INSTITUTE FOR HEALTHCARE IMPROVEMENT

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SUMMARY REPORT: 90-DAY PROJECT

Supporting a National Campaign to Reduce Bed Days (with the Counties Manukau District Health Board)

7/30/12

Executive Summary:

There has been an increase in hospital demand in Counties Manukau District Health Board (CMDHB) in New Zealand at a rate of 5.5% since 2005. This can be broken down into two parts: 3.5% based on demographic changes and 2% that is faster than expected. This has caused increased demand on their hospital facilities. This report describes the work that CMDHB has been doing for the last year.

At this time they have a collaborative process with many teams working in the following areas of interest:

- Healthy Hearts
- Better Breathing
- Health of Older Peoples (HOP)
- Cellulitis & Skin Infections
- Perioperative care
- Transitions of Care
- Predictive risk modelling
- Safer Medicines Outcomes on Transfer Home (SMOOTH)
- Very High Intensity Users (VHIU)

This report will summarize their work along with making a few suggestions for criteria to select new work. It will also make some suggestions for possible areas of interest for the next phase of this work.

I. Research and Development Team:

- John Whittington
- Amelia Cline
- This report is based on the work that is being led by Diana Dowdle and David Grayson

II. Intent:

The focus of this work is decreasing hospital bed days by 20,000 in CMDHB in New Zealand.

III. Background:

There has been an increase in hospital demand in Counties Manukau DHB at a rate of 5.5% since 2005. This can be broken down into two parts: 3.5% based on demographic changes and 2% that is faster than expected. This has caused increased demand on their hospital facilities.

This challenge is being met by the creation of a 20,000 Days Campaign in CMDHB. They have drafted specific performance targets for this work which state, "to accommodate demand for beds at Middlemore Hospital based on our information to date, the immediate targets to be adopted and achieved by 30th June 2013 are:

- To give back to our community 20,000 healthy and well days, by reducing hospital bed days by 20,000;
- To reduce 5,000 unnecessary hospital admissions; and
- To reduce requirements for beds by 66 beds"

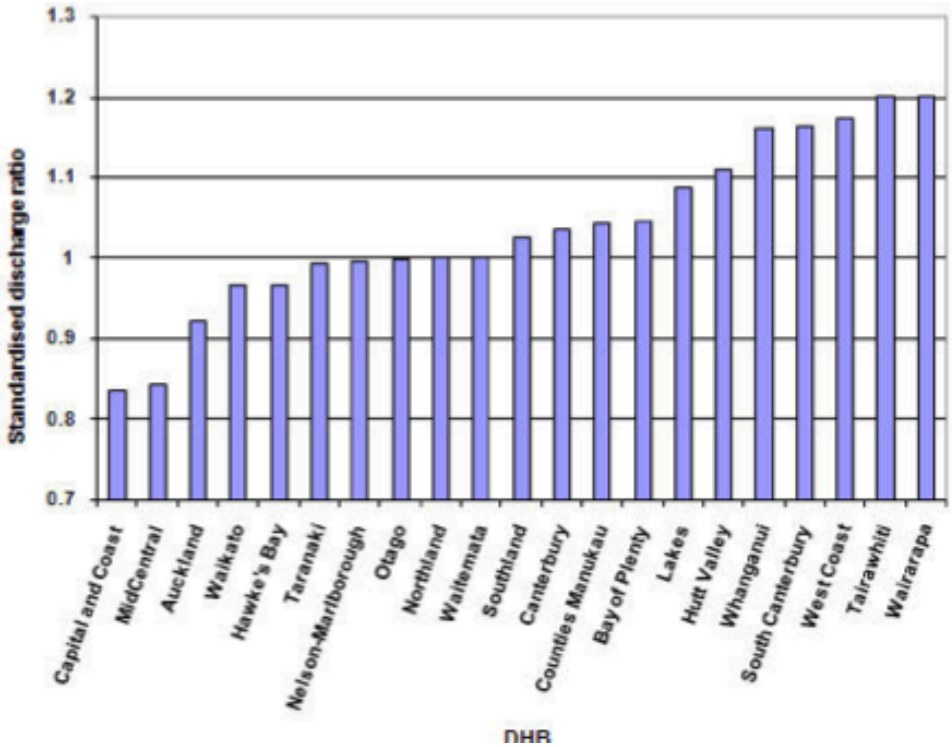
The following information comes from Malcolm L (2007), Trends in hospital bed utilisation in New Zealand 1989 to 2006: more or less beds in the future? The New Zealand Medical Journal 120(1264) http://www.nzma.org.nz/journal/120-1264/2772/

Table 2. Comparison of rates/1000 population for bed utilisation in New Zealand (2005/06), Australia (2005), NHS (2000), and US Kaiser Permanente (2000)

Variables	New Zealand	Australia	NHS (UK)	Kaiser (US)
Average length of stay (days)	3.9	6.1	5.0	3.9
Discharges/1000	157	341	200	69
Acute bed days/1000	441	1108	1000	270
Bed availability/1000	2.0	4.0	3.4	0.9

We can see from table 2 above that New Zealand as a whole compares favorably with the NHS and Australia but does not do as well as Kaiser.

