Mental Health Services Productivity Improvement:

Best Practice Review

August 2014

Contents

i. Foreword

The past three decades have been a period of increasing investment and significant improvement in mental health and addiction (MH&A) services in order to better support the recovery of people with serious mental health and addiction problems, and their family/whānau in the community.

In recent years, during a new period of resource constraint, District Health Boards (DHBs) have been establishing new service models in order to achieve the goal of "improving mental health and wellbeing for all", as set out in Blueprint II, and the priorities established in the Ministry of Health's Service Development Plan: Rising to the Challenge.

Sector leaders are finding different ways to release resources from existing MH&A services to invest in other MH&A priority areas. They are committed to simultaneously improving the performance of existing services, ensuring service sustainability, and shifting resources to invest into new services that address unmet need. They all face the challenge of improving the productivity of current services by developing new service models to reach more people, to intervene earlier, and to achieve better outcomes.

The Health and Disability Commissioner commissioned this report in collaboration with DHB MH&A services clinical directors and general managers with the purpose of focusing on improving the productivity of adult community mental health services. It was agreed that a collective understanding of how best to improve productivity would be useful to individual leaders and to leverage working as a national group. As a result, this report provides a summary of productivity improvement initiatives, and the underlying process, that reflect best practice in New Zealand and internationally, within mental health services, across whole health sectors, and by other industries more generically.

This report was informed by an expert advisory group nominated by DHB MH&A services clinical directors and general managers to develop the scope of the project and provide feedback on the draft report, MH&A key stakeholder were interviewed to identify productivity initatives that were delivering positive results, as well as a review of the international literature. I would like to thank all those people who gave their time and expertise to the development of this report, the clinical directors and general managers who are part of the productivity steering group, and the leaders and influencers from across the NGO and DHB services.

I would like to acknowldege the Ministry of Health for co-funding this report, Ko Awatea for overseeing the production of the report, and Sue Johnston for analysing a vast amount of material in a short time period to produce this report.

Having a common understanding of best practice for improving productivty provides MH&A sector leaders with the foundation to apply to their respective services. This initiative aims to support innovation and change without reinventing the wheel and make the most of collective wisdom. I look forward to seeing this knowledge support further action, with the ulitimate aim of making real gains in outcomes for service users and their family/whānau.

Lynne Lane
Mental Health Commissioner

ii. Executive Summary

ii.i *Purpose*

The purpose of this report is to inform any future actions by DHB clinical directors and general managers pursuing productivity improvement. Many DHBs and NGOs already have productivity initiatives underway. There is a desire to take a more collaborative approach and avoid duplication of effort to implementing productivity initiatives. Hence, the commissioning of this work funded by the Ministry of Health via the Mental Health Commissioner to Ko Awatea.

ii.ii *Rationale*

The reason for undertaking this work is the recognised urgency for mental health services to extend their reach into the large areas of unmet need for mental health expertise, whilst meeting the ever increasing demand for existing services. *Blueprint II* and the Ministry's service development plan *Rising to the Challenge* provide the national level direction. Both these documents acknowledge that current services will need to transform and move towards an increased emphasis on prevention and early intervention, and ongoing community support to prevent unsustainable demand for acute and specialist hospital based services. This is particularly so for infants, children and youth, adults with high prevalence conditions (mild to moderate anxiety, depression, alcohol and drug issues and medically unexplained symptoms) and our growing older population.

There is an overwhelming amount of literature about productivity generally, and more specifically applied to the health sector. This report attempts to distill relevant aspects to support mental health leaders to adequately address demand and sustainability.

ii.iii *Implementing best practice*

The challenge now is to move from aspiration to practice. This requires a system wide intervention and investment - from national level policies and funding of services, and regional level collaboration through to clinical level decision-making.

The findings and recommendations of this report were informed by the experience and research from productivity reviews from wider industry as well as the health sector, both internationally and from New Zealand.

The key points from this review are listed below.

- Understanding productivity in health means having a value (outcomes) dimension which needs to be acknowledged and measured (see page 6).

- The starting point for any productivity initiative is a having a clear idea of the problem. To illustrate this point, the review looked at the different approaches taken by several countries because of their different problem definitions (see page 6).

- The literature points to seven core conditions for success with productivity initiatives. These conditions are the same as those for any improvement initiative and include applying a system wide approach, wide level of engagement, leadership and investment (these seven conditions are discussed on page 9).

- There are four areas of focus for mental health services undertaking productivity initiatives:
    - Workforce
    - Whole of system improvement
    - Within mental health services
    - Across the whole health sector (see page 13).

- The combination of evidence in the literature and interviews with key informants suggest that the immediate priorities for New Zealand are:
    - action across the care pathway
    - effective responses to unmet need and early detection
    - changing ways of working (see "what to focus on in mental health" on page 13).

ii.iv *11 Essential steps*

- This report lists 11 essential steps for developing and implementing productivity initiatives in New Zealand mental health and addiction services, taking into account that there appears to be variation across the DHBs in their approach and readiness to engage with any new productivity initiatives (see page 21 for more information).

Start here…

1. Know the problem from all points of view
2. Have an aim

Do not pass go until…

3. Leadership and executive support is confirmed
4. Investment is agreed
5. Workforce are engaged
6. You can measure improvement

Keep it going with…

7. Quick wins
8. Evidence based practice
9. Feedback
10. Leverage your productivity initiative effort through the KPI Programme
11. Innovating.

Measuring what matters is challenging but critical. The current impetus in New Zealand mental health services to progress towards an improved set of productivity

measures must proceed (see page 25 for more about measuring productivity in health).

There are good international and local examples of best practice productivity initiatives (see page 26 for examples).

The international evidence, along with the information provided by key informants, indicates that the evidence presented in this report is highly applicable to mental health and addiction services in New Zealand (see page 29).

Successful productivity initiatives are system-wide, and link knowledge and action across what may have been traditional boundaries. The best of these take a collaborative approach, whether that be locally, regionally, or nationally (see page 31 for discussion about readiness and aspirations for collaboration).

ii.v *Priorities for action in New Zealand*

The science of improvement and change provides the foundation for the success factors identified for productivity initiatives. However, what we also know from the literature and from experience is that the simplicity around knowing what works is commensurate with the difficulty in making it happen. While it may seem quite simple and straight forward, it's actually more difficult to put into action.

The Clinical Directors and General Managers' Group has talked about adult community mental health services as an area of focus. In the course of conversations with key informants, they expressed aspirations for mental health services. There was one theme that came up consistently – and that was the desire to have one joined up system (see page 33 for more about taking a collaborative approach).

The starting point for deciding whether or not it's the right time to take a collaborative approach will depend upon two main factors:
Agreement between collaborative participants on the problem definition, their shared aim, and agreed metrics.
Readiness of each participant to engage in collaborative activities (depends on factors such as leadership support, workforce engagement and investment of resources).

Successful productivity initiatives in the health sector have two vital ingredients: a focus on outcomes for service users, and the inclusion of the health workforce. Any productivity initiatives need to proceed as a matter of priority with these two groups of people in the forefront of the design and implementation of the initiative.

This paper will be tabled at the Clinical Directors and General Managers' meeting on 19 August 2014. The information provided in this report, plus the impetus of discussions in the KPI Programme, and the diverse experience across DHBs with implementing productivity initatives is a good foundation for any action decided by the group. It's time for some action (see page 33 for more on next steps).

1.0 Introduction and Background

The commissioning for this work came about because the District Health Boards' (DHBs) Clinical Directors and General Managers identified productivity of mental health and addiction (MH&A) services as a priority for them. Before launching into action, they wanted to learn more about successful strategies for achieving productivity, including latest overseas and local evidence regarding successful productivity initiatives across industries and in the health sector.

Many DHBs and NGOs already have some productivity initiatives underway. There is a desire take a more collaborative approach to implementing productivity initiatives and avoid duplication of effort. Hence, the commissioning of this work. The group are also aware of the urgency to progress productivity initiatives and wanted to proceed with a common understanding and intent. The agreed scope for this work and other background material is attached as Appendix 1.

The interest and motivation for investigating productivity is not new. However, internationally and in New Zealand, there has been a renewed focus on productivity as governments and organisations alike strive to maximise value and make the most effective and efficient use of the resources available to them.

The Ministry of Health's service development plan (SDP) for mental health and addiction services, *Rising to the Challenge*, provides the backdrop for MH&A services' current interest in pursuing the objective of improving productivity. The first of four overarching goals identified in *Rising to the Challenge* is "actively using our current resources more effectively". The desired result is increased value for money. The SDP goes on to outline the key requirements for all regional annual plans:

> *The Ministry of Health will require all regional and annual plans to:*
> - *include initiatives aimed at improving the use of current resources and the expected results from these initiatives*
> - *include initiatives aimed at addressing the priority actions in this Plan*
> - *describe the change management approach that will support the implementation of service developments and system improvements*
> - *clearly identify the proposed source of any additional resource (eg, discontinuing services that have been proven to be relatively ineffective; releasing resources by meeting needs in more cost-effective ways; additional demographic funding (if available) or previously approved, targeted Government funding for specific services).* (Ministry of Health, 2012).

