

Project Title

Streamlining Renal Dialysis Centre Operations

Project Lead and Members

Liang Wenqian, Quek Hwee Koon Susan, Kan Foong Ming, Asyura bte Adnan, Cassandra Elaine Celetaria, Grace Loh Pei Hsia, Lew Sing Hui Veronica, Ong Jie Yi, Lee Wan Pin, Tay Hui Erh, Md Lutif bin Md Yusuf, Christian Kim Sison Patwaran, Estee Chan, Sng Ei Leen, Ryan Koh, Mohd Farhan, Kam Wai Kuen, Mohd Fahmy bin Abdul Kader,

Organisation(s) Involved

Singapore General Hospital

Healthcare Family Group(s) Involved in this Project

Nursing, Healthcare Administration

Applicable Specialty or Discipline

Operation, Nephrology, Office of Safety Network

Aims

To streamline renal dialysis centre's operations

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Quality Improvement, Workflow Redesign, Lean Methodology, Value Based Care,
Productivity

Keywords

Haemodialysis, Value Stream Mapping, Ergonomic

Name and Email of Project Contact Person(s)

Name: Liang Wenqian

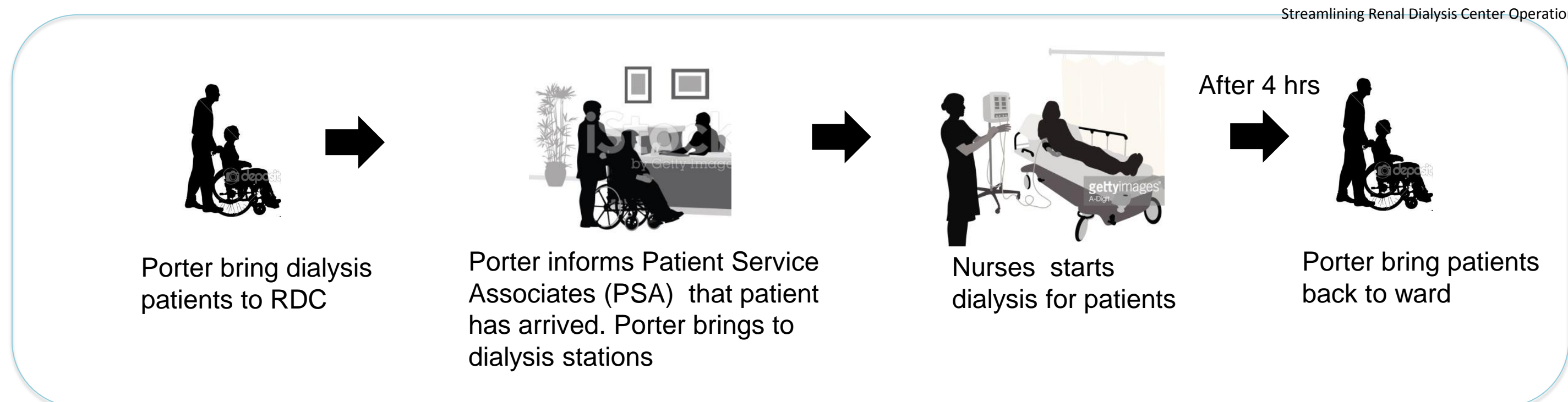
Email: singaporehealthcaremanagement@singhealth.com.sg

