Monitoring
Partners Road to Sustainability

BS Ganesh Babu

Learning Objective

- Overview of Monitoring
- Importance of Information for monitoring
- Presenting information for monitoring
- How to identify information required for monitoring
- Leverage IT for effective monitoring

Session Plan

<table>
<thead>
<tr>
<th>Contents</th>
<th>Time</th>
<th>Teaching Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview and Importance of Monitoring</td>
<td>10</td>
<td>Presentation</td>
</tr>
<tr>
<td>MIS for Monitoring</td>
<td>15</td>
<td>Presentation</td>
</tr>
<tr>
<td>Selecting Indicators for Monitoring</td>
<td>20+10</td>
<td>Group Work</td>
</tr>
<tr>
<td>PM5 Demo</td>
<td>20</td>
<td>Presentation</td>
</tr>
<tr>
<td>Importance of Giving Feedback and its methods</td>
<td>10</td>
<td>Presentation</td>
</tr>
<tr>
<td>QA / Discussion</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Management

Management is the process whereby resources are utilized in a most **Effective** and **Efficient** manner to achieve the objectives of the organization

- Effectiveness
- Efficiency

Management Cycle

- Planning
- Implementation - Monitoring
- Evaluation

Monitoring

- Identifying deviations from the established plan and finding quick practical solutions
- An on-going process of reviewing a program's or project activities to determine whether set standards or requirements are being met
Methods of Monitoring

- Communication with staff, clients and community
- Review of records & Information
- Using software tool

Monitoring Vs Information

- Monitoring efforts are motivated by the need for information ideally actionable information.

Information Needs and Organizational Level

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>Strategic Management</th>
<th>Middle Management</th>
<th>Operations Management</th>
<th>Transaction Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregated, time delay, less well defined, external, tolerate less accuracy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detailed, current, well defined, internal, accurate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Purpose of MIS

- Identify problems
- Decision Making

Decision Areas

- Strategic- traditional surgery vs IOL
- Managerial- effectiveness & efficiency
- Operational- timings, manpower, machines

Steps in Monitoring

Select Indicators
Develop Standards
Collect data/ information to measure
Analyze to measure performance
Compare against established plan
Take corrective actions- decisions

Standards:

- Historical
- Need Based
- Bench Mark
- Statistical
**Indicator**

- Indicators are standardized measures to compare status or performance
- Can identify change in situation

**How to Select Indicator**

- Derivation from Organization’s goals and strategies
- Select Difficult Activities
- Focus on “Complaint” Variables
- Select Key Success Variables
- Select Input, Process, Output, Outcome Indicators (e.g., using Logical Frame-Work)

**Derivation from Strategies and Goals**

- **Eradicating needless blindness among school going children**
  - Involve teachers

- **No. of Schools**
- **No. of School children**
- **No. of children with problem**
- **No. of children received treatment**

- **No. of Teachers**
- **No. of teachers trained**
- **No. of children screened**
- **No. of children identified with problem**
- **Children confirmed with problem**
- **Response Rate**

**Areas of concern for Managers**

- **Input**
- **Process**
- **Output**
- **Outcome**
- **Impact**

**Inputs** are the resources you put into your project to deliver its outputs.

- Infrastructure - building, water, electricity
- Organization - hierarchy, line of control, accountability and authority, policies and procedures
- Manpower
- Equipment
- Materials - drugs, disposables

**Developing Indicators**

**Input**

- No of centers with full staff in position
- No of centers with functional OT
- No of centers with uninterrupted supply of electricity
Process: It is a set of activities in which program resources are used to achieve the expected results

- Screening
- Outpatient clinics
- Vision correction
- Surgeries
- School health checkup
- Vitamin A supplementation

Developing Indicators

Process

Diagnosis
- Number of people screened
- Number of people identified with visual impairment
- Number of people found fit for surgery

Output (Immediate results obtained by the program through the execution of activities)

Treatment
- Number of people treated
- Number of people operated
- Number of patients received glasses
- Number of patients referred to basehospital

Outcome
- Number of people got vision corrected/ restored
- Number of complications/ surgeon
- Number of complications/ center
- Client satisfaction

