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## NEWCASTLE PROVINCIAL HOSPITAL



# RECENT EXPERIENCES WITH INTRODUCTION OF LEAN MANAGEMENT IN PUBLIC SECTOR HOSPITAL

## INTRODUCTION

- Newcastle Provincial Hospital is a District hospital within the Amajuba Health district in KwaZulu Natal with 242 usable beds.
- We provide regional and district care. We offer regional service on Obstetric & Gynaecology and Paediatrics for Amajuba District, part of Umzinyathi and part of Zululand.
- We were nominated by the National Department of Health to participate in the Capacity Building Project which was aiming at improving quality of care in Public Hospitals.

## WORKSHOP ACTIVITIES

- The workshop took place on the 1-5 November 2010 and 14 members from the hospital participated.
- The projects selected were:
  - Reducing waiting time in Pharmacy by 25%
  - Reduction of missing files by 25%
  - To increase theatre utilization by 10%

## PHARMACY PROJECT BACKGROUND

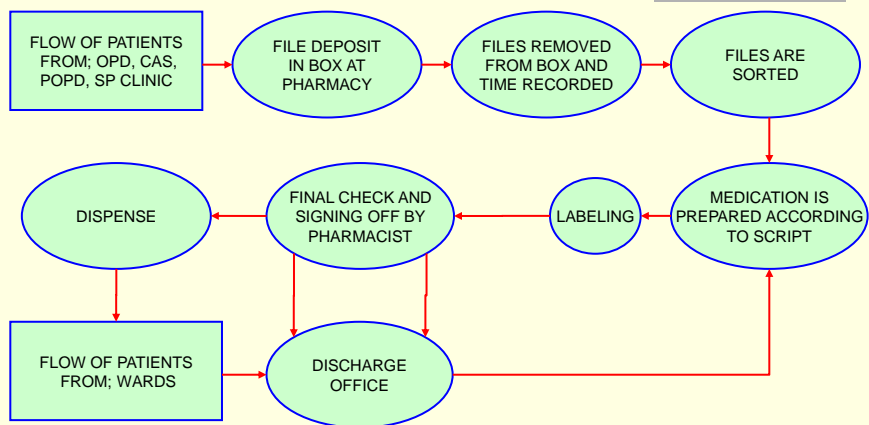
- In Oct 2010 an avg of 520 scripts dispensed per day by 7 pharmacists & 8 assistants
- There were continual complaints from customers about the long waiting time at pharmacy



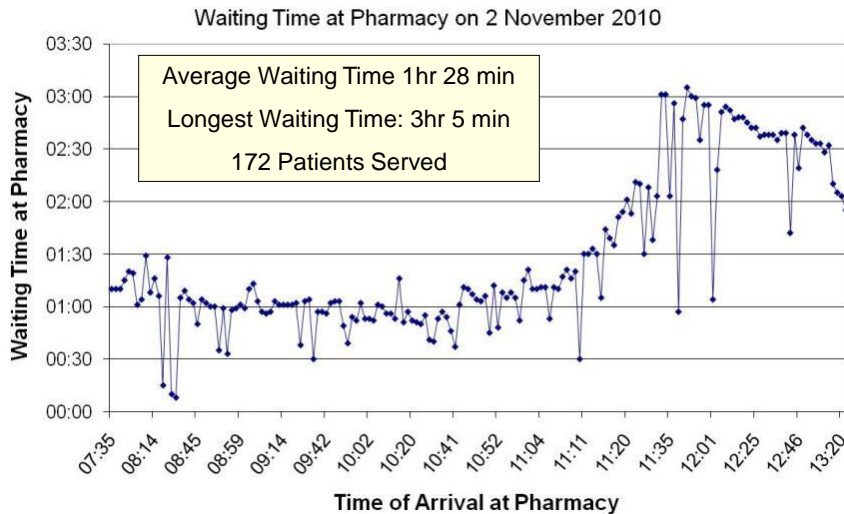
## CURRENT SITUATION INSIDE THE PHARMACY



