

# Implications of DATA on Practice

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# DATA

- **Population**
- **Audit**
- **QI**
- **Planning**
- **Marketing**

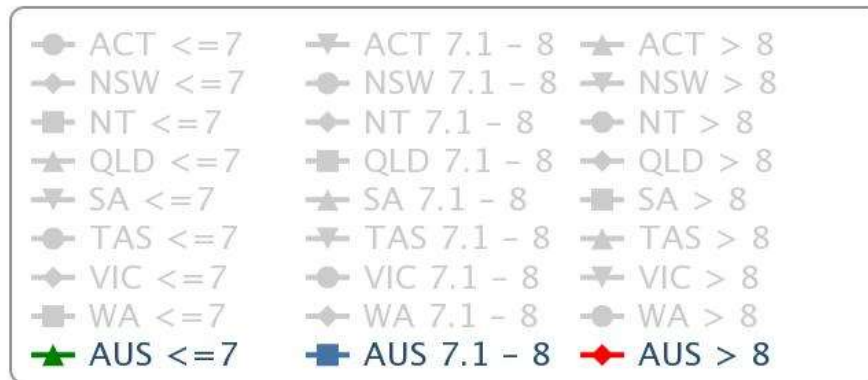
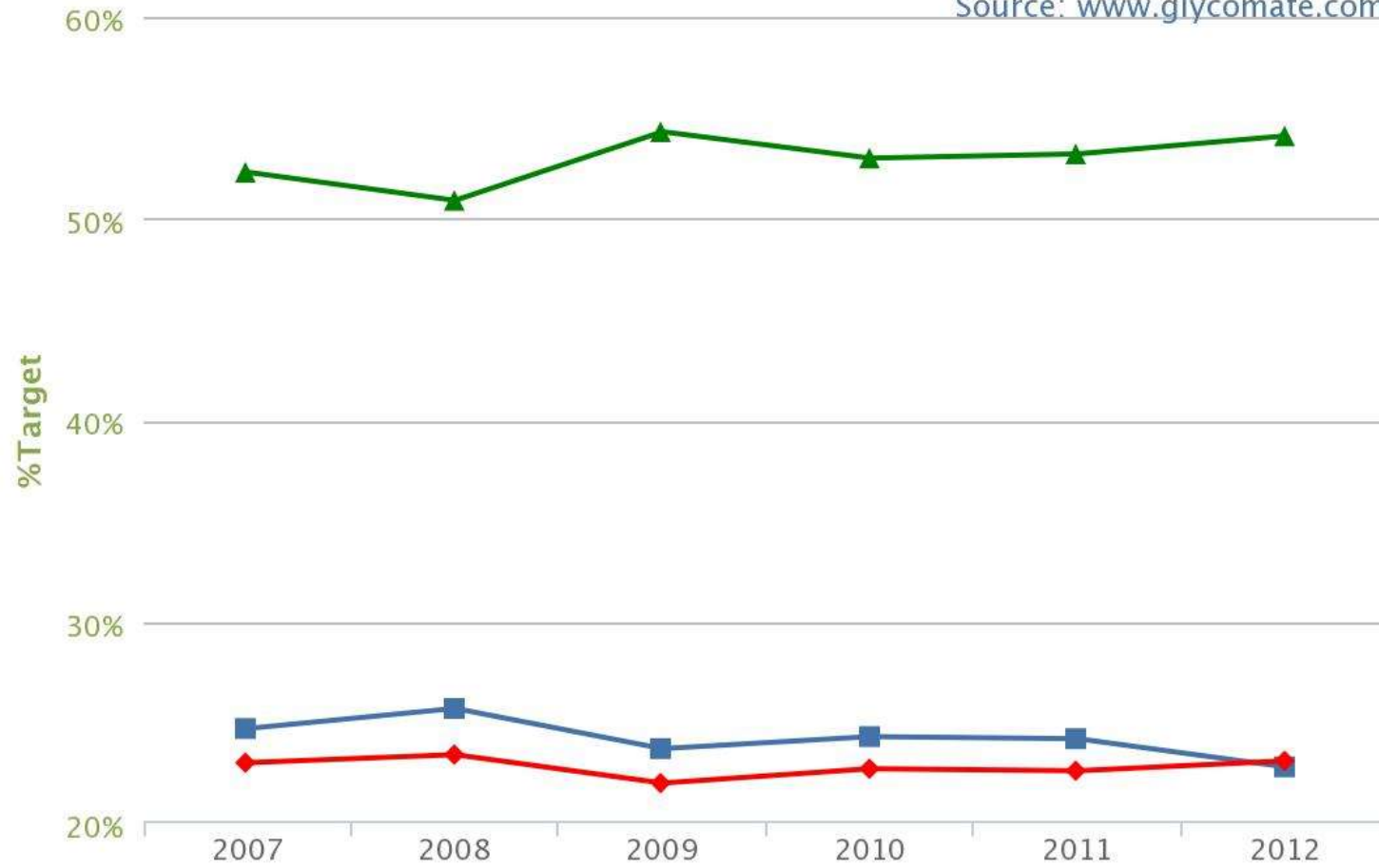


