

STARS

Unlocking Data to Improve Patient Flow and Access

Whole of Hospital Program Master Class
Friday 17 October 2014

Rachael Knoblanche
Operations Manager, Performance
SLHD

Ministry

Clinicians
and
Managers

SLHD

Other
Districts

DATA MINING AND ANALYTICS

Ambulance
Service

Other
States

ACI

CEC



STARS

SLHD Targeted Activity
& Reporting System



Health

Limitations of Current System

- Labour intensive
- Limited data able to be reviewed
- Unable to respond to different needs of different departments
- No real time access to data

Limitations of Current System

- Labour intensive

- Limited data able to

- Unable

- N

✘ Time consuming

✘ Inefficient

✘ Disengagement of clinicians
— “too hard”

Why STARS?

- We can't manage what we can't analyse/monitor
- Managing processes in real time
- Efficient insight into data
- Combines and manages multiple sources of data



Data Source Collections



PowerHealth Solutions

Feeder Systems:

- Pathology
- Imaging
- Pharmacy
- Procurement
- Blood
- Operations



Data Extracts:

- Overdue Patient (Daily)
- Financial Classifications (Times a Day)
- NEAT (Daily)
- Orders and Results



EDWARDS
Enterprise Data
for analysis.

Data Collections:

Inpatient Admitted Patient Data

Data Collections:

Inpatient Admitted Patient Data

Emergency Department

Clinical

Cases



STARS
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Incidents related to:

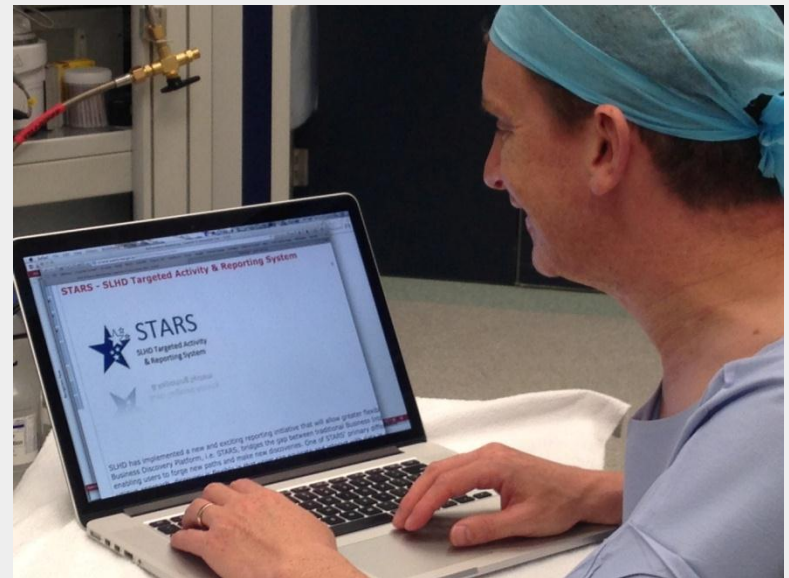
- Falls
- Medication
- Pressure Ulcers



Health

What does STARS offer clinicians & managers?

- A tool to help:
 - increase our collective knowledge about our services
 - identify clinical variation / reduce unwarranted clinical variation
 - strengthen / implement 'best-practice' models of care, & monitor outcomes
 - improve clinical outcomes



What does STARS offer clinicians?

- ☑ Real time access to a huge amount of data
- ☑ User driven and flexible design
- ☑ Link to clinical databases



STARS Implementation

- Strong governance
- Managed by the Performance Unit
- Focus groups for individual application development
- Review of applications/functions used at other healthcare facilities (internationally)
- Data access and security
- Resources



Governance

STARS Executive Steering Committee

Clinicians:

