

Pressure Injury Prevalence and Practice Improvement: A realist evaluation of nursing care and nursing knowledge to reduce pressure injuries in an Australian hospital



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Pressure injuries are defined as ...

“localized damage to the skin and/or underlying tissue, as a result of pressure or pressure in combination with shear. Pressure injuries usually occur over a bony prominence but may also be related to a medical device or other object.”

(EPUAP, NPIAP & PPPIA 2019, p.

Background

Pressure injuries are:

- Painful, reduce QOL and lead to ↑ mortality (Essex et al. 2014)
- A common form of adverse event (Tubaishat et al. 2018; Rodgers et al. 2021)
- Considered preventable and an indicator of quality nursing care (Stotts et al. 2013)
- Expensive to health care systems (Nguyen et al. 2015)

Research Aim:

To explore how periodic pressure injury prevalence (PIP) surveys can impact on Hospital Acquired Pressure Injury (HAPI) rates and the knowledge and attitudes of nursing staff towards preventing pressure injuries in an acute care hospital.

Methodology:

1. Used a Realist Evaluation Framework.
2. Equal focus on Pressure Injury Prevalence and improving processes of care.
3. Evaluation of what has worked, for whom and in what circumstances (Pawson & Tilley 1997).

Mixed Methods Study

1

- Pressure Injury Prevalence study 1 (All patients – 4 wards)
- Nurse Survey (Knowledge & attitudes of nurses to PI prevention)

2

- Snapshot Audit 1 (10 random patients – 4 wards)
- Ward developed Action Plan

3

- Snapshot Audit 2 (10 random patients – 4 wards)
- Ward developed Action Plan

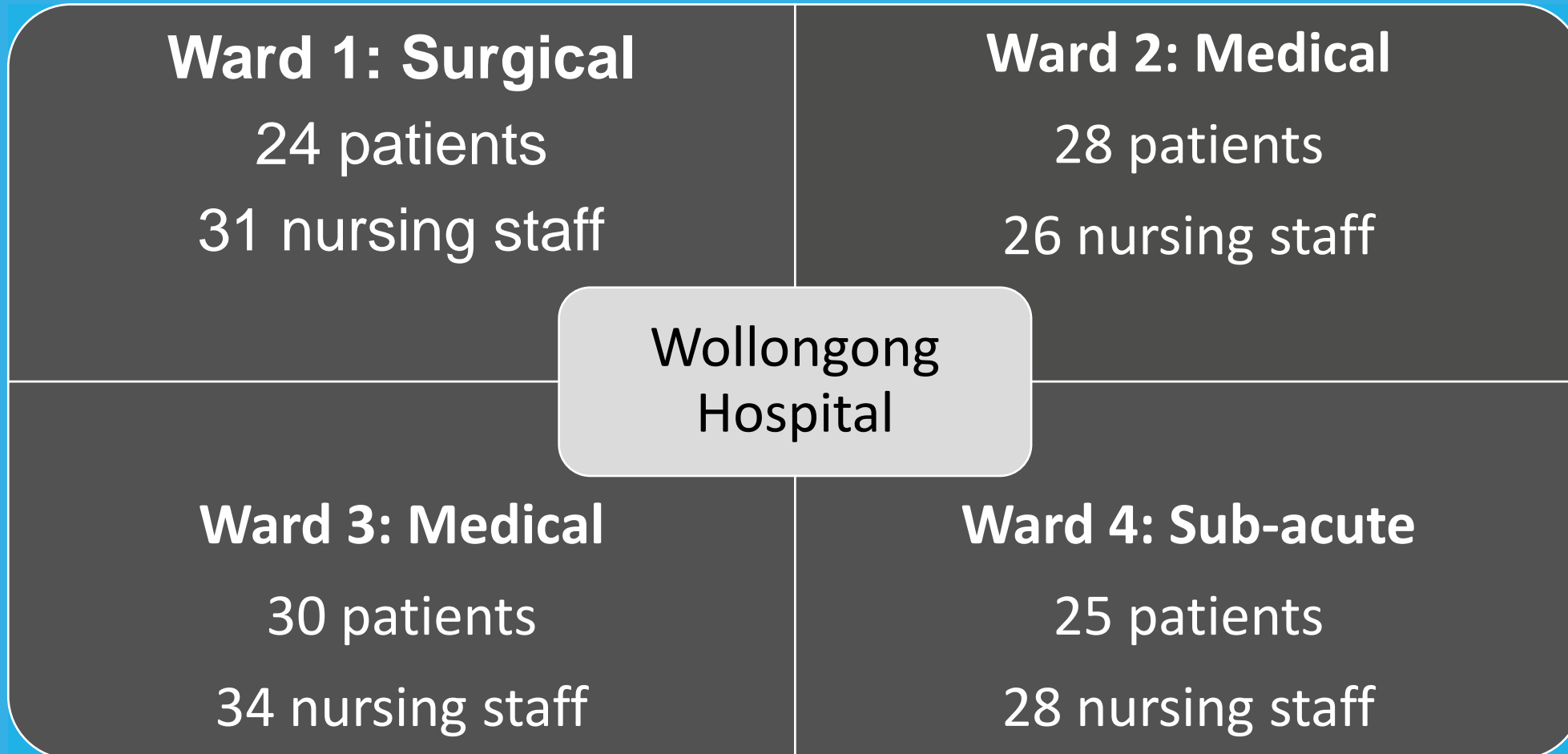
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- Pressure Injury Prevalence study 2 (All patients – 4 wards)
- Nurse Survey 2 (Knowledge & attitudes of nurses to PI prevention)

