



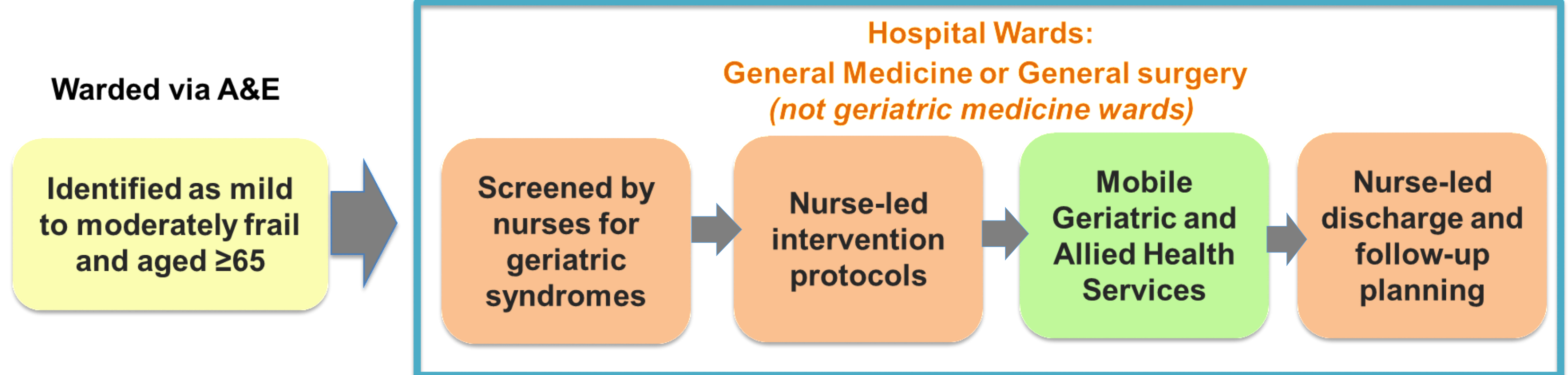
Forging Towards a Frailty-Ready Hospital

Identifying and Addressing Anticipated Barriers and Facilitators to Implementing an Integrated Nurse-led Frailty Management Programme within a Hospital in Singapore

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1. BACKGROUND & STUDY AIMS

- With populating ageing, hospital systems are grappling with caring for an increasing number of frail older individuals. This warrants forging a frailty-ready hospital system across medical specialties. Yet, a **gap exists in managing frailty among older patients in non-geriatric acute wards**. Tan Tock Seng Hospital's new Inpatient Nursing Frailty Assessment (INFA) programme involves nurses screening for geriatric syndromes in mild-to-moderately frail patients and facilitating multidisciplinary management.
- Study aims:** We aimed to identify **expected implementation barriers before (pre-) implementation, to develop targeted strategies for optimising actual implementation.** Subsequently, INFA's **adoption (uptake) and implementation (delivery)** was assessed **during early implementation.**



Mild to moderate frailty: Clinical Frailty Scale (CFS) score 4 to 6
Geriatric syndromes: Delirium, fall-risk, functional decline, sensory impairment, swallowing impairment, nutrition

2. METHODS

- Many new healthcare programmes in clinical settings face challenges in being optimally implemented, sustained or scaled. Hence, we conducted a systematic **multi-method two-phased implementation research study, pre-implementation and during early implementation**, to assess and increase the likelihood of successful adoption and implementation.

