LONG PATIENT WAITING TIME AT PRINCESS MARINA HOSPITAL OUT-PATIENT DISPENSARY

BY
PMH TQM TEAM
INTRODUCTION

- **Total Quality Management (TQM)** is a systematic, data-based method for improving the quality of specific work processes. TQM follows the Plan-Do-Study-Act cycle as illustrated.

6. Standardization
7. Future Plans

5. Results

1. Reason for improvement
2. Current situation
3. Problem Analysis
4. Countermeasures
Princess Marina (PMH) is a referral hospital.

Provides services to patients from all over the country.

Bed capacity of 507 patients (normal).

Can go up to 700 or 800 including floor beds.

The hospital has 45 departments/units.
The project was carried out at the Pharmacy outpatient dispensary.

The Pharmacy department is divided into 6 units.
Dispensary staff consists of 2-3 Pharmacists and 2-3 Pharmacy Technicians.

The dispensary receives an average of 350 Patients a day.
Like Ministry of Health (MOH), PMH has a strategic objective of providing **Timely and Efficient** services.

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<thead>
<tr>
<th>VISION 2016</th>
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<tbody>
<tr>
<td>PROSPEROUS, PRODUCTIVE &amp; INNOVATIVE NATION</td>
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<th>NDP9</th>
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<tr>
<td>EFFICIENCY AND EFFECTIVENESS</td>
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<th>MOH</th>
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<td>PROVIDE TIMELY &amp; EFFICIENT SERVICES</td>
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<tr>
<th>PMH</th>
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<tbody>
<tr>
<td>REDUCE PATIENT WAITING TIME AT DISPENSARY</td>
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</tbody>
</table>
TEAM MEMBERS

- MRS M. THAGA, PRINCIPAL PHARMACY TECHNICIAN (TEAM LEADER)
- MR M.F. CHOHAN, PRINCIPAL PHARMACIST II
- MR P. MOROKA, PRINCIPAL PHARMACY TECHNICIAN
- MRS. O. MOSALAKATANE, PRINCIPAL PHARMACY TECHNICIAN
TEAM MEMBERS

- MISS G. GOFHAMODIMO,  
  SENIOR PHARMACY TECHNICIAN

- MISS N. KEETSALETSE,  
  HEALTH CARE AUXILLARY

- MRS S. NHIRA  
  PHARMACY TECHNICIAN (SECRETARY)
LIST OF PROBLEMS BRAINSTORMED

1. Expiries
2. Inadequate computer skills
3. Poor documentation
4. Wards not abiding to their ordering days
5. Misplacement of patient prescriptions
6. Inadequate stock availability
7. Long patient waiting time at the dispensaries
LIST OF PROBLEMS BRAINSTORMED

8) IDCC patients not honoring refill dates
9) Lack of sops (non documentation)
10) Time management
11) Lack of continuity
12) Lack of job description
13) Security
14) Unauthorized entry of personnel into the pharmacy
LIST OF PROBLEMS BRAINSTORMED

15) Prescribers not signing their prescriptions
16) Poor inventory use
17) Too frequent ordering by OPD dispensary
18) Use of trade names
19) No custody of files
20) Too many people going on offs at the same time
<table>
<thead>
<tr>
<th>ITEM</th>
<th>PROCESS PROBLEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Too many Pharmaceuticals expiring in PMH</td>
</tr>
<tr>
<td>B</td>
<td>Improper documentation and filing at PMH Pharmacy</td>
</tr>
<tr>
<td>C</td>
<td>Poor ordering habits by the wards/units at PMH</td>
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<tr>
<td>D</td>
<td>Drugs out stock affects our stock availability</td>
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<tr>
<td>E</td>
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<tr>
<td>F</td>
<td>Inappropriate signing of prescriptions by PMH prescribers</td>
</tr>
</tbody>
</table>
## MULTIVOTING