## CURRENT SITUATION PHARMACY PROCESS FLOW



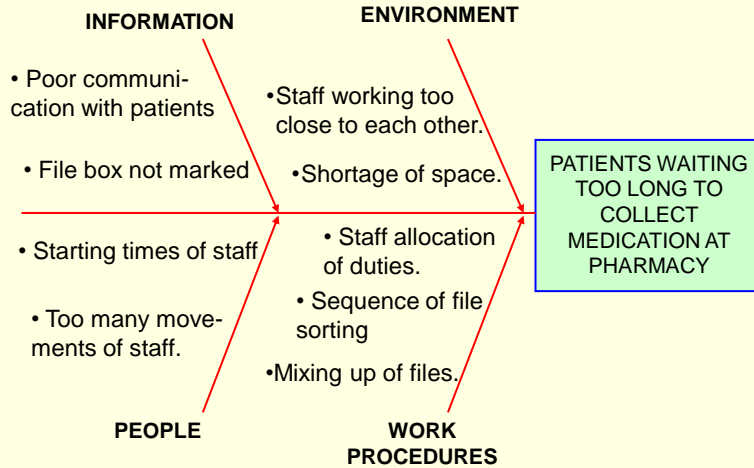
## CURRENT SITUATION: OPERATIONAL PERFORMANCE



## GOAL

- TO REDUCE THE AVERAGE WAITING TIME OF PATIENTS AT PHARMACY BY 25%

# ANALYSIS



# ANALYSIS

## Value Adding

- Preparation of medicines
- Labelling
- Final check & dispensing

## ANALYSIS

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### Necessary but not value adding

- Stacking of files
- Sorting of files
- Packing of chronic medication (Prior).

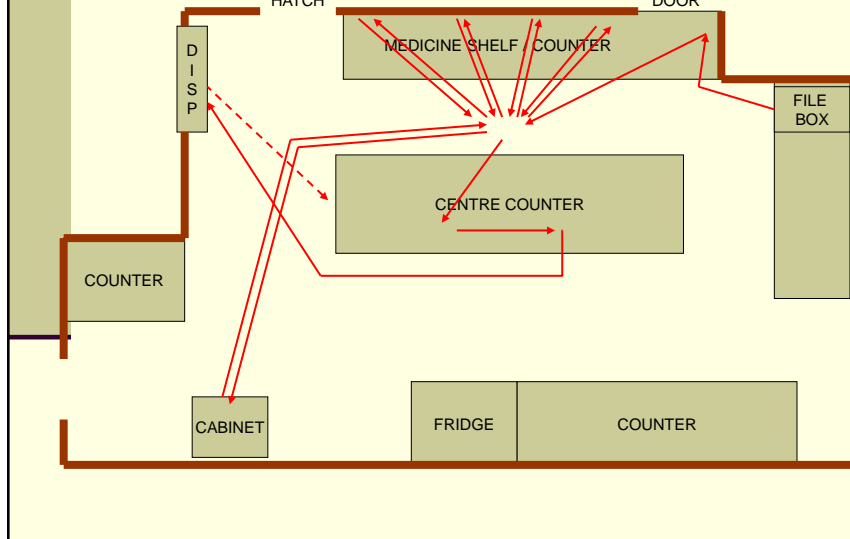
## ANALYSIS

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### Waste

- Patients queue twice if the prescription is wrong
- Unnecessary movement of staff
- Delays in dispensing (time 1<sup>st</sup> file is taken out until it is dispensed)
- Waiting time for cleaning
- Poor planning (staff coverage) e.g. lunch breaks.
- Only one dispensing hatch
- Identification of the file box (signage)
- Wrong prescription by doctors delay the checking

## SPAGHETTI DIAGRAM OF FILE MOVEMENT IN PHARMACY



## IMPROVEMENT RECOMMENDATIONS

- Have three boxes which are clearly identifiable for depositing of files according to collection times.
- Patients who are waiting in line are served first.
- Open a second dispensing hatch.
- Call patients more than once.
- Minimize movement by taking file with holder when doing scripts
- Communicate with wards about discharge of patients
- Perspex backing for file drop-box to see files

