

Guidelines
Facility Score card for Secondary Health Care Facilities
District and Sub District Hospitals
[To measure Quality of service]
Monthly Reporting

Maximum Score – 30

I. INDICATOR 1: Average score on patient satisfaction Survey for OP. (max- 2)

- **CATEGORY – III** (to be newly introduced in facilities which have not obtained/ or in the process of obtaining NQAS certification)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	ANM/ Staff Nurse(SN) in the OPD	Patient Satisfaction survey

i. Data collection Process

- Patient satisfaction survey format would be filled by patients attending OPD of the institution.
- Survey should be conducted during their exit from the OPD
- Survey should be conducted with at least 2 patients per day, (i.e.) totaling to atleast 60 patients per month.
- Care should be taken to cover the OPD of all the specialities.
- The attender/SN/ANM will read and fill the format for those persons who are not able to read.
- In the Paediatric OPD, the respondents would be the mother/ care taker bringing the child
- The survey formats should be signed by the person responsible for data collection.

ii. Formula: Score of all Patient satisfaction survey reports

Total patients surveyed

Patient satisfaction survey (Max score – 50)

S.No	Attributes	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5
1	Availability of sufficient information in Hospital (Directional & location signages, Registration counter, Laboratory, Radiology Department, Dispensary, etc)					
2	Waiting time at the registration counter					
3	Behavior and attitude of Hospital staff					
4	Amenities in waiting area (chairs, fans, drinking water and cleanliness of bathrooms & toilets)					
5	Attitude & communication of Doctors					
6	Time spent on consulting, examination and counselling					
7	Availability of Lab and radiology investigation facilities within the hospital					
8	Promptness at medicine distribution counter					
9	Availability of prescribed drugs at the hospital dispensary					
10	Your overall satisfaction during the visit to the hospital					

**survey form used for NQAS certification*

Total score:

Note: Tamil version of the above survey format will be used. The staff nurse/ attenders will read the format of those persons who are not able to read

iii. Scoring based on Patient Satisfaction Survey

- Score < 20 = 0
- Score ≥ 20 < 40 = 1
- Score ≥ 40 = 2

iv. Example

- The scores of 10 patients surveyed – 40,35,20,45,50,25,30,45,50,35
- Total = 375
- $375/10 = 37.5$

Since 37.5 lies between ≥ 20 < 40 the score in the score sheet would be 1

II.INDICATOR 2 – Average score on Family Planning (FP) clients survey on Quality counselling on FP methods (max- 2)

- **CATEGORY – III** (to be newly introduced in health facilities)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	ANM/ SN /Counsellor providing Family Planning services	Family Planning client Satisfaction survey

Data collection Process

- Family planning survey format would be filled by the women coming to the obstetric / family planning OP for contraceptive services
- Survey should be conducted with at least one or two women per day, (i.e.) 30 to 60 per month.
- The attender/SN/ANM will read and fill the format for those persons who are not able to read.
- Survey should be conducted during their exit from the OPD
- The survey participant should be women, who have adopted any one of the contraceptive methods during the last six months.
- The survey formats should be signed by the person responsible for data collection.

ii. **Formula:**
$$\frac{\text{Score of all family planning survey reports}}{\text{Total Number of family planning clients surveyed}}$$

iii. Family planning survey format (Max score – 20)

A. *Respectful care* (Max score -6)

1. Were you treated well by the service provider? Yes -1, No-0
2. Were you allowed to ask questions/ clarify your doubts? Yes -1, No-0
3. Were your questions and doubts answered to your satisfaction -? Yes -2, only few answered -1, No-0
4. Did you have privacy in the counselling place? Yes -1, No-0
5. Do you feel that the information will be kept confidential? Yes -1, No-0

B. *Mode of selection of the Contraceptive method adopted* (Max score -8)

1. Were you enquired about your previous experience of adopting any FP methods? Yes -1, No-0
2. Were you asked about the preferred time of your next child? Yes-1, No-0
3. Were you briefed about the different type of contraceptive methods (Condoms, Oral pills, Copper T, Antara, tubectomy, vasectomy) that are available? Yes-2, partially -1, No-0
4. Were you asked about the preferred method of contraception? Yes-1, No-0
5. Did the service provider suggest you to use any specific method? Yes-1, No-0
6. Was your spouse also counselled on the Family Planning method adopted? Yes-1, No-0
7. Who made the final choice of the contraceptive method to be adopted? Me -1, Me and the Service provider -0.5, Service provider - 0