**Problems of top priority**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PROCESS PROBLEM</th>
<th>1ST VOTE</th>
<th>2ND VOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Too many Pharmaceuticals expiring in PMH</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>Improper documentation and filing at PMH Pharmacy</td>
<td>6</td>
<td>2</td>
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<tr>
<td>C</td>
<td>Poor ordering habits by the wards/units at PMH</td>
<td>2</td>
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<tr>
<td>D</td>
<td>Drugs out stock affects our stock availability</td>
<td>5</td>
<td>2</td>
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<tr>
<td>E</td>
<td>Long waiting time at the dispensaries at PMH</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>F</td>
<td>Inappropriate signing of prescriptions by PMH prescribers</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
The Theme Matrix selection was done to select the theme process problem. The following results were obtained:
<table>
<thead>
<tr>
<th>PROCESS PROBLEM</th>
<th>CUSTOMERS</th>
<th>IMPACT ON EXTERNAL CUSTOMERS</th>
<th>NEED TO IMPROVE</th>
<th>OVERALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too many Pharmaceuticals expiring in PMH</td>
<td>Patient, Staff, Ministry of Health</td>
<td>25/8 = 3.13</td>
<td>36/8 = 4.50</td>
<td>14.09</td>
</tr>
<tr>
<td>Long waiting time at the dispensaries at PMH</td>
<td>Staff, Patients</td>
<td>40/8 = 5.00</td>
<td>39/8 = 4.88</td>
<td>24.40</td>
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</tbody>
</table>
AVERAGE PATIENT WAITING TIME (Data collected before implementation of countermeasures)

**AVERAGE MONTHLY WAITING TIME**

<table>
<thead>
<tr>
<th>MONTH</th>
<th>WAITING TIME IN MINS</th>
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<tbody>
<tr>
<td>OCT</td>
<td>145</td>
</tr>
<tr>
<td>NOV</td>
<td>130</td>
</tr>
<tr>
<td>DEC</td>
<td>125</td>
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</table>

**AVERAGE DAILY WAITING TIME**

- **Days:** MON, TUE, WED, THU, FRID
- **Waiting Times:**
  - MON: 150
  - TUE: 155
  - WED: 150
  - THU: 160
  - FRID: 145

**Diagram:**
- **AVER DAILY WAITING TIME (OCTOBER, 2006)**
- **AVER MONTHLY WAITING TIME**
- **Series 1**
PROBLEM STATEMENT

During the month of October 2006, 282/297 (95%) of sampled patients at PMH outpatient dispensary waited for 2 hrs 21 mins instead of 1 hr (expected time), and thus causing patient dissatisfaction.
PROBLEM STATEMENT (Continued)

- **When? October, 2006**
- **How many? 282/297 (95%)**
- **Who? Outpatients**
- **Where? Princess Marina Outpatient dispensary**
- **What? Waited for more than 1 hour**
- **Impact?causing customer dissatisfaction.**
IMPROVEMENT TARGET

- The average waiting time at PMH outpatient dispensary will be decreased from an average of 2hrs 21 minutes to 60 minutes by February 2007.
FISHBONE DIAGRAM

PROCESS

- Too many stages
- Long winding dispensing system and processes in place
- Inadequate and breakdown of equipment
- Lack of service and capacity
- Budget constraints

STAFF

- Dispensary understaffed
- Available members cannot meet demand
- Inadequate allocation and frequent rotation
- High patient volume
- Self referrals

EQUIPMENT

PATIENTS

- Long patient waiting time at PMH outpatient dispensary
- Patients not informed
PARETO CHART

- **A = HIGH PATIENT VOLUME**
- **B = DISPENSARY UNDERSTAFFED**
- **C = TOO MANY STAGES**
- **D = INADEQUATE & FREQUENT BREAKDOWN OF EQUIPMENT**
COUNTERMEASURES MATRIX

