



Background of Problem

Controlled drugs (CD) are tightly regulated in Singapore and prescriptions for CDs are required to include additional elements. We observe that these requirements are often missing/ incorrectly written on CD prescriptions and multiple reworks are required by the physicians and pharmacists.

Examples of inaccurately written CD prescriptions

DRUG NAME + FORM	Dose and Frequency	Duration/Quantity
Morphine sulphate SR tablet	20mg BD	1/52
Please supply 12 (twelve) tablets of morphine sulphate SR 10 mg tablets.		

Pic 1. Total quantity of tablets to be given for the dose and duration should be 28 tablets instead of 12.

DRUG NAME + FORM	Dose and Frequency	Duration/Quantity
Fentanyl Patch	18 mcg/hr Q 72h	2 weeks
Pls supply 5 (five) patches of fentanyl 18 mcg/hr patches.		

Pic 2. Doctor should give 10 patches of fentanyl 12mcg/hr patch instead as 18mcg/hr patch is not in drug formulary

Objectives

Primary objective

- To reduce number of inaccurately written CD prescriptions over 5 months

Analysis of problem

Using the 5 “Whys” analyses

Inaccurately written CD prescriptions

New Doctors rotating into the department

Miscalculation of total quantity of CD to supply

Not familiar with hospital formulary and strengths of CD available

Not familiar with legal requirements of CD prescriptions

Doctor have to manually calculate the required number of dose

Baseline data collection

Data collection over a 14-day period in SGH inpatient discharge pharmacy between 15-28th August 2016

- Total of 48 CD prescriptions were collected and 25% (n=12) required amendments
- 5 amendments were related to error in drug formulation or strength
- 7 amendments were related to error in the quantity of drug prescribed

Interventions / Initiatives

Initiative should tackle the root problem by:

- Having a list of CD and its respective strengths available in the formulary
- Having an intuitive and easy-to-use interface
- Easily accessible to doctors handling the discharge

Figure 1: Screen shot of the CD excel calculator

Steps to using the CD excel calculator

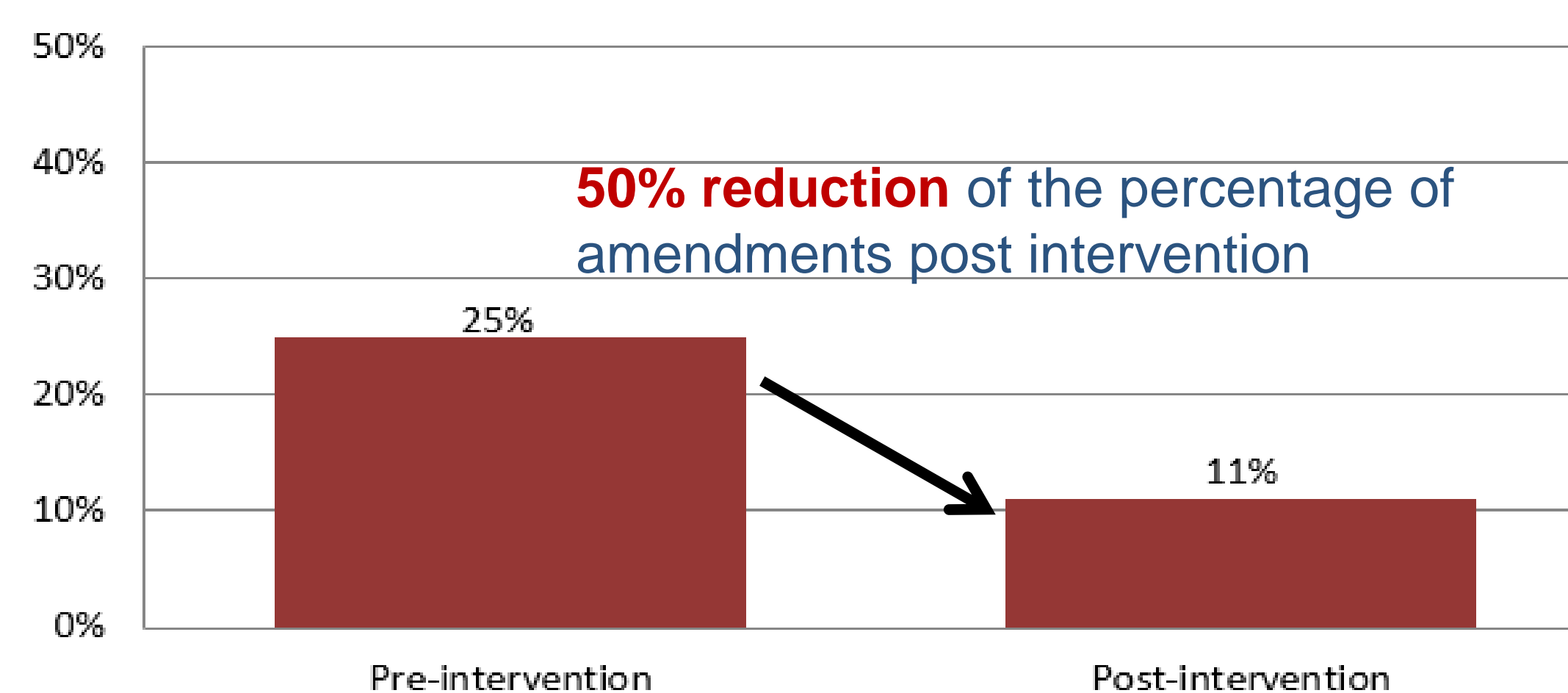
- Click on the button corresponding to the CD to be prescribed
- Fill in the required values, namely: Dose, Duration, Frequency
- Click the “Back to Frontpage” button and the sample prescription will be populated
- Repeat the above steps for the other CDs
- Handwrite the CD prescription using the sample as a template

Results

A post intervention data collection was conducted over a 14-day period in SGH inpatient discharge pharmacy between 3rd-17th January 2017

- Total of 63 CD prescriptions were collected, 11.1% (n=7) required amendments
- 2 amendments were related to error in drug formulation or strength
- 5 amendments were related to error in the quantity of drug prescribed

Percentage of CD prescriptions requiring amendment



Other intangible benefits of the project include:

- Time savings from having to make fewer calls to doctors for amendments
- Doctors make less trips to pharmacy to make amendments
- Pharmacist satisfaction increase as less time is spent to follow up on prescriptions

Sustainability

- To ensure sustainability, the excel calculator is uploaded onto SGH Infopedia for all doctors to access easily
- Conduct lectures to doctors at department meetings to introduce the project to newly rotated physicians