers timely. If Case managers has access to FAS employment programmes, Housing support, Family interventions, including parenting classes and parenting support activities and other structured day programme activities as well as other medical and psychiatric services, there is some preliminary work to indicate that such an approach can improve treatment outcomes.

It is open to exploration to consider how some of the current coordinator role could be evolved into a new care coordinator role. The development of such a role could be piloted to ensure that such a function did not simply add a new bureaucratic tier to an already complex system.

Other studies indicate that much of the change that is likely to occur within a treatment programme is achieved at the early stage of entry into treatment and that the expectations of outcome and goals of treatment need to be firmly set at the early stage of treatment. If such a finding were correct it would provide a basis for setting very clear structures and expectations around the type of interventions delivered in the first period of treatment. There is considerable interest in developing manual guided approaches to treatment at this stage in order to ensure that this early and critical phase of treatment is delivered to a reasonable and consistent standard by a range of professionals who have been trained in this approach. Such an approach might allow for training of some General Assistants as well as counsellors, nurses, social workers and doctors in a fashion that could attempt to ensure that the team maximised its use of manpower resources in delivering structured treatment.

There is limited use of clinical psychology input and consideration should be given to developing a tier of clinical psychology that would develop the skills of the multidisciplinary team including the medical staff and work to regularly update and introduce new and innovative therapeutic techniques as they are developed.

5.5 Review practices of EHB linked services for users drug

The ongoing waiting lists put considerable pressure on existing services and can distort existing services. A clear example of this is the current use of the methadone bus, which seems to function for two purposes. One is to pick up individuals who are awaiting treatment but the other is to pick up individuals who have been subject to sanctions and assigned to low dose methadone from the bus for an interim period. The mixing of these two populations seems undesirable but has been generated by service exigencies.

A midwife/obstetric liaison service has been established which provides important links between primary care services, drug services, social services and other relevant agencies. This is an important area for monitoring and ensuring that the links fostered in this setting be explored for replication in other settings.

Given the integrated nature of EHB services there seems to be a strong case for substantial expansion in this form of liaison/shared care model into primary care, general mental health services, child and adolescent psychiatric services, hepatology services, criminal justice agencies. At a local level case managers or liaison workers could provide a key role in ensuring that a combination of community and statutory resources are mobilised in order to achieve maximum treatment and rehabilitation impact.

There is considerable concern about the initiation of very young users and there is a need for a child and adolescent focus in some services. The services are currently primarily adult focussed and there is a need to consider the practice and professional issues involved in working with underage users. These issues are particularly relevant where needle exchange and methadone prescribing is being provided. There is a need for a clear policy and recommendations for practice to ensure that staff understand fully the complex possible medico-legal and childcare protection legal issues involved in managing vulnerable youngsters. Such issues could be usefully explored with Youth services and Child and Adolescent services to ensure that appropriate child and family focussed practices are adopted within the services.

5.6 Needle Exchange Schemes

The Needle exchange provision within Dublin is patchy and not very comprehensive. It is understandable that there is substantial sensitivity and community resistance to such services. However the limited amount

of facilities for the safe disposal of used injecting equipment is an environmental hazard that should be directly addressed. A broader range of secure disposal facilities should be developed that are well geographically distributed. Part of the decision on locating such facilities could be guided by a mapping of locations that currently have substantial environmental health problems due to syringe litter. Pharmacists could also provide disposal facilities but are generally reluctant to do so for occupational health and safety reasons.

There is also a need for a network of needle exchange facilities that could provide sterile syringes as well as collect used equipment. It is possible that pharmacies have an important role to play in this and could be engaged without encountering major issues of community resistance that may be likely with the development of other facilities.

Merchants Quay play an important role in needle exchange provision but because of the limited amount of overall provision there is a real risk that such a service draws individuals from a wide geographic network together in a manner that is not desirable for a range of reasons.

It is also noteworthy that currently the Outreach workers provide a range of syringe exchange services. In the absence of other provision this service is critical to the current geographic spread of needle exchange provision.

A well evaluated pilot study of needle exchange via community pharmacy would be a rational and practical way forward which would provide useful information about processes and problems in establishing such a service.

5.7 Pharmacy Services

There has been very major developments in the delivery of services to drug users through pharmacy based services over the past five years. The Pharmacy co-ordinators faced a substantial challenge in developing community pharmacy based services and has achieved remarkable success. Overall, there are now 152 pharmacies in the EHB area with methadone patients. There are a small number of services with extremely high numbers. Some of this is due specific local provision, however, it is a cause for serious concern as it is likely to result in problems of community resistance and local nuisance over a period of time and likely to be an unsustainable mode of community service provision with intermittent crises. In a survey conducted by the Liaison Pharmacist it is reported that nearly 70% of respondent pharmacists were prepared to supervise methadone self-administration on site at their premises and approximately on third said they were not. Half of the pharmacists who were willing to supervise self-administration reported that they had a private area suitable for such activity. The pharmacists reported good links with local prescribers, but also reported poor feedback with the same services.

The issues facing the liaison pharmacist are similar to the challenges facing the most professionals in the EHB service which is that of major expansion of workload, diversification of role and function and heavy commitment to face to face work in addition to the co-ordinating function. There is a need for a clear phase of consolidation within pharmacy services. There is a large spend now within the drugs budget and there is a need for further analysis to ensure that services are organised in a professional and cost effective manner. It is likely that manpower and recruitment will remain a challenge and this has important implications for quality and continuity of service.