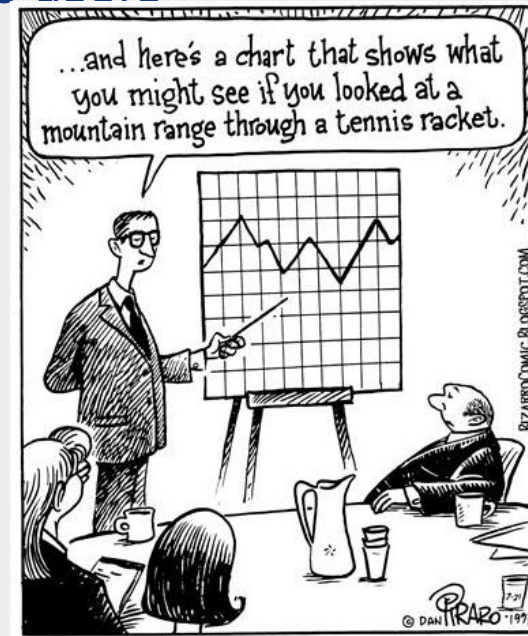
Medical / Surgical / O&G
JMOs
Nursing and Allied Health
Mental Health

Managers:

Chief Executive
Senior Executive
General Managers
HIMs

Take Home Messages STARS

- New innovative data management system
- Tool to identify and interrogate clinical variation
- Needs clinicians and managers to work together for it to gain maximum benefits
- Will only be as good as its data inputs and its users
- For successful local implementation needs
 - adequate resources
 - educated, engaged clinicians and managers
 - clear governance structures and processes



Where we are now:



★ **201415 Acute NWAU Projections.qww**

Last Update: 2014-04-02 09:14

[view details](#)



★ **Acute Admitted Activity.qww**

Last Update: 2014-06-15 22:00

[view details](#)



★ **Clinical Variation.qww**

Last Update: 2014-06-15 22:01

[view details](#)



★ **Emergency Department Utilisation.qww**

Last Update: 2014-06-15 22:00

[view details](#)



★ **Haemovigilance.qww**

Last Update: 2014-05-13 15:28

[view details](#)



★ **HITH.qww**

Last Update: 2014-06-15 22:00

[view details](#)



★ **IIMS.qww**

Last Update: 2014-02-25 14:11

[view details](#)



★ **Mental Health Admitted Activity.qww**

Last Update: 2014-06-15 22:00

[view details](#)



★ **NWAU13 Acute.qww**

Last Update: 2014-06-15 22:00

[view details](#)



★ **NWAU13 Emergency.qww**

Last Update: 2014-06-15 22:00

[view details](#)

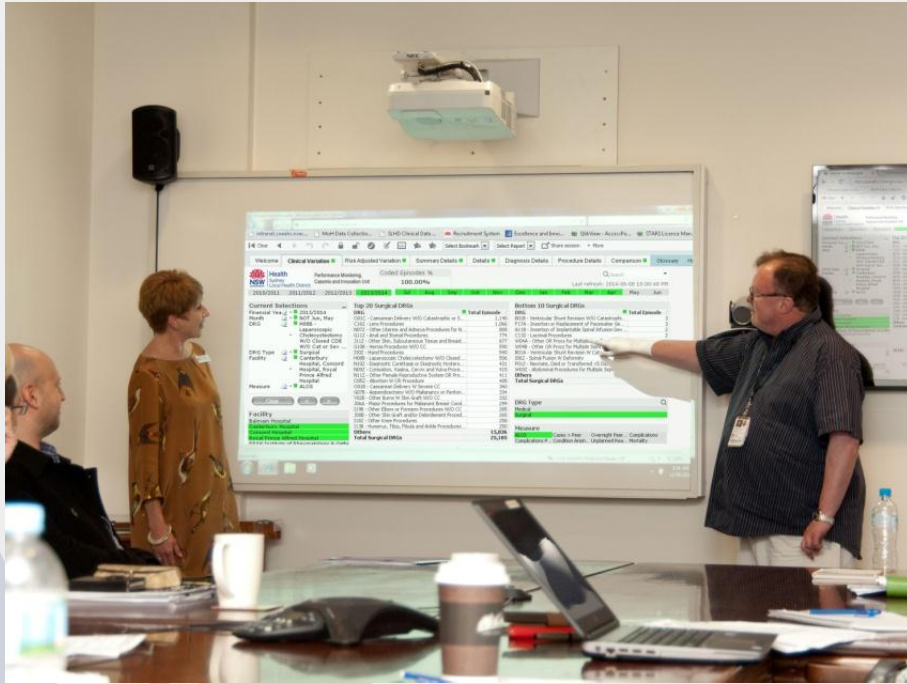


★ **Revenue.qww**

Last Update: 2014-06-16 02:10

[view details](#)

