

Financial Modelling in Northland



**NORTHLAND HEALTH
SERVICES PLAN**

Working as One - Mahi Kia Kotahi

Baseline
projections



Estimate of
NHH changes



New
projections

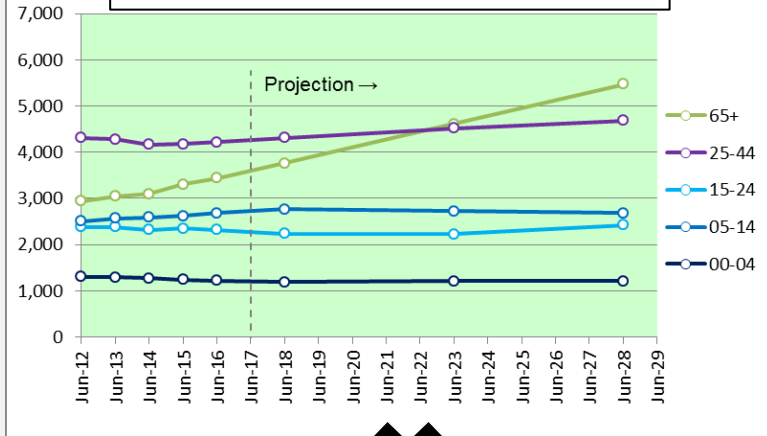
Important concept

More consults does not necessarily mean
more profit

Calculating the baseline

Underlying volume projections

Population projections



Utilisation rates

5YearAgeBand	Non Maori	Maori	Grand Total
00-04	4.0	4.6	4.2
05-09	2.6	2.4	2.5
10-14	2.0	1.5	1.8
15-19	2.5	2.0	2.4
20-24	2.8	2.1	2.6
25-29	3.4	2.5	3.2
30-34	3.3	2.5	3.1
35-39	3.8	3.4	3.7
40-44	4.1	3.8	4.0
45-49	4.4	3.7	4.2
50-54	5.0	4.3	4.9
55-59	5.0	6.4	5.2
60-64	5.5	7.5	5.7
65-69	6.3	9.6	6.7
70-74	7.8	7.9	7.8

Capitation rates, co-pay and average expenses

Statement of Financial Performance
April 2015 through March 2016

Practices' P&L & FTE

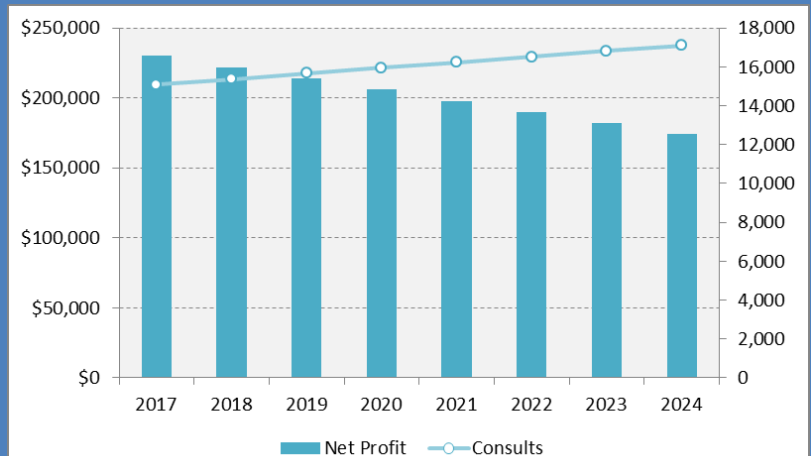
Ordinary Income/Expense	2015	2016	2017	2018
Income				
Capitation Funding				
Capitation	126,453	126,787	126,577	127,221
Under 13 Funding	1,920	5,242	2,726	9,462
Under 6 Capitation				
After Hours Services				
Total Capitation				

Patient fees by age

Patients	2015	2016	2017	2018
ACC	75,209	92,086	77,768	95,186
Careplan				
Cervical				
CVD & Diabetes	2,036	2,036	2,036	2,036
GMSServices	1,009	1,378	1,062	1,556

MOH Capitation Rates

Baseline projections



Costing the NHH model

Change	Components	Impact on Revenue	Impact on Expenses
New DHB / PHO Funding		\$16 + 3 per enrolled population	
Changes to GP or nurse schedules	<ul style="list-style-type: none"> • Dr triage • Huddles • Telephone consults • Portal contact • LTC Consults • MDT meetings 	Reduction in co-pay collected from patients	
Changes to workforce	<ul style="list-style-type: none"> • New roles e.g. HCA, additional Admin • Task substitution to allow for top-of-scope working • Time savings e.g. as a result of triage, portal use 		Cost or savings to salaries depending on nature of change
Non-Schedule changes	<ul style="list-style-type: none"> • Extended hours • Lean • Call management • Consumer engagement, co-design • Equity management • Quality and safety • Other general costs 		<ul style="list-style-type: none"> • Overheads, time + ½ for out of hours wages • Facility changes, savings on supplies and equipment • Phone and IT set-up costs (if in-house) or call centre fees • Staff costs e.g. to undertake consumer engagement • Additional staff training

