



# Choosing Wisely

ACEM ASM

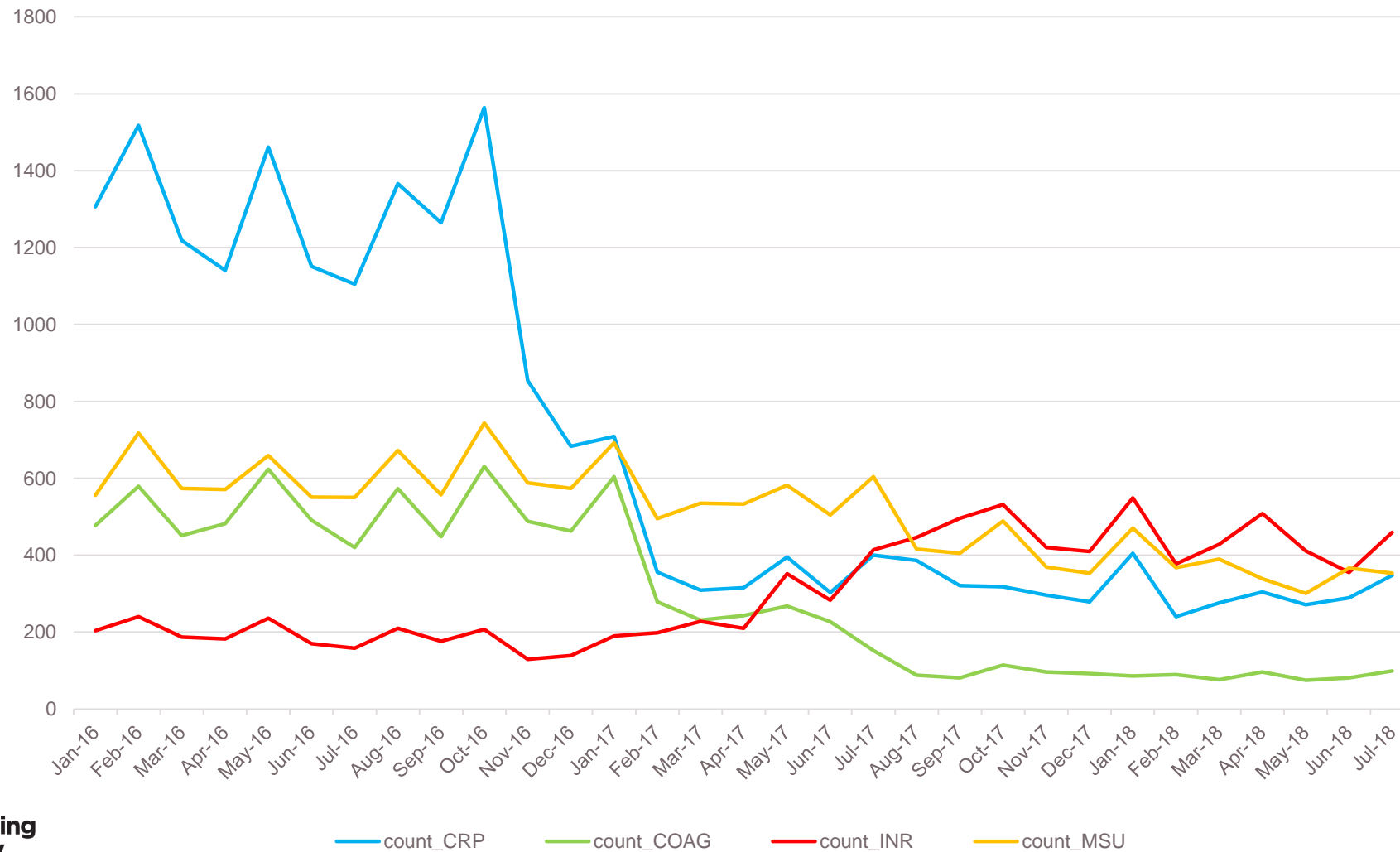
Perth

November 2018

**Austin**  
HEALTH

# ED Activities at Austin Health

# "Routine" Tests in ED

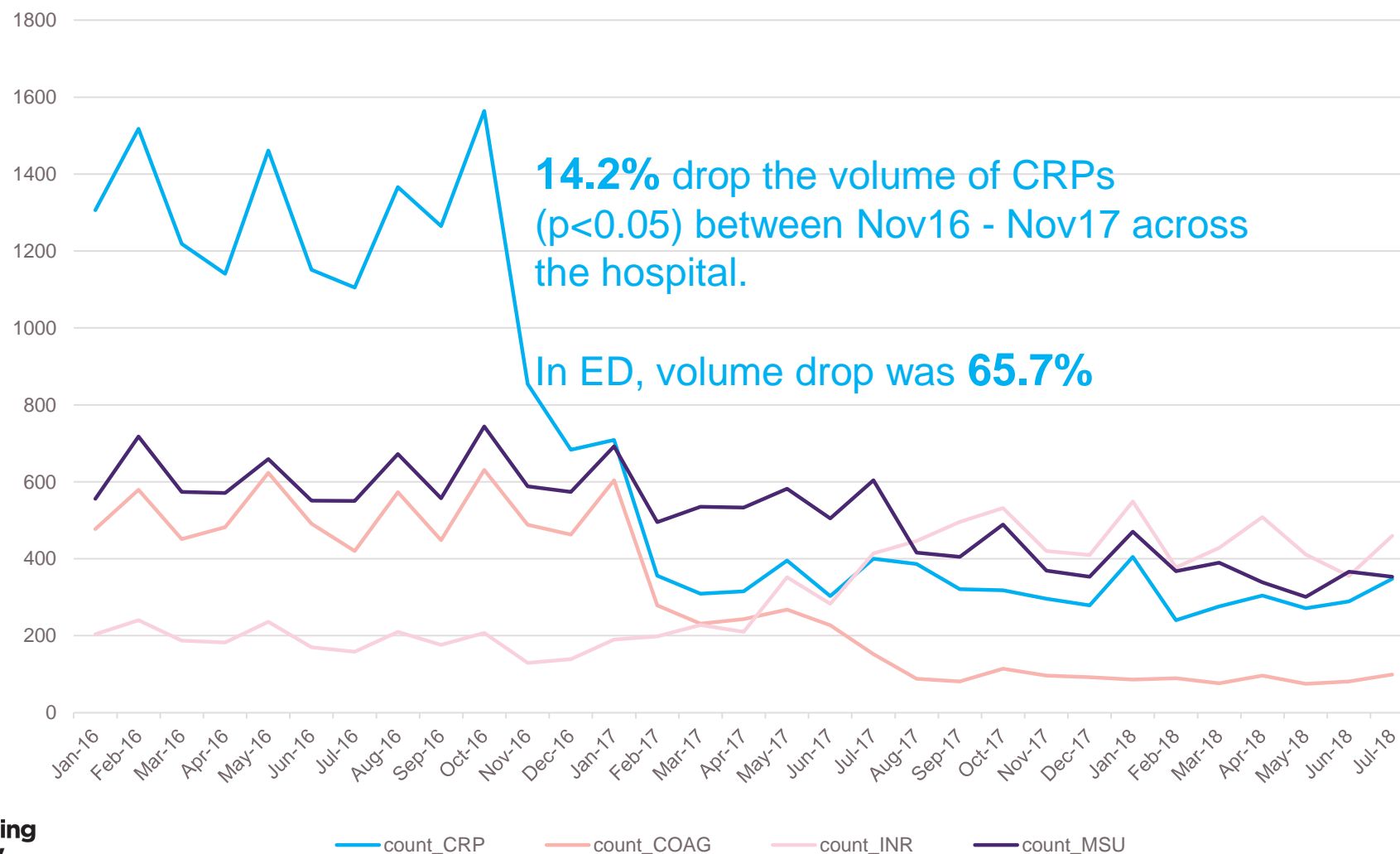


**Choosing  
Wisely  
Australia**

An Initiative of NPS MedicineWise



# “Routine” Tests in ED



**Choosing Wisely Australia**

An Initiative of NPS MedicineWise



# Urine Cultures

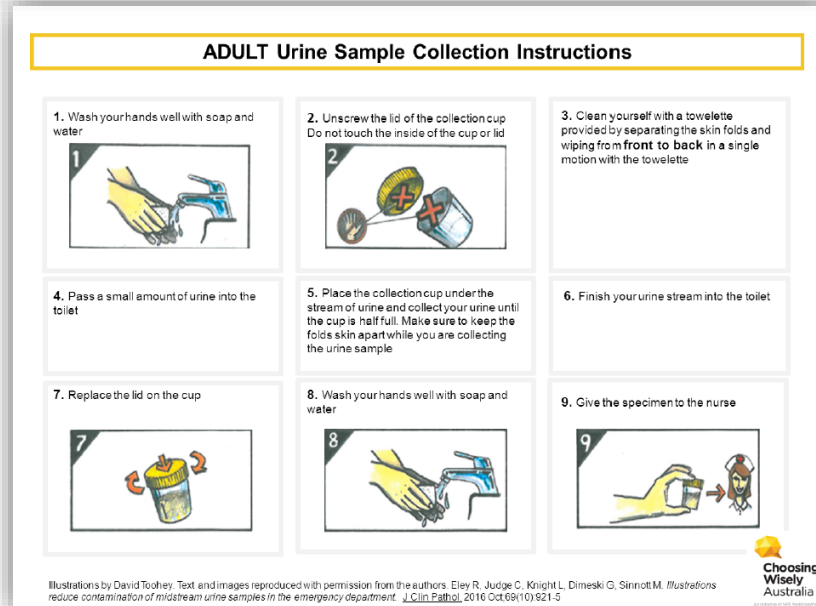
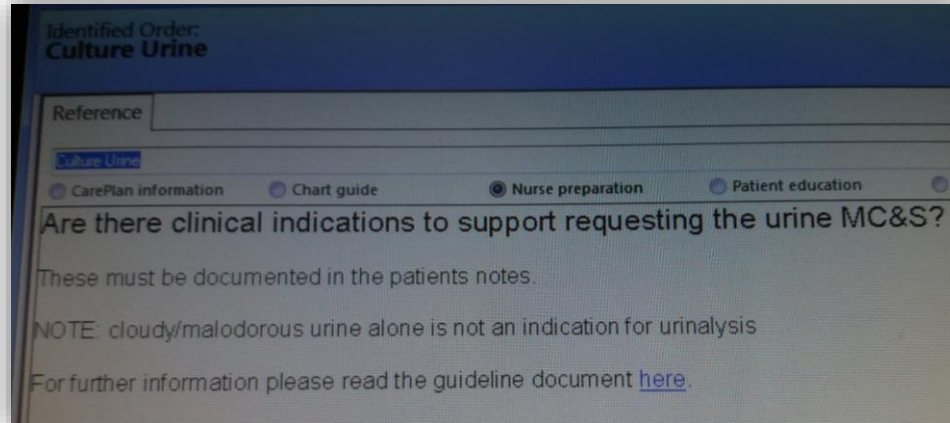
- Multi-faceted behaviour change strategy implemented across the hospital:

**Audit & Feedback** + **Guideline development** + **Education** + IT changes

- Particular focus and attention paid for ED Department due to high volumes of orders and high rates of sample contamination

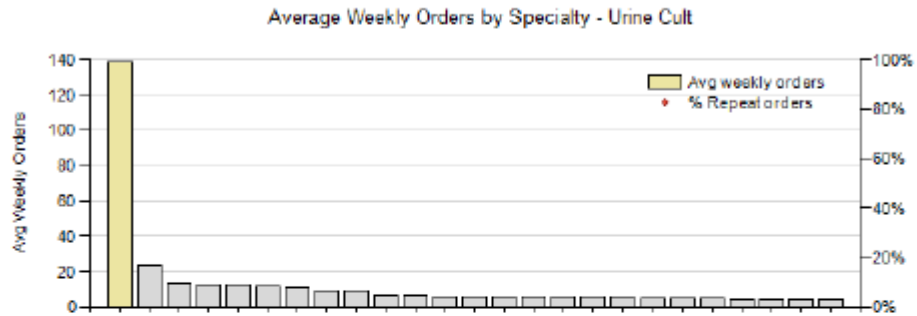


