

Streamlining Chronic Disease management in the Torres Strait

Alfred Liu, MBBS IV UQ, BSc
Dr Lachlan McIver

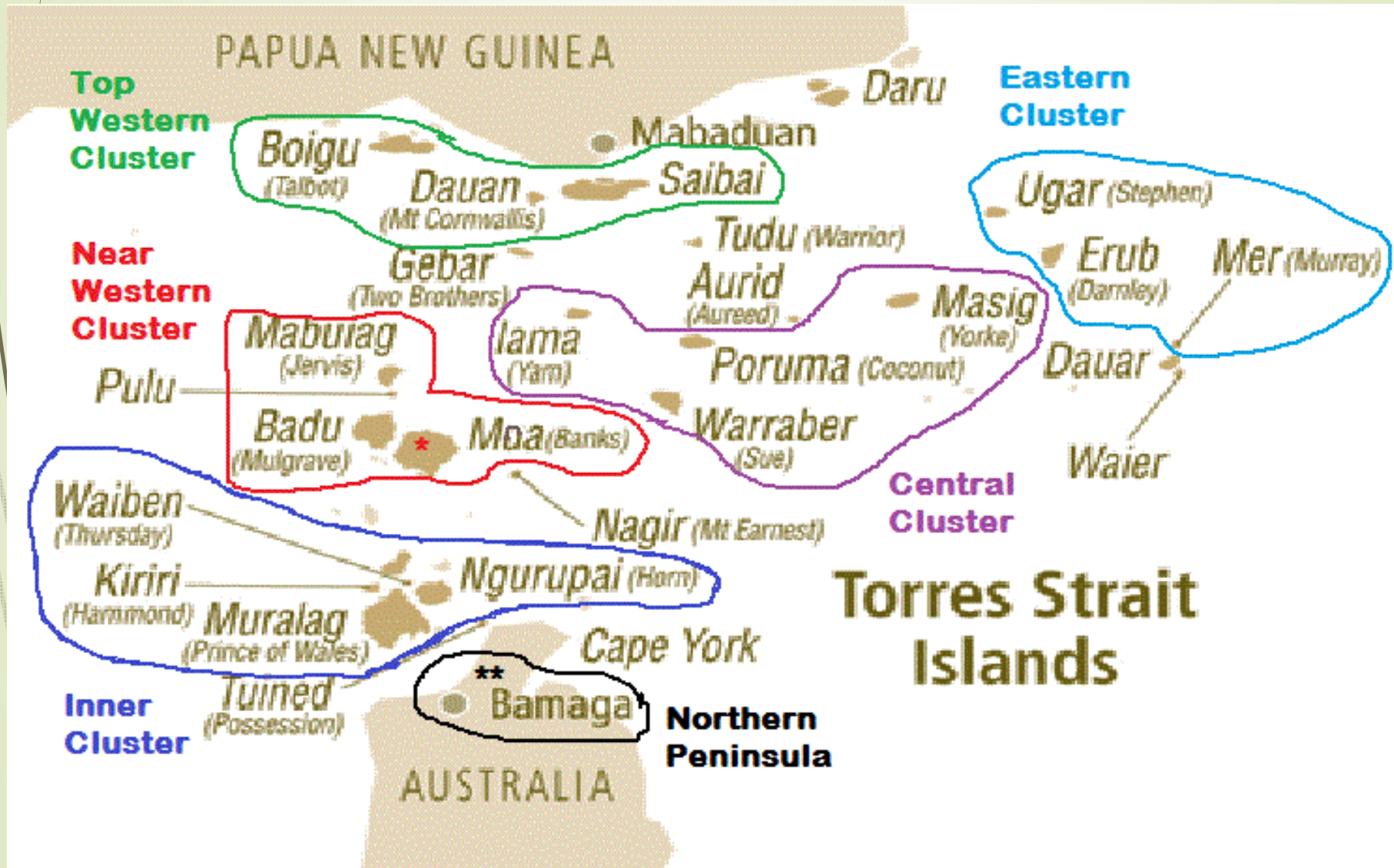
NRHC 2015



Overview

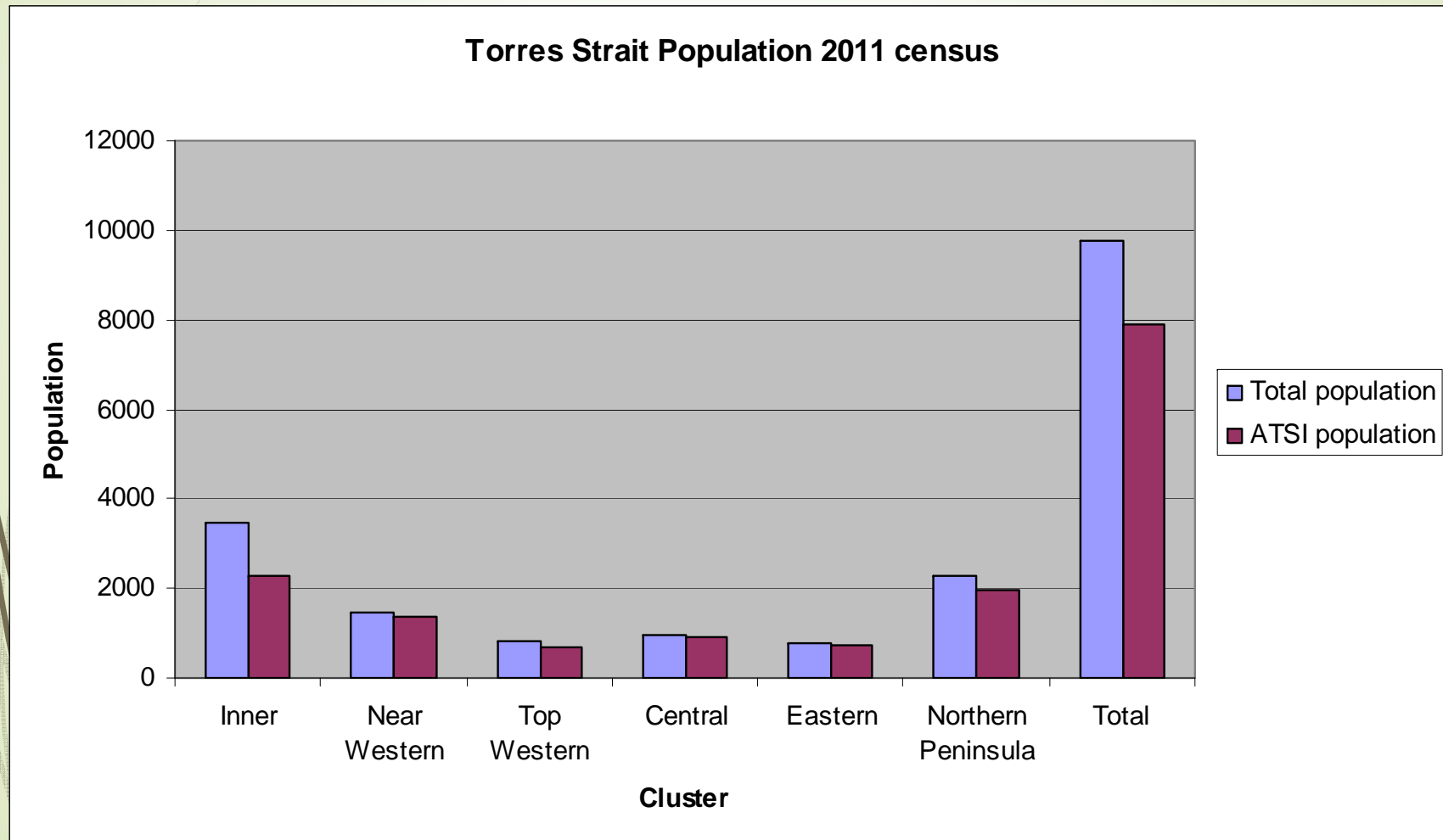
- ▶ Torres Strait is a region of high rates of chronic disease
- ▶ The rates of chronic disease is unevenly distributed
- ▶ Shortfalls in management of chronic disease
- ▶ Streamlining chronic disease management
 - ▶ Including using an electronic health record would be beneficial

