



Problem Statement

Pre-QIP survey (n=42, Dec 2022) showed 57% of Registered Nurses (RNs) were dissatisfied with their unequitable daily patient-nurse assignments.

Significance of the Issue

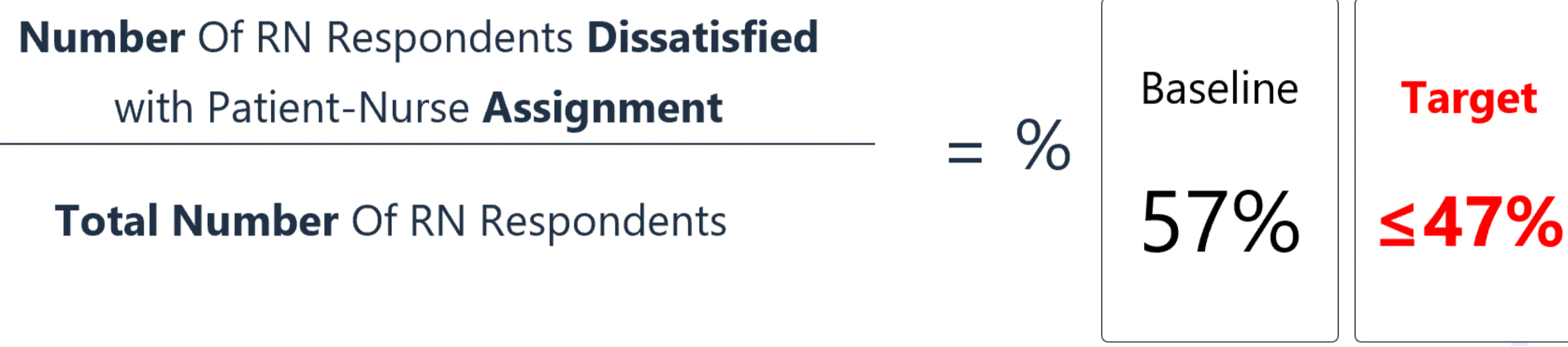
Mismatch of patient acuity and nursing capacity leads to unequitable patient-nurse assignments, compromised patient care, and undesirable patient safety events.

Unintended Ramifications & Challenges

Imbalanced workload increases nursing workload, nursing burnout, and nursing attrition rate, exacerbating nursing shortage.