There are also issues arising of the primary care involvement within the specialist clinics where some services appear to have pharmacies involved in a range of generic medication dispensing. It is desirable that this be streamlined and demarcated so that such primary care prescribing be clearly delineated. There is a need for clear policies about the range of medication that can be prescribed within specialist clinics if the specialist pharmacist function is to be maintained and developed. There is a clear need for ongoing training and support and there may be room for developing innovative modes of communication between the clinicians in the drug services and the pharmacies that would improve the overall function of the team. Better integration between these professionals is likely to pay substantial dividends in the quality and coherence of the local service.

5.8 Non opiate type drug assessment and treatment responses

The EHB to date has been heavily focussed on developing services and facilities for those who are chronically dependent on heroin and other opiates. There is now a need to broaden the base of services available and to consider how briefer types of interventions could be developed that would be accessible for young people before they have progressed to chronic heroin addiction. A broader community based treatment programme where the workers have a capacity to conduct assessments and provide advice and treatment for problems ranging from long term cannabis use, MDMA, cocaine and benzodiazepines is required. To date some of this has been provided by counsellors, outreach workers and others. There is a need to formalise this approach and it is possible that such an approach could be provided on a larger geographical scale than current clinic provision. Such an approach could be based on a direct access system and problems of a more complex nature could be referred to more local services.

The challenge is to construct a framework of a service that will be able to adapt to changing patterns of drug abuse over time and than can achieve maximum access and utilization of the skills of existing staff. If these activities are linked with existing services it will provide existing staff with opportunities to work with individuals who have better levels of social functioning and are less entrenched in their drug habits. Such

services should be identifiably separate but organisationally should be closely integrated with the whole service.

Some aspects of this might be linked to developing services for people with alcohol problems and developing methods to ensuring more integration between alcohol and drug services.

5.9 Development and Provision of Rehabilitation, both day programme and residential services

There is now a relatively high level of provision of in-patient and residential rehabilitation services in Dublin. The outcome study conducted on a cohort from Cuan Dara indicates moderately good impact on what is clearly a difficult to treat population. The development of a down stream service to integrate with the shorter stay unit is a welcome development. This service because of the duration of stay is likely to have a heavy demand on it and is likely to experience serious difficulty in meeting expectations.

Overall, there is a need for better links between the community based day programmes, and the inpatient and residential services.

There is considerable interest in the use of Naltrexone as part of a community reinforcement strategy where detoxification is conducted in an inpatient setting and ongoing intensive support is provided within a day programme setting. Particular interest has been expressed in linking this to Criminal Justice Approaches to treatment but there is also the possibility of exploring the use of Naltrexone as an adjunctive support after a shorter stay period within the inpatient unit.

Currently the Voluntary Sector Residential services continue to be key providers of services. Many of these services are long standing with experienced and knowledgeable staff, however, there is a need for these different services to meet and to develop a more cohesive voice about the role of the residential sector in the overall provision of services. Such joint activities could also explore issues of training and establishing mutually agreed standards for service provision, m particular, there is a need for a more coherent approach to how these services link into the broader range of community services.

Overall, there is a need for careful linkage between monitoring, evaluation and training programmes and research programmes. Monitoring could include new and innovative approaches to assessing the nature and content of the individual treatment sessions through video taped sessions, which are then reviewed as part of the supervision process. Such an approach could be linked to improving the quality and practical usefulness of the content of sessions through the development of more structured manually based approaches for interventions for both drug and alcohol problems.

5.10 Day Programmes and the Criminal Justice System

There has been substantial investment in day programmes and a number of day programmes are run in different locations in the city. Some of these programmes have been highly innovative and also have obtained a high profile through the skillful use of media resources. The use of such structured facilities for providing clear structure in the early phase of treatment seems desirable but may conflict with some of the existing overall aims of these day programmes.

Because of the complex nature of many drugs related problems there are many agencies where the consequences of chronic drug use and dependence impact. The most obvious and costly is that of the prison system and of the probation service. To date the EHB has placed substantial resource within prisons through the allocation of substantial specialist and general medical time. Internationally there is much change afoot as services in many countries strive to find models that integrate the treatment services with the criminal justice services.

Both the Health Board and the prisons need to explore further the development of multidisciplinary teams to develop integrated and holistic care that emphasises continuity and aims to tackle chronic recidivism. Overall, there is a need for more structured linkages between specific programmes and the prison services. It is recommended that ongoing work is progressed to formally structure the linkages between prisons and community based programmes and between the rehabilitation programmes and the other community based programmes.

The key challenge will be to develop good quality, accessible community based treatment that individuals can be linked into on release from prison. There has been substantial investment in day programmes and some of the day programmes are models of their kind that have developed an international profile and standing. However, the numbers being processed through appear to make the unit cost of these programmes high. There is a need to see how these programmes can be linked with methadone treatment as part of the new criminal justice strategy either as alternatives to prison and importantly if legally feasible as an early prison release option which attempts to bring high offending chronic recidivists into contact with the treatment rehabilitation system.

FAS report that they are making available a substantial number of training slots for drug addicts in treatment. Such an offer seems a valuable opportunity. There is a need to ensure that such an offer is actively pursued and that the use of such services are monitored to determine what impact these training programmes have and to determine what are the strategies required to encourage up take of such programmes. There should be an annual audit and report on the numbers using these FAS facilities and targets should be set for the services for referral of clients into these FAS services.

There is a continued problem in the level of need and the level of provision within prisons. This presents a challenge to all services and requires a system where the community services have the capacity to rapidly access individuals into treatment and to develop a system of continuity between community based and prison services that would allow methadone provision within prisons.

