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Reducing preventable harm to patients
using a digital platform: A tool for
clinicians and coders

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Let's talk about Hospital Acquired Complications (HACs)

- Reducing preventable harm is critical in delivering high quality healthcare
- This is linked to accuracy of clinically coding; relevant and timely clinical information
- Clinical governance for HACs is a high priority area
- However, what if the coded data underpinning HACs is not reliable?



Question:

How confident are you in the accuracy of your reported HACs?



HAC classification, coding & adjustment

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“A patient complication for which clinical risk mitigation strategies may reduce (but not necessarily eliminate) the risk of that complication occurring” (ACSQHC)

- Coding of HACs specified by IHACPA
- Public reporting of HACs
- Risk adjustment model for HAC funding



Question:

What do you think is the average additional cost of Falls resulting in fracture or other intracranial injury?

1. Pressure injury	5. Unplanned intensive care unit admissions	9. Gastrointestinal bleeding	13. Endocrine complications
2. Falls resulting in fracture or other intracranial injury	6. Respiratory Complications	10. Medication complications	14. Cardiac complications
3. Healthcare associated infection	7. Venous thromboembolism	11. Delirium	15. Third and fourth degree perineal laceration during delivery
4. Surgical Complications (unplanned return to theatre)	8. Renal Failure	12. Incontinence	16. Neonatal birth trauma



A:

\$17,173

*Average additional cost of Falls resulting in fracture or other intracranial injury**

Hospital complications cost more than \$4billion a year for public hospitals and more than \$1billion for privates**

*Fernando-Canavan Liam et al (2021) Measuring the economic impact of hospital-acquired complications on an acute health service. *Australian Health Review* 45, 135-142.

** Grattan Institute 2018. Safer care saves money: How to improve patient care and save public money at the same time



Challenges for clinicians & coders

- Lack of trust in the coded data
- Lack of clinician engagement in HAC management
- Multiple sources of HAC data
- Lack of timeliness in HAC reporting
- Incomplete clinical documentation impacting on the assignment of condition onset flag and code assignment specificity



Consider:

How can we ensure that HAC data that is reported is accurate and will ultimately improve the quality of care and patient safety? What systems and processes do you have in place to manage and report on your HACs?



Using SaaS to correct and measure HACs



Identifies focus areas and set targets, allowing health services to monitor improvements over time

Measures data quality with a focus on reducing HACs error rates and to reduce financial penalties

Compares performance with industry best practice

Monitors HAC rates, drill down into clinical specialities or select records for review with detailed source information from the medical record



RISQ™ drives data and patient safety improvements

Beamtree RISQ Benchmarking

Target Type: Best Practice Ratio

2020

	HACs All				CDFs		
	Cases	Ratio	Target	Separations	Cases	Denominators	Ratio
PHM223	217	2.10%	1.65%	10,254	643	1232	52.19%
▶ 01 - Pressure injury	5	0.05%	0.02%	10,242	15	19	78.95%
▶ 02 - Falls resulting in fracture or other intracranial injury	2	0.02%	0.01%	10,262	1	3	33.33%
▶ 03 - Healthcare associated infection	75	0.73%	0.36%	20,264	152	359	42.34%
▶ 04 - Surgical complications requiring unplanned return to theatre	16	0.16%	0.14%	20,257	16	34	29.41%
▶ 06 - Respiratory complications	11	0.11%	0.11%	9,893	7	20	35.00%
▼ 07 - Venous thromboembolism	17	0.16%	0.03%	10,254	4	38	10.53%
Pulmonary embolism	4	0.04%	0.02%	10,254	2	12	16.67%
Deep vein thrombosis	13	0.13%	0.02%	9,978	2	26	7.69%
▶ 08 - Renal failure	1	0.01%	0.01%	20,257	3	3	100.00%
▶ 09 - Gastrointestinal bleeding	8	0.08%	0.06%	9,895	29	132	21.97%
▶ 10 - Medication complications	5	0.05%	0.07%	10,334	42	49	85.71%
▶ 11 - Delirium	29	0.30%	0.26%	9,873	68	98	68.71%
▶ 12 - Persistent incontinence	2	0.02%	0.01%	9,879	12	19	63.16%
▶ 13 - Malnutrition	8	0.02%	0.03%	8,587	168	125	84.80%

