Healthcare associated infection surveillance practices in Australian hospitals

Russo, Philip L[1], Hall, Lisa[1], Cheng, Allen C[2], Richards, Michael[3], Graves, Nicholas[1].

1 Institute of Health & Biomedical Innovation, School of Public Health and Social Work, Queensland University of Technology, Brisbane, QLD
2 Infectious Diseases Epidemiology Unit, Department of Epidemiology and Preventive Medicine, Monash University, VIC
3 Faculty of Medicine, Dentistry and Health, University of Melbourne, VIC

CENTRE OF RESEARCH EXCELLENCE
REDUCING HEALTHCARE ASSOCIATED INFECTIONS

QUT ihbi Institute of Health and Biomedical Innovation

philip.russo@qut.edu.au

INTRODUCTION

Background

Australia does not have a national HAI surveillance program. Existing State programs have developed independently, all broadly based on the NHSN system. Variation between the State programs, and their suitability to generate national data is uncertain.

Aim

The aim of this study was to identify and describe the differences between the HAI surveillance programs in Australia, measure agreement between infection prevention clinicians when identifying HAIs and identify factors that influence agreement levels.

Method

Staff who undertake HAI surveillance in acute care facilities with more than 50 beds were invited to participate. The survey collected data on demographics, skill, education, support resources, surveillance practices and methods. Participants were also presented with clinical vignettes describing potential HAI scenarios.

DEMOGRAPHICS

Responses received	104
Average age (IQR)	48.9 (43-55)
Average years of IC experience (IQR)	11.8 (5-17)
Masters degree or higher	28%

TRAINING AND METHOD

Trained in HAI surveillance (n=81)	51%
Prospective SSI surveillance (n=104)	47%
Prospective CLABSI surveillance (n=85)	58%
Always discuss HAIs with a team before confirming (n=55)	29%
Rarely or never discuss HAIs with a team before confirming (n=55)	13%
Use surveillance software (n=77)	53%

HAI DEFINITIONS

	SSI (n=81)	CLABSI (n=66)
NHSN with NO modifications	64%	67%
NHSN with modifications	31%	29%

SUPPORT RESOURCES

Rarely or never have access to	n=85
Infectious Diseases Physician	13%
Microbiologist	17%
ICP with more experience	43%
Epidemiologist	83%
Statistician	83%
Administrative assistance	57%

KEY FINDINGS

State, training, size of hospital and support resources influenced vignette agreement

CLINICAL VIGNETTES

SURGICAL SITE INFECTION

1:
Post CABGS
- Incisions at sternum, arm and leg
- Sternum and arm infected

How is this reported? (n=23)

2:
Post bowel resection
- Fever, collection surgically drained from abdomen

Is this classified as an organ space or deep SSI? (n=81)

BLOODSTREAM INFECTION

3:
Admitted with infected leg ulcer
- *S.aureus* bacteraemia 4 days later

Is this a HAI? (n=85)

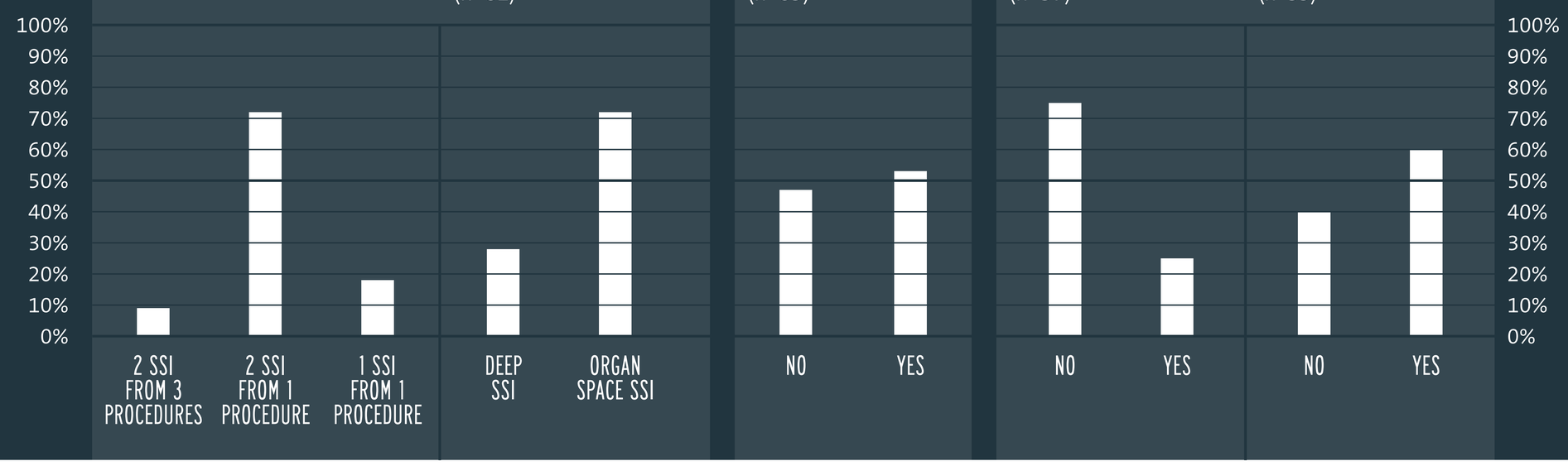
CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTION

4:
ICU patient with central line
- fever and *S.epidermis* in one BC
- commenced on IV vanc

Is this a HAI CLABSI? (n=57)

5:
ICU patient with central line
- *S.aureus* bacteraemia at 2 calendar days but < 48hrs

Is this a CLABSI? (n=55)



CONCLUSION

- **First description of HAI surveillance practices in Australia**
- **Widespread variation identified amongst qualifications, training, data collection method, definitions, support resources and clinical vignette agreement**
- **State, training, size of hospital and support resources influence vignette agreement**
- **Major gaps must be addressed before the implementation of a national HAI surveillance program in Australia**

For more information:
Twitter: @PhilRusso_aus

Acknowledgements: The Rosemary Norman Foundation and the Nurses Memorial Centre, all ICP's who participated in the survey, the Australian Commission for Safety and Quality in Health Care and Jurisdictional Health Department representatives.