dhis2 academy

Data Quality Review – The Annual Report

Data Quality online

Outline – Data Quality Report

1. Annual report using WHO DQ Tool

(Has your country installed it and customised it?

Who is responsible for the customisation?)

- Purpose of this report – who needs this and why do they need it?
- Actions taken – result in demonstrable changes?

2. Reviewing the (actual) data and making corrections

- Checking for outliers and obvious data errors and correcting
- Check for missing months of data and 'filling' them in

Annual report using WHO DQ Tool

Annual Report - output

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SUMMARY

Domain 1 - Completeness

1a: Completeness of facility reporting

The percentage of expected reports that have been entered and completed.

Data set	Overall score	District with divergent score	
		Number	**Percent**
Child Health Reporting rate	83.6%	8	61.5%

1b: Timeliness of facility reporting

The percentage of expected reports that have been entered and completed on time.

Data set	Overall score	District with divergent score	
		Number	**Percent**
Child Health Reporting rate on time	83.6%	4	30.8%

1c: Completeness of indicator data

Reports where values are not missing. If zeros are not stored, zeros are counted as missing.

Indicator	Overall score	District with divergent score	
		Number	**Percent**
Measles doses given Fixed, <1y	73.7%	13	100%
Penta1 doses given Fixed, <1y	79.9%	10	76.9%

Annual Report – now what?

- Is this report helpful?

- If so – for who?

- What guidance does this report provide?

- It is a guarantee that the data is correct, complete, consistent and timely?

Data Quality Review/data cleaning in South Sudan

- Data review and cleaning done in South Sudan (using DHIS1.4)

- Done for 2012/2013/2014 data

Why bother to clean data?

- Poor quality data is generally not usable
  - ❖ all that effort for no return
- A few obvious data entry errors can be viewed as a sign that **all** the data is untrustworthy
- Correcting obvious errors makes the **data usable and acceptable**
- In spite of validation checks and quarterly reviews – data errors will creep in and frequently remain undetected/uncorrected
- South Sudan using DHIS1.4 at the time of the data cleaning process

Background in South Sudan

- HMIS/ Minimum Indicator based dataset implemented in 2011 **with 2 pages**

- Decision made in 2013 to clean the data for report for 2012 Annual Report

- Done at state level (10 states) with some states combined for convenience

- Present was the State M&E Officer, and the County M&E Officer for each county – and they took the responsibility for correcting the data

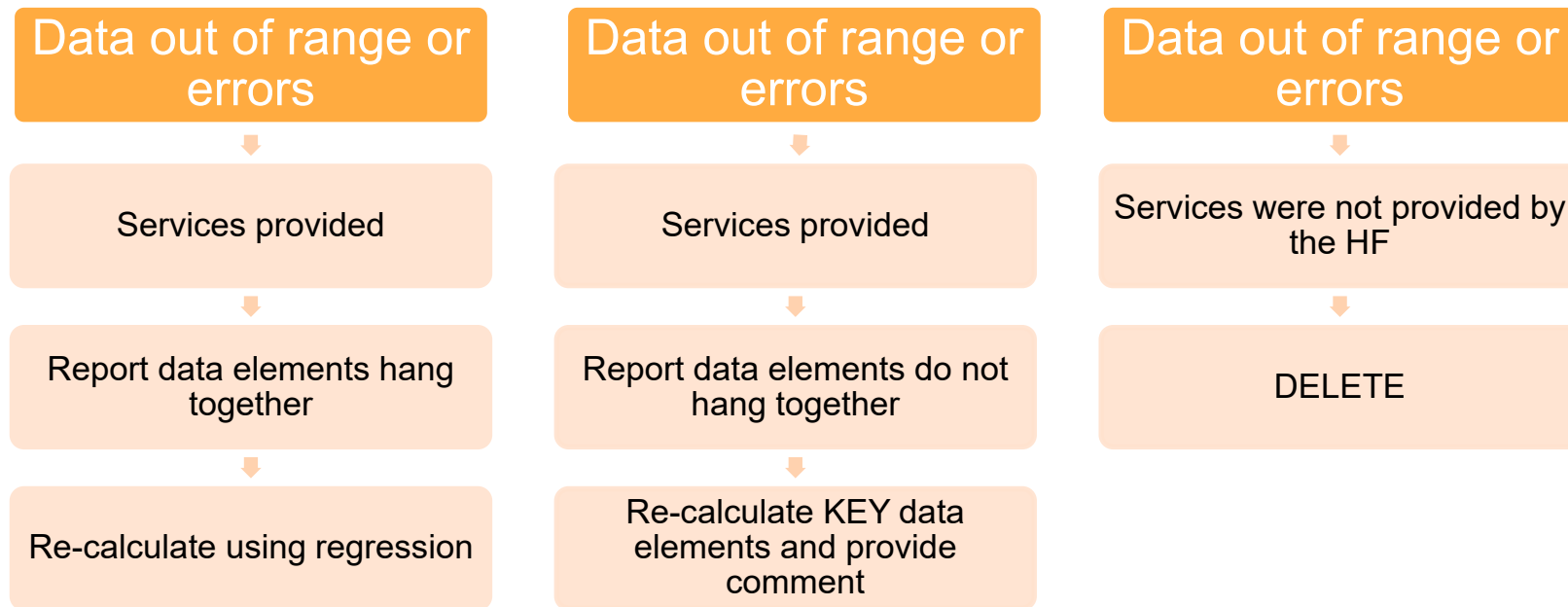- Took some 4-5 days per group of States – labour intensive process