- A tool to identify countermeasures which can be implemented.
<table>
<thead>
<tr>
<th>ACTIONABLE ROOT CAUSE</th>
<th>OBJECTIVE</th>
<th>COUNTER MEASURE</th>
<th>EFFECTIVENESS</th>
<th>FEASIBILITY</th>
<th>OVERALL</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate allocation of staff and frequent rotation.</td>
<td>Review allocation of staff and frequent rotation.</td>
<td></td>
<td></td>
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</tr>
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<td></td>
<td></td>
<td>Individual</td>
<td>Team</td>
<td>Individual</td>
<td>Team</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introduce relief schedule</td>
<td>32/8</td>
<td>4</td>
<td>28/8</td>
<td>3.5</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Reduce frequent rotation</td>
<td>25/8</td>
<td>3.1</td>
<td>27/8</td>
<td>3.38</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>Re-allocation</td>
<td>34/8</td>
<td>4.25</td>
<td>25/8</td>
<td>3.13</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>Introduce shift work</td>
<td>30/8</td>
<td>3.75</td>
<td>18/8</td>
<td>2.25</td>
<td>8.4</td>
</tr>
<tr>
<td>ACTIONABLE ROOT CAUSE</td>
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<tr>
<td>Long winding dispensing system and processes in place.</td>
<td>Review Long winding dispensing system and processes</td>
<td>To open a card collection window</td>
<td>Individual: 21/8, 37/8</td>
<td>Team: 2.6, 4.6</td>
<td>11.96</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open a discharge patient dispensary</td>
<td>Individual: 29/8, 20/8</td>
<td>Team: 3.6, 2.5</td>
<td>9</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequent meetings to be reduced</td>
<td>Individual: 35/8, 37/8</td>
<td>Team: 4.4, 4.6</td>
<td>20.24</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Issue 2 months supply to selected prescription</td>
<td>Individual: 30/8, 29/8</td>
<td>Team: 3.75, 3.6</td>
<td>13.5</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increase prepacks</td>
<td>Individual: 32/7, 22/7</td>
<td>Team: 4, 2.75</td>
<td>11</td>
<td>NO</td>
</tr>
<tr>
<td>ACTIONABLE ROOT CAUSE</td>
<td>OBJECTIVE</td>
<td>COUNTERMEASURE</td>
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<tr>
<td><strong>Patients not informed</strong></td>
<td>Patients are informed about getting their medication from the nearest clinic/health facility</td>
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<td></td>
<td>Provide education to get medication from clinics</td>
<td>Individual: 27/8, Team: 3.38</td>
<td>Individual: 26/8, Team: 3.25</td>
<td>OVERALL: 10.99, ACTION: YES</td>
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<td></td>
<td>Open an enquiries window</td>
<td>Individual: 28/8, Team: 3.5</td>
<td>Individual: 31.8, Team: 3.88</td>
<td>OVERALL: 13.58, ACTION: YES</td>
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<td></td>
<td>Meeting with GCC Pharmaceutical staff</td>
<td>Individual: 30.8, Team: 3.75</td>
<td>Individual: 23/8, Team: 2.88</td>
<td>OVERALL: 10.8, ACTION: NO</td>
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</table>
The graph below illustrates the average waiting time collected before and after implementation of countermeasures.

![Graph showing average monthly waiting time before and after implementation of countermeasures.](image)

**Countermeasure Implementation**

**Target (60 mins)**
STANDARDIZATION INFORMATION

- Plans for standardizing and replicating process improvements:
  - Morning relief to continue until staff situation changes i.e. increases.
  - Dispensary supervisor to monitor.
  - Relief to be replicated to stock management during receipt of bulk orders.
  - Officers tasked to draw relief schedules.
Scheduled meetings on the notice boards.

Enquiries window to be continually attended to.

An auxillary to be availed at all times to work with the clerk.
After standardization the dispensary continued collecting waiting time data as illustrated on the graph below.
FUTURE PLANS

- Additional long term countermeasures e.g.
- The opening of satellite Pharmacies at the eye and Psychiatric units to decongest dispensary
- The opening of a discharged patient dispensary.
- Meeting with GCC staff to resolve the issue of reducing volumes of patients coming to PMH dispensary through educating the patients to collect their medication from their nearest health facility.
FUTURE PLANS

- Request for the update of the clinic list.
- Pharmaceuticals expiring within PMH organization (wards and Pharmacy) as the next project.
CONCLUSION

- The data collected before and after implementation & standardization of countermeasures illustrates the effectiveness of the TQM project.
LONG PATIENT WAITING TIME AT PRINCESS MARINA HOSPITAL DISPENSARY

Do what you can with what you have, where you are!