

EVALUATION TEST
Competency 3
(Data Quality)

Instructions to the participants:

Please circle the correct response. Chose the most appropriate response where more than one response seems applicable. This is an open book test, you can make use of various training material that has been provided to you. Each question carries 1 point.

Total questions: 20

Maximum Score: 40

Time allotted: 30 min

Name: _____

Designation: _____

Office Address: _____

Phone no.: _____

Date: _____

Pre-training

Post-training



SET: 3A

- 1) Which attributes of data quality are to be checked and improved upon by every HMIS Manager?
 - a) Completeness of reporting
 - b) Timeliness of reporting
 - c) Accuracy of reporting
 - d) Relevance of data element collected
 - e) All of the above except D

- 2) All the following statements are correct except...
 - a) Validity: data measures what it intends to measure.
 - b) Reliability: mistakes in data aggregation and computation.
 - c) Consistency: data will be the same when measured on repeated times or by different persons.
 - d) Accuracy : correctness of the data collected

- 3) “Relevance of data collected” is an important dimension of data quality. Relevance means that the data collected should...
 - a) Reflect government priorities
 - b) Reflect what services are provided
 - c) Help in decision making and planning
 - d) All of the above

- 4) Why completeness is part of data quality?
 - a. If required data are missing then we under-estimate the performance or status and appropriate actions cannot be taken.
 - b. Essential to monitor provision of all services and to provide resources needed to improve service delivery/provision throughout the geographical areas and population covered.
 - c. To monitor both public and private sector for getting a total picture of the health system
 - d. All of the above

- 5) To improve data completeness which of the following needs to be done?
 - a. Reporting unit- completeness: Every report should indicate % of reporting units whose data has been included.
 - b. Data completeness: A feedback should be given to each reporting unit indicating % of essential data elements of a format that were reported on.

- c. Ask private sector units to report regularly using the same form and aggregate this at the block or district level as appropriate.
 - d. All the above.
- 6) 'Reporting unit completeness' report of District X shows that 20% of sub-centers and 3 PHCs have not reported. While the District is in the process of securing the data it can use available data by...
- a. Subtracting from the denominator populations of the areas served by the non-reporting facilities.
 - b. Extrapolating the final district data elements by a multiplier that compensates for the missing facilities.
 - c. Can estimate by either A and B provided above it is acknowledged during decision making that equity in access may not be the same.
 - d. Cannot estimate any indicator until data gaps are filled.
- 7) You visited Facility A in your block and found that the facility was reporting 'Number of women having hemoglobin <math><11\text{gm \%}</math> (tested cases)'. However, you also found that haemoglobinometer has been out of order for last 3 months. What was the basis of reporting and what would you advise them? Circle correct response (a-d) given at the bottom.
- I. Reporting anemia was based on mere clinical examination of nails and eyes for pallor. This is acceptable and may be continued.
 - II. Reporting anemia was based on mere clinical examination of nail and eyes. This is unacceptable.
 - III. Probably pregnant women who got Hb tested from private facilities were reported. This should not be included in the reporting form.
 - IV. Probably pregnant women who got Hb tested from accredited private labs were reported. This is acceptable.

Chose correct answer:

- a. i and iii
 - b. ii and iii
 - c. ii and iv
 - d. i and iv
- 8) You visited Facility X and found that they were reporting 'Number of women having hemoglobin <math><11\text{gm \%}</math>'. However, Sahli's apparatus was broken/ unavailable and ANMs were reporting based on clinical assessment. What component of data quality will be affected by this reporting? More than one correct answer can be chosen.
- a. Accuracy of data will be affected as data would have poor validity.
 - b. Timeliness of data will be affected, as this would take longer.

