



Leveraging data to improve clinical practice and patient care

Workshop Leads:

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Workshop Facilitators:

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Acknowledgment of Country

We recognise and pay respect to Elders and communities – past, present and emerging - of the land of the Gadigal clan of the Eora Nation on which we all meet today.

For thousands of years, they have shared and exchanged knowledges across innumerable generations for the benefit of all.



Introductions & Housekeeping

- Chairs: Dr David Rankin & Professor Tim Shaw
- Workshop Facilitators
- Consent to Taking Notes
- Future Collaborations?



What is this workshop about?

- In-depth group discussion about key challenges, facilitators and barriers to widespread implementation of practice analytics.
- Using a hypothetical case study to explore themes including:
 - Why should we conduct practice analytics? And what will its impact be?
 - How can we use technology to support practice analytics?
 - How do we ensure health professionals can understand the data?
 - What do patients feel about data-sharing?
 - What are some risks associated with these activities?

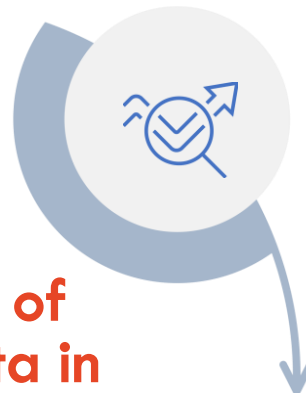


What is Practice Analytics?

- Using health data to encourage practice reflection, and performance improvement amongst clinicians.
- Examples of practice analytics
 - Clinical Registries
 - CPD Requirements
 - People Performance Management Toolkit (NHS England)
 - Online Performance Review System (NHS Professionals)



How do we link use of data with My CPD, what are the medico legal consequences?



What data is important to clinicians?

Lifecycle of health data in practice analytics

How do we present and visualise data?



How do clinicians make sense of data?



The Cabrini Experience



Common Assumptions & Challenges

Assumption

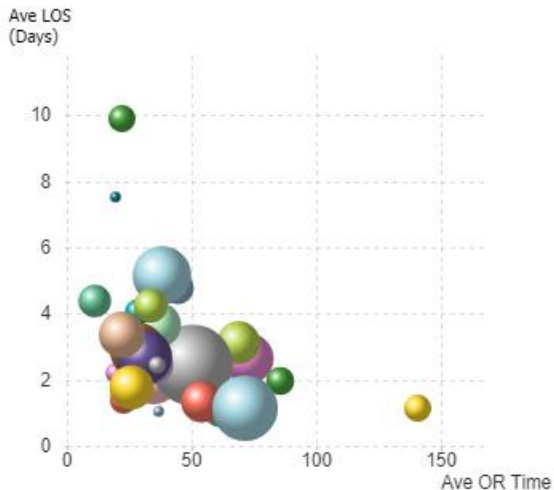
- Given access to their data, specialists will improve their performance
- Specialists focus on reducing “harm” to their patients
- Specialists are intelligent, so understand data
- Specialists are curious
- Specialists seek competitive advantage

Reality

- Specialists tend to be cynical about hospital sourced data
- Harm is a nebulous concept, interpreted differently by management and clinicians
- University does not teach data literacy to doctors
- Specialists lack time/motivation to explore
- Specialists are inherently insecure
- Primacy of reputation



Distribution by Specialist



What does the data mean?
How is it interpreted by clinicians?
Is there a problem?
What is best practice?
Is the comparison valid?



Sources of Data

- Patient Administration
 - Patient demographics
 - Bed activity
 - Theatre activity
 - Admission and discharge data
- Patient Billing
 - Allied health attendance
 - Prosthesis
- Coded Clinical Data
 - Hospital Case-mix data sets
 - Diagnosis, Procedures, complications
 - Incidents
 - Riskman
- Patient Experience
 - Surveys, complaints



Example of a Quarterly Report

Surgeon	Cases	Same Day	% Same Day	Hours To Surgery	Theatre Time	Avg LOS	Ext ended LOS	Complications	Return to OR	MET Calls	28 Day Readmit	% Readmit	Deaths	Robot
Other Knee Surgery														
Group Outcomes	101	59	58%	2	46	1.1					1	1%		
ORT32	22	16	73%	1	33	1.1					1	5%		
Knee - arthroplasty														
Group Outcomes	74			3	94	5.2		2	1	6	1	1%		2
ORT32	30			2	86	5.4		1	1	4				1