# Urine Cultures

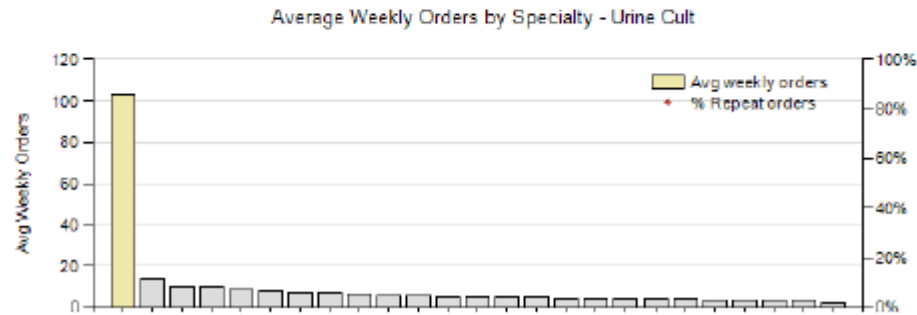


# Urine Cultures - Results

Pre-intervention: 1/3/16 – 1/3/17



Post-intervention: 1/8/17 – 1/10/17



\*This data reflect electronic orders only

	Urine Cultures	
	Pre-intervention	Post-intervention
Volume of tests across whole hospital (weekly average)	340.77	250
Volume of tests in ED (weekly average)	142.15	87.69
Volume of tests per patient whole hospital	0.09	0.06
Volume of tests per patient in ED	0.08	0.04



# Coagulation Studies

- Multi-faceted behaviour change strategy implemented across the hospital:

**Audit & Feedback** + **Guideline development** + **Education** + IT changes

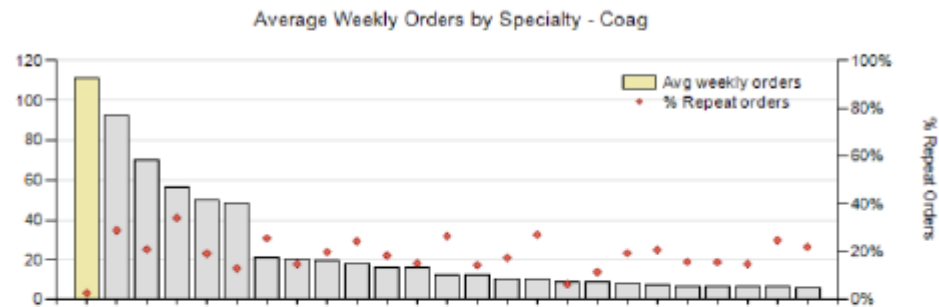
- Particular focus and attention paid for ED Department due to high volumes of orders