5

- Interviews with Pressure Injury Champions, Educators & NUMs
- Group Interviews with ward staff

Sample: 4 wards in 1 hospital



WOLLONGONG HOSPITAL

Main Entry



Study Design and Findings

Part 1

- Pressure Injury Prevalence (PIP) Studies
- Full PIP and Snapshot surveys

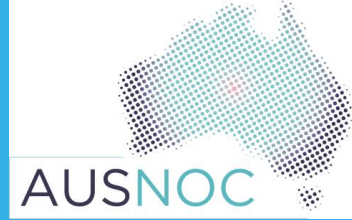
Part 2

- Nurse Survey
- Demographics, Knowledge and Attitudes survey

Part 3

- Qualitative Data
- Interviews & Group Interviews

Pressure Injury Prevalence Surveys

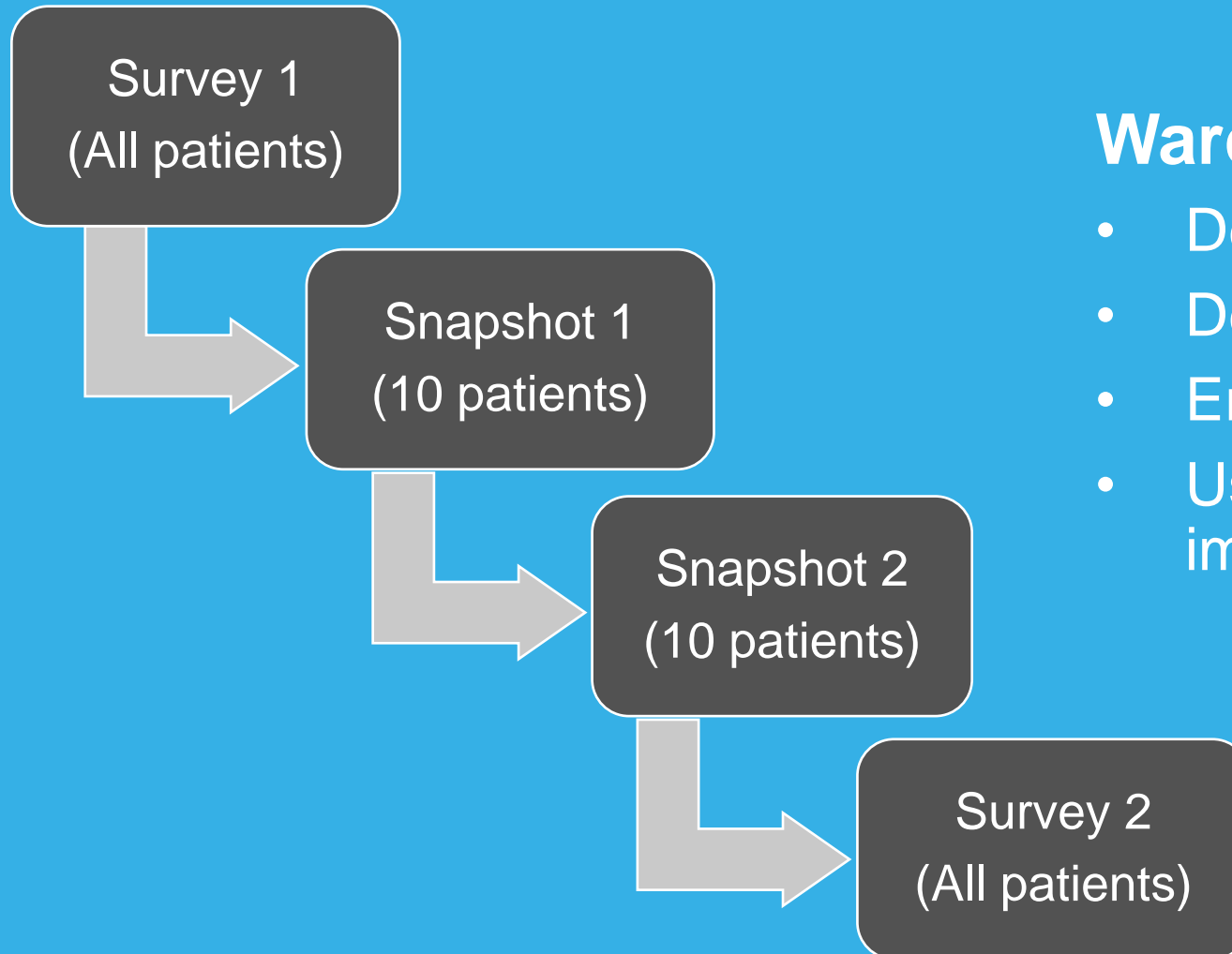


Methods: Observational study

- 2 observers (one independent)
- All completed training (Online learning module & test)
- Used International Clinical Practice Guideline for Pressure Injury classification (NPUAP/EPUAP/PPPIA 2014)
- Independent observer conducted all PIP surveys
- Methodology based on EPUAP guidelines and NSW Clinical Excellence Commission Audit tool
- Data collected on iPad