Pre-Implementation

Identify Expected Barriers

Methodology	• Qualitative research
Sampling & Participants	• Maximum variation purposive sampling • Total n = 25 o Hospital leadership (n = 5), nurses (n = 10), doctors (n = 5), allied health professionals (n = 5)
Data Collection	• 4 focus group discussions and 7 in-depth interviews
Data Analysis	• Deductive-inductive approach • Deductive coding using the updated Consolidated Framework for Implementation Research (CFIR) ^{1,2} o Coding contextual barriers to implementation with framework constructs • Mind-mapping to derive themes inductively • Framework method for data synthesis

Develop Implementation Strategies

Sampling & Participants	• Purposive sampling • 5 seniors nurses and 4 geriatricians with knowledge on programme and clinical context
Procedure	• Identify: • Barrier-to-strategy matching (implementation science frameworks, tools) • Select: o Selection based on an implementation science framework's 5 criteria ³ : ➢ relevance, impact, feasibility, difficulty, validity • Develop: • For each selected strategy: o described using Proctor's et al. 5 domains ⁴ : ➢ actor, action, action target, temporality, dose o senior nurses and doctors operationalised

During Early Implementation

Assess Adoption and Implementation

Methodology	• Qualitative research	• Quantitative Process indicators
Participants	• Purposive sampling • 5 nurses who have implemented INFA	• Patient aged 65 and above, CFS 4-6
Data Collection	• 5 in-depth interviews	• Extracted patient data from databases on routine nursing care
Data Analysis	• Akin to pre-implementation phase o Using the Consolidated Framework for Implementation Research o Framework method for data synthesis	• Ongoing monitoring of care process indicators

3. FINDINGS

Pre-Implementation

Key Expected Barriers

1. Capability gaps among nurses

"(...) for newly graduated nurses and now majority of nurses come from Asian countries...They may not have that kind of knowledge..." (IDI 2, Nursing Leadership)

2. Compatibility with existing nursing practice

"One of the risk of introducing something that **layers on existing efforts is [duplication]...** There is a lot of duplication of risk factor assessments...nurses may not do it and **not give enough time to think** why they are doing this... Otherwise, **no time to translate the data into actions**" (IDI 1, Nursing Leadership)

"(...) **accuracy in doing the screening itself is very very important.** Otherwise, when you talk about increased referrals, there will be a lot of false negative, false positives and that's just going to throw this whole thing aside" (FGD 4, P3, Allied Health)

3. Competing priorities across specialist departments

"Some of the very **objective disciplines like General Surgery, they are not focused on all these...they only focus on their issues and go back already...cut, chop, okay discharge**" (FGD 2, P4, Ward Nurse)

4. Interprofessional communication and collaboration

"when we suggest, [**doctors**] will be **"ah it's ok"..."I am the doctor, and I know what's best for patients"**...they must be **aware and agree to do...** Otherwise, **nurses' efforts will be wasted...nurses' efforts needs to be recognised**" (FGD 2, P1, Ward Nurse)