District led



Specialty / Clinician driven



STARS DEMONSTRATION



STARS

SLHD Targeted Activity
& Reporting System



Health

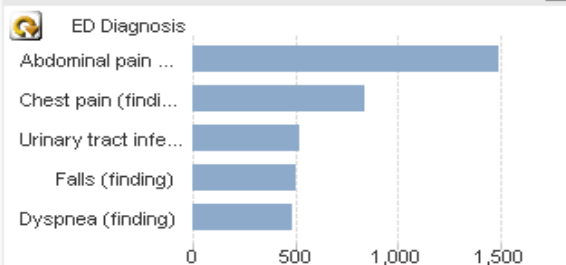
Current Selections

Year 2014
 Measure NEAT Over 4 Hours
 maptype road map

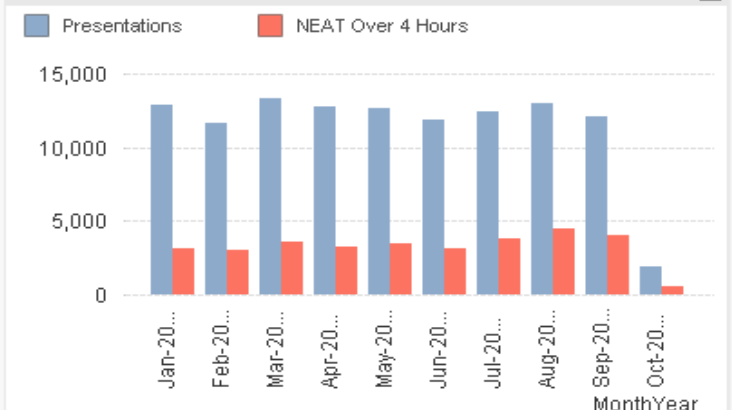
Measure

NEAT Over 4 Ho... Presentations Ov... MH Presentation...
 Re-Presentations ... UDAG T1 Breach
 T2 Breach T3 Breach T4 Breach
 T5 Breach Presentations Admissions

NEAT Over 4 Hours



NEAT Over 4 Hours



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Facility

Canterbury Hospital
 Concord Hospital
 Royal Prince Alfred Hospital

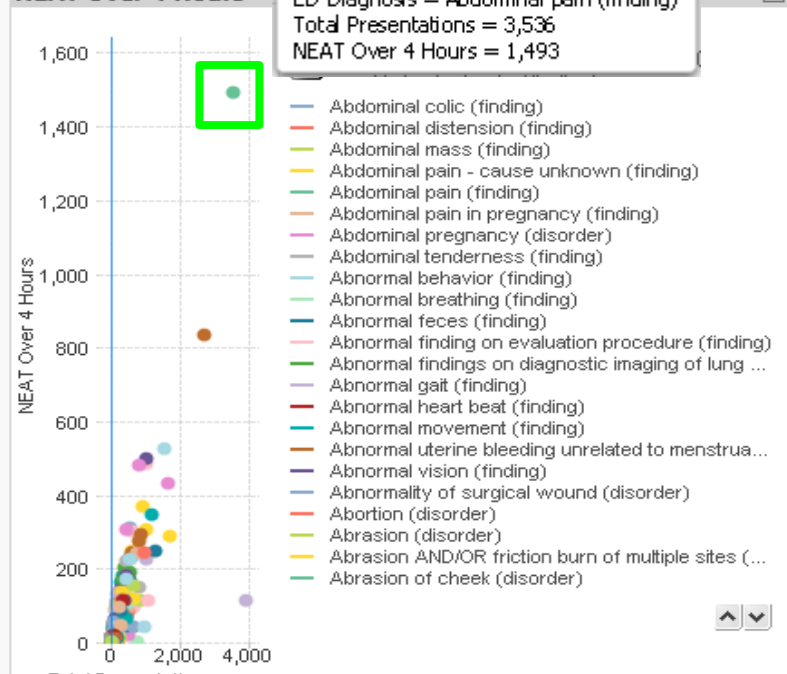
URG

Adm_T1_All other MDB groups
 Adm_T1_Circulatory system illness
 Adm_T1_Injury
 Adm_T1_Poisoning
 Adm_T1_Respiratory system illness
 Adm_T2_All other MDB groups
 Adm_T2_Circulatory system illness
 Adm_T2_Gastrointestinal
 Adm_T2_Injury
 Adm_T2_Neurological illness
 Adm_T2_Poisoning
 Adm_T2_Respiratory system illness