# Population data



# State of the Nation

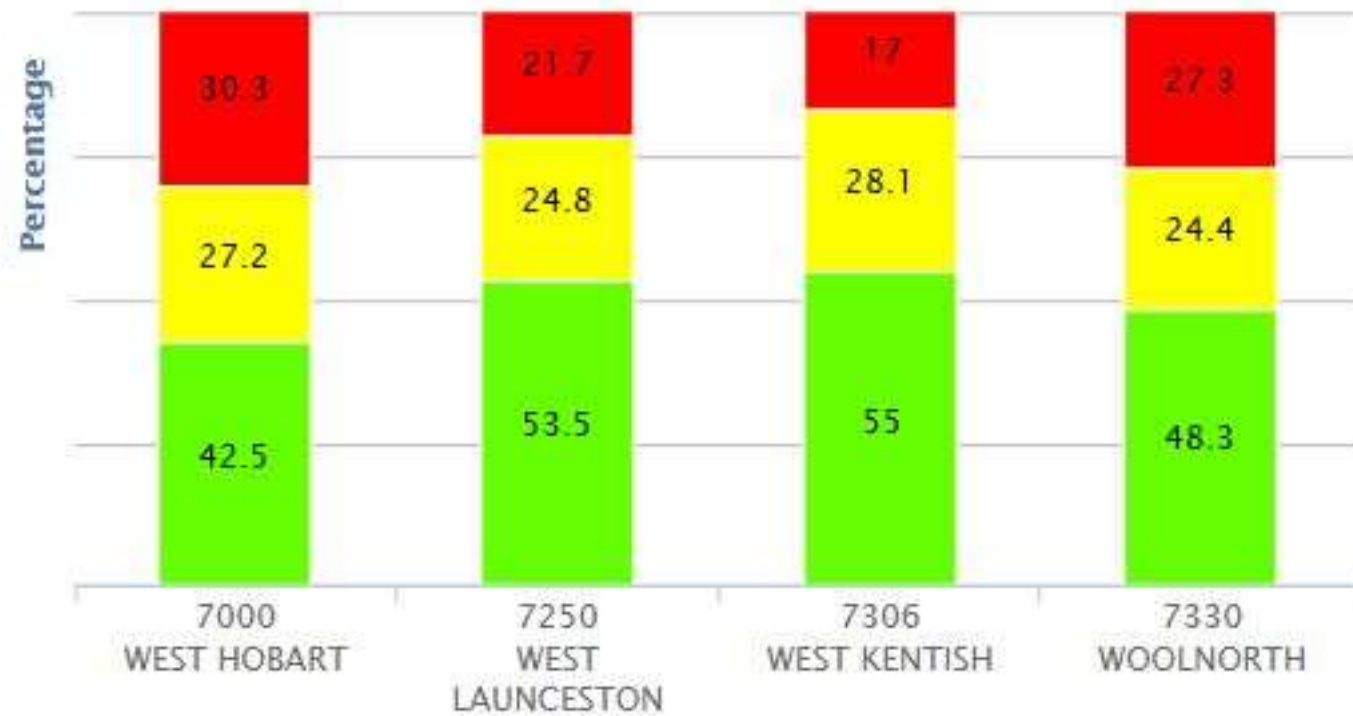
Source: [www.glycomate.com](http://www.glycomate.com)



## Compare Regions by Postcode

### HbA1c Glycaemic Control Ranges

■ >8 (64) ■ 7.1-8 (54-64) ■ ≤ 7 (53)