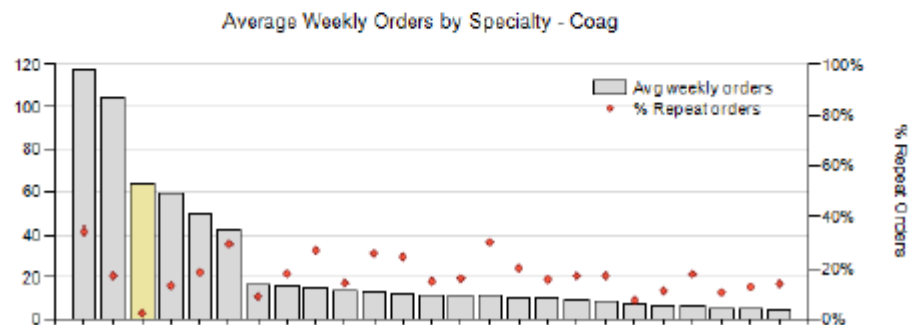


# Coagulation Studies - Results

Pre-intervention: 1/12/15 – 1/12/16



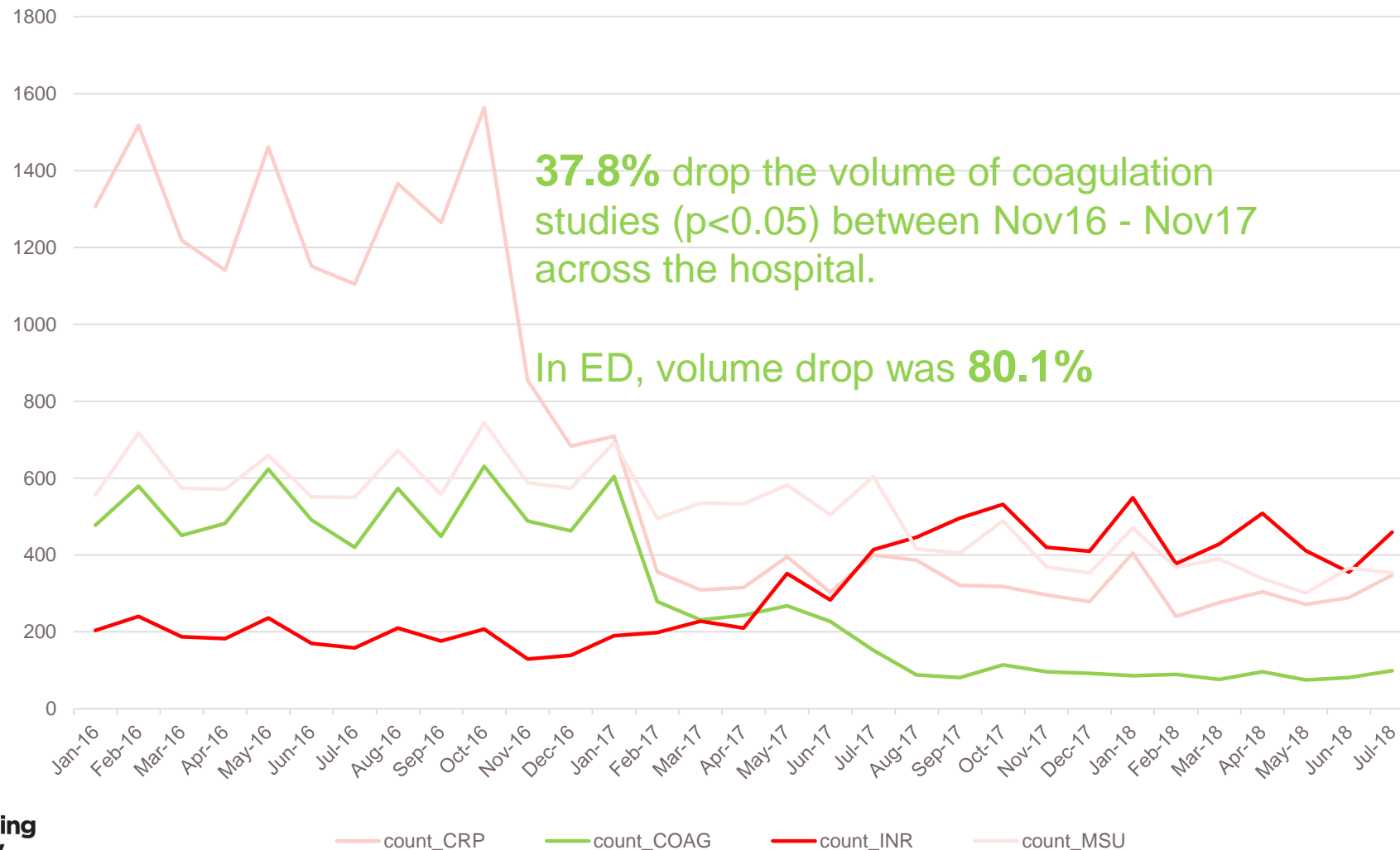
Post-intervention: 1/4/17 – 1/6/17



	Coags	
	Pre-intervention	Post-intervention
Volume of tests across whole hospital (weekly average)	686.18	552.22
Volume of tests in ED (weekly average)	119.11	49.39
Volume of tests per patient whole hospital	0.27	0.16
Volume of tests per patient in ED	0.07	0.01



# “Routine Tests” in ED

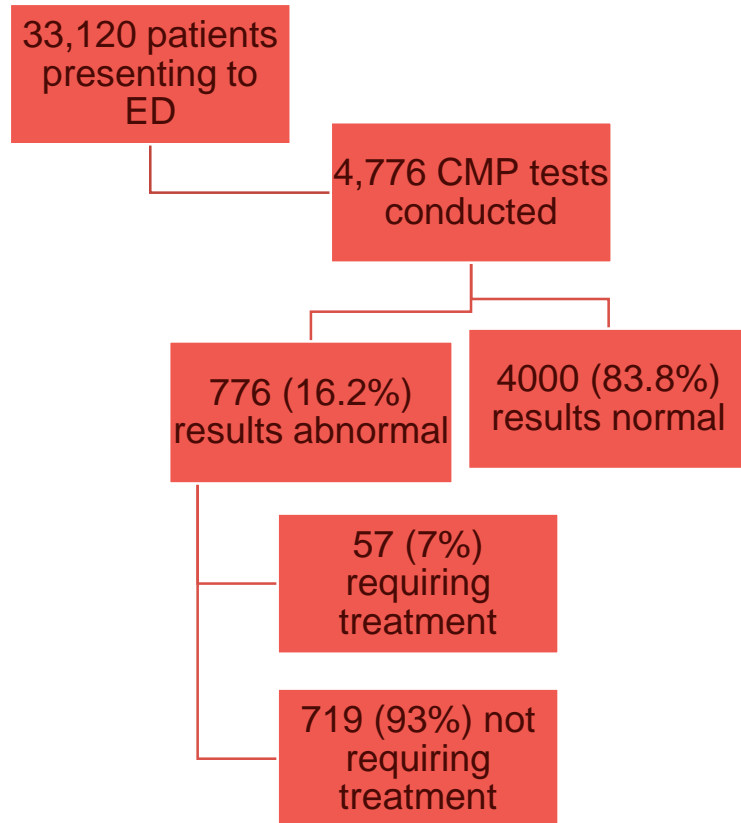


**Choosing Wisely Australia**

An Initiative of NPS MedicineWise



# CMP Testing



Between Jan 1 and Jun 30 2017:

- 5.2 % of ED patients investigated for **CMP** abnormalities
  - *Only 1.2% require treatment*
- 3.4% (49) of patients treated with Magnesium despite normal levels
- Further regression analyses to be conducted to determine patients at risk of abnormal levels