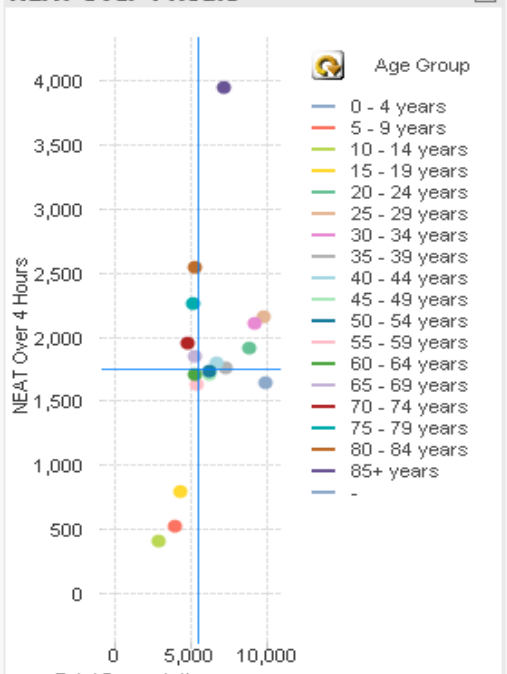
ED Diagnosis

Abdominal colic (finding)
 Abdominal distension (finding)
 Abdominal mass (finding)
 Abdominal pain - cause unknown (findi...
 Abdominal pain (finding)
 Abdominal pain in pregnancy (finding)
 Abdominal pregnancy (disorder)
 Abdominal tenderness (finding)
 Abnormal behavior (finding)
 Abnormal breathing (finding)
 Abnormal feces (finding)
 Abnormal finding on evaluation procedu...

NEAT Over 4 Hours



NEAT Over 4 Hours



2012 2013 **2014** Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

Current Selections

- ED Diagnosis Abdominal pain (finding)
- Year 2014
- Measure NEAT Over 4 Hours
- maptype roadmap

Clear < >

Facility

- Canterbury Hospital
- Concord Hospital
- Royal Prince Alfred Hospital

URG

- Adm_T1_All other MDB groups
- Adm_T2_Gastrointestinal
- Adm_T3_Gastrointestinal system illness
- Adm_T4_Gastrointestinal system illness
- Adm_T5_All other MDB groups
- Did Not Wait
- N-A_T1_All MDB groups
- N-A_T2_All other MDB groups
- N-A_T3_Gastrointestinal system illness
- N-A_T4_Gastrointestinal system illness
- N-A_T5_All other MDB groups
- Not Grouped

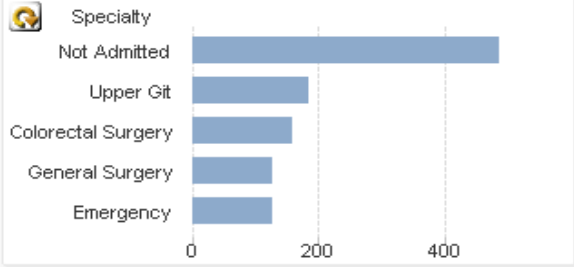
ED Diagnosis

- Abdominal pain (finding)**
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- Abnormal behavior (finding)
- Abnormal breathing (finding)
- Abnormal feces (finding)
- Abnormal finding on evaluation procedure

