

Mental Health Pathway Efficiency and Productivity Report



**healthier
scotland**
SCOTTISH GOVERNMENT

QuEST
Quality and Efficiency Support Team

Contents Page

	Page No
Executive Summary	3
Optimising the numbers of psychiatric inpatient beds through effective community services and infrastructures	9
Effective and Efficient Community Mental Health Services	17
Use of telehealth and telecare	27
Early Detection and Intervention in Psychosis	37
Additional areas for consideration	43
Appendix A: Task and Finish Group Membership	45

Chapter 1

Executive Summary

Aim of Report

This report aims to:

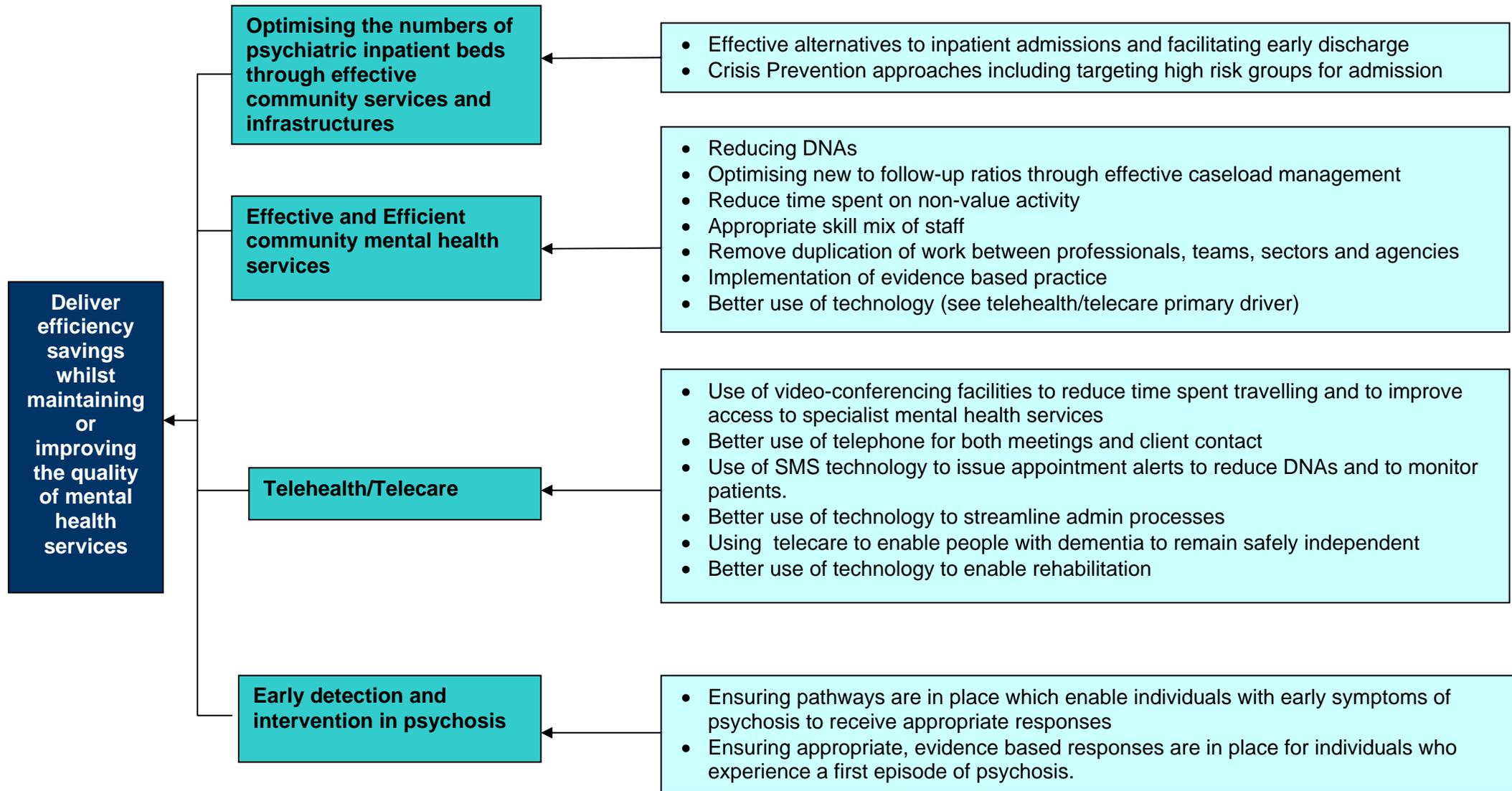
- highlight the key **opportunities** for delivering **efficiency savings** across **mental health services** whilst **maintaining or improving the quality of care**.
- provide an **assessment of the productive opportunity attached to each issue**. For many of the issues it has not been possible to quantify the potential savings at an NHS Scotland level due to a lack of relevant data and/or evidence with which to do the modelling. However, the report does interweave case studies and data throughout to provide insights into the potential opportunities that exist.
- highlight **the key actions needed to release the productive opportunities** and provide links to resources which already exist that will support services in taking action.
- identify any **additional work** that is needed **nationally** to **support NHS Boards** in releasing the productive opportunities.

Approach used to identify productive opportunities

The work has been overseen by a task and finish group, the membership of which is attached at Appendix A. The productive opportunities were identified through a combination of:

- reviewing the literature.
- an analysis of comparative data (a separate data report accompanies this report and is available on the Mental Health Efficiency and Productivity pages on the [QuEST website](#).)
- a trawl across NHS Boards of actions taken in recent years that had delivered efficiency savings (a separate data report accompanies this report and is available on the Mental Health Efficiency and Productivity pages on the [QuEST website](#).)
- the expert opinion of clinicians, managers, voluntary sector representatives, users and carers through both stakeholder workshops and individual discussion.

Summary of key productive opportunities



In addition the group highlighted Long Term Conditions and Mental Health, Better response to people with Borderline Personality Disorder, Out of Area Admissions/Independent Contracting and Proactive Management of Medically Unexplained Symptoms as areas where further work is needed to assess the productive opportunity and/or the key actions

Summary of assessments of productive opportunities

Optimising the numbers of psychiatric inpatient beds through effective community services and infrastructures

This covers work to ensure effective alternatives to admission are in place including services which facilitate early discharge and services are designed and delivered to minimise the occurrence of acute relapses and intervene quickly when they do occur.

An analysis of 2009/10 psychiatric inpatient data highlighted:

- **Three fold** variation in average length of stay for **psychiatry of old age** admissions (excluding Western Isles which pushes it up to a five fold variation).
- **Ten fold** variation in average length of stay for **older people with psychosis**
- **Four fold** variation in the average length of stay for individuals **under 25 years old with a diagnosis of psychosis**
- **Five fold** variation in bed days used for admissions with a primary diagnosis of **adult personality disorder and behavioural disorder** (excluding Western Isles which pushes it up to a forty fold variation)
- **Five fold** variation in bed days used for admissions with a primary diagnosis of **psychoactive substance misuse** (excluding Western Isles which pushes it up to a fifteen fold variation)
- Total productive opportunities of between **£4.5million to £7million** if those NHS Boards above the mean ALOS (longest 20%) for general psychiatry reduced ALOS (longest 20%) to the mean.
- Total productive opportunities of between **£2.2million to £3.5million** if those NHS Boards above the mean ALOS (longest 20%) for old age psychiatry reduced ALOS (longest 20%) to the mean.

Effective and Efficient Community Mental Health Services

This covers work attached to ensuring that community mental health services are doing the right things and doing those things in the most efficient way. There are significant productive opportunities as indicated by the following:

- **Nine fold variation in DNA rates for new outpatient appointments in general psychiatry and seven fold variation for psychiatry of old age.**
- **Three fold variation in ratio of new to returns** for general psychiatry and **five fold variation for psychiatry of old age.** We don't know what the optimum new to follow-up ratio is. However research highlights that we can't assume that higher ratios equate to better clinical outcomes. Implementation of ICPs and effective caseload management systems operating across all mental health services will help to reduce unwarranted variation.
- Activity audits in mental health showing approximately **25% of time spent on clinical admin** and highly graded clinical staff time being used for duties that could be covered by administrative staff.

- One service released **576 hours of clinical time** simply by reviewing allocation processes (26,000 population).

Increased use of telehealth and telecare

Telehealth is the use of communications technology to provide health services from a distance. Telecare is the remote or enhanced delivery of care services to people in their own home or in a community setting by means of telecommunications and computerised services. There are significant productive opportunities for both urban and rural services through the better use of telehealth and telecare:

- Examples of the use of videoconferencing facilities to provide clinics include NHS Lothian into HMP Edinburgh and HMP Addiewell (**£6,400 per year efficiency gains in terms of reduced consultant time travelling**) and NHS Highland providing input to individuals with Dementia in a rural care home (**avoidance of 2 hospital admissions representing efficiency gains of £35,000**).
- From 2006-2011 £78 million of productive opportunities have been delivered through the telecare development programme. There are still significant opportunities for expanding the use of telecare further – particularly for individuals with dementia and individuals with severe and enduring mental health problems
- NHS Dumfries and Galloway have already saved **£36,000** through the use of technology to streamline admin processes in mental health and are projecting cash releasing savings of **£80,000**. There are also opportunities for streamlining time spent travelling to meetings through the better use of teleconferencing and webex.
- There are considerable opportunities still to be realised in making better use of technology to enable self management, peer to peer support, self assessment, self referral and co-delivery of care.

Early detection and intervention for psychosis

Early detection services are focused on identification of individuals at high risk of developing psychosis and reducing the risk of transition to full psychosis. Research and modelling indicate that investment in these services will return a net saving by year 3 and an average saving of **£7633 per patient over a 10 year period**.

Early intervention teams are specialist teams focused on reducing the duration of untreated psychosis, improving recovery and preventing relapse and readmission. Research and modelling indicate that investment in these services will return a net saving from the first year and an average saving of **£15,409 per patient over a five year period**.

It is important to note that the financial case **assumes release of savings attached to a reduction in the use of inpatient beds and the extent to which this can be realised will depend on a range of local contextual factors**. However, the impact on the quality of life for individuals with psychosis provides a compelling reason for investing in these services and the potential for this to be a 'win win' in terms of improved outcomes for less money is such that it was thought important to highlight within this report.

Further work identified nationally to support NHS Boards to release the productive opportunities

The following table summarises further work to support NHS Boards to release the productive opportunities that is either already planned nationally or recommended as a result of this process.