Pressure Injury Prevalence Surveys



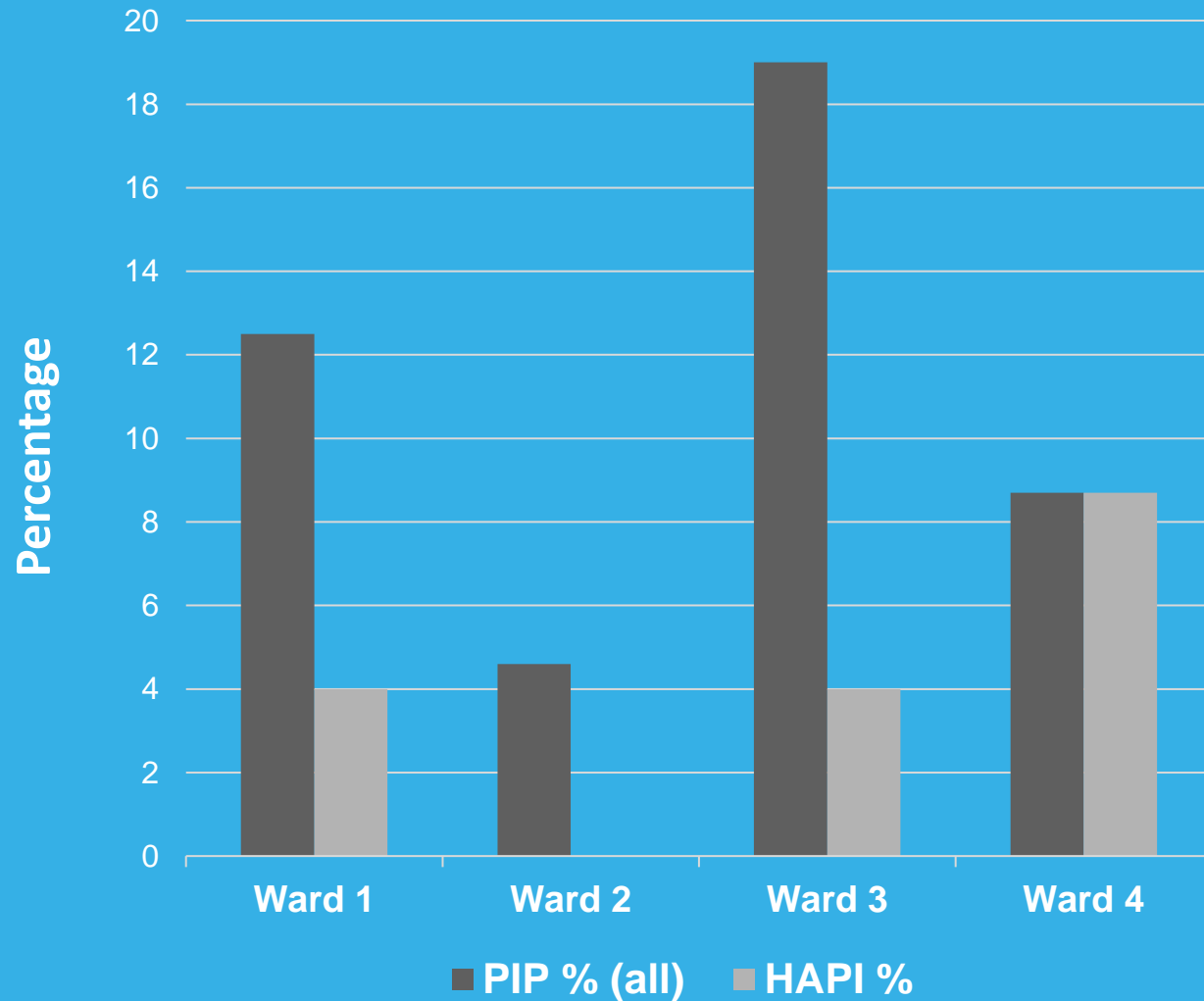
Ward Action Plans

- Developed following all cycles
- Developed by ward staff
- Encouraged (not mandated)
- Used PDSA cycles & quality improvement methodology