Separate boxes for collection now,  
after 1500 or tomorrow



Before



After

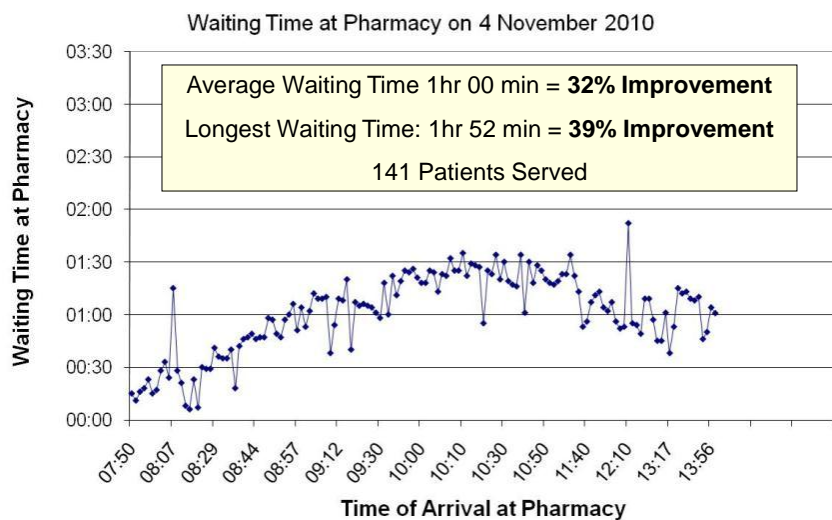
## IMPLEMENTATION PLAN

<u>WHAT</u>	<u>WHO</u>	<u>WHEN</u>
Separation of file boxes and proper identification	Pharmacy staff & Group 1 Project Team	04/11/10
Increase frequency of taking files out of boxes	Pharmacy staff & Group 1 Project Team	03/11/10
Call patients more than once	Pharmacy staff & Group 1 Project Team	03/11/10
Minimize movement by taking file with small basket	Pharmacy staff & Group 1 Project Team	04/11/10

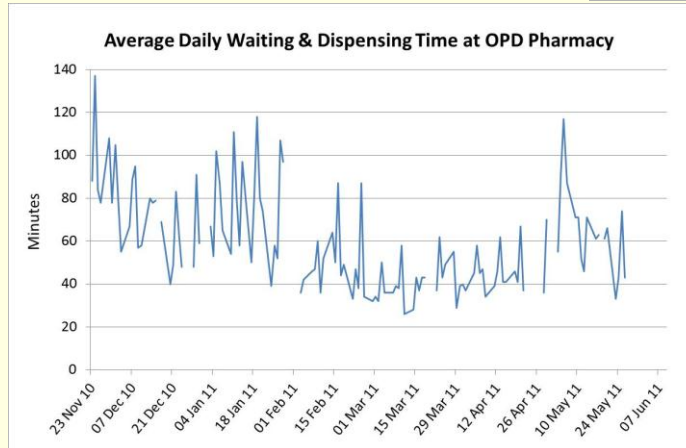
## IMPLEMENTATION PLAN

<u>WHAT</u>	<u>WHO</u>	<u>WHEN</u>
Improve patient communication about discharge procedure	Ward Staff & Pharmacy staff	08/11/10
Segregation of duties and re-organisation of working processes	Pharmacy Manager	08/11/10
Ensure staff coverage at all times	Pharmacy Manager	08/11/10

## RESULT MEASUREMENT



## A3 PROJECT BY PHARMACY STAFF



Our measurements starting showing that waiting times were increasing

## A3 PROJECT BY PHARMACY STAFF

- Monitoring of flow of activities in pharmacy was done on 16/03/2011
- Files were followed through from where they were removed from the drop in box to when the medication was dispensed to the client
- Waste in the area were identified:
  - Excessive movement of staff in preparing the scripts,
  - 4-5 staff working on scripts at centre table in pharmacy
  - FIFO system not maintained