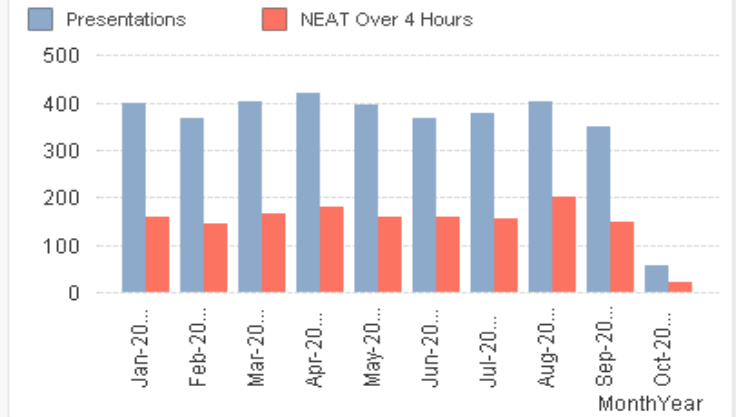
Measure

- NEAT Over 4 Hours**
- Presentations Over 4 Hours
- MH Presentation
- Re-Presentations Over 4 Hours
- UDAG
- T1 Breach
- T2 Breach
- T3 Breach
- T4 Breach
- T5 Breach
- Presentations
- Admissions

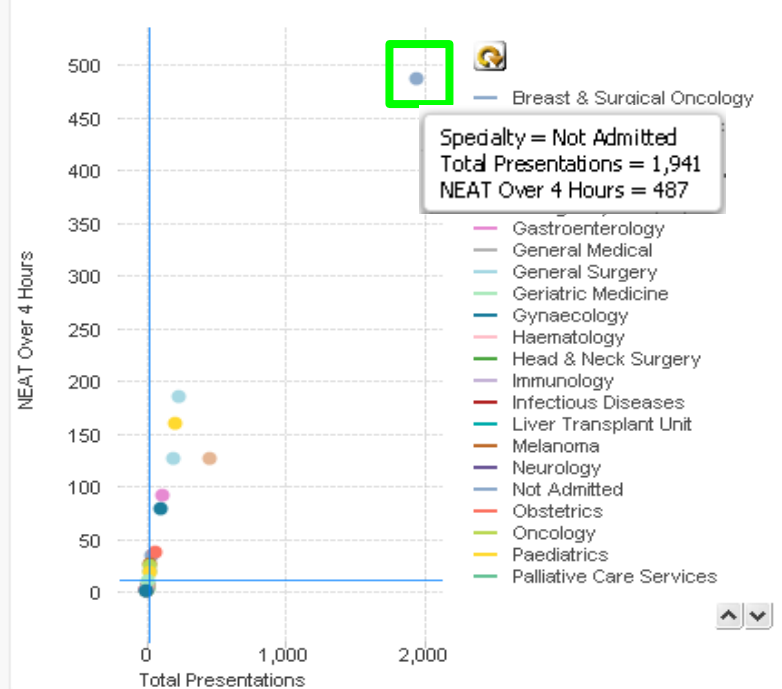
NEAT Over 4 Hours



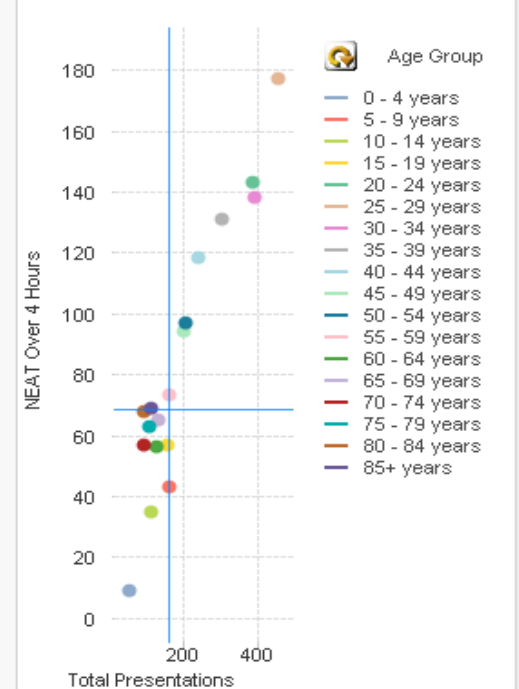
NEAT Over 4 Hours



NEAT Over 4 Hours



NEAT Over 4 Hours



Current Selections

Financial Year: 2013/2014
 Month: NOT Apr, Jun, May
 DRG: H08B - Laparoscopic Cholecystectomy W/O Closed CDE W/O Cator Sev CC
 DRG Type: Surgical
 Measure: ALOS

