

**Darren Lim Lee Kiang, Nursing**

## Mission Statement

To Reduce the Use of Controlled Psychotropic Drugs (CPDs) for Long Stay (LS) Patients in Institute of Mental Health (IMH) by 50% within 12 months

## Team Members

	Name	Designation	Department
<b>Leader</b>	Lim Lee Kiang, Darren	Assistant Director, Nursing	Nursing Quality
<b>Co-Leader</b>	Dr Tarun Suri	Medical Officer	General Psychiatry 1
<b>Members</b>	Jamilah Beevi	Senior Executive	Nursing
	G. Arumugum	Assistant Director, Nursing	Nursing
	Yuan Peng	Assistant Nurse Clinician	Nursing
	S. Punitha	Nurse Clinician	Nursing, Ward 45
	Ma Qiang	Nurse Clinician	Nursing, Ward 36
	Earl Tan Hsien Jie	Pharmacist	Pharmacy
	Agnes Wong Li Yu	Pharmacist	Pharmacy
<b>Sponsor</b>	Samantha Ong	Chief Nurse	Nursing
<b>Facilitator/ Sponsor</b>	Dr Alex Su	Vice Chairman Medical Board (Clinical Quality)	General Psychiatry 1

## Evidence for a Problem Worth Solving

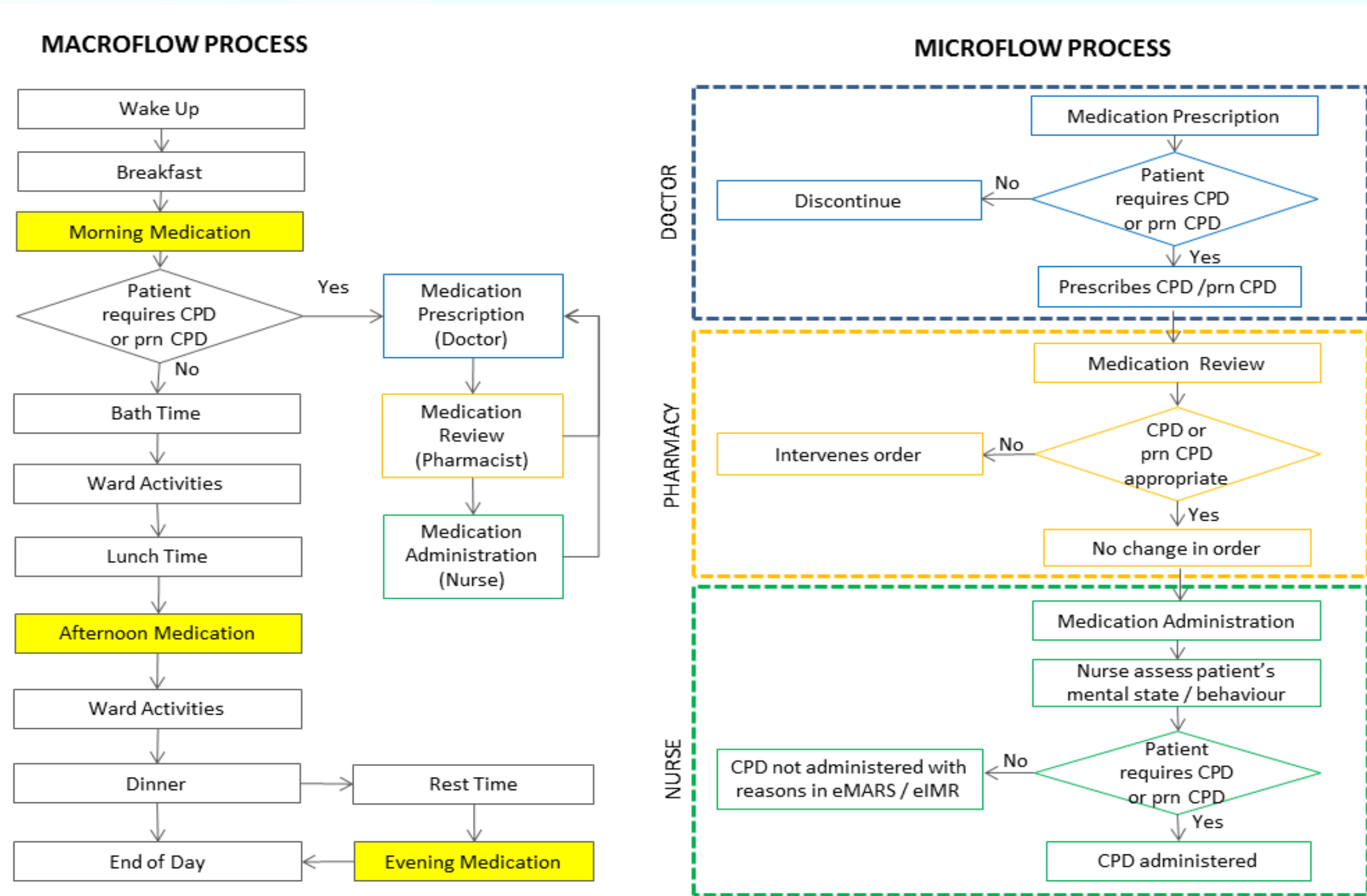
In IMH, most LS patients expressed behavioural issues due to their mental conditions. To sedate these patients without compromising their safety, CPDs, specifically benzodiazepines PRN, when necessary, were prescribed to them for at least 2 years.