Measuring progress and improvement is also a priority in the Ministry's SDP. The plan indicates that the Ministry intends using the work of the national KPI Programme as a foundation to developing an agreed set of outcome measures and KPIs. Recent discussions in the KPI forum have been about understanding measures that could be used to guage improvements in productivity.

The Clinical Directors and General Managers Group is particularly interested to know what productive mental health services looks like, and the appropriate measures to demonstrate it.

Methodology

There were three phases to this work:

1. A literature search and key informant interviews.
2. Synthesis and analysis of effective strategies, approaches and measures identifed in the literature review.
3. Draft report reviewed by reference group to progress to this final report.

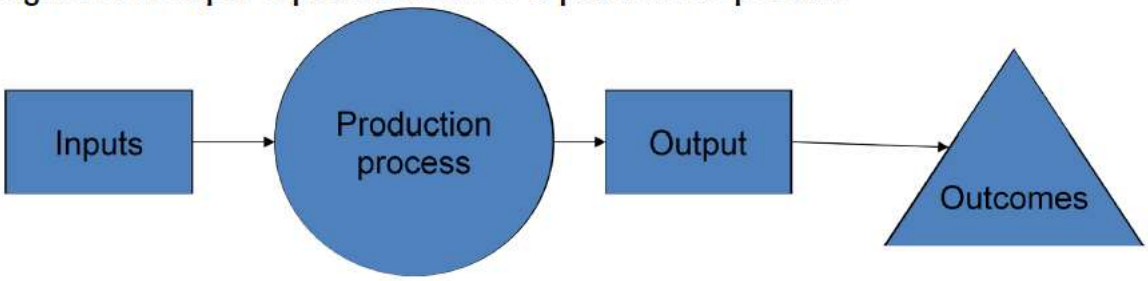
Details about the search strategy and key informants interviewed are attached as Appendix 2.

2.0 Concept of Productivity

2.1 What is productivity?

The economic definition of productivity is very simply, the ratio of outputs to inputs (see Figure 1). Productivity improvement is essentially an improvement in the ratio of outputs to inputs. However there are acknowledged challenges when measuring outputs and even more so, the outcomes in health care.

Figure 1 A simple representation of a production process



Source: Statistics New Zealand

The Canadian Workforce Forum notes that the vast majority of productivity studies in health care do not address outcomes; at best they measure activity (Western and North Health Human Resources Planning Forum, 2011). They developed a framework that used the concept of "effective productivity" which they define as "an increase in outputs per unit of input, **with evidence of improved quality and improved health outcomes that contribute to achieving health system goals"**. A copy of their framework is attached as Appendix 3.

2.2 Summary of international approaches to productivity

The literature shows that countries, companies, government services and health care services alike have invested heavily in understanding and doing something about improving productivity. What follows is a synopsis of reasons for improving productivity among local and international organisations in the health sector and in wider industry, and their subsequent approach to improving productivity. The NZ Productivity

Commission is included to illustrate the wider interest in productivity in New Zealand.

Table 1: Summary of international reasons and responses to addressing productivity

Country/Organisation	Reason for pursuing productivity	Response
New Zealand Productivity Commission	OECD research shows that NZ should be producing GDP per capita 20% above OECD average, but it's much lower. Closing the gap would dramatically lift incomes and wellbeing (NZ Productivity Commission 2014a). Two main issues: 1. Weak international connections 2. Under-investment in knowledge-based capital. Plus low services sector productivity (NZ Productivity Commission 2014b).	Government response through NZ Growth Agenda. Recommended focus on services sector.
Australia	Difficulty estimating productivity trends in health care but suggests that productivity performance of health care providers, particularly public hospitals, lags behind other industries (Novak and Judah, 2011).	Key means to secure improved productivity in health are reducing restraints on competition, encouraging providers to generate more output with fewer inputs, improving responsiveness to consumer demands, encouraging greater differentiation in health care provision, reducing regulatory impediments to provision, alleviating health sector workforce rigidities, greater transparency of operations to consumers and taxpayers.
Canada	Need to focus on workforce to have a sustainable and high performing health care system that uses its resources in the best way possible to achieve optimal value and optimal health outcomes for individual patients and the population (Western and Northern Health Human Resources Planning Forum, 2011).	Sustainability means adequate supply of health workers to ensure that the health care workforce is efficient and effective, focused on improving health outcomes. Uses the concept of 'effective productivity' which incorporates quality and health outcomes in the context of health care productivity.

Country/Organisation	Reason for pursuing productivity	Response
England	Pressure on NHS funding much tougher than in 1990s. NHS faced with unprecedented need to close the financial gap through more efficient and effective use of its constrained budget. Forecast is zero real increase in funding for the five years to 2020/21. To meet growing demands and expectations would require productivity improvements of up to 6% per year (Appleby, Galea and Murray, 2014).	Some national level actions, but the bulk of achieving productivity gains remains with those actually providing services. "Doing things right" (minimising back office costs, developing and incentivising workforce; and, "doing the right things" (changing clinical practice, commissioning and redesigning care pathways).
Scotland	Large variation in mental health delivery led to identifying productive opportunities (QuEST, 2011).	Optimising the numbers of psychiatric inpatient beds through effective community services and infrastructures, effective and efficient community mental health services, telehealth/telecare, early detection and intervention in psychosis.
USA	Improving America's cost-benefit balance one of the most urgent public policy problems. Costs rising but health outcomes not rising at the same rate. Without change, health care costs could stress state and federal governments to point of near-insolvency as baby boomers age, and expensive technology comes online (Kauffman Taskforce on Cost-effective Health Care Innovation, 2012).	The 'adjacent possible' - incremental, but important workable reforms which taken together, can accumulate to significantly advance both productivity of health care and outcomes. Initiative run with the health system's existing stakeholders and structures: harnessing information, improving research, legal and regulatory reform, empowering patients.
Global	Health care systems around the developed world are under serious long term pressure because populations are aging and demand for health services is ballooning. At the same time quality of health care is highly inconsistent. More people required to do the work while health workforces are declining. To deliver high quality health care requires highly motivated and skilled workforce. Simply pushing more productivity	Five successful habits for improving workforce motivation and productivity: strategic focus on value for patients, empowered professionals, task and process redesign, steering by outcomes: measurements and feedback, active staff motivation and management.

Country/Organisation	Reason for pursuing productivity	Response
	unidimensionally will hurt the very motivation of the workforce we need to drive the quality of care (KPMG, 2012).	

The starting point for pursuing productivity influences the chosen response. Something to keep in mind when looking at options for mental health services in New Zealand – how and what you define as your problem drives the activity that follows. Therefore having a clear problem definition is crucial.

3.0 Critical success factors

The main purpose of this report is to inform any future actions by DHB clinical directors and general managers pursuing productivity improvement. What follows is a summary of research, learning and evaluation of productivity initiatives within the health sector and beyond both internationally and in New Zealand. See Appendix 4 for a summary of international evidence regarding drivers of productivity. All published documents that informed this section of the paper are listed in the bibliography.

There were some clear commonalities in the reports and journal articles reviewed regarding the most successful approach to productivity. They mirror the findings of those who have studied success of quality improvement initiatives. These core conditions are discussed below.

> *"…conditions for successful implementation. These conditions emerge strongly from the studies reviewed in this report as well as from broader literature on health service change. They include: the active engagement of health professionals, especially doctors; the active participation of middle and senior managers, and the support of board members; the use of multifaceted interventions and sustained action at different levels of the health care system; the alignment of quality improvement activities with the strategic goals of the organisation and the embedding of quality improvement as an integral part of the everyday work of all staff (rather than the responsibility of a separate directorate or team).* (Powell et al, 2009).

3.1 System wide approach

Whatever productivity initiatives are chosen, they need time to embed and get sustainable improvement. That means taking a long view and maintaining resources and commitment to get the results. This needs to be reflected in the planning process.

Having a comprehensive system-wide approach means there are actions by individuals at all levels of the organisation. The diagram below provides a useful

illustration of actions at all levels. Appleby et al (2010) deliberately started with clinical microsystems because tackling variations in clinical practice was one of NHS' most important areas to focus on.

Figure 2 Action required at all levels of the system

3.2 Involve employees in the search to improve productivity

The research tells us that organisations that engage with their employees have higher levels of productivity and performance (Lemer et al, 2012). Alongside that is the overwhelming evidence of the benefit of developing relationships and collaborating across departments.

Clinical input

"Organisations need to have a clear view about what constitutes value for patients and use this to set its strategy, measure success and as the basis for conversations with frontline staff." (KPMG, 2012)

Lemer et al (2012) found the following factors were key to effective engagement with medical staff:

- clinical leadership
- closer working to improve doctor's relationships with managers
- understanding one's role within the organisation and health system
- measuring engagement within the organisation
- empowering clincians to identify and lead change.