5.11 Education and Prevention Services

One of the key aims of the National Drug Strategy and of the EHB services is to ensure that there is an adequate range of provision of drug prevention strategies in place. This process has been assisted by the development of the Local and National Drug Task Forces, which have a particular focus on education and rehabilitation. The challenge facing community based prevention strategies is the wide number of potential stakeholders and difficulty of mobilising key individuals to participate in such activities. Within the structure of current activities the local task force coordinators have a potentially critical role to play in ensuring that all resources are mobilised. Both the Education Officers and the Outreach workers have a remit for prevention. Both groups of professionals are faced with a very broad task and there is a case for narrowing the remit of these activities so that the professionals are provided with a clearer more focussed task, with a clear mode of implementation and a clear mechanism by which they can assess the impact of their activities. The Local Task Forces would appear to be an important focal point for developing clear and integrated local prevention strategies where the roles of the different educational and health professionals are well delineated. The challenge of drug prevention should not be underestimated and in the context of health promotion the EHB should consider drawing a clear boundary on its remit which should be more targeted towards high risk and vulnerable individuals. Currently children and adolescents at high risk for alcohol and drug problems are unlikely to receive much benefit from broad based prevention efforts. Specialized prevention programmes are required for individuals who are especially vulnerable. These programmes are expensive but may be cost beneficial in the long term.

5.12 Training and Service Development Issues

The dramatic expansion of services over a short period time has left a substantial gap in the knowledge and experience base of many of the different professionals who have been newly introduced into this field. There is a need for development of a range of organisational and management skills for many of the key individuals within the service.

There can be little doubt that much of the future quality of the service hinges on the capacity of the EHB to invest in ongoing skill development for the broad range of professionals involved in the service. Such an approach will require a combination of short-term training and workshop approaches, with a particular emphasis on training in team working and

team development. In addition there is a need for more substantial development of specialised professionals in the variety of disciplines involved.

At a senior level there is a need for organisational skill development but also for individuals who are taking key leadership and coordinator roles to have the opportunity to intensify and develop specific high level skills commensurate with their roles.

5.13 Information Strategy

The EHB has invested in the development of a software system for the monitoring of clinical activity. It is clear that in the long term such a management information tool is required to ensure the maximum delivery of drug treatment. However, in the short term it is likely that there is considerable gap between current levels of information and a future integrated management information system.

There is a need for prioritisation. The computerisation and linking of the pharmacists may be one of the initial targets, which would provide a more detailed picture of current pharmacy activity.

5.14 Research

There has been a major development of research activity, which appears to have been conducted primarily with the enthusiasm and good will of the clinical staff as well as one additional research registrar.

Work has been done on following up a group of in-patients after discharge. In addition, work has been done to look at the impact of transfer to primary care. Also work has been done demonstrating the high levels of drug problems and problems with hepatitis C within the prison service.

There is a need for a continuation and expansion of this activity in a manner, which can provide good data on the beneficial impact of treatment. Such an approach should involve a criminology perspective and an econometric perspective so that the criminal justice benefits can be delineated.

6 Service response in the EHB area in the context of trends and practices elsewhere

The following section reviews the research literature on the effectiveness of treatment for drug misuse to date[1]. Today, there remain substantial information gaps about the impact of treatment in several areas. The lack of current research evidence for a specific treatment is noted in each relevant section.

[1] An on-line literature search was performed using Medline, Psychlnfo, BIDS databaselines; and Addiction Abstracts (1996-1999).

Assessing the effectiveness of drug misuse treatment is complicated by the fact that a majority of individuals in need of treatment have multiple problems across personal and social functioning domains. Certain services are also geared towards the reduction in risk for particular health behaviour (e.g. needle and syringe sharing). In general positive outcomes from treatment include a reduction in drug use involvement, health risk behaviour, physical and psychological health symptoms, together with positive outcomes in the social functioning domains (e.g. employment, relationship problems, accommodation and criminal behaviour).

The following section presents a review of the research literature on the effectiveness of treatment for drug misuse to 1999[2]. Unlike the alcohol problems literature, statistical reviews based on pooling effect sizes reported by multiple studies of a particular intervention are relatively rare in the drug misuse field and reviews to date. Reviews have tended to be thematic in scope. It should be noted that a focused section of the kind cannot hope to review the research evidence for all types of treatment and the reader is encouraged to consult the key references for research evidence for the impact of treatment services. The present section focuses on more recently published information. There are substantial information gaps about the impact of treatment in several areas. There is a need to gather information on the impact of contemporary services as they are delivered on a day-to-day basis. Most evaluation studies have focused on the main effects of treatment for a group or cohort of clients. Increasingly, treatment strategists and the research community is looking for answers to more specific questions which concern the outcomes for priority groups, including groups such as young people, people with dual diagnosis, the homeless and people from ethnic communities. There is now a matrix of clients, treatments and referral and treatment management issues, which are guiding the formation of research questions.

Assessing the effectiveness of drug misuse treatment is complicated by the fact that a majority of individuals in need of treatment have multiple problems across personal and social functioning domains. Certain services are also geared towards the reduction in risk for particular health behaviour (e.g. needle and syringe sharing). In general positive outcomes from treatment include a reduction in drug use involvement, health risk behaviour, physical and psychological health symptoms, together with positive outcomes in the social functioning domains (e.g. employment, relationship problems, accommodation and criminal behaviour) [1]. Whilst the primary outcome measures from treatment tend to be substance involvement related, a set of health, relationship functioning, employment and criminal indicators are usually planned by comprehensive outcome evaluation studies.

[2] The literature search for this chapter was performed using Medline, Psychlnfo, BIDS databaselines and by consulting Addiction Abstracts (1996-1999).

In the following sections, we review the main services and treatment interventions.