Streamlining Renal Dialysis Center Operations

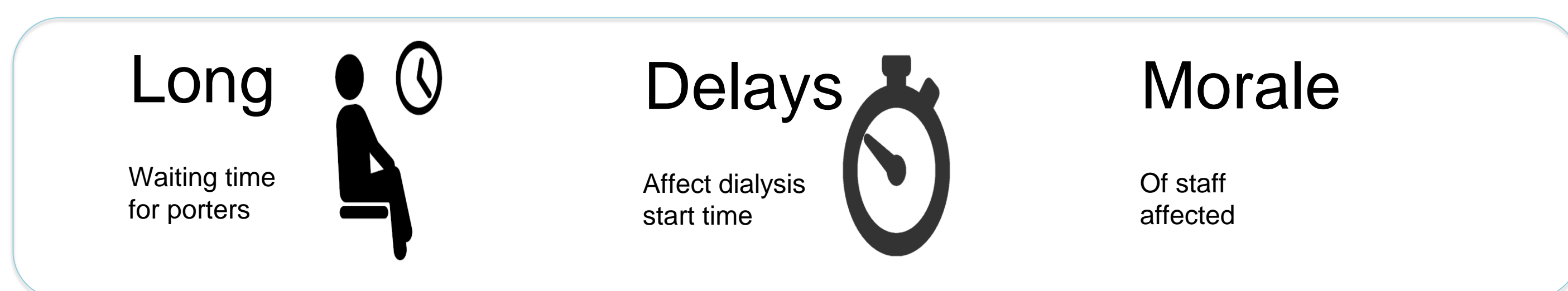
Renal Dialysis Centre (RDC) provides Hemodialysis (HD) treatment for patients admitted to Singapore General Hospital. Dialysis treatments are provided as both In-center and Out-center services. For In-center service, RDC operates 20 dialysis stations on full-time six days per week, and part-time for emergency care on Sunday. For patients who are suffering from severe shock, trauma, post cardiac and vascular surgery, or hospitalized at intensive care units (ICUs), ICAs and Isolation Wards, out-centre dialysis is provided at the patient's bedside.