Training and development

Empowering professionals to participate and lead productivity initiatives means providing them with quality improvement, leadership and team working skills and to be coached and supported as they learn (KPMG, 2012).

3.3 Productivity leadership flows from the top down

Improving productivity requires resourcefulness, imagination and enthusiasm. Leaders and managers set the scene to permit these behaviors and innovative thinking. Gilbert and Peck (2014) point out that change requires high quality and stable leadership that supports the needs of stakeholders and is consistent with the direction of change. They recommend that national and local effort is invested in shared learning between organisations to support change.

"*One of the strongest findings was that good leadership and effective general and clinical management are both crucial for making productivity gains"* (Hurst and Williams, 2012).

3.4 Integrate with other strategic priorities

The literature suggests that stand-alone initiatives have less chance of succeeding. The productivity improvement initiatives need to be integrated into the organisation's other quality improvement activities (so it is part of the organisation's strategic plans and priorities, targets etc). Productivity improvement should be viewed as a continuing programme that never finishes.

3.5 Tailor the selected methods to local circumstances

The key message in the literature is to apply productivity initiatives in a way that suits your service users' needs, your clinicians and your community.

"While national and internationally developed models are useful, choice of any particular model should be driven by local need, allowing flexibility for local providers to innovate" (Gilbert and Peck, 2014).

3.6 Measuring productivity is challenging but essential

"There is general agreement that traditional productivity measures are not enough to assess whether allocated resources are used according to set priorities and generate value for money" (Glenngard, 2013).

Essential to productivity improvement is accurate, reliable information. It is also one of the most mentioned in relation to productivity initiatives. Data and information are essential to confirming the problem definition, and monitoring progress towards the agreed aim.

The literature points out time and time again the challenges in deciding the appropriate measures for measuring productivity, particularly in non-market goods and services, especially classic public goods (Bojke et al, 2013; Statistics NZ).

Criteria for selecting indicators for use in measuring productivity were developed in Canada through a collaborative project run by the Western and Northern Health Human Resources Planning Forum. They took a strategic approach to determining suitable indicators that would enable the description, measurement, monitoring and evaluation of 'effective productivity'[1]. They identified the following criteria for a suitable indicator:

- must represent a significantly important aspect of effective productivity within a given sector of the health care system (i.e., must capture the essence of the issue)
- must be available and applicable to all jurisdictions currently, or in the near future
- must be applicable to multiple levels of the health care system
- must have readily available or collectable baseline data
- must have data required for measurement at a reasonable cost, including the process of risk assessment
- must provide guidelines for action based on analysis and evaluation of the indicator changes
- must provide useful feedback in a timely manner
- the cost of data collection and indicator development must be less than the perceived benefit
- must be reliable, credible, valid, clear, and have accepted normative interpretation (Northern Health Human Resources Planning Forum, 2011).

3.7 Money must often be spent in one place to save in another

Large scale change requires investment. Many of the success stories and literature about achieving sustainable productivity improvement mention the need to invest resources (funding and people) in the new initiative before closing or changing existing capacity (King's Fund, 2014). The quote below is from a New Zealand study assessing the effectiveness of the Productive Ward and the Productive Operating Theatre.

"Our conclusion is that the financial benefits - largely the value of increased nurse time for direct care, supported by saving in stock management – are likely to outweigh implementation costs by a ratio of approximately 8:1. The net present value of the investment over 10 years is estimated at approximately $1 million per ward, or nearly $14 million for the hospital" (Moore et al, 2013).

[1] Effective productivity is an increase in outputs per unit of input, with evidence of improved quality and improved health outcomes that contribute to achieving health system goals (Northern Health Human Resources Planning Forum, 2011).

4.0 What to focus on

This section discusses four key areas of focus for mental health services undertaking productivity initatives:

1. Workforce.
2. Whole of system improvement.
3. Within mental health services.
4. Across the whole health sector.

Choosing what to focus on will depend on having a clear problem definition, and tailoring your approach to local conditions. However, the evidence would suggest that the broad areas discussed below will be pertinent to DHBs.

4.1 Motivating your workforce

In health care - including mental health services, the focus invariably comes back to the workforce because they represent the largest proportion of costs, and provide the means to address variation in clinical practice, which is a major issue when looking at productivity improvement. At the same time there is the dilemma of increasing demand for services, coupled with a declining and aging health workforce.

There have already been some initiatives looking at redefining traditional roles in the mental health workforce. Te Pou currently have a study underway to inform initiatives interested in "top of scope" to provide direction to a workplan that will deliver value and utility to the MH&A sectors (Te Pou, 2014).

KPMG completed a global study that looked specifically at enhancing the productivity of the health workforce. They noted that the option most favoured in times of economic shortfall is simply to slash costs. The blunt cost cutting approach, however, is often shown to have a negative impact on both the quality of care and the engagement of professionals and other workers.

"Simply put, asking employees to work harder is not a proven recipe for success. Requiring professionals to see more patients per day could lead to diminished quality and a higher risk of medical errors. What is more, such measures generally decrease workforce satisfaction, leading to increased levels of absenteeism and decreased employee retention rates" (KPMG 2012).

The KPMG study found examples of meeting the workforce productivity challenge in new and radical ways: by enhancing the productivity of healthcare personnel and at the same time improving the quality of care and improving the attractiveness of the workplace. Their research showed that this approach can result in cost savings, quality gains and a more satisfied workforce. They went on to identify five successful habits for improving workforce motivation and productivity. They are summarised in the following diagram.

Figure 3: The five habits shared by providers that successfully address the workforce challenges

These habits fit with a New Zealand-authored journal article that took a systems perspective to look at nursing productivity. They showed that reframing nursing productivity (as an intellectual asset of a knowledge intensive health organisation) brings into focus management strategies to raise productivity whilst protecting service user outcomes (North & Hughes, 2012).

4.2 Whole of system improvement

Appleby et al (2010) provide a useful framework to consider the various approaches to productivity improvement, as the diagram below illustrates.

Figure 4: Key Productivity Approaches in the NHS

Source: Naylor et al (2010).

For the last decade, the UK has pursued productivity gains in health services. Their learning from that experience indicates that the opportunities to make significant recurrent productivity gains fall into four categories.

1. Improving productivity within existing services – reduce waste and running costs, improve procurement, reduce length of stay in hospitals, collaborate better with social services, redesign clinical roles and avoid using procedures or drugs of low clinical value.
2. Delivering care in the right settings (eg increasing care in the community for those with long-term conditions).
3. Developing new ways of delivering care (eg innovation from other health care systems).
4. Allocating spending more rationally (eg redirecting resources to prevention and early diagnoses) (Monitor, 2012).

4.3 What to focus on for mental health

It is clear from key informant interviews that there has already been thought and action regarding productivity oppportunities in New Zealand. Initiatives are underway across the country that aim to address productivity.

The combination of evidence in the literature and interviews with key informants suggest that the immediate priorities for New Zealand MH&A services are:

- action across the care pathway
- effective responses to unmet need and early detection
- changing ways of working.

Naylor and Bell (2012) concluded the immediate priorities for mental health in the NHS. They are:

- action across the care pathway
- effective responses to complex needs
- changing ways of working.

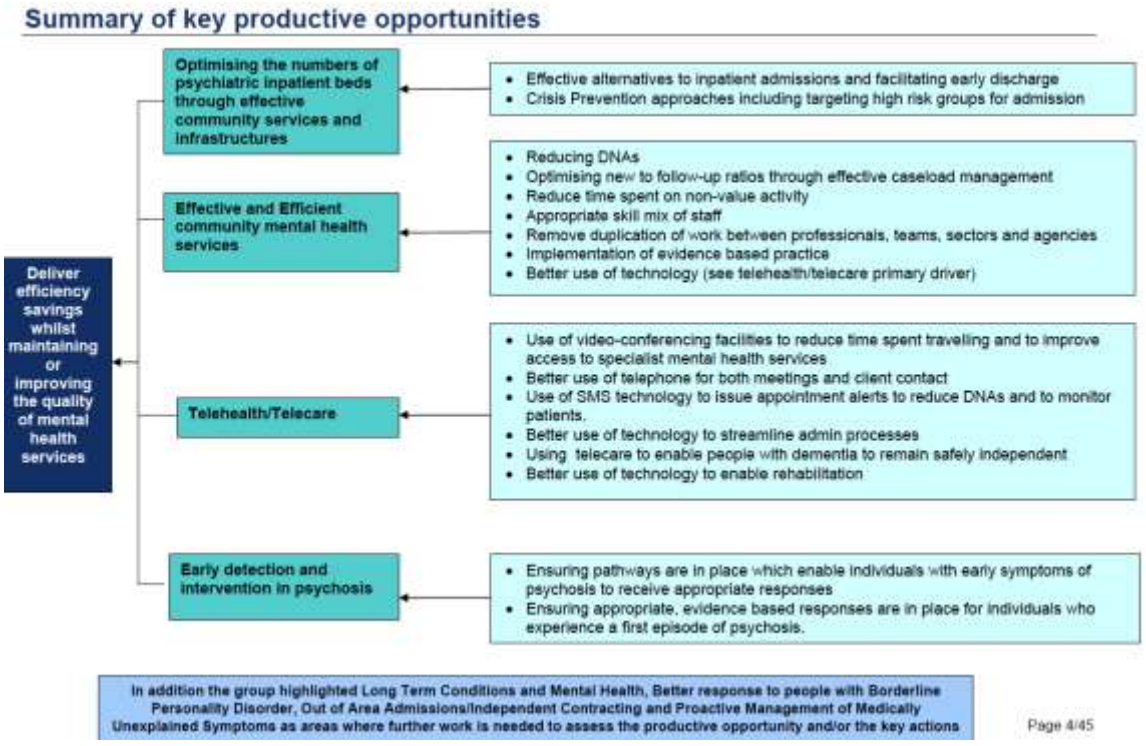
The diagram below illustrates the immediate priorities for the NHS in these three areas.