Top 20 Surgical DRGs

DRG	Total Episodes
OO1C - Caesarean Delivery W/O Catastrophic or Se...	1,075
C16Z - Lens Procedures	1,003
N07Z - Other Uterine and Adnexa Procedures for N...	763
G11Z - Anal and Stomal Procedures	717
J11Z - Other Skin, Subcutaneous Tissue and Breas...	640
I30Z - Hand Procedures	559
G18B - Hernia Procedures W/O CC	546
H08B - Laparoscopic Cholecystectomy W/O Closed...	473
N18Z - Diagnostic Carotidog or Diagnostic Hystero...	469
N11Z - Other Female Reproductive System OR Pro...	391
N09Z - Conisation, Vagina, Cervix and Vulva Proce...	390
O05Z - Abortion W OR Procedure	386
I04B - Knee Replacement W/O Catastrophic or Sev...	372
O01B - Caesarean Delivery W Severe CC	336
I18Z - Other Knee Procedures	320
Y02B - Other Burns W Skin Graft W/O CC	305
G07B - Appendectomy W/O Malignancy or Perito...	295
I03B - Hip Replacement W/O Catastrophic CC	290
I19B - Other Elbow or Forearm Procedures W/O CC	282
J06A - Major Procedures for Malignant Breast Con...	282
Others	14,880
Total Surgical DRGs	24,714

Bottom 10 Surgical DRGs

DRG	Total Episodes
A11B - Insertion of Implantable Spinal Infusion De...	2
B01B - Ventricular Shunt Revision W/O Catastroph...	2
C13Z - Lacrimal Procedures	2
W02B - Hip, Femur & Limb Pr for Mult Signif Trau...	2
W04B - Other OR Procs for Multiple Significant Tra...	2
B01A - Ventricular Shunt Revision W Catastrophic...	1
I06Z - Spinal Fusion W Deformity	1
I11Z - Limb Lengthening Procedures	1
P01Z - Neonate, Died or Transferred <5 Days of A...	1
W03Z - Abdominal Procedures for Multiple Signific...	1
Others	24,699
Total Surgical DRGs	24,714

DRG Type
 Medical
Surgical

Measure
ALOS Complications Post Procedural
 Cases > Peer Condition Arising During Episode
 Overnight Peer Bed Day Variance Unplanned Readmissions < 28 D...
 Complications Mortality

Facility

Balmain Hospital
 Canterbury Hospital
 Concord Hospital
 Royal Prince Alfred Hospital
 RPAH Institute of Rheumatology & Ortho