Table One: Summary of further work nationally to support NHS Boards to release the productive opportunities

Action	Lead	By When
Optimising the numbers of psychiatric inpatient beds through effective community services and infrastructures		
Identify a core data set that would allow cross comparison of the effectiveness of different models of crisis resolution/home treatment services across NHS Scotland	TBA	TBA
Identify the key components that need to be in place within every mental health service to enable early intervention in the course of an acute episode – with the aim of reducing the severity and impact of an episode.	Taken forward by Mental Health Division as part of work to look at the balance of care between community and inpatient mental health services	TBA
Review the evidence around integrated acute care teams and the potential impact within the Scottish context	Taken forward by Mental Health Division as part of work to look at the balance of care between community and inpatient mental health services	TBA
Effective and Efficient Community Mental Health Services		
Produce guidance for mental health services on the different approaches to reducing DNAs, the current evidence base behind their use in mental health services and practical tips for application	QuEST Mental Health Team	Oct 12
Amalgamate existing tools/approaches to support effective and efficient community mental health services into a module format that can be used by community mental health services to support release of the high impact opportunities.	QuEST Mental Health Team	Oct 12
Explore development of database to reduce analytical time needed to support activity audits	QuEST Mental Health Team	May 12
Identify what needs to happen to address the issues associated with inaccuracy of national staffing data and to develop credible comparative information on costings	Mental Health Benchmarking Implementation Group	TBA
Telehealth and Telecare		
National Telehealth and Telecare Strategy which includes mental health.	NHS 24 and Scottish Centre for Telehealth	2012
The Scottish Government Mental Health Division is proposing a piece of work to ensure Scotland is recognised as a leading provider of mental health	Reshaping Care and Mental Health Division	TBA

<p>services through new technologies. This will include putting in place the national platforms/infrastructures to enable technology to be used to provide effective peer to peer support, enable people to self assess where appropriate and to provide treatment using a range of new technologies. Further information will be available once the remit of this work is agreed.</p>		
<p>Early Detection and Intervention in Psychosis</p>		
<p>Work with relevant NHS Boards to develop and test model/s for providing Early Intervention services within geographically dispersed communities</p>	<p>Reshaping Care and Mental Health Division</p>	<p>TBA</p>

NB Actions being taken forward by the Mental Health Division are being fed into the action plan for the Mental Health Strategy. Timescales for delivery will be agreed as part of this process. This will ensure the efficiency and productivity priorities are firmly embedded into the wider strategic agenda for mental health.

Optimising the numbers of psychiatric inpatient beds through effective community services and infrastructures

Summary

Optimising the numbers of psychiatric inpatient beds covers work to:

- Ensure **effective alternatives to inpatient admission** are in place. This includes community based acute services and the appropriate range of community based supports for those who require ongoing 24 hour care.
- Ensure appropriate services to **facilitate timely discharge** are in place including work to eliminate delayed discharges.
- Integrate care vertically so that, in those situations where a person requires more intensive input that is being provided by a different service (such as a dedicated crisis team or inpatient service) the **person gets the right support quickly and without the need for multiple assessments**.
- Ensure key components are in place within every mental health service to enable **early intervention in the course of an acute episode** with the aim of reducing the severity and impact of the acute mental health episodes experienced.
- Ensure services appropriately **target high risk groups for admission**.

This work needs to cover all ages. Given the growing elderly population and the predicted increase in numbers of people with dementia, there is a particular need to ensure an appropriate focus on psychiatry of old age services.

Timescale for release of savings

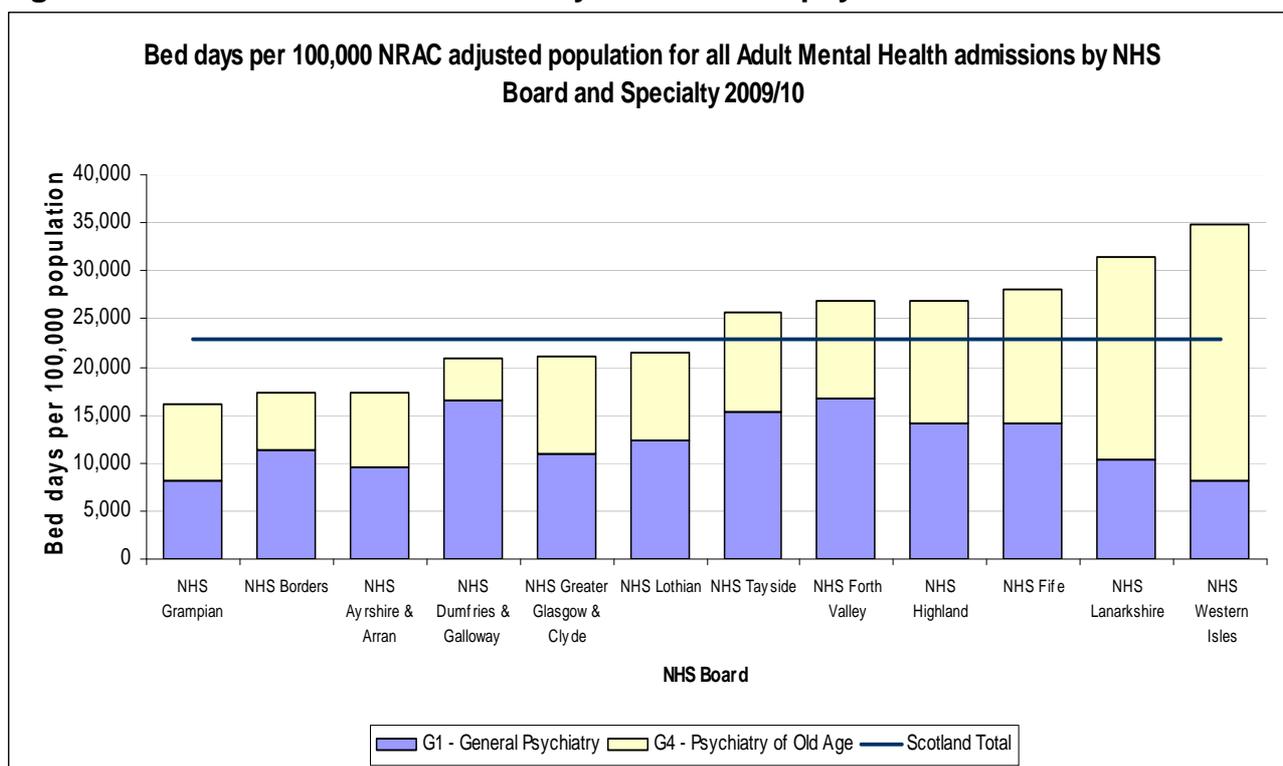
Medium to longer term.

Assessment of Productive Opportunity

Please see the accompanying report [NHS Scotland Variation in Mental Health Activity 2009/10](#) for a more in-depth analysis, including the limitations of the data. This report also highlights the need to compliment comparative data with a range of other sources of information to identify opportunities for improvement. Key headlines from the data analysis include:

- **Three fold** variation in average length of stay for **psychiatry of old age** admissions (excluding Western Isles which pushes it up to a five fold variation).
- **Four fold** variation in the average length of stay for individuals **aged 18- 25 years old with a diagnosis of psychosis**
- **Ten fold** variation in average length of stay for **older people with psychosis**
- **Four fold** variation in bed days used for admissions with a primary diagnosis of **adult personality disorder and behavioural disorder** (excluding Western Isles which pushes it up to a forty fold variation)
- **Five fold** variation in bed days used for admissions with a primary diagnosis of **psychoactive substance misuse** (excluding Western Isles which pushes it up to a fifteen fold variation)
- Total productive opportunities of between **£4.5million to £7million** if those NHS Boards above the mean ALOS (longest 20%) for general psychiatry reduced ALOS (longest 20%) to the mean.
- Total productive opportunities of between **£2.2million to £3.5million** if those NHS Boards above the mean ALOS (longest 20%) for old age psychiatry reduced ALOS (longest 20%) to the mean.

Figure 1: Two-fold variation in bed days for all adult psychiatric admissions



Delivering the Productive Opportunity

Work to deliver this productive opportunity focuses primarily on ensuring:

- **Effective alternatives to inpatient admission are in place, including services which facilitate early discharge.** There is mixed evidence about the extent to which these services provide efficiency savings and the level of savings will depend in part on historical contextual issues and local service configuration issues.
- **Crisis prevention approaches are minimising the occurrence of acute relapses and services are designed to intervene early when they do occur, with a particular focus on high risk groups for admission.** There are likely to be far greater quality and efficiency savings attached to working on these issues – though this is an area where little research has been completed and hence there is currently a lack of evidence to back up this assertion. Those diagnostic categories which make up the greatest percentage of beds are worth particular attention.

Feedback from service users and carers consistently highlights services failing to listen and appropriately respond to individuals and their families in the early stages of an acute episode, and that this failure then leads to further deterioration in the individual's wellbeing. Therefore work in this area must include ensuring effective involvement of service users, their families and their friends; and timely responses when either individuals or their support networks highlight the occurrence of early warning signs.

Effective Alternatives to Inpatient Admission – Acute Care

Over the past 5-10 years considerable development has already been made in shifting the balance of care from inpatients to community. This shift has in part been enabled by the development of Crisis Resolution Home Treatment Services (CRHT) across most NHS Boards. [The Scottish Crisis Resolution/Home Treatment Network Service Mapping Report \(2010\)](#) and [A Review of Crisis Resolution Home Treatment Services In Scotland \(2011\)](#) both highlight that a range of different models are in place. There is no one model that is obviously best at reducing bed use and a lack of good comparative data across a range of outcomes significantly hinders the ability to make any cross comparison. However, it is clear from the data that all the different models have delivered effective alternatives to hospital bed usage and the research indicates positive impacts on patient experience.

However, there is mixed evidence about whether these services provide a more cost effective solution as they nearly always require considerable additional investment in community resources. [A Review of CRHT Services In Scotland \(2011\) report](#) identified the following issues are pertinent for **further consideration when reviewing locally the cost effectiveness** of the local approach:

- The catchment area of the service, or put another way how many teams are needed, and hence what team overheads are required.
- Staff mix and grades varied considerably without it being immediately obvious how this linked to the effectiveness of the service.
- Removing the duplication of work with other mental health services – for example duplication of assessments without clear evidence of a clinical need for this
- Length of stay and speed of discharge from intensive treatment.

- Opportunities for CRHT teams to share other functions with other teams in less busy times – for example support for discharge – and to be enhanced from other teams when the pressures are on. Put another way, there may be some, if limited – scope for flexibility around different teams providing back-up to each other.

In addition the [Mental Health and The Productivity Challenge \(2010\)](#) report identified that the development of integrated acute care teams, in which CRHT or other community teams work together with inpatient staff under a common management structure, can deliver further reductions in bed use whilst improving the quality of care (Audit Commission 2010). **Closer working in ways such as this is an area for further exploration which will be taken forward as part of the next phase work nationally to look at the balance of care between inpatient and community services.** It also highlighted the need to improve discharge and step-down arrangements.

The [NHS Scotland Efficiency and Productivity Mental Health Case Study Summary Report](#) highlights a number of examples of the impact of developing CRHT services. Amongst these is the CAMHS intensive home treatment service developed by NHS Lothian which removed the need to extend the existing inpatient provision by a further 4 beds. An increase of four beds would have enabled 14 extra admissions at a cost of £64,000 per admission. The intensive treatment team enabled 27 admissions at a cost of £16,224 per admission.

Finally, in addition to CRHT teams, there are also a range of other models worth further exploration in terms of their potential application within the Scottish context:

- Crises Houses
- Crisis Sponsor Homes
- Social crisis response services

Effective Alternatives to Inpatient Admission – Longer Term Care

The shift in the balance of care from inpatients to community has also been enabled through the development of alternative models for individuals who were previously long stay NHS patients. Services include 24 hour staffed care and different intensities of supported accommodation. Whereas such services clearly improve the quality of life for individuals, there is mixed evidence about the extent to which these services provide efficiency savings. Further, the level of savings will depend in part on historical contextual issues and local service configuration issues.

An analysis of individuals accounting for the 20% longest length of stays highlights that approximately 50% of these are individuals with dementia, with the next highest category being those with schizophrenia, schizotypal and delusional disorders. Indeed the top three diagnostic categories account for 91% of the beds used. NHS Boards may want to explore further the opportunities for redesigning services for individuals with longer term needs, particularly around these diagnostic categories.

Table Two: Percentage of total length of stay by description of Primary Mental Health Diagnosis (ICD10) - 2009/10 for the 20% of admissions with the longest length of stay.