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Measurable Indicators</th>
<th>Means of verification</th>
<th>Important assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL: To admit all the patients who are advised and come for admission.</td>
<td>Acceptance rate of surgery. How many patients disagreed to take surgery and their reasons.</td>
<td>Maintain advised registers at Counseling and enter the details in computer.</td>
<td>Patients might choose free service through camping or free hospital.</td>
</tr>
<tr>
<td>PURPOSE: To restrict the dropout rate from 25% to 5%. To increase the patient satisfaction. To effectively utilize the beds - No patients should unnecessarily stay in the hospital</td>
<td>Acceptance rate is at least 60%. No comments/ remarks should be there regarding rooms availability from the patients. Length of stay.</td>
<td>Patients satisfaction survey / Patients suggestion book. Inpatient register.</td>
<td></td>
</tr>
<tr>
<td>OUTPUTS: Revenue / bed should increase. No Patients should be advised to come on later date for admission.</td>
<td>Productivity / bed = i.e no. of surgeries per bed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTIVITIES: Clear instruction to Counselors. Maintain the room list accurately. Clear instructions to the patients about their surgery date and discharge date in advance (or on admission).</td>
<td>Defined Length of Stay for each surgery. Counselors. Social workers.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Equipment utilization

- No of procedures/ OT
- No of procedures/ machine
- No of patients transported/ vehicle

Quantitative Vs Qualitative

- Number of OTs vs Number of OTs with aseptic conditions
- Number of staff vs number of competent staff
- No. of people operated vs No. of people whose vision is restored
- No. of people operated vs No. of complications

Group Work: Identify Indicators for Monitoring

Primary Eye Care Centre in Rural areas

CBM decided to support their partners to setup Primary Eye Care Centres in rural areas for reaching the un-served/underserved population by establishing permanent eye care facility for every 50,000 to 75,000 population and ensure that eye care needs of entire range of population are fulfilled by diagnosing, providing treatment, referrals to base hospitals for surgery and acute diagnosis and rehabilitation

CBR Programme

CBM is supporting for CBR program in two taluks of Hassan District. All types of disabilities are eligible for this program.

Abstract data has limited value
- Data should be compared
- Comparison can be:
  - With established plans
  - Longitudinal
  - Cross section

Presentation of Data

- 2500 surgeries in 2006; against 1800 in 2005 -> \(^40\%\)
- Surgeries: 25,000 \(\rightarrow\) 5/25,000 = 0.02%; In 2005 rate 0.034%
- 5 infection cases in 2006

Outpatients Arrival Pattern

23% 77%
### Surgery Acceptance Rate

**Nov 2007**

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Admitted</th>
<th>3 Weeks</th>
<th>1 Month</th>
<th>3 Months</th>
<th>Total</th>
<th>% Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN</td>
<td>2,362</td>
<td>1,177</td>
<td>560</td>
<td>910</td>
<td>116</td>
<td>1,886</td>
</tr>
<tr>
<td>FEB</td>
<td>2,538</td>
<td>1,450</td>
<td>172</td>
<td>123</td>
<td>96</td>
<td>1,866</td>
</tr>
<tr>
<td>MAR</td>
<td>3,177</td>
<td>1,902</td>
<td>182</td>
<td>143</td>
<td>128</td>
<td>2,355</td>
</tr>
<tr>
<td>APR</td>
<td>2,939</td>
<td>1,728</td>
<td>243</td>
<td>123</td>
<td>102</td>
<td>2,196</td>
</tr>
<tr>
<td>MAY</td>
<td>3,325</td>
<td>1,954</td>
<td>223</td>
<td>123</td>
<td>73</td>
<td>2,372</td>
</tr>
<tr>
<td>JUN</td>
<td>3,579</td>
<td>2,122</td>
<td>232</td>
<td>158</td>
<td>60</td>
<td>2,572</td>
</tr>
<tr>
<td>JUL</td>
<td>3,200</td>
<td>1,755</td>
<td>217</td>
<td>122</td>
<td>68</td>
<td>2,162</td>
</tr>
<tr>
<td>AUG</td>
<td>3,356</td>
<td>1,859</td>
<td>168</td>
<td>107</td>
<td>10</td>
<td>2,180</td>
</tr>
<tr>
<td>SEP</td>
<td>2,040</td>
<td>1,071</td>
<td>144</td>
<td>80</td>
<td>0</td>
<td>1,295</td>
</tr>
<tr>
<td>OCT</td>
<td>2,756</td>
<td>1,338</td>
<td>166</td>
<td>33</td>
<td>0</td>
<td>1,761</td>
</tr>
<tr>
<td>NOV</td>
<td>3,468</td>
<td>1,687</td>
<td>175</td>
<td>124</td>
<td>727</td>
<td>22,760</td>
</tr>
</tbody>
</table>