Developed Implementation Strategies to Mitigate Expected Barriers

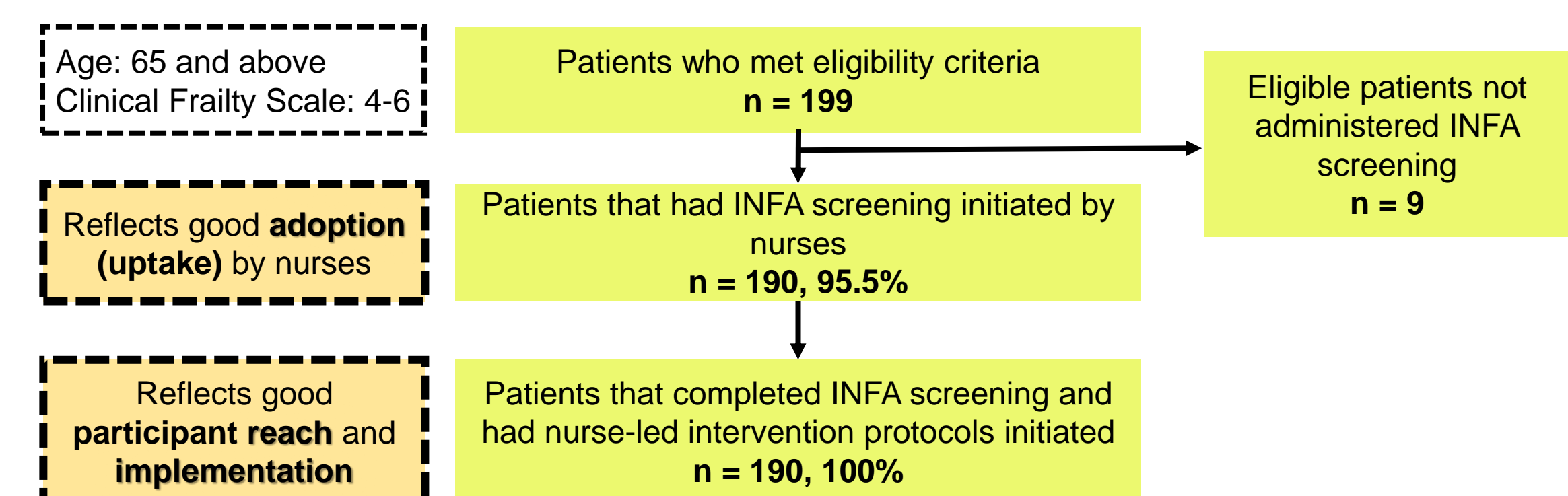
1. Develop Educational Materials
2. Distribute Educational Materials
3. Conduct Educational Meetings
4. Mobilise Champions
5. Promote Adaptability
6. Change Records System
7. Conduct Local Consensus Discussions
8. Organise Implementation Team Meetings

Brief Example of Strategy Description Strategy: Mobilise Champions

Actors:
a) Senior nurses, doctors
b) Core trainers
Action:
a) Nominate nurse champions
b) Responsibilities (promote programme, motivate colleagues, gather feedback, liaise with PIs)
Target:
a) Junior nurses
Temporality:
a) 2 weeks before implementation
b) Monthly meetings with INFA project team
Dose:
a) Monthly meetings for 30 minutes during implementation

During Early Implementation

Process Indicators



Qualitative Assessment of Adoption and Implementation

Adoption

Perceived Facilitators:
• Early and streamlined care interventions
• Perceived pride in ability to prevent patients' deterioration
• Motivated by gaining useful skills

Perceived Barriers:
• Concerns on nursing workload amid competing priorities

Implementation

Perceived Facilitators:
• Clear training facilitated perceived importance and execution of programme
• Observed benefits to patients and service outcomes

Perceived Barriers:
• Workload pressures amid clinical busyness
• Inaccuracy in/missing out assessments
• Lack of awareness among doctors

Qualitative Assessment of Implementation Strategies

Identified Expected Barrier	Impact of Implementation Strategy on Adoption and Implementation
Compatibility with existing nursing practice	Strategy: Promote adaptability: Bettering integration with workflows ➢ De-duplication eased implementation "for example, nurses asked if PT already walked the patient, do we need to sit patient out? We say no need... we make it easier for them because they are very busy.. We adopt some flexibility " (IDI 2, Senior Nurse)
Interprofessional communication and collaboration	Strategy: Implementation communication platforms: Communication pathways between nurses and team doctors ➢ Enabled feedback mechanism and recognition of nurses' efforts (implementation) "Process is very good, because there we can tell the feedback... We do all the assessment and inform the medical team. So, all this process the nurses are doing, and they are being appreciated " (IDI 3, Nurse Champion)

4. DISCUSSION & CONCLUSION

- Nurse-led frailty care models can be transformative by empowering nurses, harnessing multidisciplinary strengths and bridging fragmented care delivery. Realising this potentials by optimising adoption and implementation in real-world settings requires:
 - o Systematic methods to proactively identify and address contextual barriers through strategies
 - o Adapting interventions to the clinical context, ensuring they are feasible, compatible, and sustainable
- Long-term scalability and sustainability of the programme needs to be further studied.

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