Primary Diagnosis Description	Percentage of total los	Spells
Organic, including symptomatic, mental disorders	51.5%	1,676
Schizophrenia, schizotypal and delusional disorders*	23.7%	511
Mood (affective) disorders	16.0%	973
Psychoactive Substance Misuse	5.1%	144
Neurotic, stress-related and somatoform disorders	1.5%	158
Adult personality and behavioural disorders	1.4%	40
Mental retardation	0.6%	5
Behavioural syndromes associated with physiological disturbances and physical factors	0.1%	4
Psychological development disorders	0.1%	2
All Diagnoses	100.0%	3,513

Crisis Prevention Approaches

CRHTs provide alternatives to hospital admissions. An important complimentary approach is the provision of robust community services which prevent the crisis occurring in the first place. **There are likely to be significantly greater quality and efficiency savings attached to preventing the crisis occurring in the first place.**

As there is evidence that a psychiatric crisis is often preceded by a social crisis¹, integrated and responsive health and social care services are vital. Further work is needed to identify the key components but it is expected that they will include:

- Routine use of relapse and crisis contingency planning for individuals who have experienced more than one acute episode
- Integrated (across health and social care) and person centred care planning in line with ICP Standards 16 and 17
- Effective involvement of families and friends
- Timely responses by specialist services when an individual or their carers highlight the occurrence of early warning signs

Work to identify the key components of crisis prevention approaches is being taken forward as part of the next phase work nationally to look at the balance of care between inpatient and community services. In addition, services may find value in undertaking in-depth audits of the reasons why individuals are being admitted to their inpatient units to help identify key issues locally.

Targeting high risk groups for admission

The [Mental Health and The Productivity Challenge \(2010\)](#) report identified the need to ensure effective targeting of high risk groups for admission. They identify individuals with co-morbid mental health and substance misuse problems as a key high risk group. NHS Boards need to ensure they have effective arrangements in place to deliver appropriate treatment without duplicating work and/or individuals experiencing unnecessary barriers to treatment. Other high risk groups for admission are indicated in the table below. The top three diagnostic categories account for 83% of the beds used.

¹ Bridgett C and Polak P (2003), Social systems intervention and crisis resolution. Part 1: Assessment, *Advances in Psychiatric Treatment*, 9:424-431

Table Three: Percentage of total length of stay by description of Primary Mental Health Diagnosis (ICD10) - 2009/10 for the 80% of admissions with the shortest length of stay.

Primary Diagnosis Description	Percentage of total los	Spells
Schizophrenia, schizotypal and delusional disorders	42.7%	3533
Mood (affective) disorders	29.8%	4017
Psychoactive Substance Misuse	11.1%	3842
Organic, including symptomatic, mental disorders	7.8%	279
Adult personality and behavioural disorders	4.0%	1119
Neurotic, stress-related and somatoform disorders	3.6%	1070
Behavioural syndromes associated with physiological disturbances and physical factors	0.7%	87
Mental retardation	0.2%	43
Childhood/Adolescent behavioural and emotional disorders	0.0%	9
Psychological development disorders	0.2%	40
All Diagnoses	100.0%	14,039

Summary of current resources which may support delivery

- Staff skilled in lean techniques around process mapping, value streaming and ideal state development can support work locally to identify opportunities for improvement. Many NHS Boards have central teams who can provide advice and support. In addition please see the [Quality Improvement HUB website](#).
- [A review of Crisis Resolution Home Treatment Services In Scotland](#)
- [The Scottish Crisis Resolution/Home Treatment Network Service Mapping Report \(2010\)](#)
- [National Crisis Standards](#)
- [ICP Standards](#)
- [JIT resources around partnership working](#)
- [Benchmarking Toolkit](#)
- [GG&C Benchmarking work](#)
- [Mental Health and The Productivity Challenge \(2010\)](#)
- [NHS Scotland Variation in Mental Health Activity Briefing 2009/10](#)

Potential measures to support release of productive opportunities

- Referral numbers and sources of referral to CRHT services
- Workload by staff member and team – screening, assessment, treatment intervention
- Outcome of assessments – including referrals on to other services
- Number of readmissions to CRHT services
- Number of readmissions to mental health Inpatient services*
- Number of admissions to mental health inpatient services by sector/team
- Number of patients admitted to CRHT who are then admitted to inpatients – together with reasons why
- Length of Stay for CRHT
- Length of Stay for Inpatients*
- Clinical Outcomes data

**Indicates that national comparisons available*

Quality Domains

These actions will impact positively on the following domains of quality - person centred care, effective care, access, efficiency, equity, safe

Further national work to support release of productive opportunities

The Mental Health Strategy for Scotland 2011-15 makes explicit an intention to focus on determining the ideal balance between hospital and community based services. Work has been initiated nationally which includes:

- Identifying a core data set that would allow effective cross comparison of the effectiveness of different models of crisis resolution/home treatment services across NHS Scotland.
- Identifying the key components that need to be in place within every mental health service to enable early intervention in the course of an acute episode – with the aim of reducing the severity and impact of the episode.
- Reviewing the evidence around integrated acute care teams and potential impact within the Scottish context.

Chapter 3

Effective and Efficient Community Mental Health Services

Summary

Effective and efficient community mental health services covers work attached to ensuring we are doing the right things and doing those things in the most efficient manner and includes:

- Work to reduce the number of people who **Do Not Attend (DNA)** appointments.
- Addressing **unwarranted variation in new to follow-up ratios** by ensuring **effective caseload management systems** are in place so people are not seen more times than is necessary.
- Reducing time spent on **non-value adding activities** and releasing this time for direct client work. This includes reviewing referral allocation processes.
- Ensuring the **appropriate skill mix of staff** including effective use of administrative staff.
- Removing **duplication of work** between professionals, teams, sectors and agencies.
- Reliable implementation of **evidence based practice**
- **Better use of technology** to reduce administrative burdens and travel time. ***This is picked up in a separate section of this guidance.***

As highlighted in the section on delivering these productive opportunities, a range of tools/approaches have already been developed to support the release of these productive opportunities in community mental health services. The QuEST Mental Health Team is currently working to produce a toolkit that pulls all of the different tools/approaches together and provides guidance for teams on what to use when. This will cross reference to Releasing Time to Care Community (RTCC) resources where appropriate. However it is worth noting that RTCC (which was developed for Health Visiting and District Nursing teams) does not directly cover a number of the high impact productive opportunities for mental health services.

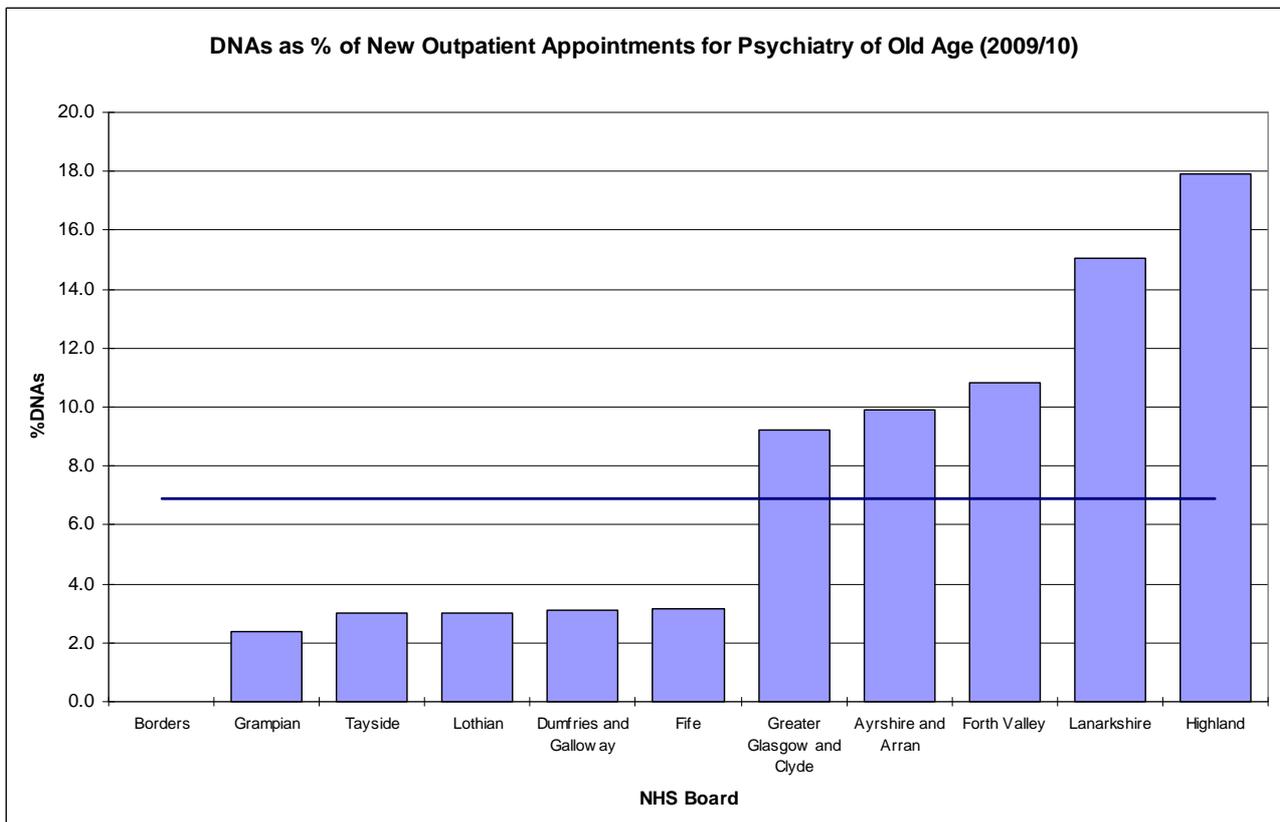
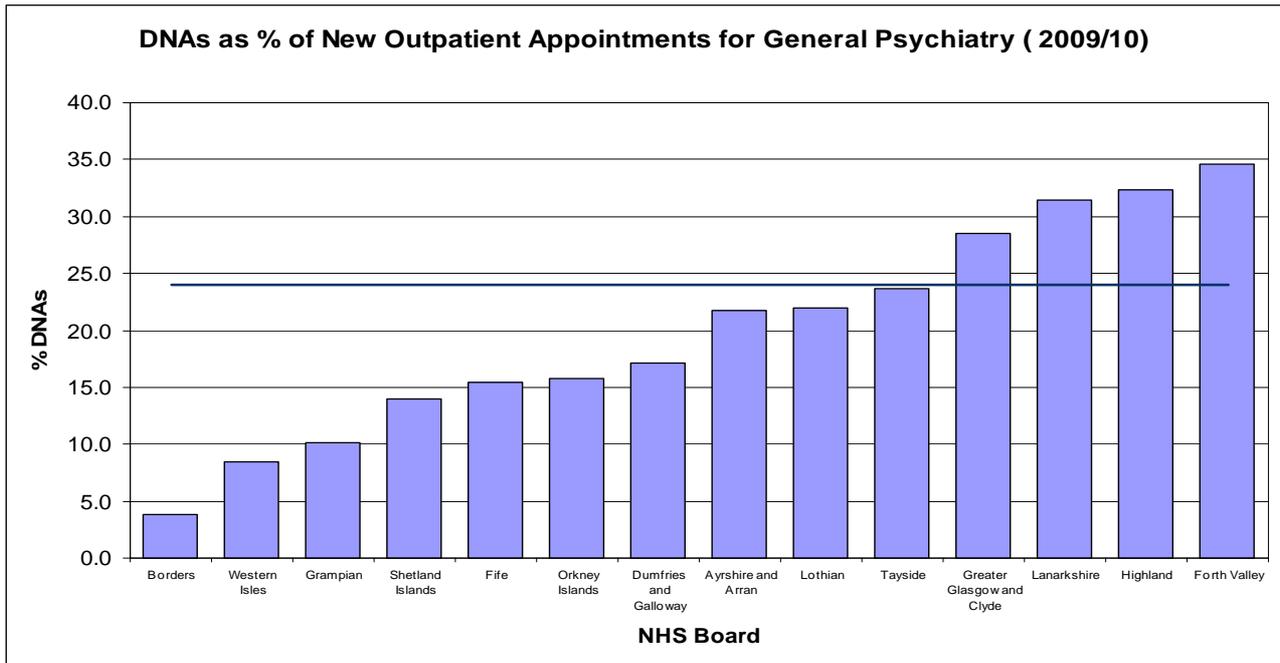
Timescale for release of savings

Short to medium term: As productive opportunities are mainly related to staff time – the ability to make cash releasing savings will depend on the levels of staff turnover and flexibilities to move staff between teams/services.

