Health
Hunter New England
Local Health District

NextGen Infection
Prevention Collaborative

Training the Next Generation of Infection Prevention Leaders: A Junior Doctor Quality Improvement Program

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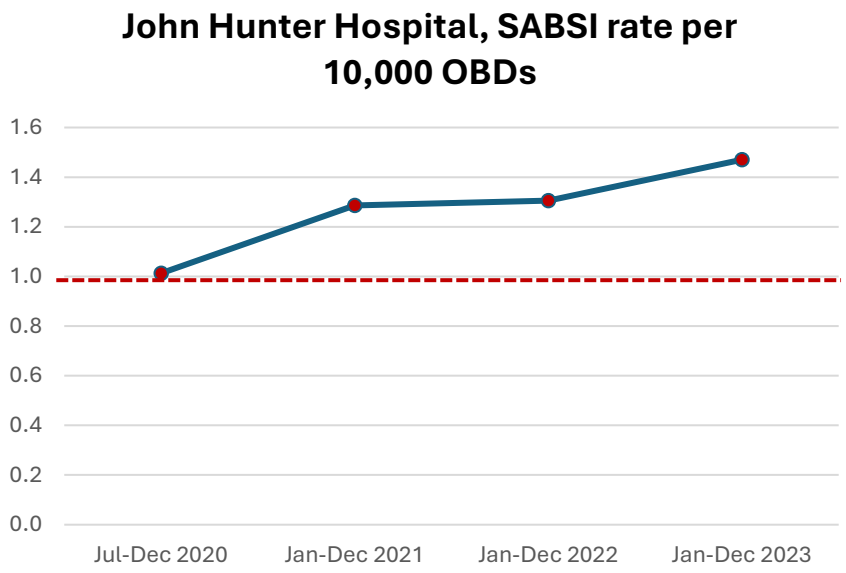
Disclosures

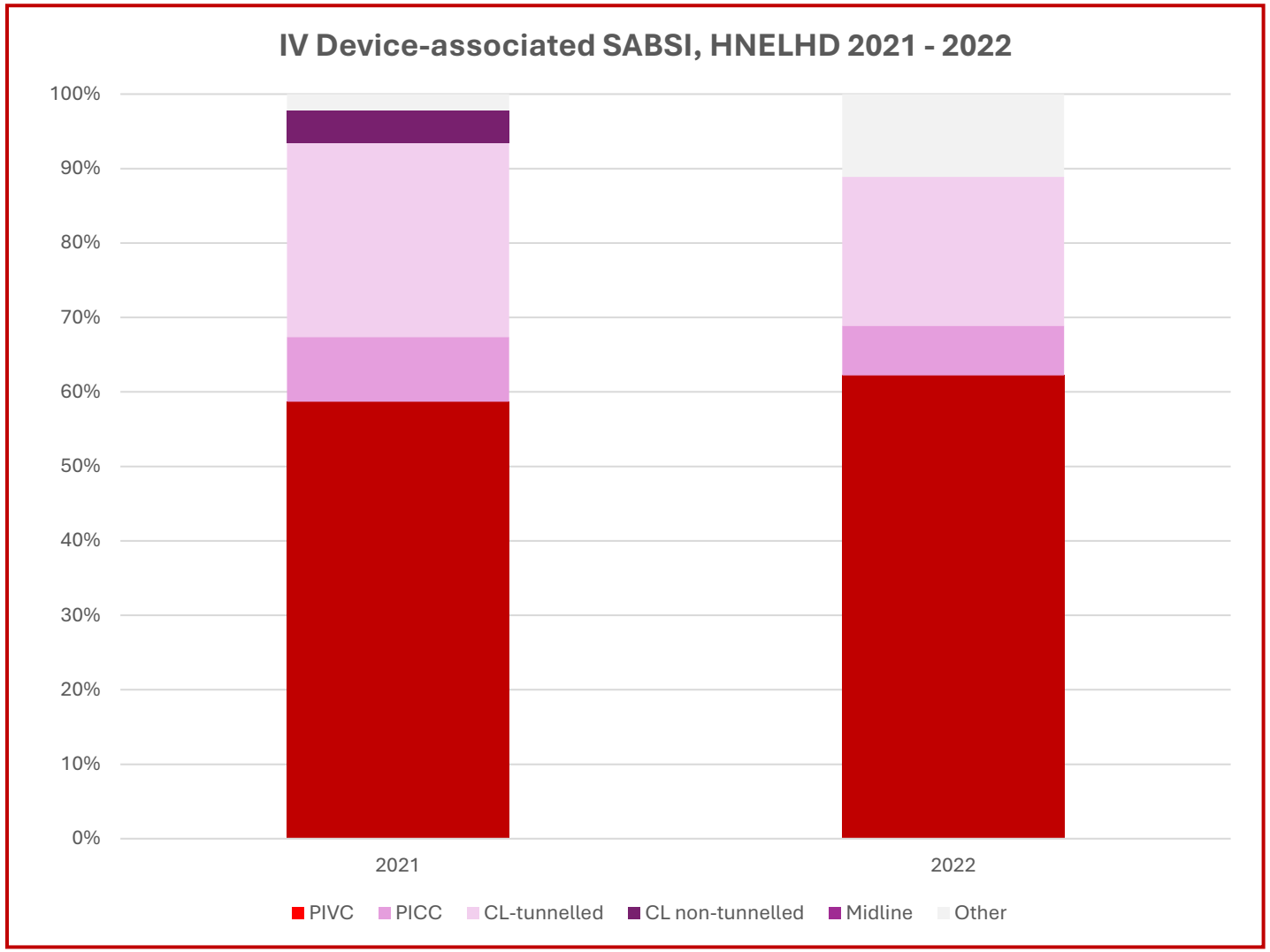
- All views and opinions expressed during this presentation are my own.
- We use Solventum solutions in HNE hospitals.
- All photos and images in this presentation are used with appropriate permission.
- Flights and accommodation provided by Solventum

About Hunter New England Local Health District | NSW Government

131,785 square kilometres
Approx 1 million residents
38 hospitals
1 Principal referral (John Hunter)
4 Public Acute Group A
2 Public Acute Group B
Largest JMO network in NSW, spanning eight training hospitals

HA-SABSIs in Hunter New England





Simultaneous demands for IPC attention

- Hand hygiene compliance
- Aseptic technique (competency assessments)
- Intravascular device insertion (credentialling)
- Ultrasound probe cleaning and disinfection
  - Use of sterile probe covers and sterile gel where relevant

How can we improve medical officer engagement in IPC and promote practice and culture change?