Hospital Quality Index

- Best Practice
- Better than Peers
- Equal to Peers
- Worse than Peers
- Worst Practice
- No Data
- Not Applicable



Benchmarking with Peers



Workflow for Coders & Clinicians



National Standards Measurement



Case study 1: Central Adelaide LHN

≈140k annual separations

5 sites (2 largest sites: Royal Adelaide Hospital, The Queen Elizabeth Hospital)

Pre RISQ:

- × NO Formalised HAC Management workflow
- × NO Rigorous HAC auditing process
- × NO Clinician trust in HAC



Case study 1: CALHN - RISQ

RISQ - went live early 2022

New workflows & HAC governance implemented:

- Each clinical unit has their own access to RISQ portal
- HAC review panels established and meet regularly
- HAC queries are escalated back to the Documentation Improvement Manager

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HACs coded incorrectly within the first week of implementation

- ✓ New HAC reduction infection controls
- ✓ In-house clinical programs developed on HAC rates
- ✓ Improved education on coding rules



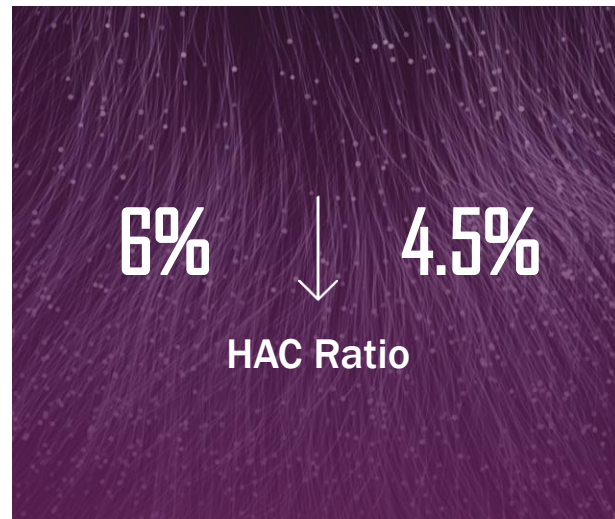
Case study 1: Central Adelaide LHN - IMPACT

- Stringent HAC Management workflow
- All HACs justified and reviewed
- Trust in data

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“Higher data quality, Clinical access to reviewed HAC data without having to come to Clinical Coding Team for audits, individual coder education, ability to audit output and review coder understanding of HACs and documentation.”

CALHN





Case study 2: St Vincent's Health Australia

Why RISQ?

- SVHA Board directive in 2019 to reduce HAC rate by 10% (15% in subsequent years)
- Wanted to be leaders in minimising potentially avoidable harm – HACs
- Needed transparency of data, confidence in accuracy of data, including automated data collection, integrated workflows and more robust reporting
- Improved internal and external benchmarking



A network of 10 Private Hospitals across 3 states

- 1693 beds incl. 55 ICU beds
- 75 Operating Rooms
- 9 Cardiac Cath Labs

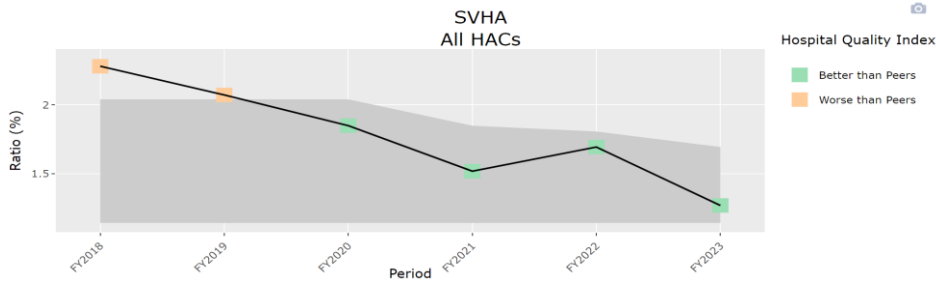


Case study 2: SVHA – new workflows

- RISQ was implemented in 2020 as the tool to manage and govern HAC data across SVHA private hospitals.
- Establishment of **Multidisciplinary Quality & Safety, Clinicians and Coders HAC Working Parties** to:
 - Identify the Priority HACs due to high rates/ outliers/ harm
 - Review clinical practices to ensure compliance with state and national standards
 - Review quality of clinical documentation and coding
- Coder workflow and clinician workflows developed in collaboration with Beamtree to ensure almost real time automated HACs review