Assessment of Productive Opportunity

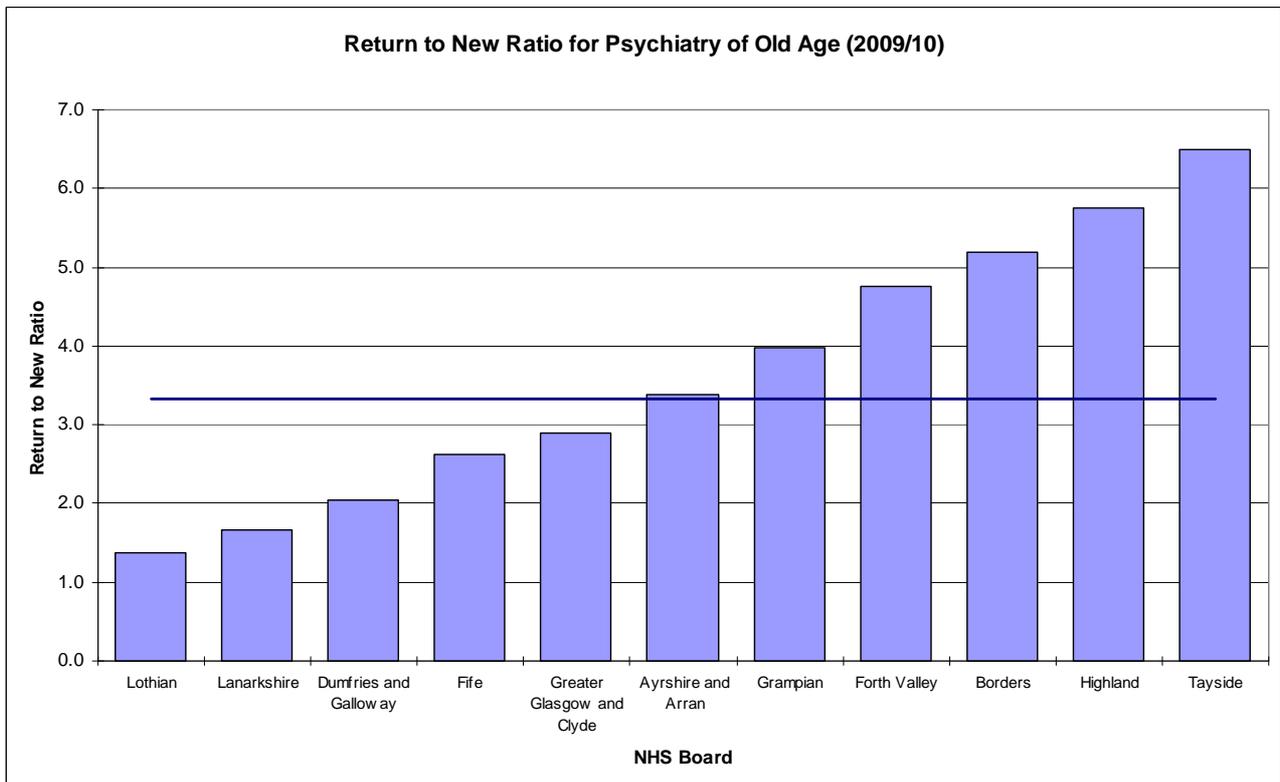
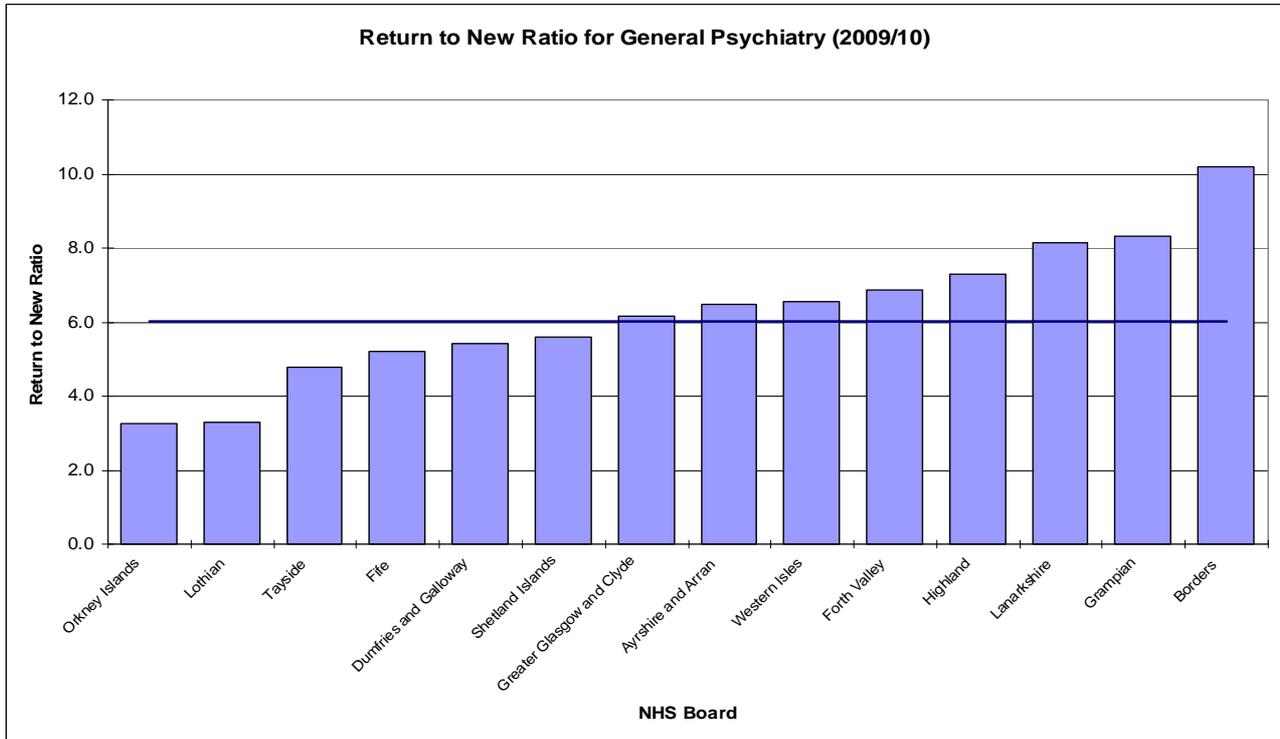
Reducing Did Not Attend (DNA) rates

National data on DNA rates in mental health services are currently only collected for psychiatric outpatient clinics. There is no national data covering psychology, community psychiatric nursing and OT. The outpatient data shows a **nine-fold variation** for general psychiatry and a **seven-fold variation** for psychiatry of old age. As with all comparative data, care needs to be taken when interpreting this data as it is not clear how much of this variation is due to differences in data recording and/or demographic need.



Addressing unwarranted variation in new to follow-up ratios

For mental health, national data on the average number of follow-up appointments for each new assessment is only collected for psychiatric outpatient clinics. There is no national data covering psychology, community psychiatric nursing and OT. The outpatient data shows a **three fold variation** for general psychiatry and a **five-fold variation** for psychiatry of old age across NHS Boards. As with all comparative data, care needs to be taken when interpreting this data as it is not clear how much of this variation is due to differences in data recording and/or demographic need.



Releasing time from non-value adding activities.

Activity audits in community mental health services are consistently showing approximately **25% of clinical time being spent on clinical admin**. Work to streamline clinical admin processes and make better use of technology should release time for clinical work, though this needs to be tested in practice.

Further some of the clinical administrative duties could be more efficiently performed by administrative staff, though services report significant challenges in ensuring appropriate levels of admin are funded. The following table shows the cost of different grades of staff spending 5 hours a week of their time on admin and the potential productivity release if this was transferred to an admin professional.

Table Four: Comparison of costs for different grades of staff spending 5 hours on admin

AfC Banding	Annual cost of 5 hours per week	Annual savings from using 5 hours weekly of Band 3 admin rather than 5 hours of clinical time (£)	Annual savings from using 5 hours weekly of Band 4 admin rather than 5 hours of clinical time (£)	Annual savings from using 5 hours weekly of Band 5 admin rather than 5 hours of clinical time (£)
6	4741	1986	1534	870
7	5661	2907	2454	1790
8a	6895	4140	3687	3024
8b	8101	5347	4894	4230
8c	9622	6867	6414	5751
8d	11527	8773	8320	7656
9	13953	11199	10746	10082

NB These savings are not cash releasing unless resources are being moved from vacant posts.

Meetings also feature significantly in the use of time, indicating the need to review the function and effectiveness of meetings. For example, teams who have moved from allocating new referrals through a meeting to direct allocation show considerable productive opportunities. **Western Isles released 576 hours of clinical time a year by moving to direct allocation and one team in Lothian released 312 hours of clinical time per year by moving to direct allocation.**

Appropriate Skill Mix

Considerable work has already been undertaken by mental health services to address issues around skill mix. For example NHS Lothian **delivered £220,000 cash releasing savings through a skill mix review across Tier 4 CAMHS nursing teams.**

It is not possible to quantify nationally the level of productive opportunities still available. This is due to both issues around the accuracy of national mental health staffing data and the challenges of doing comparative work in the context of needing to look at the full multidisciplinary team composition, rather than just professions in isolation.

It is recommended that discussions take place with the Mental Health Benchmarking Implementation Group to explore what needs to happen to address the accuracy issues associated with national staff data and to develop credible comparative information on costings.

Removing duplication of work between professions, teams, sectors and agencies and reliable implementation of evidence based practice

Highly efficient services that are doing the wrong things are not productive. Therefore, a vital part of delivering productive community mental health services is ensuring that services are designed to meet the needs presenting using the best possible evidence base and removing any un-necessary duplication and waste. It is not currently possible to quantify the level of productive opportunity attached to this, though the majority opinion is that there are considerable productive opportunities attached to this heading.

