

Mission Statement

To reduce the episodes of 4-5 point restraint (more than 120 minutes) in a Child and Adolescent Ward (W30A) by 50% within 6 months

Team Members

S/No.	Name	Designation	Role in this project
1.	Poh Zhi Qian Brian	Principal Clinical Psychologist	Leader
2.	Dr Tan Da Vid	Associate Consultant	Co-leader
3.	Qu Yuanrong	APN	Member
4.	Aileen Leow Suyin	Nurse Clinician	Member
5.	Christine Tan	Senior Case Manager	Member
6.	Jiang Zijun	Senior Pharmacist	Member
7.	Alvin Khong	Senior Staff Nurse	Member
8.	Joycelyn Neo	Principal Occupational Therapist	Member
9.	Prof Daniel Fung	Chief Executive Officer	Sponsor
10.	Dr Ong Say How	Senior Consultant and ex-Chief	Sponsor

Evidence for a Problem Worth Solving

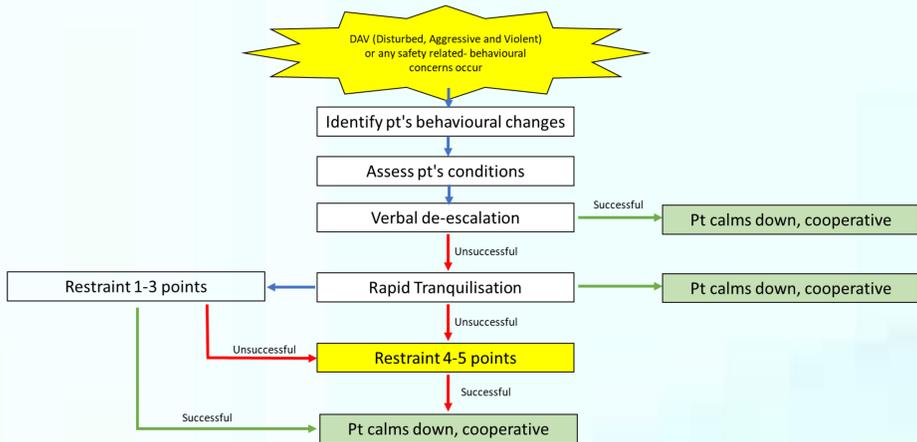
- Ethical, moral, and legal considerations associated with use of restraints on youths
- Physical impact/medical complications
 - Laceration, bruises, nerve damage, pressure ulcers, infections
- Psychological Impact
 - Anger, fear, denial, humiliation, loss of dignity, trauma, confusion, depression, agitation and regressive behaviours

Current Performance of a Process

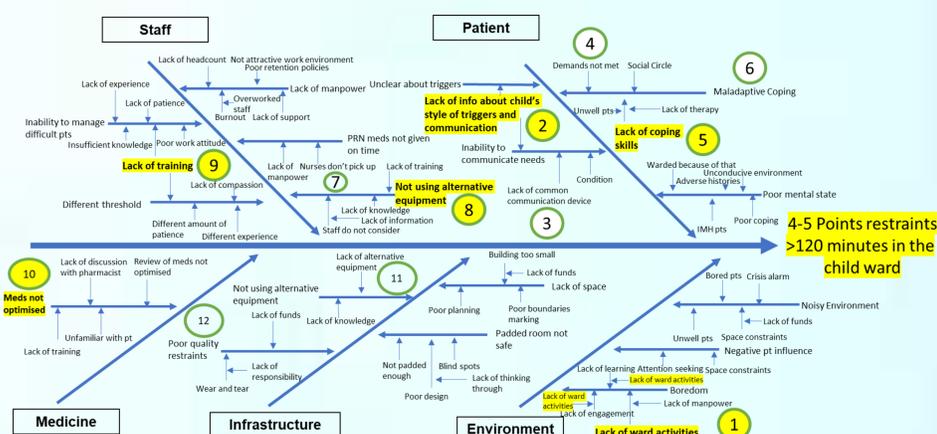
Clinical guidelines state restraints for children and adolescents should not exceed 2 hours (Brown et al., 2000). Patient feedback consistently reveals that restraint experiences are traumatic, causing feelings of powerlessness, humiliation, and intense distress. These negative experiences can significantly impact therapeutic relationships and treatment outcomes.