- c. Consistency of data will be affected as different persons would make different readings.
- d. Relevance as measurement of anemia is not useful for planning.
- e. Completeness

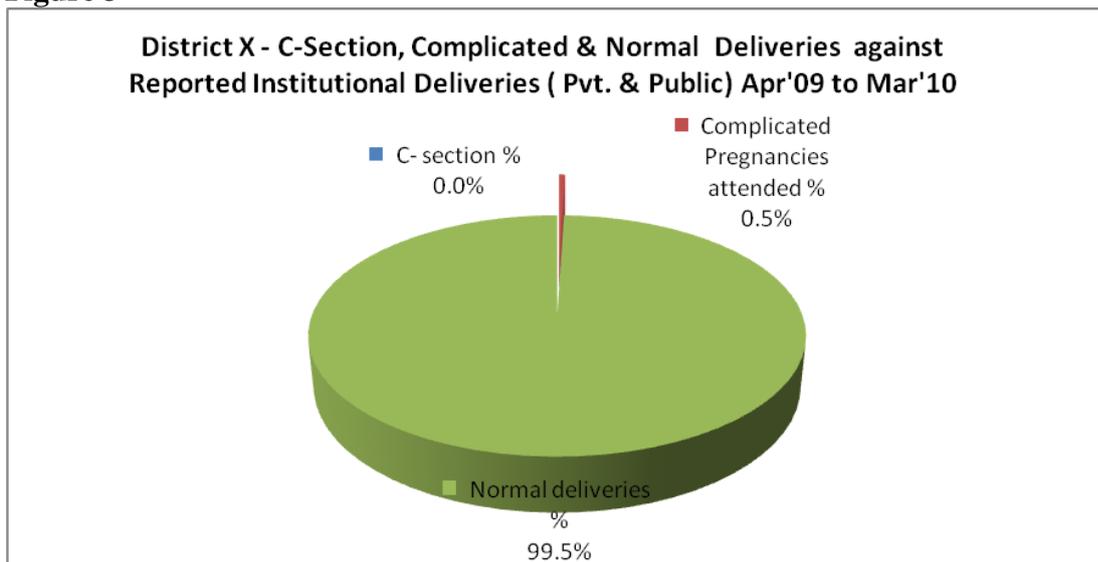
9) Wet mount test is available in the CHC. However, tests are not being conducted because of lack of skills. What would you write in the format while reporting for the data element “wet mount conducted at the facility”?

- a. Leave data cell blank
- b. Write zero against the data element
- c. Write any number
- d. Write number of patients diagnosed (clinically) for RTI

10) IUD removals for District A are reported zero for last six months. What is the most likely reason? All are correct, except...

- a. There is no column/space in the registers to capture this data element, however reporting formats have this column.
- b. No IUDs have been removed in the last six months.
- c. ANM knew that some of the IUD has been removed by the women themselves, but there is no space and time (in her work schedule) where she would review users and write it down.
- d. No IUDs were inserted therefore no IUDs were removed.

Figure 3



- 11) Examine Figure 3. District X had only 0.5% of complicated pregnancies and had no c-sections. If this is a data quality error, what could be the possible reason?
- Facilities doing C- section are not reporting this data element
 - No facility in the district is attending complicated pregnancies
 - Private facilities attend complications but there is no system of collecting data from them.
 - All of the above
- 12) When we send district data the higher authority analyzes data and points out statistical outliers* the action required is...

**(Statistical Outliers: Data that do not conform to the trend in statistical terms i.e., they lie more than 1.5 SDs from the plot of most of the data received for a specific data element over months).*