Delivering the Productive Opportunity

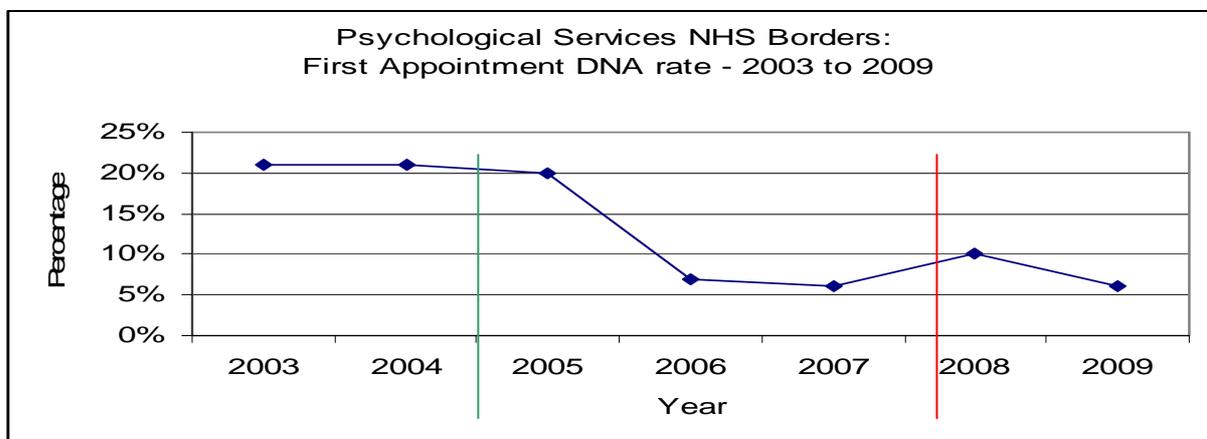
Reduction in DNAs

- DNA rates can be attached to **both administration errors** (ie patients not receiving appointments in time or at all) as well as **patient factors**. (Two studies show 38% and 44% of DNAs attached to administration error, though these were not in the field of mental health).
- **Focusing initially on follow-up DNA's initially is usually more productive**, even though the DNA rate for new appointments is generally higher. This is because a 1% reduction in DNAs across five appointments (follow-ups) will release more time than a 1% reduction in DNAs for one appointment (new assessments). It is also generally considered an easier area for interventions as the individuals are known to the service. The following table taken from the [Lothian DCAQ Early Implementer Phase 1 Report](#) highlights this.

Table Five: Average hours lost per week to DNAs

Did Not Attend (DNA)	East Lothian Psychology	East Lothian Therapists
1 st Assessment DNA rate	15.5%	19%
Average hours lost per week due to 1st Ass. DNA	1.4	2.7
Follow-up DNA rate	11%	12.2%
Average hours lost per week due to follow-up DNA	3.3	4
Average hours lost per week to DNAs	4.7	6.7

- There are a **range of interventions that can reduce DNAs** including: allowing people to choose the appointment time to suit them, the use of text reminders, the timing of appointments (a particular issue for services working with severe and enduring mental illness), ensuring mechanisms for cancelling appointments are easy to access. The following graph shows the impact of work across NHS Borders psychology services to reduce new DNA rates.



The first line in 2005 indicates the introduction of the first appointment opt in policy for psychological services. At this stage appointment times were given and patients had to confirm. The second line in 2008 indicates the introduction of full partial booking system, with patients required to phone in for their appointment time and slot filling when clients fail to opt in.

Further guidance will be produced for mental health services by QuEST on the different approaches, the current evidence base behind their use in mental health services and practical tips for application.

Addressing Unwarranted Variation in New to Follow-up ratios

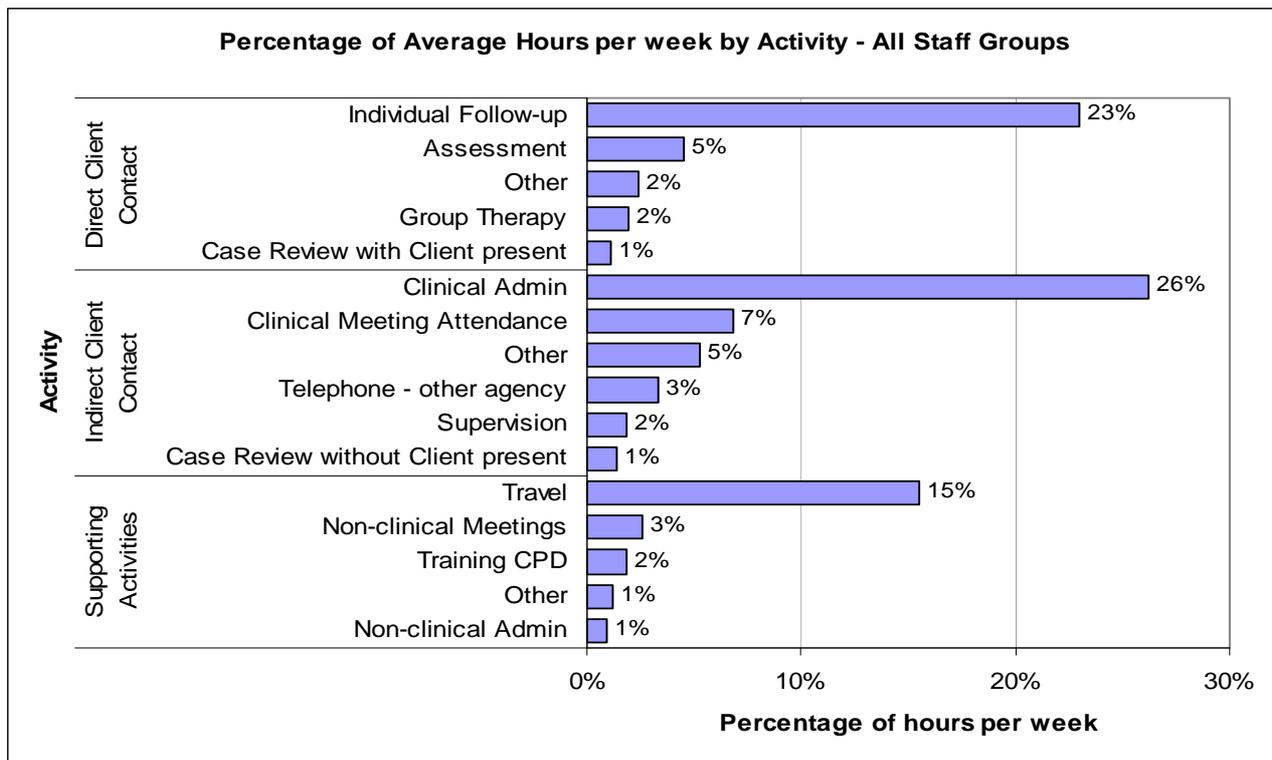
- Every team should have caseload management systems in place that ensure caseloads are regularly reviewed and practitioners supported to discharge appropriately. Please see the [MHC DCAQ Goal Setting and Case Review Guide](#) and [The Choice and Partnership Approach](#) guide for further information on the different options.
- Implementing [integrated care pathways](#) will also help to address unwarranted variation in new to follow-up ratios as they will ensure practitioners are following evidence based pathways and that variance from these pathways are monitored to ensure it is based on client need.
- Considerable care needs to be taken when comparing new to follow-up ratios of individual practitioners to ensure that the data isn't mis-interpreted. Please see QuEST Mental Health Guidance on [Calculating New to Follow-up Ratios](#) for further information on the techniques that should be used when comparing data at an individual practitioner level.

Reducing time spent on non-value adding activities

Auditing how staff currently spend their time can identify opportunities for releasing time back into clinical work. There are already tools developed for Mental Health Community Services to support this:

- [Mental Health Capacity Calculator](#). This tool enables you to do a **quick estimate** of how staff are currently spending their time and can highlight opportunities for releasing time for clinical work. It can also create the motivation to undertake a more detailed analysis using the activity tracker as the amount of time spent in direct client work usually surprises staff and gets them interested in finding out more.
- [Mental Health Activity Tracker \(MHAT\)](#). This allows you to do a **more detailed audit** how community mental health staff time is actually spent and time and highlights opportunities for releasing time for clinical work.

The following graph highlights the type of analysis that can be undertaken using the MHAT.



In addition the [Mental Health DCAQ Framework](#) identifies a range of actions that can increase direct clinical time including: reducing un-necessary travel time, removing unnecessary meetings and improving the effectiveness of those that are needed, better management of sickness management and effective use of email and other new technologies (see telehealth section of this guide for further info)

Ensuring the appropriate skill-mix of staff

- Many services across Scotland have already completed work around the skill mix of their community services (see the [NHS Scotland Efficiency and Productivity Mental Health Case Study Summary Report](#) for more info). **To maximise productive opportunities it is vital that this work is completed on a cross-professional basis rather than just a uni-disciplinary basis.**
- As services start to collect more reliable information about the demand for their services this is likely to highlight further issues around the current skill mix of teams. NHS Boards and health and social care partnerships need to have systems in place to enable **the staffing decisions to be based on need** and not the historical allocation of budgets between professional groups.

Removing duplication of work between professions, teams and sectors and agencies.

- The nature of mental health problems means that some individuals have a number of professions/agencies involved in their care at any one moment in time. Further some individuals may move between services (such as CMHT to crisis to CMHT) which can lead to duplication of assessment and information gathering. **Pathways need to be**

designed to ensure the appropriate information transfers with the service user so as to remove the need for duplicating the collection of information.

- Implementing a single care plan that operates across all service care providers ([ICP Standard 17](#)) will both improve the quality of care received and improve efficiency of care.
- Using lean principles to map the patient's journey through their eyes **and identify what adds value, can highlight key opportunities for removing waste and duplication.** It is vital that the mapping is based on **what actually happens to service users, not what staff think happens. Therefore current state process maps need to be based on auditing actual service user journeys.**

Inverclyde CHCP has recently redesigned mental health services with the objective of creating a single integrated system for mental health and an approach to delivery of care which focuses resources and avoids duplication. Based on diagnostic pathways there is a single point of access to integrated mental health services. Standardised approaches outline seamless routes from initial access to services through treatment, transitions and transfers within the integrated service.

This model was developed by process mapping existing patient journeys, identifying gaps or duplication and re-mapping services incorporating condition pathways to enable clarity for practitioners and service users. A summary outline of the service model and pathway is available on the [QuEST website](#).

Reliable Implementation of Evidence Based Practice

- Ensuring individuals receive evidence based care appropriate to their needs is vital for both effective and efficiency services. The failure to do so results in people presenting again or their mental wellbeing deteriorating and hence needing a more intensive response than would have otherwise been the case.
- Effective implementation of [ICPs](#) and routine use of clinical outcome measures will enable much clearer and earlier identification of any quality issues.
- RTC Communities Standard Operating Procedures module also provides useful tools/guidance for taking this work forward.

Better use of technology to reduce administrative burdens and travel time

- Please see the separate section on the use of telehealth and telecare for more information on this issue.

Summary of current resources which may support delivery

- Staff skilled in lean techniques around process mapping, value streaming and ideal state development can support work locally to identify opportunities for improvement. Many NHS Boards have central teams who can provide advice and support. In addition please see the [Quality Improvement HUB website](#).
- NHS Scotland Patient Centred Booking – Guidance on Implementation (awaiting publication)
- [Mental Health DCAQ Framework](#)
- [PT HEAT Driver Diagram](#) – includes sections which are relevant to this work
- [DCAQ Guides](#) – please go to the Psychological Therapies page
- [The Choice and Partnership Approach](#)
- [Mental Health Activity Tracker \(MHAT\)](#)
- eWWM – details on [QuEST Mental Health Psychological Therapy page](#)
- [ICPs website](#)

Potential measures to support release of productive opportunities

- New to follow-up ratios – though ideally this needs to be used alongside clinical outcome data.
- DNA rates broken down by new and follow-up
- % of time spent on direct client work
- Data on skill mix of comparable teams.