Figure 5. Variation between DHBs in discharge ratios standardised for age, gender, and casemix 2005/06



From the same article by Malcolm L we get a sense of the variability across the DHBs in New Zealand.

This report will describe the changes that they developed and implemented along with structures that they created to get this work done. It is important to recognize that this report only focuses on changes they are making through the collaborative. There are other changes that have been underway and that are active which are not included in this report.

IV. Description of Work to Date:

The initial deliverables at the start of this project were:

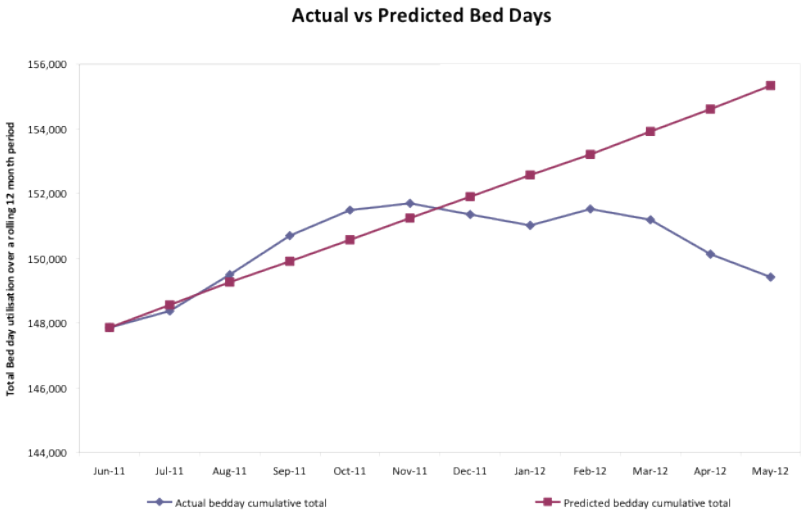
1. To support the team in New Zealand
2. To test a series of interventions that will lead to a decrease in bed days.

Halfway through the work we decided that the deliverables should be to help with selection of new topics along with criteria that would influence their new topic selection. It should be noted that for selection of the first phase of work they had a good method and process for selection. They also

already have a good list of candidates for the next wave of work. All of this will be outlined in the results section of this work.

V. Results of the 90-Day Scan:

During the last year CMDHB worked to develop a set of initiatives that could be used in a collaborative to help alleviate pressure on the hospital. A key measure for this work was based on the expected growth in utilization versus actual bed usage. The graph below shows bed utilization over a rolling 12 month period of time. The two lines represent actual utilization versus predicted utilization. The prediction is based on historical growth trends as discussed in the background section. This graph shows the Actual bed day usage compared to the predicted usage. If the actual is less than predicated then they will have bed day gain.



Operational Definition

- Bed Days: Actual patient time on bed
- Predicted bed day: Cumulative beds required calculated based on bed modelling
- Cumulative: Previous 12 months of data from the current month

Criteria: Middlemore, Age >-15 years, Surgical/Medical specialty (incl. Gynae), Acute and Elective

The difference between expected and actual utilization is 5921 days on June 13th. For a more detailed measurement dashboard please see Appendix A.

Through a selection process they identified a set of interventions that fall under the following headings:

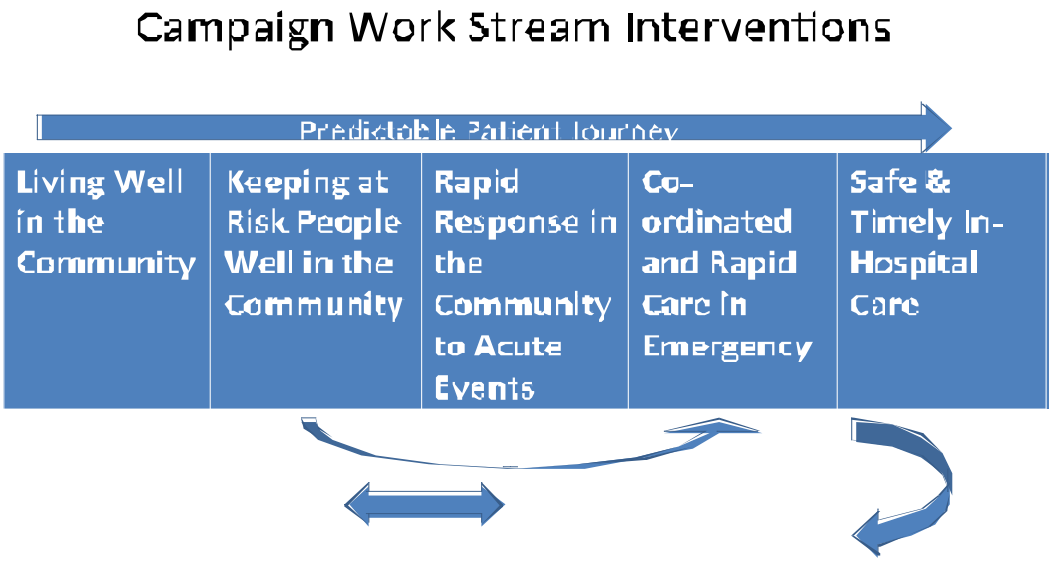
- Healthy Hearts

- Better Breathing
- Health of Older Peoples (HOP)
- Cellulitis & Skin Infections
- Perioperative care
- Transitions of Care
- Predictive risk modelling
- Safer Medicines Outcomes on Transfer Home (SMOOTH)
- Very High Intensity Users (VHIU)