Medical officers - A different language.

Basic Training Curriculum
Adult Internal Medicine

The Royal Australasian College of Physicians

KNOWLEDGE (Cont.)	SKILLS (Cont.)
Prevention of infection	Complies with isolation procedures.
Universal precautions.	Complies with universal precautions.
Hospital practices to reduce risk.	Complies with hand washing guidelines and other guidelines to limit nosocomial infection (Link 2.4.3).
Isolation procedures.	
Hand washing.	

Which direction are we training junior doctors to look?

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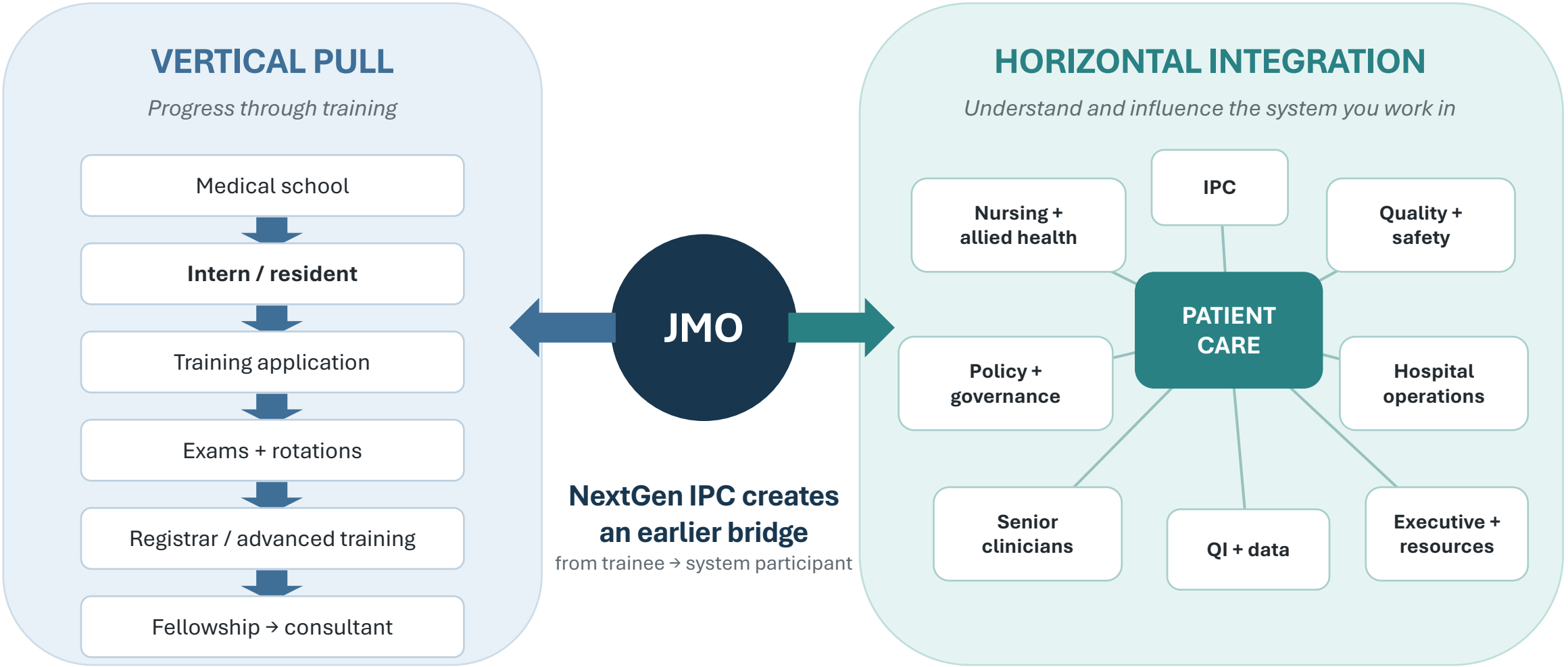
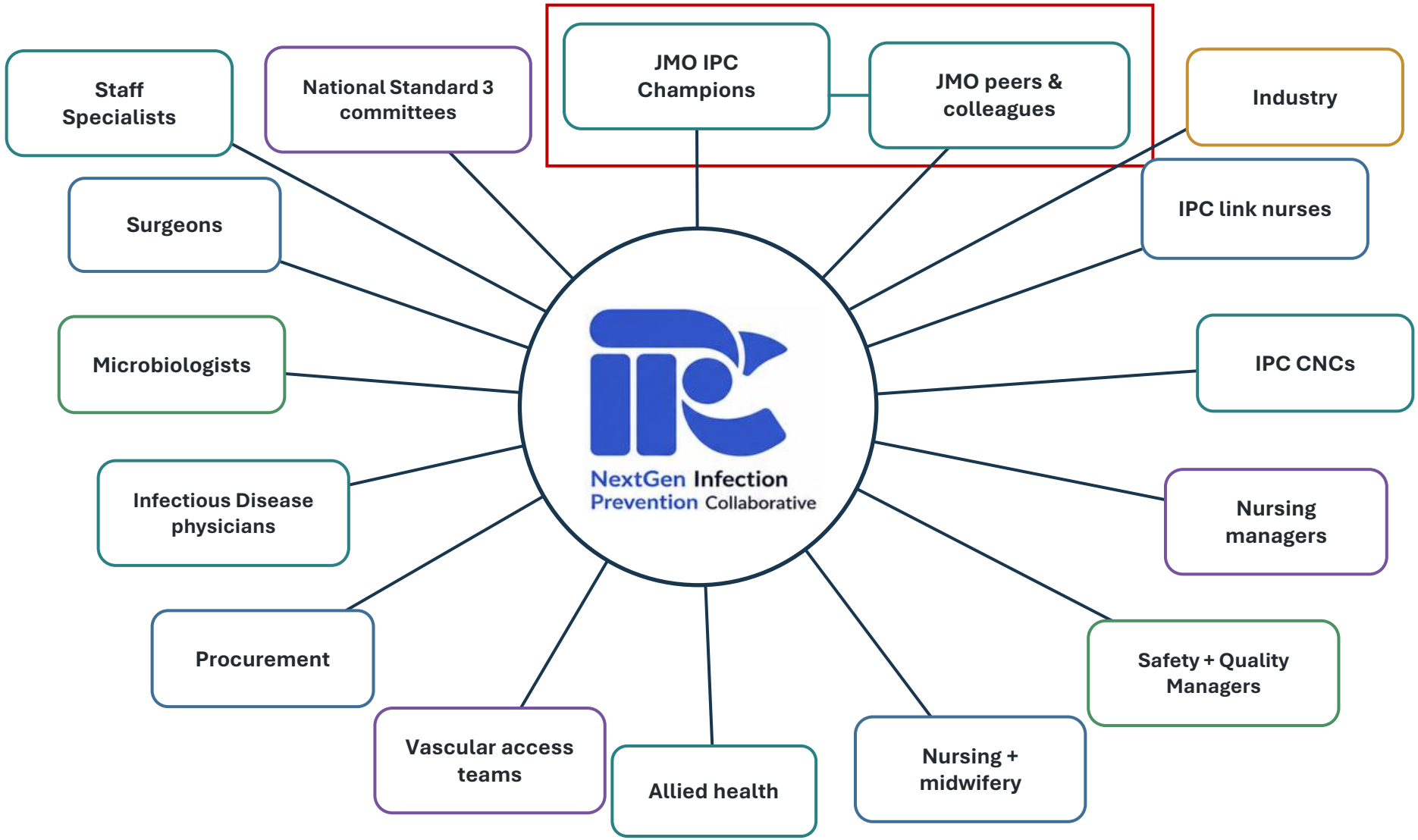
The vertical pull of medical training can compete with horizontal integration into the health system.