Torres Strait Islands



Population in Torres Strait 16yo+

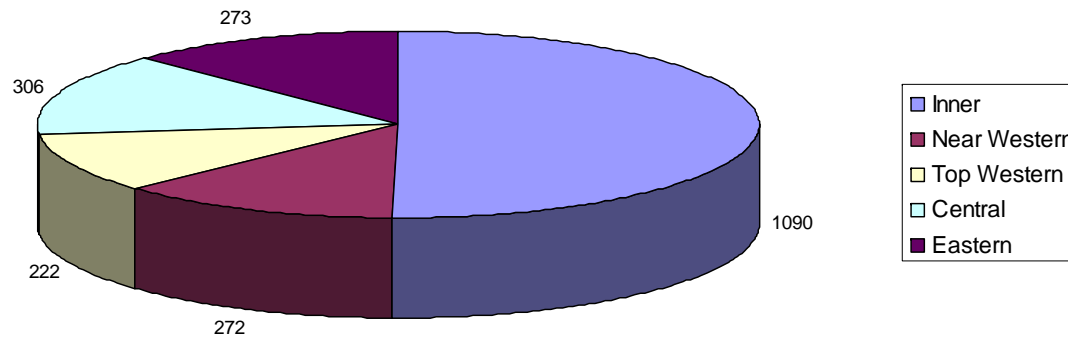
80.79% ATSI



Chronic disease burden

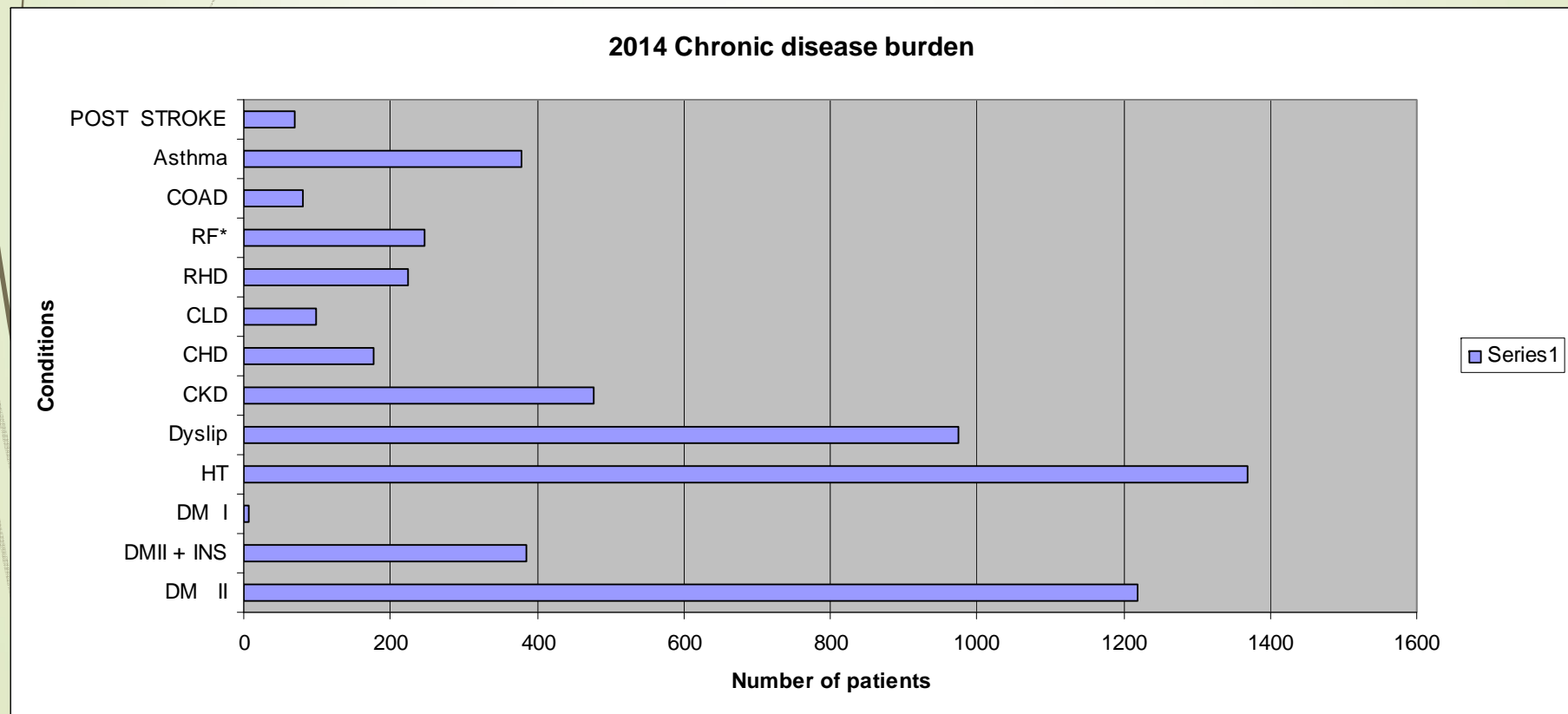
- Chronic disease
 - = illness that is prolonged in duration, does not often resolve spontaneously, and is rarely cured completely
 - 2180 patients (22.2%) above age of 16 yo, suffering from 1 or more chronic diseases (only focused on 10 chronic condition)
 - 2013-2014 local statistics (collected by James Candy, RN)