For each of the areas above there may be more than one intervention being carried out.
For more details on most of the interventions and measures associated with each see appendix B

These areas of focus break down into the first four above which represent patient conditional groups with a range of integrated interventions and the next group which represents enablers across a number of conditional groups or clinical specialties.

The drawing below is another way the team in New Zealand characterizes the work. They have thought about the interventions and how they impact the patient journey across the continuum. Appendix C shows this intersection between areas of intervention and the patient journey.



A key question that they had to answer was by what mechanism they would execute these changes. Instead of using some form of command and control they are using an IHI breakthrough collaborative model: a series of face to face meetings with action periods between which the teams work on testing and learning their way through the interventions. As seen in appendix B the teams

have developed aims and measures for their various interventions. They plan to launch another phase of projects. In the first phase they used the following selection criteria:

1. Likelihood the proposed intervention will achieve the predicated bed day saving in year 1;
2. Intervention state of readiness to implement (include and expect delays);
3. Number of predicted bed day savings;
4. Transferability (defined as an extension of the concept of this initiative to other types of patients); and
5. Scalability (defined as an extension of this initiative to more of the same type of patient).

They used the software called 1000 minds (http://www.1000minds.com/) to develop the weighting for these criteria. The figure below shows the criteria plus weighting.

Saving 20,000 Bed Days Campaign - Collaborative Prioritisation Framework			
Likelihood the proposed intervention will achieve the predicted bed day saving in Year 1		**Relative Weighting**	
	Low Likelihood - Little confidence that intervention will achieve its predicted bed day savings	0.00%	
	Moderate Likelihood - Confident but with some reservations	27.80%	
	High Likelihood - High level of confidence that proposed intervention will achieve its predicted bed day savings	38.90%	
Intervention State of Readiness to Implement (include any expected delays)			
	Long delay (>12 months lead in time to implementation expected)	0.00%	
	Moderate delay (>3 months < 12 months lead in to implementation expected)	22.20%	
	Already in place or < 3 months required to establish	25.00%	
Year 1 Predicted Bed Day Savings			
	< 1000 bed days	0.00%	
	1000-2500 bed days	13.90%	
	>2500 bed days	19.40%	
Transferability - Extension of the concept of this initiative to other types of patients			
	None apparent	0.00%	
	Yes	8.30%	
Scalability - Extension of this initiative to more of the same type of patients			
	Year 1 > 80% of potential	0.00%	
	Year 1 - 20% to 80% of potential	5.60%	
	Year 1 - <20% of potential	8.30%	

And this figure illustrates how 13 interventions where ranked.

Intervention	Rank	Total score	Year 1 Predicted Bed Day Savings	Likelihood of the predicted bed day saving in Year 1	Readiness to Implement (include any expected delays)	Scalability - Extension of this initiative to more of the same type of patients	Transferability - Extension of the concept of this initiative to other
CBRT COPD	1st	97.2%	>2500 bed days	High	Moderate delay (>3 months < 12 months lead in to implementation	Year 1 - <20% of potential	Yes
CBRT Cardiac CHD and CHF	2nd=	91.7%	1000-2500 bed days	High	Moderate delay (>3 months < 12 months lead in to implementation	Year 1 - <20% of potential	Yes
CBRT Frail Elderly	2nd=	91.7%	1000-2500 bed days	High	Already in place or < 3 months required to establish	Year 1 - 20% to 80% of potential	Yes
Predictive Risk Modelling	2nd=	91.7%	>2500 bed days	High	Already in place or < 3 months required to establish	Year 1 - <20% of potential	None apparent
Cellulitis Clinical Pathway	5th	88.9%	>2500 bed days	High	Moderate delay (>3 months < 12 months lead in to implementation	Year 1 > 80% of potential	Yes
ERAS expansion	6th	83.3%	>2500 bed days	Moderate	Moderate delay (>3 months < 12 months lead in to implementation	Year 1 - 20% to 80% of potential	Yes
GP Triage	7th	80.6%	1000-2500 bed days	Moderate	Moderate delay (>3 months < 12 months lead in to implementation	Year 1 - <20% of potential	Yes
MM Central	8th	77.8%	>2500 bed days	Moderate	Already in place or < 3 months required to establish	Year 1 - 20% to 80% of potential	None apparent
Botany Locality Care Cluster Pilot	9th	63.9%	< 1000 bed days	Moderate	Moderate delay (>3 months < 12 months lead in to implementation	Year 1 - 20% to 80% of potential	Yes
Primary Care Ambulance Transport Options	10th	58.3%	< 1000 bed days	Moderate	Already in place or < 3 months required to establish	Year 1 - 20% to 80% of potential	None apparent
Predominant Consultant Model in EC	11th	27.8%	>2500 bed days	Low	Long delay (>12 months lead in time to implementation expected)	Year 1 > 80% of potential	Yes
Advanced Care Planning	12th	25.0%	>2500 bed days	Low	Long delay (>12 months lead in time to implementation expected)	Year 1 - 20% to 80% of potential	None apparent
Surgical Hip Fracture Management in over 64yrs	13th	8.3%	< 1000 bed days	Low	Long delay (>12 months lead in time to implementation expected)	Year 1 > 80% of potential	Yes