### Problem Solving – Shortage of Beds

**Inpatients Length of Stay**

<table>
<thead>
<tr>
<th>ICD_CODE</th>
<th>ICD_DESCRIPTION</th>
<th>N</th>
<th>Pre-OP</th>
<th>Post-OP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.75N</td>
<td>PHACO WITH ACRYSOFT NATURAL</td>
<td>20</td>
<td>1.2</td>
<td>1.0</td>
<td>2.2</td>
</tr>
<tr>
<td>13.71P</td>
<td>INTRA OULAR LENS INSERTION</td>
<td>54</td>
<td>1.2</td>
<td>1.9</td>
<td>3.1</td>
</tr>
<tr>
<td>13.75</td>
<td>PHACO WITH ACRYSOFT LENS</td>
<td>111</td>
<td>1.2</td>
<td>1.2</td>
<td>2.4</td>
</tr>
<tr>
<td>13.7SP</td>
<td>IOL P.C / PHACO</td>
<td>241</td>
<td>1.1</td>
<td>1.1</td>
<td>2.2</td>
</tr>
<tr>
<td>13.78</td>
<td>CATARACT WITH IOL (MANUAL PHACO)</td>
<td>405</td>
<td>1.3</td>
<td>1.2</td>
<td>2.5</td>
</tr>
<tr>
<td>13.75C</td>
<td>PHACO WITH AUROFOLDABLE</td>
<td>406</td>
<td>1.1</td>
<td>1.1</td>
<td>2.2</td>
</tr>
</tbody>
</table>

### Utilization of Beds

**Nov 2007**

<table>
<thead>
<tr>
<th>Room Type</th>
<th>A</th>
<th>B</th>
<th>ASA</th>
<th>ASA</th>
<th>StT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Beds</td>
<td>34</td>
<td>4</td>
<td>82</td>
<td>82</td>
<td>2</td>
</tr>
<tr>
<td>Jan'07</td>
<td>78%</td>
<td>40%</td>
<td>44%</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>Feb'07</td>
<td>73%</td>
<td>45%</td>
<td>40%</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td>Aug'07</td>
<td>68%</td>
<td>36%</td>
<td>41%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Sep'07</td>
<td>56%</td>
<td>40%</td>
<td>42%</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>Oct'07</td>
<td>53%</td>
<td>34%</td>
<td>40%</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Nov'07</td>
<td>54%</td>
<td>43%</td>
<td>40%</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Dec'07</td>
<td>67%</td>
<td>41%</td>
<td>40%</td>
<td>5%</td>
<td>21%</td>
</tr>
<tr>
<td>Jan'08</td>
<td>72%</td>
<td>45%</td>
<td>45%</td>
<td>5%</td>
<td>21%</td>
</tr>
<tr>
<td>Feb'08</td>
<td>77%</td>
<td>50%</td>
<td>40%</td>
<td>15%</td>
<td>31%</td>
</tr>
<tr>
<td>Mar'08</td>
<td>70%</td>
<td>43%</td>
<td>42%</td>
<td>15%</td>
<td>23%</td>
</tr>
<tr>
<td>Apr'08</td>
<td>77%</td>
<td>50%</td>
<td>50%</td>
<td>45%</td>
<td>40%</td>
</tr>
</tbody>
</table>

### Complication Analysis for QA

#### 3. IntraOperative COMPLICATIONS

<table>
<thead>
<tr>
<th>Grade</th>
<th>No. of Patients Operated</th>
<th>No. of Days</th>
<th>% Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade-1</td>
<td>DESCHEMOT STRIPPING</td>
<td>3</td>
<td>0.97</td>
</tr>
<tr>
<td>Grade-2</td>
<td>POSTIVE PRESSURE - WOUND</td>
<td>2</td>
<td>0.63</td>
</tr>
<tr>
<td>Grade-3</td>
<td>SCLERAL TUNNEL - PREMATURE ENTRY</td>
<td>3</td>
<td>0.97</td>
</tr>
</tbody>
</table>