Clinical Stream

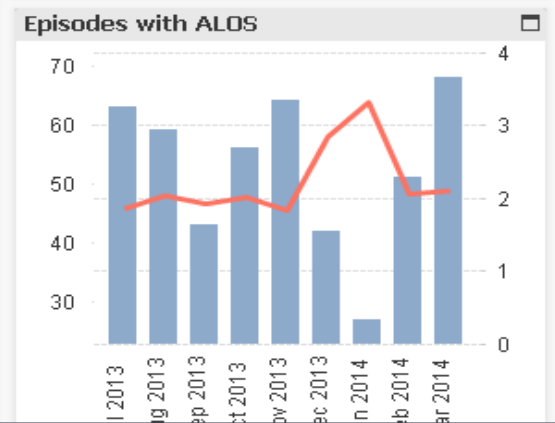
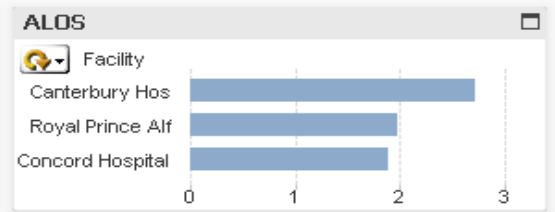
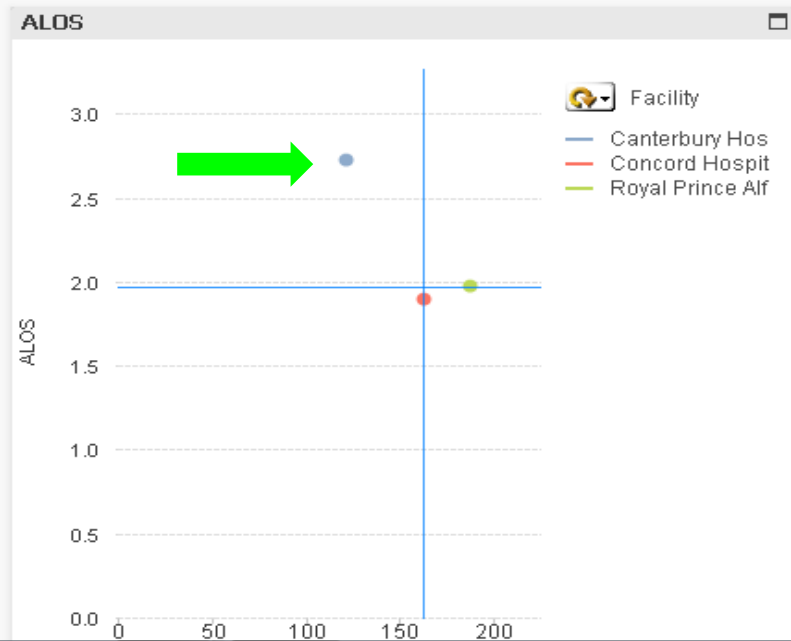
Aged Care
 Cancer
 Critical Care
 Gastroenterology and Liver
 Womens Health, Neonatology and Pae

Specialty Unit

Breast/endocrine
 Emergency
 Gastroenterology
 General Medical
 General Surgery

DRG

H08B - Laparoscopic Cholecystectomy
 801A - OR Procedures Unrelated to Pri
 801B - OR Procedures Unrelated to Pri
 801C - OR Procedures Unrelated to Pri
 A01Z - Liver Transplant
 A06A - Tracheostomy W Ventilation >95
 A06B - Trach W Vent >95 hours W/O C
 A06C - Ventilation >95 hours W/O Cat
 A06D - Tracheostomy W/O Catastroph
 A07Z - Allogeneic Bone Marrow Transp
 A08A - Autologous Bone Marrow Trans



Coded Episodes %






100.00%

Search

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2010/2011 2011/2012 2012/2013 **2013/2014** Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

Current Selections

- Financial Year  ● 2013/2014
- Month  ● NOT Apr, Jun, May
- DRG  ● H08B - Laparoscopic Cholecystectomy W/O Closed CDE W/O Cator Sev CC
- DRG Type  ● Surgical
- Measure  ● ALOS

Clear < >

- Facility**
- Balmain Hospital
 - Canterbury Hospital
 - Concord Hospital
 - Royal Prince Alfred Hospital
 - RPAH Institute of Rheumatology & Ortho

Summary Details

Facility	DRG	ALOS	Cases GT Peer	Overnight Peer Bedday Variance	Complications	Condition Arising During Episode	Unplanned Readmission within 28 Days	Mortality	Cost Weight	Total Episodes
Concord Hospital	H08B - Laparoscopic Cholecystectomy W/O Closed CDE W/O Cat or Sev CC	1.90	37	68.13	0	8	3	0	1.35	163
Royal Prince Alfred Hospital	H08B - Laparoscopic Cholecystectomy W/O Closed CDE W/O Cat or Sev CC	1.97	39	64.38	0	12	4	0	1.35	188
Canterbury Hospital	H08B - Laparoscopic Cholecystectomy W/O Closed CDE W/O Cat or Sev CC	2.72	49	-78.24	0	12	5	0	1.38	122
Total		2.14	125	54.27	0	32	12	0	1.36	473

Key Messages

- Collaboration is the critical success factor
- Clinicians have to be involved early in governance and app design
- System needs to be fast and accessible
- Need the processes for data review to already be in place
- Education is critical
- Focus on understanding and explaining variation
- Set clear expectations regarding data review, feedback and accountability