Quality Domains

Work on the issues identified in this section will impact positively on the following domains of quality - person centred care, effective care, access, efficiency, equity

Further national work to support release of productive opportunities

- Summary of the different actions that can be taken to reduce DNA rates linked to the evidence and including case studies and contacts for areas that have already done it in mental health. **Proposed as work to be taken forward by QuEST.**
- As identified in this guidance, a wide range of tools already exist that were developed to support redesigning services to improve access to psychological therapies service. **QuEST is working to pull these all together into a module format that can then be used by community mental health services to support release of the high impact opportunities.**
- One of the current barriers to progressing activity audits is the lack of capacity in NHS Boards to analyse the data. One way of addressing this is to set up a database that automatically produces standardised reports. **QuEST will explore the potential for commissioning the development of a database that would enable automatic generation of reports.**
- It is recommended that discussions take place with the Mental Health Benchmarking Implementation Group to explore what needs to happen to address the accuracy issues associated with national staff data and to develop credible comparative information on costings.

Use of Telehealth and Telecare

Summary

Telehealth is the use of communications technology to provide health services from a distance. The three main areas of activity are clinical, educational and administrative. In addition to a range of developments which improve access for groups who have traditionally presented challenges to engage with, telehealth can also be used to deliver efficiency savings.

Telecare is the remote or enhanced delivery of care services to people in their own home or in a community setting by means of telecommunications and computerised services. Telecare usually refers to sensors and alerts which provide continuous, automatic and remote monitoring of real time emergencies and lifestyle changes over time in order to manage the risks associated with independent living.

Telecare is predominantly deployed in the provision of Learning Disability services and to support the care at home of people with a diagnosis of dementia. However, there are opportunities to extend its use into other domains.

Telerehabilitation is the use of information and communication technology to deliver rehabilitation over a distance. There is an emerging evidence base for telerehabilitation and it continues to evolve as a delivery method for rehabilitation. A number of rehabilitation services are already making use of telerehabilitation in Scotland in the physical health field and is an area for potential extension in mental health.

Timescale for release of savings

Short to medium term. Some actions such as better use of telephone and web-conferencing can be implemented without any additional investment in infrastructures (though there is a cost attached to the use of the webex). Other actions may require an upgrade to infrastructure on an invest to save basis, and hence savings will take longer to realise.

Assessment of the Productive Opportunity

The following table highlights the type and level of savings that can be achieved through better use of communications technology to provide mental health services at distance. **It is worth noting that it is not just rural areas that can achieve considerable savings in travel time through better use of communications technology.**

Table Six: Telemental Health in NHS Scotland – Case Study Examples of Savings & Efficiencies

Service	NHS Board/Organisation	Patient/Service Data	Quality and efficiency impact
<p>Teleneuropsychology Clinics via videoconferencing to improve access to specialist Neuropsychology services</p> <p>Institute of Neuroscience at the SGH in Glasgow to the Western Isles Hospital in Stornoway.</p>	NHS GG&C to NHS Western Isles	<p>Average cost per patient is lower for the Teleneuropsychology compared to a mainland or visiting clinic. Figures are based on a previous cost-minimisation analysis conducted for the Teleneurology service to the Western Isles from GG&C. This is due to be published shortly.</p>	<p>Costs for clinics –</p> <ul style="list-style-type: none"> • Teleneuropsychology Clinic - £114.87 per patient, includes the cost of putting the VC equipment in. As more services use VC costs allocated to each episode will reduce. • Mainland Clinic - £494.01 per patient (includes patient travel costs) • Visiting Clinic - £146.88 per patient - includes cost of consultant being out of the office for 2 days to conduct a visiting clinic. • 101.36 kg of CO₂ emission being prevented per patient seen (a 91.5% reduction). • Most patients attending a mainland clinic would also be accompanied by a Carer/staff member. The above costs do not include staff accompanying patients. <p>In addition there are the considerable benefits for patients in terms of reduced time spent travelling to mainland clinics.</p>
<p>Forensic Psychiatry services to improve access to specialist forensic services and Training – from the REH to SPS</p>	<p>NHS Lothian to HMP Edinburgh and HMP Addiewell</p> <p>Royal Edinburgh Hospital to Scottish Prison Service.</p>	<p>Avoided Consultant travel & time to HMP Addiewell – 44miles</p> <p>Avoided Consultant Travel & time to HMP Edinburgh – 6miles</p> <p>Costs at 40p per mile</p>	<ul style="list-style-type: none"> • Increase in Consultant productivity due to time saved on travelling, getting through prison security, traffic, and waiting on patients being escorted to clinic. Equates to approx 78 hrs per annum or £6,400 efficiency gains (value of consultant hours including on-costs)

			<ul style="list-style-type: none"> • Reduction in travel costs of approx £1,000 per annum cash releasing • Though for individual clinics these savings are small, if the approach is extended across a number of clinics and staff then they start to produce more significant levels of savings. • Improved access to staff training and CPD
Substance Misuse Clinics via videoconferencing to improve access to specialist SM services	NHS Highland Inverness to Wick	Consultant avoids a 210 mile round trip at 40p per mile, approx 8 hours per trip spent driving and an overnight stay six times a year.	<ul style="list-style-type: none"> • Increase in Consultant productivity through reduction in Consultant Travel Time. Equates to approx 50 hrs per annum or £4,100 efficiency gains (value of consultant hours including on-costs) • Reduction in Consultant Travel costs of approx £500 per annum cash releasing. • Though for individual clinics these savings are small, if the approach is extended across a number of clinics and staff then they start to produce more significant levels of savings. • Improved access to staff training and CPD
Dementia Services via videoconferencing for patients in a Care Home Setting	NHS Highland Inverness to Care Home in Ballachulish	<p>Consultant/Dementia Nurse will avoid a 160 mile round trip at 40pence per mile and approx 4 hours travel. This should have been monthly but due to capacity only happened annually.</p> <p>The new VC clinic has avoided an unnecessary hospital transfer/admission for 2 patients so far.</p> <p>ALOS is 10 weeks at £250 per day.</p>	<ul style="list-style-type: none"> • Avoidance of 2 admissions equates to 140 bed days saved and productive saving of £35,000. Percentage of productive savings which are cost releasing will depend on whether any staff reductions associated with reduced bed use. • Improved quality of care as now able to do monthly input to care home. • Improved patient and carer experience for those individuals where an inpatient admission is avoided. • Improved access to staff training and CPD

Psychotherapy Services for patients with Eating Disorders	Regional Service operating across the North of Scotland from NHS Grampian.	<p>Patients are offered a VC appointment in Shetland, Orkney & remote parts of Aberdeenshire & Moray.</p> <p>Currently there are 8-20 sessions delivered per month depending on patient need/availability for appointments.</p>	<ul style="list-style-type: none"> • Increased productivity through reduction in time spent travelling to deliver service. Where patients were travelling to receive the service then reduction in NHS funded travel costs and reduction in patient time spent travelling. • Reduction in staff travel costs including flights.
Dementia Services via videoconferencing to improve access to Old Age Psychiatry services	NHS Grampian to NHS Shetland	Based on the previous Economic Evaluation of the Head & Neck Cancer Service (Tele-endoscopy) from Grampian to Shetland.	<ul style="list-style-type: none"> • Unit cost per Tele-endoscopy Clinic-£353 per patient • Unit cost per Mainland Clinic - £381 per patient As patients with Dementia require escorts/carers then the unit costs for the mainland clinic can be considerably higher. • Improved patient and carer experience due to reduction in time spent travelling.
Telephone CBT for patients with low mood/anxiety	NHS 24		The cost for this service will be £80 a session with a patient receiving 6 sessions on average. For 250 plus sessions this would reduce to £70 per session.
Telephone Guided Self Help for patients with low mood/anxiety	NHS 24		During 2011-12 total projected costs were £125,000 for running the service. As this is not running at optimum capacity, the cost per session would be £73.43. If we assume 3 sessions are required per patient for course completion, this means a course cost of £220.30 per patient. Currently there are now more patients than 2011/12 and costs are expected to be much lower.

NB Inpatient efficiencies have been worked out using the net direct costs of an inpatient stay per day (£257). The cash releasing savings attached to reducing admissions will depend on the overall level of reduction and hence whether it results in reduction in staffing and/or actual ward closures.

For **telecare**, the efficiency gains will primarily be through reduced admissions to hospital and care homes. The following table highlights the productive opportunities already delivered through the use of the Telecare Development Programme Funding in general. Much of these savings were cost avoidance rather than cash releasing as, for instance, the hospital beds released were often used to respond to other demand presenting in the system. Details on how the costs in the following table were calculated can be found in the [Telecare Development Programme in Scotland 2006-11 Report](#). This report highlights a further limitation to this data, telecare is only part of the package of support which has resulted in an avoidance of admissions. The financial analysis did not look at the additional costs associated with increased use of day care, home care, community services etc and hence the net efficiency gains may be less than reported in this analysis.

	Partnership Achievements		Savings and efficiencies	
	2010/11	2006- 2011	2010/11	2006-2011
Number of hospital bed days saved due to reduction in number of delayed discharges	10,928	27,292	£4,292,840	£9,988,754
Number of hospital bed days saved due to reduction in number of unplanned hospital admissions	33,049	82,106	£9,661,648	£24,289,642
Reduction in number of care home bed days purchased	199,587	545,943	£14,824,425	£37,816,787
Number of nights sleepover care saved	11,452	48,182	£617,329`	£2,776,270
Number of home check visits saved	33,284	443,969	£344,698	£2,979,088
Procurement efficiencies			£347,172	£753,569
Total			£30,088,112	£78,604,110

Table Seven: Savings and Efficiencies already delivered across Scottish CHPs through Telecare Development Programme

Delivering the Productive Opportunity

Using *telehealth* to deliver productive opportunities

To maximise productive opportunities local services should consider whether they are maximising the use of communications technologies under the following key headings.

- **Use of video-conferencing (VC) facilities to reduce time spent travelling and to improve access to specialist mental health services.** There are already successful examples of clinical consultations being provided to remote and rural areas through the use of VC facilities. Further there is an increasing use of VC facilities and web-conferencing resources to reduce time spent travelling to both meetings and training (see table six above for examples). The use of VC facilities is often seen as something for remote and rural areas to consider. However provision of forensic psychiatry services via VC in NHS Lothian highlights the opportunities for use within more urban areas.
- **Better use of the telephone for client contact and meetings**
NHS 24 already provide a range of clinical services via the telephone: Breathing Space, telephone guided self help and telephone CBT.

There are also opportunities within territorial NHS Boards to consider more active use of telephone and other communication technologies to supplement face to face contact.

Conference call facilities now exist that enable large numbers of individuals to dial into a meeting. Web-conferencing means that individuals can also all access the same computer screen whilst on the call and hence enables presentations to be given remotely and or documents to be viewed during the discussion. Whilst face to face meetings will continue to have their place, appropriate use of tele-meetings can save considerable time on travel when staff are based in different facilities.

- **Use of SMS technology to issue appointment alerts to reduce DNAs**
There is research evidence of improvements in DNA rates in mental health services which use of SMS technology to issue appointment reminders, though at the moment this is US based.
- **Better use of technology to streamline admin processes.**
In NHS Dumfries and Galloway, patient records, letters, etc are dictated and downloaded remotely onto a hub where medical secretaries can transcribe from any location. The new hospital also has wireless facilities allowing hospital staff to type up notes anywhere within the building. New systems within support services such as laboratories allow results to be electronically linked to the record removing the need to scan this information into the patient record releasing further admin time.

The use of new technologies has allowed them to move to a 2:1 ratio between medical secretaries and Consultant Psychiatrists and has released **£36,000 to date with a projected total of £80,000 in cash releasing savings.**

- **Better use of technology to enable self management, peer to peer support, self assessment, self referral and co-delivery of care.**

There are already examples of technology being used effectively to enhance the involvement of individuals in their own care. For example Living Life to the Full enables individuals to participate in guided self help over the internet and SMS technology is already being successfully used within some mental health services in the UK to monitor individuals with low mood. However, there are a wide range of opportunities to expand this approach further and ***work will be progressing nationally with the aim of ensuring Scotland is recognised as a leading provider of mental health services through new technologies.***

Using *telecare* to deliver productive opportunities

The following list provides examples of how telecare can be used to enable people with dementia to remain safely independent and hence reduce admissions to care homes and hospitals. This technology can also be used within hospitals. Please see [the Telecare and Dementia report](#) for more information.