Pre-Intervention Landscape

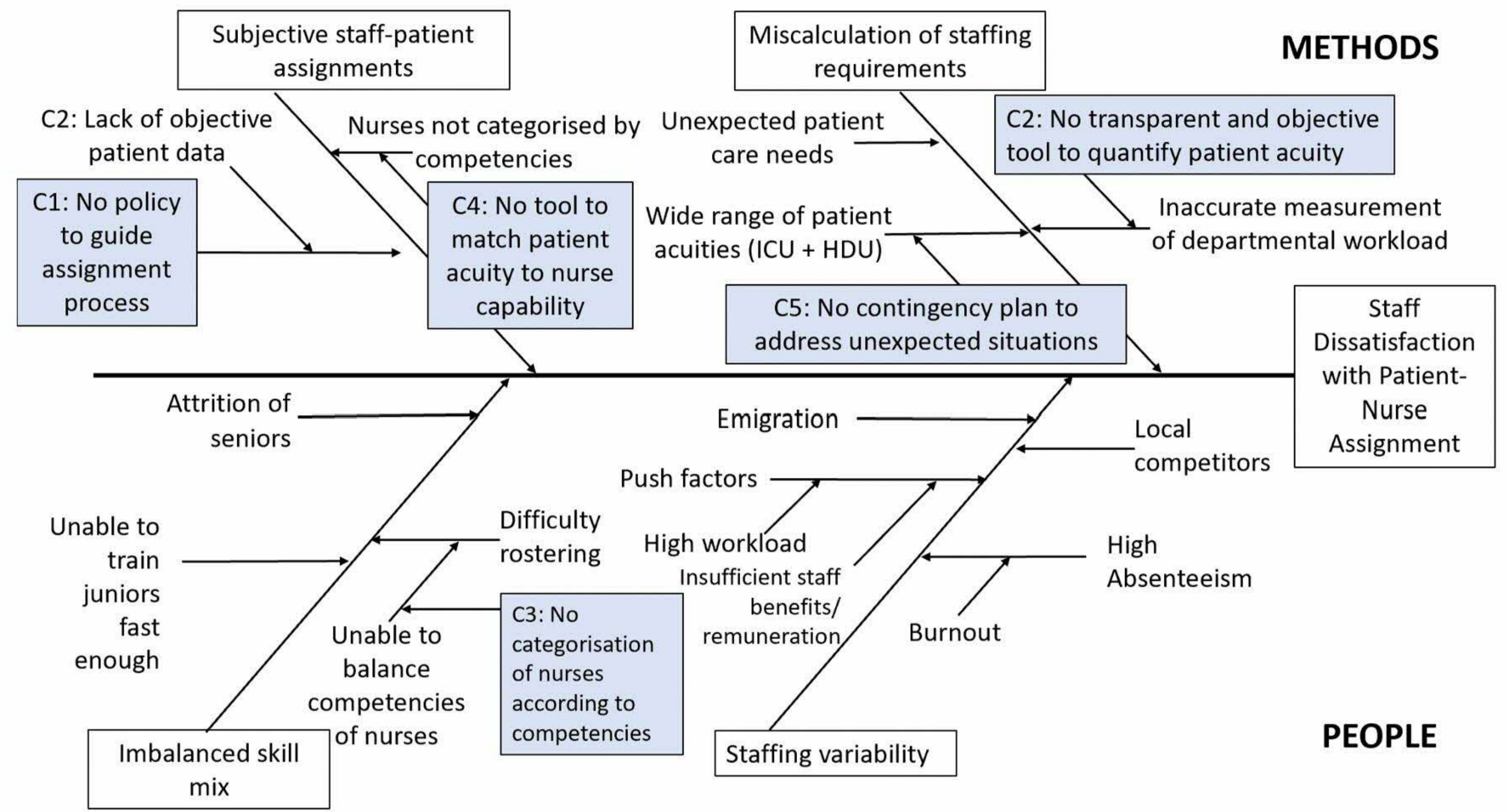
- 57% of RNs (n=42, Dec 2022) expressed dissatisfaction with their patient-nurse assignment
- 50% felt that patient-nurse assignments were NOT done fairly
- Target: 10% reduction in dissatisfaction = Less than 47% RNs dissatisfied with patient-nurse assignment



Comprehensive Aim Statement Framework

To reduce Registered Nurse (RN) dissatisfaction with patient-nurse assignments by 10% from 57% to 47% within 6 months in Gleneagles ICU/HDU from January to June 2023.

❖ Cause and Effect Diagrams. Examples : Fishbone Diagram, Pareto Analysis, 5-why



CAUSES: C#1: No transparent and objective tool to quantify Patient Acuity | C#2: No categorization of ICU RNs according to skill level | C#3: No tool to match Patient Acuity to Nurse Capability