Assumptions

Important note: Only change yellow cells - formulas will derive the result using these inputs

General assumptions

Projections are based on flat enrolment growth

All figures are represented in today's dollars, no discounting or rate adjustments have been made in the projections

All patient fees and costs are excluding GST

Workdays and hours

Work days per year	249	Open Mon-Fri
Paid leave per year	20	
Actual days working	229	
Hours per FTE	8	
Practice operating hours/day	8.7	

Staffing & Salaries

	GP	NP	Nurse	HCA	Admin	PM
Current FTE						
Average Annual Salary	\$175,000	\$98,000	\$60,000	\$43,000	\$40,000	\$95,000
Hourly rate	\$88	\$49	\$30	\$22	\$20	\$48

GP Consultations

	Length (mins)	Avg Patient Fee	Govt. subsidy	Average Staff Cost	Gain / loss
Standard F2F consult	15	\$11.40	\$0.00	\$21.96	-\$10.57
Telephone/virtual consult	10	\$11.40	\$0.00	\$14.64	-\$3.24
Portal communication	1	\$0.00	\$0.00	\$1.46	-\$1.46

Nurse Consultations

	Length (mins)	Avg Patient Fee	Govt. subsidy	Average Staff Cost	Gain / loss
Standard F2F consult	15	\$9.67	\$0.00	\$12.30	-\$2.63
Telephone/virtual consult	10	\$9.67	\$0.00	\$8.20	\$1.47
Flu Vaccination	5	\$0.00	\$21.00	\$4.10	\$16.90
Immunisations	10	\$0.00	\$21.00	\$8.20	\$12.80
Smear	10	\$35.00	\$0.00	\$8.20	\$26.80
Dressings	10	\$20.00	\$0.00	\$8.20	\$11.80
Bloods	10	\$10.00	\$0.00	\$8.20	\$1.80

Assumptions ctd.

PHO Utilisation Data

	GP	Nurse
Consults last 12 months		5
Copay revenue (derived)		1

Phone Triage Outcomes

	GP triage	Nurse triage
Resolved over phone	30%	10%
Resolved with Rx or MC	25%	0%
Face to face appointment	35%	85%
Telephone/virtual consult	10%	5%
Mins per call	3.0	3.0
Average co-pay per triage call	\$2.17	\$0.00

Other Patient fees (ex GST)

Script / Medical Certificate	\$8.70
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Other

Enrolled population (last qtr)	
Variable overhead costs p.a.	
Variable overheads per hour	
Medical supplies costs p.a.	

Daily Template			Revenue from patient fees		
Time	Current template (per FTE)	Example of NHH Template	Current co-pay	NHH co-pay	Change in co-pay
8:00 a.m.					
8:15 a.m.					
8:30 a.m.	F2F consult	Huddle	\$11.40	\$0.00	-\$11.40
8:45 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
9:00 a.m.	F2F consult	Phone triage	\$11.40	\$2.17	-\$9.22
9:15 a.m.	F2F consult	Phone triage	\$11.40	\$2.17	-\$9.22
9:30 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
9:45 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
10:00 a.m.	Break	Break	\$0.00	\$0.00	\$0.00
10:15 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
10:30 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
10:45 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
11:00 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
11:15 a.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
11:30 a.m.	Admin	Admin	\$0.00	\$0.00	\$0.00
11:45 a.m.	Admin	Admin	\$0.00	\$0.00	\$0.00
12:00 p.m.	Break	Break	\$0.00	\$0.00	\$0.00
12:15 p.m.	Break	Break	\$0.00	\$0.00	\$0.00
12:30 p.m.	Break	Break	\$0.00	\$0.00	\$0.00
12:45 p.m.	Break	Break	\$0.00	\$0.00	\$0.00
1:00 p.m.	F2F consult	Virtual consult	\$11.40	\$11.40	\$0.00
1:15 p.m.	F2F consult	Virtual consult	\$11.40	\$11.40	\$0.00
1:30 p.m.	F2F consult	Portal contacts	\$11.40	\$0.00	-\$11.40
1:45 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
2:00 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
2:15 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
2:30 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
2:45 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
3:00 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
3:15 p.m.	Break	Break	\$0.00	\$0.00	\$0.00
3:30 p.m.	Admin	Admin	\$0.00	\$0.00	\$0.00
3:45 p.m.	Admin	Admin	\$0.00	\$0.00	\$0.00
4:00 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
4:15 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
4:30 p.m.	F2F consult	F2F consult	\$11.40	\$11.40	\$0.00
4:45 p.m.					
5:00 p.m.					
	Daily co-pay per FTE		\$262.15	\$220.91	-\$41.24
	Annual co-pay per FTE		\$60,032	\$50,588	-\$9,445
	Annual co-pay for all FTE		\$114,062	\$96,117	-\$17,945

Workforce changes

Important note: Only change yellow cells - formulas will derive the result using these inputs