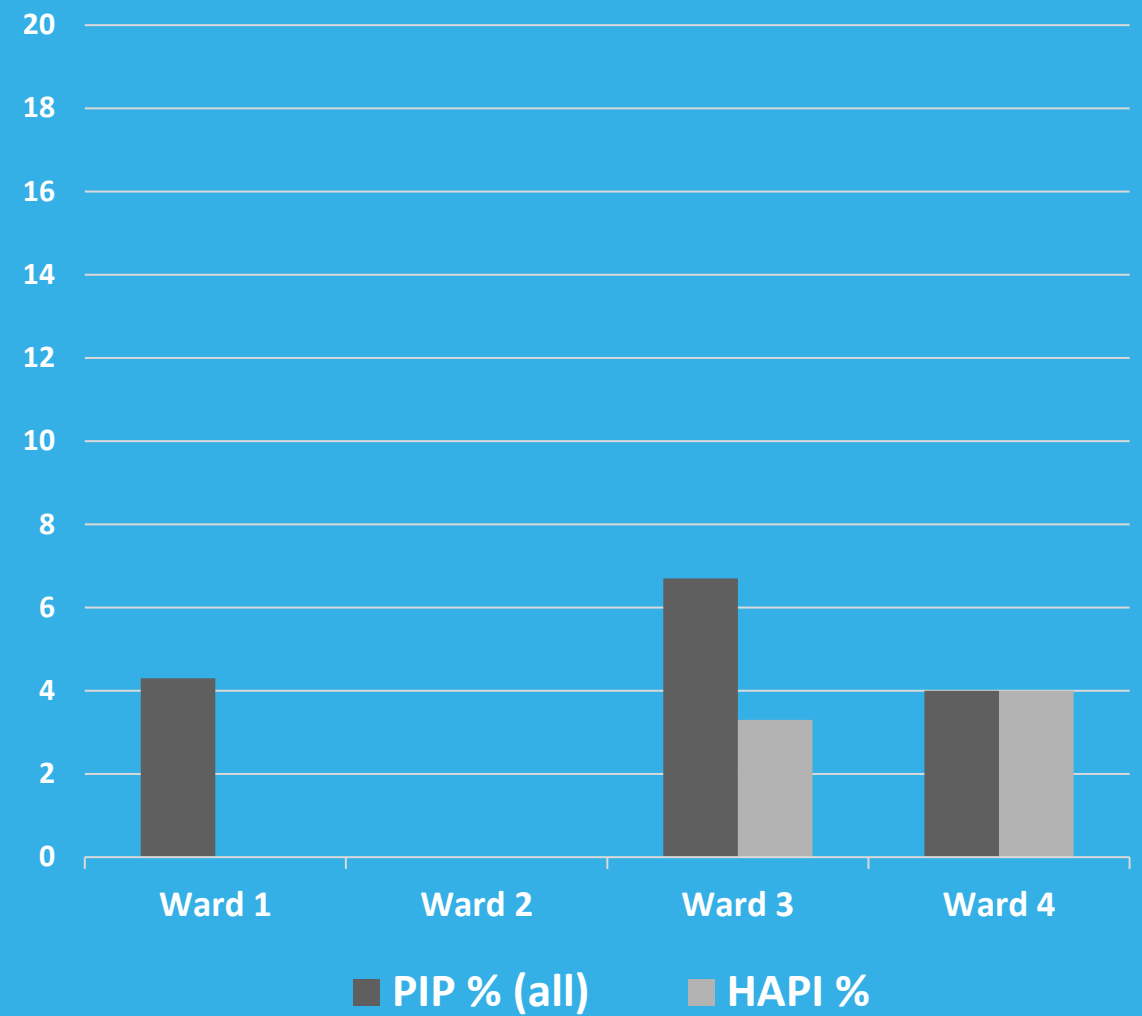
Pressure Injury Prevalence (%) - Findings



