

Data quality for RSV surveillance

Identify gaps and improve data quality



World Health
Organization

**We just need to migrate
the data from these
systems to fit into that
hole over there.**

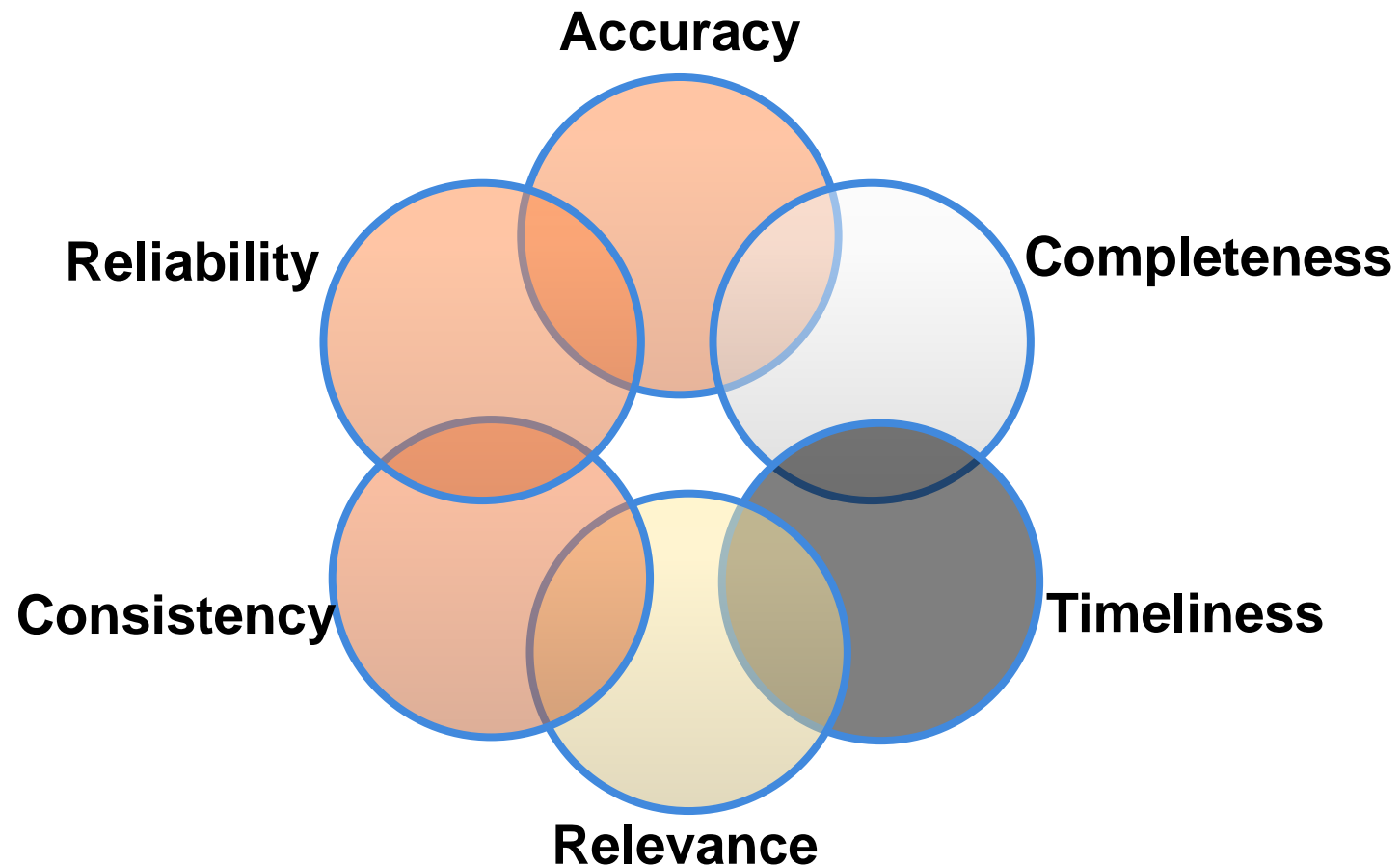


Understanding your data

Variable name
Country name
Sentinel site code
Patient ID
Patient's age in completed years if age 2 years and above
Patient's age (in completed months) if less than 2 years
Patient's birth date
Patient's sex
Date of onset of symptoms
Date of specimen collection
Patient required hospitalization
Symptom onset within last 10 days
History of cough
History of shortness of breath
Measured fever
History of fever
Wheezing
Sorethroat
Cold
Chest indrawing
Apnea (in infant <6mo age)
Sepsis (in infant <6mo age)
Respiratory rate per minute
WHO SARI case definition
WHO SARI without fever
WHO ILI case definition
WHO ILI without fever
ARI case definition
If adult, pre-existing chronic cardiac disease
If adult, pre-existing chronic respiratory disease
If adult, pre-existing diabetes
If adult, pre-existing immunodeficiency
If adult, pre-existing other illness
If adult, pre-existing other illness (specify)
Patient pregnant
If child, prematurity
If child, pre-existing chronic respiratory disease
If child, pre-existing chronic respiratory disease (specify)
If child, pre-existing malnutrition
If child, pre-existing immunodeficiency
If child, pre-existing other illness
If adult, pre-existing other illness (specify)
Type of specimen
Results of RSV testing
RSV Ct value
RSV type if known
RNAse P control
RNAse P Ct value
Results of testing for influenza
If positive, influenza virus type

- Total variable: 49
- Information:
 - Country and identification code
 - Date
 - Symptoms
 - WHO case definitions
 - Pre-existing condition
 - Disaggregation of adult and child
 - RSV information
 - Influenza testing
 - RNA (Ct pos) RNP (Ct value pos and neg samples)