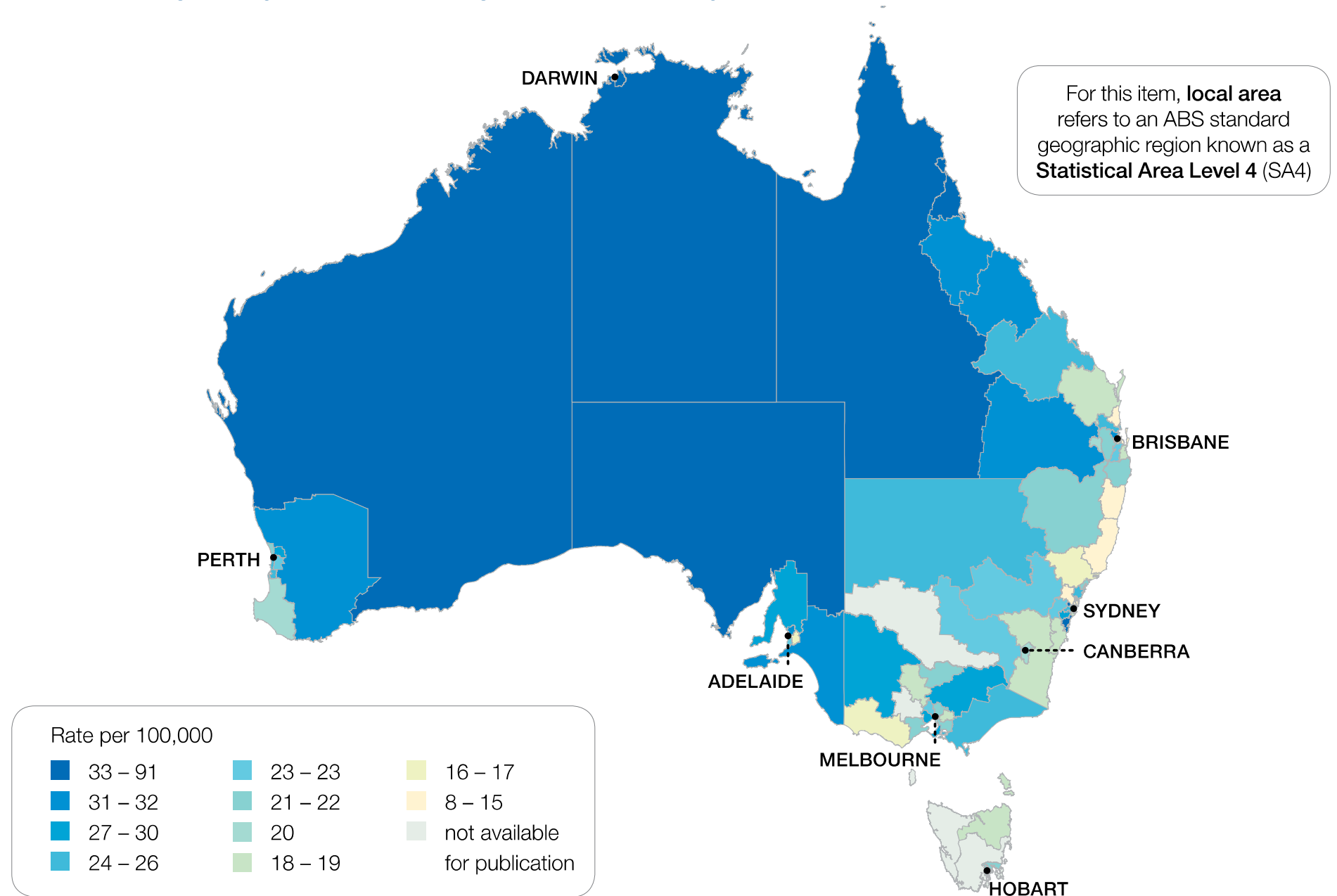
Highcharts.com

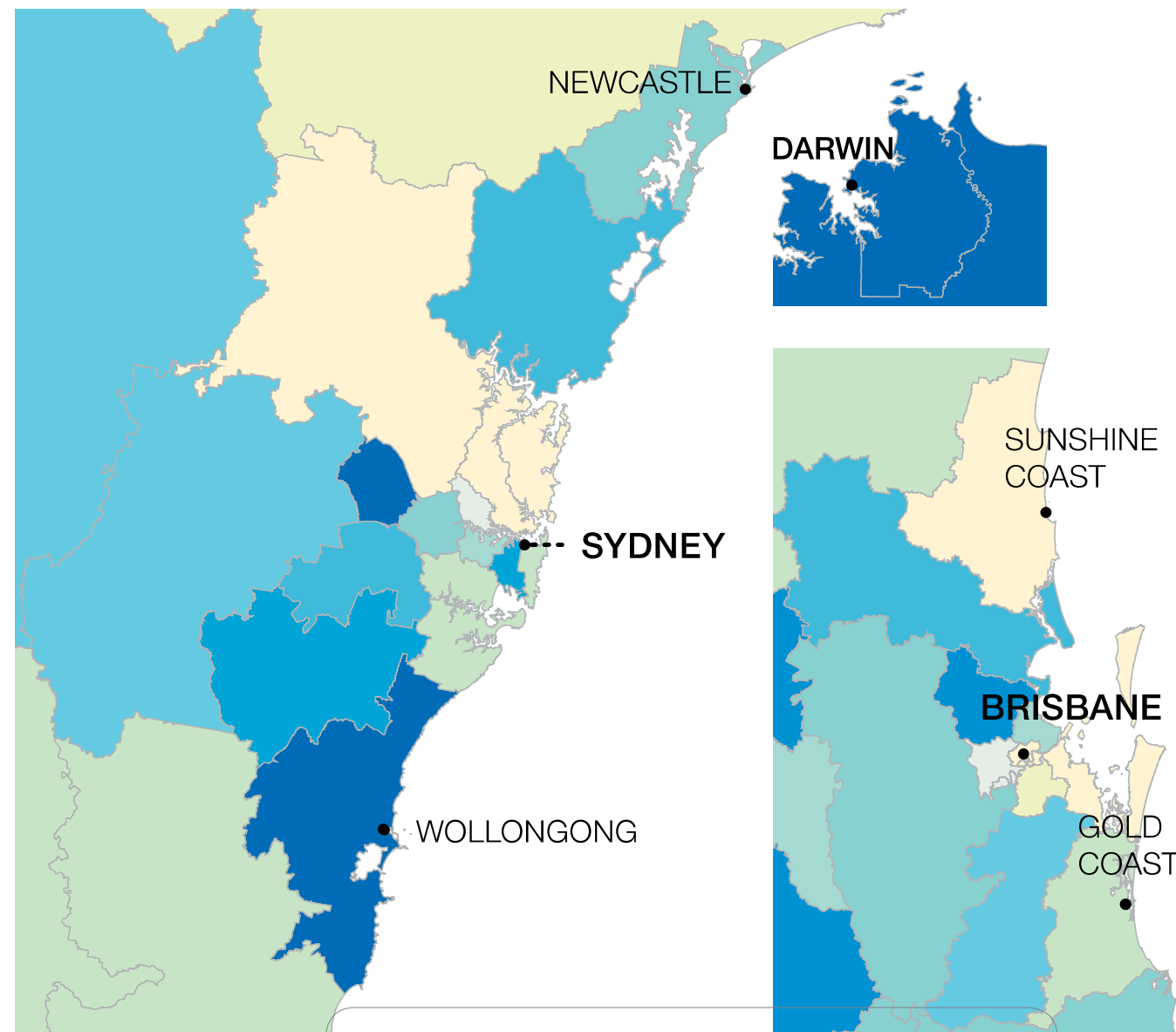
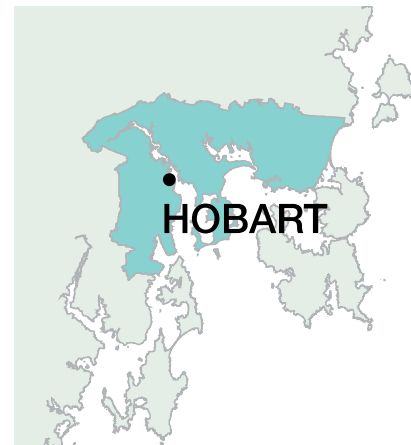
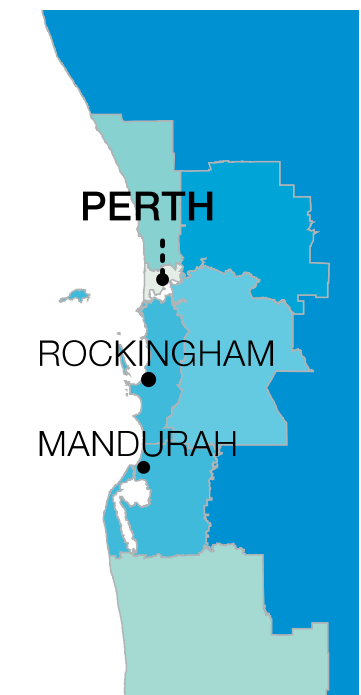


# Diabetes related amputations – national data

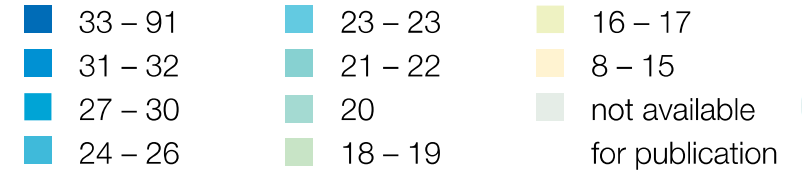
- In 2012–13, there were 4,402 diabetes-related lower limb amputation admissions to hospital
- 23 admissions per 100,000 people aged 18 years and over (the Australian rate)
- Admissions to hospital across 80\* local areas ranged from 8 to 91 per 100,000 people

Figure 136: Number of diabetes-related lower limb amputation admissions to hospital per 100,000 people aged 18 years and over, age standardised, by local area, 2012–13



