The Union

International Union Against
Tuberculosis and Lung Disease

*Health solutions for the poor*

# Brief Introduction to TBData4Action:

# What, why, how and by whom?

*7 September 2023*

*Riitta Dlodlo, MD, MPH, The Union*

## Objectives and outline

- Share a glimpse of advantages of active use of routinely available TB data at all levels of health services
- Provide basics of 'how' of TBData4Action
- Summarise TBData4Action innovations
- Discuss whether local level data use is relevant in Norway and settings with low burden of TB

# What is TBData4Action?

***TBData4Action is a practical approach to engage health staff, including facility and district level teams, to tabulate, analyse and use TB data to strengthen patient and programme management***

# History

- In 1980s, The Union (Karel Styblo) and partner national TB programmes (NTPs) developed model TB services with strong recording and reporting component, training and supportive supervision
- Worked well in strengthening NTPs in different settings, e.g., Tanzania, Mozambique, Nicaragua and later in East Timor, Arkhangelsk (Russia)
- From 2010s, further developed in Zimbabwe
- Included into national TB strategic plan in Kenya and country-wide training from 2019-2021
  - Emerging interest in Sudan, Malawi, Zambia, Pakistan, Togo, Guinea Conakry and Cameroon
- Integrated into Union international TB training courses (Arusha and Bulawayo)
- Post-graduate courses in Union conferences from 2015

# Why TBData4Action?

# Why?

- **Large amounts** of **TB data** exist and are submitted 'upwards' but **not used** locally for decision-making
  - But frequently weak data quality
  - No information on which **facilities/districts** perform unsatisfactorily and need support
  - No information on **components of TB** services that need support
- **Supervision** is **key** NTP activity**:** frequently general and mechanical
- **Review meetings**: frequently make only modest difference
- Accurate data vital for **supply chain management** and prevention of stock-outs
- Epidemiological assessments, surveys, etc. not done by NTP or national professionals

# TBData4Action - how?

# TB data analysis

***After data validation and tabulation, focus on differences between areas and change over time***

- Calculate selected *indicators* for the last quarter or year and compare with the expected
  - Need facility, district, province/sub-national population data
  - Indicator values: rates per 100,000 population or proportions (%)
- Comparison of indicators
  - Between facilities in a district
  - Between districts in a province
  - Between provinces in a country
- Compare trends: changes over time - quarterly or annually
  - Last quarter (or year) most important

*In pandemic times:*
Need to consider weekly/monthly data review?

# Indicator values *different* from expected

- Values may differ from expected
  - Could be either above or below
  - Poor quality data frequently main reason
- Reason(s) for indicators being ***different*** from expected
  - Weakness / challenge?
  - ***Act!***
  - Desired change – look at data in subsequent quarter(s)
  - Sometimes *beyond* control of facility or district – should not demotivate staff

*Note:*
No mention of targets

# Indicators, expected values and possible reasons for values below or above expected

# Indicators (1)

**Presumptive TB:**

#1: Presumptive TB per 100,000 population

#2: % positives among presumptive TB with sputum test results

**TB:**

#3: Notification rate per 100,000: TB (all forms)

#4: Notification rate per 100,000: TB (new bacteriologically confirmed)

#5: % of children and adolescents (0-14 years) of all TB notifications

**TB-HIV:**

#6: % of TB patients with known HIV status

#7: % of TB patients with HIV result and who are HIV-positive

#8: % of HIV-positive TB patients on ART

# Indicators (2)

**Directly Observed Therapy (DOT):**

#9: % of TB patients on treatment supported either by health worker or trained community observer (including trained family member)

**Treatment:**

#10 & 11: % of all TB successfully treated (cure + completed)

#12: % of all TB failed treatment

#13: % of all TB lost to follow-up

#14: % of all TB died

#15: % of all TB "not evaluated"

**Drugs:**

#16: Drug stocks in months

# Indicators (3)

**DR-TB:**

#17: % of bacteriologically confirmed TB tested for rifampicin resistance (RR)

#18: % of those with RR result found to have resistance

#19: % of those with RR started on treatment

**TB infection (preventive) treatment (TPT):**

#20: % of index cases whose contacts are line listed

#21: % of line listed contacts are investigated (by different tests)