# Renal Colic

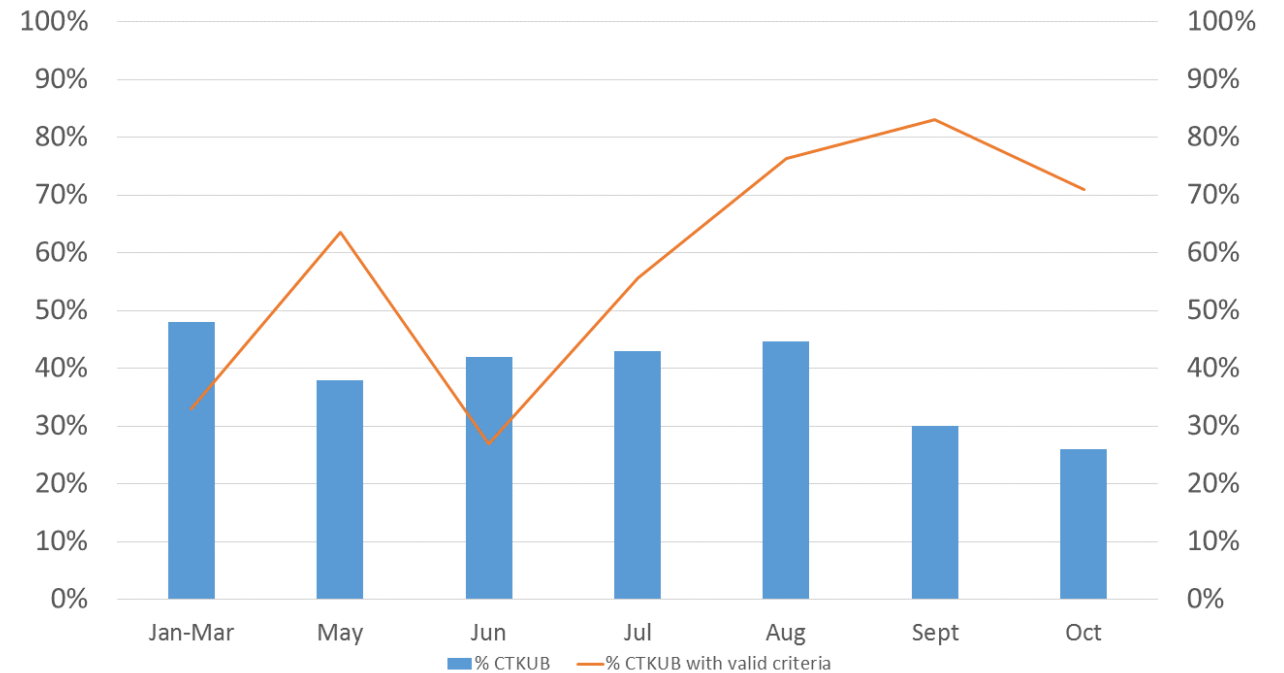
- Previous audits in the Emergency Department demonstrated a slow time to analgesia for renal colic presentation.
- An evidence-based care improvement project to improve the patient experience for patients presenting with renal colic was implemented
- Project activities included
  - Education sessions
  - Posters
  - Ongoing staff feedback
  - Local guideline amendments



# Renal Colic - Results

The project measured a number of outcomes including:

- The proportion of patients receiving an NSAID within 60 minutes of ED arrival (**increase from 40% to 84%**)
- The proportion of patient with a pain score < 2 at 60 minutes (**increase from 13% to 17%**)
- The proportion of patients discharged on a course of NSAIDs (**increase from 70% to 77%**)
- The proportion of patients receiving a CTKUB (**decrease from 53% to 23%**)
- The proportion of patients receiving a CTKUB with the correct indications (**increase from 38% to 71%**)



# DVT/PE stratification.

- Development of an automated Well's score calculator built into Cerner

Wells Score - TESTING, James MR

\*Performed on: 05/04/2018 1537 AEST By: Burns, James Daniel Mr - Admin

Wells Score

Name: TESTING, James MR, DOB: 21/11/1978, Sex: M, URB: 8001575

Clinical symptoms or signs of DVT? ☒ Yes ☐ No

Alternative diagnosis less likely than PE? ☐ Yes ☒ No

HR > 100 ☒ Yes ☐ No

Immobilisation/surgery < 4weeks? ☒ Yes ☐ No

Previously documented DVT or PE? ☐ Yes ☒ No

Haemoptysis? ☐ Yes ☒ No

Cancer ( treated in last 6 months, or palliative)? ☐ Yes ☒ No

Total Score

Score <2 - low pre-test probability of PE (approx. 5%)\*  
Score 2-6 - moderate pre-test probability of PE (approx. 30%)  
Score >6 - high pre-test probability of PE (approx. 80%)

In Progress

US Doppler Leg DVT Wells Score - TESTING, James MR

\*Performed on: 05/04/2018 1538 AEST By: Burns, James Daniel Mr - Admin

US Doppler Leg

Name: TESTING, James MR, DOB: 21/11/1978, Sex: M, URB: 8001575

Wells Score DVT

1. Active Cancer? ☒ Yes ☐ No

2. Bedridden recently >3days or major surgery within 4 weeks? ☐ Yes ☒ No

3. Calf swelling >3cm compared to other leg? ☒ Yes ☐ No

4. Entire leg swollen? ☒ Yes ☐ No

5. Localized tenderness along deep venous system? ☐ Yes ☒ No

6. Pitting oedema, greater in symptomatic leg? ☐ Yes ☒ No

7. Paralysis, paresis or recent plaster immobilization or lower extremity? ☐ Yes ☒ No

8. Previous documented DVT? ☐ Yes ☒ No

9. Alternative diagnosis to DVT? as likely or more likely? ☐ Yes ☒ No

Wells Score:

Score 0-1 = Low risk group for DVT  
Score 2+ = High risk group for DVT

In Progress



# Next Area to Tackle: Routine Testing

Path View	19/08/2018 18:10	19/08/2018 11:53
General Path		
Spec Error Report		
Haematology		
<input type="checkbox"/> Hb	119 L (d)	119 L
<input type="checkbox"/> WCC	6.1 (d)	6.6
<input type="checkbox"/> Plt	193 (d)	196
<input type="checkbox"/> RCC	3.57 L (d)	3.61 L
<input type="checkbox"/> Hct	0.35 L (d)	0.36
<input type="checkbox"/> MCV	99 (d)	99
<input type="checkbox"/> MCH	33.0 (d)	33.0
<input type="checkbox"/> MCHC	337 (d)	331
<input type="checkbox"/> Neutrophils #	3.5 (d)	4.8
<input type="checkbox"/> Lymphocytes #	1.8 (d)	1.1
<input type="checkbox"/> Monocytes #	0.6	0.5
<input type="checkbox"/> Eosinophils #	0.1	0.1
<input type="checkbox"/> Basophils #	0.1	0.0
Haematology Report	Haematology	Haematology
Coagulation		
<input type="checkbox"/> PT		17.0 H
<input type="checkbox"/> INR		1.6
<input type="checkbox"/> APTT		
<input type="checkbox"/> Fibrinogen Level		
Coagulation Studies Report		Coagulation
Biochem Blood		
<input type="checkbox"/> Sodium Level	140	140
<input type="checkbox"/> Potassium Level	4.2	4.5
<input type="checkbox"/> Chloride Level	102	103
<input type="checkbox"/> Bicarbonate Level	23	24
<input type="checkbox"/> Urea Level	6.6	7.1
<input type="checkbox"/> Creatinine Level	78	72
<input type="checkbox"/> Estimated GFR	76 L	78 L
<input type="checkbox"/> Calcium Level	2.31	
<input type="checkbox"/> Calcium Corr	2.32	
<input type="checkbox"/> Magnesium Level	0.81	
<input type="checkbox"/> Phosphate Level	1.05	
<input type="checkbox"/> Bilirubin Tot	19	15
<input type="checkbox"/> ALT	15	18
<input type="checkbox"/> GGT	50	50
<input type="checkbox"/> ALP	118 H	118 H
<input type="checkbox"/> Protein Tot	72	71