C. Effective use and continuity of the method selected (Max score -6)

1. Were you briefed on the method to use the contraceptive/ explained the procedure which was done – Yes-1, No-0
2. Do you know how the method adopted prevents conception? – Yes-2. Partially-1 No-0
3. Were you informed about the side effects of the contraceptive method used? Yes-1, No-0
4. Were you informed about the way to manage the side effects – Yes-1, No-0?
5. Were you informed on your next follow up visit? Yes -1, No- 0

Total score:

Note: Tamil version of the above survey format will be used. The staff nurse/ attenders will read the format of those persons who are not able to read

iv. Scoring based on scores obtained in the Family planning clients survey

- Score <10 = 0
- Score ≥10 and <15 = 1
- Score ≥15 = 2

v. Example

- The scores of 15 family planning clients surveyed – 15,16,17,8,9,14,13,5,13,15,7,8,14,9,7
- Total = 170
- $170/15 = 11.3$, rounded to 11

Since 11 lies between ≥10 and < 15, score in the score sheet would be 1

III. INDICATOR 3: Percentage of births by Caesarean section among primi gravida (max- 2)
(Applicable only to DH/ SDH where C sections are routinely done)

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	Designated staff nurse from the OG Department	Parturition register

i. Data collection Process:

Existing information

- The Parturition register has information on the list of deliveries with details of name, age, parity of the mother, sex of the new born, method of delivery and the time of birth for all deliveries conducted in the institution. This is consolidated daily and monthly.
- Data on percentage of caesarean sections is currently reported.
- Data on percentage of caesarean sections among primi mothers is not reported at present.

Obtaining new data

- From the parturition register
 - o Data on total number of primi women delivered in the institution during the month could be obtained. This would be the denominator
 - o Data on primi mothers delivered by caesarean section can also be obtained from the same register. This will be the numerator
- We would now be able to calculate the percentage of primi women delivered by caesarean section.

ii. Formula:

$$\frac{\text{No: of primi women delivered by C-section in an institution in a particular month}}{\text{Total number of primi women delivered in the institution during the same month}} \times 100$$

iii. Scoring for score card:

- < 25% - 2
- ≥25% < 40% - 1
- ≥40% - 0

IV. INDICATOR 4: Time to Colposcopy (max- 2)

Percentage of women with positive VIA undergoing follow-up Colposcopy within 6 weeks of VIA test

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	NCD staff nurse of the DH/SDH	New follow up NCD register, which would be an abstract of the existing follow up register.

i.Data collection Process:

Existing information

- NCD screening register is available in all the secondary health facilities. The list of women who have undergone VIA along with the results of VIA testing are available in this register
- Details of women found to be positive for VIA is now brought to the NCD follow up register. There would be tentatively around 5 to 7 VIA positive cases per month
- The date and report of colposcopy is entered in the follow up register along with the other details for the women.
- Monthly consolidation of number of VIA positive and number of colposcopies done is available every month, however data on individual follow up is missing.

Obtaining new data

- Name of the woman, date found to be VIA positive and other relevant details will be entered in a separate register. The date on which she will complete six weeks will be noted. She would be followed up for a period of six weeks.
- Date on which the colposcopy was done would be entered in the register
- At the end of each month the Staff Nurse, would consolidate the list of women who have completed 6 weeks following VIA during the current month. This would be the denominator
- Information of women who have undergone colposcopy among those who have completed 6 weeks during the current month is also available in the register. This would be the numerator.
- We would now be able to calculate the number of women VIA positive, who have undergone colposcopy within six weeks.

ii.Formula: No: of women who had undergone follow up colposcopy within the same month of VIA test
 -----x100
 No: of women found positive by VIA and had completed six weeks in an institution in a particular month

Scoring for score card:

- ≥90% - 2

- $\geq 70\% < 90\%$ - 1
- $< 70\%$ - 0

V.INDICATOR – 5: Time to USG/Mammogram (max- 2)

Percentage of women who tested positive with Clinical Breast Examination (CBE) screened with USG/ mammogram within 6 weeks

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	NCD staff nurse of the DH/SDH	New NCD follow up register, which would have an abstract of the existing follow up register

I. Data collection Process:

Existing information

- NCD screening register is available in all the secondary health facilities. The list of women who have undergone Clinical breast examination (CBE) along with the results are available in this register
- Details of women found to be positive for CBE is now brought to the NCD follow up register. There may be around 3 to 4 cases per month
- The date and report of ultrasonogram/ Mammogram is entered in the follow up register along with the other details for the women.
- Monthly consolidation of number of women with positive CBE findings and number of women who had undergone USG/ Mammogram is available every month, however data on individual follow up is missing.

