Introduction: The optimal dressing and securement for peripherally inserted central catheters (PICCs) is unclear with most evidence coming from other central venous catheter types. We aimed to compare the effectiveness of chlorhexidine gluconate (CHG) dressings to prevent catheter associated bloodstream infection (CABSI) and integrated securement devices (ISD) to prevent PICC failure.

Methods: This NHMRC-funded study was undertaken with cancer patients at 3 Australian adult/paediatric hospitals. There was a pragmatic, randomised, controlled, assessor masked, 2x2 factorial superiority design. Patients were randomised (centralised, stratified, blocked) to receive a PICC dressing with a CHG disc (intervention) or not (control), and to PICC securement with an ISD (intervention) or separate securement device (control). The primary outcomes were CABSI for the dressing comparison and all-cause PICC failure for the securement hypothesis.

Results: Between June 2016 and September 2020, 840 patients (1045 PICCs) were randomly assigned, with 1027 PICCs successfully inserted, and no attrition. PICCs were predominantly dual lumen, polyurethane non-valved catheters in the basilic vein. Median studied PICC dwell was 42 days. CABSI occurred in 23 of 491 (4.7%) CHG dressing PICCs, and 31 of 536 (5.8%) no-CHG catheters in the basilic vein. Median studied PICC dwell was 42 days. CABSI occurred in 23 of 491 (4.7%) CHG dressing PICCs, and 31 of 536 (5.8%) no-CHG dressing PICCs (Hazard Ratio [HR] 0.68, 95% confidence interval [CI] 0.40-1.17; p = 0.16). PICC failure occurred in 107/510 (21.0%) of ISD secured PICCs and 108/517 (20.9%) separate securement device secured PICCs (HR 1.01, 95% CI 0.77-1.32; p = 0.95).

Conclusion: Preliminary analysis identified no significant reduction in CABSI or PICC failure with the use of CHG dressings or ISD securement. Multivariant, economic and sensitivity analyses will further inform these results.

77. AUSTRALIA’S PATHWAY TO A NATIONAL CENTRES FOR DISEASES CONTROL - COMPARING THE CURRENT INFECTION PREVENTION AND CONTROL STRUCTURES
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Background: The COVID-19 pandemic has provided a focus for Infection Prevention and Control and unprecedented interest from all walks of the healthcare and non-healthcare system. There is little research information on state and national structures for Infection Prevention and Control across Australia. In Australia state and national programs were created to respond to healthcare associated infections (HAIs) and their prevention, however understanding the structures, connection or lack there off possibly the cause for historical disengagement by clinicians. This study compared the jurisdictional programs to begin to understand the complexities and need for improvement.

Method: This study examined the characteristics of the HAI Programs across Australian national, states and territories and level of focus placed on IPC jurisdictions, connection or lack there off possibly the cause for historical disengagement by clinicians. This study compared the jurisdictional programs to begin to understand the complexities and need for improvement.

Results: There were variations to websites and consistent complexity for jurisdictional programs to begin to understand the complexities and need for improvement.

78. DO PPE OBSERVERS INCREASE HCW PPE COMPLIANCE? A SYSTEMATIC REVIEW
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Background: Healthcare workers (HCW) are at risk of acquiring the infection when managing highly infectious patients, due to their nature of their work and prolonged close contact. The risk is highlighted in management of an infectious disease outbreaks. The use of personal protective equipment (PPE) observers has been recommended to improve the HCW compliance to PPE practices, which will reduce the risk of exposure to the HCW. The purpose of this systematic review is to identify the evidence that supports the role of the PPE observer to improve HCW PPE compliance in an infectious disease outbreak and reduce the risk a healthcare acquired infection.

Methods: A systematic review of the four databases was conducted using key terms and phrases. PRISMA guidelines were used to report eligible literature and outcomes. Literature was evaluated using the Mixed Methods Assessment Tool.

Results: A total of 170 articles were identified from the database search. Four articles were relevant to the aim of the review and included. Four main themes were identified: workforce and training requirements, the role of the observer, the need for teamwork and peer support, and PPE errors and risk reduction.

Conclusion: The role of the PPE observer is considered critical in the management of an outbreak or pandemic. However, this recommendation is based on grey literature, with little supporting research. Further research into the PPE observer role is required, to evaluate the effectiveness of their position in reducing PPE errors and therefore reducing the risk of healthcare acquired transmission to HCWs.