VII. Conclusions and Recommendations:

CMDHB is focused on decreasing bed days by 20,000 by 30th June 2013.To accomplish this work they have developed support infrastructure and a collaborative model to engage multiple groups around a set of key areas.

Those key areas are:

- Healthy Hearts
- Better Breathing
- Health of Older Peoples (HOP)
- Cellulitis & Skin Infections
- Perioperative care
- Transitions of Care
- Predictive risk modelling
- Safer Medicines Outcomes on Transfer Home (SMOOTH)
- Very High Intensity Users (VHIU)

For more detail on the above see appendix A

At this point in time they are showing some reduction in bed days but it is probably not related to the present work but to past work. The present projects are either too early or not a scale to have that much impact.

IHI should continue to work with CMDHB on this project to continue to gain insight from a frontline organization that is making a difference in improving health care. This work has the potential to be used on a larger scale in New Zealand as well as any place in the world that is trying to contain the growth of the acute care sector.

In support of this work they requested some suggestions for evaluation criteria for new projects. They had a strong process for selection in the first phase of this work and we made suggestions for new criteria that they might use to modify their present process. See appendix D for more information.

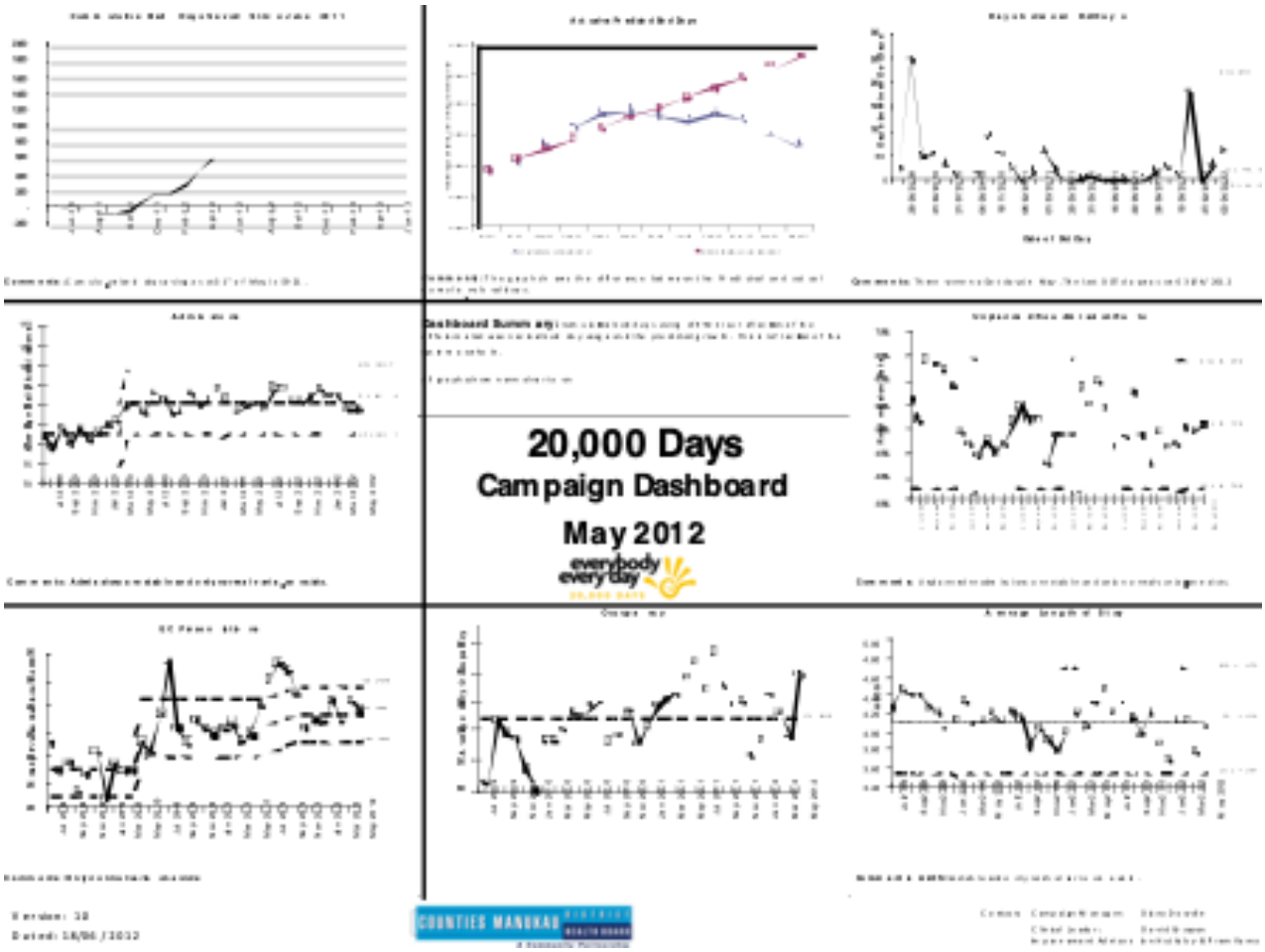
In addition they asked for suggestions for new topics for phase two. See appendix E for these.