Obtaining new data

- Name of the woman, date found to have positive findings on CBE and other relevant details will be entered in a separate register. The date on which she will complete six weeks will be noted. She would be followed up for a period of six weeks.
- Date on which the USG/Mammogram was done would be entered in the register
- At the end of each month the SN, would consolidate the list of women who have completed 6 weeks following positive findings on CBE during the current month. This would be the denominator

- Number of women who have undergone USG/Mammogram among those who have completed 6 weeks during the current month is also available in the register. This would be the numerator.
- We would now be able to calculate the number of women with positive findings on CBE, who have undergone USG/ Mammogram within six weeks.

ii. Formula:
$$\frac{\text{No: of Women who tested positive with CBE screened with USG/ mammogram within 6 weeks}}{\text{No: of women found positive by CBE and had completed six weeks in an institution in a particular month}} \times 100$$

iii. Scoring for score card:

- $\geq 90\%$ - 2
- $\geq 70\% < 90\%$ - 1
- $< 70\%$ - 0

VI. INDICATOR - 6 Microbiological surveillance reporting positive in Operation Theaters (OT) (max- 2) (Applicable only to DH/ SDH where OTs are functional)

Microbiological surveillance refers to OT swab tests only

- **CATEGORY – I** (Available now)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	SN in charge of OT	OT swab register

i. **Data collection Process:** Data can be obtained from the existing OT swab register

* OT swabs should be collected for testing every month

ii. **Formula:**
$$\frac{\text{No: of microbiological surveillance in OT found positive for pathogenic organisms in the month}}{\text{No: of functioning OTs during the month}}$$

iii. Scoring for score card

- Value obtained is 0, then the score is 2

- If value obtained is ≥ 1 , then the score is 0

VII.INDICATOR – 7: Surgical Site infection rate (max- 2) (Applicable only to DH/ SDH where OTs are functional)

Criteria: Surgical site infection refers to patients who had developed surgical site infection (SSI) within 30 days following surgery

- **CATEGORY – I** (Available now)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	SN in charge of OT	Post-op wound follow up register

i. Data collection Process: Data can be obtained from the existing post-op wound follow up register

ii. Formula –

$$\frac{\text{Number of patients who had SSI within 30 days following surgery}}{\text{No: of surgeries performed during the month}} \times 100$$

Scoring for score card:

- < 15% - 2
- $\geq 15\% < 20\%$ - 1
- $\geq 20\%$ - 0

VII. INDICATOR – 8: Drug stock out rate in OPD (max- 2)

Drug stock out against the essential drug list for OPD. Number of drugs not available refers to the non-availability of a particular essential drug even on a single day.

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Structural indicator	Chief Pharmacist / Pharmacist	Drug Main stock /Sub stock register

		and stock out register.
--	--	-------------------------

i. Data collection Process:

Existing information

- TNMSC has got a list of essential drugs which is available. Each health facility prepares its own list of essential drug list for OPD from the list of drugs available in TNMSC based on the services provided.
- The pharmacist maintains the main/ sub stock register, so he is aware of the number of drugs that are not available in the DH / SDH, He prepares a list and reports to the Medical officer and also follows up with TNMSC to procure the medicine. But currently, reporting system specifying the name of drugs and number of days it was stock out is not available.

Obtaining new data

Data of the name of the essential drug and the number of days it was available can be entered in a separate register (stock out register) and this would be the numerator. The number of drugs in the essential drug list becomes the denominator. Data on drug stock out can be now obtained.

Formula:

$$\frac{\text{Number of drugs in the essential drug list not available in a month in the facility}}{\text{Total number of drugs in the essential drug list}} \times 100$$

Scoring for score card:

- All available during the month – 2
- ≤3% of the drugs are not available -1
- >3% are not available -0

IX. INDICATOR - 9: Critical Equipment functionality in ICU/ HDU/Casualty (max- 2)

Percentage of Functional critical equipment in Intensive care unit (ICU)/High Dependency Unit / Casualty (in smaller institutions)

Critical equipment refers to 1. Ventilator, 2. Suction apparatus 3. Pulse oximeter/ Multi channel monitor

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Structural indicator	Chief Pharmacist/ Pharmacist / Medical Stores officer	Equipment register & Equipment down time register.

i. Data collection Process:

Existing information

- Data on the number of equipment available in the ICU/HDU & casualty is available in the equipment register. (If an equipment is condemned, it is entered in the same register and is subtracted from the total number provided).
- A down time register is maintained in which the pharmacist/ MSO maintains details of the name of the equipment, the number of days it was not functional and the date it was repaired and made functional.
- Information on down time of the equipment is available, yet not reported.