## A3 PROJECT BY PHARMACY STAFF

- Recommendations were made as follows
  - Open two windows where a pharmacist and assistant pharmacist would prepare and dispense script directly to client
  - Discontinue one drop in box and let clients queue with file in hand
  - Open 3<sup>rd</sup> window for queries and fast queue clients
  - Modify monitoring of waiting time to suit new system
  - Allocate 1 person to marshal the queue

## A3 PROJECT BY PHARMACY STAFF

Pharmacist & pharmacy assistant prepare and dispense scripts directly to clients from 2 dispensing windows



## PHARMACY STAFF A3 PROJECT RESULTS

Before clients were waiting in queues for up to 3hrs  
After implementing recommendations chairs were empty at 14:00



Before



After

## PHARMACY STAFF A3 PROJECT RESULTS

Prepared medicine packages for the 15:00 and Next Day boxes have decreased as clients are now prepared to wait for their medication. Therefore less uncollected packages need to be unpacked

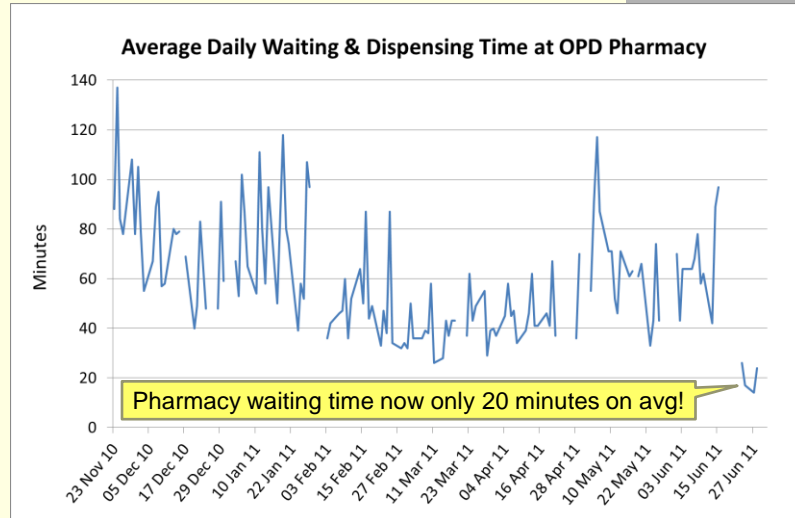


Before



After

## PHARMACY STAFF A3 PROJECT RESULTS



## WHAT DID WE LEARN?

- You can do more with less
- Working smarter but not harder
- Removing waste from the system can result in a big improvement
- “Go see” principle
- In the system most of the activities are necessary but not value adding and they can be minimized in order to improve quality in the work place.
- The A3 process improvement method help to keep you focused on your objectives.

## WHAT DID WE LEARN?

- Visual measurement gives you encouragement to continue improvement because you can “see” the outcome immediately.
- For any change to be effective you do not have to rush activities but you start bit by bit.
- Team work, participation/involvement is crucial.
- Prioritization of the recommended activities. e.g. taking one or two recommendations first and monitor.
- Monitoring each stage of the project is crucial.
- Staff buy in

## BENEFITS

- Looking at the 3 projects as a whole the benefits were:
  - Waiting time in pharmacy on average was 120 minutes before, then down to 64 minutes and now it is 20 minutes.
  - Two patients went to CEO to thank her for the improvement
  - Elimination of the waste in the system e.g. less complaints.
  - No extra costs were incurred with implementation of the recommendations.
  - Working smarter and not harder.
  - Decreased waiting times for elective surgery in theatre which is costly to the department and may be dangerous to the patient.

## CHALLENGES

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- Resistance to change- both staff & patients.
- Fear of failure of the project
- Staff attitude
- Patient attitude
- Lack of team work amongst the staff.
- Physical infrastructure e.g. space for the files and too limited space in pharmacy/ dispensing hatches.
- Changing from old ways of doing things e. g. doing measurements.
- Facilitator
- Sustainability

## RECOMMENDATIONS

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- Increase roll out of the Best Practice Workshop to more public hospitals.
- Involvement of Provincial and Districts for sustainability and support.
- Increase supportive documents e. g. books and magazines.
- Sharing of good practices within the provinces.