In-Centre

Workflow

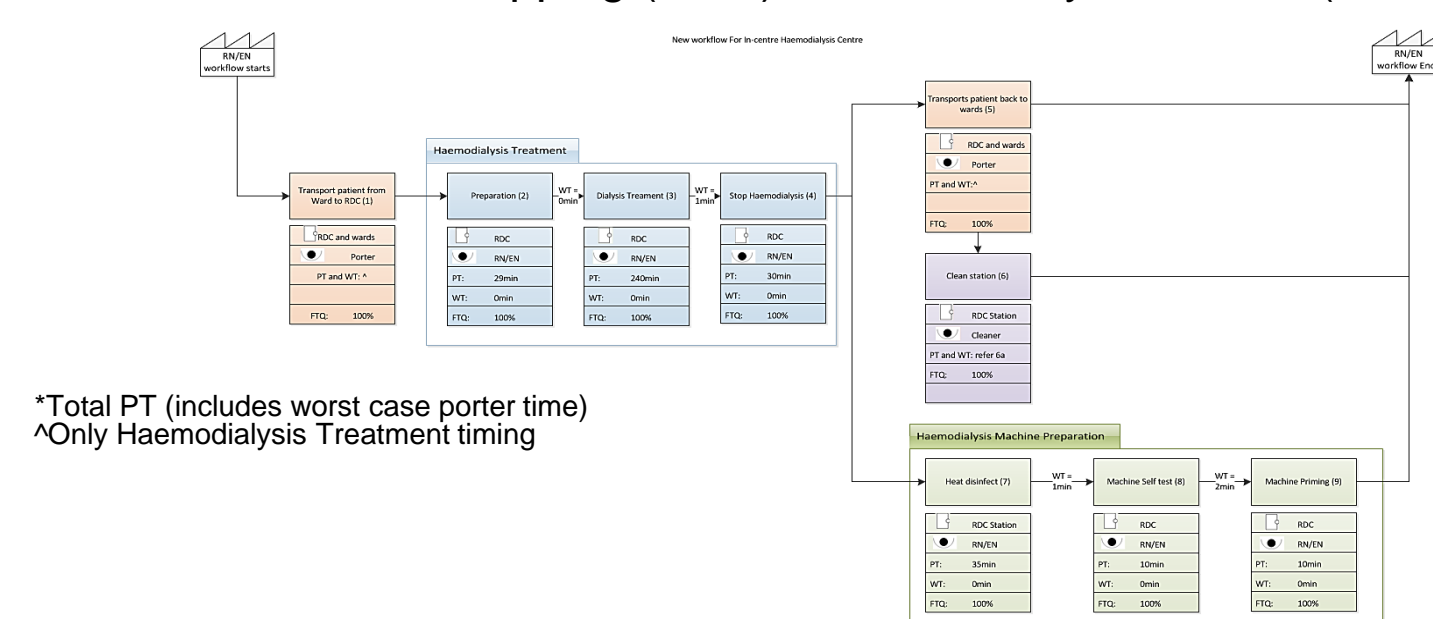


Problem

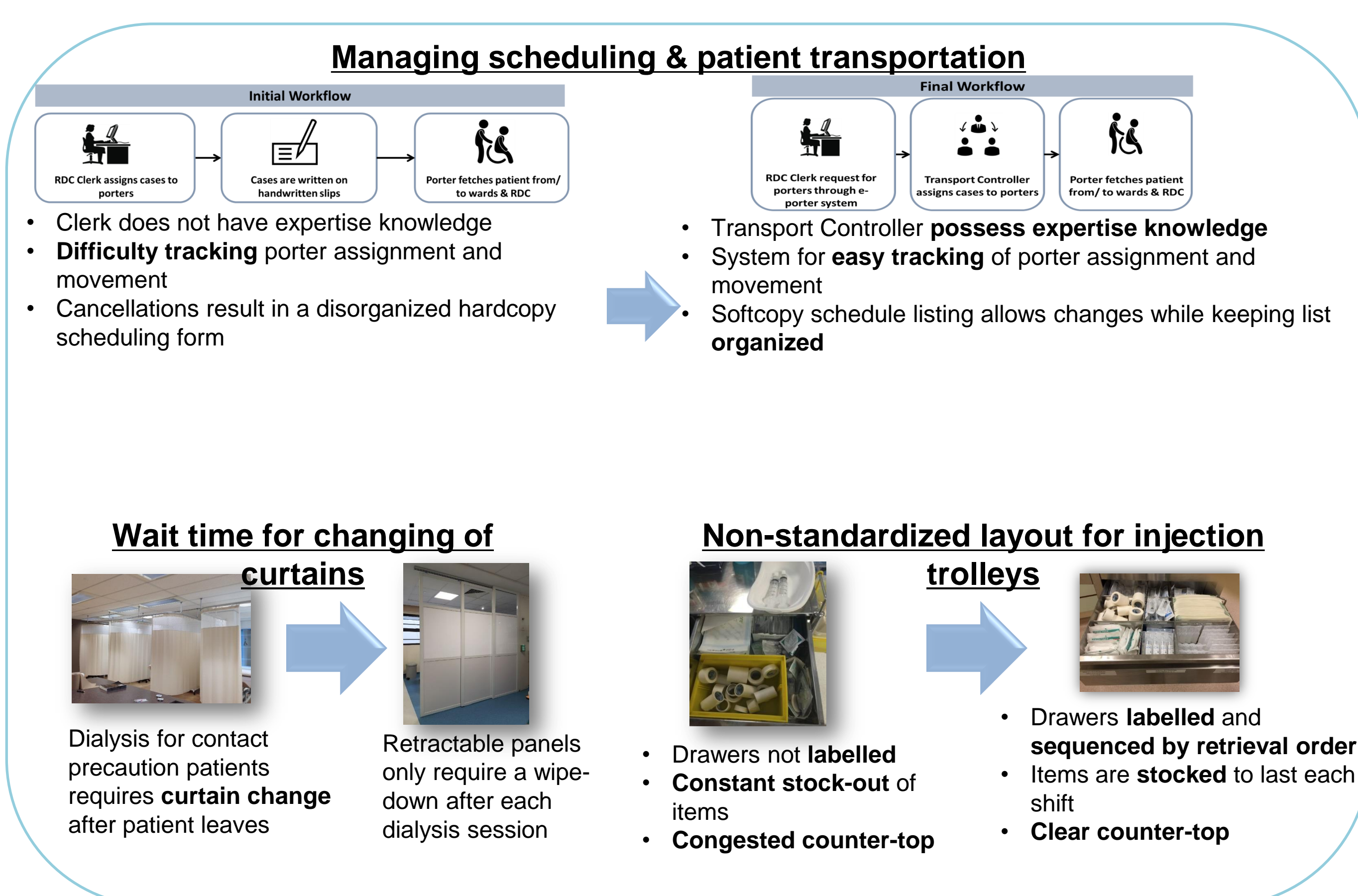


Methodology

Ground observation and Value Stream Mapping (VSM) of Renal Dialysis Center (RDC) processes are used to identify problem areas



Findings & Solutions



Cost Savings



Time Savings

- Waiting time for porter (Wheelchair Cases)**
 - 7800 cases
 - 20 minutes reduction per case