Process 1

Decision made to concentrate on crucial data elements

- Headcount
- Children with diarrhoea/pneumonia/malaria
- Maternal health – ANC visits/deliveries/live births

- Validation rules (absolute and statistical) were run and noted (same as DHIS2)

- Extreme outliers identified and corrected using tools in DHIS1.4 (Interpolation/regression analysis)
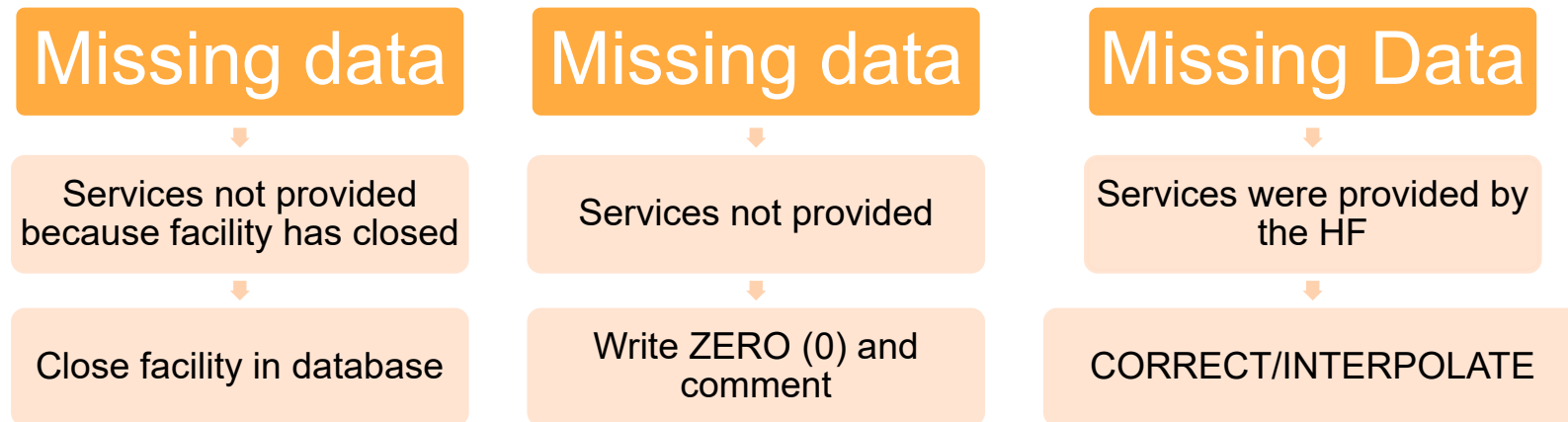
Process 2

- Concentrate on replacing missing months of data (i.e. missing for the whole month using interpolation)
- Validation rules that revealed missing compulsory pairing were resolved
  - Diarrhoea treated must have diarrhoea reported
- Look for extreme outliers and correct those at facility level, specifically if this value materially altered the indicator value
- Reviewed both **raw data** and **indicators**

Actions

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Decision tree for Data outliers

Data out of range or errors	Data out of range or errors	Data out of range or errors
Services provided	Services provided	Services were not provided by the HF
Report data elements hang together	Report data elements do not hang together	DELETE
Re-calculate using regression	Re-calculate KEY data elements and provide comment	

Actions

Decision tree for Missing Data

Missing data	Missing data	Missing Data
Services not provided because facility has closed	Services not provided	Services were provided by the HF
Close facility in database	Write ZERO (0) and comment	CORRECT/INTERPOLATE

How was this possible?

- SMALL dataset

- Eagerness of local staff to take responsibility and fix own data

- Pride in clean data with no violations

- Hands on support and supervision

Results

- Cleaned data for 3 years resulting in an annual report for each year

- Able to measure service delivery over time

- Staff with more capacity and knowledge of HMIS/DHIS

- Updated facility list

Conclusion

- Has all the missing data (where you KNOW a facility worked but there is no report) been added in

- Are all your outliers fixed

- Have all validation rules been fixed or explained

WHO takes responsibility for this??

Is it important?

Exercise: WHO Annual Report

Using either your own DHIS2 instance or the demo data file

- Run the WHO Annual report for a selected OU and DE/Indicator Group

- Print – which will allow you to download in .pdf format

- Review and discuss : How can you use this report?

Exercise: Data review and corrections

Using your own DHIS2 instance or the Demo instance

- Using the WHO DQ tool – find missing data and outliers

- What needs to happen to replace the missing values or correct the obvious data outliers

- How will you decide what the new value should be?