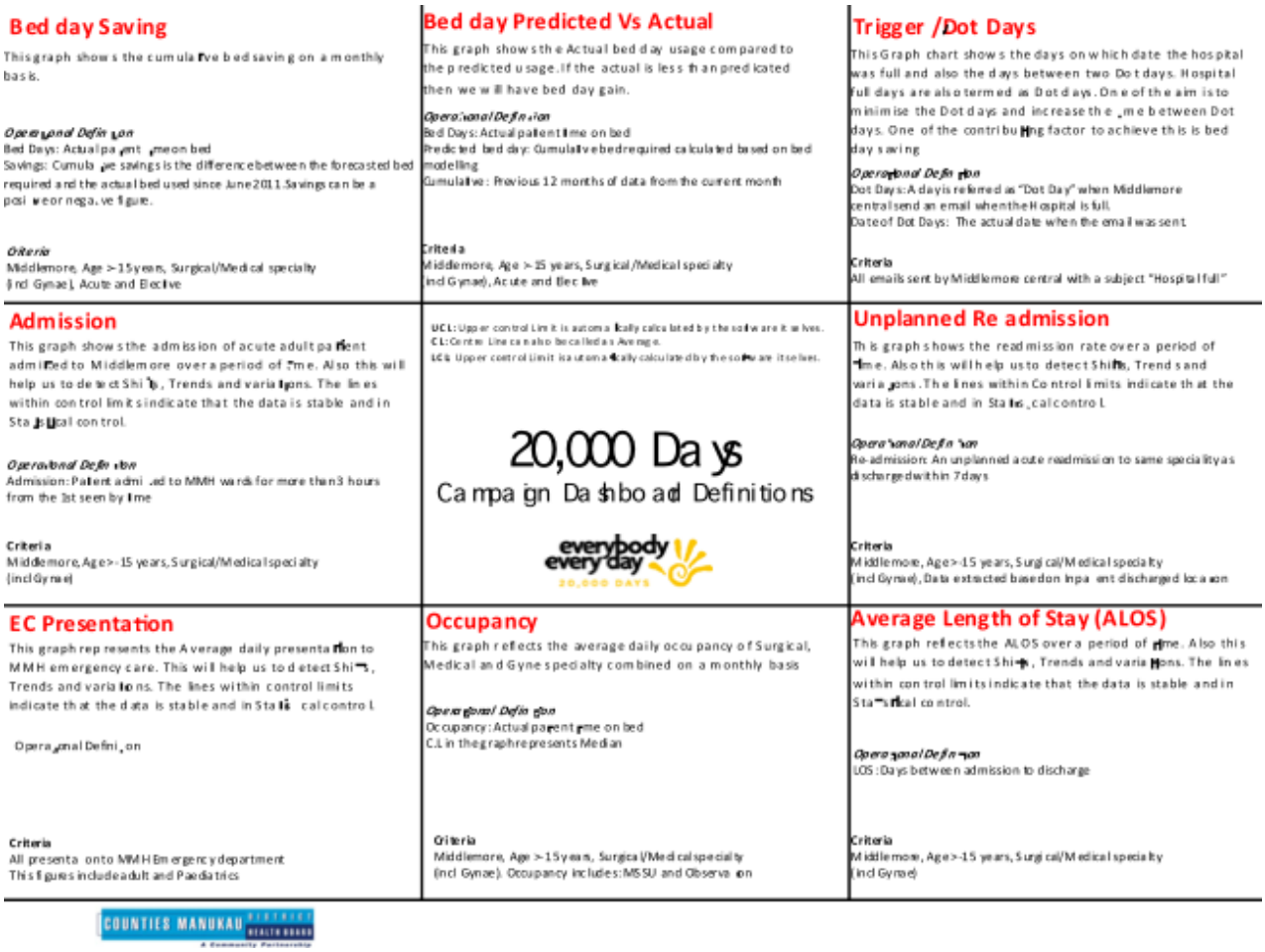
VI. Open Questions:

1. Can focused work on individual chronic disease be sustained without significant redesign of primary care?
2. What does success look like in this work? Should actual beds and hospital units be closed and money shifted to the community for us to claim success or is it enough to control growth without closing beds to be successful?

