FINANCIAL ANALYSIS

1. Introduction

This document has been produced to inform discussions, by the South Taranaki Steering Group and the DHB Board, about potential changes to health services in South Taranaki.

This analysis is based on the proposals in the consultation document issued to the public on 4 July 2011 and is a refinement of section 4.0, page 21 of that document.

The information presented should be viewed as indicative rather than as definitive or binding, to either the DHB or a health service provider in any future contract negotiations. Similarly, as this paper is indicative and will be used as a basis for informing decision making, it is not intended to pre-empt implementation consultation with unions and staff. Ultimately a final change proposal will be formulated for the purpose of implementation consultation.

A financial analysis is presented of the service changes described in the "South Taranaki Alive with opportunities for better health care" consultation document. The analysis includes bottom up costing information, provided by the DHB Finance Department and by Midlands Health Network in collaboration with Health Partners Consulting Group; funding impacts assessed by the DHB Funder; and overall sector service impacts assessed from a managerial and clinical perspective by members of the Executive Management Team of the DHB.

The aim of the document is to show the net financial impact of change proposals from an overall DHB perspective.

2. Methodology

The financial impacts described in this document arise throughout the health system and are not limited to DHB funded costs. This draft represents an estimate of the financial impact to the DHB, prior to negotiations with various providers. Changes in revenue, funding and patient charges have been included where possible.

Transition, implementation and enabler costs are not included in this analysis. Assumptions have been made about the volume impacts of the potential model of care changes. Where possible these have been made on the basis of discussions with Taranaki DHB and other Taranaki based health professionals. Otherwise the analysis uses assumptions that have been made elsewhere in New Zealand by clinicians and planners considering similar model of care changes.

All assumptions used in this analysis will need to be revisited in the light of the final service model developed for South Taranaki.

3. Overview of Financial impacts

The cost impacts below are referenced to section 3 subsections of the Consultation Document of 4 July 2011.

Sections 3.1 and 3.2 "Visiting Your GP Practice" and "Your Family Health Care Team"

General Practice Changes:

An increase in the number of GPs in South Taranaki is obviously desirable. However for the purposes of this financial modelling it is assumed that the number of GPs will remain at just over 14 full time equivalents; and that the new ways of working will augment the general practice team with other health professionals. Thus the proposed changes to General practice would enable an increase in the number of patient contacts without increasing the number of GPs in South Taranaki.

The proposed model of care should also improve performance on fee-for-service immunisation and Diabetes Annual Review programmes resulting in a small increase in revenue for practices. However it is not possible to estimate this increase, which is unlikely to be material to the DHB.

Assumptions:

- Approximately 105,000 annual consultations (including ACC, casual appointments and nurse consultations) occur across the district currently.
- Likely to increase to approximately 155,000 with the introduction of a new model of care. These would include telephone and email contacts, as well as face to face consultations.
- Additional co-payments will be available to practices in line with any increase in consultations
- General practitioners, nurses and pharmacists will be providing these contacts. Increasing contact capability will enable a more proactive patient-centred approach, and will also reduce dependence on Hawera and Base hospital services.
- A centralised Patient Access Centre (PAC) would be established
- Estimated additional staffing requirements: 4 nurses, 1.7 clinical pharmacists, 12 patient access centre staff across all practices.
- Implementation of the new model for primary care would take place within the flexible funding available to Primary Health Organisations, including maximised Careplus funding and any additional co-payments.

Financial Assumptions

- Cost of General Practice changes $1,200,000. including PAC overheads
- Estimated increase in co-payments $400,000 to $600,000 based on district population profile and published patient charges from each practice. This equates to an average of $8 to $12 for each additional contact.

Introduction of Care Management
The introduction of Care Managers (Registered Nurses) to assess and coordinate care for older people with complex long term conditions is proposed. Delivery of care to this group utilises the existing District Nursing service and NGO mobile nursing services. In addition two new therapist roles are proposed.

Assumptions:

- Service operates Monday to Friday, office hours
- All roles are mobile and deliver in patients own home
- Staff costs estimated using DHB rates
- Vehicle costs estimated at DHB internal vehicle charge rate ($32 per day)

Financial Assumptions:

- $329,547 Staff costs
- Vehicle costs $24,000

Increase in Kaiawhina roles
A number of Kaiawhina already work in South Taranaki, both employed by the DHB and employed by other providers. The proposed changes include an increase in Kaiawhina to reduce barriers to services and increase access.
Assumptions:

- Two additional FTEs.
- Current outsourcing costs used as basis of estimate
- Overhead assumptions include transport costs

Financial Assumptions:

- $109,322

Section 3.3 Diagnostic tests
The proposed changes include both alternative referral patterns and changes in delivery location for some diagnostic tests. Ultimately both primary referred and secondary radiology tests are funded by the DHB Funder. Similarly echocardiograms are charged the same way irrespective of where in Taranaki they are delivered. Therefore it could be argued that the proposed changes should not lead to an increase in diagnostic testing. However clinical advice suggests that removing barriers to diagnostic testing invariably leads to some level of increased activity.