Figure 5: Productivity within mental health: immediate priorities

Source: Naylor and Bell (2012)

In Scotland, they reviewed the literature, analysed data, scanned actions that had delivered efficiency savings and sought the expert opinion of clinicians, managers, NGOs and service users to look at key actions to improve productivity in mental health services. They identifed four areas for action that would deliver efficiency savings whilst maintaining or improving the quality of mental health services. The diagram below is a summary of their findings.

Figure 6: Summary of key productive opportunities



Source: QuEST (2012)

4.4 Productivity opportunities across the health sector

The burden of disease in developed countries due to mental illness and addiction (in Disability Adjusted Life Years) now exceeds cardiovascular disease and cancer. In New Zealand, *Blueprint II* and *Rising to the Challenge* both identified the challenge of meeting increased demand and specified that meeting unmet need across certain population groups is a priority. Both these documents acknowledge that current services will need to transform and move towards an increased emphasis on prevention and early intervention, and ongoing community support to prevent unsustainable demand for acute and specialist hospital based services. This is particularly so for infants, children and youth, adults with high prevalence conditions (mild to moderate anxiety, depression, alcohol and drug issues and medically unexplained symptoms) and our growing older population.

"There are…. opportunities to make savings across the wider NHS by responding to mental health needs more effectively in primary care, accident and emergency, and acute hospital settings" (NHS Confederation 2009).

Mental and physicial health problems are strongly interdependent, and co-morbidities are common. Research demonstrates that intervening to improve mental health can improve prognosis of physical disease and associated costs (Naylor et al, 2010).

Naylor et al went on to identify three areas that offered opportunities for improvements in the interface between mental and physical health care to deliver productivity improvements across the wider health sector:

1. **Claiming the long-term conditions dividend – reducing unplanned hospital admissions by responding more effectively to the mental health and psychological needs of people with long term conditions, eg diabetes, arthritis, cardiovascular disease.**

   NICE guidelines on collaborative care for people with depression and a chronic physical health problem
   NICE recommends that collaborative care be considered for people with moderate to severe depression and a chronic physical health problem whose depression has not responded to initial treatment. This should normally include:

   - provision of a case manager responsible for overseeing and coordinating all components of care, with supervision from a senior mental health professional
   - close collaboration between primary and secondary physical health services and specialist mental health services
   - a range of interventions including patient education
   - Long term coordination of care and proactive follow-up.

   Source: National Institute for Health and Clinical Excellence (2009).

2. **Addressing medically unexplained symptoms – physical symptoms that lack a medically identifiable cause.**

   Medically unexplained symptoms in Suffolk
   Suffolk Mental Health Partnership has developed a training programme for local GPs on the identification and effective management of medically unexplained symptoms. At least one GP from each practice will attend the training over the next two years.
   They also working with the general acute hospital sector, NHS Suffolk and local GPs to develop several projects aimed at limiting the flow of specific groups of patients with medically unexplained symptoms to secondary care. These include:
   - primary care pain management groups to reduce referrals to the pain clinic
   - earlier psychological interventions for irritable bowel syndrome, using IAPT low intensity workers and cognitive behavioural therapy CBT therapists.

3. Improving services for older people – dementia and depression in particular, where there is considerable scope to reduce costs by providing specialist input into residential care facilities.

Hospital liaison in Leeds

A mental health liaison service for hospitals in Leeds, created as part of the National Partnerships for Older People Projects, succeeded in reducing admissions and facilitating early discharge for older people. The average length of stay for people with dementia fell by 54%, saving 1,056 bed days per year.

Care home liaison in Doncaster

A specialist liaison team was established in Doncaster and 2006 to provide mental health support to local care homes. After the first year, admissions from care homes to hospital had been reduced by 75%. The team has also been highly active in delivering training to care home staff and coordinating the work of care homes, mental health services and social services.

Crisis resolution for older people in West Suffolk

In 2006, the crisis resolution and home treatment team in West Sussex expanded its remit to include the provision of services to older adults in addition to those of working age. Admissions to hospital for older people were reduced by 31% without any adverse impact on patient or carer satisfaction.
Source: Anderson et al (2009).

5.0 Making it happen

The 'how'

"The same lesson popped up each time: just making a rational argument about why people ought to spread some form of excellence was rarely sufficient to provoke them into action. Skilled leaders found ways to stoke emotions that fuelled tangible and desirable actions. This observation dovetails with research on the forces that explain both individual behaviour and social movements" (Sutton and Rao, 2014).

The UK's insights and learning from implementing the first of its Productive series, 'The Productive Ward', is a good place to start. The NHS Institute suggests one straightforward technique that has been used with consistent success in relation to the implementation and assessment of innovation. It has been used successfully in New Zealand too. It is the PDSA model. The model has two components. The first is to establish a starting point by setting precise aims, defining measures that show whether or not those aims are being met and identifying change concepts.

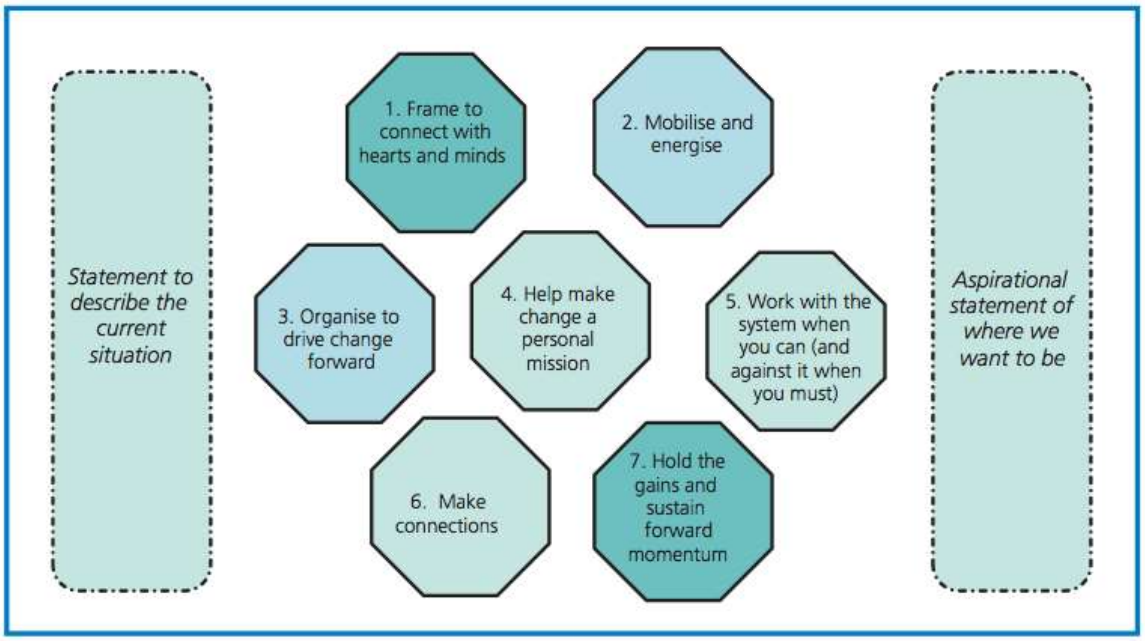
The second component involves the following:

Plan	Plan the change to be tested or implemented.
Do	Carry out the test or change.
Study	Study data before and after the change and reflect on what was learned.
Act	Plan the next change cycle or plan implementation.

Integrating design thinking into organisations has found increasing popularity, especially with those who favour customer-led design. Visit Stanford's D.School if you are interested in learning more (http://dschool.stanford.edu/our-point-of-view/#design-thinking).

The seven design principles for radical change from Kings College and the NHS Institute capture the key actions to bring about change.