NextGen IPC: A JMO-led, multidisciplinary model connecting frontline clinicians with the people and systems needed to turn ideas into practice change.



The JMO is not the endpoint of the intervention — they become part of the improvement system.

Junior doctors want to improve the system — but engagement is hard

AUSTRALIAN EXPERIENCE • 10-YEAR REVIEW

Improvement House Medical Officer (IHMO)

Royal Melbourne Hospital
3-month dedicated QI rotation
27/40 former IHMOs surveyed

97%
would recommend the rotation

82%
used QI skills in ongoing work

What gets in the way?

1. **TIME + CLINICAL DEMANDS**
   Workplace demands leave little time or capacity to pursue QI alongside clinical work.
2. **TRANSIENT WORKFORCE**
   Short rotations, changing departments/hospitals and shift patterns disrupt continuity.
3. **THE SYSTEM IS HARD TO NAVIGATE**
   Junior doctors reported difficulty understanding organisational governance and operational structures.
4. **CHANGE FEELS SLOW + DISTANT**
   The pace of institutional change can frustrate JMOs and make the impact of their actions hard to see.
5. **CULTURE + ENGAGEMENT**
   Prevailing attitudes can support the status quo; even protected QI doctors found it difficult to engage other JMOs.

The barrier is not simply motivation — it is access, continuity, organisational literacy, time and culture.

O'Leary CA, Piu L, Braithberg G. Aust Health Rev. 2023;47:441–447.

The literature says the barrier is not simply “lack of interest”

Physician and junior-doctor engagement in QI requires a designed system, not just goodwill.

Teaching QI is not the same as enabling QI.

QI education is only one part of an enabling system.

45%

lack of time[1]

Most frequently reported barrier in the 10-health-system physician-engagement study.

31%

institutional culture[1]

Second most frequently reported barrier in the same study.

69%

senior leadership[2]

11 of 16 publications identified engaged/supportive leadership as an engagement strategy.

ENGAGEMENT STRATEGIES IDENTIFIED ACROSS 16 PUBLICATIONS — MAHBOOBA ET AL.

63%

data support[2]

10 of 16 publications identified credible, accessible data as an engagement strategy.

38%

QI training[2]

6 of 16 publications identified QI education/training as an engagement strategy.

38%

protected time[2]

6 of 16 publications identified dedicated/protected time as an engagement strategy.

1. Taitz JM, Lee TH, Sequist TD. BMJ Qual Saf. 2012;21:722–728.
2. Mahbooba B, et al. Am J Med Qual. 2021;36:328–336.

Three conditions convert interest into action

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1 CAPABILITY

“I need to know how.”

- QI method + practical tools
- Measurement and data literacy
- IPC / vascular-access knowledge
- Confidence to test and adapt

2 CONNECTION & SUPPORT

“I need someone to help me navigate it.”

- Senior sponsorship and mentorship
- Access to IPC, Q&S and governance
- Multidisciplinary relationships
- People who can remove barriers

3 CULTURE & OPPORTUNITY

“I need permission and a path to act.”

- Real clinical problems worth solving
- Protected opportunity, not just enthusiasm
- Recognition and visible leadership
- Improvement built into the system

The aim is not just to create better QI projects — it is to create clinicians who understand, influence and improve the system.

NextGen IPC addresses several barriers at once

A deliberately multi-component model: capability + connection + opportunity.