#22a: % of tested contacts with abnormal CXR

#22b: % of tested contacts with positive IGRA/Mantoux

#22c: % of tested contacts with positive sputum smear microscopy/XpertMTB/RIF

#23: % of eligible contacts started on TPT

# Example 1: Presumptive TB (1)

***Please see complete list in Orange Guide, Supplementary materials***

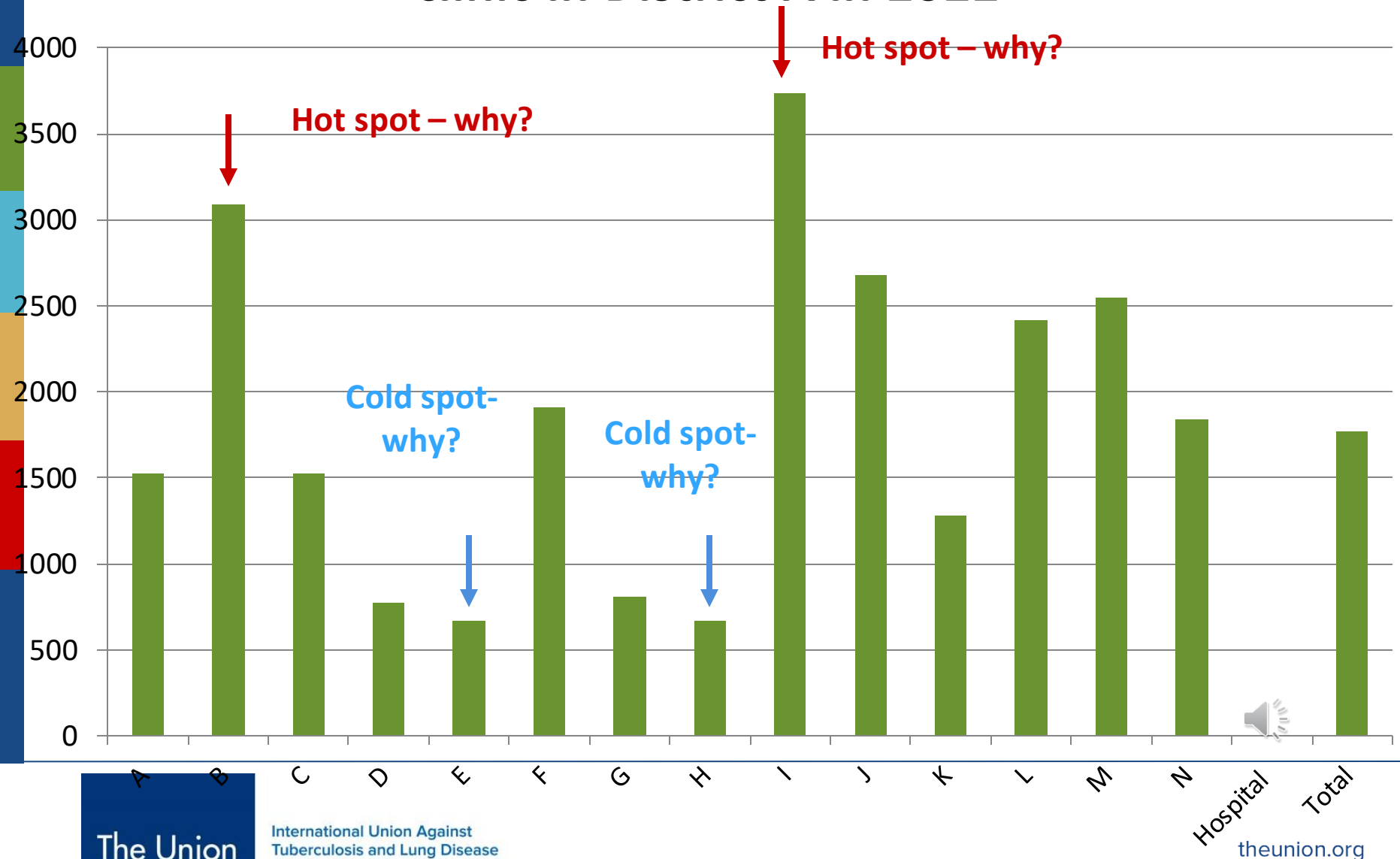
| ***Indicator*** | ***Expected value*** | ***Indicator*** | |
|---|---|---|---|
| | | ***Below expected (less favourable)*** | ***Above expected (more favourable)*** |
| *Number of presumptive TB cases per 100,000 population* | *There is no global standard. Facilities compare with district average , districts with provincial average and provinces with national average* | • Symptomatic patients are not coming to facilities because services are not accessible (long distances, expensive transport, staff attitudes etc.) | • Health staff do not know symptoms suggestive of TB |
| | | • Health staff do not suspect TB and do not screen patients for TB | • Health staff use too wide definition of presumptive TB |
| | | • Health staff have not been trained in TB screening | |
| | | • Health staff do not have symptomatic TB screening questionnaires | |
| | | • Health staff follow too strict definition of presumptive TB case | |