6.1 Syringe exchange schemes

Quality of evidence and size of effect: II-1 (C)

The main outcome measure for evaluating the impact of specialist and community syringe exchange programmes is the frequency of needle and syringe sharing incidents during the month prior to interview. Landmark research on the impact of the initial wave of syringe exchange programmes in the UK was conducted by Stimson and colleagues [2].

Impact studies on syringe exchange have been conducted across several countries. In general there is evidence from certain observational studies that, on average, participation in exchanges is linked to some decrease in HIV-related risks among drug injectors and that contact with these services was associated with a reduction in injection risk behaviour [3]. However, this is by no means a consistent finding [4]. HIV prevalence' among IDUs in London have declined from 12.8% in 1990, to 9.8% in 1991, to 7.0% in 1992, and to 6.9% in 1993 and the low and stable HIV prevalence rates in several cities have been attributed, in part, to the early introduction of harm reduction interventions and syringe exchange schemes [2, 5]. Table 5-1 summarises the findings of recent studies on syringe exchange programmes from the international literature.

Table 6-1: Summary of recent studies on syringe exchange programmes

First Author	Publ=n Year	Study	Sample	Primary Outcome Measures	Key Findings
Durante [4]	1995	National Surveillance	1976 IDUs in 1992 and 2138 IDUs in 1993	Sharing in previous month and proportion of shares receiving previously used needles	Reduction of 1.3% in sharing rate (95% CI - 3.7, (1.1%) Proportion of sharers receiving used needles fell by 18% (95% CI 11%, 26%
Bluthenthal [5]	1998	Illegal syringe exchange programme	1304 IDUs were interviewed, 684 (53%) returned for more than one interview	Participation in programme and sharing	SEP use increased and syringe and sharing declined from 1992 to 1995

First Author	Publ=n Year	Study	Sample	Primary Outcome Measures	Key Findings
Hahn [6]	1997	Syringe exchange programme	1093 IDUs recruited in MMT out-patient detoxification programs in 1998	Risk behaviour and pre-needle exchange HIV serocon version rate	The number of sharing partners did not change among IDUs who attended and sero-conversion increased
Hagan [7]	1999	Syringe exchange programme	Cohort study with 647 IDUs	Incidence of HBV and HCV	No protective effect for HBV or HCV

Collectively, syringe exchange and distribution services are likely to have contributed to public health efforts to achieve declining prevalence of markers of exposure to HBV in some areas of the UK, which is currently estimated at around 20% to 30% among London IDUs [4]. Studies in England show lower rates of HBV exposure among people with shorter injecting careers [8-11] with those starting to inject after the introduction of harm reduction interventions having considerably lower rates of HBV exposure than those injecting before these initiatives were put in place. Nevertheless, as Table 5-1 shows the research evaluation literature on the specific impact of the syringe exchange schemes is mixed.

6.2 Specialist prescribing programmes (oral methadone)

Quality of the evidence; I-1 (B)

Agonist prescribing (usually with oral methadone) is one of the most widely evaluated treatment for opioid dependence worldwide. Internationally, there is a well-established research and clinical evidence-base for substitution treatment with oral methadone [12, 13]. On average, methadone maintenance is associated with lower rates of heroin consumption, reduced levels of crime, and improved social functioning. A lower risk of premature mortality amongst maintained patients has been reported and substitution programmes have also contributed to the prevention of the spread of HIV infection, by encouraging change in injection risk-taking practices. In the UK, Results from NTORS suggests that on average, post treatment outcomes from opioid substitution treatments are positive across a broad range of substance use, injecting and needle/syringe sharing behaviours, health symptoms and crime measures [14]. Changes in drug use are summarised below.

Table 6-2: Drug use at one-year follow-up (methadone clients in NTORS)

DRUG USE MEASURE	INTAKE	ONE-YEAR FOLLOW-UP
Abstinence from illicit opioids	5%	22%
Abstinence from stimulants	47%	64%
Injecting illegal drugs	62%	45%
Sharing injecting equipment	13%	5%

Source: Gossop, Marsden & Stewart (1998); [14].

Data based on follow-up with 478 clients **(n = 667).**

Marsch has reported the results of a statistical meta-analysis of 11 methadone maintenance treatment outcome studies and 8 and 24 studies investigating the effect of methadone maintenance treatment on HIV risk behaviours and criminal activities, respectively [15]. The results showed a consistent, statistically significant relationship between maintenance treatment and the reduction of illicit opiate use, HIV risk behaviours and drug and property crimes.

Table 6-3: Unweighted effect sizes from meta-analysis of methadone maintenance

OUTCOME DOMAIN	EFFECT SIZE (*R*)
Illicit opiate use	0.35
HIV risk behaviours	0.22
Drug-related crime	0.7
Drug and property crime	0.23
Drug and non-property Crime	0.17

Source: Marsch (1998) [15]

The effectiveness of maintenance treatment appears strongest in reducing drug-related criminal behaviours. This treatment has a moderate effect in reducing illicit opiate use and drug and property-related criminal behaviours, and a small to moderate effect in reducing HIV risk

behaviours. To date there is no published evaluations that would indicate or suggestion that the treatment of heroin injectors is or should be substantially different from the treatment of heroin smokers.

6.3 Other opioid substitution procedures

There is increasing evidence that other opiate agonist agents such as buprenorphine and LAAM may have a significant role to play as alternatives to methadone in some situations {[13]. To date, a substantial number of randomised controlled trials have demonstrated similar sorts of outcomes to those on methadone, the safety profile of buprenorphine in relation to overdose appears to be superior to methadone and the duration of action of LAAM has advantages in some circumstances[13].