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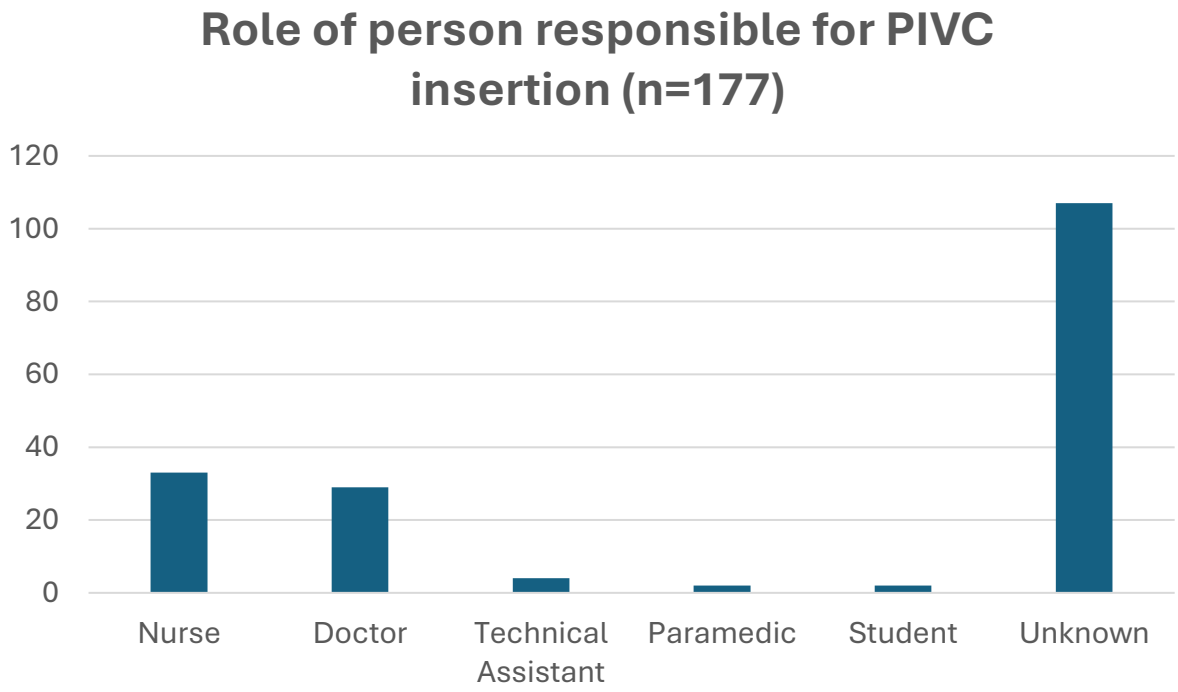
Common barrier	NextGen IPC response
“I don’t know how.”	QI method, FOCUS-PDSA methodology, mentoring, data and practical project support.
“I don’t know who.”	NextGen IPC connects JMOs to nursing, vascular access, procurement, policy authors, Q&S and senior clinicians.
“I don’t have time.”	Small, scoped projects; clear roles; monthly structure; senior support to keep work moving despite rotations.
“The system is too hard.”	JMOs learn how governance, policy, procurement, education and implementation actually work.
“It won’t change anything.”	Projects target visible system changes: stock, workflow, education, escalation pathways and spread.
“This isn’t my role.”	Peer-level leadership reframes IPC and QI as part of medical practice, not something done around doctors.

From trainee → system participant → peer mentor → future safety leader

PIVC related SABSIs in HNELHD:
A 10-year retrospective audit

Dr Winston Giang

- ICNet database maintained prospectively in HNE since 2015
- 177 SABSIs attributable to PIVC device (mean 17.7 per year)
- 58 medical records not available for full review
- Male 59%
- Mean age: Male, 64 yrs. Female 66 yrs.



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JMO IPC CHAMPIONS

PIVC related SABSIs in HNELHD:
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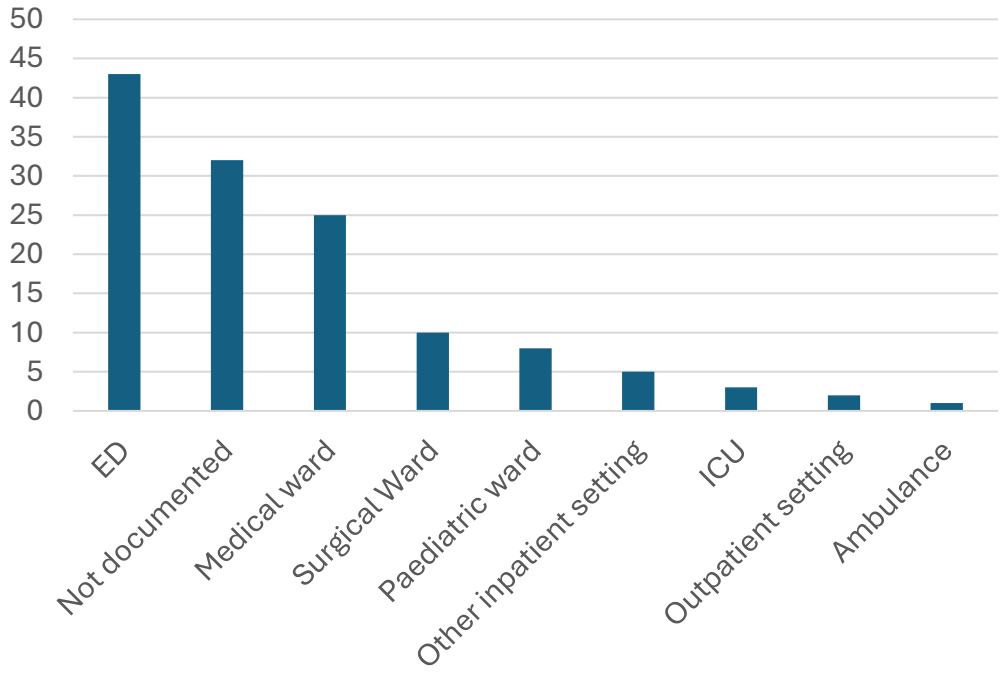
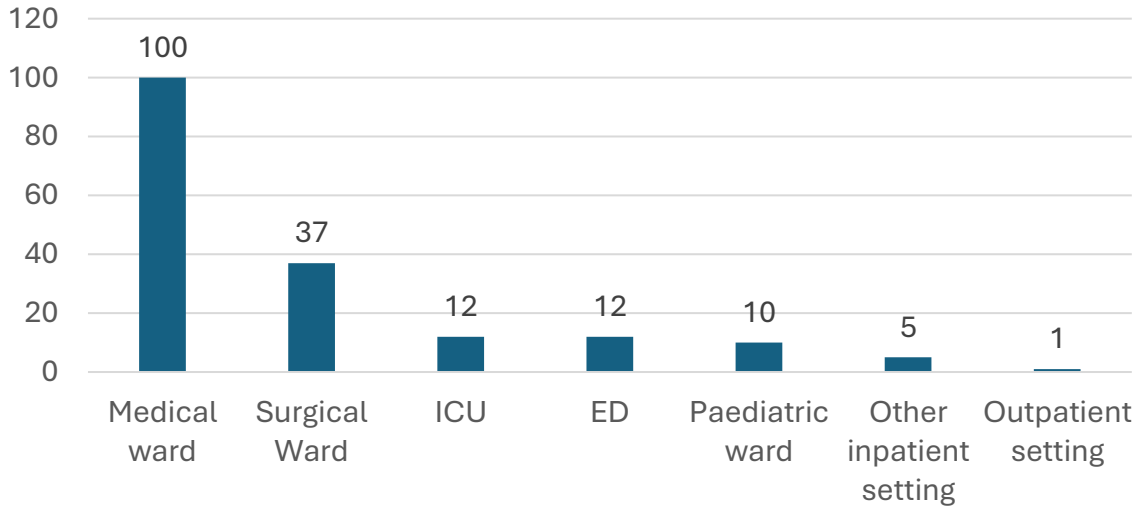
Location at time of insertion (n=129)