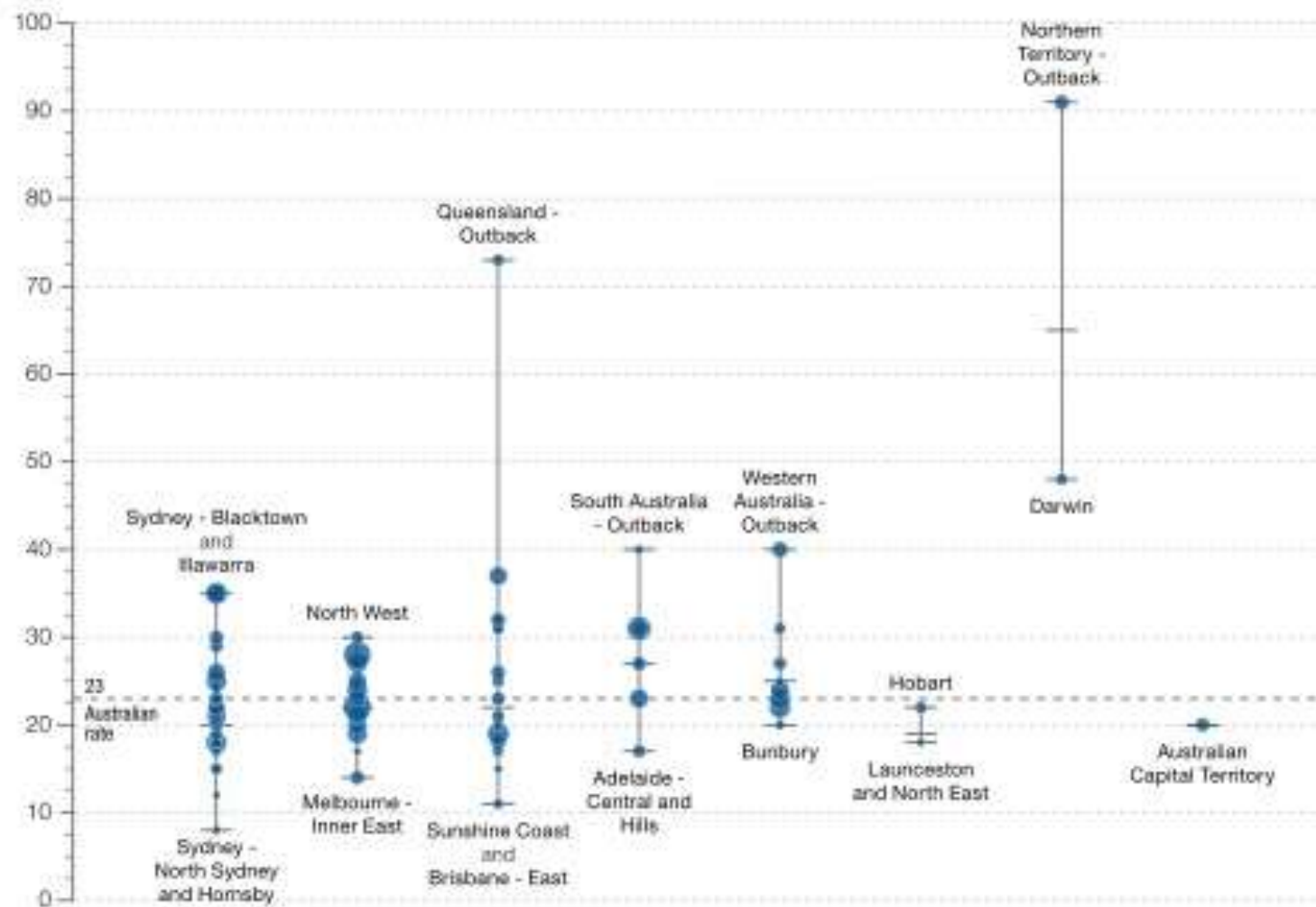


Rate per 100,000





	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
Highest rate	35	30	73	40	40	22	91	-
State/territory	20	22	22	27	25	19	65	20
Lowest rate	8	14	11	17	20	18	48	-
No. admissions	1,331	1,081	834	417	480	68	99	65



# Audit

- **Number of PWDs with:**
  - HbA1c >8
  - BP >140/90
  - Chol >4.0
- **Pharmacy: Number of PWDs with medchecks with:**
  - >5 medications
  - Elderly on SU
- **Podiatry: number of PWDs**
  - high risk foot who have had education on daily checks
  - How many patients with high risk feet are seen 3 monthly



# QI

- An audit = state of play
- QI is what you do with it!
- Think about the data
- Happy 😊 or 😞