Survey 1



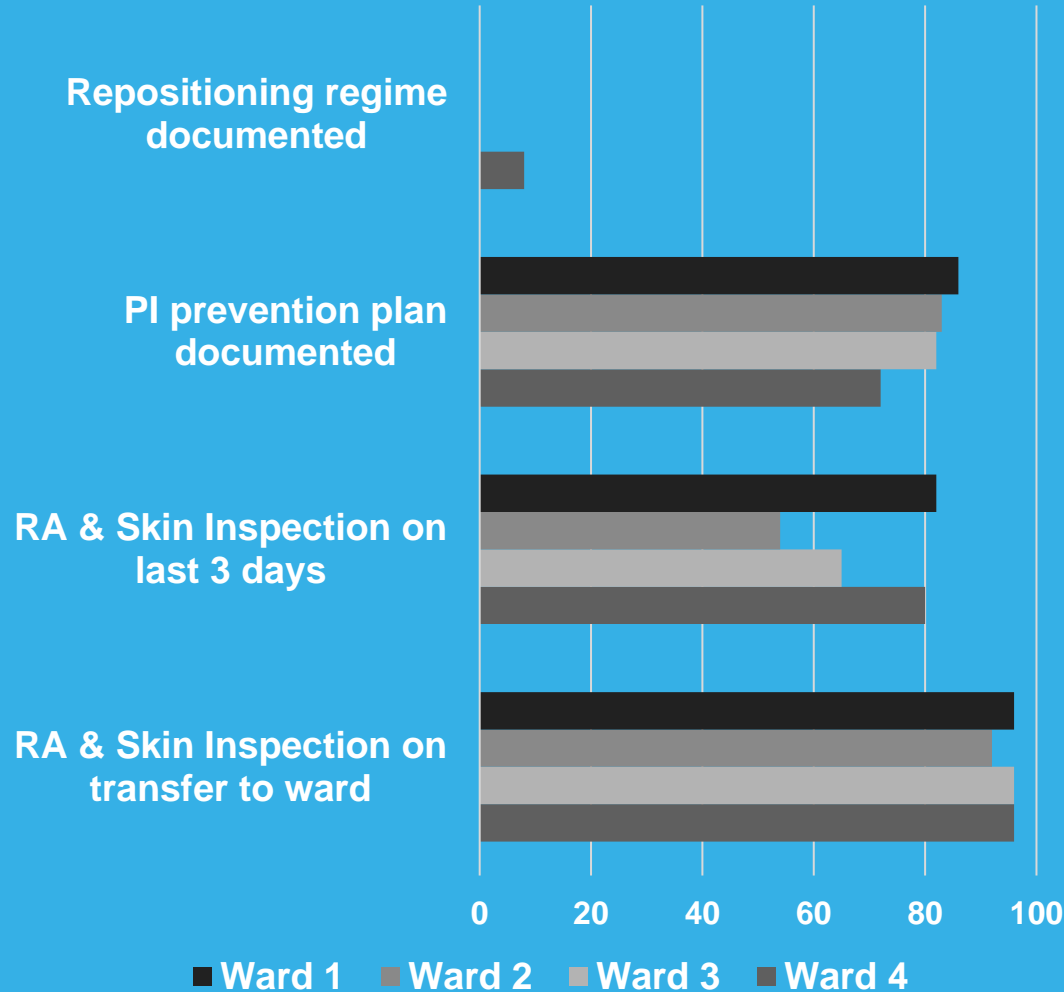
Survey 2



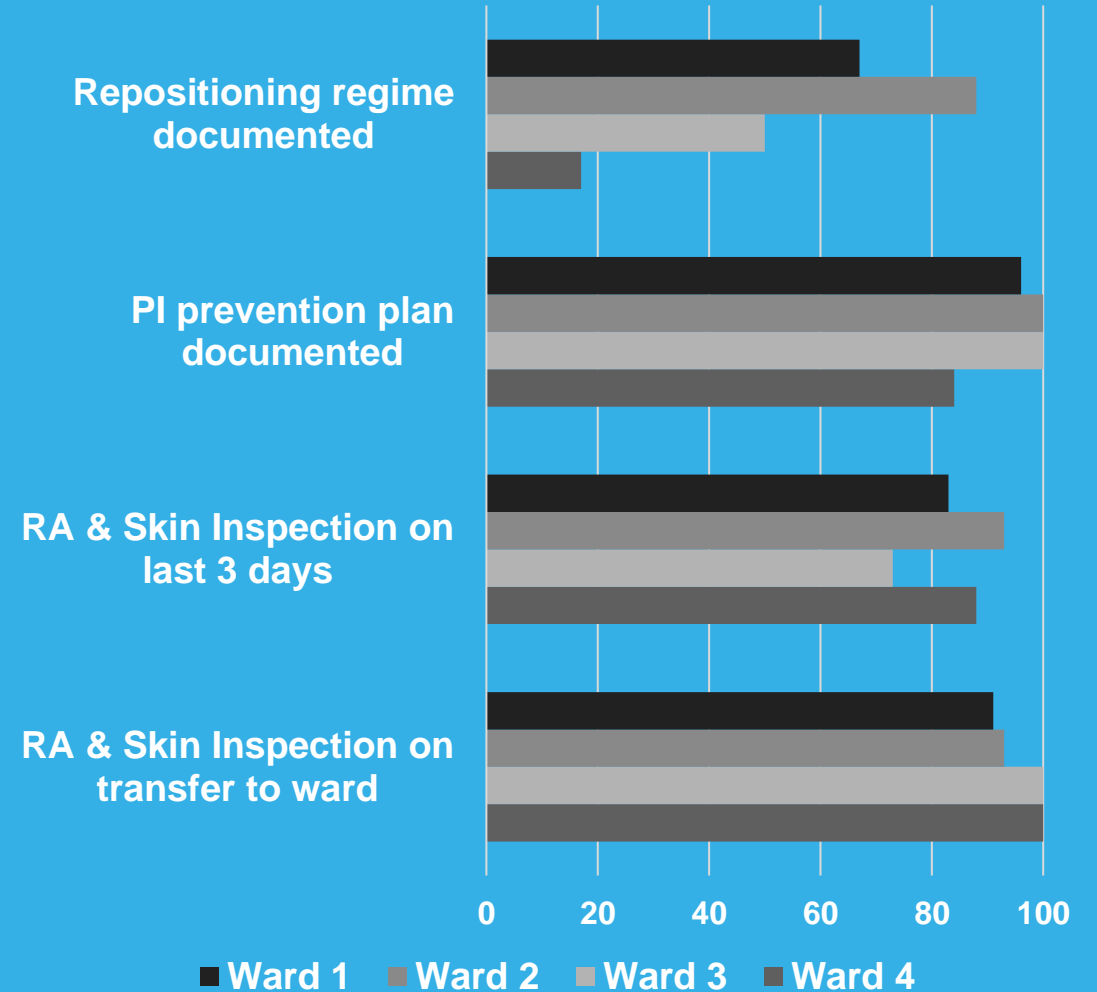
Pressure Injury Prevalence - Findings



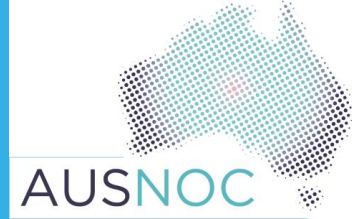
Survey 1



Survey 2



Nurse Surveys - Methods



DEMOGRAPHICS

- Age
- Gender
- Years worked - Nurse
- Years worked - ward
- Position (EN, RN, CNS/CNE, NUM)
- Qualification
- Employment status