Studies showed long term benzodiazepine users performed more poorly than the general population across all cognitive categories. Baseline studies showed that 64% of patients in Wards 45 and 36 were on CPD for more than 2 years.

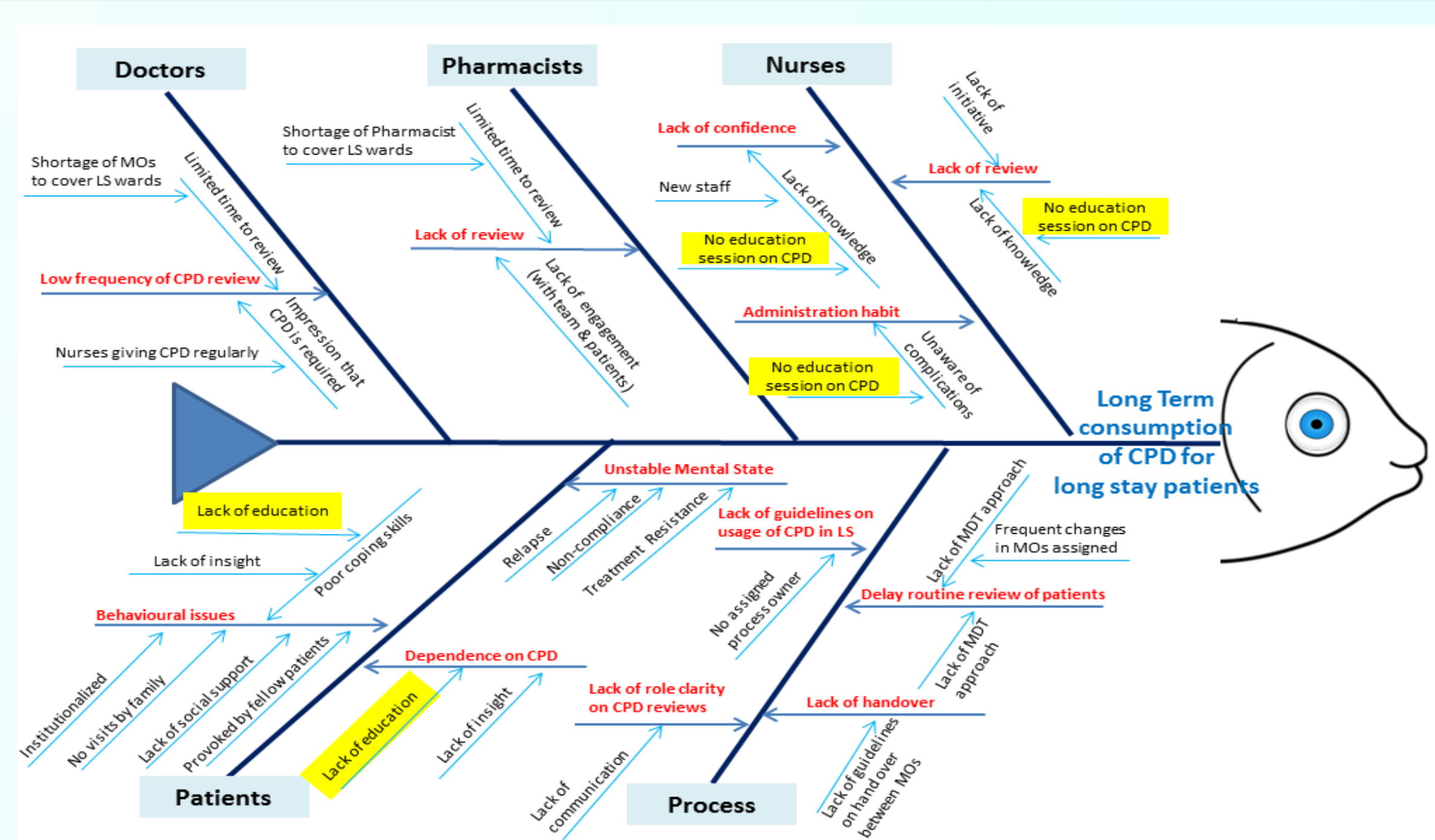
## Current Performance of a Process

Ward 43B and 45B 30/11/15 to 03/01/2016			
	No. of Total serving	No. of Prn Serving	PRN Percentage
<b>Lorazepam</b>	2992	2818	94.18%
<b>Diazepam</b>	288	288	100.00%
<b>Clonazepam</b>	702	633	90.17%
<b>Phenobarbitone</b>	209	0	0.00%
<b>36B:</b>			
	No. of Total serving	No. of Prn Serving	PRN Percentage
<b>Lorazepam</b>	1885	1780	94.43%
<b>Diazepam</b>	197	197	100.00%
<b>Clonazepam</b>	350	280	80.00%
<b>Phenobarbitone</b>	209	0	0.00%
<b>45B</b>			
	No. of Total serving	No. of Prn Serving	PRN Percentage
<b>Lorazepam</b>	1108	1038	93.68%
<b>Diazepam</b>	91	91	100.00%
<b>Clonazepam</b>	352	352	100.00%
<b>Phenobarbitone</b>	0	0	0.00%

