



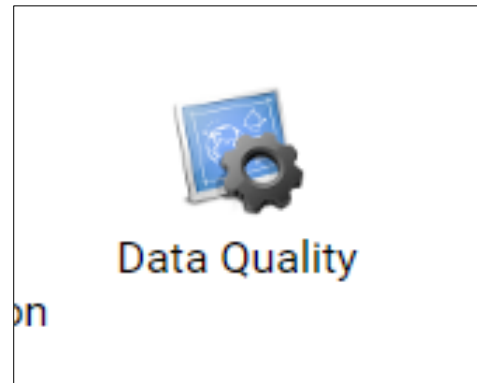
dhis2 academy

Data quality app – a hidden gem

Data Quality Academy On line

DQ app and some questions

- Have you seen this app?
- Have you used this app?
- Do ALL analytic users have access to this app?

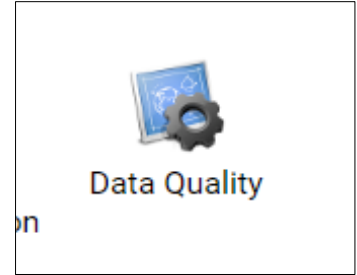


Data Quality App - Learning Objectives

- Most common use of DQ App
- The value of validation rules
- How to translate VR into actual use
- Issues associated with DQ App

Contains the following

- Validation rule Analysis
- Standard deviation Analysis
- Min-Max outlier Analysis
- Follow-up analysis



Who is responsible ?

- ❑ They are not important - so it does not matter
- ❑ Nobody runs them any way, and if they run them, no one does anything anyway

- ❑ Who is responsible for **thinking** about them and then **defining** them

- HMIS DHIS2 configuration expert
- Program manager
- District Information Officer

Who is responsible for **running** them

- Data Entry clerk
- Program manager
- FIO/DIO or higher level

Understanding the Logic of Validation Rules dhiss2

- A method to assess the quality of data entered in DHIS2
- Based on a set of predefined rules set for the data
- This does NOT allow you to FULLY assess whether or not reported numbers are completely accurate

Validation rules – how to define

- An expression that defines a relationship between a number of data elements
- Expression has Left side, Right side and an Operator
- Common operators used
 - less than or equal to \leq
 - equal to $=$
 - greater than or equal to \geq
- **Validation Rules** are created based on what you know to be true e.g. 'Malaria RDT tested' CANNOT be more than 'Malaria RDT positive'
- For instructions on how to set up a validation rule – look at the DHIS2 manual




Validation rules

- Some simple guides to VR
 - Validation rules are assigned to groups
 - Easy to use and understand
 - Signs like \leq or $=$ or \geq - does **everybody** understand them
 - Use of Importance field (Low/Medium/High)
 - Consistent guide to setup, i.e. always have smaller number first
- These **SHOULD** be run after data entry before the Complete button is ticked
- Validation rules should be run after most/all monthly data has been captured
- Who is responsible for this (F/DIO, Program manager?)
- Is there an SOP to guide the process of running these rules and then taking action?

Validation rules - and then?

- How to run validation rules
 - Select OrgUnit
 - Select time period
 - Select Validation rule group
 - Click Validate
- Gives a report which can be downloaded into different formats
- Download into Excel

Validation rule Output

DOWNLOAD AS PDF DOWNLOAD AS XLS DOWNLOAD AS CSV							
Organisation Unit	Period	Importance	Validation Rule	Value	Operator	Value	Details
Beetle Health ...	March 2020	MEDIUM		136.00	==	133.00	
Beetle Health ...	March 2020	MEDIUM		30.00	==	32.00	
Beetle Health ...	March 2020	MEDIUM		0.00	>=	11.00	

Detail icon

VALIDATIONS RESULT DETAILS

VALIDATION RULE

Name RMNCAH Child 5-9 with acute respiratory illness (ARI)>= child 5-9 with pneumonia
Description

LEFT SIDE

DATA ELEMENT

RMNCAH - Child with symptoms of acute respiratory illness (ARI) 5-9 years

VALUE

-

RIGHT SIDE

DATA ELEMENT

RMNCAH - Child diagnosed with pneumonia 5-9 years

VALUE

11.00

Validation rules - output

Data Quality Report							
Source	Period	Validation rule	Left side description	Value	Operator	Value	Right side description
Afghan Dispensary	March 2020	RMNCAH Women received prophylactic uterotonic immediately after birth <= facility deliveries (by age)	Received uterotonic	67	<=	0	Delivery in facility (age)
Afghan Dispensary	March 2020	RMNCAH Contraception first time user (by age and sex) = Total Contraception first time user (by method)	Contraception first time user (by age and sex)	18	==	0	Contraception first time user by method
Alsatian Primary Health Centre	March 2020	RMNCAH Total deliveries <= Live births + still births	Delivery in facility	197	<=	196	Sum of live births and still births

- Sort according to OrgUnits
- Give to supervisors/program managers for action

Data Quality App – the rest...

- Standard deviation Analysis – now mainly WHO DQ Tool is used
- Min-Max outlier Analysis – used if Min/Max values have been set
 - If not – set first before running Min-Max outlier analysis
 - See next presentation
- Follow-up analysis
 - Used to mark data that is correct but does not fit the pattern, or triggers a validation rule

Marked for follow-up

- Mark problematic data for follow up
- Highlight star
- SAVE - (done at Data Entry)
- Useful to explain when a validation rule has been triggered
- Report can be run on Follow-up stars

Comment 

Closure of other delivery centres, all deliveries referred here

Save comment

- What are the barriers to running Validation Rules
- Have most possible validation rules been set
- Do validation rules pick up **all** the data mistakes
- When obvious data entry errors are identified, why are they not corrected
- Who is responsible for chasing up the data entry errors
- What happens when they are not corrected

Exercises

Access to own country DHIS2 OR DEMO database for this training

- Confirm access to Data Quality App – in MOH DHIS2
- Obtain list of all Validation rules and VR Groups
- Review all Validation rules
- Review for consistency (smaller value first)
- Run at least 2 VR Groups for last 6 months
- Write a short report on rules violated
- Consider an action plan
- Do some rules need to be re-written to make them easier to understand
 - Are some rules triggered consistently
 - Is the problem with the data quality or the rule?
- Think of 1 rule to add to the current list