Obtaining new data

- Data of the name and number of the critical equipment available in the ICU/HDU/ Casualty is available in the stock register. This would be the denominator.
- The name and functionality of the equipment can be obtained from the down time register. Number available minus number not functional will give the data on the number of equipment in working condition. This would be the numerator.
- From this we would be able to calculate the critical equipment functionality.

ii. Formula:
$$\frac{\text{Total number of critical equipment functional}}{\text{Total number of critical equipment available (those specified)}} \times 100$$

iii. Scoring for score card:

- 100% - 2
- $\geq 70\%$ to $< 100\%$ - 1
- $< 70\%$ - 0

X. INDICATOR -10: Average score on provider satisfaction (max- 2)

- **CATEGORY – III** (to be newly introduced in health facilities)

Indicator - Type	Person responsible for collecting data	Source of data
Process indicator	Self-reporting	Provider Satisfaction survey

i. Data Collection Process: Provider's satisfaction survey will be conducted using a structured provider's satisfaction survey format. Tamil version of the format will be made available for staff who prefer it in Tamil. Atleast 1/4th of the hospital staff should be covered every month.

ii Formula:
$$\frac{\text{Score of all provider satisfaction survey reports}}{\text{Total number of providers surveyed}}$$

iii. Provider Satisfaction Survey Format

S.No	Attributes	Very unsatisfactory 1	Moderately unsatisfactory 2	Moderately satisfactory 3	Satisfactory 4	Very satisfactory 5
1	Appropriate trainings necessary for the job has been given					

2	Adequate opportunities are given to develop one's own professional skill					
3	Cooperation and responsiveness of the co-workers and senior officials					
4	Safety measure in place for protection of service providers					
5	• Ability to schedule surgeries, procedures, tests and special orders within a reasonable time (<i>applicable to doctors & nurses only</i>) • Ability to plan & execute your work within a reasonable time (<i>applicable to other staff</i>)					

6	Availability of appropriate infrastructure & equipment to meet the needs of the work					
7	- Promptness and accuracy in processing and reporting laboratory and radiology results <i>(applicable to doctors & nurses only)</i> - Promptness in providing consumables & equipment <i>(applicable to other staff)</i>					
8	Your work load related to the time you have					
9	Timeliness in which decisions made in the meetings are implemented					
10	Your overall satisfaction with your job					

Total score:

iv.Score in the score card – based on scores of the providers satisfaction survey

- Score < 20 = 0
- Score ≥ 20 < 40 = 1
- Score ≥ 40 = 2

v. Example

- The scores of 10 provider surveyed – 40,35,20,45,50,25,30,45,50,35
- Total = 375
- $375/10 = 37.5$

Since 37.5 lies between ≥ 20 < 40 the score in the score sheet would be 1

XI.INDICATOR -11: Critical Equipment down time in ICU/HDU/ Casualty [in Smaller institutions] (max- 3 (1+1+1))

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Structural indicator	Chief Pharmacist/ Pharmacist / Medical Stores officer	Equipment down time register.

i. Data collection Process:

Existing information

- A down time register is maintained in which the pharmacist/ MSO/BME maintains details of the name of the equipment, the number of days it was not functional and the date it was repaired and made functional.
- Information on down time of the equipment is available, yet not reported.

Obtaining new data

- Data on the number of days a particular equipment was not in working condition can be obtained from the down time register. From this you will know the number of days the equipment was in working condition and this would be numerator .
- The total number of days in a month is known, this would be the denominator
- Equipment downtime for each of the three critical equipment can be calculated from this.