6.4 Counselling

Quality of evidence: I-1 (B) [Structured Counselling only]

There is widespread belief in the importance and value of counselling for opiate addicts in Europe and internationally [16]. However, the evidence base for the effectiveness of counselling with this population is sparse. Whilst there is considerable variation in the nature and delivery of counselling services, the English Department of Health Task Force to Review Services for Drug Misusers identified two main types of structured individual counselling which are supported by treatment service personnel:

- non-directive counselling;
- a range of cognitive behavioural approaches, including motivational interviewing, skills training and relapse prevention.

In the broader international literature, outpatient drug-free counselling provision in the U.S. has been evaluated as part of the national series of field evaluation studies. Results suggest that abstinent oriented counselling is associated with reductions in drug use and crime involvement and improvements in health and well being [17,18,19]. In 1997, drug use outcomes for outpatient drug free programmes which contain a counselling element were reported by the Drug Abuse Treatment Outcome Study (DATOS) are summarised below:

Table 6.4: Drug use outcomes from outpatient drug-free programmes in the Drug Abuse Treatment Outcome Study (DA TOS)

OUTPATIENT DRUG-FREE		
Drug use	**Pre-admission year (n= 2,000;%)**	**Follow-up year (n=764;%)**
Heroin	5.9	3.3
Cocaine	41.7	18.3
Cannabis	25.4	8.5
Alcohol	31.0	15.1

Source: Hubbard et al., (1997) [18]

Note: Substance use is presented as weekly or frequent use during the one-year period

In terms of the mediators of treatment outcome, client engagement in programme counselling has been reported to be a significant predictor of favorable outcome [20,21]. Increasing opportunities for participation by the client has been associated with greater treatment benefits [22]. Providing intensive, individually based, counselling to targeted individuals with extensive treatment histories appears to be an effective clinical strategy at improving outcome in outpatient drug misuse treatment [24].

However, overall, there is an urgent need to research *[the impact of counselling]* on service users and further research is needed to evaluate the effectiveness of different counselling approaches as well as models of organisation of service delivery].

Of all the psychosocial counselling approaches, relapse-prevention oriented, cognitive-behavioural therapies (CBT), have received the most frequent evaluation in other countries [24]. Cognitive-behavioural coping skills training approaches have been used successfully with heroin users in assisting the prevention of relapse [25]. Several psychological treatments, which incorporate behavioural elements, have also produced encouraging results, notably contingency reinforcement therapy. [26]

Some 24 randomized controlled trials of CBT have been conducted among adult users of tobacco, alcohol, cocaine, marijuana, opiates, and other types of substances [26]. In her review, Carroll concludes that there is good evidence for the effectiveness of CBT compared with no-treatment controls. The most rigorous tests of CBT therapies are contrasts with

existing treatments results have been more varied. These comparisons have led to somewhat mixed results in studies conducted in the US. CBT has shown encouraging results in the treatment of cocaine misusers. In one study, 42 clients who met DSM criteria for cocaine dependence were randomized to receive a 12-week programme of individual CBT sessions or Interpersonal Psychotherapy [27]. The trial results showed that the CBT subjects were more likely than subjects in the comparison condition to complete treatment (67 vs. 38 percent), achieve three or more continuous weeks of abstinence (57 vs. 33 percent), and be continuously abstinent 4 or more weeks when they left treatment (43 vs. 19 percent). Treatment gains were most evident amongst a group of severe cocaine users, who were more likely to achieve abstinence if assigned to receive CBT. Other studies have shown that CBT is effective in retaining depressed clients [28].

6.5 Residential Programmes

Quality of evidence: I-1 (B)

A relatively small number of studies have evaluated the impact of hospital inpatient units and residential rehabilitation programmes. One early English follow-up study of patients who were treated by a specialist inpatient unit found that 51% of patients were drug-free at a 6 months follow-up [29]. The only controlled study of in-patient and out-patient treatment of opiate withdrawal in the U.K. found in-patient withdrawal to be four times more effective (in terms of the proportion of patients who completed the withdrawal regime)[30].

For residential rehabilitation programmes, both US and UK studies have shown positive psychosocial benefits after treatment [31, 32]. In the US, outcome from longer-term residential rehabilitation programmes is related to total time spent in treatment, with episodes of at least three months associated with positive outcome. [33] In the US, the majority of studies have evaluated Therapeutic Community (TC) programmes. Programme length varies from short-term with aftercare to long-term programmes of over 1-year duration. The evidence points to the considerable success of these services for the recovering user sub-group. US studies show that, on average, clients receiving TC treatment have enduring post-discharge reductions in illicit drug use [35,36].

In 1989, the Treatment Outcome Prospective Study (TOPS) regular use of illicit drugs (weekly or more frequent consumption) was reported by 31 % of clients in the year prior to admission to residential programmes. For those clients who had received at least 23 months of treatment, this rate reduced to zero during the first 90 days of treatment, then stabilized across three further points: the first three months after treatment (11%); the one year after treatment (11%) and for the period 3-5 years post treatment (12%). In 1997, drug use outcomes for the long-term residential and short-term inpatient treatment modalities studied by the Drug Abuse Treatment Outcome Study (DATOS) are summarised below:

Here results have been more varied. These comparisons have led to somewhat mixed results in studies conducted in the US. CBT has shown encouraging results in the treatment of cocaine misusers. In one study, 42 clients who met DSM criteria for cocaine dependence were randomized to receive a 12-week programme of individual CBT sessions or Interpersonal Psychotherapy [27]. The trial results showed that the CBT subjects were more likely than subjects in the comparison condition to complete treatment (67 vs. 38 percent), achieve three or more continuous weeks of abstinence (57 vs. 33 percent), and be continuously abstinent 4 or more weeks when they left treatment (43 vs. 19 percent). Treatment gains were most evident amongst a group of severe cocaine users, who were more likely to achieve abstinence if assigned to receive CBT. Other studies have shown that CBT is effective in retaining depressed clients [28].