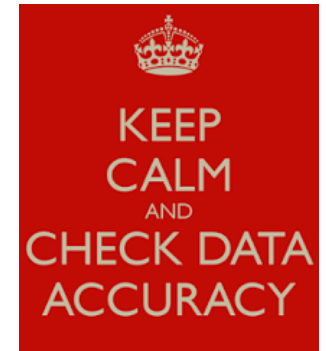
Quality Assurance Aspects



Identifying gaps

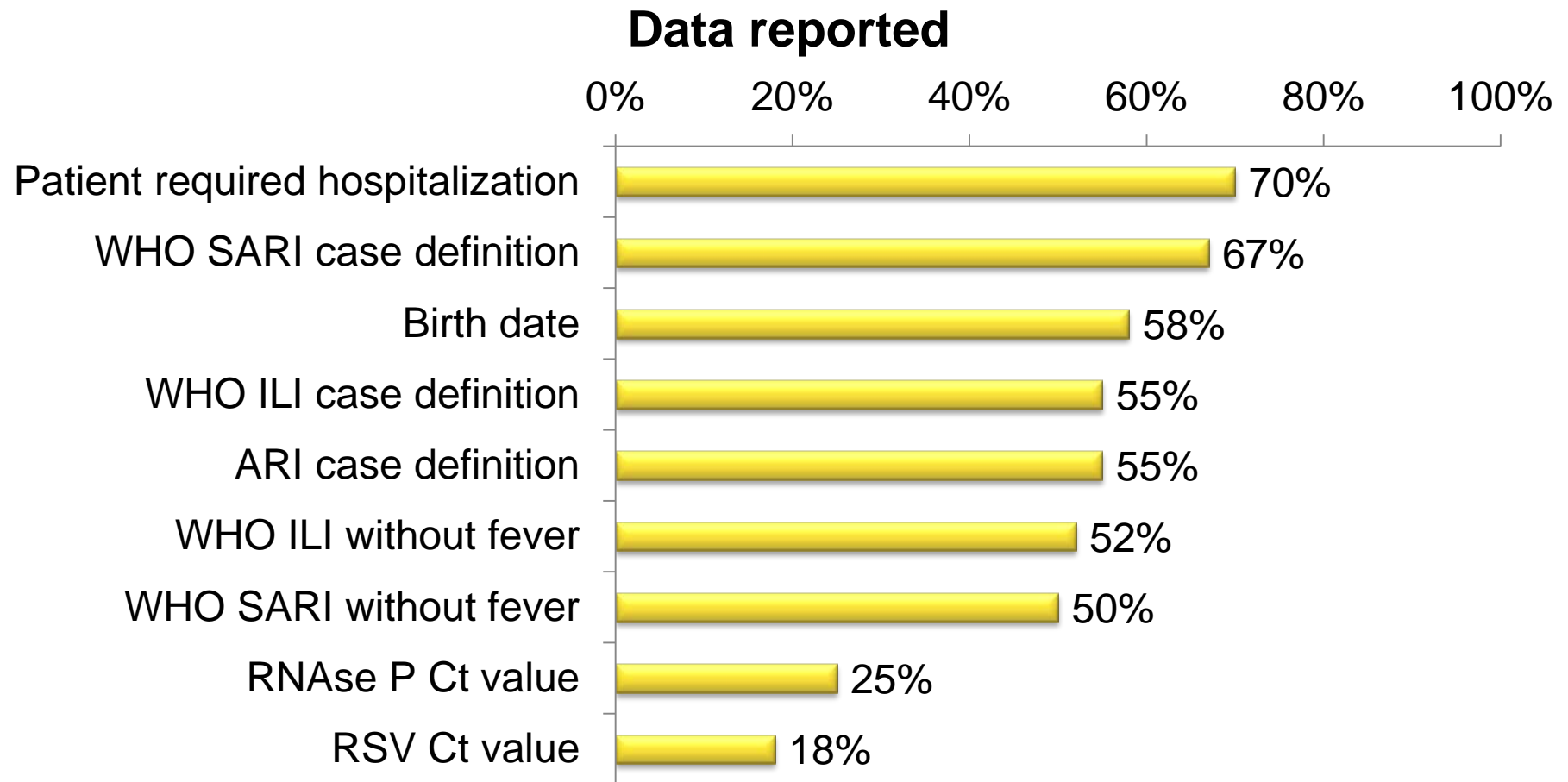
● Accuracy

- Date of birth
 - Information of year and month \neq date of birth
 - Input "0"
 - Input blank
- Onset date
- Sample collection date
- Type of samples
- Hospitalized
 - Inpatient or outpatient
 - Sentinel sites
- Age disaggregation (0 – 6 months; 6 – <5 years; 5 – 64 years; \geq 65 years)



Identifying gaps (2)

- **Completeness**



Identifying gaps (3)