VIII: Appendices:

Appendix A: Dashboard of Measures





Appendix B: Details on interventions under each area

Health of Older Peoples (HOP) interventions

1. Community Supportive Discharge

Aim

To reduce the ALOS from 15 days to 13 days and reduce readmission from 13% to 10%

Measures

1. ALOS
2. Readmission rate
3. Patient Satisfaction
4. EC presentation

Collaborative Type

Prototype

Activity:

3 PDSA cycles

2.Care Cluster Integrated care

Aim

To reduce the number of unplanned hospital admissions by way of improved integration between Counties-Manukau District Health Board (DHB) Community Health Services and a cluster of General Practices within East Health Trust PHO for a defined group of high utilizers

Collaborative Type

Spread

Measures

1. EC presentation Collaborative Type

Spread

Activity:

1 PDSA cycle

3.Community Geriatric service collaborative

Aim

To reduce Unplanned presentation and admission by spreading Community Geriatric Service providing specialist support to Age Related Residential Care

Measures

1. EC presentation
2. Admission
3. LOS

Collaborative Type

Spread

Activity:

4. Early Delirium identification and management within MMH

Aim

To reduce ALOS and Pt. complication by spreading Early identification and management of Delirium Pt's

Measures

1. Reduce ALOS
2. Reduce Pt Complication
3. Readmission

Collaborative Type

Spread

Activity:

5. Hip fracture management + 64 years orthopedic care

Aim

To improve patient outcome by reducing complications and ALOS for hip fracture patients >65 years of age (and >54 year old Maori and Pacific)in MMH from 22 days to 19 days

Measures

1. Reduce Pt Complication
2. Reduce ALOS
3. Readmission

Collaborative Type

Prototype

Activity:

Transitions of Care

1 Primary care transportation option-St John

Aim

To increase the number of low acuity (status 3 and 4) patients transported to and managed in a primary care setting from 7% to 30% (30 patients per day) by December 2012

Measures

1. Reduce Presentation
2. Reduce Admission
3. Subsequent presentations

Collaborative Type

Spread

Activity:

2. Transition of care-Discharge

Aim

To reduce the ALOS from xx to yy and readmission for the secondary care Pt's

Measures

1. Reduce ALOS
2. Reduce readmission

Collaborative Type

Prototype

Activity:

1 PDSA cycle

Better Breathing(COPD)

1. Pulmonary rehabilitation in Community

Aim

To reduce unplanned admission from x to y by spreading Pulmonary Rehab model

Measures

1. Unplanned EC presentation
2. Reduce Admissions

Collaborative Type

Spread

Activity:

1 PDSA cycle

2. COPD management in primary care_ Implementation of COPD pathway

Aim

To implement the COPD pathway

Measures

1.Reduce unplanned admissions
2.Compliance to pathway

Collaborative Type

Prototype

Activity:

Very High Intensity Users (VHIU)

VHIU-Integrated case management

Aim

To Reduce Unplanned admission by spreading the VHIU model to 4 CMDHB localities

Measures

1. Reduce Presentations
2. Reduce Admission
3. Reduce ALOS

Collaborative Type

Spread

Activity:

2 PDSA cycle

Cellulitis & Skin Infections

Cellulitis-In Hospital

Aim

Decrease the number of cellulitis admissions, and ALOS as a result of cellulitis

Measures

1. Number of patients presenting with Cellulitis
2. Number of patients Admitted with Cellulitis
3. ALOS of Cellulitis patients

Collaborative Type

Prototype

Activity:

Cellulitis-In Community

Aim

Reduce the number of cellulitis presentations to EC

Measures

% patients following cellulitis pathway

Number patients referred to POAC

Collaborative Type

Prototype

Activity:

Perioperative care

1. Gynae

Aim

Increase Number of patients going through ERAS protocol

Measures

1. Number of patients using ERAS
2. Number of Patients eligible for ERAS
3. ALOS of eligible patients
4. Readmission rate of ERAS patients

Collaborative Type

Spread

Activity:

2. Ortho

Aim

Increase Number of patients going through ERAS protocol

Measures

1. Number of patients using ERAS
2. Number of Patients eligible for ERAS
3. ALOS of eligible patients
4. Readmission rate of ERAS patients

Collaborative Type

Spread

Activity:

Predictive risk modeling

1.ART

Aim

Identifying patients at high risk of readmission due to pharmaceutical issues, thereby leading to a reduction in readmissions

Measures

1. Number of high risk patients identified
2. Number (or %) of high risk patients readmitted

Collaborative Type

Prototype

Activity:

2.PARR

Aim

We aim to provide coordinated planned management of our identified high risk primary care patients reducing the demand for unplanned hospital admissions and bed days by 10% (1625 bed days) by 1 July 2013 *(Figures from GAIHN website*

Measures

1. Number of patients identified at risk
2. Number of at risk patients admitted
3. ALOS of at risk patients

Collaborative Type
Spread

Activity:

Appendix C Matrix of Workstreams and Interventions

Appendix D Selection criteria recommendations for portfolio development for phase two of this work.

PORTFOLIO DEVELOPMENT

During the first phase of your work you had good methodology that you used to pick the interventions that you are working on at this time. This document attempts to expand upon those methods the team used to shape the portfolio interventions in the Saving 20,000 Bed Days Campaign.