Sonography
Assumptions:

- Currently clinics take place on Wednesday and Thursday.
- Change to Monday, Wednesday and Friday, allowing for acute appointments as well as the planned appointments
- Additional appointments will lead to an overall increase rather than a reduction in tests elsewhere
- Additional requirement 0.25 FTE

Financial Assumptions:

- $25,000 including on cost

Echocardiograms

Assumptions:

- Mobile service for 3 days each month
- A new echocardiogram machine would need to be purchased to reduce the likelihood of damage caused by transporting the equipment to South Taranaki.

Financial Assumptions

- $14,000 per annum, including travel costs.
- Capital costs would be covered from DHB Trust Funds

Section 3.4 Medicines

After Hours Medicines

It is proposed that after hours medicines prescribed for urgent and emergency treatment be dispensed from supplies kept at Hawera Hospital.

Assumptions:

- An additional Pyxis dispensing machine will be installed
- Nursing staff will be able to dispense a GP prescription
- Nursing required to enter, dispense and check each prescription 15 minutes
- No charges will be made to the patient
- Medication usage will not increase
- Weekly attendances which might lead to after hours prescription:
    - After hours impact 182 (based on average May to December ED attendances, less estimated impact of GP urgent slots)
    - 40 GP attendances occurs each week after normal pharmacy hours
    - Total attendances 222
- Dispensing fee paid by DHB to pharmacy $5.30

Financial Assumptions:

- Rental of Pyxis machine $28,000 per annum
- If 46% of these 222 visits require a single urgent prescription then the saving in dispensing fees would pay for the additional Pyxis machine
- Additional nursing costs $53,000

IV Chemotherapy

It is proposed that whenever possible IV chemotherapy will be administered to South Taranaki patients at Hawera Hospital outpatients department.

Assumptions

- No increase in IV chemotherapy
- Existing staff in Hawera outpatients will be upskilled to deliver the service
- Existing transport service will be used to transport medication to Hawera

Financial Assumptions:

- No additional cost to DHB

Section 3.5 Other community health services

The cost impact of introducing Care Managers has been considered as part of Section 3.1 above. Assumptions:

- Expansion of community services in South Taranaki will result from a review of total community services allocation across the Province and reallocation of resources.
- Provision of crisis support by community mental health staff will be incorporated in existing roles with additional training provided to staff.

The Information Technology required to access relevant information to support this initiative will be funded as part of the national roll out of InterRAI.

Financial Assumptions

- No additional cost to DHB

Section 3.6 Referral to hospital

Assumptions:

- The adoption of email, teleconference and diagnostic ordering protocols outlined in this section has no cost impact.

Financial Assumptions:

- Kaiawhina input has been costed as part of Section 3.1.

Section 3.7 Transport to hospital

Assumptions:

- Improved coordination and integration of transport provision across agencies would enable more frequent and improved transport options without additional investment.

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Financial Assumptions:

- No additional cost to DHB

Section 3.8 Admission to hospital

It is expected that the consistent application of standard clinical admission protocols will lead to a reduction in the number of South Taranaki patients admitted to Hawera Hospital and an increase in the number admitted to Base Hospital.

Increased South Taranaki Admissions to Base Hospital

Assumptions:

- No increase in the number of beds at Base Hospital until 2013
- Increased admissions from South Taranaki will be absorbed within the existing beds, through the usual prioritisation processes
- Increased admissions likely to offset beds freed up through implementation of intermediate care in North Taranaki

- Cost of South Taranaki admissions will be higher than the intermediate care patients due to acuity
- Increased ambulance transport resulting from additional admissions to Base Hospital. 50% patients likely to be transferred by Emergency Ambulance at no additional cost to TDHB, with the remainder being transferred by inter hospital transport (IHT) at a cost of $405 per journey
- ED presentations at Base Hospital likely to increase by 372 due to increased admissions.
- Cost of patients transferred from Hawera ED 50% of a new presentation

Financial Assumptions:

- Additional bed costs at Base due to acuity $35,007
- Increased inter hospital transport costs $75,330
- Increased presentations at Base ED $47,288

Short Term Care Beds

The consultation document proposes the establishment of 4 new short stay beds next to the Emergency Department. The existing resuscitation and observation beds are unaffected.