# Next Area to Tackle: Routine Testing

Path View		19/08/2018	19/08/2018	
General Path	Path View	20/08/2018 05:46	19/08/2018 22:22	19/08/2018 22:10
Spec Error Report	Haematology			
Haematology	Hb	120	142	
<input type="checkbox"/> Hb	WCC	3.5 L	4.8	
<input type="checkbox"/> WCC	Plt	207	285	
<input type="checkbox"/> Plt	RCC	3.93	4.60	
<input type="checkbox"/> RCC	Hct	0.35	0.41	
<input type="checkbox"/> Hct	MCV	89	90	
<input type="checkbox"/> MCV	MCH	31.0	31.0	
<input type="checkbox"/> MCH	MCHC	345	345	
<input type="checkbox"/> MCHC	Neutrophils #	1.2 L	2.0	
<input type="checkbox"/> Neutrophils #	Lymphocytes #	2.0	2.4	
<input type="checkbox"/> Lymphocytes #	Monocytes #	0.2	0.4	
<input type="checkbox"/> Monocytes #	Eosinophils #	0.1	0.0	
<input type="checkbox"/> Eosinophils #	Basophils #	0.0	0.0	
<input type="checkbox"/> Basophils #	Haematology Report	Haematology	Haematology	
Haematology Report	Coagulation			
<input type="checkbox"/> PT	Biochem Blood			
<input type="checkbox"/> INR	Sodium Level	140	140	
<input type="checkbox"/> APTT	Potassium Level	3.7	4.3	
<input type="checkbox"/> Fibrinogen Level	Chloride Level	101	95	
Coagulation Studies R	Bicarbonate Level	22	23	
Biochem Blood	Urea Level	5.5	6.1	
<input type="checkbox"/> Sodium Level	Creatinine Level	75	84	
<input type="checkbox"/> Potassium Level	Estimated GFR	> 90	81 L	
<input type="checkbox"/> Chloride Level	Calcium Level	2.29	2.49	
<input type="checkbox"/> Bicarbonate Level	Calcium Corr	2.30	2.33	
<input type="checkbox"/> Urea Level	Magnesium Level	0.75	0.85	
<input type="checkbox"/> Creatinine Level	Phosphate Level	1.14	1.34	
<input type="checkbox"/> Estimated GFR	Bilirubin Tot		5	
<input type="checkbox"/> Calcium Level	ALT		21	
<input type="checkbox"/> Calcium Corr	GGT		58 H	
<input type="checkbox"/> Magnesium Level	ALP		83	
<input type="checkbox"/> Phosphate Level	Protein Tot		77	
<input type="checkbox"/> Bilirubin Tot	Albumin Level	39	48	
<input type="checkbox"/> ALT	Globulin Level		29	
<input type="checkbox"/> GGT				
<input type="checkbox"/> ALP				
<input type="checkbox"/> Protein Tot				





## Next Area to Tackle: Routine Testing

Path View		20/08/2018	19/08/2018					
General Path		Path View		20/08/2018 05:46	19/08/2018 22:22	19/08/2018 22:10		
Spec Error Report	Haematology	Path View		20/08/2018 05:46	19/08/2018 23:21	19/08/2018 15:22	19/08/2018 15:08	19/08/2018 15:07
<input type="checkbox"/> Hb	<input type="checkbox"/> Hb	Haematology						
<input type="checkbox"/> WCC	<input type="checkbox"/> WCC	Haematology						
<input type="checkbox"/> Plt	<input type="checkbox"/> Plt	Haematology		120				128
<input type="checkbox"/> RCC	<input type="checkbox"/> RCC	Haematology		10.4				10.7
<input type="checkbox"/> Hct	<input type="checkbox"/> Hct	Haematology		273				291
<input type="checkbox"/> MCV	<input type="checkbox"/> MCV	Haematology		4.48				4.71
<input type="checkbox"/> MCH	<input type="checkbox"/> MCH	Haematology		0.37				0.40
<input type="checkbox"/> MCHC	<input type="checkbox"/> MCHC	Haematology		82				85
<input type="checkbox"/> Neutrophils #	<input type="checkbox"/> Neutrophils #	Haematology		27.0				27.0
<input type="checkbox"/> Lymphocytes #	<input type="checkbox"/> Lymphocytes #	Haematology		325				321
<input type="checkbox"/> Monocytes #	<input type="checkbox"/> Monocytes #	Haematology		7.7				8.3 H
<input type="checkbox"/> Eosinophils #	<input type="checkbox"/> Eosinophils #	Haematology		1.3				1.3
<input type="checkbox"/> Basophils #	<input type="checkbox"/> Basophils #	Haematology		1.3 H				1.1 H
Haematology Report	Haematology Report	Haematology		0.0				0.0
Coagulation	Coagulation	Haematology		0.0				0.0
<input type="checkbox"/> PT	<input type="checkbox"/> PT	Haematology		0.0				0.0
<input type="checkbox"/> INR	<input type="checkbox"/> INR	Haematology		0.0				0.0
<input type="checkbox"/> APTT	<input type="checkbox"/> APTT	Haematology		0.0				0.0
<input type="checkbox"/> Fibrinogen Level	<input type="checkbox"/> Fibrinogen Level	Haematology		0.0				0.0
Coagulation Studies R	Coagulation Studies R	Haematology		0.0				0.0
Biochem Blood	Biochem Blood	Haematology		0.0				0.0
<input type="checkbox"/> Sodium Level	<input type="checkbox"/> Sodium Level	Haematology		138			140	
<input type="checkbox"/> Potassium Level	<input type="checkbox"/> Potassium Level	Haematology		4.3			4.5	
<input type="checkbox"/> Chloride Level	<input type="checkbox"/> Chloride Level	Haematology		102			103	
<input type="checkbox"/> Bicarbonate Level	<input type="checkbox"/> Bicarbonate Level	Haematology		21 L			20 L	
<input type="checkbox"/> Urea Level	<input type="checkbox"/> Urea Level	Haematology		10.2 H			9.0 H	
<input type="checkbox"/> Creatinine Level	<input type="checkbox"/> Creatinine Level	Haematology		84			76	
<input type="checkbox"/> Estimated GFR	<input type="checkbox"/> Estimated GFR	Haematology		56 L			64 L	
<input type="checkbox"/> Calcium Level	<input type="checkbox"/> Calcium Level	Haematology					2.19	
<input type="checkbox"/> Calcium Corr	<input type="checkbox"/> Calcium Corr	Haematology					2.32	
<input type="checkbox"/> Magnesium Level	<input type="checkbox"/> Magnesium Level	Haematology					0.83	
<input type="checkbox"/> Phosphate Level	<input type="checkbox"/> Phosphate Level	Haematology					0.77	
<input type="checkbox"/> Bilirubin Tot	<input type="checkbox"/> Bilirubin Tot	Haematology					34 L	
<input type="checkbox"/> ALT	<input type="checkbox"/> ALT	Haematology					32 H	
<input type="checkbox"/> GGT	<input type="checkbox"/> GGT	Haematology					T/F	
<input type="checkbox"/> ALP	<input type="checkbox"/> ALP	Haematology					1.39	
<input type="checkbox"/> Protein Tot	<input type="checkbox"/> Protein Tot	Haematology					4 L	
<input type="checkbox"/> Globulin Level	<input type="checkbox"/> Globulin Level	Haematology					27 L	
<input type="checkbox"/> Transferrin	<input type="checkbox"/> Transferrin	Haematology					3.2	
<input type="checkbox"/> Transferrin Saturation	<input type="checkbox"/> Transferrin Saturation	Haematology					5 L	
<input type="checkbox"/> General Chem Comm	<input type="checkbox"/> General Chem Comm	Haematology					General Chem	
<input type="checkbox"/> General Chem Comm	<input type="checkbox"/> General Chem Comm	Haematology					General Chem	



# Next Area to Tackle: Routine Testing

Path View		19/08/2018	19/08/2018
General Path		20/08/2018	19/08/2018
Spec Error Report		05:46	22:22
Haematology		19/08/2018	19/08/2018
Haematology		20/08/2018	19/08/2018
Hb		05:46	14:19
WCC			
Plt			
RCC			
Hct			
MCV			
MCH			
MCHC			
Neutrophils #			
Lymphocytes #			
Monocytes #			
Eosinophils #			
Basophils #			
Haematology Report			
Coagulation			
PT			
INR			
APTT			
Fibrinogen Level			
Coagulation Studies R			
Biochem Blood			
Sodium Level			
Potassium Level			
Chloride Level			
Bicarbonate Level			
Urea Level			
Creatinine Level			
Estimated GFR			
Calcium Level			
Calcium Corr			
Magnesium Level			
Phosphate Level			
Bilirubin Tot			
ALT			
GGT			
ALP			
Protein Tot			
Globulin Level			
General Chem Comm			