In compiling this list, we expanded on the five criteria which worked well in intervention selection for year 1 (show in red below). Many of these criteria can be adapted and used in the 1000 Minds software tool, which was used successfully in the first phase of work in New Zealand. It should be noted that while all of these criteria are worth considering, we are not advising that you add each point in this exhaustive list of criteria questions into the 1000 Minds software. We just wanted to give you some additional criteria that you might want to consider. Imbedded in the list are a few examples of summary statements which could be used in the 1000 Minds framework so wherever you see the "*1000Minds"* that is our attempt to summarize the ideas that we are discussing.

Criteria to consider: Will, Evidence, Feasibility

We divided our recommendations up into three areas to consider: will, evidence and feasibility

Will

1. **Leadership:**

   Buy-in: Is there leadership buy-in for this intervention?
   Level: What level of leadership is engaged in this work? Are their necessary levels which are not engaged? [i.e. Not enough middle managers]

1000Minds: Level of necessary leadership direction and prioritization.

2. **Strategic Alignment:**

   Aim: Which strategic goal does this intervention work towards?
   Priority: When you assess the areas which need improvement, what are the priorities? Does this project *really* meet one of those high-priority needs?
   Benefit: What value can you add to the body of work by choosing to work on this project? [Credibility, execution experience, new setting]

1000Minds: Relevance to strategic organizational priorities.

Evidence

1000Minds: Likelihood of achieving results in this setting, given the level evidence and degree of belief.

1. **Quantitative outcome:**

   Does this intervention achieve the intended outcome?
   How much, by when? [i.e. how many bed days in year 1]

2. **Level of Evidence:**

   Will this require developing "new science" or "implementing old science"?
   If you are building on existing evidence, but expanding into a new setting: what will it take to make it work here?
   If you are charting new territory, do you have the design to be able to significantly evaluate its success? Are you aware of and comfortable with the risk associated with that?
   Degree of belief- Likelihood the proposed intervention will achieve expected outcome?

3. **Population Segmentation:**

   What is the evidence for this intervention's impact on specific populations and sub populations?

   Sensitivity: Does the evidence point to the efficacy on the whole population of interest? Will this intervention work on the segment which contributes to the intended outcome in this setting? For example, if the intervention reduces bed days, by X amount, in 80% of the population, but the majority of the bed days actually occur in remaining 20% of the population, the intervention may not achieve the predicted results.
   Scope: Are the interventions which are effective in that critical 20% in the scope of the project? [i.e. if these interventions are best done by specialists, but you are working in a primary care setting]

Feasibility

1. **Cost of implementation:**

   Funding: What is the total cost? How cost-effective is the intervention?
   Personnel: Staff time; in overall amount as well as the spread across persons. Will the work for this project be incorporated into some one's day job, or will tasks be extra work without extra time to complete tasks? What are the costs for capacity building?
   Improvement energy: Will this project sap the organizational energy?
   Downstream effects: how will this affect other parts of the system? Will this bring improvement at the cost of another factor?
   Time- How long will it take for results to be actualized? How does that match up with the organization's expectation? [i.e. it will take a year to see results, but the Board is expecting improvement in 6 months]

1000Minds: Relative ease of implementation (in time, money, energy, personnel, etc).

2. **Project Design:**

   Appropriate method: Does the intervention fit the method chosen? [For example, before choosing a collaborative model you must evaluate if this is a project for which collective action will help or just cause more friction.] Is there an infrastructure to support mid-project changes to the system?
   Quality of measures: Are the proposed measures feasible? Do they capture the intended outcome? Are there balancing measures to capture for unforeseen consequences?
   Clarity: Are the responsibilities, risks, constraints, and requirements clear at the outset?

1000Minds: Clarity and precision of intervention design and measures.

3. **Intervention Setting:**

   Where will this be done -- i.e.: hospital ward, primary care office, or emergency room?
   Capacity: What is the level of readiness at this site? How much improvement capacity-building is needed? Has that been accounted for in the costs and timeline estimates?
   Energy: What is the level of improvement fatigue in this setting? Are there other improvement projects which have concluded recently or are happening concurrently?
   Balance: Are projects being implemented in an intentional way which balances the settings or are they concentrated in just a few? Would the likelihood of achieving the outcome be maximized by adding variety to the settings of work in the portfolio?
   Boundaries- Is the intervention setting within the bounds of the system you have control of?

1000Minds: State of readiness and aptitude of intended intervention site.

4. **Looking forward:**

   Sustainability: Is the intervention going to produce sustainable improvement or just more attention during project action period?
   Transferability: Can this improvement be extended to *other types of patients*?
   Scalability: Can this improvement be scaled to *more of the same types of patients*?

1000Minds: Likelihood for sustained results and expansion of intervention.

One other item for consideration is about methods for gathering ideas for the next phase of work:

a) Comprehensive assessment to find areas, which need work, then devise strategies for each of the target areas.

b) Less intensive assessment conversation, with high-level governance, about needs and current work being done. From this, pick a short list of projects, which meet these needs.

c) Predictive modeling- using a representative population and simulate interventions for efficacy, evaluating based on relevant criteria.