PUKAT 2.0

- Pressure Ulcer Knowledge Assessment Test 2.0 (Manderlier et al. 2017)
- 25 items
- MCQ
- 6 subscales

APUP

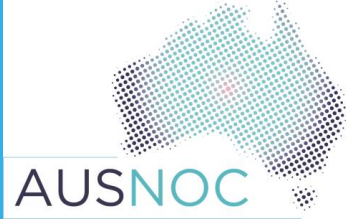
- Attitudes to Pressure Ulcer Prevention scale (Beeckman et al. 2010)
- 13 items
- Likert scale
- 5 subscales



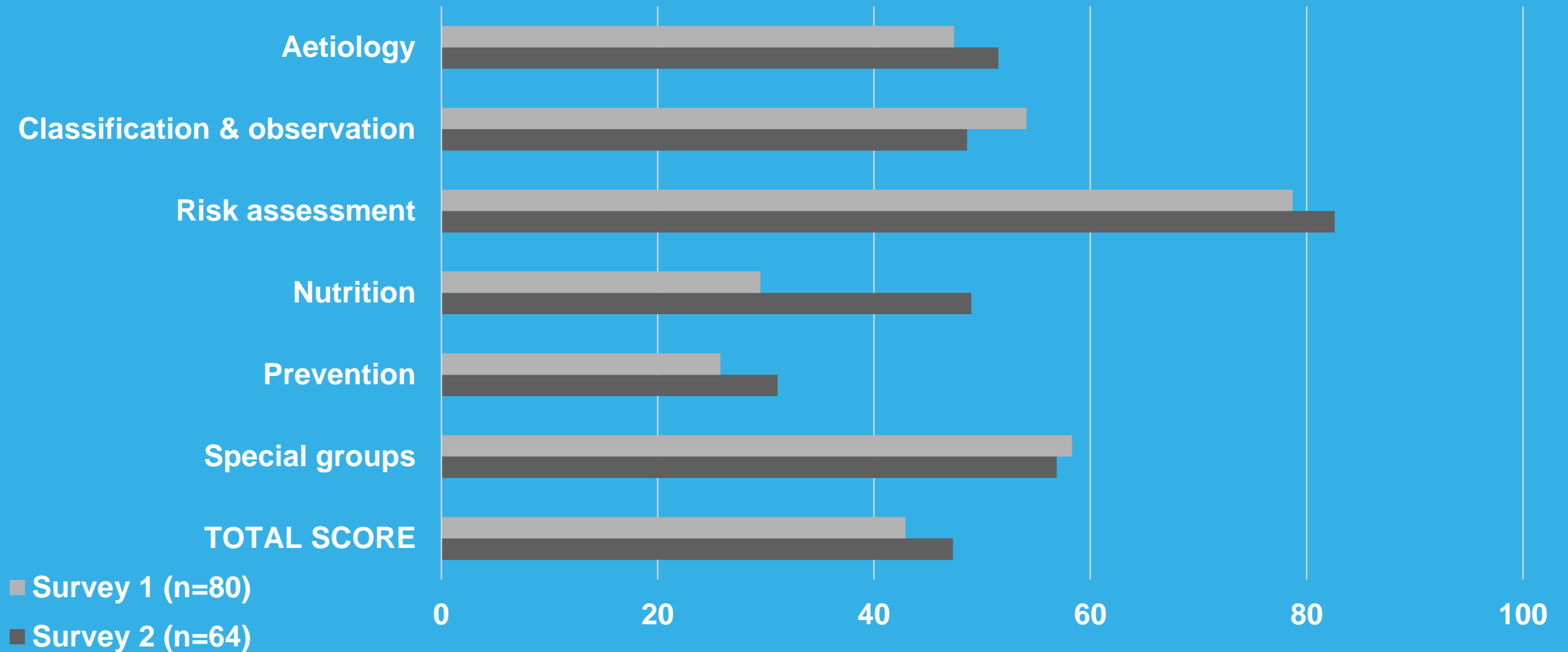
Nurse Survey - Findings

Demographic Characteristics		Survey 1 (n=80)	Survey 2 (n=64)
Age	< 24	14	16
	25-44	47	39
	>45	19	9
Gender	Male	8	11
	Female	72	53
Position	Registered Nurse	57	44
	Enrolled Nurse	23	20
Nursing Experience (years)		10.6	9.5
Experience on Ward (years)		5.2	3.7
Employment status	Full time	55	42
	Part time / Casual	25	24