2013 Chronic disease burden (cluster distribution)



- Number of patients above 16 yo with 1 or more chronic disease in each cluster

2014 Chronic disease burden



2014 Chronic disease rates

	DM II	DMII + INS	DM I	HT	Dyslip	CKD	CHD	CLD	RHD	RF*	COAD	Asthma	POST STROKE
INNER CLUSTER													
THURSDAY	13.18%	4.06%	0.11%	17.62%	10.84%	5.44%	2.95%	0.54%	2.22%	2.68%	1.23%	6.86%	1.11%
HORN	10.02%	2.78%	0.19%	13.17%	14.47%	7.61%	1.11%	0.37%	0.37%	1.11%	1.11%	5.57%	1.30%
HAMMOND	10.67%	2.22%	0.00%	6.67%	6.22%	4.00%	1.33%	0.00%	1.78%	2.67%	3.11%	5.33%	0.00%
PRINCE OF WALES	3.45%	1.15%	1.15%	11.49%	6.90%	2.30%	0.00%	0.00%	1.15%	1.15%	1.15%	0.00%	1.15%
NEAR WESTERN CLUSTER													
BADU	10.47%	2.94%	0.00%	12.26%	8.56%	2.43%	1.15%	1.02%	2.81%	3.32%	0.51%	2.30%	0.51%
KUBIN	11.66%	3.68%	0.00%	6.75%	7.36%	4.29%	1.23%	2.45%	1.23%	1.84%	0.00%	1.84%	0.00%
ST. PAUL	18.99%	5.81%	0.00%	15.50%	10.85%	3.88%	1.55%	1.55%	2.71%	3.49%	0.00%	1.94%	0.78%
MABUIAG	13.46%	3.46%	0.00%	8.85%	4.23%	5.77%	0.00%	0.00%	1.92%	1.15%	0.00%	1.15%	0.38%
TOP WESTERN CLUSTER													
BOIGU	15.87%	6.25%	0.00%	25.00%	17.31%	10.10%	1.92%	1.44%	4.33%	5.29%	1.44%	3.85%	0.96%
DAUAN	13.08%	3.08%	0.00%	15.38%	10.77%	6.92%	0.00%	3.08%	0.77%	2.31%	0.77%	6.15%	0.77%
SAIBAI	12.71%	5.42%	0.00%	13.33%	7.92%	4.17%	1.25%	2.92%	0.83%	0.21%	1.46%	1.04%	0.42%
CENTRAL CLUSTER													
YAM	14.29%	5.71%	0.00%	10.48%	7.94%	6.98%	2.86%	0.63%	2.86%	3.81%	0.32%	3.17%	0.00%
YORKE	15.13%	6.72%	0.00%	12.61%	10.92%	4.20%	1.26%	0.84%	3.36%	2.94%	1.26%	4.62%	0.00%
COCONUT	13.42%	3.36%	0.00%	10.07%	4.03%	3.36%	2.01%	0.67%	0.67%	2.01%	0.00%	2.68%	0.67%
WARRABER	16.00%	7.20%	0.00%	16.40%	12.00%	5.60%	1.20%	1.20%	2.00%	2.00%	0.00%	1.60%	0.00%
EASTERN CLUSTER													
DARNLEY	13.99%	3.79%	0.00%	18.66%	10.50%	9.62%	2.33%	2.33%	3.21%	2.62%	1.17%	4.66%	1.75%
MURRAY	21.37%	5.48%	0.00%	25.21%	20.00%	12.88%	2.74%	2.19%	2.74%	2.74%	0.82%	5.48%	2.19%
STEPHEN	25.00%	6.25%	0.00%	27.08%	27.08%	10.42%	2.08%	2.08%	2.08%	0.00%	4.17%	4.17%	0.00%
NORTHERN PENINSULAR													
BAMAGA	10.04%	2.49%	0.10%	10.42%	8.22%	2.20%	1.63%	1.05%	2.29%	2.20%	0.48%	1.43%	0.19%
INJINOO	10.55%	3.80%	0.00%	9.07%	7.38%	2.11%	1.48%	0.84%	2.53%	2.53%	0.42%	1.48%	0.63%
NEW MAPOON	7.27%	2.42%	0.00%	7.27%	6.23%	1.38%	0.69%	0.00%	2.42%	3.11%	0.00%	2.77%	0.35%
SEISIA	12.32%	3.94%	0.00%	13.30%	9.85%	1.48%	0.49%	0.99%	1.48%	1.48%	0.00%	2.96%	0.00%
UMAGICO	6.41%	2.85%	0.00%	6.76%	6.76%	2.14%	0.71%	1.42%	3.91%	4.98%	0.00%	1.42%	0.00%