Attributable ward (n=177)



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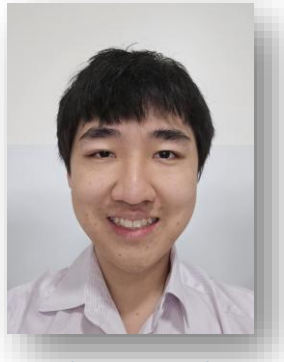
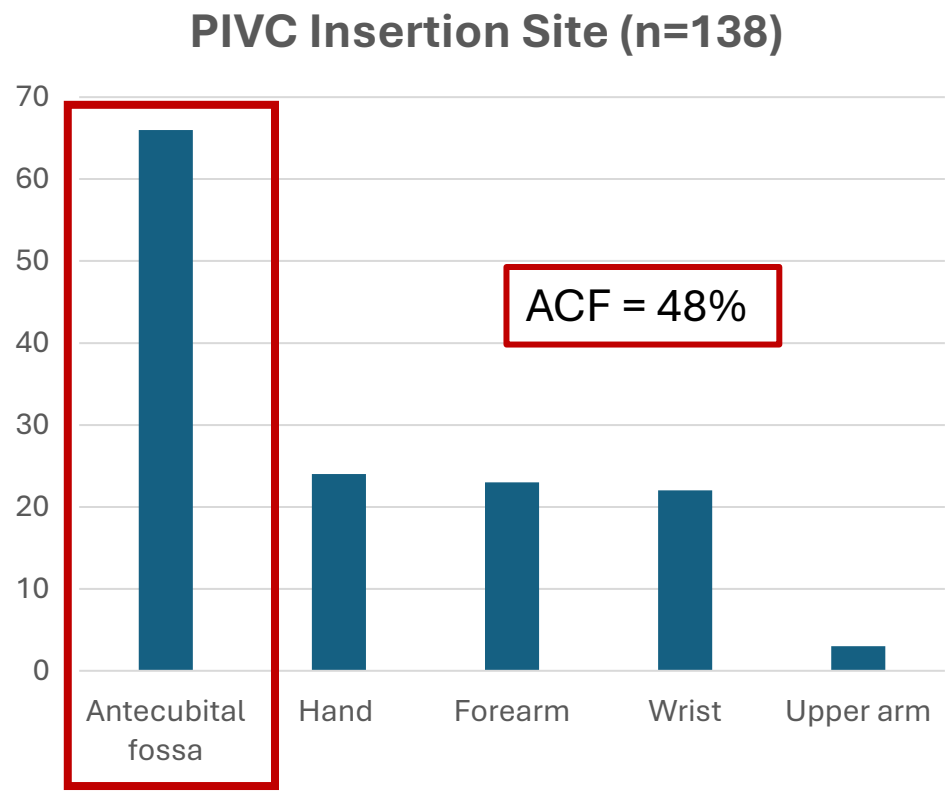
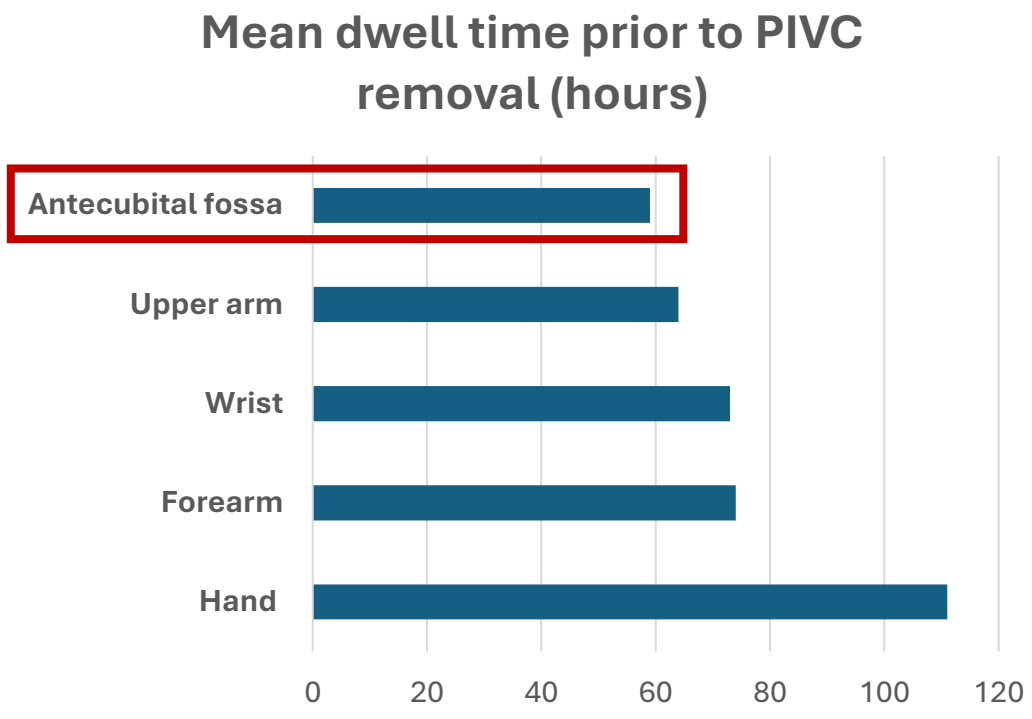


Dr Winston Giang





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All cause 30-day mortality, 19.2%
All cause 90-day mortality, 24.3%