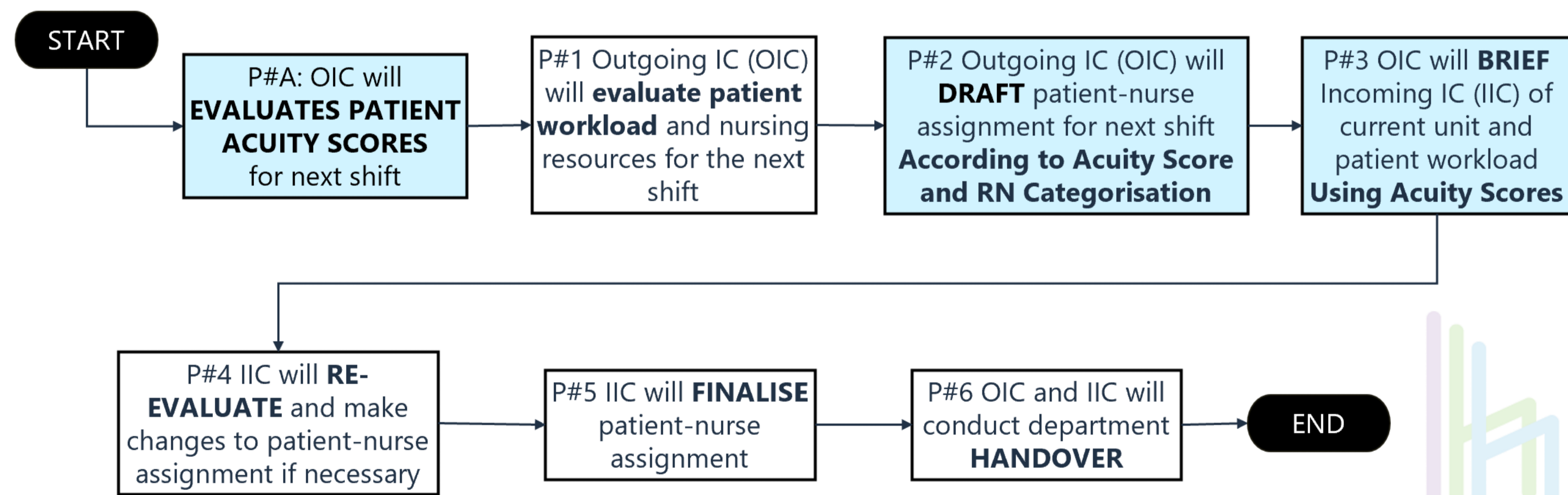
PDSA Cycle:		PDSA #1	PDSA #2	PDSA #3
P Change Idea?		Develop an objective tool to quantify Patient Acuity	Clearly state nurses training on nursing roster	Match patient acuity with nurse capability according to categorisations
P Predict		Effectively quantify Patient Acuity	Clear categorisation of different levels of nurses from Novice to Expert according to training	Each RN has a maximum score of 50
D Learn		100% compliance from RNs to utilise Acuity scoring tool	RN IC able to equitably assign appropriate RN to patient category	RNs were able to voice out their burnout when their assignments are too heavy (>50)
S Compared to prediction – it works?		YES: Objective measurement of patient requirements and department workload	YES: Transparent and objective patient-nurse assignments	YES: Improved staff satisfaction and ICU RN morale
A Adopt, Adapt or Abandon Change		Adopt	Adopt	Adopt

SCORING	ACUITY TREND					DATE:		
	1 Stable	2 Low-acuity	3 Moderate-acuity	4 High-acuity	5 Complex patient	SCORE	SCORE	SCORE
1 NEUROLOGICAL STATUS	Alert and Oriented	4 hourly GCS monitoring	Hourly GCS/BS/ Mid dementia/ Parkinsonism	Delirious/ Restraints / 4hourly RASS	Sedation titration/ Restless/ Agitated/ Unable to leave unattended	AM	PM	ND
2 HEMODYNAMIC STATUS	4 hourly monitoring or less	Hourly BP	More often than 1 hour monitoring/ ABP	Labile BP/ ABP/ SIED	ECMO/ PrEP/ IABP/ CRRT			
3 ADL/ ISOLATION	Independent	Minimal assistance	Moderate assistance/ Contact Precaution	Maximum assistance 2 persons/ Airborne precaution	Maximum assistance >2 persons / Contact			
4 HYGIENE	Independent	Minimal assistance	Twice per shift	3 to 4 times per shift	More than 5 times per shift			
5 MONITORING LINES	NBP	CVP	ABP	2 monitoring	3 or more			
6 DRAINAGE DEVICES	NIL	1 drain	2 drains	3 to 4 drains	5 or more drains			
7 NUTRITION	Independent	Minimal assistance	Enteral continuous feeding	Enteral Bolus feeding/ Maximum assistance	Hourly / 2hourly bolus/ Pediatric			
8 IV (PH/ HYDRATION/ INTERMITTENT) INFUSIONS/ CHRONOTROPES/ SEDATION/ OPI/ OGD INFUSION	NIL	1	2 to 3	4 to 5	6 or more/ Chemotherapy			
9 RESPIRATORY	Room Air	Naasal prongs	Face mask/ Home Care/ Suctioning 1 - 2 times	Bipap/ H-Flow/ Home ventilator/ Tracheostomy/ 2 hours suctioning	Invasive Ventilation/ Hourly Suctioning			
10 PROCEDURES/ WOUND DRESSING	NIL	Single wound/ line dressing	Accompany non-ventilated for scans/ procedures/ Assist OGD/ Colonoscopy	Tracheostomy/ Bronchoscopy/ Invasive line insertion/ Complex wound dressing	Intubation/ Resuscitation/ Accompany ventilated for scans			
11 PATIENT AND FAMILY EDUCATION/ ADMISSION/ DISCHARGE PLANNING	5 to 10 minutes	15 to 30 minutes	30 minutes	45minutes - 1hour	Extensive >1hour			