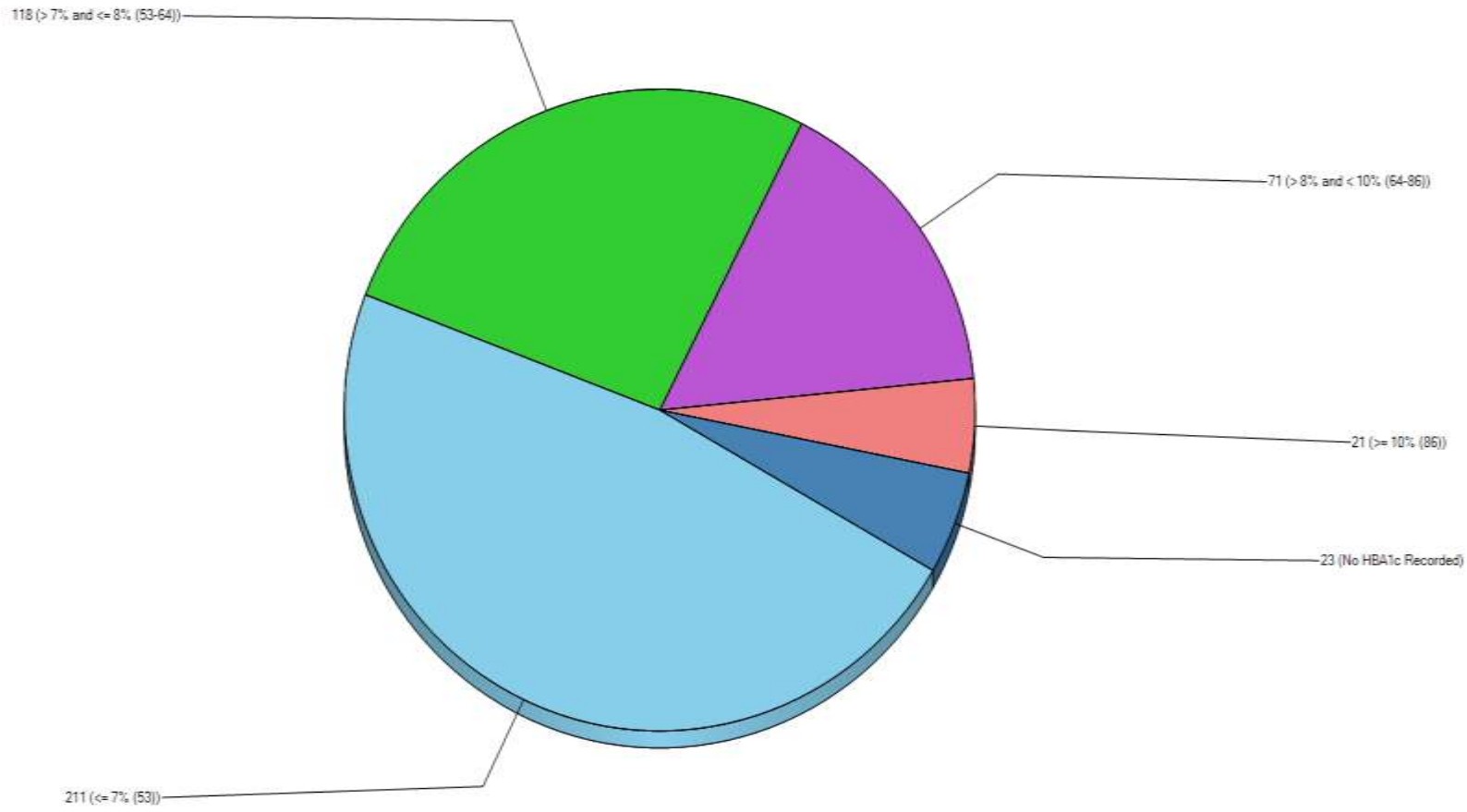
# Practice Data

- **PEN**
- **Polar**
- **Inbuilt into software**
- **Spreadsheets**
- **Paper and pen**



Select All
  Show Percentage

HbA1c Status in % (and mmol/mol) [population = 444]



92 HbA1c >8%

# Dianella

- **4 years ago 15% PWDs – HbA1c >10%**
- **Goal to get that lower**
- **Picked out people who needed insulin**
- **Trained staff (stepping up protocol unimelb)**
- **5 people at a time**
- **4.7% with a HbA1c>10%**



### APCC Report

	CORONARY HEART DISEASE	Count				Percentage			
		Total	ATSI	Non ATSI	NR	Total	ATSI	Non ATSI	NR
CHD-001	Number of patients on the CHD register	134	0	69	65				
	Patients with CHD whose last recorded BP within the last 12 months was:								
CHD-002	BP <=130/80 mmHg	75	0	44	31	55.97 %		63.77 %	47.69 %
CHD-003	BP Recorded	111	0	65	46	82.84 %		94.20 %	70.77 %
CHD-004	Patients with CHD who are currently prescribed an Antiplatelet Medication	91	0	48	43	67.91 %		69.57 %	66.15 %
CHD-005	Patients with CHD who are currently prescribed a Statin Medication	101	0	54	47	75.37 %		78.26 %	72.31 %
	Patients with CHD whose last recorded LDL/Cholesterol within the last 12 months was:								
CHD-006	LDL <= 2mmol/l or if no LDL, Cholesterol < 4mmol/l	3	0	2	1	2.24 %		2.90 %	1.54 %
CHD-007	Cholesterol Recorded	4	0	2	2	2.99 %		2.90 %	3.08 %
CHD-008	Patients with CHD who are currently prescribed an ACE or ARB Medication	85	0	44	41	63.43 %		63.77 %	63.08 %
	Patients with CHD whose Smoking status is:								
CHD-009	Non Smoker (i and ii)	80	0	47	33	59.70 %		68.12 %	50.77 %
CHD-010	i) Never Smoked	29	0	13	16	21.64 %		18.84 %	24.62 %
CHD-011	ii) Ex Smoker	51	0	34	17	38.06 %		49.28 %	26.15 %
CHD-012	iii) Current Smoker	14	0	3	11	10.45 %		4.35 %	16.92 %
CHD-013	iv) Not Recorded	40	0	19	21	29.85 %		27.54 %	32.31 %