Identifying the challenges

- The high prevalence of chronic diseases in the Torres Strait makes chronic disease management pertinent in the local health system and has been faced with many challenges.
- We try to investigate what are some of the obstacles
- We conducted a survey by interviewing clinicians from different disciplines to explore qualitatively their ideas and opinions on how the management of chronic diseases can be improved




Survey

- ▶ N = 15
- ▶ 4 doctors, 7 nurses, 4 health workers

10 Survey Questions:

- ▶ What chronic diseases do you think are managed the best / poorest in Torres Strait Islands? (Name 3)
 - ▶ Best
 - ▶ Poorest
- ▶ What are some challenges faced for the management of chronic diseases in Torres Strait Islands?
- ▶ What are some areas of improvement for the management of chronic diseases in Torres Strait Islands?
- ▶ What factors do you think affects patients from returning to follow up consultations?
- ▶ Do you think having a chronic disease registry will help? (Yes/No)
 - ▶ Reason?
- ▶ What information do you think is pertinent to include in the chronic disease registry?
- ▶ What is done to ensure that patients with chronic diseases are being followed up?
- ▶ What mechanism / system would you prefer when establishing a chronic disease registry?
- ▶ From your experience, what are the lessons learnt from management of chronic diseases in Torres Strait Islands?



Challenges when managing CD in Torres Strait

Total interviewees: 15

Environmental

limited options at supermarket	4
lack of facilities and human resources	2
remoteness	1
desalination of water	1
hot climate	1

Patient

getting patients motivated	6
poor patient compliance	4
cultural values	4
lack of knowledge to health, poor understanding	3
lifestyle, poor eating habits	3
frequent change of staff	1

Clinician

lack of continuity of care	5
lack of coordination, teamwork, consistency	4
lack of time, human resources	4
multiple systems for recording data	3
lack of recall system	3
lack of effort in non-medical side	3
lack of standardisation of management	2



Chronic disease registry

CDR help?