Critical equipment chosen for scoring – 1, Ventilator, 2. Suction apparatus & 3. Pulse oximeter and Multi-channel monitor (whichever is available or both)

iii. Scoring for each individual equipment

1. Ventilator (Max score =1)

ii. Formula - Number of days a ventilator

was in working condition in a month

$$\frac{\text{-----}}{\text{Total number of days in a month}} \times 100$$

Score for one ventilator

- 100 %- 1
- >75 %- 0.5
- ≤25 %- 0

iv. Example:

(Larger institutions may have more than one of each of this equipment)

Situation : A DH has 5 ventilators, among which 3 were in working condition through the month, one was functional for only 25 days and the other for 20 days

From the above situation, the calculation for the scores will be as follows :

- Three ventilators were functional on all days then the percentage score each of the ventilator is 100% (ie) 30 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to 100 % =1, Now the score for each of the ventilator is 1. Therefore the score for the 3 ventilators is =1+1+1
- One ventilator was functional for 25 days then the percentage score for that equipment is 83% (ie) 25 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to or above 75 % =0.5, Now the score for that ventilator is 0.5
- The other ventilator was functional for 20 days then the percentage score for that equipment is 66% (ie) 20 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value less than 75 % =0, Now the score that ventilator is 0

Now the score for ventilators is =
$$\frac{\text{Total scores obtained}}{\text{Total number of ventilators}} = \frac{1+1+1+0.5+0}{5} = \frac{3.5}{5} = 0.7$$

Now the score for the ventilator is 0.7 out of 1.

2.Suction Apparatus (Max score =1)

ii. Formula - Number of days a Suction Apparatus
was in working condition in a month

$$\frac{\text{-----}}{\text{Total number of days in a month}} \times 100$$

Score for one Suction Apparatus

- 100 %- 1
- >75 %- 0.5
- ≤25 %- 0

iv. Example:

(Larger institutions may have more than one of each of this equipment)

Situation: A DH has 3 Suction Apparatus, among which 2 were in working condition through the month, one was functional for only 20 days

From the above situation, the calculation for the scores will be as follows :

- Two Suction Apparatus were functional on all days then the percentage score each of the Suction Apparatus is 100% (ie) 30 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to 100 % =1, Now the score for each of the Suction Apparatus is 1. Therefore the score for the 2 Suction Apparatus is =1+1
- The other Suction Apparatus was functional for 20 days then the percentage score for that equipment is 66% (ie) 20 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value less than 75 % =0, Now the score that Suction Apparatus is 0

Now the score for Suction Apparatus is = Total scores obtained

$$\frac{\text{-----}}{\text{Total number of Suction Apparatus}} = \frac{1+1+0}{3} = 0.6$$

Now the score for the Suction Apparatus is 0.6 out of 1.

3.Pulse oximeter and Multi-channel monitor (Max score =1)

ii. Formula - Number of days a Pulse oximeter /

Multi-channel monitor was in working condition in a month

$$\frac{\text{-----}}{\text{-----}} \times 100$$

Total number of days in a month

Score for one Pulse oximeter /Multi-channel monitor

- 100 %- 1
- >75 %- 0.5
- ≤25 %- 0

iv. Example:

(Larger institutions may have more than one of each of this equipment)

Situation: A DH has 2 Pulse oximeter and 3 Multi channel monitor, among which 2 Pulse oximeter & 1 Multi channel monitor were in working condition through the month, one Multi channel monitor was functional for only 25 days and the other multi-channel monitor for 20 days

From the above situation, the calculation for the scores will be as follows :

- 2 Pulse oximeter and one multi-channel monitors were functional on all days then the percentage score each of the Pulse oximeter/Multichannel monitor is 100% (ie) 30 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to 100 % =1, Now the score for each of the pulse oximeter and one multi-channel monitor is 1. Therefore the score for the 2 Pulse oximeter and 1 multi-channel monitor is =1+1+1
- One Multi channel monitor was functional for 25 days then the percentage score for that equipment is 83% (ie) 25 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to or above 75 % =0.5, Now the score for that Multichannel monitor is 0.5
- The other Multichannel monitor was functional for 20 days then the percentage score for that equipment is 66% (ie) 20 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value less than 75 % =0, Now the score that Multichannel monitor is 0

Now the score for Pulse oximeter = Total scores obtained
& Multi channel meter is
$$\frac{1+1+1+0.5+0}{5} = 0.7$$

Total number of pulse oximeter
& Multichannel meter

Now the score for the Pulse oximeter and Multi-channel monitor is 0.7 out of 1.