### Finance

#### Income and Expenditure Statement

<table>
<thead>
<tr>
<th>Income/Expenditure</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary Payment</td>
<td>12,500</td>
<td>13,000</td>
<td>13,500</td>
<td>14,000</td>
<td>14,500</td>
<td>15,000</td>
</tr>
<tr>
<td>Gas &amp; Water</td>
<td>2,000</td>
<td>2,500</td>
<td>3,000</td>
<td>3,500</td>
<td>4,000</td>
<td>4,500</td>
</tr>
<tr>
<td>Electricity Charges</td>
<td>1,500</td>
<td>1,750</td>
<td>2,000</td>
<td>2,250</td>
<td>2,500</td>
<td>2,750</td>
</tr>
<tr>
<td>Repairs &amp; Maintenance</td>
<td>3,500</td>
<td>4,000</td>
<td>4,500</td>
<td>5,000</td>
<td>5,500</td>
<td>6,000</td>
</tr>
<tr>
<td>Total EXPENSES</td>
<td>43,500</td>
<td>49,500</td>
<td>55,500</td>
<td>61,500</td>
<td>67,500</td>
<td>73,500</td>
</tr>
</tbody>
</table>
Year-wise Outpatient Distribution

Complication Score Analysis

<table>
<thead>
<tr>
<th>Region</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madurai Nr.</td>
<td>Dts</td>
<td>7.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Rest TN</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Kerala</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Andhra</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Review 170391 180752 199185 231010 271611 299912 323459 353973 402747 467040

New 157396 167029 197167 226765 258059 267506 278705 296578 356548 408048

Year-wise Outpatient Distribution

Complication Score Analysis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Madurai Nr.</td>
<td>77.5</td>
<td>60</td>
<td>94</td>
<td>87.8</td>
<td>90</td>
<td>52</td>
</tr>
<tr>
<td>Rest TN</td>
<td>140.9</td>
<td>137.5</td>
<td>178.5</td>
<td>156.4</td>
<td>91</td>
<td>81.6</td>
</tr>
<tr>
<td>Kerala</td>
<td>235.7</td>
<td>269.3</td>
<td>312.5</td>
<td>211.9</td>
<td>164.6</td>
<td>97.2</td>
</tr>
<tr>
<td>Andhra</td>
<td></td>
<td>2252</td>
<td>33163</td>
<td>28561</td>
<td>5539</td>
<td>2252</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>10000</td>
<td>20000</td>
<td>30000</td>
<td>40000</td>
<td>50000</td>
</tr>
</tbody>
</table>

Region-wise Outpatient Distribution

Complication Score Analysis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Madurai Nr.</td>
<td>77.5</td>
<td>60</td>
<td>94</td>
<td>87.8</td>
<td>90</td>
<td>52</td>
</tr>
<tr>
<td>Rest TN</td>
<td>140.9</td>
<td>137.5</td>
<td>178.5</td>
<td>156.4</td>
<td>91</td>
<td>81.6</td>
</tr>
<tr>
<td>Kerala</td>
<td>235.7</td>
<td>269.3</td>
<td>312.5</td>
<td>211.9</td>
<td>164.6</td>
<td>97.2</td>
</tr>
<tr>
<td>Andhra</td>
<td></td>
<td>2252</td>
<td>33163</td>
<td>28561</td>
<td>5539</td>
<td>2252</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>10000</td>
<td>20000</td>
<td>30000</td>
<td>40000</td>
<td>50000</td>
</tr>
</tbody>
</table>

Common Problems in Monitoring

- Unclear Objectives
- No Systems in Place
- Poor Data and Information Management
- Unstructured Information Distribution & Use
- Lack of coordination

Challenges

- Implementing Agency -
  - Finding Documents
  - Data Collecting & Report Processing
  - Distribution of Reports on time
  - Tracking of Reports sent
  - Spent but not Accounted
  - Proposed but not yet spent
  - Tracking assets and supplies
  - Adequacy of staffing
  - Coordination & Tracking
  - Relating to Monitoring...