Figure 7: Seven design principles for radical change



The 'what'

The literature suggests that before deciding exactly what needs to be done, assess the readiness of your organisation to do it:

- Is it the right time?
- Do you have the resources?
- Can you measure and monitor results?
- Is there executive support and does it fit with your strategic direction?

Once readiness has been confirmed, invest time getting clear about the problem – it will drive the solution and will be more likely to result in productivity improvement.

What should be the focus for productivity improvement initiatives?
Appleby et al (2010) identified opportunities that are pertinent to service level initiatives and they were to increase productivity through:

- reducing variation in clinical practice and improving clinical decision making
- new ways of working and skill mix changes
- thinking creatively about workforce incentives, including better use of current contractual frameworks.

5.1 Essential steps for developing and implementing productivity initiatives

These 11 essential steps are the culmination of considering the extensive body of knowledge about successful productivity initiatives in health care and other organisations, internationally and in New Zealand. They also take into account the

current environment for MH&A services in New Zealand. Together they represent well-informed advice on which to base the next actions to improve productivity in MH&A services in New Zealand.

This is a generic process that can be used for any initiative. In keeping with the language of productivity improvement, it appears that there is variation across DHBs both in their approach and in their readiness to engage with any new productivity initiatives, particularly at a national level. The following essential steps are relevant to all DHBs (NGOs and PHOs) regardless of their current approach.

Choose where you need to put your energy; where you believe you will get your best return for the time and energy invested.

Start here…

1. Know the problem from all points of view

   Being very clear about the problem will ensure that all the time and energy put into fixing it works. The problem definition process takes time. Invest time to confirm the nature of the problem from the perspective of service users, your workforce, your partners in primary care and NGOs.

2. Have an aim

   Having an aim sets a direction of travel. It won't be a straight path, and there are many ways to get there, but the aim ensures that people are all clear about where they need to head and what the ultimate goal/objective is. Smaller aims and objectives can be set once the big aim is agreed.

Do not pass go until…

3. Leadership and executive support is confirmed

   This will be vital if the initiative is going to succeed. One of the key findings from all improvement science (including productivity initiatives) is the importance of initial and ongoing support from leaders and executives. Remember that your leaders will be scattered through your hierarchy. They are people who are key influencers and inspire others. Make them part of your guiding coalition.

4. Investment is agreed

   How many times have you seen agreement to start a new initiative with little or no new resource to either start it, or keep it going? The evidence shows clearly that there needs to be up front and ongoing investment of people and resources to succeed with productivity initiatives.

5. Workforce are engaged

   Probably the most compelling of the factors for productivity initiatives is engaging your workforce. Considering them as an asset rather than just an 'input' to your initiative will set the scene. They are the most expensive of your resources, they

will be at the front line of any change and improvement, they are in short supply whilst demand is growing. Invest time in understanding (recommendation 1 helps with this) and involving them in designing the initiative. Give them the training and support they need to engage and support the change.

6. You can measure improvement

   What to measure will be guided by local conditions and current initiatives. However, it's vital that people know that what they are doing is progressing towards the agreed aim. Going through change can be frustrating and uncomfortable, so having the ability to see the results means stopping doing what isn't working and continuing to do what is working. That means having agreed metrics for your initiative, ideally with a mix of input, output and outcome measures.

Keep it going with…

7. Quick wins

   As with other improvement initiatives, being able to move quickly, try things out, learn and change is important for teams to get a sense of progress, and to ensure you continue heading towards your agreed aim. Many DHBs have already had experience with Plan Do Study Act (PDSA) cycles which provide the basis for quick wins.

8. Evidence based practice

   Focus on outcomes and evidence based practice – indicators and actions need to match service user need.

9. Feedback

   Feedback to all those committed and involved with the initiative is vital. That means service users, clinicians, managers, leaders, executive team, board and maybe the PHOs, NGOs, the Ministry of Health if it is a wider collaborative initiative. The feedback will be slightly different for each audience. But the key piece of information will be progress towards the agreed aim. Focus on reporting outcomes as they will be most engaging, then outputs. Reporting inputs, particularly in isolation from outputs or outcomes is the least engaging feedback for teams.

10. Leverage your productivity initiative effort through the KPI Programme

    The KPI Forum has engagement and credibility across the sector. It can promote cross sector learning and development of outcome measures including patient reported outcome measures to measure productivity beyond face to face contact. The current interest of the Ministry of Health to work with the KPI Programme to develop an agreed set of outcome measures is the ideal platform to progress the internationally promoted concept of patient reported outcome measures.

11. Innovating

    Productivity often requires new solutions, new ways of looking at the problem. Look beyond health for people and processes to help you innovate. Diversity is key. Use co-design models like the Stanford's D.School model, involve people from other industries, and of various ages and backgrounds to come up with new solutions.

5.2 Caution required

"Change is hard, requires investment in advance of any savings and will require experiment and evaluation, but it will transform the lives of people using services" (Gilbert and Peck, 2014).

Research in mental health service transformation identified a number of important lessons and unintended consequences. They are listed below.

- Danger of re-institutionalisation when institutionalised professional behaviours continue in community settings.
- Danger of system complexity with complex care pathways developed for specific groups of people or needs results in an inflexible system that leaves people confused about access points and referral criteria.
- Need to understand the nature and cause of professional resistance to change.
- Need to understand the complexities for partnership working inter-sectorally and cross sectorally as there may be differences in agenda and in the focus of care.
- Need to engage primary care as part of the solution, not the problem.
- Unintended consequences on bed numbers and occupancy with new demands on beds from groups of service users not previously cared for (eg specialised and forensic units).
- Temptation to be overly optimistic about outcomes and cost savings.
- A lack of flexibility in implementation with a focus on service structures rather than the transformation process or desired outcomes for patients (Gilbert and Peck, 2014).

Appleby et al (2010) add a note of caution when estimating the impact of improvement strategies. They advise caution in the following areas:

- Double counting with both primary and secondary care anticipating financial benefits of reduced emergency admissions.
- Not distinguishing between changes that increase productivity by adding value and others that reduce costs.
- Simply equating the productivity challenge to a 4% cut in baseline budgets.
- Taking financially led, incremental approaches such as crude across the board

efficiency savings (what they call 'salami slicing') or indiscriminate cuts in resources (slash and burn).

6.0 Measuring what matters

"Given the development infancy of system-level measures of change in the quality of health care provided in New Zealand, and until there is broad discussion and agreement on how to construct such measures and combine these with the existing quantity measures, care should be taken in presenting such information" (Statistics NZ, accessed from website June, 2014).

How do you decide what matters when it comes to measurement? The National KPI Programme have already generated discussion within this group about measuring productivity – how the current KPIs are used, their strengths and weaknesses. The feedback from the key informant interviews shows that there is interest in improving the way that productivity in MHA services is measured. In particular moving beyond the current "face to face" measures which were seen by some as ignoring other essential productivity type work, and discouraging new models of shared care.

At the national level too, there is interest in improving the way that productivity in health is measured. Following a feasibility study into measuring productivity in the health sector, 10 recommendations were made regarding the collection of health care data. The Ministry's service development plan (SDP) indicates their intention to work with the KPI Programme to develop an agreed set of outcome measures and KPIs. This process has the potential to provide MH&A services with a renewed and more acceptable suite of productivity measures.

Also in the mix is the Health Research Council-funded three year study with the objective of:

- quantifying, in readily interpretable terms, the extent of between-hospital variation in the access to inpatient and outpatient services (time to service and variation in relation to geographical location and socioeconomic status)
- assessing the quality and safety of hospital services using a range of mortality and clinical indicators and follow up attendances
- assessing the productivity and efficiency of hospital-related services
- analysing the effectiveness of primary health care services using preventive health (ambulatory sensitive) indicators
- studying the effectiveness and appropriateness of health service delivery
- assessing the quality of new outpatient datasets by means of comparisons with established primary health care data (University of Auckland, accessed from website June, 2014).

The use of outcome measures and, more particularly, patient reported outcome measures (PROMs) are discussed in quality improvement literature. The Institute for Healthcare Improvement's (IHI) avoidable rehospitalisations initiative provides a useful example of outcome measures related to readmissions, patient experience, and process measures (IHI, accessed from website June, 2014). These are listed in Appendix 5. Closer to home and in the mental health area, Western Australia have looked at outcome measurements for community mental health services (Wilson et al, 2011). NGOs in New Zealand have been using outcome measures from the Activity and

Participation Questionnaire (APQ6) and whole of health quality of life measures for service users to self report.

7.0 Examples of Best Practice

The most consistently reviewed and evaluated examples of best practice in the productivity area are from the UK Productive series, in particular The Productive Ward. The NHS Insititute for Innovation and Improvements (NHS Institute) sought to increase the proportion of time nurses spent in direct patient care, improve experience for staff and patients, and make structural changes to the use of ward spaces to improve efficiency in terms of time, effort and money (Kings College, 2011).