- Community alarms which enable people to call for help when they need it by pressing a push-button pendant
- Enuresis sensors which alert carers or support staff when someone has had an episode of incontinence
- Door contacts of passive infrared beams which alert carers that the person has gone outside
- Electronic location devices which can be used to locate a person with dementia who may have left their home and become lost or disorientated
- Temperature, smoke, carbon monoxide and flood detectors
- Devices to stop sinks and baths overflowing
- Medication reminders which use alarms as prompts
- Fall detectors which can be attached to clothing and are activated if the person falls

By 31 March 2011 at least 4,000 people with a diagnosis of dementia had been assisted through the Telecare Development Programme, though in practice the number assisted is likely to have been much higher than this, due to the existence of undiagnosed dementia in the older population.

Telecare can also be used to support people with severe and enduring mental illness to live independently in the community. In one CHP a package of telecare is being used within a supported accommodation complex. Telehealthcare equipment provided as part of individual support programmes (including linked smoke alarms, temperature monitors above cookers to reduce risks of cookers left on, flood detectors and individual trigger/pendants) has enabled these tenants to lead independent lives within the community and develop daily living skills after prolonged periods within a long-stay hospital ward (between four to ten years). They are able to call staff if they need help, rather than the staff having to programme frequent monitoring or check visits throughout

the day and evening. The tenants also had a key safe fitted outside each of their flats which they agreed could be opened to allow access in the case of an emergency. These tenants have been in their homes for more than two years, and comment positively on the equipment and security it provides.

Issues which need to be addressed to enable adoption

Three of the **main barriers** to the adoption of telehealth/care across mental health services are:

- Services **awareness of the potential opportunities** offered by telehealth.
- For video-conferencing, the **costs** attached to putting in the equipment and infrastructure that enable high quality images.

Additional funding to cover the set-up costs attached to redesigning services to make better use of technology is available through the Change Fund (£70 million for 2011/12). The guidance encourages local partnerships to use some of this resource to implement technology enabled care redesign at scale to deliver sustainable, personalised health and care services to meet the needs of the people of Scotland. Circa **£2.7 million, or 3.9%** has been allocated directly to tele(health)care, with a further circa £1.7 million allocated to projects that specifically include tele(health)care.

- **Cultural barriers** to the adoption of telehealth/care.

The [Telemental Health in Scotland](#) report highlights that service users prefer video to face to face if there are savings in time, travel, child care etc. Further some service users also prefer VC consults as they feel more in control and less intimidated during their appointment. However, clinicians are more worried than patients about the possible limitations of video. It also highlights that technical problems (actual or perceived) put clinicians off and hence **training and technical support** are important to **give clinicians the confidence to use the technology**.

Summary of current resources which may support delivery

- [Telecare and Dementia, Using telecare effectively in the support of people with dementia](#), JIT and Dementia Services Development Centre
- Telemental Health In Scotland, Oct 2009 <http://www.sctt.scot.nhs.uk/mentalhealth.html>
- NHS 24 & SCTT Strategic Mental Health Framework <http://www.sctt.scot.nhs.uk/mentalhealth.html>
- [Whole System Demonstrator Action Network](#) (WSDAN) (early results in relation to telehealth)
- Telehealth Evaluation Guidance - <http://www.sctt.scot.nhs.uk/evalres.html>
- [The Kings Fund, Telehealth and Telecare summary](#)
- How can local authorities with less money support better outcomes for older people? www.jrf.org.uk Joseph Rowntree Foundation 2011

- Exploring the Cost Implications of Telecare Service Provision Newhaven Research, Feb 2010
- The Telecare Development Programme in Scotland 2006-11 Newhaven Research July 2011
- Bowes, Alison (2009) Implementing telecare for people with dementia: supporting aging in place in West Lothian, Scotland, *Journal of care*
- Evaluation of the Telecare Development Programme Final Report YHEC Jan 2009
- Woolham J (2005). *The Effectiveness of Assistive Technology in Supporting the Independence of People with Dementia: The Safe at Home project*. London: Hawker Publications.

Potential measures to support release of productive opportunities

- Staff time spent travelling to see service users
- Staff time spent travelling to meetings
- Staff travel costs
- Patient travel costs
- Amount of time spent in meetings
- Did Not Attend Rates
- Number of avoidable admissions to care homes due to better use of telecare/telehealth.
- Number of days spent in care homes due to better use of telecare/telehealth and savings delivered through reduced use.
- Number of unplanned admissions and readmissions to hospital due to better use of telecare/telehealth.
- Number of occupied bed days due to better use of telecare/telehealth and total value of this reduction.
- Service users and carers satisfaction with service provided
- CO2 emissions

In addition, the following link takes you through to guidance on how to go about evaluating the impact of a Telehealth Initiative: <http://www.sctt.scot.nhs.uk/evalres.html>

Quality Domains

This action will impact positively on all six domains of quality: Safe, Effective, Patient Centred, Timely, Efficient and Equitable

Further national work to support release of productive opportunities

- NHS 24 and the Scottish Centre for Telehealth and Telecare (SCTT) are currently leading the development of the national telehealth/care strategy and mental health will be a key component of this strategy. This will provide additional guidance on how to use telehealth/care to improve the quality of care (with a particular focus on access) and maximise efficiency savings. The document is due for publication in 2012.

- The Scottish Government Mental Health Division is proposing a piece of work to ensure Scotland is recognised as a leading provider of mental health services through new technologies. This will include putting in place the national platforms/infrastructures to enable technology to be used to provide effective peer to peer support, enable people to self assess where appropriate and to provide treatment using a range of new technologies. Further information will be available once the remit of this work is agreed.

Early Detection and Intervention in Psychosis

Summary of Productive Opportunity

- **Early detection services** are focused on identification of individuals at high risk of developing psychosis and reducing the risk of transition to full psychosis.
- **Early intervention teams** are specialist teams focused on reducing the duration of untreated psychosis, improving recovery and preventing relapse and readmission.

Timescale for release of savings

- Early Detection Services deliver savings over original investment by year 3
- Early intervention teams deliver savings over original investment by year 1

However, the financial case assumes release of savings attached to reduction in use of inpatient beds and the extent to which this can be realised will depend on a range of local contextual factors.

Assessment of Productive Opportunity

Early detection services

Approximately 3 in every 100 people will experience an episode of psychosis at some point in their life, with approximately 80% of first episodes occurring between 16 and 30 years of age.²

Early detection services are focused on the identification of individuals at high risk of developing psychosis, reducing the risk of transition to full psychosis and reducing the duration of untreated for those who do transition.

Increased duration of untreated psychosis is associated with higher costs to public services (including health, social care, and criminal justice), lost employment, and greatly diminished quality of life for the patient and their family. Knapp et al (2011)³ estimate that early detection services have a **net increased cost in the first year of £2,228 per patient** but then deliver net annual savings for **years 2-5 of £1,149 and years 6-10 of £1,053 delivering a net saving of £7633 per patient over a 10 year period.** However, early detection services are not routinely provided and provision is currently very limited.

Early intervention teams

These are specialist teams focused on reducing the duration of untreated psychosis, improving recovery and preventing relapse and readmission. The emphasis is on an assertive approach to maintaining contact with the patient and a focus on improving the individual's chances of returning to employment, education or training, and more generally their future quality of life. Bird et al (2010)⁴ highlight the important role of CBT and family interventions for reducing symptom severity and reducing relapse rates and hospital admissions.

Research evidence (eg McCrone *et al* (2009)⁵ and Mihalopoulos *et al* (2009)⁶) confirms that, in comparison to standard care, costs are reduced where such specialist teams are employed. **The latter study suggests that this type of intervention is a “win-win” – i.e. less utilisation of services and better mental health outcomes.** Savings are achieved through lower utilisation of inpatient services and in the longer term, less dependence on all services.

² Hafner H, Maurer K, Loffler W, et al (1994) The epidemiology of early schizophrenia. Influence of age and gender on onset and early course. *British Journal of Psychiatry*, 148:554-559

³ Knapp M, McDaid D, Parsonage M (2011) Mental Health Promotion and Mental Illness prevention

⁴ Bird V, Premkumar P, Kendall T, Whittington C, Mitchell J, Kuipers E (2010), Early intervention services, cognitive behavioural therapy and family intervention in early psychosis: systematic review, *The British Journal of Psychiatry*, 197:350-356

⁵ McCrone P, Knapp M, Dhanasari S (2009), Economic impact of services for first episode psychosis: a decision model approach. *Early Intervention in Psychiatry* 3:266-273

⁶ Mihalopoulos C, Harris M, Henry L, Harrigan S, McGorry P. (2009) Is Early Intervention in Psychosis Cost-Effective Over the Long Term *Schizophrenia Bulletin* 35: 909-918

Knapp et al (2011)⁷ highlight that the **annual direct cost per patient** of this type of service in terms of input from an early intervention team plus other community psychiatric services and inpatient care has been estimated at **£10,927** at 2008/09 prices, **a saving of £5,777** over standard care at **£16,704**⁸. For years two to five the savings are estimated at **£2,408 per patient per year** and after that it is assumed that the inpatient admission rates for early intervention services are the same as standard care and hence no further savings. In total this analysis claims a **five year saving of £15,409 per patient attached to specialist teams versus standard care.**

It is important to note that a considerable percentage of the predicted savings are attached to reductions in inpatient beds. **Therefore the financial case for investment in both early detection and early intervention services assumes that the savings attached to a reduction in inpatient use are releasable.** The level of inpatient costs released will depend on whether action taken here, combined with other work to reduce inpatient bed use, enables an entire ward to be closed and whether the building can then be disposed off. This highlights the complexity of undertaking invest to save work across the community and inpatient divide and the difficulty in doing any credible modelling at a national level as the precise financial modelling will depend on a range of local contextual factors.

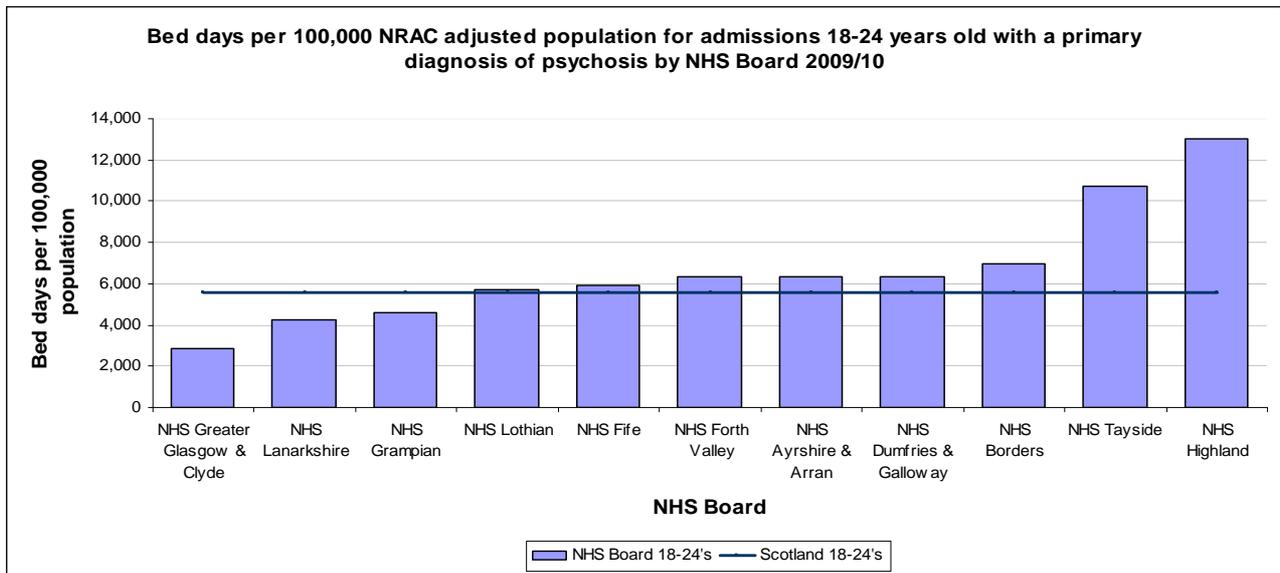
However, the impact on the quality of life for individuals with psychosis provides a compelling reason for investing in these services alone and the potential for this to be a 'win win' in terms of improved outcomes for less money is such that it was felt important to highlight within this report.