## Next Area to Tackle: Routine Testing


Path View		19/08/2018		19/08/2018											
General Path		Path View		20/08/2018 05:46		19/08/2018 22:22		19/08/2018 22:10							
Spec Error Report		Haematology		Path View		20/08/2018		19/08/2018		19/08/2018		19/08/2018		19/08/2018	
Haematology		Hb		Haematology		Path View		20/08/2018		19/08/2018		19/08/2018		19/08/2018	
<input type="checkbox"/> Hb		<input type="checkbox"/> WCC		<input type="checkbox"/> Hb		<input type="checkbox"/> WCC		<input type="checkbox"/> Hb		<input type="checkbox"/> WCC		<input type="checkbox"/> Hb		<input type="checkbox"/> WCC	
<input type="checkbox"/> WCC		<input type="checkbox"/> Pit		<input type="checkbox"/> WCC		<input type="checkbox"/> Pit		<input type="checkbox"/> WCC		<input type="checkbox"/> Pit		<input type="checkbox"/> WCC		<input type="checkbox"/> Pit	
<input type="checkbox"/> Pit		<input type="checkbox"/> RCC		<input type="checkbox"/> Hct		<input type="checkbox"/> MCV		<input type="checkbox"/> MCH		<input type="checkbox"/> MCHC		<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #	
<input type="checkbox"/> RCC		<input type="checkbox"/> Hct		<input type="checkbox"/> MCV		<input type="checkbox"/> MCH		<input type="checkbox"/> MCHC		<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #	
<input type="checkbox"/> Hct		<input type="checkbox"/> MCV		<input type="checkbox"/> MCH		<input type="checkbox"/> MCHC		<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #	
<input type="checkbox"/> MCV		<input type="checkbox"/> MCH		<input type="checkbox"/> MCHC		<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #	
<input type="checkbox"/> MCH		<input type="checkbox"/> MCHC		<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report	
<input type="checkbox"/> MCHC		<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation	
<input type="checkbox"/> Neutrophils #		<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT	
<input type="checkbox"/> Lymphocytes #		<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT		<input type="checkbox"/> INR	
<input type="checkbox"/> Monocytes #		<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT		<input type="checkbox"/> INR		<input type="checkbox"/> APTT	
<input type="checkbox"/> Eosinophils #		<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT		<input type="checkbox"/> INR		<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level	
<input type="checkbox"/> Basophils #		<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT		<input type="checkbox"/> INR		<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report	
<input type="checkbox"/> Haematology Report		<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT		<input type="checkbox"/> INR		<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report		<input type="checkbox"/> Biochem Blood	
<input type="checkbox"/> Coagulation		<input type="checkbox"/> PT		<input type="checkbox"/> INR		<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report		<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level	
<input type="checkbox"/> PT		<input type="checkbox"/> INR		<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report		<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level	
<input type="checkbox"/> INR		<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report		<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level	
<input type="checkbox"/> APTT		<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report		<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Bicarbonate Level	
<input type="checkbox"/> Fibrinogen Level		<input type="checkbox"/> Coagulation Studies Report		<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Urea Level	
<input type="checkbox"/> Coagulation Studies R		<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Urea Level		<input type="checkbox"/> Creatinine Level	
<input type="checkbox"/> Biochem Blood		<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Urea Level		<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR	
<input type="checkbox"/> Sodium Level		<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Urea Level		<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level	
<input type="checkbox"/> Potassium Level		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Urea Level		<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr	
<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level	
<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level	
<input type="checkbox"/> Urea Level		<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level	
<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level	
<input type="checkbox"/> Estimated GFR		<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> Calcium Corr		<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> Phosphate Level		<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> Globulin Level		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	
<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm		<input type="checkbox"/> General Chem Comm	



## Next Area to Tackle: Routine Testing

Path View		19/08/2018		19/08/2018		20/08/2018	
General Path		Path View					
Spec Error Report							
Haematology		Haematology		Path View			
<input type="checkbox"/> Hb	<input type="checkbox"/> Hb						
<input type="checkbox"/> WCC	<input type="checkbox"/> WCC	Haematology					
<input type="checkbox"/> Plt	<input type="checkbox"/> Plt	<input type="checkbox"/> Hb					
<input type="checkbox"/> RCC	<input type="checkbox"/> RCC	<input type="checkbox"/> WCC					
<input type="checkbox"/> Hct	<input type="checkbox"/> Hct	<input type="checkbox"/> Plt					
<input type="checkbox"/> MCV	<input type="checkbox"/> MCV	<input type="checkbox"/> RCC					
<input type="checkbox"/> MCH	<input type="checkbox"/> MCH	<input type="checkbox"/> Hct					
<input type="checkbox"/> MCHC	<input type="checkbox"/> MCHC	<input type="checkbox"/> MCV					
<input type="checkbox"/> Neutrophils #	<input type="checkbox"/> Neutrophils #	<input type="checkbox"/> MCH					
<input type="checkbox"/> Lymphocytes #	<input type="checkbox"/> Lymphocytes #	<input type="checkbox"/> MCHC					
<input type="checkbox"/> Monocytes #	<input type="checkbox"/> Monocytes #	<input type="checkbox"/> Neutrophils #					
<input type="checkbox"/> Eosinophils #	<input type="checkbox"/> Eosinophils #	<input type="checkbox"/> Lymphocytes #					
<input type="checkbox"/> Basophils #	<input type="checkbox"/> Basophils #	<input type="checkbox"/> Monocytes #					
Haematology Report		<input type="checkbox"/> Eosinophils #					
Coagulation		<input type="checkbox"/> Basophils #					
<input type="checkbox"/> PT	Haematology Report						
<input type="checkbox"/> INR	Biochem Blood		Haematology Report				
<input type="checkbox"/> APTT	<input type="checkbox"/> Sodium Level	Biochem Blood					
<input type="checkbox"/> Fibrinogen Level	<input type="checkbox"/> Potassium Level	<input type="checkbox"/> Sodium Level					
Coagulation Studies R		<input type="checkbox"/> Chloride Level		<input type="checkbox"/> Potassium Level			
Biochem Blood		<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Chloride Level			
<input type="checkbox"/> Sodium Level	<input type="checkbox"/> Urea Level	<input type="checkbox"/> Bicarbonate Level		<input type="checkbox"/> Urea Level			
<input type="checkbox"/> Potassium Level	<input type="checkbox"/> Creatinine Level	<input type="checkbox"/> Creatinine Level		<input type="checkbox"/> Estimated GFR			
<input type="checkbox"/> Chloride Level	<input type="checkbox"/> Calcium Level	<input type="checkbox"/> Calcium Level		<input type="checkbox"/> Calcium Corr			
<input type="checkbox"/> Bicarbonate Level	<input type="checkbox"/> Magnesium Level	<input type="checkbox"/> Magnesium Level		<input type="checkbox"/> Phosphate Level			
<input type="checkbox"/> Urea Level	<input type="checkbox"/> Phosphate Level	<input type="checkbox"/> Bilirubin Tot		<input type="checkbox"/> Albumin Level			
<input type="checkbox"/> Creatinine Level	<input type="checkbox"/> Calcium Corr	<input type="checkbox"/> ALT		<input type="checkbox"/> Troponin T			
<input type="checkbox"/> Estimated GFR	<input type="checkbox"/> Bilirubin Tot	<input type="checkbox"/> GGT		<input type="checkbox"/> NT Pro BNP			
<input type="checkbox"/> Calcium Level	<input type="checkbox"/> ALT	<input type="checkbox"/> ALP		<input type="checkbox"/> TSH			
<input type="checkbox"/> Calcium Corr	<input type="checkbox"/> GGT	<input type="checkbox"/> Protein Tot		<input type="checkbox"/> Iron Level			
<input type="checkbox"/> Magnesium Level	<input type="checkbox"/> ALP	<input type="checkbox"/> Albumin Level		<input type="checkbox"/> Ferritin			
<input type="checkbox"/> Phosphate Level	<input type="checkbox"/> Protein Tot	<input type="checkbox"/> Globulin Level		<input type="checkbox"/> Transferrin			
<input type="checkbox"/> Bilirubin Tot				<input type="checkbox"/> Transferrin Saturation			
<input type="checkbox"/> ALT				General Chem Comm			
<input type="checkbox"/> GGT							
<input type="checkbox"/> ALP							
<input type="checkbox"/> Protein Tot							
<input type="checkbox"/>							

## HUB/CHOOSINGWISELY



**GIVE THE  
ROUTINE TEST  
A REST**

There's no such thing as a routine test. Choose Wisely.