Case study 2: SVHA- Results



Nb. 2022 - HACs V3.1: new HAC Surgical Complications & URTT saw slight increase in HACs - industry review in progress

Period	Ratio	Target
FY2018	2.281%	2.040%
FY2019	2.073%	2.040%
FY2020	1.849%	2.040%
FY2021	1.518%	1.849%
FY2022	1.694%	1.807%
FY2023	1.269%	1.694%





Case study 2: SVHA– What helped to achieve the reduction?

- ✓ Ongoing Board directive to improve & CEO accountability
- ✓ Private hospitals collaborative approach, led by an enthusiastic Clinical Governance Manager and Clinical and HIS teams!
- ✓ Regular benchmarking reports using RISQ Portal
- ✓ Committed multidisciplinary HAC working parties who meet regularly to maintain and sustain the improvements
- ✓ Deep dives into the data in response to identified gaps
- ✓ Close working relationship with Beamtree.

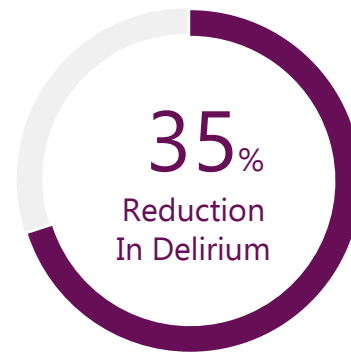
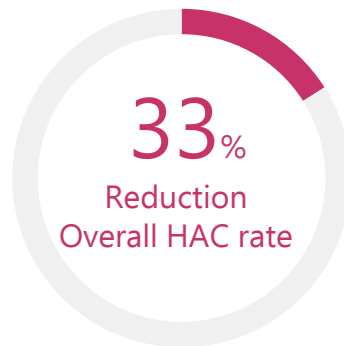


Case study 3: Uniting Care (Private Hospital Group)

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“If coding of HACs does not accurately reflect trust incidents rate, mistrust in the data can build with clinical governance programs then focusing on querying the data rather than preventing the HAC”

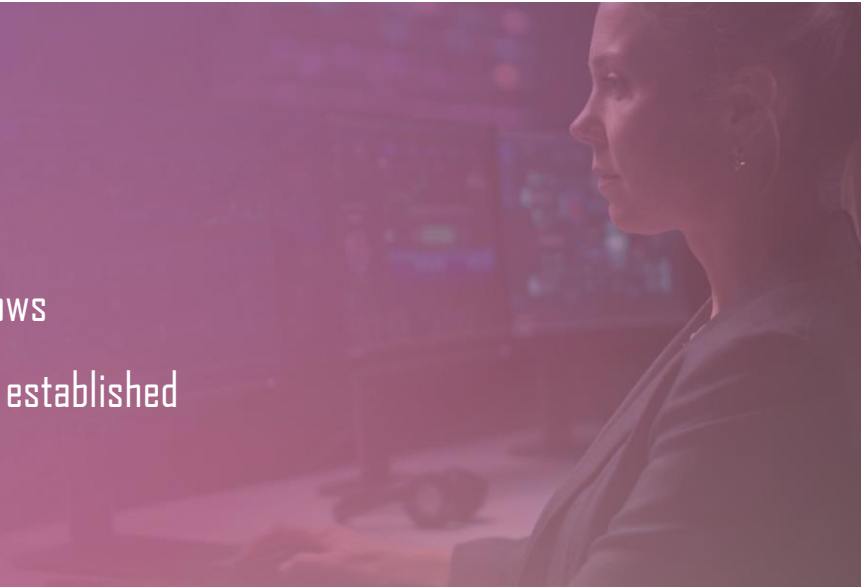
“The Beamtree HAC solution implemented by us have driven many improvements in health information, data management and the delivery of clinical care. The partnership with our clinical coder and clinicians is one of collaboration.”





Key takeaways:

1. Coding education is important
2. Incomplete documentation needs to be addressed
3. Embed coding HAC review process into daily workflows
4. Collaboration between clinician and coders must be established
5. HAC governance should be clear





Thank you

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