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Junior doctors take to the floor: Exploring barriers to timely removal of antecubital fossa cannulae across four tertiary hospital wards

Quoy S (1,2,3), Wasson L (1), Tjang R (1), Lye C (1,2), Watson E (1), Browning S (1,2,3)
(1) John Hunter Hospital, Newcastle, NSW, (2) Hunter Medical Research Institute, Newcastle, NSW, (3) University of Newcastle, Newcastle, NSW

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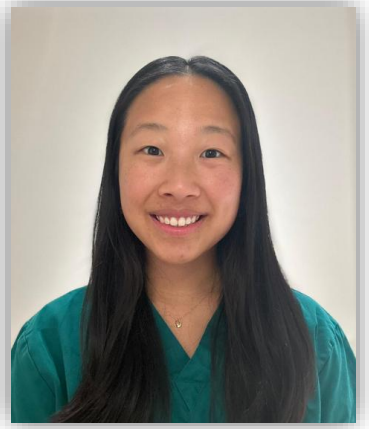

Dr Samantha Quoy

AIM

To determine the prevalence of ACF PIVCs and identify the barriers to timely ACF PIVC removal

DESIGN

Weekly PIVC point prevalence surveys and patient / staff interviews (by invitation)

SETTING

Four acute medical and surgical wards, John Hunter Hospital

PARTICIPANTS

- **PPS:** Adult inpatients with any PIVC in situ
- **Patient interviews:** Consulting adult inpatients with any PIVC in situ
- **Staff interviews:** Consenting staff providing care to patient with ACF PIVC in situ > 12 hours

OUTCOME

PIVC insertion site, dwell time, documentation, plan for removal

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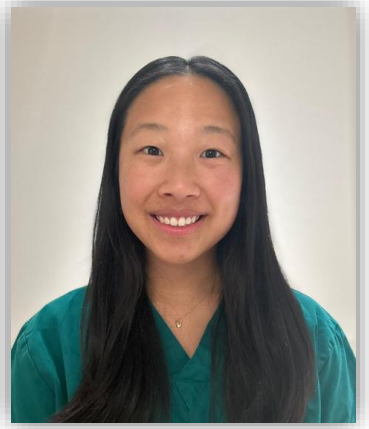
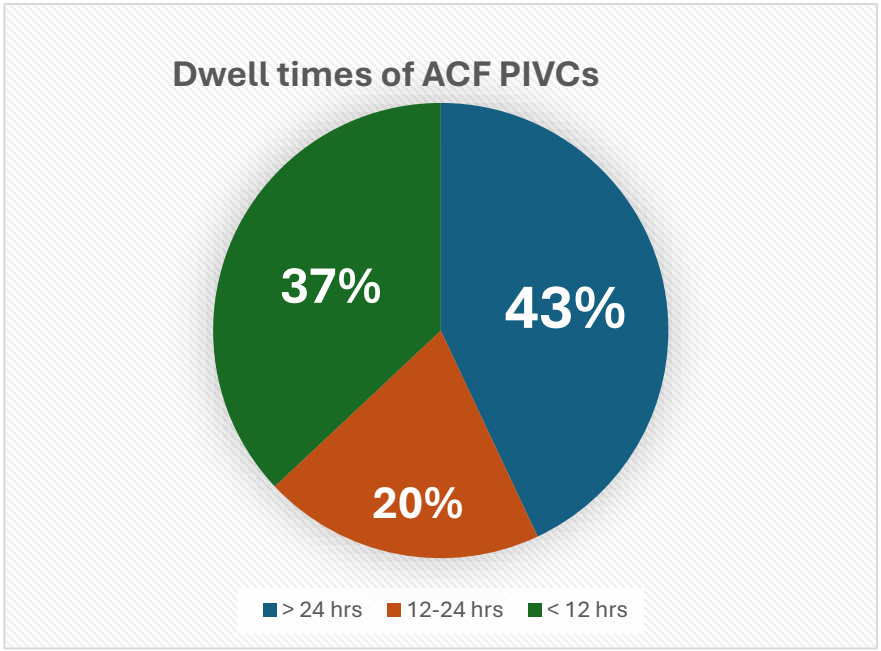


Dr Samantha Quoy

- **366 PIVCs reviewed**
- **51 (13.9%) located in the ACF**



NURSING STAFF INTERVIEWS (n=30)

Aware of policy requirement for removal by 24 hours	100%
Aware current dwell time was in breech of policy	45%
Credentialled in PIVC insertion	30%
In favour of nursing PIVC insertions / credentialling	100%

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Clean. Cover. Cannulate.: a JMO-led example of system redesign

Dr Mia Bowden

Dr Suki Jetley

Dr Anthea Azzi

Dr Ben Quirico

Behaviour change demonstrated across two hospitals, July 2026

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Reported likelihood of routinely using a sterile ultrasound probe cover following implementation

Hospital 1:

Hospital 2:

Self-reported likelihood of routine sterile probe cover use

High (8–10) Moderate (7) Low (0–6)

Likelihood of routine use sterile transducer cover ‘high’ or ‘moderate’

Hospital 1: **72%** | Hospital 2: **90%**

Project Awareness

Hospital 1: **88%** | Hospital 2: **96%**

Self-reported consistent use of low-level disinfection

Hospital 1: **77%** | Hospital 2: **64%**

Most clinicians reported a high likelihood of routinely using sterile probe covers following implementation. The intervention was successfully transferred to a second tertiary hospital with a view to replicate this project at all training sites in our health district.

JMO I.P.C BITES

A Fresh Take on Infection Prevention Education

Dr Mariam Khalid

JMO-created education resources

Education which meets JMOs wherever they are.

Colourful and engaging media designed by JMO's, for JMO's. Content appears in write-up rooms, common rooms, wards, and mandatory education sessions. Social media account to come...

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ACCESS

Advanced Cannulation, Credentialing & Education Support Service

A JMO-led vascular access initiative that builds skills, confidence and safety through ultrasound guided cannulation education, credentialing and ongoing peer support.

JMO-LED
Peer driven, peer supported

CREDENTIALED
Trainers & assessors you can trust

ULTRASOUND FOCUSED
Best practice image-guided access

PATIENT SAFETY
Clean technique, infection prevention and quality care

WHAT WE AIM TO ACHIEVE

Build JMO capability & confidence
Provide high quality training and mentoring in ultrasound-guided cannulation.