Appendix E Suggestions for new topics for phase two

Some General Observations about moving forward in the next phase of the 20,000 bed days work.

As you consider projects that you want to work on, there are a number of ways to categorize the work. The first three listed below are a breakdown of the present work.

1. Disease: COPD, CVD and Cellulitis
2. Populations - Older adults, VHIU
3. Cross Cutting issues or enablers of care: transitions of care, predicative risk modeling, medicine management on transfer home and perioperative care

There is at least one other category of work to consider: redesign of care. Obviously in your present work there are some redesign components but what we are suggesting is a more radical redesign. We think it starts by examining the overall health system and asking basic questions on what job you are trying to produce with each part of the health system or you can look at your present design and see how it is being used right now.

Here is a list of the possible jobs for a health system with categorizations of the population based on the work of Dr Joanne Lynn:

1.Help us stay healthy.
- Pregnancy
- Infant
- Child development
- Healthy Adult

2.Help us when we get acutely ill.
3.Help us diagnose what we have.
4.Help us when we have a chronic disease.
- Chronic condition, normal function
- Stable but serious disability
- Limited reserve and exacerbations

5.Help us at the end of life?
- Short course
- Longer decline - frailty at the end of life

So one question based on this list and looking at CMDHB would be how much of the work of managing chronic disease now is done at the acute hospital and how much of that should be moved to a new location, i.e. primary care setting? Will working on chronic diseases one at a time produce the shift in care to a primary care setting away from the hospital? Or do you need to redesign primary care more extensively, only you can answer that. As you know there has been redesign of primary care in New Zealand in the recent past.

The last item to consider is growth in new areas of health care. As you manage to decrease growth in some aspects of hospital care, what new areas are you worried about that might start growing excessively and how will you manage them? Do you have an early warning system on growth?

Next Phase Opportunities.

In the previous work you created two very helpful documents, "CMDHB Acute Demand Overview" and "International Evidence about Interventions to Reduce Unplanned Hospital Use". Both of these documents should continue to help you with your work.

I. Diseases to consider

A. Diabetes

1.One proposal you have already received is on Comprehensive Inpatient Care for People with Diabetes.

2. Primary care focuses on better management of diabetes by focusing on BP, Cholesterol, tobacco free, aspirin and blood sugar. HealthPartners in Minnesota made great strides in diabetic management by using the previous list as an all or none measurement set.

B. Mental Health. Mental Health is a significant contributor to overall health care utilization even if it is not the primary problem for acute hospitalization.

C. Hypertension / Stroke-

1. Community identification of all persons with hypertension with the plan to get them into appropriate treatment

2. Hospital implementation of best practice to manage stroke

II. Populations - the two populations that you chose to work with in phase one were excellent choices: seniors and high risk. You may want to continue to focus more energy on them.

III. Cross Cutting-

A. Patient self-management education such as Stanford Self-Management Programs created by Kate Lorig and others http://patienteducation.stanford.edu/programs/

B. Placement issues for seniors at hospital discharge. Some societies, Singapore and Canada for example, have problems at discharge in finding the right place for some seniors. This in turn delays discharges and ties up hospital beds.

The health issues that society faces have changed dramatically during the last 60 years from primarily acute care disease to chronic disease to the maximizing of health over a lifetime. Although our health care systems have changed they have not evolved quickly enough. This still leads to too much acute care focus and not enough primary care focus. New Zealand has been working to strengthen and improve primary care.

Any redesign work for primary care should deal with some of the "jobs" that an individual needs primary care help with that were outlined earlier in this paper.

The redesign work needs to improve the primary care delivery mechanism that occurs in the office, in the community and between primary and secondary providers.

In the primary care office that design will need to consider the following elements (if you want more detail on this list that can be provided).

1. Care-team development
2. Population-based planned care
3. Working on quality access
4. Efficiency and reliable design in the office
5. Information technology support
6. Leadership engagement
7. Strong learning system
8. Patient Engagement
9. Accountable outcomes

In the community there need to be good connections between social service, visiting nurses, pharmacy, dental care and the primary care office. That should lead to work that does a better job on prevention as well as chronic disease management.

Between primary care and secondary care, communication handoffs need to be strengthened in both directions. In some organizations that has actually taken the form of written non-monetary contracts where each group clearly defines their level of responsibility for the care they will provide and the relationship between primary and secondary specialties.

The final issue in redesign is around the flow of money and who should be managing it. As some of you know the NHS under the new government initially was going to replace PCT with GP commissioning groups. This would have placed a lot of the money within the GP groups to direct on behalf of the patients. However, there was enough concern that they broadened this work to clinical commission groups and it is still early days. In the US there

is an experiment called accountable care organizations in which a lot of the responsibility has shifted to primary care with the possibility of primary care getting financially rewarded if savings occur for a Medicare (65+) population.

In conclusion, phase one work at this time seems to be making good progress and we offer the above suggestions for your consideration for your work on phase two along with the previous document that we sent you about selection criteria.