Task	GP's	Nurses	HCA	Admin	Other	Additional staff costs/savings
Annual Salary	\$175,000	\$60,000	\$43,000	\$40,000	0	
Task Substitution / Role expansion						
HCA to release nurse time		-0.30	0.30			-\$5,100
Additional telephony support at peak times				0.40		\$16,000
Doctor time released as a result of triage*						\$0
Release of nurse and admin time from portal uptake*		-0.04		-0.37		-\$16,736
Shift Weight, BP, diagnostics to HCAs		-0.10	0.10			-\$1,700
Inbox filtering to most appropriate person	-0.05	0.02	0.03			-\$6,260
						\$0
						\$0
Additional FTE Req.	-0.05	-0.42	0.43	0.03	0.00	-\$13,796
Additional staff costs/savings	-\$8,750	-\$24,910	\$18,490	\$1,373	\$0	-\$13,796

Diagram of Clinical Triage Outcomes, Revenue and Staff Time

Daily calls for same day appt. **25**

76%

Doctor Phone Triage	
Triage calls	19
Co-pay loss*	-\$64.97
Staff Hrs	1.0

55%

10	Resolved in triage	
Outcome	Brief advice	Rx/Med Cert
Count	6	5
Revenue	\$0.00	\$41.30

35%

7	Face-to-face Consult	
Clinician	GP	Nurse
GP/Nurse	100%	0%
Consults	7	0
Co-pay	\$75.80	\$0.00
Staff Hrs	1.1	0.0

10%

2	Phone/virtual consult	
Clinician	GP	Nurse
GP/Nurse	100%	0%
Consults	2	0
Co-pay	\$21.66	\$0.00
Staff Hrs	0.3	0.0

*Loss of co-pay generated from consults while on triage calls

Overflow to nurses

24%

Nurse Phone Triage	
Triage calls	6
Co-pay loss*	-\$2.90
Staff Hrs	0.3

10%

1	Resolved in triage	
Outcome	Brief advice	Rx/Med Cert
Count	1	0
Revenue	\$0.00	\$0.00

85%

5	Face-to-face Consult	
Clinician	GP	Nurse
GP/Nurse	68%	32%
Consults	3	2
Co-pay	\$39.53	\$3.95
Staff Hrs	0.9	0.4

5%

0	Phone/virtual consult	
Clinician	GP	Nurse
GP/Nurse	68%	32%
Consults	0	0
Co-pay	\$2.33	\$0.23
Staff Hrs	0.03	0.02

Example of the cost for a 3 GP practice with 5,000 patients

BREAKDOWN OF NET CHANGE BY NHH COMPONENT (values > 0 represent a net gain)						
	Year 1	Year 2	Year 3	Year 4	Year 5	
NHH Capitation Funding	\$95,000	\$95,000	\$95,000	\$95,000	\$95,000	
1. Equity management	-\$3,360	-\$3,360	-\$3,360	-\$3,360	-\$3,360	
13. Consumer and community engagement						
2. Call Management	-\$32,505	-\$31,370	-\$31,370	-\$31,370	-\$31,370	
3. Doctor phone triage of patients requesting urgent car						
11. Telephone and virtual consultations with a Doctor/						
4. Engagement with new model of nursing care						
5. Kia Ora Vision	\$0	\$0	\$0	\$0	\$0	
6. Extended hours	-\$9,413	-\$9,823	-\$9,823	-\$9,823	-\$9,823	
7. Patient and whānau centric appointments	-\$14,340	-\$21,510	-\$21,510	-\$21,510	-\$21,510	
8. Clinical and administrative pre work	-\$22,672	-\$22,672	-\$22,672	-\$22,672	-\$22,672	
9. Expanded use of roles and new roles	-\$1,895	-\$1,895	-\$1,895	-\$1,895	-\$1,895	
10. Applying 'lean' principles to practice processes and	\$0	\$0	\$0	\$0	\$0	
12. Patient portals	\$4,007	\$11,404	\$14,795	\$14,795	\$14,795	
14. Integration with health and social sector						
15. Quality and safety	-\$785	-\$785	-\$785	-\$785	-\$785	
Other costs (e.g. IT, training, change costs)	-\$8,154	-\$2,000	-\$2,000	-\$2,000	-\$2,000	
Change in net profit	\$5,882	\$12,990	\$16,380	\$16,380	\$16,380	



Phasing of changes over time to reflect implementation plan

What I think is important to focus on

- Spending time getting the GP Schedule right – useful visual to communicate changes
- Analysis of Doctor Phone Triage and Patient Portals and their impact on time released
- Extended hours assumptions – can be costly
- Workforce changes e.g. new Admin or HCA resource
- **Sensitivity / “What-if” analysis with business owners**

Improvement areas

- Nurse schedules – model impact on chargeable consults and chronic care management
- Utilise MedTech data - to get a better handle on revenue, daily activity and capacity vs demand
- Simplify – often presenting to GP owners, not excel wizards. Inherent uncertainty anyway no value in being too exact.