Assumptions:

- Staff in ED would be expanded to cover the short term beds
- Addition staffing requirement 1 FTE Nurse on both morning and afternoon shifts

Financial Assumptions:

- Increase in ED staffing for short term beds $261,679

Palliative and Intermediate Care Beds

The consultation document proposes two different options:

Option 1: 2 palliative care beds located at Hawera Hospital
4 intermediate care beds located at Hawera Hospital

Option 2: 2 palliative care beds located in a hospital level rest home
4 intermediate care beds located in a hospital level rest home

Assumptions:

- Bed occupancy 85%
- Option 1 would require 10.2 Nursing FTE required rather than current 17.6 FTE
- Option 2
    - Palliative Care costed using Hospice contract price for Rest Homes of $185 per day
    - Intermediate Care costed using hospital level rest home price $172
    - Reduction in Nursing roster at Hawera Hospital of 17.6 FTE

- Reduction in hotel and supply costs based on net reduction in bed days
- Reduction in infrastructure and utility costs not material

Financial Assumptions:

- Option 1
  - Nursing costs reduced from $1,318,204 to $644,245
  - Reduction in supply costs $72,417
- Option 2
  - Palliative care costs $114,793
  - Intermediate care costs $213,452
  - Reduction in nursing roster from fewer inpatient beds $1,318,204
  - Reduction in hotel and supply costs $183,270

Medical Staff

Assumptions:

- Reduction in Hawera medical staff by 3.03 FTE from Ward Doctor and 50% of the "Float" position due to a reduction in admissions
- Staffing is a mixture of contractors and locums so average of both rates used for calculation

Financial Assumptions:

- Reduction in Medical staff costs due to reduced admissions $855,400

Section 3.9 Maternity care

Assumptions:

- Service unchanged.

Financial Assumptions:

- No change

Section 3.10 Emergency care

The development of primary care services will change the future dependence of the locality on hospital based services. The Emergency Department (ED) capability is largely unchanged as a result of the proposals. The staffing for ED with observation beds is inflexible for smaller volumes, so a future reduction in volume at the ED is unlikely realise further cost reductions. Financial impacts due to changes to emergency care arise, from the implementation of standard clinical protocols; from the proposal to have medical cover provided off site by an ED doctor on-call; and from improved access to GP appointments.

Assumptions:

- Reduction from roster of 10 hours per day medical staff (2.3 FTE)
- Costs calculated on an average of employed ($231 K per annum) and contractor/locum rates ($333K per annum)

- Emergency ambulance protocols likely to reduce triage 2 and 3 presentation overnight by 50% with bypass policy
- Overnight triage 4 and 5 presentations would be seen and treated by nursing staff, or if not urgent referred to GP the following working day.
- Average number of call out per night 1.27
- Cost per call out $540
- Supply costs will reduce based on the movement of some triage 4 and 5 patients to primary care through increased primary care appointments.

Financial Assumptions:

- Reduced ED medical staff costs due to oncall arrangement $641,550
- On call costs for overnight medical staff $249,480
- Reduced supply costs for ED due to reduction in 4 and 5 presentations $125,005

4. Summary of Financial Analysis

Ref.		Additional Cost	$ impact to DHB
3.1/ 3.2	General Practice changes including PAC	$1,200,000	$0
3.1/ 3.2	Introduction of Care Management	$329,571	$329,571
3.1/ 3.2	Increase in Kaiawhina	$109,322	$109,322
3.3	Increased access to sonography	$25,000	$25,000
3.3	Local delivery of echocardiograms	$14,000	$14,000
3.4	After hours medicines via Pyxis machine	$81,000	$53,000
3.4	Local delivery of IV chemotherapy	$0	$0
3.5	Local delivery of other community health services	$0	$0
3.6	Referral to hospital	$0	$0
3.7	Improved coordination and integration of transport	$0	$0
3.8	Increased South Taranaki admissions to Base	$157,625	$157,625
3.8	Increase in ED staffing to cover short term beds	$261,679	$261,679
3.8	Reduction in beds with Palliative and Intermediate Care beds at Hawera Hospital (Option1)	$644,245	-$746,376
3.8	Reduction in beds with Palliative and Intermediate Care beds in Rest Home (Option 2)	$328,245	-$1,173,228
3.8	Reduction in Medical staff costs due to reduced admissions		-$855,400
3.9	No change to maternity services	$0	$0
3.10	Overall reduction in medical staff costs due to ED changes		-$392,070
3.10	Reduction in ED supply costs due to increased primary care access		-$125,005
Overall	**Option 1 palliative and intermediate care**	**$2,822,442**	**-$1,168,654**
Overall	**Option 2 palliative and intermediate care**	**$2,506,442**	**-$1,486,482**

5. Conclusion

Within the limitations of the stated assumptions, the financial impact to the DHB of the proposals in the consultation document are estimated to be:

- A reduction of $1.169 million if palliative care and intermediate care beds were sited at Hawera Hospital
- A reduction of $1.486 million if palliative care and intermediate care beds were sited in a rest home.

Costs of set up, transition and capital have not been assessed.

Sandra Boardman
General Manager Planning, Funding & Population Health
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