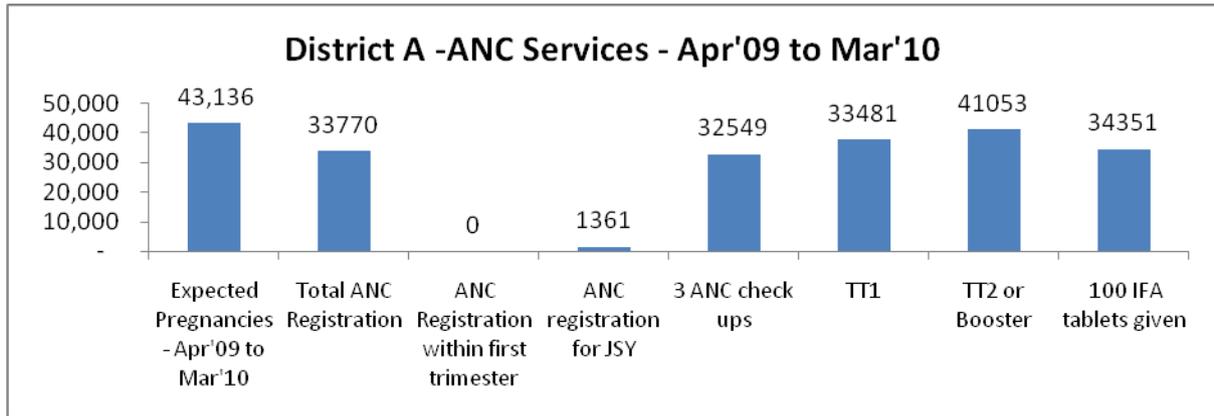
- These data are wrong and need to be corrected.
 - These data are correct and indicate need for public health action.
 - These data need to be examined closely to determine if data are wrong and need improvement in data collection and flow or if data are correct and appropriate public health management action needs to be taken.
 - Officers know the range of numbers within which they are expected to report.
- 13) A district HMIS officer is informed by a higher authority that following data had statistical outliers (all had values lower than expected values):
- DPT 1, 2 and 3 reduced but other immunization parameters are usual.
 - Total ANC: both registration and ANC 3 going down in a district in months of pulse polio or catch up measles campaigns.
 - Home deliveries by SBA decreasing.
 - Number of C-sections decreasing.

He was asked to look for facilities reporting incompletely or failing to report. Officer checked and responded that the problem was with the programme rather than with the data. What other problems possibly result in a poor report? Please elaborate.

- 14) Validation rules are rules run by the computer to check common data entry errors. Following are correct validation rules, except...

- a. Number of C-sections should be less than or equal to number of deliveries.
 - b. Total number of ANCs given TT1 cannot be more than the total number of 3 ANCs.
 - c. Total number of BCG given should be equal or less than to live births.
 - d. Delivery discharged under 48 hours should be less than or equal to deliveries conducted at facility
- 15) Validation rules are rules that compare two data elements based on a logical relationship. Whereas, statistical outliers compare data within the same data element based on a statistical relationship. The benefits of using validation rules are all of the following, *except...*
- a. Obvious data entry errors are flagged so that data entry operator can check and correct errors.
 - b. Violation of validation rule helps Data Manager to identify and attend to systemic errors in data collection.
 - c. Violation of validation rule suggests possible problems with programme implementation. It also indicates why particular event is occurring less or more times than what would be logically expected.
 - d. Violation of validation rule should be corrected so that data presented are consistent with expectations.
- 16) If there are no AEFI cases in your district what advice would you give to your field level staff while reporting AEFI
- a. Leave the box blank to indicate there are no cases of AEFI reported
 - b. Put zero to indicate that there are no cases of AEFI reported
 - c. Fill it with any number which looks reasonable to avoid questions
 - d. None of the above
- 17) Which of the following is not a valid rule/query to assess accuracy of data quality?
- a. Number of women discharged after delivery <48hrs should be greater than total number of deliveries conducted at facility
 - b. Measles dose given should be greater than or equal to Full Immunization
 - c. Newborns breastfed within 1 hour are less than total live births
 - d. Women receiving first (within 48 hour) Postpartum check-up equal to total Live births.

Figure 1



- 18) Examine data in Figure1 and indicate the data element which is highly under reported.
- Total ANC Registration
 - ANC Registration within first trimester
 - ANC Registration for JSY
 - Total IFA tablets given
- 19) Examine data in Figure1 and indicate the data element which is not being reported.
- Total ANC Registration
 - ANC Registration within first trimester
 - ANC Registration for JSY
 - Total IFA tablets given
- 20) Based on your response to Q19 specify the possible reasons for non-reporting of this data element? All statements are correct except...
- Women don't get registered in first trimester
 - Recording registers do not have space to record this data element
 - There is lack of understanding of data element among ANMs
 - There is a mismatch between the terms used in recording (early registration) and reporting register (1st trimester)