Y 15/15

Advantages:

research and statistics

greater appreciation of burden of disease

generate data to work strategically for certain regions, maximise effectiveness

better transitional care, and planning

allows performance data

enhance care to patient --> can see trajectory of disease development

client satisfaction enhanced

Issue: didn't work before, problem with input of information

Information that's needed

diagnosis

staging / severity of disease

cycle of care

last r/v

investigations

last specialist r/v

differentiation between coronary heart disease (e.g. STEMI, NSTEMI, Angina)

differentiation between HTN, DMII, dyslipidemia or is it a combination

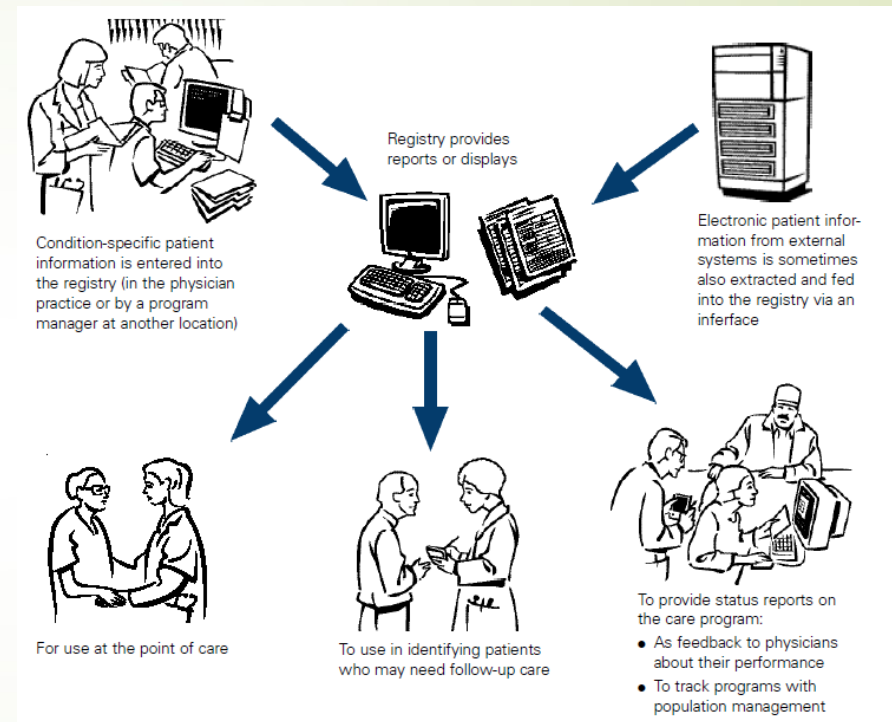
patient compliance

colour coded reminders

reminder of obese children

Chronic disease registry

- ▶ Chronic disease registry
 - ▶ = computerised system incorporating the 10 most common chronic diseases in the Torres Strait region and other relevant medical information
 - ▶ Track multiple chronic diseases to ensure adequate care
- ▶ Linked with GP software
 - ▶ Instantaneous update during consults



Conclusion & Recommendations

- Revealed several key challenges with chronic disease management in the Torres Strait
- Identified a key opportunity to improve CD management in a form of a registry
 - beyond what is available in the paper charts & built into the current GP software
- Clinicians also identified other ways of improving chronic disease management
 - Health promotion (tv, radio, newspaper)
 - Culturally appropriate exercise classes
 - Healthier food choices
 - Considering the current technology advances
 - SMS reminder system



Acknowledgements

- ▶ Thank you!!
- ▶ Dr. Lachlan McIver
 - ▶ Rural Generalist & Public Health Practitioner, Associate Professor of Tropical Medicine, James Cook University
- ▶ James Candy
 - ▶ Registered Nurse, Thursday Island Primary Healthcare Centre – for wonderful statistics
- ▶ Paula Marshall
 - ▶ Clinical Nurse consultant, EMR project manager
- ▶ Glenise Koch
 - ▶ EMR Administrative officer
- ▶ Dr. Lynette Hodgson
 - ▶ Academic Coordinator Health Project, Medicine in Society rotation, University of Queensland School of Medicine
- ▶ Survey participants

Questions?