 - Annual reduction: 2,600 hours
- Wait time for curtain change (Contact Precaution Case)**
 - 7884 cases
 - 52.5 minutes reduction per case
 - Annual reduction: 6,898.5 hours

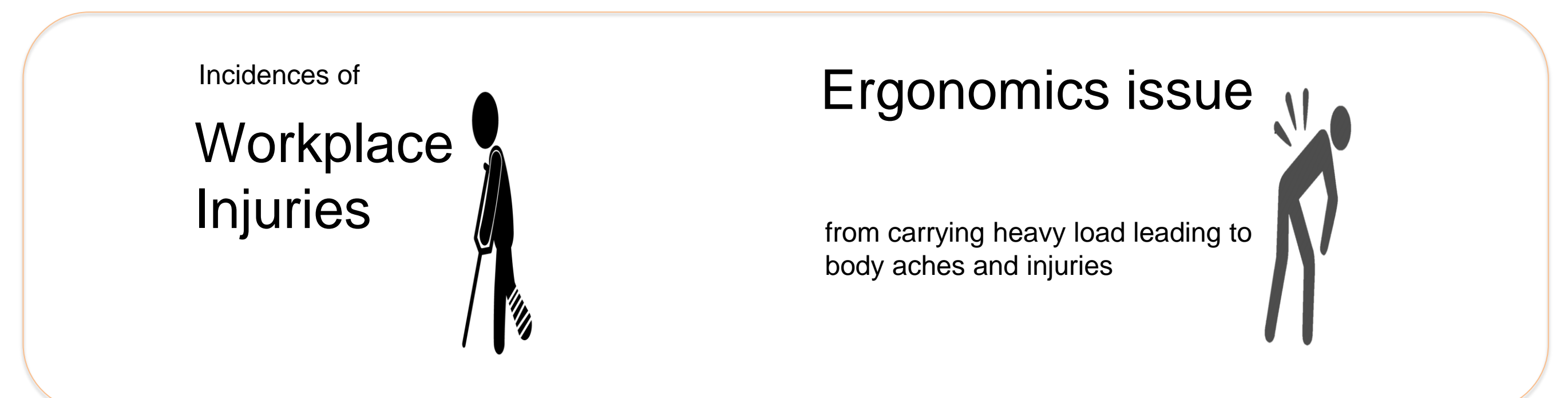


Manpower Savings

- Preparation time to initiate cases**
 - 20,000 cases
 - 15 minutes reduction per case
 - \$30 per man-hour cost
 - Annual man-hour cost savings: \$150,000