Nurse Survey - Findings



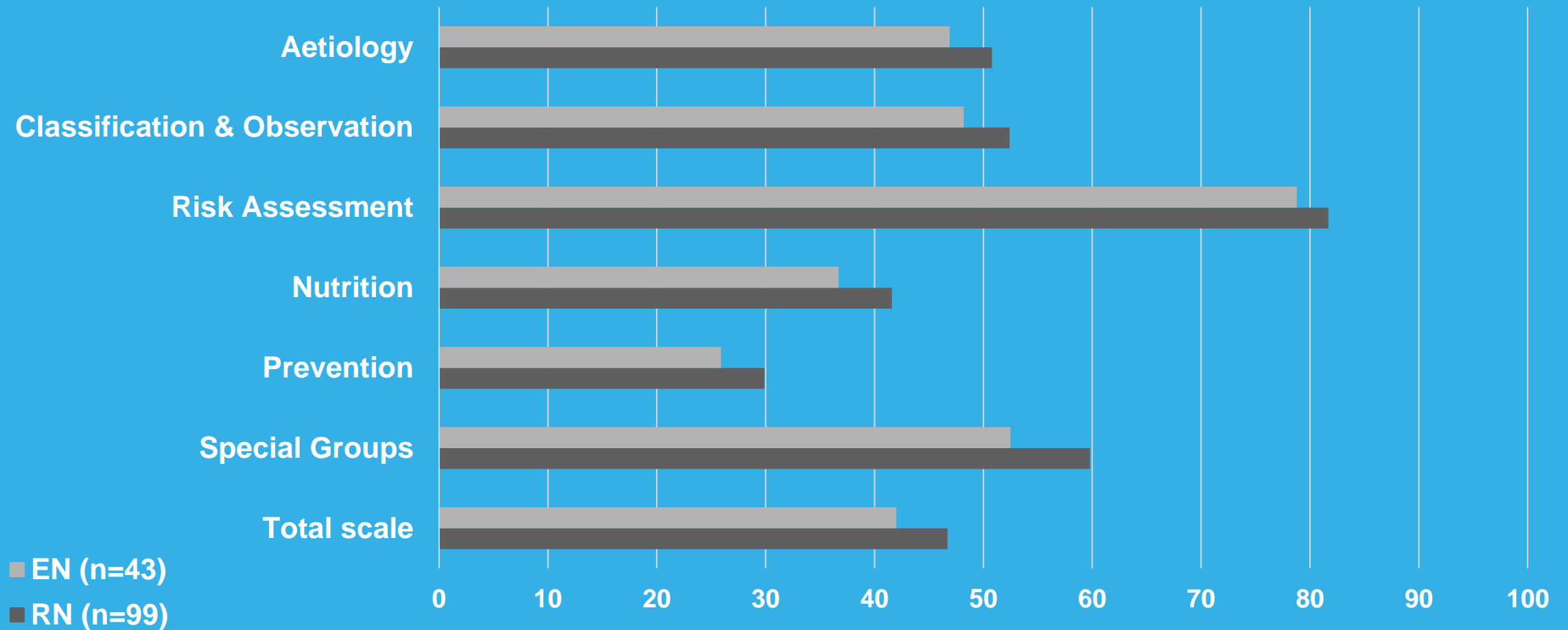
PUKAT 2.0 - Nurses knowledge (% answers correct) Survey 1 & 2



Nurse Survey - Findings



PUKAT 2.0 - Nurses Knowledge (% answers correct) by RN status



Nurse Survey - Findings

APUP - Attitudes towards PI prevention (Survey 1 & Survey 2)

	Survey 1	Survey 2
Personal Competency	9.4	8.9
Priority of prevention	10.4	10.2
Impact of PI	8.5	9.2
Responsibility in prevention	6.9	6.8
Confidence in prevention	6.5	5.2
TOTAL SCORE	40.2	38.8

Nurse Survey - Findings



APUP - Attitudes towards PI prevention (by RN status)

	RN	EN/EEN/AIN
Personal Competency	9.2	9.2
Priority of prevention	10.3	10.4
Impact of PI	8.8	8.8
Responsibility in prevention	6.9	6.7
Confidence in prevention	5.4	4.9
TOTAL SCORE	39.6	39.4

Interviews - Methods

- Interviews conducted at completion of project
 - Nurse Unit Manager
 - Clinical Nurse Educator
 - Pressure Injury Champion (PIP data collection)
 - Group Interview with staff from each ward (4 scheduled)

- Data analysed using Thematic analysis

(Braun & Clark 2006)

Interviews - Findings

- 7 individual interviews
- 4 group interviews (28 participants).
- Total of 35 participants
- Focused on what worked for whom & in what circumstances

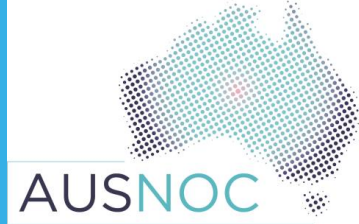
Interviews - Findings

- PIP survey (full ward) – worked well in all settings, data collected on iPads, Independent observer, perceived as positive and contributed to promotion of good practices
- PIP survey (snapshot) – seen as positive, not time consuming, maintained focus (but not enough time between surveys to lead to actions)

Interviews - Findings

- Action Plans – “what action plans?”
 - No clinical staff were aware of action plans
 - 2 of 4 wards developed action plans - some improvements in processes of care
 - No action plan focused on knowledge
- Nurse surveys (knowledge and attitudes)
 - Too long
 - Too complex
 - No feedback on the “correct” answers

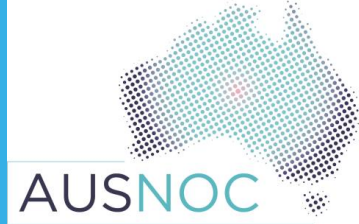
Realist Evaluation – Findings



Hypothesis 1: Pressure injury prevalence and processes of care data collection enabled clinical nurses to gain insight into, and make visible, their nursing care practices to prevent pressure injuries. Enhancing insight into (1) risk assessment processes, (2) the importance of regular skin assessment, (3) repositioning regimes and (4) the use of pressure relieving equipment led to practice improvements and reduced pressure injuries.