Now the total scoring for this indicator is

- **Ventilator – 0.7**
- **Suction apparatus – 0.6**

- **Pulse oximeter & Multi channel monitor – 0.7**

Therefore the total score for this indicator is $0.7 + 0.6 + 0.7 = 2$ out of 3

XII. INDICATOR -12: Critical lab Equipment functionality (max- 2)

Critical lab equipment specified - 1. Electrolyte analyser, 2. Fully automated/semi auto analyser & 3. Cell counter

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Structural indicator	Chief Pharmacist/ Medical Stores officer /Lab technician	Equipment down time register.

i. Data collection Process:

Existing information

- Data on the number of equipment available in the laboratory is available in the equipment register. If an equipment is condemned, it is entered in the same register and is subtracted from the total number provided.
- A down time register is also maintained in which the pharmacist/ MSO/lab technician maintains details of the name of the equipment, the number of days it was not functional and the date it was repaired and made functional.
- Information on the functionality of the equipment is not reported.

Obtaining new data

- Data of the name and number of the critical equipment in the Laboratory is available in the stock register. This would be the denominator.
- The name and number of equipment which are not in working condition can be obtained from the down time register. Number available minus number not functional will give the data on the number in working condition. This would be the numerator.
- From this we would be able to calculate the critical lab equipment functionality.

ii. Formula

$$\frac{\text{Total number of critical equipment functional*}}{\text{-----}} \times 100$$

Total number of critical equipment available

*Functional refers to - in working condition

iii. Scoring for score card:

- 100% - 2
- $\geq 70\%$ to $< 100\%$ - 1
- $>70\%$ - 0

XIII. INDICATOR 13: Critical lab Equipment down time (max-3)

Critical lab equipment includes 1. Electrolyte analyser, 2. Fully automated/semi auto analyser & 3. Cell counter (**Maximum score of the indicator is 3**)

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Structural indicator	Chief Pharmacist/ Medical Stores officer / Lab Technician	Equipment down time register.

i. Data collection Process:

Existing information

- A down time register is maintained in which the pharmacist/ MSO/ Lab Technician maintains details of the name of the equipment, the number of days it was not functional and the date it was repaired and made functional.
- Information on down time of the critical lab equipment is available, yet not reported.

Obtaining new data

- Data on the number of days a particular lab equipment was not in working condition can be obtained from the down time register. From this the number of days the equipment was in working condition can be calculated and this would be the numerator.
- Equipment downtime for each of the three critical equipment can be calculated from this.

1. Electrolyte analyzer (Max score =1)

ii. Formula - Number of days an Electrolyte analyser

was in working condition in a month

$$\frac{\text{-----}}{\text{Total number of days in a month}} \times 100$$

Score for one Electrolyte Analyser

- 100 %- 1
- >75 %- 0.5
- ≤ 25 %- 0

iv. Example:

(Larger institutions may have more than one of each of this equipment)

Situation : A DH has 5 Electrolyte analysers, among which 3 were in working condition through the month, one was functional for only 25 days and the other for 20 days

From the above situation, the calculation for the scores will be as follows :

- Three Electrolyte analyzers were functional on all days then the percentage score each of the Electrolyte analyser is 100% (ie) 30 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to 100 % =1, Now the score for each of the Electrolyte analyser is 1. Therefore the score for the 3 Electrolyte analysers is =1+1+1
- One Electrolyte analyzer was functional for 25 days then the percentage score for that equipment is 83% (ie) 25 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to or above 75 % =0.5, Now the score for that Electrolyte analyzer is 0.5
- The other Electrolyte analyzer was functional for 20 days then the percentage score for that equipment is 66% (ie) 20 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value less than 75 % =0, Now the score that Electrolyte analyzer is 0

$$\begin{array}{lcl} \text{Score for Electrolyte =} & \text{Total scores obtained} & 1+1+1+0.5+0 \\ \text{analysers} & \text{-----} & \text{-----} \\ & \text{Total number of Electrolyte analysers} & 5 \end{array} = 0.7$$

Now the score for the Electrolyte analyser is 0.7 out of 1.