Flow Chart of Process

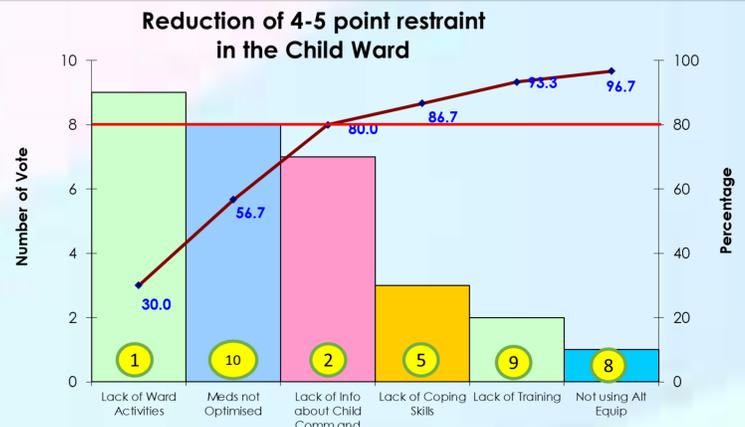
Flowchart – Macro Flow



Cause and Effect Diagram



Pareto Chart

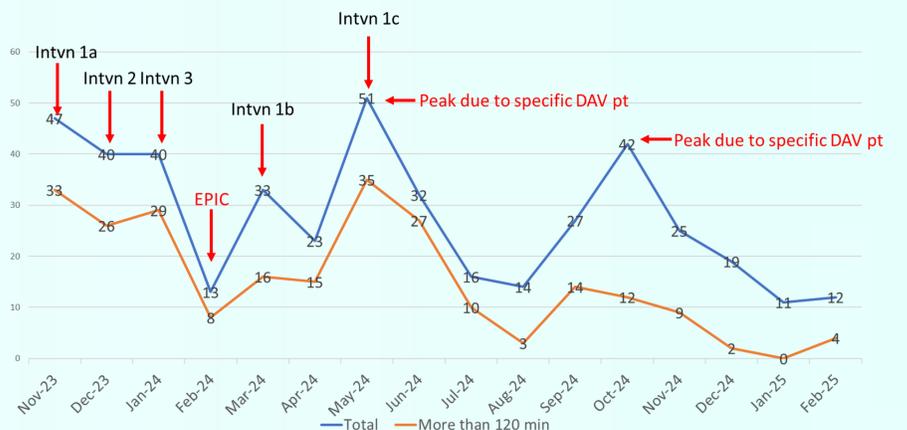


Implementation

CAUSE / PROBLEM (refer to Pareto Chart)	INTERVENTION	DATE OF IMPLEMENTATION
Lack of ward activities	Plan daily MDT activities to increase engagement, teaching coping skills and reduce boredom for pts	Nov 2023
Medicine not optimised	Pharmacist will look through all the pts' meds. If pt not settled, Dr and nurses to highlight to pharmacist for advice	Dec 2023
Lack of information about child's communication and triggers	Create a questionnaire to be used for all pts to understand their triggers, communications and preferences	Jan 2024

Results

Ward 30A 4-5 Point Restraints Run Chart (Nov 23 – Feb 25)



• Six-month results (Nov 23 - Apr 24):

- Restraints >120 minutes reduced by **55%** (33 to 15 episodes)
- Total restraints reduced by **51%** (47 to 23 episodes)

• One-year results (Nov 23 - Feb 25):

- Restraints >120 minutes reduced by **88%** (33 to 4 episodes)
- Total restraints reduced by **74%** (47 to 12 episodes)

Cost Savings

- Based on "The Economic Cost of Using Restraint and the Valued Added by Restraint Reduction or Elimination" (LeBel and Goldstein, 2005), the total cost per episode: \$302 USD
- Cost per episode in SGD = \$302 x 1.61* x 1.3 (convert SGD) = \$632
- Cost Savings in reduction of 35 restraint (from 47 episodes to 12 episodes) episodes = \$632 x 35 = \$22,120
- Cost savings per annum: \$22,120 x 12 months = \$265, 440
- *Taking into account core inflation of 2.43% per year (\$1 in 2005 is equivalent to \$1.61 in 2024)

Problems Encountered

Problems:

- Data shows fluctuations in restraint use due to:
 - Individual cases of highly agitated patients
 - System disruptions during EPIC implementation

Learning Points:

- Overall downward trend achieved through consistent monitoring
- Regular PDSA cycles allowed for quick adaptations to challenges
- System changes require careful planning to minimize impact on restraint rates

Strategies to Sustain

- Collaborative multidisciplinary effort essential
- Patient profiles influence restraint episodes
- Quality improvement is an ongoing journey
- Long-term monitoring required
- Staff motivation maintained through visible achievements