Credential competent practitioners
Develop a structured credentialing pathway for trainers and clinicians.

Deliver accessible education
Offer ad hoc bedside workshops and targeted support for JMOs.

Promote clean, safe practice
Embed infection control and *Clean Cover Cannulate*™ concepts in every cannulation.

Support our teams & patients
Reduce complications, improve success rates and enhance patient experience.

HOW ACCESS WORKS

1. IDENTIFY & DEVELOP
JMOs with interest are selected and supported to become accredited trainers & assessors.

→

2. BUILD THE CURRICULUM
Create a structured lesson plan covering ultrasound technique, anatomy, complications, IPC and *Clean Cover Cannulate*.

→

3. DELIVER & SUPPORT
Run ad hoc bedside workshops, simulation sessions and 1:1 support for JMOs when they need it most.

→

4. ASSESS & CREDENTIAL
Assess competency and credential clinicians to ensure safe, consistent practice.

→

5. EVALUATE & IMPROVE
Audit outcomes, gather feedback and continuously refine our teaching and support.

Dr Ottavio De La Vaga

NextGen Infection Prevention Collaborative

Projects have translated into recognition and wider influence

NextGen IPC is creating visible pathways from local improvement work to professional contribution.

Season 9: 12-part CEC podcast

HNE junior clinicians share honest reflections on confidence, connection, role models and safer patient care.

Safety and Quality in Action: Stepping into practice

Listen on Spotify

2
ACIPC best posters
JMO-led IPC/QI projects recognised at consecutive conferences: 2024 and 2025.

4
showcase placings
First and second place at the HNELHD JMO Quality & Safety Showcase in both 2024 and 2025.

2
oral presentations
ACIPC oral presentation delivered in 2025, with a further oral presentation planned for 2026.

PROGRAM REACH • 2023–2026

4
Australian cities reached
Invited NextGen IPC presentations in Adelaide, Sydney, Melbourne and Perth during 2025–2026.

56
participant-years
Participation grew from 6 in 2023 to 15, 17 and 18 in successive annual cohorts.

4
annual cohorts
A sustained program since 2023—supporting leadership, evaluation and dissemination across rotations.

Feedback

> *__Great opportunity__ to understand more about and __get involved__ in infection prevention and control and quality improvement. It has also been fantastic exposure to the benefits and challenges of __change management__ in healthcare.*

> *The program __empowers__ the JMO cohort to __lead infection prevention and patient safety efforts__ by promoting awareness among peers via JMO led projects. It fosters creativity, builds __leadership skills__, enhances CVs, and offers a valuable introduction to initiatives led by senior clinicians.*

> *__Amazing initiative.__ I hope this can pave the way for more groups to engage and improve the junior doctor cohort.*

> *Provides JMOs an opportunity to become __more exposed to infection prevention__ (prior to IPC champions I had very little exposure!). Provides support to lead our own research/quality improvement projects on __topics important to us__. Provides a great opportunity to meet other like-minded JMOs!*

PIVC-related SABSI by insertion site, HNELHD 2015 - 2025

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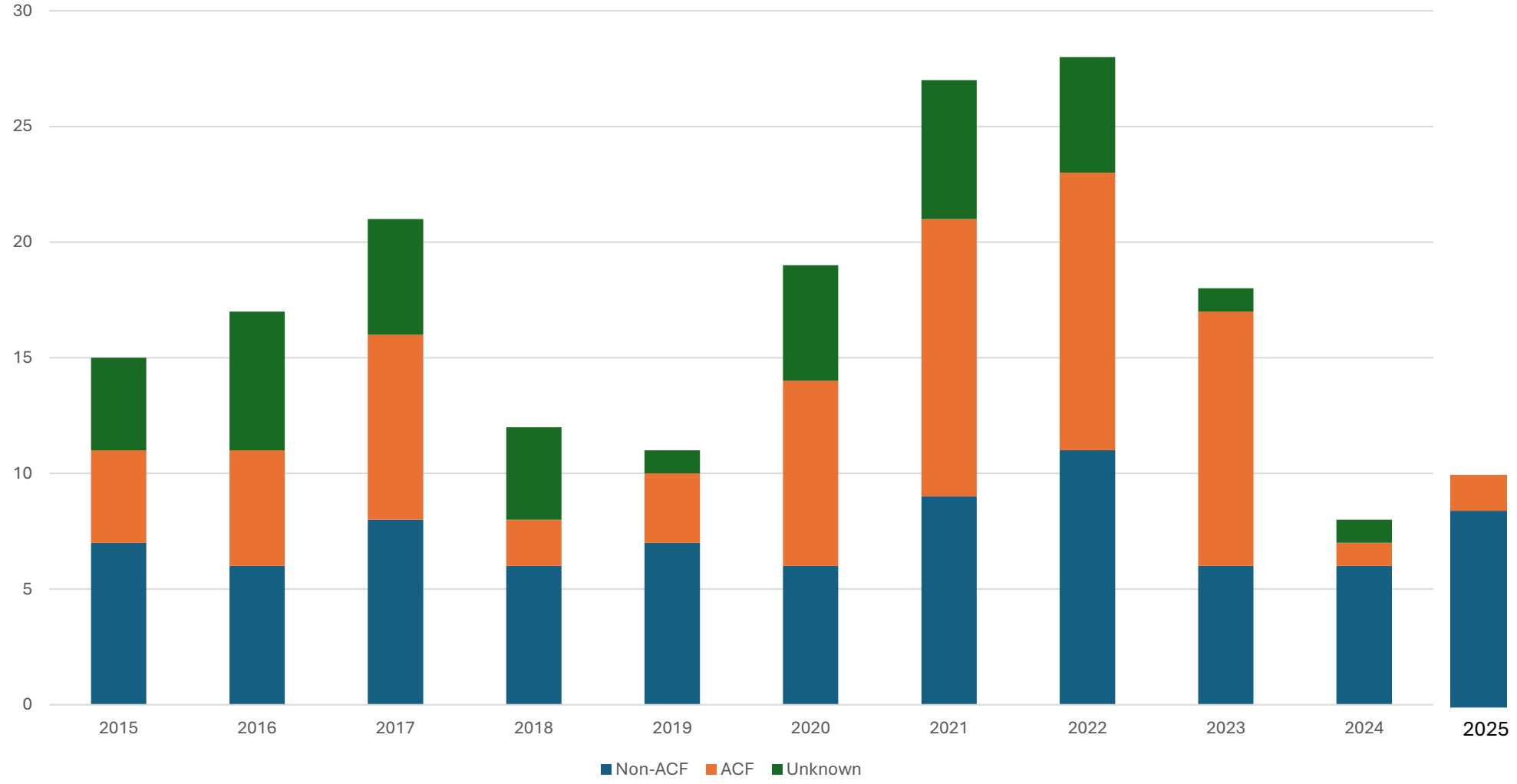