Table 6.5: Drug use outcomes from residential services in the Drug Abuse Treatment Outcome Study (DA TOS)

	Long-term residential treatment		**Short-term inpatient**	
Drug use	**Pre-admission year (n = 2,293; %)**	**Follow-up year (n = 676; %)**	**Pre-admission year (n = 2,613; %)**	**Follow-up year (n = 799; %)**
Heroin	17.2	5.8	7.0	2.2
Cocaine	66.4	22.1	66.8	20.8
Cannabis	28.3	12.7	30.3	10.5
Alcohol	40.2	18.8	48.1	19.7

Source: Hubbard et al., (1997) [38]

Note: Substance use is presented as weekly or frequent use during the one-year period

In the UK, NTORS has examined outcomes after discharge from 8 inpatient units and 16 residential rehabilitation programmes. One year follow-up results are summarised below.

Table 6-6: Drug use at one-year follow-up (residential clients in NTORS)

Drug use measure	Intake	One-year follow-up
Abstinence from illicit opioids	22%	50%
Abstinence from stimulants	30%	68%
Injecting illegal drugs	61%	33%
Sharing injecting equipment	19%	7%

Source: Gossop, Marsden & Stewart (1998); [39] data based on follow-up with 275 clients

Broekart and colleagues have reviewed seven major European country studies of the effectiveness of TC programmes [37J and reached the following main conclusions:

- time in treatment is the most powerful predictor of positive outcome;
- clients of TCs achieve major reductions in criminal involvement and increased rates of employment;
- there is a 25% general success rate for admitted cohorts;
- 85% of TC graduates (ie. those completing the main programme) had positive one year outcomes.

6.6 Cost-effectiveness of drug misuse treatment

Quality of evidence: 11-2 (C)

There have been several cost-effectiveness studies (ie. the measurement of outcome against the cost of treatment) in the drug misuse treatment field, the majority having being conducted in the US. Health economic-relevant outcomes in the drug misuse field are usually conceptualised as an increase in desired, positive behaviours [40]. It is important to differentiate two other kinds of economic studies: cost-benefit and cost-offset. The former yields measures of benefit in units of monetary return [41]; the latter usually involves the estimation of whether the costs of drug misusers treatment is offset by reductions in expenditure in other health care services or in reduced victim costs due to less criminal involvement.

Almost all studies which have examined changes in crime (largely acquisitive or property oriented) during and after an index treatment episode have shown a reduction in victim costs to individuals, retailers and insurers [42]. For example, the US TOPS study included two summary cost measures (costs to victims and cost to society) and in most instances the ratio of costs to benefits was quite substantial.

Table 6-7: Ratio of benefits to costs of treatment (TOPS)

Impact category	Outpatient methadone	Residential	Outpatient drug-free
Costs to victims a	4.04	3.84	1.28
Costs to society b	0.92	2.1	4.28

Source: Hubbard et al., (1989); [38]

a comprises a total estimate of costs to victims of crime and costs borne by the criminal justice system;

b includes estimates of costs of crime career and productivity (legitimate earnings)

Flynn and colleagues have also reported on the costs and reduced crime-related benefits of long-term residential rehabilitation and outpatient drug-free treatments for cocaine dependence as part of the Drug Abuse Treatment Outcome Studies (DATOS) in the US [42]. One-year post-departure follow-up interviews with 300 residential clients and 202 outpatient drug free clients indicated that the combined during-treatment and after-treatment benefit to cost ratios ranged from 1.68 to 2.73 for residential treatment, and from 1.33 to 3.26 for outpatient drug-free treatment (according to the degree of conservatism used for the benefit estimates employed).

In the UK, basic economic analyses from NTORS have focused on the overall costs of providing treatment in relation to the costs due to crime amongst the cohort. Some 1.4 million was estimated to have been spent in the year prior to intake to those clients who were followed up at one year. During this time the costs of providing drug treatments for these clients was approximately 3 million [14]. Reductions in criminal behavior at one year represented cost savings worth some 5.2 million to victims and the criminal justice system, leading to the conclusion that for every extra 1 spent on treatment there is a return of more than 3 in terms of costs savings to victims and the criminal justice system.

6.7 Critical issues in treatment effectiveness

Several mediating and moderating influences on the impact of treatment have been identified. A consistent finding from US and UK research concerns the importance of retention in treatment and completion of programmes which have a pre-determined duration. In the US, the TOPS , and DATOS studies have shown that clients who stay for at least 6 months on outpatient drug-free treatment and residential programmes have superior post-departure outcomes than those clients who have stays below this threshold; clients who stay for one year or more in outpatient

methadone treatment have substantially better outcomes than clients who leave before this point [44,45]. In the NTORS study the planned duration of the residential services studies varied considerably, and three general categories of programmes were identified: hospital inpatient programmes (2-5 weeks); shorter- term rehabilitation programmes (6-12 weeks) and longer-term rehabilitation programmes (13-52 weeks)[39]. The median number of days spent in treatment in these agencies by the clients in the study was 15 (inpatient); 42 (short-term rehabilitation) and 70 (longer-term rehabilitation). Critical times in treatment which were associated with the greatest levels of abstinence for opiate use at one-year follow-up were 28 days for the inpatient and shorter-stay programmes and 90 days for the longer-term programmes. Importantly, the percentage of clients who stayed for these critical times were 20% of the clients in the inpatient programmes; 64% of those in the shorter-term rehabilitation programmes and 40% of those treated in the longer-term programmes.