Out-Centre

Workflow

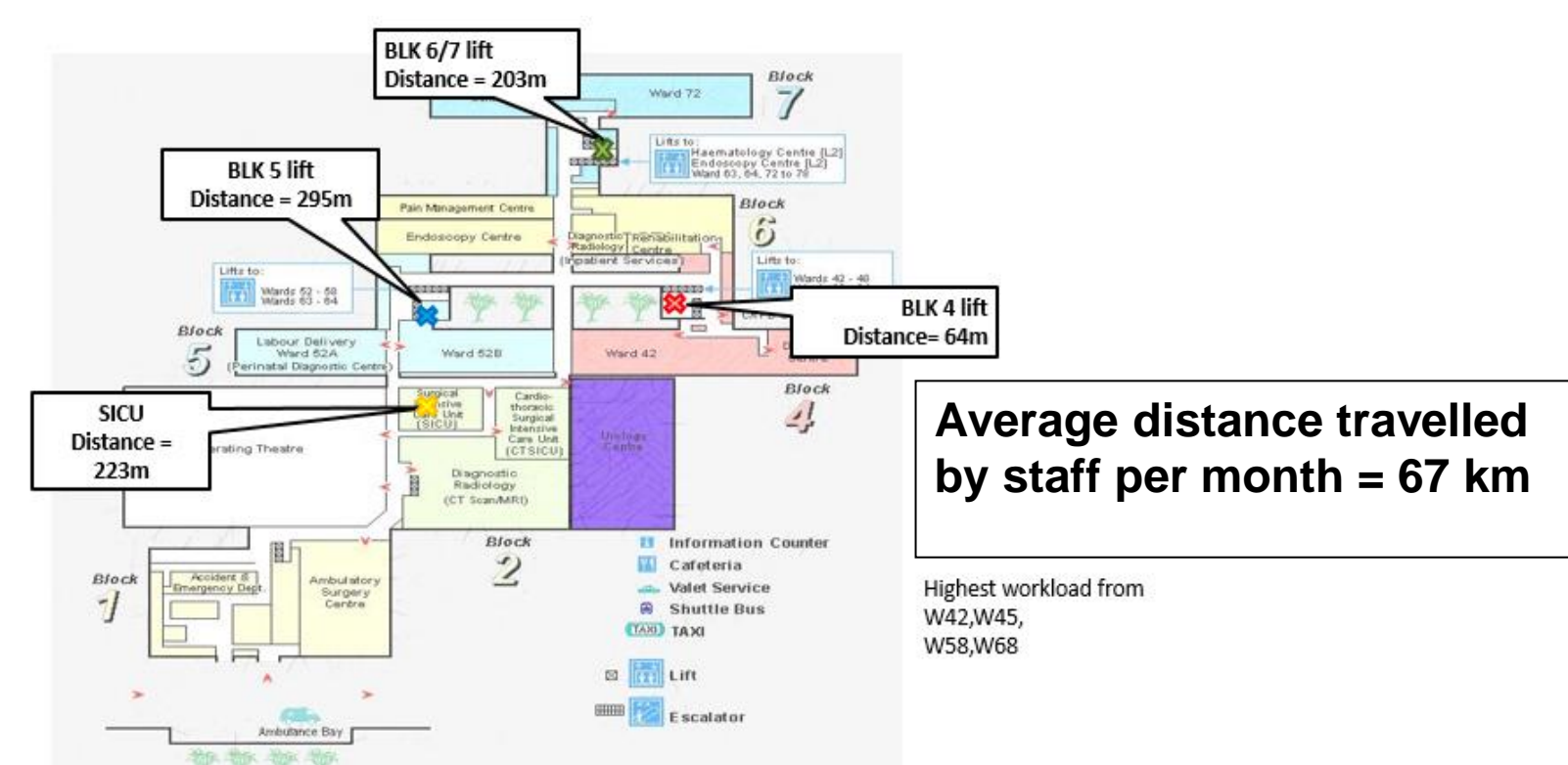


Problem

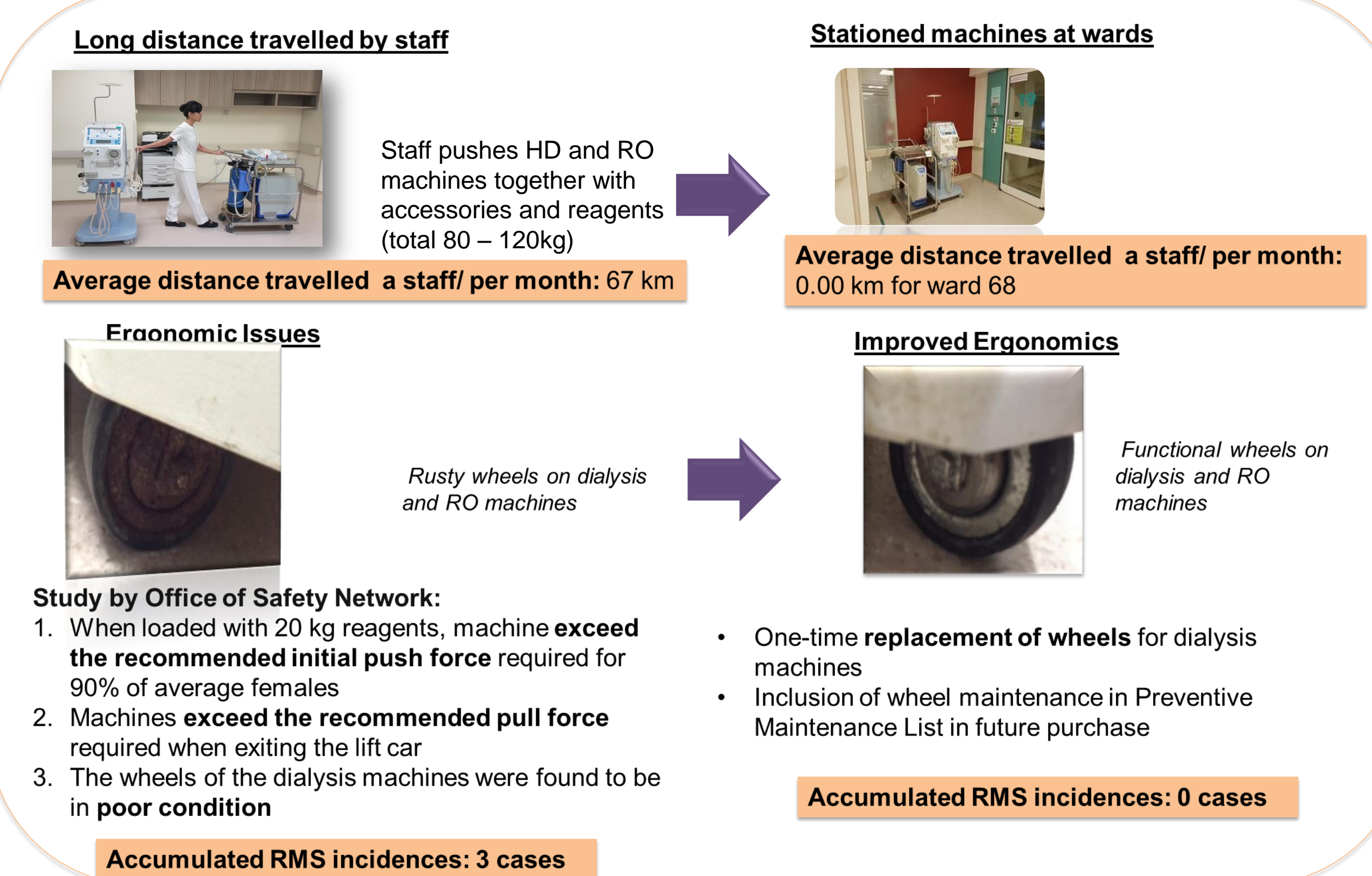


Methodology

(1) Distance travelled by nurse from RDC to wards was mapped and calculated. (2) Ergonomics study by Office of Safety Network



Findings & Solutions



Cost Savings



Time Savings

- Turnaround time to complete each case**
- 876 cases annually
 - Reduction of 30 min per case
 - \$30 per man-hour cost
 - Annual man-hour savings: \$13,140