To assess the level of productive opportunity still available to NHS Boards in terms of better treatment for first episode psychosis, a comparative analysis of the use of beds by individuals under the age of 25 with a primary diagnosis of psychosis was completed. This highlights significant variation in both the beds days used and average length of stay, indicating both a compelling qualitative case for intervention (a four fold variation in length of stay) and the potential for action here to deliver efficiency savings.

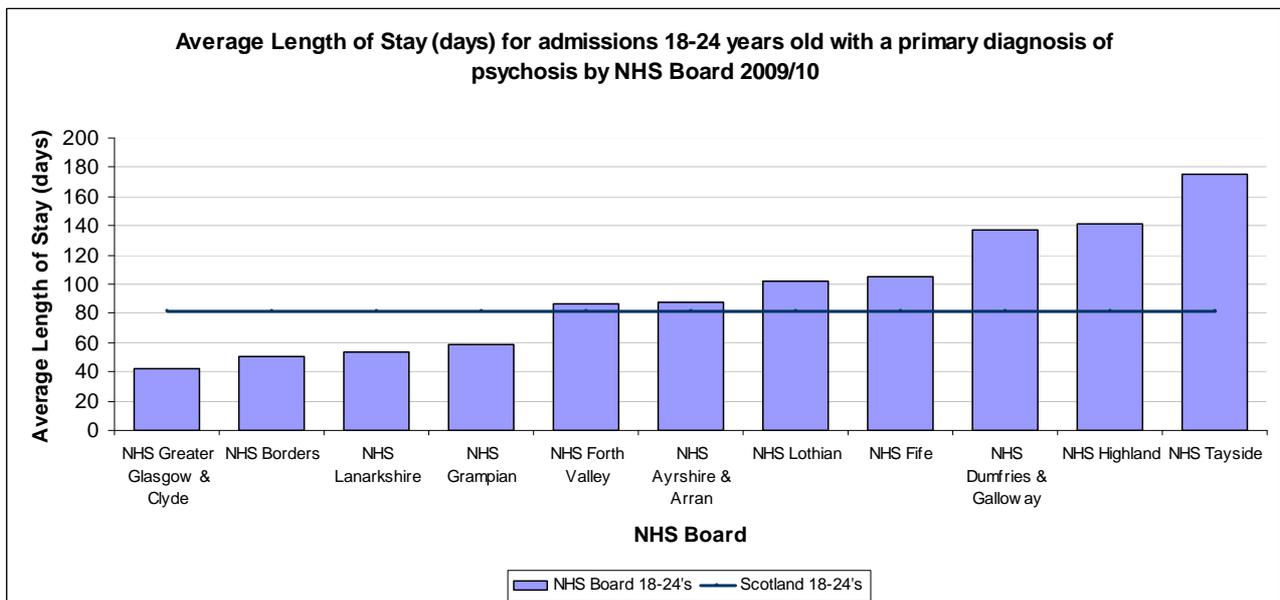
⁷ Knapp et al (2011) op cit

⁸ McCrone et al (2009) op cit

Four fold variation in occupied bed days for admissions 18-24 yrs old with a primary diagnosis of psychosis



Four fold variation in average length of stay for admissions 18-24 with a primary diagnosis of psychosis



There is clear evidence that the prevalence of psychosis has a positive correlation with levels of deprivation. Therefore the fact that NHS GG&C has the lowest number of bed days used and the shortest average length of stay is of particular interest. NHS GG&C has a specialist team for first onset psychosis in place which covers individuals from 16-35. This aligns with the evidence base that such services result in a reduced use of inpatient beds over the medium to longer time. NHS Lothian has a specialist team in place for adolescents only (14-18). No other NHS Boards in NHS Scotland have specialist teams. Please see the next section for further discussion around this.

Delivering the Productive Opportunity

Work to deliver this productive opportunity primarily focuses on:

- Ensuring pathways are in place which enable individuals with early symptoms of psychosis to receive appropriate responses. This needs to include access to CBT which has been shown to reduce the severity of 'at risk mental states'.
- Ensuring appropriate, evidence based responses are in place for individuals who experience a first episode of psychosis including the provision of sessions of cognitive behavioural therapy and family interventions.

The evidence base is clear on the advantages of specialist early intervention teams. However, the geography of NHS Scotland is such that the provision of specialist teams is not realistic for every NHS Board. ***Further work will be initiated nationally to test models for providing the same level of skilled input within geographically dispersed communities. This will draw on the learning from work already in place in Australia to implement early intervention services in remote and rural areas.***

Summary of current resources which may support delivery

- New SIGN guidance in development and due for publication in winter 2012. The existing guideline will be completely updated to cover the pharmacological and non-pharmacological management of schizophrenia and related psychoses (as defined by ICD-10), spanning both primary and secondary care. The guideline will cover the management of co-morbidities, in particular, substance misuse.
- [ICP for Schizophrenia](#)
- [Knapp et al \(2011\)](#)
- [MATRIX 2011](#)

Potential measures to support release of productive opportunities

- Occupied bed days per 100,000 for under 25s with a diagnosis of psychosis
- ALOS for under 25's with a diagnosis of psychosis
- Admission rates for under 25's with a diagnosis of psychosis
- Duration of untreated psychosis

Quality Domains

This action will impact positively on the following domains of quality - person centred care, effective care, access, efficiency, equity.

Further work planned nationally

Further work will be initiated nationally to work with relevant NHS Boards to test models for providing the same level of skilled input within geographically dispersed communities. This will draw on the learning from work already in place in Australia to implement early intervention services in remote and rural areas. This will be taken forward by the Mental Health Division as part of the next stage Mental Health Strategy.

Additional areas for consideration

In addition to the areas identified above, the following issues were also identified as potential areas where efficiency gains and quality improvements could be made. However, further work is needed to assess the productive opportunities and/or key actions for releasing them.

Long-term conditions and mental health

A recently published [Kings Fund report](#) on the cost of long term conditions and mental health co-morbidities has highlighted:

- Individuals with long-term physical health problems and co-morbid mental health problems have significantly poorer health outcomes and reduced quality of life
- By interacting and exacerbating physical illness, co-morbid mental health problems raise total healthcare costs by at least 45 per cent for each person with a LTC and co-morbid mental health problem
- Care could be improved by better integrating mental health support with primary care and chronic disease professionals
- Collaborative care arrangements between primary care and mental health specialists can improve outcomes with no or limited additional net costs

Further work is needed to translate the findings into the Scottish context and to agree what specific actions are needed to support the realisation of these productive opportunities.

Better response to people with Borderline Personality Disorder

The natural outcome of patients with BPD is recognised to be more positive than previously portrayed. One of the theories is that perhaps part of the negative outcome was unintentionally induced by well meaning clinicians who struggled with this complex patient group.

Patients with a diagnosis of Borderline personality disorder have been shown to utilise pharmacological treatment and in patient time at a greater rate than those with affective disorders yet NICE guidelines would suggest that medication has little to offer this group and that inpatient stay should be kept to a minimum to reduce complications induced by treatment.

Structured management of this patient group has been shown to reduce costs in reducing A and E admissions, liaison psychiatry team time, primary care consultations and out of hours contact.

If the ICP for BPD was implemented in Health Boards all of these factors would be addressed within a coherent and effective framework. This would not only offer the

patients considerable therapeutic benefit but would also have an impact on the staff burn out that can occur when trying to work with this patient group in an unsupported and unsupervised environment.

Evaluating the impact of an ICP for BPD could be usefully analysed in a couple of volunteer health boards to encourage the engagement in other areas. The possibility of progressing this further will be discussed further as part of the work to refresh the ICP implementation plan.

Out of area admissions and independent contracting

Across NHS Scotland, significant savings have already been made through regions working together to develop NHS eating disorder services which enabled the repatriation of work from the independent sector. Further work is needed to scope the extent to which there are other opportunities for repatriating work from the independent sector or NHS England. This scoping should include the potential impact of effective implementation of the ICP for Borderline Personality Disorder on the use of intensive out of area treatment facilities.

This is an issue for NHS Boards to take through their regional planning structures where issues require either a regional or national responses.

Proactive management of medically unexplained symptoms

[Knapp et al \(2011\)](#) highlight the potential productive opportunities attached to better management of medically unexplained symptom, including functional neurological symptoms. Healthcare Improvement Scotland published a report on [Stepped Care for Functional Neurological Symptoms](#) in February 2012 which highlights the economic impact of functional neurological symptoms. The report provides some management recommendations that NHS boards may wish to consider. Further economic analysis is required to fully examine the cost savings attached to better treatment of functional symptoms. ***NHS Boards are advised to refer to this report for further information.***

Mental Health Promotion

[Knapp et al \(2011\)](#) assess a range of interventions in the area of mental health promotion, prevention and early intervention in terms of the economic case for investment. These did not fall into the specific scope of this piece of work (which was focused on mental health services) but are referenced here as they may be of interest to NHS Boards in terms of their wider efficiency and productivity programmes. Further, intervening earlier on in the pathway may have longer term productivity impacts by reducing the future flow of work into specialist services.

Appendix A

Mental Health Efficiency and Productivity Pathway

Task and Finish Group Membership

Name	Job Title	Organisation
Caroline Selkirk (Chair)	Deputy Chief Executive	NHS Tayside
Moira Connolly	Principal Medical Officer for Mental Health	Reshaping Care and Mental Health Division, Scottish Government
John Connor	Principal Information Analyst	Information Services Division
Penelope Curtis	Team Leader	Reshaping Care and Mental Health Division, Scottish Government
Shelah Dutta	Assistant Director of Finance (Strategic Planning)	NHS Lothian
Ruth Glassborow	National Lead, Mental Health	QuEST, Scottish Government
Elaine Hunter	Allied Health Professional Advisor in Mental Health	Reshaping Care and Mental Health Division, Scottish Government
Linda Irvine	Strategic Programme Manager, Mental Health and Wellbeing	NHS Lothian
Heather Knox	Director of Regional Planning	West of Scotland
Susanna McCorry Rice	Head of Mental Health, Addictions and Homelessness, Inverclyde CHP	NHS GG&C
Nils Michael	Economist	QuEST, Scottish Government
Kathy O'Neill	General Manager	NHS Forth Valley
John Taylor	Associate Medical Director, Mental Health Services	NHS A&A
Mhairi Will	Lead Nurse, Mental Health and Learning Disabilities	NHS Highland
Jonathan Wright	Principal Research Officer	Health Analytical Services, Scottish Government