Important advances have been made in understanding what happens during a clients stay in a drug misuse treatment programme. This work has sought to combine several factors, including a clients readiness for change (motivation), initial engagement in the programme, the establishment of a positive therapeutic working relationship with programme staff [46,47,48]. Joe and colleagues have shown that therapeutic involvement (as measured by rapport between a client and programme counsellor, and the clients ratings of the extent to which-they. are committed to treatment and believe it to be effective) and counselling session attributes (as measured by the number of sessions attended, the number of health and other topics discussed) exert direct positive effects on retention in outpatient drug-free, long-term residential and outpatient methadone treatment [49]. These findings are supported from several other valuable studies which suggest that programme counselors who possess strong interpersonal skills, are organized in their work, see their clients more frequently, refer clients to ancillary services as needed and generally establish a practical and empathy Atherapeutic alliance with the client [50,51,52].

In terms of client attributes, the presence of psychiatric comorbidity amongst drug misusers entering treatment has been linked to poorer outcomes [53]. Pre-treatment psychiatric severity to be predictive of outcome and this should be taken into account when selecting appropriate treatments.

The importance of assessing the extent to which clients are ready and motivated to make changes in their substance use behaviors is also an important issue. Analyses from the DATOS datasets, for example, have shown that treatment readiness is related to retention and early therapeutic engagement for clients entering long-term residential treatment and outpatient methadone and drug-free treatments [45].

The importance of providing ancillary of wrap-around services, particularly in the first three months of treatment has been advocated for community-based treatment services

[38]. However, the intensity or comprehensiveness of services *per se* is not consistently associated with improved outcome. The matrix of client attributes and treatment factors and processes has important implications for referral, assessment and client treatment-placement activities [48].

6.8 Urine Testing in methadone programmes

Urine testing for illicit drugs has been a core part of methadone treatment programmes since their inception [54] and technology has now diversified the range of biological fluids that are possible to test [55]. Urine testing is primarily used for two purposes, for patient management and for programme evaluation. In patient management this is primarily around contingency contracting where take home privileges may either be gained or lost through test results. Overall urine testing provides an objective measure of performance within the limited time frame of the test.

There has been only limited critical evaluation of the role of urine testing in reducing illicit drug use, Goldstein [56] conducted a study demonstrating a significant effect from testing but Havassy and Hall [5 7] conducted a further study which failed to demonstrate a reduction in illicit use with testing.

Stitzer et al [58] have reviewed the literature on contingency management around dose increases, dose decreases and take home priveleges and concluded that the robust evidence was only for take home doses. There are some particular problems around both dose reduction and expulsion in that they both work against the more robust evidence of the benefits of retaining individuals in treatment and the role of higher doses of opiates in reducing illicit use. However high dosing is potentially risky in the context of alcohol and polydrug dependence.

A number of studies have reported that there is major variation in how urine test results are used in day to day clinic practice[56, 57] ward. In addition in the modem consumer culture where patients are viewed as service consumers there is increasing dissonance between such status and the models of contingency management traditionally applied. In an expanded diversified treatment system service users express direct, negative critical commentary to programmes that implement strict surveillance and negative contingency management. It is possible that such programmes are more effective in reducing illicit opiate use but not clear whether the effect is offset by the cost of more disenfranchised and negative patient population.

Some researchers now argue that urine testing can be best used to monitor programme effectiveness by the use of a random testing system that provides an overview of levels of usage within the treatment programme

rather than a monitoring of an individual. This is argued for on the basis of the cost savings in reducing the amount of urine testing and the capacity of the information to be targeted at improving overall management and organisational improvement. However there is no robust scientific consensus on the issue of urine testing. The future of testing is likely to be influenced by developments in the technology of testing biological specimens, the overall cost of testing and the voice of service users who view much of the testing in a negative way.

7 Key Executive Summary and Recommendations

7.1 The EHB has achieved a major expansion of drug services over the past five years and has developed innovative services. The scale of the change, growth and obstacles placed in the way of this change makes the achievement all the more remarkable.

7.2 A programme of service expansion was embarked on that is probably one of the more innovative community drug service programmes in Europe. It has taken the core of the evidence on the effectiveness of methadone maintenance and attempted to develop a range of services to ensure higher levels of treatment access. This has resulted in a major expansion in the levels of provision of methadone treatment with over 4000 individuals in treatment by October 1999.

7.3 The introduction of the Methadone Protocol has enabled the formal organisation of the relationship between primary care and secondary care delivery of methadone treatment. At the same time the Pharmacy Coordinators have developed a large network of community pharmacists who are trained and experienced in the delivery of services to drug misusers. Over 50 different treatment sites have been established with a mixture of larger on site services such as Castle St and St James Hospital to smaller satellite clinics in North, South and West County Dublin.

7.4 It is appropriate to state that by international standards of assessment of methadone clinics the rates of both positive and negative opiate tests indicate clinics that are operating to a very high standard of performance on this particular parameter. However, on the negative side the high rates of benzodiazepine positivity indicate a major problem of polydrug misuse, which requires urgent and concerted attention.

7.5 A number of the satellite clinics informally reported rates of 40% plus returning to work, such levels of beginning or returning to work indicate the positive work climate that exists in Dublin but is also very striking as evidence of successful social habilitation or rehabilitation. It is worth further exploring these variations to determine whether program or clinic characteristics are associated or facilitate these positive outcomes. Rates of 30% return to work are remarkable by current international standards and full attention should be paid to this phenomenon. A process should be put in place to properly monitor and document the performance of the clinics

on this parameter. Such an exercise should formally establish through documented and objective procedures the social welfare and occupational status of individuals in treatment.