There are a mix of methodologies used in the Productive series which includes The Productive Mental Health Ward, The Productive Leader and The Productive Community Health Centre. They include lean thinking and Six Sigma. Many DHBs and NGOs have experience with these.

Here are five case studies indicating use of best practice productivity change, some within The Productive Ward, one from the USA and New Zealand.

Service Line Management – UK

One trust in the UK introduced more devolved budget and financial responsibility through service line management. Responsibility for achieving targets shifted to clinical teams is supported by finance and management. Although these targets have been agreed from the top of the organisation, the way in which they are achieved is increasingly the responsibility of clinical teams. This has given the organisation renewed hope:

"Even though we have only been doing this for three weeks, we are already seeing a real culture change. It's absolutely fascinating, totally gob-smacking! We had a board meeting yesterday, and it's completely amazed us-this shift in culture - 'here's your autonomy, here are your local services, you are responsible and accountable for them but we will give you the space to be able to do the things you want to do within these constraints.' This management approach will enable us to realise some local efficiencies within the hospital." (Appleby, 2014).

New Service – Early intervention UK

The impact of additional funding of £35,000 to liaison psychiatry service for a liaison nurse in the North East was evaluated over one year and compared with the previous year. As a result of the additional funding:

- the team saw more patients (an increase from 476 to 546)
- admission rates of patients with psychiatric illness to medical beds dropped from 39% to 35%
- the average bed stay for patients with psychiatric illness in the acute hospital was one day
- crisis team referrals dropped from 35% to 24%
- savings associated with decreased attendances and admissions were £59,000

- an additional two more liaison nurses were funded on the back of these results (NHS Confederation, 2009).

Liaison Psychiatry UK

A region's liaison psychiatry services recently implemented a psychological treatment service for patients presenting with self harm who discharged themselves against medical advice – these patients are at high risk of further self harm and suicide. The psychological treatment is known as PIT and has been evaluated in a randomised controlled trial. It consists of just four sessions of psychotherapy. From August 2007 to January 2008, 42 patients were offered treatment. The self harm attempts for these patients for the three months prior to the index episode of self harm were 41 attempts by 18 patients and the number of self harm attempts in the three months following the treatment were 11 attempts by six patients (NHS Confederation, 2009).

RED: Re-engineered Discharge

Boston University Medical Centre developed a process for improved discharge coordination called Project Re-Engineered Discharge (RED). The project is located at an urban hospital that serves a low income, ethnically diverse population.
The intervention includes a number of components, which are facilitated by a specially trained nurse called a discharge advocate who does the following:

- educates the patient about his or her diagnosis throughout the hospital stay, makes appointments for clinician follow-up, test results follow up, and post-discharge testing
- organises post-discharge services
- confirms the medication plan
- reconciles the discharge plan with national guidelines in clinical pathways
- gives the patient a written discharge plan, assesses the patient's understanding of the plan
- reviews what to do if a problem arises
- expedites transmission of the discharge resume (summary) to outpatient providers; and
- calls to reinforce the discharge plan and offer problem-solving 2-3 days after discharge.

Results:

- Interventions significantly reduced hospital utilisation.
- 80 patients in the intervention group had 116 episodes of hospital utilisation (61 ED and 55 readmissions) during the 30 day follow-up period; 99 patients in the usual care group had 166 episodes of hospital utilisation (90 ED and 76 readmissions during the 30 day follow-up period.
- Subgroup analysis revealed that the interventions were most effective for patients with higher rates of hospital utilisation in the preceding six months (Boutwell et al, 2009).

Staff wellbeing – New Zealand

Evidence suggests that participation in the Productive Ward programme improves staff job satisfaction. Staff at Waikato Hospital completed a survey before and after starting on the programme. The DHB reported that staff felt more involved in the organisation of the ward and felt that equipment was more readily available when needed. Bay of Plenty DHB reported improvements in the level of trust and commitment among staff in the showcase ward at Tauranga Hospital during the first year of the participation. However, reported reductions in staff turnover appear to be more difficult to distinguish from changes in economic climate (Moore et al, 2013).

8.0 Applicability to NZ mental health and addiction services

It is not uncommon to hear "But we're different" as a reason to dismiss a wide variety of learning and evidence. This happens at a country level, sector level, industry level, organisational level and local community level. There are always factors that make us unique. But we are not necessarily different enough to dismiss without consideration what some very clever people have learnt from their research and experience. In this case, the evidence presented in this report is highly applicable to MH&A services in New Zealand.

Many components of the successful approaches presented in this report have already been tested by DHBs in a wide range of quality improvement initiatives. Conversations with key informants highlighted the initiatives and innovation that have been, and are currently underway. In some cases the methodologies have been directly imported from the UK, as is the case with the Productive series – releasing time to care. The Productive Ward and The Productive Operating Theatre have been reviewed under New Zealand conditions and show positive results (Moore and Blick, 2013).

The Moore and Blick report on the experience of implementing The Productive Ward in New Zealand found that there was wholesale support for the programme, however the success of the programme was being hampered by:

- patchy implementation
- a lack of programme support
- lack of organisation wide support
- variable training.

The vital common factors for those DHBs who successfully implemented The Productive Ward compared to those that were less successful were:

- stronger leadership from the board, executive and front line management
- a more structured programme roll-out plan, with clear accountability and reporting
- being able to use training budgets laterally to release staff to work through modules.

"Organisations that have unified quality and change approaches seem to have made the combination of projects more relevant to staff and to have reinforced each aspect of the otherwise competing programs. They typically exhibit greater structure around the change management programmes. They are more easily able to identify the resources needed to support these programs. We were likely to see a structured plan, regular milestone checkups, and a sense of pace to roll out the modules in a timely manner" (Moore and Blick, 2013).

New Zealand is not alone in grappling with appropriate measures for productivity. Outcome measures and patient reported outcome measures (PROMs) are the most challenging. The literature provides a useful basis for discussion about appropriate measures to be used here in New Zealand.

There are other New Zealand developed innovations that, when used alongside other productivity initiatives, are reported to show better understanding and measurement of productivity. The Care Capacity Demand Management programme (CCDM), for

example, matches demand for services (care required by patients) with the resources required (ie staff, knowledge, equipment, facility).

When it comes to decisions about what to focus on with regard to productivity initiatives, the applicabillity will depend on the problem definition, and other unique factors for the DHB. It is vital that the problem definition for productivity in mental health services is confirmed before proceeding with any further initiatives.

9.0 Collaborative approach to productivity initiatives

The Clinical Directors and General Managers' Group are interested in looking at opportunities to take a collaborative approach to improving productivity.

Undoubtedly collaboration provides the opportunity to avoid re-inventing the wheel and leverage system-wide learning. Options for collaboration start within each of the DHB's mental health services – hospital and community services, crisis and hospital teams for example. These options are useful for 'trying out' collaborative practices in readiness for any regional or national collaborative opportunities.

The starting point for deciding whether or not it's the right time to take a collaborative approach will depend upon two main factors:

1. Agreement between collaborative participants on defining the problem, their shared aim, and agreed metrics.
2. Readiness of each participant to engage in collaborative activities (depends on factors such as leadership support, workforce engagement and investment of resources).

Once these two factors are addressed, collaboration at any level can occur - locally, regionally, inter-regionally, nationally or internationally. Depending on the issue that is agreed, the collaboration can be with a wide range of participants. For example:

- within DHB mental health services
- between mental health and other DHB services
- between mental health, primary health and NGO services.

The conversations that have begun through the KPI Programme provide a good starting point for determining if there are some common issues that would benefit from collaborative effort. For example, DHBs and NGOs interested in improving the productivity in their delivery of adult community mental health services. There may be services that have already successfully addressed productivity issues. In these cases, it makes sense to learn from their experience.

In the course of conversations with key informants, they expressed aspirations for mental health services. There was one theme that came up consistently – and that was the desire to have one joined up system. The comments below provide a useful starting point for discussing options for collaborating around these aspirations.