2. Fully Automated & Semi Auto Analyser

ii. **Formula** - Number of days a Fully automated analyzer /

Semi auto analyzer was in working condition in a month

$$\frac{\text{-----}}{\text{Total number of days in a month}} \times 100$$

Score for one Fully automated analyzer /Semi auto analyzer

- 100 %- 1
- >75 %- 0.5
- ≤25 %- 0

iv. Example:

(Larger institutions may have more than one of each of this equipment)

Situation : A DH has 2 Fully automated analyzer and 3 Semi auto analyzer, among which 2 Fully automated analyzer & 1 Semi auto analyzer were in working condition through the month, one Semi auto analyzer was functional for only 25 days and the other semi auto analyzer for 20 days

From the above situation, the calculation for the scores will be as follows :

- 2 Fully automated analyzer and one semi auto analyzers were functional on all days then the percentage score each of the Fully automated analyzer/Semi auto analyzer is 100% (ie) 30 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to 100 % =1, Now the score for each of the Fully automated analyzer and one semi auto analyzer is 1. Therefore the score for the 2 Fully automated analyzer and 1 semi auto analyzer is =1+1+1
- One Semi auto analyzer was functional for 25 days then the percentage score for that equipment is 83% (ie) 25 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to or above 75 % =0.5, Now the score for that Semi auto analyzer is 0.5
- The other Semi auto analyzer was functional for 20 days then the percentage score for that equipment is 66% (ie) 20 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value less than 75 % =0, Now the score that Semi auto analyzer is 0

$$\begin{array}{l} \text{Score for Fully automated analyzer} = \text{Total scores obtained} \\ \text{\& Semi auto analyzer} \end{array} \quad \begin{array}{l} 1+1+1+0.5+0 \\ \text{-----} = \text{-----} = 0.7 \\ \text{Total number of Fully} \quad 5 \\ \text{Automated \& Semi auto analyzer} \end{array}$$

Now the score for the Fully automated analyzer and Semi auto analyzer is 0.7 out of 1.

Cell counter

3. Cell counter (Max score =1)

ii. Formula - Number of days a Cell counter

was underworking condition in a month

$$\frac{\text{-----}}{\text{Total number of days in a month}} \times 100$$

Score for one Cell counter

- 100 %- 1
- >75 %- 0.5
- ≤ 25 %- 0

iv. Example:

(Larger institutions may have more than one of each of this equipment)

Situation: A DH has 3 Cell counter, among which 2 were in working condition through the month, one was functional for only 20 days

From the above situation, the calculation for the scores will be as follows :

- Two Cell counter were functional on all days then the percentage score each of the Cell counter is 100% (ie) 30 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value equal to 100 % =1, Now the score for each of the Cell counter is 1. Therefore the score for the 2 Cell counter is =1+1
- The other Cell counter was functional for 20 days then the percentage score for that equipment is 66% (ie) 20 days divided by 30 days and multiplied by 100 to express as a percentage. As per the scoring, any value less than 75 % =0, Now the score that Cell counter is 0

$$\text{Score for Cell counter} = \frac{\text{Total score obtained}}{\text{Total number of cells counter}} = \frac{1+1+0}{3} = 0.6$$

Now the score for the Cell counter is 0.6 out of 1.

Now the total scoring for this indicator is

- Electrolyte Analyser – 0.7
- Fully automated & Semi auto analyzer – 0.7
- Cell counter – 0.6

Therefore, the total score for this indicator is $0.7 + 0.7 + 0.6 = 2$ out of 3

XIV. INDICATOR -14: ICU readmission rate (max- 2)

Rate of ICU readmission within 24hrs after transfer out from ICU .

(Applicable only to DHs)

- **CATEGORY – II** (new data obtained from the existing registers)

Indicator - Type	Person responsible for collecting data	Source of data
Outcome indicator	Designated staff nurse of the ICU	ICU admission register

I. Data collection Process:

ICU/HDU admission register has data of the patients admitted in the ICU during the month. Patients who were readmitted in the ICU after transfer out will also be available in the same register, but will not be specified as re -admission. Readmission rates are not reviewed as of now.

Information of readmissions can be obtained from the same register and this would be the numerator, while the total number of cases admitted in the ICU will be the denominator.

ii. Formula - Number of patients who were readmitted in the ICU within 24hrs after transfer out within in a month

----- X100

Total number of patients admitted in the ICU during the same month

iii. Scoring for score card:

- <5% - 2
- ≥ 5 <15% - 1
- $\geq 15\%$ - 0

iv. Example:

Situation: 48 cases were admitted in the ICU in a month. Of which 2 patients were transferred out to ward and were then admitted again within 24 hrs after transfer out.

The score calculation may be as follows:

Now the numerator would be 2 (re-admitted patients)

The denominator would be 48 (total cases including the 2 re-admitted patients)

So, the readmission rate would be $2/48 \times 100 = 4.2\%$. Since 4.2% is less than 5%, the score would be 2.