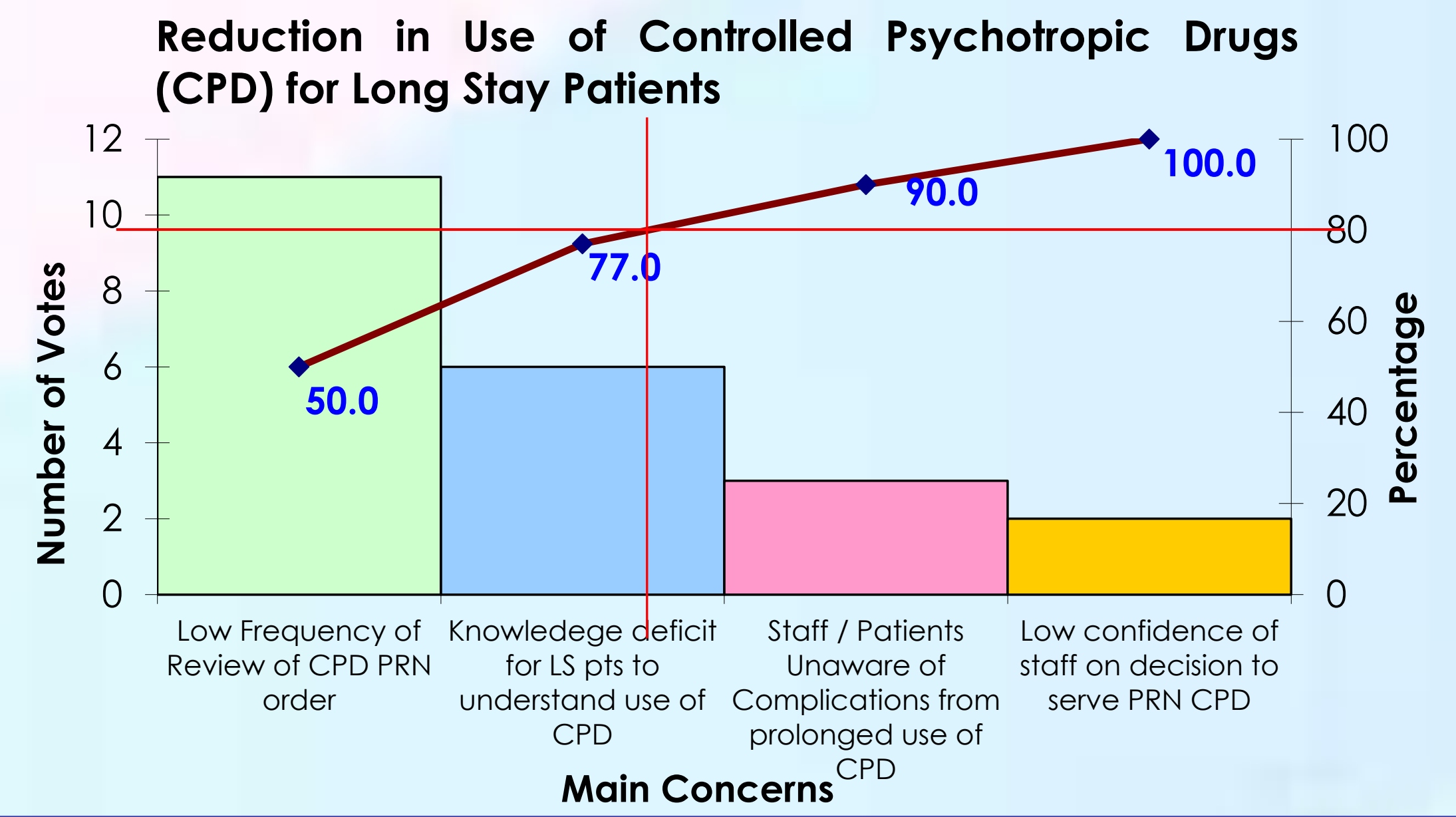
## Flow Chart of Process



## Cause and Effect Diagram



## Pareto Chart

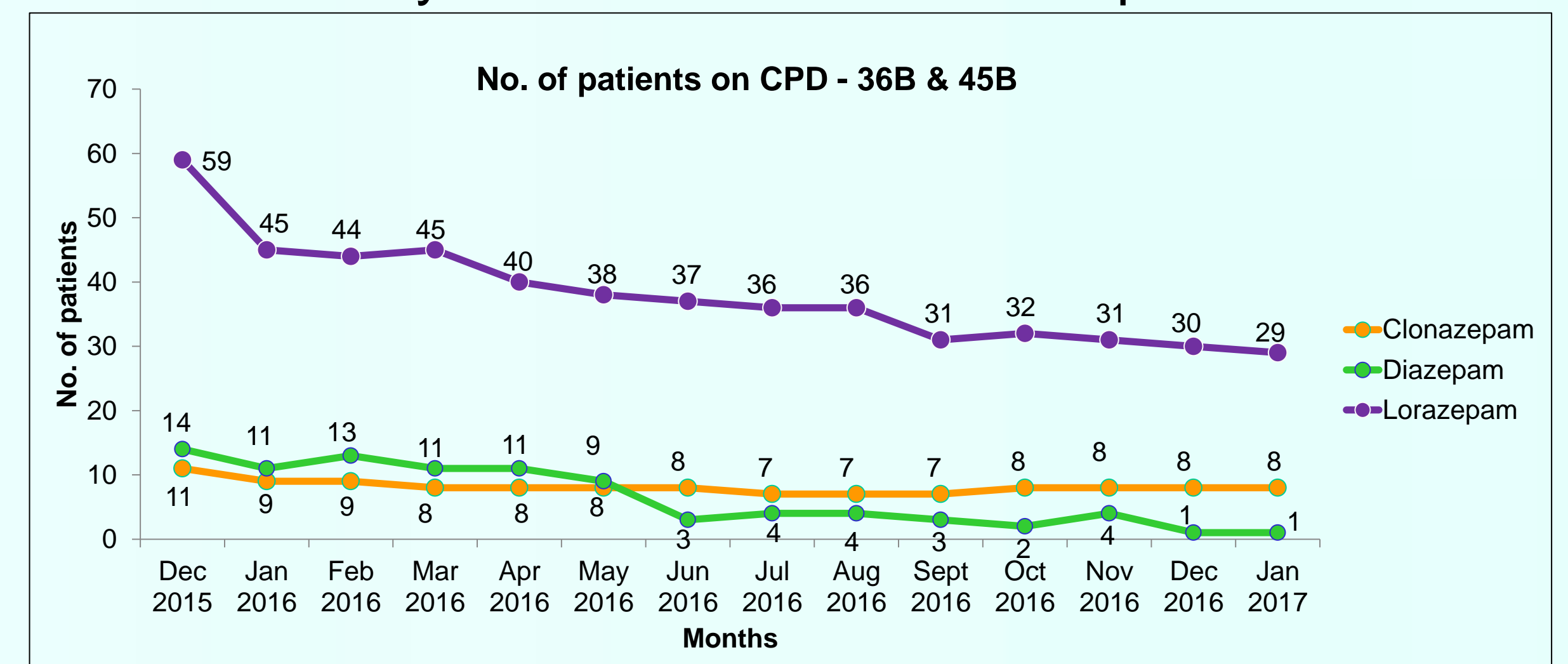


## Implementation

CAUSE / PROBLEM (refer to Pareto Chart)	INTERVENTIONS	DATE OF IMPLEMENTATION
A Low frequency review of CPD PRN orders	Dr Tarun and team from Wards 36B & 45B will select patient (at least 5) who are on CPD PRN order and review weekly.	Jan 2016
B Knowledge deficit of LS patients on understanding the use of CPD	Staff will conduct psycho education for LS patients on Use of CPDs	Feb 2016
C Staff and patients unaware of complications from prolonged use of CPD	Pharmacist will conduct education to all nurses from ward 36AB and 45AB	Sep 2016

## Results

Two long stay wards 36B & 45B (total of 50 beds each) were piloted. Most of the below data were based on these two wards. Initially, ward Nurses, Medical Officers (MOs) and Pharmacists selected 5 patients who were on CPD PRN. Their mental status were monitored closely after the MOs reviewed their CPD. These patients were reviewed weekly by the MOs, Pharmacists and Nurses to look out for changes in their mental status. The team slowly increased the number of patients to work on.