Complications

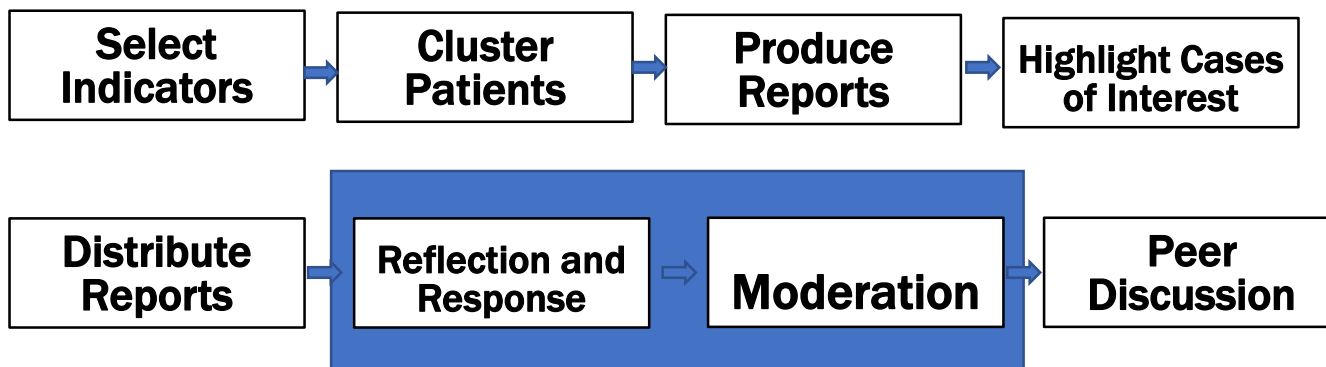
Age	Gender	Admission Date	Admission Category	Hours To Surgery	Theatre Time	LOS	Principal Diagnosis	Principal Procedure	Complication
71	F	07/03/2022	Planned	2	88	8	M17 - Arthrosis Of Knee	49518 - KNEE total replacement	Met call leading to ICU admission
67	F	21/03/2022	Planned	3	94	9	M17 - Arthrosis Of Knee	49518 - KNEE total replacement	Return to theatre following surgical complication

Readmissions

Age	Gender	Admission Date	Category	LOS	Separation Type	Principal Diagnosis	Principal Procedure	Readmit Days	Readmit Date	Readmit Category	Readmit LOS	Readmit Diagnosis
60	F	28/02/2022	Planned	2	HOME	M06 - Other Rheumatoid Arthritis	49586 - Synovectomy of knee by arthro	18	20/03/2022	EMG	2	M25.46 - Effusion of joint, lower leg



Cabrini Quarterly Process





Challenges

- What is an Outcome
 - True outcomes are delayed and seldom known to the hospital
- How do doctors receive and interpret data
 - Creating a culture of engagement and accountability
 - Encouraging reflection
- What are appropriate clinical indicators
 - Data completeness, timeliness, accuracy
 - Overwhelming details vs simplistic conclusions
- How can procedures be “clustered”
 - Creating comparable patient cohorts
- Ensuring data quality
 - Establishing trust in data accuracy
- Discoverability and transparency
 - Anonymized versus Identified
 - Who should have access to individual reports
- Consequences and Implications
 - Screening tool or diagnostic report
 - Coach versus policeman
 - Alignment with CPD requirements



Tables (Themes of Interest)

1

Risk Adjustment & Creating Comparability
Harvey Jia Wei Koh & Dr David Rankin

2

Data Visualisation & Sensemaking
Bernard Bucalon & Emma Whitelock-Wainwright

3

Constraints on Sharing Data
Kavisha Shah & Anna Janssen

4

Transparency, Disclosure, and Relevance
Nina Roxburgh & Prof Justin Dakley

5

Using eHealth Data to Strengthen CPD
Carol Pizzuti & Prof Tim Shaw



Theme 1: Risk Adjustment & Data Quality

- How can we standardise recording of data for hospitals?
- Would you be comfortable using a semi-transparent algorithm for risk-adjustment?



Theme 2: Data Visualisation and Sensemaking

- How do we present data for professional learning?
- How do we compare peer performance fairly for performance improvement (and not performance management)?
- How do we design user interfaces that scaffold individual and group reflection?



Theme 3: Constraints on Sharing Data

- What risks do you foresee with the use of health data for performance improvement and management?
- What are your expectations of how negative outliers should be handled?



Theme 4: Transparency, Relevance, and Disclosure

- Who should have access to the data collected about patients interactions with the health system?
- Do you think performance data on individual clinicians, teams, and/or organisations should be made publicly available? Why/why not?



Theme 5: Using eHealth Data to Strengthen CPD

- Considering your work setting and areas of practice/expertise, what are the challenges and enablers to use eHealth data for CPD purposes?
- If we want to implement Practice Analytics in Healthcare, what stakeholders should be involved and what roles and responsibilities should they have?



Bringing it all together

- Thoughts? Feedback? Questions?



And that's a wrap!

- Thank you!
- Fill out the following survey if you would like to be updated or participate in future projects. Or, if you would like to chat to one of our workshop organisers about their work.