Requirement for routine removal at 72 hours removed

PIVC CCS

Requirement for routine removal at 72/24 hours reinstated

SABSIs per 10,000 OBDs

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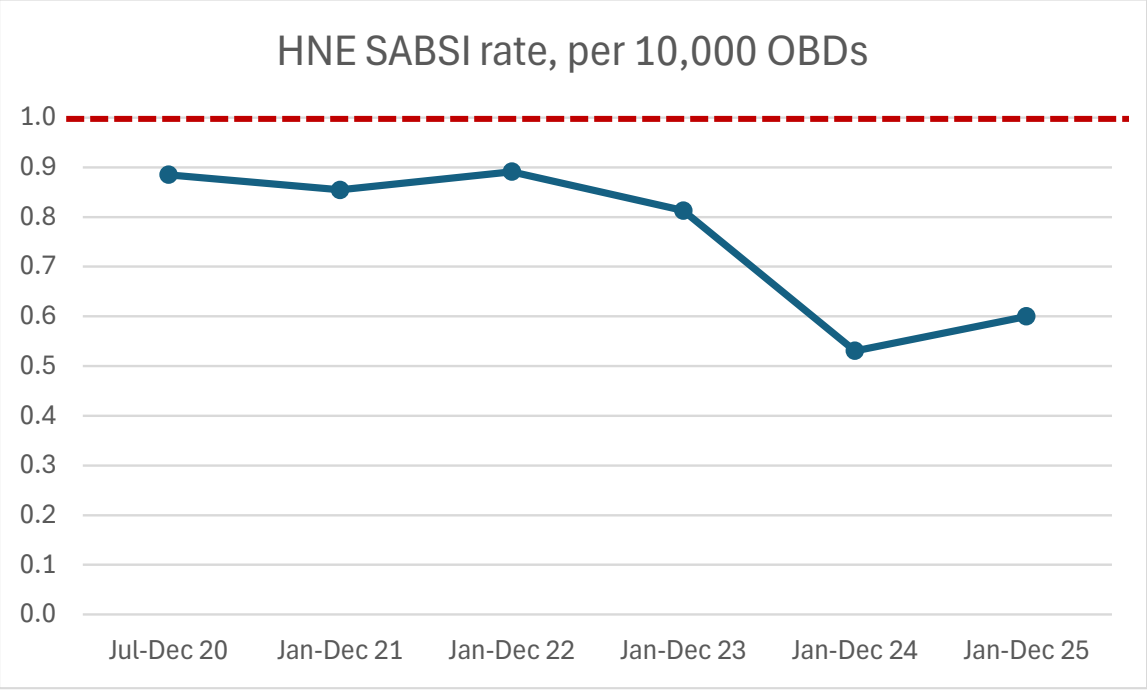
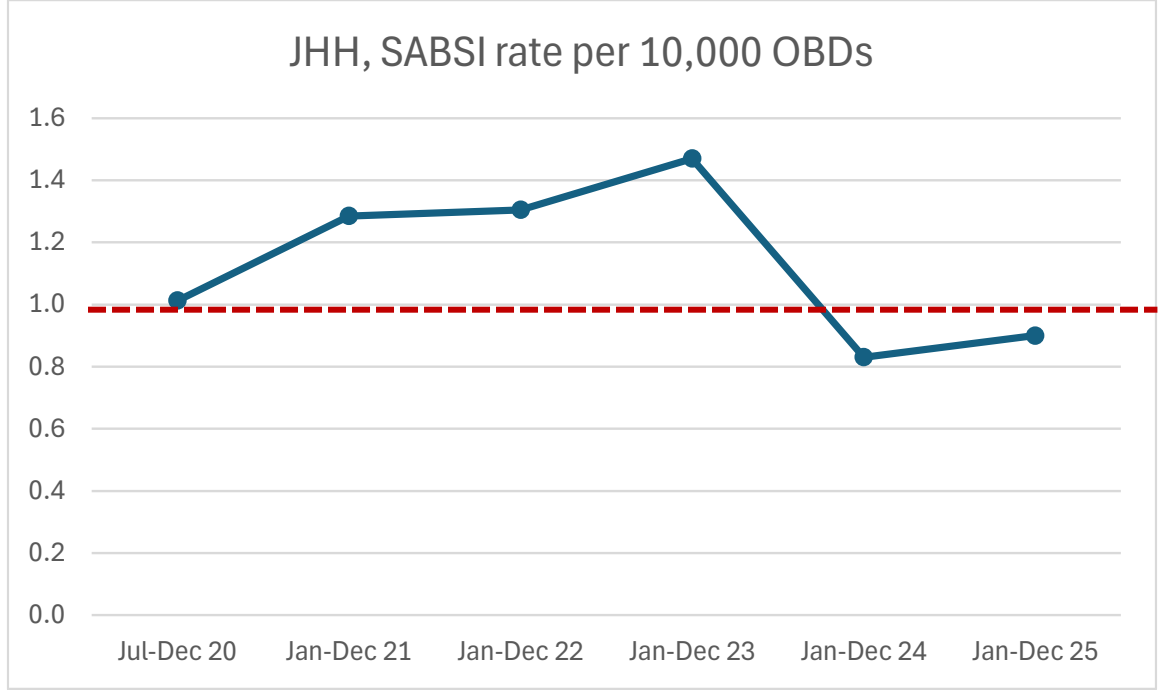


John Hunter Hospital



Thank you

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HNE IPS team
All the wonderful JMO IPC Champions and project team members

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