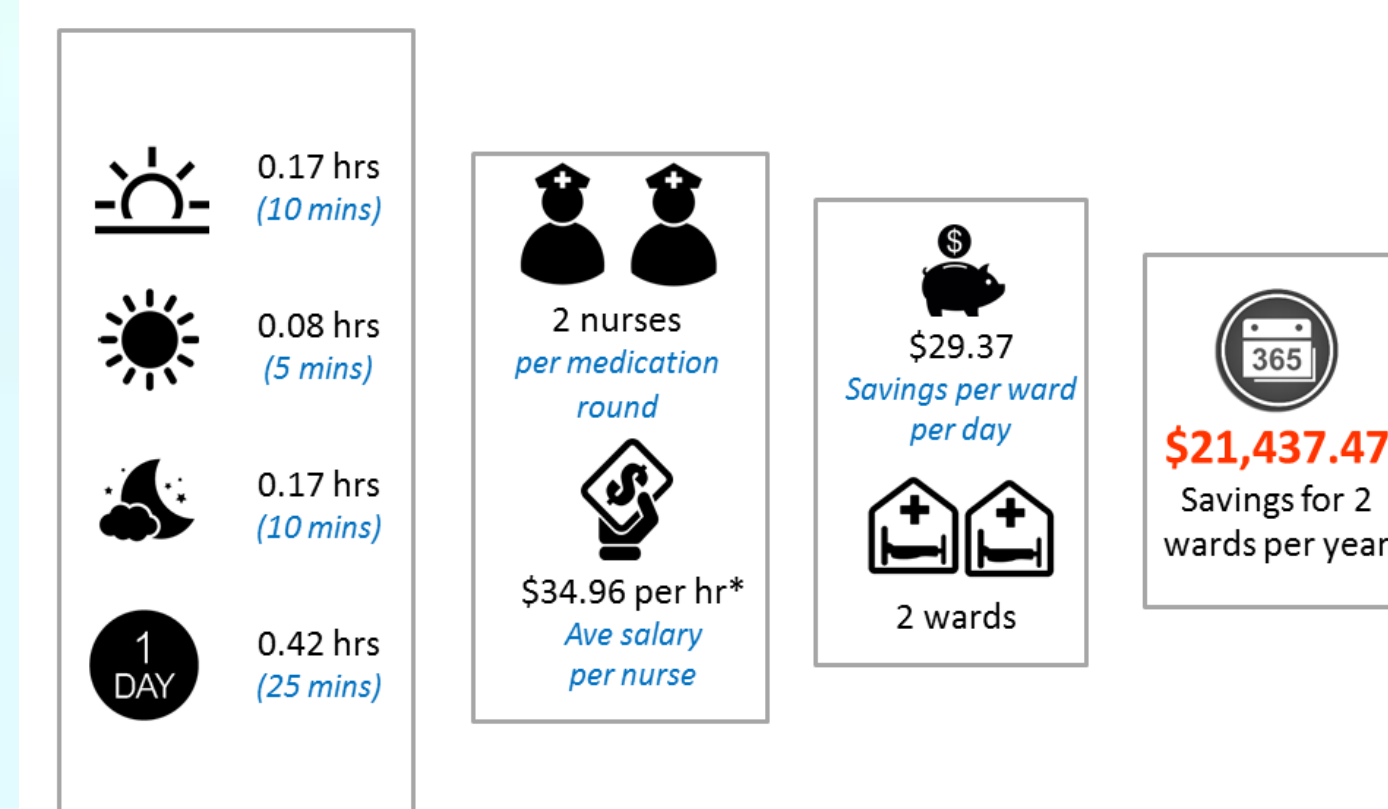


Percentage of patients on CPDs was measured monthly. After 3 interventions, the team achieved 51.56% reduction of long-term CPD usage from pre-intervention period of 64% to post-intervention period of 33%.