018 2	17/08/2018 06:55	16/08/2018 06:10	15/08/2018 01:32
	162	150	155
	5.1	4.7	6.6
	232	229	261
	4.99	4.62	4.76
	0.47	0.45	0.45
	95	97	95
	33.0	33.0	33.0
	342	336	342
	3.3	3.1	4.1
	1.1	1.0	1.8
	0.4	0.4	0.5
	0.3	0.2	0.2
	0.0	0.0	0.0
ology	Haematology	Haematology	Haematology
	12.0	13.0	
	1.1	1.2	
		33	
		4.0	
tion	Coagulation	Coagulation	
	139	137	143
	4.6	4.5	4.4
	102	99	107
	25	28	22
	1.8 L	1.9 L	2.8
	74	77	82
	> 90	> 90	> 90
		2.24	
		2.39	
		0.73	
		1.04	



# Other areas

## Done or in progress

- PPI prescribing
- Opiate prescribing
- EOLC
- Discharging Wisely
- Urine drug screens
- Ix of febrile neutropenia
- Blood product use.

## On the list

- Further imaging projects
  - Shoulder dislocation/ CXR.
- CTB in delirium
- Referring Wisely – Fracture clinic diversion.
- Impact of CW on our carbon footprint.

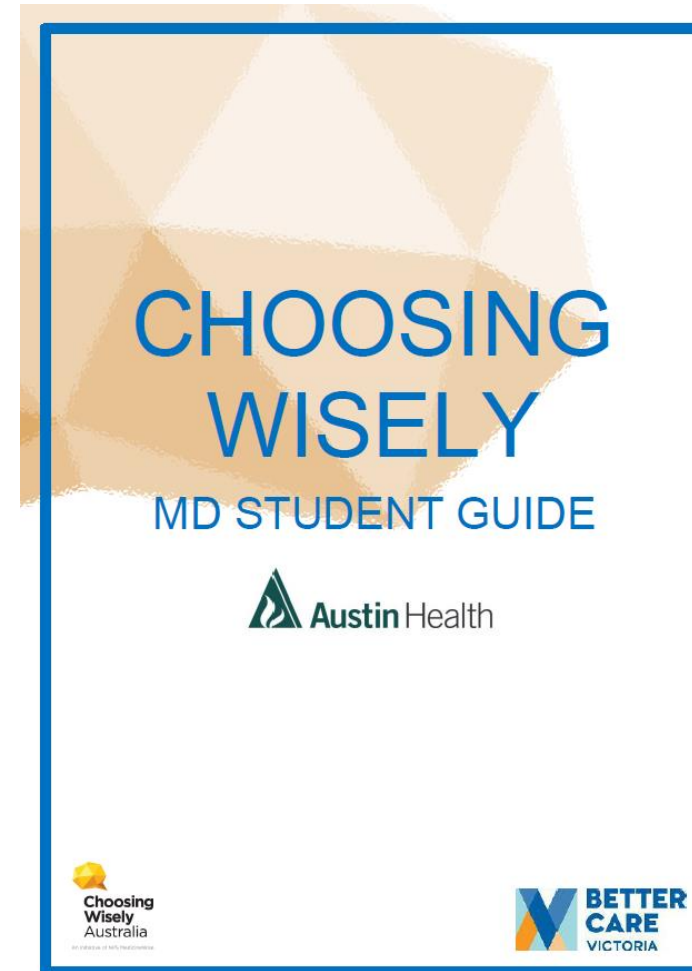


# Junior Medical Staff Engagement

Choosing Wisely Handbook available on the Hub and features Recommendations relevant to MD2 rotations



Consider inclusion of Choosing Wisely related recommendations into your unit handbook

MD students involved in many choosing wisely projects across the hospital





# Ask an Informationist




## Ask an Informationist

---

### IS THERE EVIDENCE TO SUPPORT THE USE OF IV MAGNESIUM IN ATRIAL FIBRILLATION?

---




#### Fact or Fiction?

"... at present, the available data would suggest that magnesium, as an adjunct to electric cardioversion or for prevention, **is more myth** than a practical, easy (or magical) solution to the growing problem of AF."


#### 2017

Systematic Review Evidence

**"Magnesium administration post-cardiothoracic surgery appears to reduce AF without significant adverse events."**



Optimal timing = postoperative with duration >24h, doses up to 60mmol, administered as boluses



Insufficient evidence supporting magnesium therapy for treatment or prophylaxis of other arrhythmias

- Six months a year, Austin Library produces an evidence summary based on clinical questions suggested by Austin Health Clinicians
- Topics examined so far include:
  - Opioids post-fracture
  - Minimum retesting intervals in microbiology
  - PPIs in GI bleeds
  - IV Magnesium in AF
- Next topics to include:
  - Amiodarone infusions in AF
  - Renal colic therapies
  - Deprescribing statins



# Choosing Wisely Victorian Collaboration



# Choosing Wisely Scaling Collaboration

- In partnership with Austin Health, NPS Medicine Wise
- Collaboration approach based on 12 month learning system
  - Approximately every 6-8 weeks
  - Led by a participating health service
- Funding of \$100,000 per health service to participate
- Alpha Crucis Group leading the evaluation



# Choosing Wisely Scaling Collaboration

- Key features of the Collaboration are Based on the IHI Collaborative series that is characterised by:
  - Finite period of support
  - Single improvement theme
  - Mentoring for successful implementation
  - Regular gatherings where services reflect on the journey so far
  - Based on scaling best practice



# Collaboration Aim

- To increase the number of Choosing Wisely Champions Health Services across Victoria that supports health professionals in delivering safe, effective and efficient care for patients.