Realist Evaluation – Findings



Hypothesis 2: A focus on documentation of care processes does not result in improvements in knowledge or attitudes towards pressure injury prevention. Education about why practice changes is required must be factored into strategies to improve care.

Hypothesis 3: Transformation of practice requires clinical leadership and active participation of clinical nurses in data collection, analysis, dissemination and planning for improvements to occur in practice settings.



Implications for practice

- Pressure Injury Prevalence surveys provide useful data to improve HAPIs (iPad data collection is feasible)
- Nurses knowledge of Pressure Injuries are focused on the risk assessment processes
- Nurses knowledge of preventing pressure injuries is poor
- Attitudes towards preventing pressure injuries may improve with increased knowledge
- QI projects are likely to be more successful with greater staff engagement on participating wards

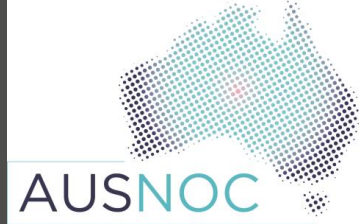
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PIPPI STUDY WATCH THIS SPACE

PUBLICATION IN PROGRESS

PRESSURE INJURY PREVALENCE & PRACTICE IMPROVEMENT IN NURSING (PIPPIN STUDY)



Current Project - Realist Evaluation

SETTING: 11 wards in 1 large Australian metropolitan teaching hospital

METHODS:

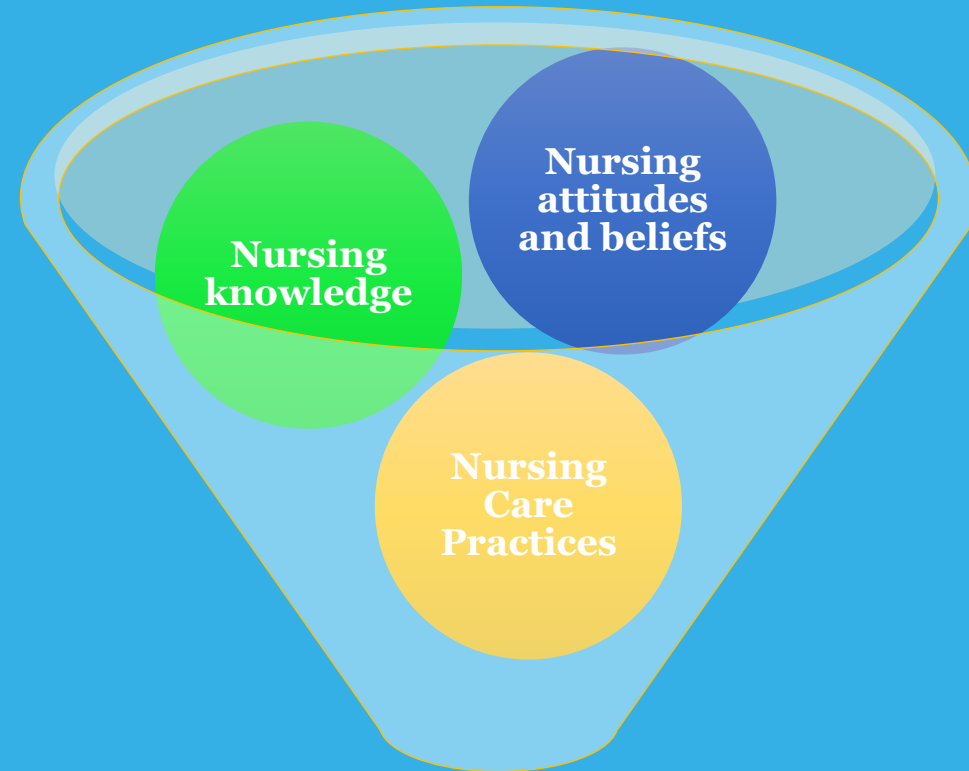
1. Uses a Realist Evaluation Framework
2. Mixed methods study (18 months)
3. Explicitly focused on pressure injury prevention (looking at individual ward/unit context)
4. Implementing evidence-based prevention processes using Plan-Do-Study-Act cycles and Action Learning cycles
5. Includes evaluation of what has worked, for whom and in what circumstances (Pawson & Tilley 1997)



TAKE HOME MESSAGES

Nursing knowledge and the use of evidence-based nursing care processes provide the key to improving nursing-sensitive patient outcomes.

Nurses are uniquely positioned to enhance patient safety and improve healthcare quality in acute care hospitals.



**Improved Patient
Outcomes**

References

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