7.6 Thus, the services have expanded from three locations to over 50 locations in the space of a five years. Over the past decade the budget for the service has increased more than 10 fold. This level of rapid expansion is a major achievement that involves an all-consuming level of managerial and administrative involvement. The services are now likely to require an opportunity for consolidation and planning for the next level of development.

7.7 The staff of all the different services demonstrate a high level of commitment to developing and improving on existing service provision. There is a high level of pride and a high sense of achievement among staff.

7.8 The level of change and the demands made on many staff leave the system under pressure and there is a need to ensure that the coordination, support and liaison functions are further developed in a manner that ensures sustainable level of professional commitment to day to day work.

7.9 The services have expanded rapidly and much of the organisations time has been taken up with prolonged community consultation which was necessary and is required on an ongoing basis. However, such activity needs to be balanced by detailed work within the services building up more coherent team functioning and ensuring adequate support for team members in working with a damaged and difficult treatment population.

7.10 In addition to further developing multidisciplinary team working, there is a case for considering the development of a key worker or alternatively a case manager system that attempts to ensure that the needs of an individual patient can be comprehensively addressed through combining the skills of the range of disciplines working within the service.

7.11 Within the primary care service there is a need to ensure that coordinators develop the support to level one general practitioners in a manner that increases the level of take up of patients by level one general practitioners and, thereby, increases the capacity of the treatment service.

7.12 The EHB should consider choosing a range of key performance parameters and ensure that data on these parameters are collected and analysed across the entire service.

7.13 There is a need for an urgent audit of benzodiazepines within the service. This should involve auditing of prescribing within the drug services and also of prescribing by practitioners who are not involved in the drug services. The Department of Health should be involved and action may need to be taken to restrict benzodiazpine prescribing if the current high levels of misuse are to be contained.

7.14 Between January 1999 and October 1999, 205 new patients went into primary care services. While this appears modest as a number it's a significant proportionate increase in numbers in primary care. However, it is clear that there needs to be a substantial increase in this if the capacity problem across the service is to be adequately addressed. There were 119 general practitioners involved in the protocol at the end of October 1999, but of these 71 practitioners had less 5 patients with nearly half having less than three patients. There is a need to expand the number of practitioners and encourage and support these practitioners to manage a reasonable workload of patients. Issues on this are discussed in the next section.

7.15 Within this approach there is also a need to consider briefer management approaches as exemplified in the Fortune House Project, where detoxification over a shorter period of time is delivered. Such an approach would allow for people with a shorter history of opiate dependence to attempt to achieve a drug free status and it would also be clear that multiple failed attempts at such an approach should lead to consideration of more sustained maintenance treatment. A twin track approach that combines detoxification with maintenance would also ensure some individuals could have shorter-term contact with services. This would in effect create some treatment capacity by having a degree of throughput for one stream of patients.

7.16 Overall it is clear that in most of these settings the teams have managed rapidly increasing work loads with enthusiasm, skill and commitment. However, there is considerable duplication of function and overlap of function within teams when it comes to the management of individual clients. Consideration should be given to the development of a key worker system where a single individual worker in the team would be responsible for the treatment of an individual who would be subject to overall team review.

7.17 The other possible option that could be considered is the use of care coordinators or case managers. Such individuals could be tasked with overseeing the delivery of multimodal treatment from a range of professionals and also assessing the impact of such treatment against baseline measures. Such an approach might assist in ensuring better coordination and integration of services. Of course, such an approach would be contingent on the availability of a range of services and on the ready access of such services for these patients.

7.18 Given the integrated nature of EHB services there seems to be a strong case for substantial expansion in this form of liaison/shared care model into primary care, general mental health services, child and adolescent psychiatric services, hepatology services, and criminal justice agencies. At a local level, case managers or liaison workers could provide a key role in ensuring that a combination of community and statutory resources are

mobilised in order to achieve maximum treatment and rehabilitation impact.

7.19 There is also a need for a network of needle exchange facilities that could provide sterile syringes as well as collect used equipment. It is possible that pharmacies have an important role to play in this and could be engaged without encountering major issues of community resistance that may be likely with the development of other facilities.

7.20 A well evaluated pilot study of needle exchange via community pharmacy would be a rational and practical way forward which would provide useful information about processes and problems in establishing such a service.

7.21 There have been very major developments in the delivery of services to drug users through pharmacy based services over the past five years. The Pharmacy co-ordinators faced a substantial challenge in developing community pharmacy based services and has achieved remarkable success. There is a clear need for ongoing training and support and there may be room for developing innovative modes of communication between the clinicians in the drug services and the pharmacies that would improve the overall function of the team. Better integration between these professionals is likely to pay substantial dividends in the quality and coherence of the local service.

7.22 There is now a need to broaden the base of services available and to consider how briefer types of interventions could be developed that would be accessible for young people before they have progressed to chronic heroin addiction. A broader community based treatment programme where the workers have a capacity to conduct assessments and provide advice and treatment for problems ranging from long term cannabis use, MDMA, cocaine and benzodiazepines is required. To date, some of this has been provided by counsellors, outreach workers and others. There is a need to formalise this approach and it is possible that such an approach could be provided on a larger geographical scale than current clinic provision. Such an approach could be based on a direct access system and problems of a more complex nature could be referred to more local services.

7.23 Currently the Voluntary Sector Residential services continue to be key providers of services. Many of these services are long standing with experienced and knowledgeable staff, however, there is a need for these different services to meet and to develop a more cohesive voice about the role of the residential sector in the overall provision of services. Such joint activities could also explore issues of training and establishing mutually agreed standards for service provision. In particular, there is a need for a more coherent approach to how these services link into the broader range of community services.

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