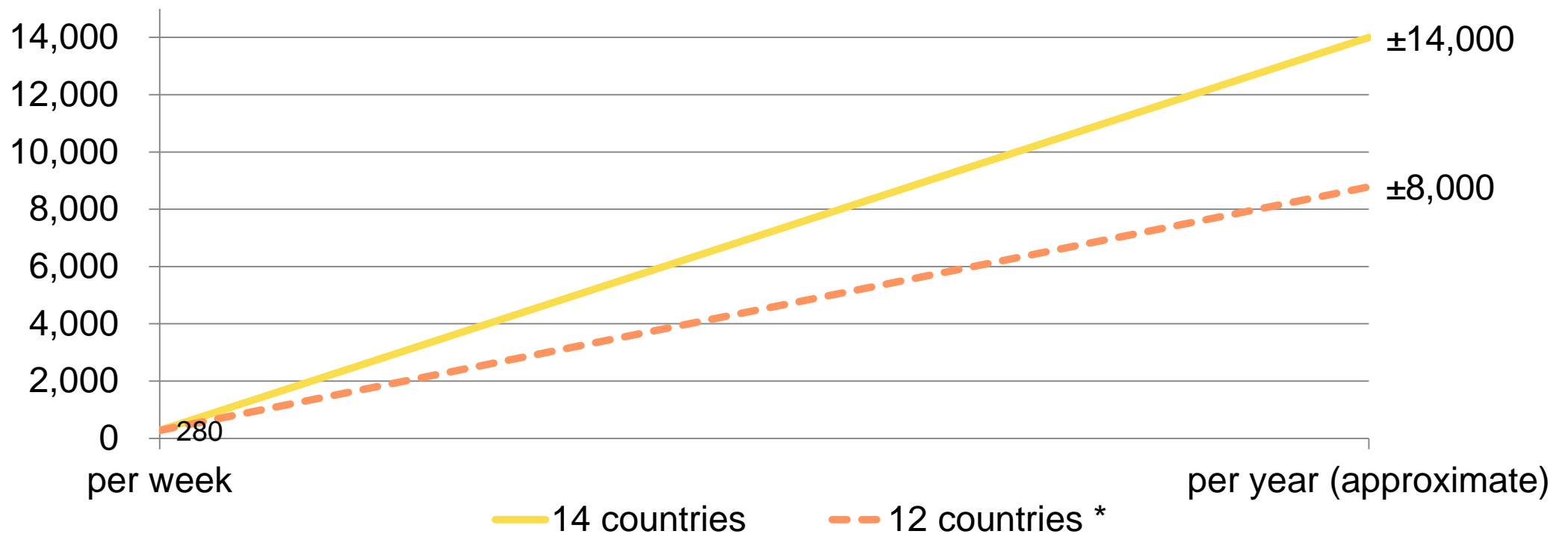
● Timeliness

- Availability
- 20 samples per week, total \pm 1000 samples per year
 - Not equal distribution 250 samples across 4 age groups
 - Risk groups
- Late submission



Target and data collected

03/2017 – 12/2017



*excluding UK and Canada

Proportion of data received

RSV surveillance pilot	per week	V.S target 1000	Collected to date
Argentina	20	56%	6%
Australia**	20	64%	7%
Brazil**	20	9%	1%
Canada*	20		
Chile	20	51%	6%
Côte d'Ivoire	20	69%	8%
Egypt	20	35%	4%
India	20	86%	10%
Mongolia**	20	38%	4%
Mozambique	20	44%	5%
Russian Federation	20	75%	9%
South Africa	20	<100%	19%
Thailand	20	<100%	21%
United Kingdom*	20		

Data as 13 Dec 2017

Canada & UK just started *
Nov 2017

Australia, Mongolia, Brazil **
started week 15-32



Identifying gaps (4)

- **Reliability**
 - Recorded temperature or respiratory rates within acceptable ranges
- **Consistency**
 - Date of birth of patient after date of admission
 - Case definition extended SARI, SARI no fever, ILI, ILI no fever and ARI
 - Identified SARI cases but not hospitalized
 - Both SARI and SARI without fever are recorded as YES
 - WHO SARI without fever is YES despite measured or history of fever being YES
 - RSV result positive but no RSV Ct value reflected (RSV RNase P)
- **Relevance**
 - Primarily hospital-based surveillance



Monitor your data

- Data quality, completeness, and reporting at site level impacts all future analysis and outputs
- Monitor and check for:
 - Completeness of case report forms
 - Numbers of specimens collected weekly
 - Capturing and recording denominators
 - Appropriate distribution of samples (dependent on type of site)
 - Quality of data on case report forms—no errors, checks for accuracy, reliability
 - Monitoring CT values of RSV and RNP and recording
 - Timeliness of sample processing
 - Timeliness and completeness of weekly reporting to WHO

Any queries after submission could be addressed to the WHO RSV secretariat

or

WHO RSV website

<http://www.who.int/influenza/rsv/en/>

Thank you