# Practice data - ??

- **Pharmacy**
- **Podiatry**
- **Dietitians**





# Implications

- **General practice**

- 100 PWDs
- 100 care plans (30-40min nurse time; 15-20 min GP time)
- 3 reviews (20 min nurse time; 15 min GP time)
- ~ 160 hours nurse time; 100 hours GP time
- 3 PWD per week – Just over 1 GPMP/TCA and 2 reviews
- ~\$70,000 (not including ACC / HMRs) ~ \$270 per hour
- Diarising



# Implications

- **Pharmacy**

- 500 PWDs
- Medscheck (30min) and HMRs (1 hour)
- 750 hours per year
- Only allowed 20 medscheck per month
- Diabetes medscheck 240 per year, 120 hours = over 2 hours per week; ~\$24,000
- What of the other half??
- HMRs – 20 per month; 240 per year, 240 hours = ~5 hours per week; \$52,800 per year



**Table 4 Outcome measures**

Parameters		No. of patients	Initial assessment	Final assessment	Mean difference (95% CI) (P-value)
<i>Biological outcomes measures</i>					
HbA1c: mean (SD)	[%]	<i>n</i> = 59	8.3 (1.1)	7.5 (1.0)	-0.8 (-1.1, -0.5) <i>P</i> < 0.001 <sup>a</sup>
Systolic blood pressure: mean (SD)	[mmHg]	<i>n</i> = 59	152.0 (18.6)	141.6 (16.4)	-10.4 (-14.1, -6.7) <i>P</i> < 0.001 <sup>a</sup>
Diastolic blood pressure: mean (SD)	[mmHg]	<i>n</i> = 59	81.2 (9.7)	79.2 (8.1)	-2.0 (-3.8, -0.2) <i>P</i> = 0.026 <sup>a</sup>
Total cholesterol: mean (SD)	[mmol/L]	<i>n</i> = 24	5.3 (1.1)	4.9 (0.8)	-0.4 (-0.6, -0.3) <i>P</i> < 0.001 <sup>a</sup>
<i>Medication compliance – oral hypoglycaemic therapy</i>					
Patient self-reporting: mean (SD)	[%]	<i>n</i> = 59	97.5 (5.4)	98.3 (3.7)	0.8 (-0.6, 2.3) <i>P</i> = 0.32 <sup>b</sup>
Community pharmacy PMR system: mean (SD)	[%]	<i>n</i> = 39	94.9 (12.6)	99.7 (14.2)	4.8 (-1.0, 10.5) <i>P</i> = 0.12 <sup>b</sup>
<i>Patient knowledge (% correct answers)</i>					
Oral hypoglycaemic therapy (59 patients/613 questions)	[%]	<i>n</i> = 59	51%	72%	<i>P</i> = 0.002 <sup>b</sup>
Anti-hypertensive therapy (25 patients/150 questions)	[%]	<i>n</i> = 25	75%	85%	<i>P</i> = 0.077 <sup>b</sup>

<sup>a</sup> Paired t-test.<sup>b</sup> Chi-squared.

# Implications

- **Group type 2 diabetes**

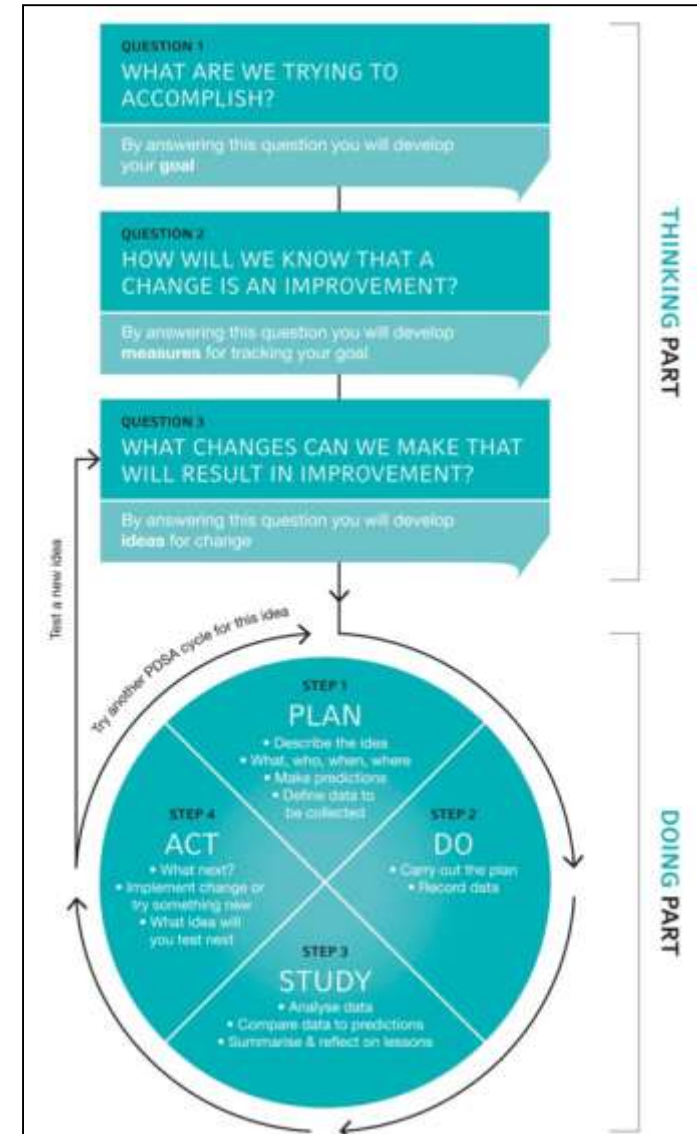
- 10 people per group, 5 per year (5 hours) ~ \$850
- Initial assessment, 50 \*45min, 38 hours ~\$3,400
- DNE/dietitian/EP