Post-Intervention Landscape

Process: SHIFT NURSING ASSIGNMENT

OIC: Outgoing IC
IIC: Incoming IC



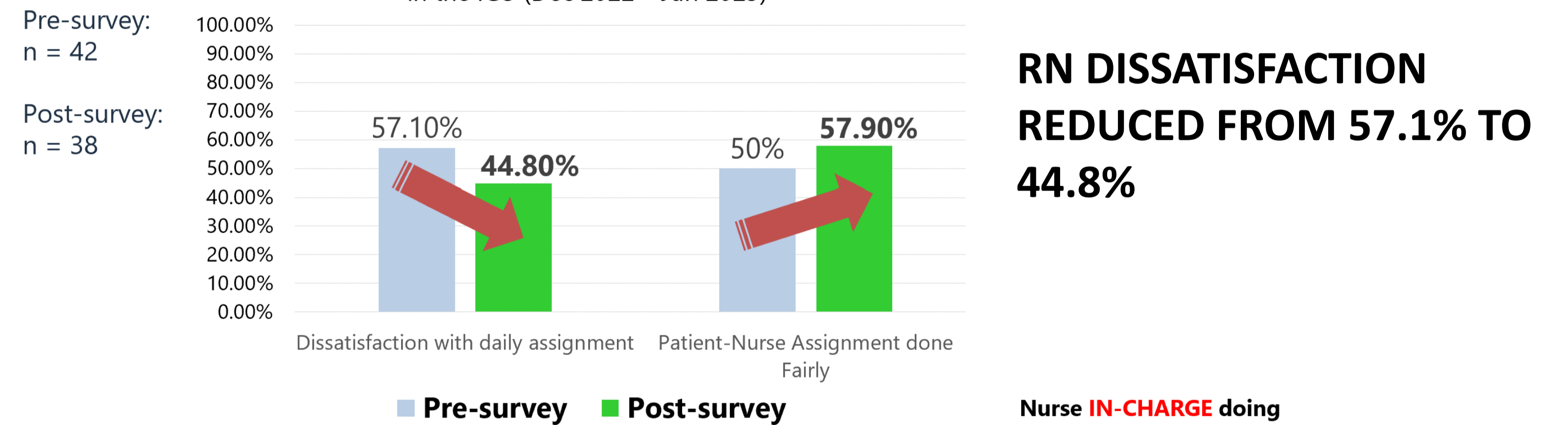
RESULTS POST-IMPLEMENTATION SURVEY

- RN SHORTAGES INCREASED FROM 78.9% O 93.3%
- DIFFICULTY SETTING ASSIGNMENTS REDUCED FROM 85% TO 60%
- DIFFICULTY JUSTIFYING ASSIGNMENTS REDUCED FROM 80% TO 53.4%