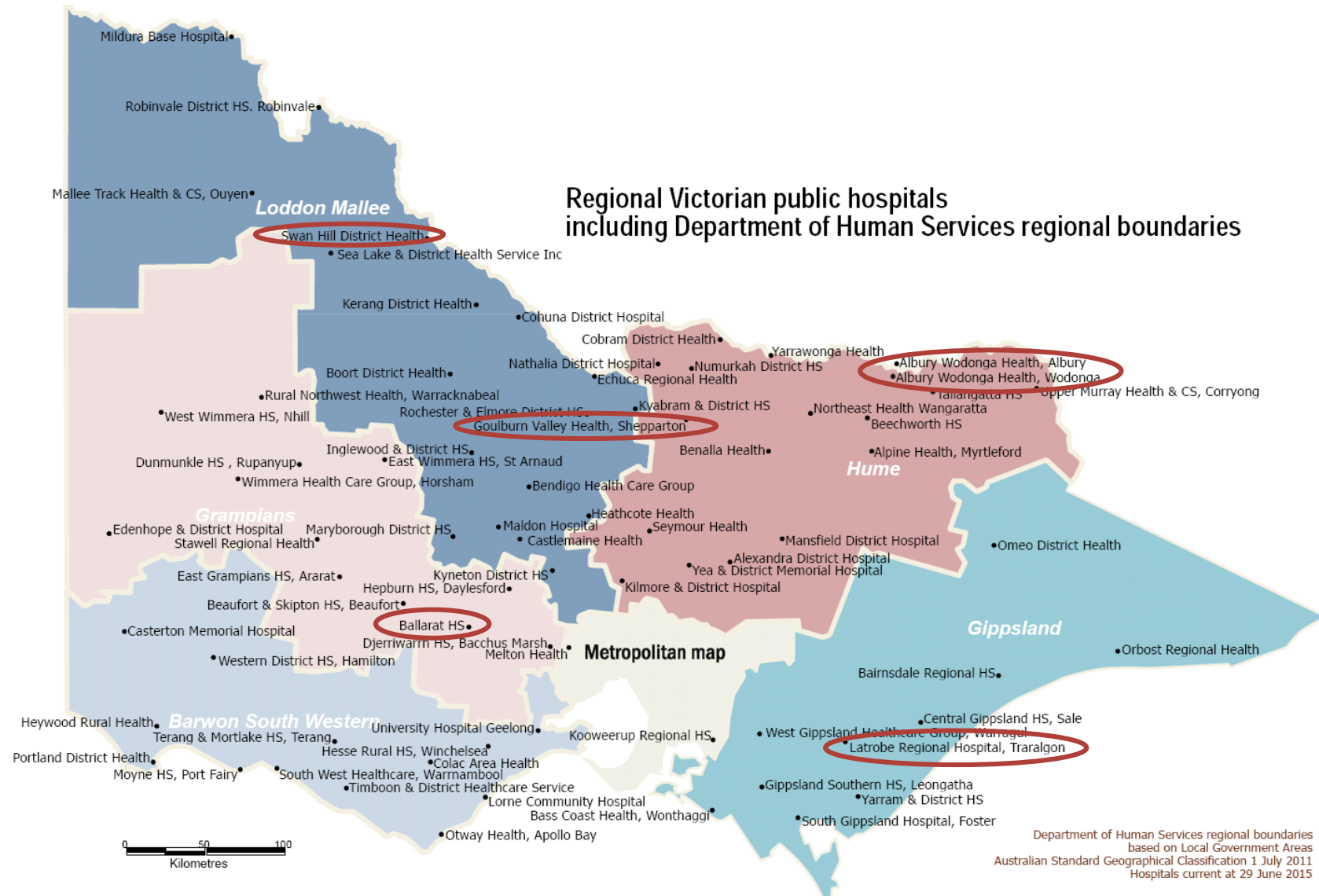


# Collaboration Objectives

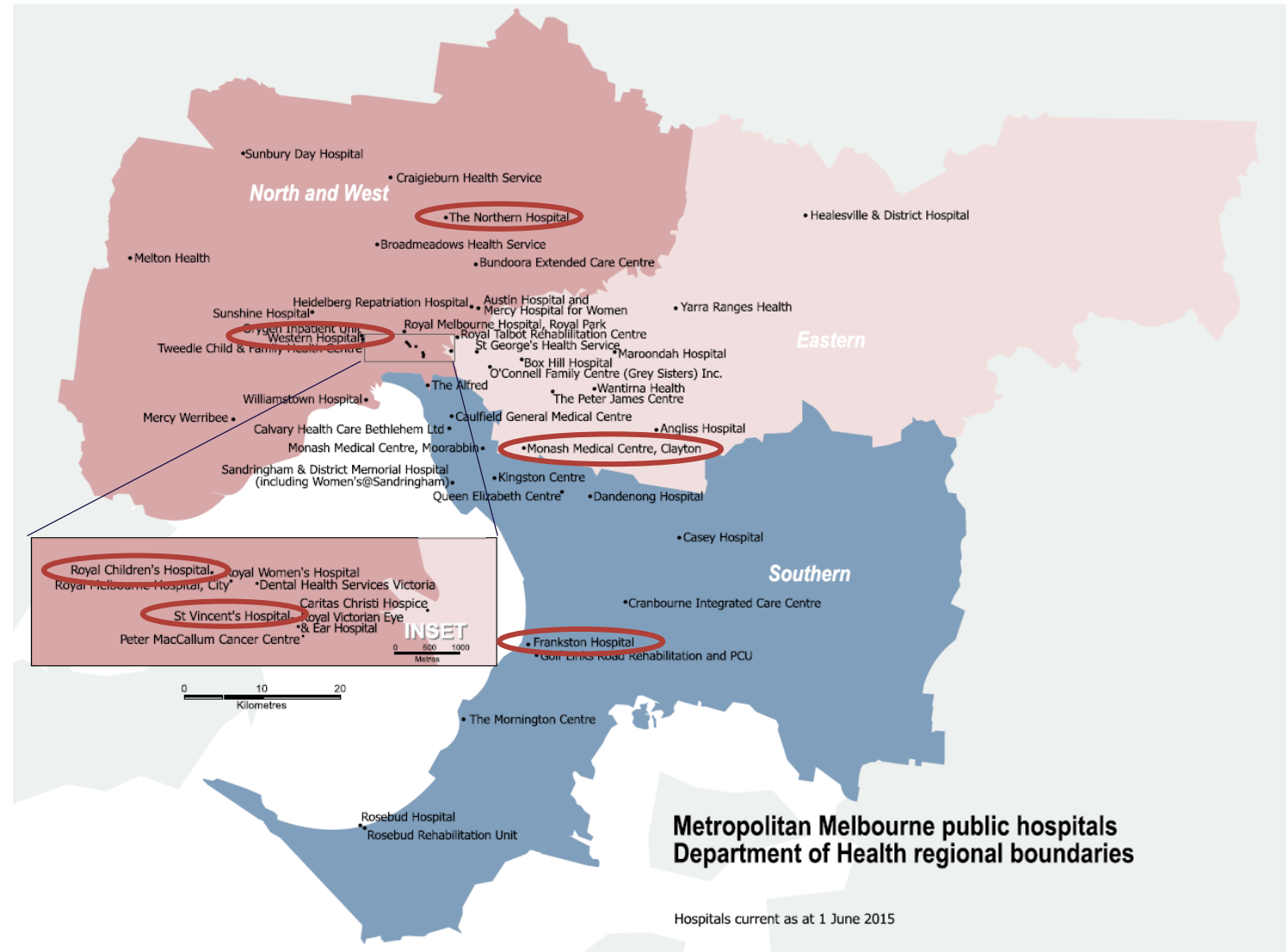
- To establish a sustainable framework to measure low value care and impact of interventions designed to reduce low value care practices
- Decrease the proportion of low value care practices delivered in health services by reducing unnecessary requestion of tests, treatments and procedures



# Choosing Wisely Scaling Collaboration



# Choosing Wisely Scaling Collaboration



# Collaboration Site Topics

Clinical area	Sites
<b>Radiology</b>	
Chest x-rays for the diagnosis of bronchiolitis & asthma in children	<ul style="list-style-type: none"> <li>Albury-Wodonga Health</li> <li>Royal Children's Hospital</li> </ul>
Chest x-rays in ICU	<ul style="list-style-type: none"> <li>St Vincent's</li> </ul>
CT scans after hours in ED	<ul style="list-style-type: none"> <li>Ballarat Health (Abdo &amp; Brain CT)</li> <li>Goulburn Valley Health (CTPA, Abdo, C-Spine &amp; Brain)</li> </ul>
CT ultrasounds for patients with renal colic	<ul style="list-style-type: none"> <li>Monash Health</li> </ul>
CT lumbar spine (non-trauma)	<ul style="list-style-type: none"> <li>Peninsula Health</li> </ul>
CT brain in head injury	<ul style="list-style-type: none"> <li>Western Health</li> </ul>
Diagnostic testing for PE	<ul style="list-style-type: none"> <li>Swan Hill</li> <li>Western Health</li> </ul>
Ultrasound for inguinal hernia	<ul style="list-style-type: none"> <li>Northern Health</li> </ul>
Other imaging (lower back, cervical spine, ankle)	<ul style="list-style-type: none"> <li>Western Health</li> </ul>
<b>Pathology</b>	
Arterial Blood Gases in ICU	<ul style="list-style-type: none"> <li>St Vincent's</li> </ul>
Coagulation Studies in ED	<ul style="list-style-type: none"> <li>La Trobe Regional Hospital</li> <li>Northern Health</li> <li>Peninsula Health</li> </ul>
Midstream Urine Samples in patients > 50 years	<ul style="list-style-type: none"> <li>Monash Health</li> </ul>
Venous Blood Gases in ED	<ul style="list-style-type: none"> <li>Ballarat Health</li> </ul>
<b>Other</b>	
ICU observations and invasive line use in ward ready patients	<ul style="list-style-type: none"> <li>St Vincent's</li> </ul>