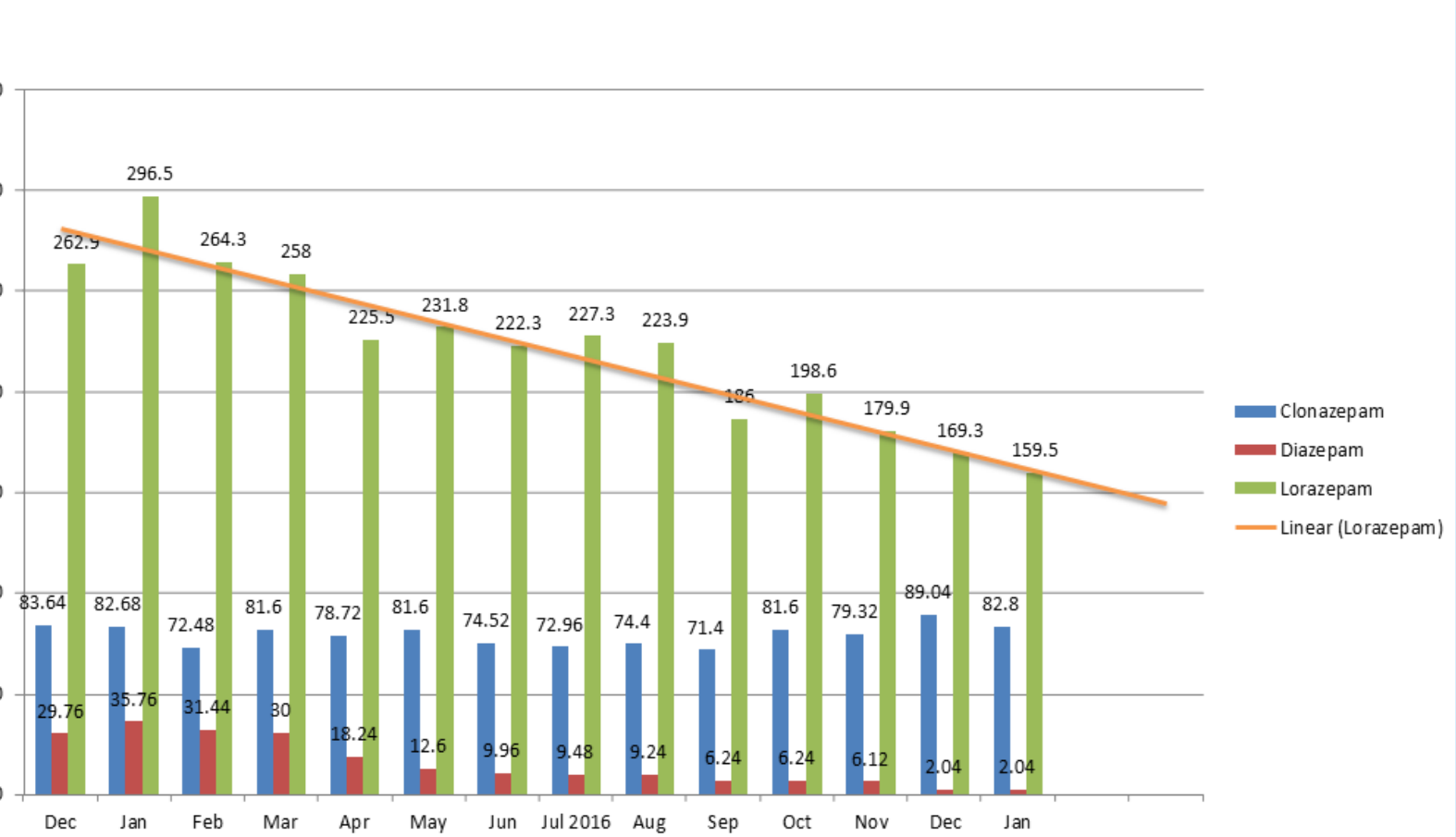
## Cost Savings

### Tangible Outcomes

#### Manpower Savings (Nurses)



### Cost of CPD Reduction - 36B & 45B



## Problems Encountered

- ✓ Get buy in from Doctors, Nurses and Pharmacists to select and work on patients.
- ✓ Build confidence on :
  - Nurses - not to administer CPD PRN if patient do not required after assessment
  - Patient - consistent education for patient on the purpose of CPD and not to be dependent on CPD

## Strategies to Sustain

- ✓ Same set of interventions shall be implemented to all long stay wards
- ✓ Gather feedback and suggestions for improvement from participating wards, for standardizing of interventions