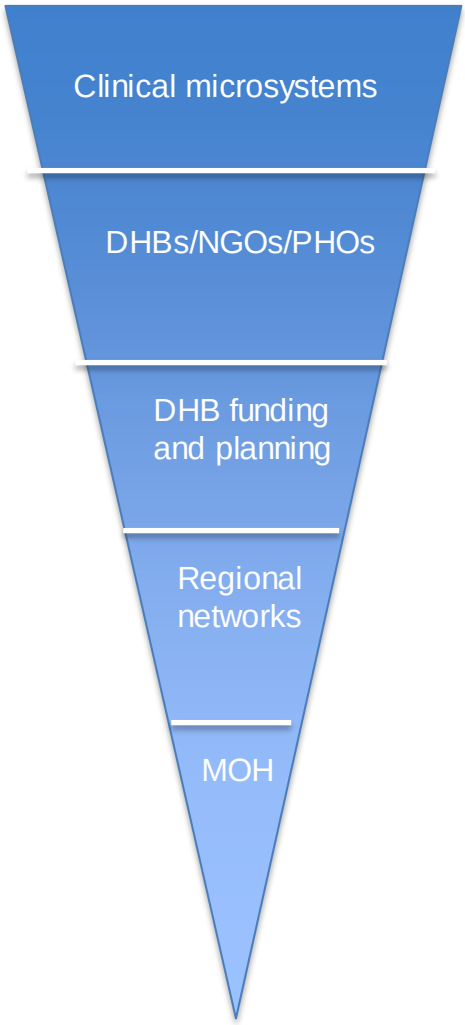
One joined up system

- Seamless NGO primary care DHB – the system works with the community and service users.
- One IT portal so no duplicate information
- One assessment not duplicate assessments
- Whole of system focus - engage with NGOs and primary care
- Electronic diaries with open access
- Focus on health and well being – access to primary care with emphasis on keeping self well and taking responsibilty for own wellbeing
- Track patient journey from NHI perspective
- Move from being islands

- Integrated care plans.

The desire for 'one joined up system' expressed by key informants can only happen if there is a system-wide response to productivity. That means collaboration at all levels of the system. By way of example, let's take the objective of increasing access to talking therapies, which has been identified as a way of improving the capability of people to become more resilient and deal with life's challenges. The diagram below illustrates the types of activity that would be necessary across the system to make it happen.

Figure 8: Example of system wide response to improving access to talking therapies



Engaging clinicians
- Supporting and enabling them to access or offer talking therapies
- Different ways of delivering services

Improving operational efficiency
- Tackling variations in access
- Ensuring links between services
- Making sure right mix of services

Doing things right and doing the right things
- Priority setting and managing demand
- Enabling greater integration

Setting the tone for the region
- Supporting quality
- Supporting change and leadership
- Promoting innovation

Defining the rules of the game
- Setting high level direction
- Ensuring capital investment in change

10.0 Summary and Conclusions

The main purpose of this report is to inform future actions by DHB clinical leaders and general managers pursuing productivity improvement. It provides a summary of research, learning and evaluation of productivity initiatives within the health sector and beyond, both internationally and in New Zealand.

The evidence presented in this report will not be a surprise to most readers. The science of improvement and change provides the foundation for the success factors identified for productivity initiatives. However, what we also know from the literature and from experience, is the simplicity around knowing what works is commensurate with the difficulty with making it happen. Whilst in principle making improvements seems straightforward, making it happen is not easy.

Each DHB is currently investing time and energy in understanding and improving services using a wide variety of change and improvement techniques. Why take on anything new? What commitment will there be for it? What we know from the evidence is that starting a new initiative without consideration for other initiatives is not a good way to start.

A key message of this report is to proceed with consideration and care. There is no one size that fits all. Invest at the outset in ensuring that the focus is on the right issue and ensure that the leadership support and resources are there before commencing.

The power of metrics to drive productivity is indisputable. The interest in, and motivation for, exploring better outcome measures has been seen through the deliberations of the KPI Programme. The time is right to progress work on agreeing appropriate measures, particularly as the Ministry of Health has signalled work in this area in the Service Development Plan.

The focus on outcomes for service users is an enduring message through the international literature, along with the vital asset that is the health workforce. Any productivity initiative needs to proceed with these two groups of people in the forefront of the design and implementation of the initiative.

10.1 Where to next?

This paper will be tabled at the Clinical Directors and General Managers' meeting on 19 August 2014. The information provided in this report, plus the impetus of discussions in the KPI forum, and the diverse experience across DHBs with implementing productivity initatives is a good foundation to for any action decided by the group. It's time for some action.

The group will need to:

1. confirm a common area for action (the key informants advice would suggest adult community health) and
2. choose a specific and well contained area (eg, streamling referral process, clarifying roles in community teams) to get some PDSAs underway.

Look to link action with the KPI Programme, seek support from other players like Te Pou, and include NGOs and PHOs as part of the team to getting things moving. The time is right to get some concerted system wide effort to improve productivity in mental health services in New Zealand.

11.0 Appendices

Appendix 1: The agreed scope for this work

The Ministry of Health has provided funding via the Mental Health Commissioner to Ko Awatea to undertake a project to support progressing knowledge and application of productivity improvement approaches in mental health and addiction (MH&A) services.

Sue Johnston from Artemis Group Limited was contracted by Ko Awatea to review international experience and best practice regarding productivity and mental health services. The following service components were agreed.

A. Literature review and information collection

Conduct a literature review from 2010 – 2014 based on international and local examples of effective approaches to productivity improvement. The literature review should not be limited to mental health and addiction services (MH&A services), but draw on knowledge gained in the wider health and disability sectors and other industries. The focus of the literature review should be on both effective strategies and implementation (the "what" and "how"), and effective means for measuring improvement.

MH&A Services are particularly interested in applying productivity approaches that impact on the following areas:

a. Empowered consumer and active family whānau participation
b. Workforce
c. Clinical practice
d. Care pathways
e. Governance and leadership.

B. Synthesis and Analysis

Conduct synthesis and analysis of effective strategies, approaches and measures identified in the literature review to include;

a. Key features of the successful strategies
b. Suitability to New Zealand MH&A specialist services
c. Approaches to effective implementation and monitoring
d. Conclusions and recommendations.

C. Reporting

A final report that will provide MH&A Services with enough information to confidently commence researching collaborative productivity initiatives. In particular it should cover the following areas:

a. An overview of successful approaches to enhancing productivity
b. Examples of best practice
c. Assessment of applicability to MH&A Services in New Zealand
d. Options for taking a collaborative approach to implementing productivity initiatives
e. Recommendations for developing and implementing productivity initiatives.

Appendix 2: Methodology

An expert advisory group nominated by DHB MH&A services clinical directors and general managers was established to develop the scope of the project and provide feedback on the draft report.

Expert Advisory Group
Robyn Byers (Chair), Nelson Marlborough DHB
Frank Rawlinson, Whanganui DHB
Jeanette Wylie, Mid Central DHB
Joanna Jastrzebska, Tairawhiti DHB
Tess Ahern, Counties Manukau DHB
Clive Bensemann, Auckland DHB and Chair National MH&A Service KPI Group

As a first step to completing this report, a request for literature on productivity was made to the Counties Manukau Health Library. The results of their search led to the identification of 11 resource websites, 46 reports and approximately 82 abstracts (some of these were duplicates). The abstracts and websites were appraised. A total of 75 reports were reviewed to inform this report.

The search strategy was to search several databases using two search topics:

- Productivity and improvement
- Productivity improvement measures for health care services, especially mental health.

The databases searched with the limits of English language and year coverage 2010-2014 were:

- Medline
- CINAHL
- PsycInfo
- Proquest Health and Medical Complete
- Proquest Nursing and Allied Health

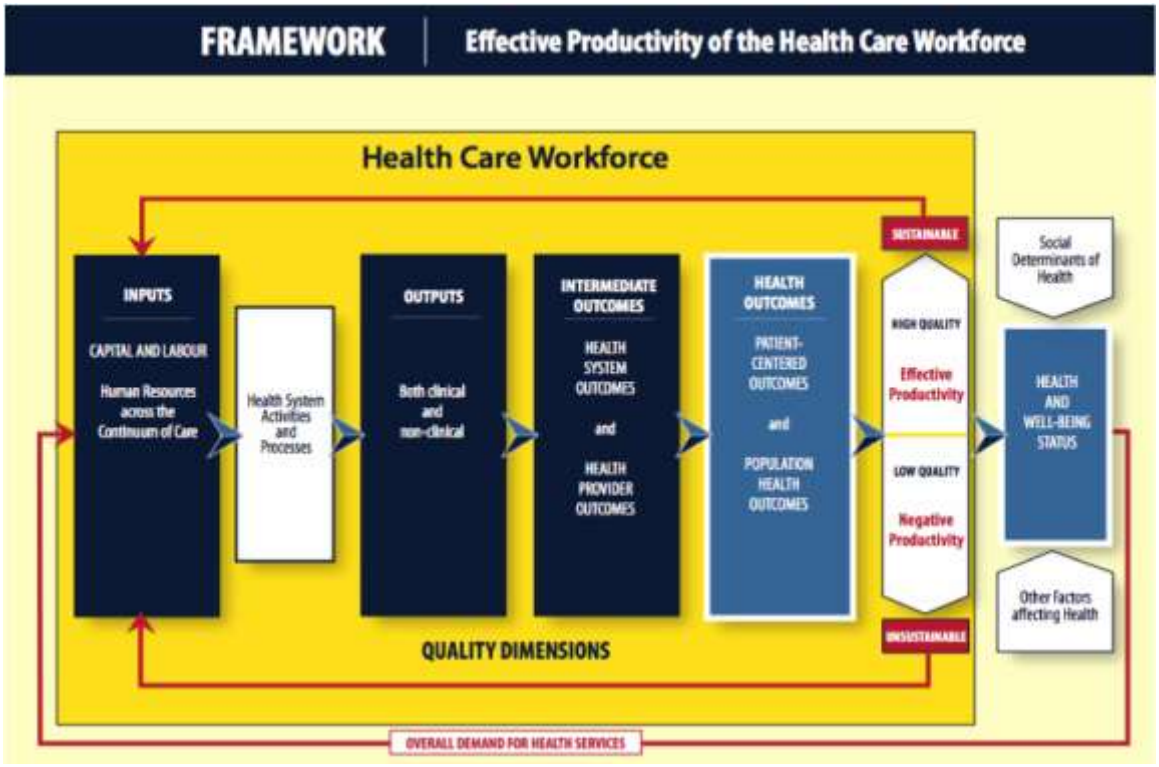
The library also did a manual search of internet sites relating to productivity and health sector productivity covering the NHS, Australia, Canada and the USA.