- Supporting Organization -
  - Finding Documents
  - Getting Reports
  - Assessing Status – Activities / Finance

Tasks List

- Collect & Updating Data
- Sending reports
- Follow-up on Activity
- Performance
- Finance

Finance $ Budget

- Received
- Spent
- Released
- Utilized

Equipment Agreed

- Received
- Purchased

Manpower

- Full-time
- Part-time
- Salary

Proposed Changes Details

- Reason
- Justification

Documents Proposal

- Agreement/MoU
- Presentations
- Reports

Activities

- Target
- Achievement

Proposals

- Details
- Reason
- Justification

Access to Information

Challenges

- Implementing Agency -
  - Finding Documents
  - Data Collecting & Report Processing
  - Distribution of Reports on time
  - Tracking of Reports sent
  - Spent but not Accounted
  - Proposed but not yet spent
  - Tracking assets and supplies
  - Adequacy of staffing
  - Coordination & Tracking
  - Relating to Monitoring...

- Supporting Organization -
  - Finding Documents
  - Getting Reports
  - Assessing Status – Activities / Finance

Promys

Tasks

- Tracking
- Reminder

Finance $ Budget

- Released
- Utilized

Equipment

- Agreed
- Supplied
- Purchased

Proposals

- Details
- Reason
- Justification

Supplies

- Agreed supplies
- Received
- Used

Manpower

- Training & Development

Documents

- Proposal
- Agreement/MoU
- Presentations
- Reports

Activities

- Target
- Achievement

Challenges
Noted leadership trainer John E. Jones said:

- "What gets measured gets done"
- "What gets measured and fed back gets done well"
- "What gets rewarded gets repeated."

Feedback

Feedback is information about performance that leads to action to change or maintain performance.

Feedback Importance

- Encouragement to the partner
- Helpful to provide advice
- Partners could understand themselves better
- Encourage partners to look for opportunities to share their experience
- Ensure Proper & focused monitoring -> as it requires thorough understanding of the details received

Feedback would contain

- Performance Indicators
- Targets & Achievements
- Appreciation
- Add value to their MIS
  - Graphs, Trends, %, compare

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Month Target</th>
<th>Performance %</th>
<th>Annual Target</th>
<th>Performance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP</td>
<td>750</td>
<td>700</td>
<td>93%</td>
<td>8000</td>
</tr>
<tr>
<td>Surgery</td>
<td>100</td>
<td>98</td>
<td>99%</td>
<td>1100</td>
</tr>
<tr>
<td>Surgery Acceptance</td>
<td>90%</td>
<td>70%</td>
<td>78%</td>
<td>90%</td>
</tr>
<tr>
<td>Follow-Up Rate</td>
<td>95%</td>
<td>60%</td>
<td>83%</td>
<td>95%</td>
</tr>
<tr>
<td>Cost Recovery</td>
<td>100%</td>
<td>90%</td>
<td>90%</td>
<td>110%</td>
</tr>
<tr>
<td>Bed Utilization</td>
<td>90%</td>
<td>80%</td>
<td>89%</td>
<td>90%</td>
</tr>
</tbody>
</table>
## Performance Report

--- | --- | --- | --- | --- | --- | ---
**Awareness Creation**
- Press meeting | 10 | 23 | 32 | 150 | 27 | 82
- Seminar for doctors | 50 | 83 | 163 | 38 | 92 | 77
- Seminar for others | 71 | 92 | 263 | 300 | 73 | 49
- Poster distribution | 408 | 156 | 564 | 350 | 74 | 21
- Booklet distribution | 408 | 159 | 567 | 391 | 76 | 21
- Pamphlet distribution | 33,336 | 476 | 38,102 | 350 | 74 | 21
- Diabetic fair and exhibitions | 20 | 475 | 495 | 9 | 7 | 7%
- Seminar for Paramedical | 9 | 109 | 109 | 9 | 7 | 7%

### Community Outreach

--- | --- | --- | --- | --- | --- | ---
- Mobile van camps | 24 | 40 | 64 | 25 | 62 | 62%
- Diabetes screening | 12,000 | 19,262 | 31,262 | 20,000 | 19,262 | 96%
- Diabetes screening at Monthly camp | 5,000 | 9,262 | 14,262 | 5,000 | 9,262 | 95%
- Exclusive DR camp | 24 | 25 | 49 | 109 | 110 | 108%

### Tertiary Care

- Laser treatment | 360 | 70 | 106 | 1,200 | 1,200 | 100%

---

**Using Charts**

- [Graph showing performance metrics](Using%20Charts.png)