- **Desmond**



# The Model for Improvement

- A simple tool to test and implement change that can be used by anyone
- It achieves rapid results by breaking down change into small steps
- It reduces risk by starting small



# The 'thinking' part – the 3 fundamental questions

## QUESTION 1

WHAT ARE WE TRYING TO ACCOMPLISH?

By answering this question you will develop your **goal**

## QUESTION 2

HOW WILL WE KNOW THAT A CHANGE IS AN IMPROVEMENT?

By answering this question you will develop **measures** for tracking your goal

## QUESTION 3

WHAT CHANGES CAN WE MAKE THAT WILL RESULT IN IMPROVEMENT?

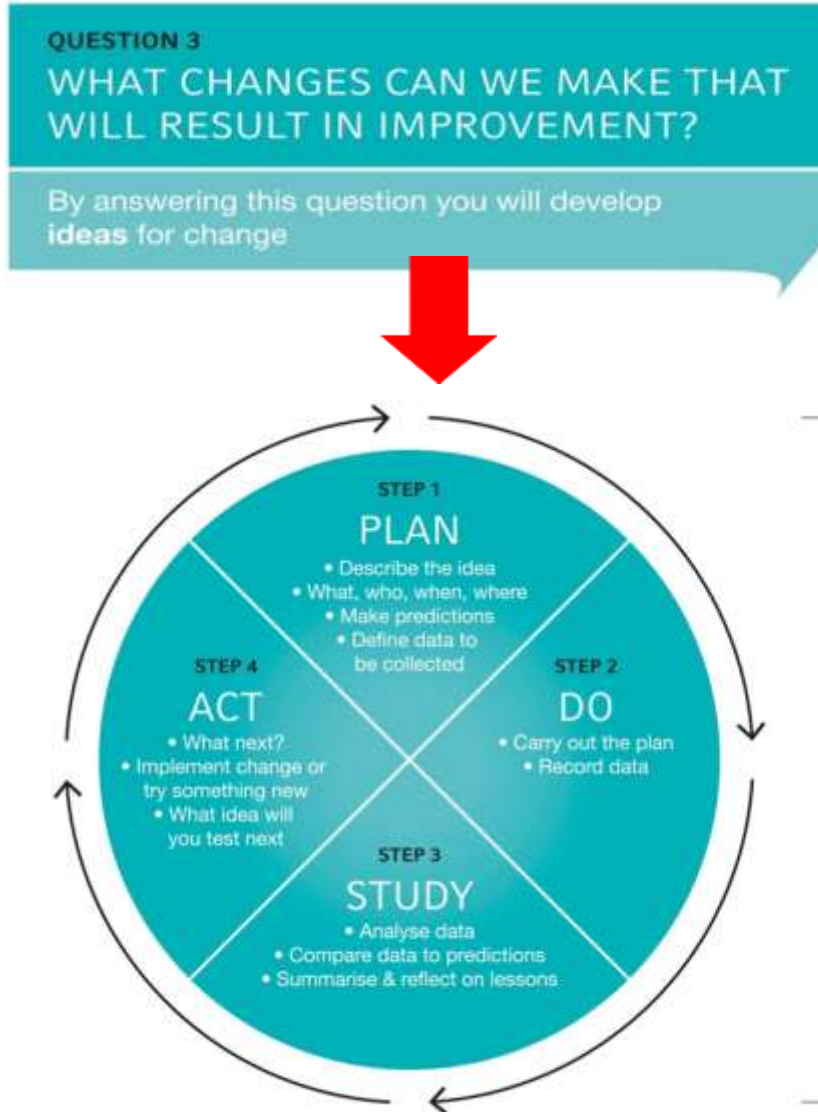
By answering this question you will develop **ideas** for change

THINKING PART





# The 'doing' part – PDSA cycles



THANK  
YOU!