RESULTS POST-IMPLEMENTATION SURVEY

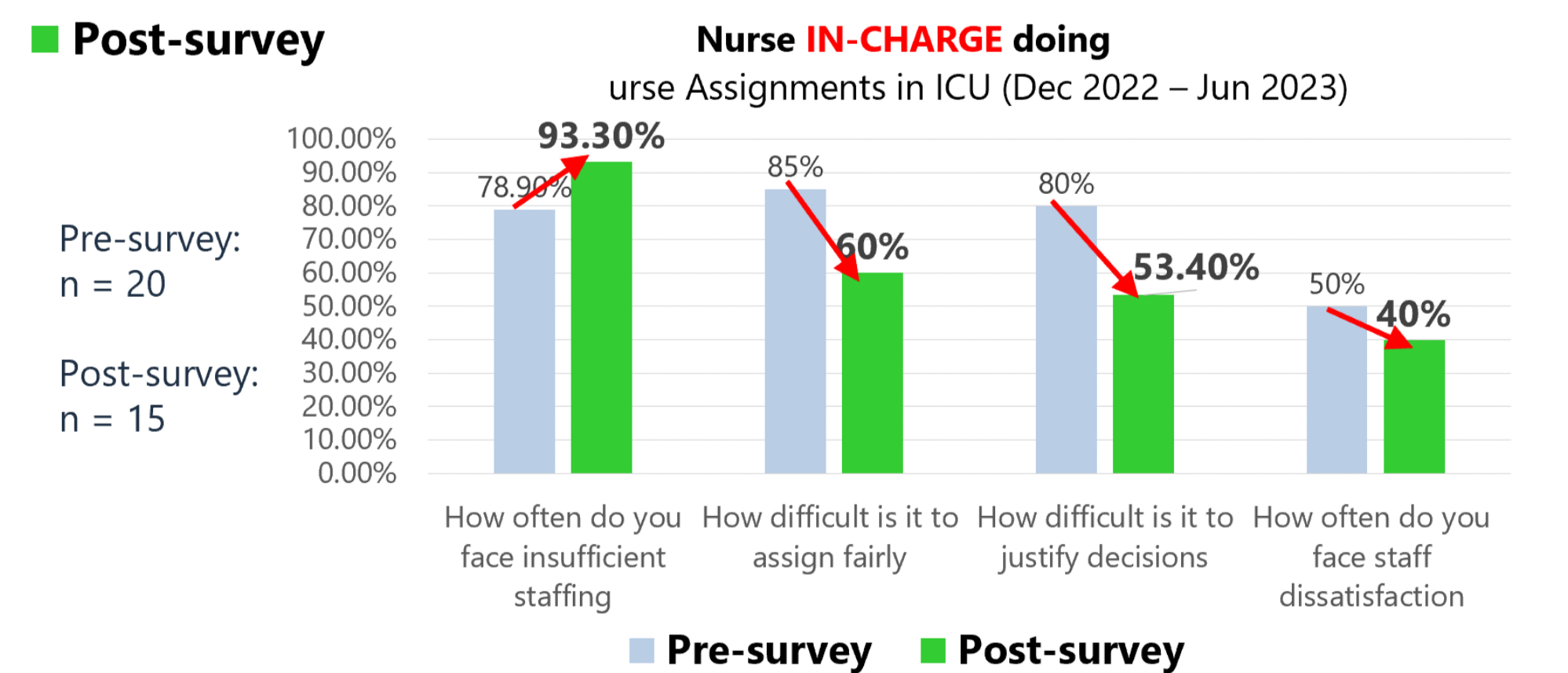
- RN DISSATISFACTION REDUCED FROM 50% TO 40%
- RN DISSATISFACTION WITH DAILY ASSIGNMENTS REDUCED 57.1% TO 44.8%
- RN FAIRNESS PERCEPTION INCREASED FROM 50% TO 57.9%

RNs Receiving Patient-Nurse Assignments in the ICU (Dec 2022 – Jun 2023)



RN DISSATISFACTION REDUCED FROM 57.1% TO 44.8%

IN-CHARGE RNS REPORTED IMPROVEMENT IN DIFFICULTY AND JUSTIFICATION



Quantifiable Projected Yearly Benefits

Improved RN satisfaction by 13% from 57.1% to 44.8%.

Team Members

Lee Qi Carin, Tung Saw Meng, Khaing Nwe Ko, Ma May Htwe Lin, Muhammad Ikhwan bin Mohmmad

Sustainability

- Successful integration into RN In-charge patient-nurse assignment process
- Continuous feedback and response from staff and shift in-charge RNs to continuously improve and ensure sustainability
- Moving forward to improve inter-rater reliability
- Transforming QIP into research study