In order to supplement the literature with current experience and advice about mental health productivity initiatives in New Zealand, meetings or phone conversations were held with the following key informants between 28 May and 17 June 2014.

Key informants: interviewed	
John Crawshaw, Ministry of Health	Helen Wood, Waitemata DHB
Toni Gutschlag, Canterbury DHB	Robyn Shearer, Te Pou
Clive Bensemann, Auckland DHB	Barbara Disley, Richmond Fellowship
Tess Ahern, Counties Manukau DHB	Virginia Endres, Waikato DHB
Francois Rawlinson, Whanganui DHB	Emma Wood, Te Pou
Rees Tapsell, Waikato DHB	Jane O'Malley, Ministry of Health
Jeff Bennett, Waikato DHB	Derek Wright, Recovery Solutions
Rebecca Merrington, KPI Forum	Paul Ingle, Platform

Note that there were others key informants who were approached but were unable to contribute due to a variety of reasons.

Appendix 3: Framework - Effective productivity of the health care workforce



Source: Western and North Health Human Resources Planning, 2011.

Appendix 4: Viewing productivity from the wider world

In the world beyond health, there has been a great deal of interest in productivity. In the more market driven sectors of the economy, being productive goes hand in hand with sustainability and survival. Here in New Zealand, government agencies, trade unions, and business organisations have all turned their minds to improving the productivity of New Zealand business. As a result of their discussions, the "Workplace Productivity Education Programme" has been established by the New Zealand Council of Trade Unions (NZCTU).

The CTU's review of research from New Zealand and international workplaces led to the development of seven areas of focus for workplace productivity. Interestingly, these seven areas form the foundation for their education programmes in a variety of sectors including manufacturing, sales and service, public sector and health and education. This indicates their applicability to the mental health sector. The seven areas are illustrated in the diagram below.

Table 2: Seven areas of focus for workplace productivity (NZCTU)

Source: NZCTU website

Appleby et al provide a useful table summarising empirical evidence from the wider world which is reproduced on the next page. You will notice the similarities in themes (particularly the intrinsic drivers) with those expressed in the seven areas of focus illustrated above.

Table 3 What determines productivity? (Summarised from Syverson 2011)

	Interpretation	Evidence
Internal drivers: factors that operate within firms		
Managerial practice/talent	Managers are in charge of the processes that co-ordinate the application of inputs to make outputs. Better managerial decisions imply better productivity	Bloom and Van Reenan (2007) find a strong correlation between a firm's management practice and its productivity. In addition, more intense competition implied better management practice
Quality of labour and capital inputs	(Non-managerial) labour quality (e.g. educational and experience levels) and more up-to-date capital improve the production process and hence productivity	Fox and Smeets (2011) find only a modest impact of labour skills measures on productivity. More capital-intensive firms and those with more up-to-date capital are more productive (Sakellaris and Wilson 2004)
Use of IT and R&D	Greater use of IT improves production processes and better enables dissemination of more productive processes across a firm/plants. More R&D improves innovation and experimentation to improve productivity	Greater use of IT found to explain the higher productivity of US firms operating in Europe compared to European businesses (Bloom *et al* 2007)
'Learning by doing' (and 'forgetting')	Greater experience of a particular production process allows learning of best/most efficient ways of producing outputs. The flip side – 'forgetting' – damages productivity	Benkard (2000) shows productivity increasing in an aircraft firm as more units of the same plane are built. Such learning can be forgotten for various reasons, however, with a negative impact on productivity
Product innovation	Innovation designed to improve quality (if not output) to allow for higher prices improves revenue-based measures of productivity	Higher productivity found to be linked to new patents by firms (Balasubramanian and Sivadasan 2011)
Firm structure decisions	Organisational structure, type of industry they operate in, vertical and horizontal linkages, size, etc, may affect productivity levels directly and indirectly	Suggestive evidence that more decentralised firms achieve higher levels of productivity (eg, Bloom *et al* 2009).

Table 3 What determines productivity? (Summarised from Syverson 2011)

	Interpretation	Evidence
External drivers: factors that operate outside firms		
Productivity spill-overs	Firms may improve their productivity by learning of other, more productive, firms' production processes	Firms that are geographically and technologically 'close' tend to be more productive due to 'knowledge transfers' (eg, movement between firms of workers) (Moretti 2004)
Competition	As part of Darwinian selection, competition incentivises businesses to, for example, invest in innovative designs or reduce costs, which improves productivity	Syverson (2004) reports higher average productivity in more highly competitive market areas (less productive firms being driven out due to consumers more easily switching to firms charging lower prices)
Deregulation or proper regulation	Poorly or wrongly regulated industries can introduce disincentives to greater productivity through, for example, their pricing strategy or other regulatory actions	Electricity market reforms in the USA in the 1990s improved productivity as a result of new incentives imposed on producers by regulators (Fabrizio *et al* 2007)
Flexible input markets	Reductions in the financial and non-financial costs of hiring and firing labour or in accessing investment capital can improve productivity by allowing more productive firms to expand to meet demand (as a result of lower prices)	Hseih and Klenow (2009) show that Chinese aggregate productivity could increase by 30%-50% if US levels of efficiency in the use/matching of inputs were achieved

(Source: Appleby et al, 2014)

The factors shown are linked – none have been shown to operate in isolation from one another. What has not been answered, however, is which of these factors (if any) are most important? This leads Appleby et al to make the following observation:

"In some ways the lack of (empirical) knowledge in other sectors of the economy about what determines productivity is perhaps reassuring to the NHS; at least it is not alone in its struggle to get to grips with the business of efficiently converting inputs to outputs. On the other hand, this does little to help the NHS meet the productivity challenge it faces" (Appleby et al, 2014).

Appendix 5: Examples of outcome measures and patient outcome measures
Source: IHI website, accessed June 2014.

1. Outcome Measures: Readmissions

30-Day All-Cause Readmissions (overall hospital and pilot-unit)	• Percent of discharges with readmission for any cause within 30 days
30-Day All-Cause Readmissions (overall hospital and pilot-unit)	• Percent of discharges with readmission for any cause within 30 days
Readmissions Count (overall hospital and pilot-unit)	• Number of readmissions (numerator for 30-day all cause readmissions measure) for hospital and pilot unit(s)
Optional Measure: 30-Day All-Cause Readmissions for a specific clinical condition or subpopulation	• Percent of discharges in the desired subpopulation who were readmitted for any cause within 30 days of discharge

2. Outcome Measures: **Patient Experience**

HCAHPS Communication Questions (overall hospital)	• "During this hospital stay, how often did nurses explain things in a way you could understand?" (Q3) • "How often did doctors explain things in a way you could understand?" (Q7)
HCAHPS Discharge Questions (overall hospital)	• "Did hospital staff talk with you about whether you would have the help you needed when you left the hospital?? (Q19) • "Did you get information in writing about what symptoms or health problems to look out for after you left the hospital?" (Q20)
Care Transitions Measures (pilot unit)	• The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital. • When I left the hospital, I had a good understanding of the things I was responsible for in managing my health. • When I left the hospital, I clearly understood the purpose for taking each of my medicines.

3. Process Measures

Enhanced Admission Assessment for Post-Hospital Needs	• Percent of admissions where patients and family caregivers are included in assessing post discharge needs • Percent of admissions where community providers (e.g., home care providers, primary care providers and nurses and staff in skilled nursing facilities) are included in assessing post discharge needs
Effective Teaching and Enhanced Learning	• Percent of observations of nurses teaching patient or other identified learner where Teach Back is used to assess understanding • Percent of observations of doctors teaching patient or other identified learner where Teach Back is used to assess understanding
Real-time Patient-and Family Centred Handoff Communication	• Percent of patients discharged who receive a customised care plan written in patient-friendly language at the time of discharge • Percent of time critical information is transmitted at the time of discharge to the next site of care (e.g., home health, log term care facility, rehab care, physician office)
Post-Hospital Care Follow Up	• Percent of patients discharged who had a follow-up visit scheduled before being discharged in accordance with their risk assessment

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