***Always assess together with positivity rate (indicator #2)***

# Example 1: Presumptive TB (2)

| *Indicator* | *Expected value* | *Indicator* | |
|---|---|---|---|
| | | *Below expected (less favourable)* | *Above expected (more favourable)* |
| *Percentage of presumptive TB cases screened by rapid molecular tests, smear microscopy or culture who had positive result* | 5-15 % | • Health staff use too wide definition of presumptive TB and do not adhere to symptomatic TB screening questionnaire leading to large number of cases wrongly registered as presumptive TB | • Health staff have too strict definition of presumptive TB and are likely to miss many people with TB |
| | | • Poor quality sputum specimens are sent to laboratory | • Symptomatic patients attend health services late |
| | | • Laboratory staff are unable to detect positive specimens (false negative sputum smear results) | • Low quality microscopy (false positive) |
| | | • Laboratory does not participate in external quality assurance | • Laboratory does not participate in external quality assurance |

# Ex 3: Presumptive TB per 100,000 population by clinic in District A in 2022



# Supervision feedback: summary of strengths, weaknesses and action points

| Strengths | Weaknesses |
|---|---|
| Indicators: 3 to 18<br><br>(TB cases, TB-HIV, DOT, treatment result, drugs, RR-TB) | • Indicator #1: (presumptive cases per 100 000): fewer than expected<br><br>• Indicator #2: percentage of presumptive cases with positive result: higher than expected |

| Action points to address weaknesses that were identified | | |
|---|---|---|
| **Action point** | **Responsible person** | **Time line** |
| Clinic staff should ensure that TB screening is practiced in OPD and OI clinic | Nurse in charge | Start immediately and on-going |
| Community workers should create awareness about TB in community, look actively for people with presumptive TB and refer | Nurse in charge and Environmental Health Technician | Start from 1st Q of 2023 |

# TBData4Action – by whom?

# TB coordinators

- *TB coordinators* at sub-national levels of health system
  - In Norway, county, health facility (healthcare company), municipality
  - In ZW, province/city, district, health facility
- Supported
  - TB focal nurses
  - District/provincial teams (medical, nursing and records officers)
- National level: relevant officers

# TBData4Action – innovations

# What are TBData4Action innovations?

- Not useful to compare absolute numbers: use ***rates*** (need catchment populations)
- ***Cascade analysis*** to detect where the gaps are
  - Presumptive TB and TB care cascade
  - RR/MDR-TB care cascade
  - TB-HIV cascade
  - TPT cascade, etc.
- **Ownership** by and motivation of local health staff
  - Need staff in place and training
  - Data-driven support and review meetings: focus on identified issues that need action, then monitor results
- **Reliable** routine TB data facilitate **operational reseach**
  - Provides local answers to local challenges

# TBData4Action – relevance in Norway?

# TBData4Action – relevant in settings with low burden of TB, for example, Norway

- Few TB patients (in 2022: 174 with TB disease and 619 started TB preventive treatment), health staff analyse in county, HF and regional HF?
- Frequency of analysis: now annually – more frequent better
- Indicators:
  - Case finding (TB disease and TPT), treatment outcome data
  - Cascade of screening?
    - Contact tracing already collect data, link to sequencing data, cluster
    - Entry screening of refugees and asylum seekers: follow numbers who should be screened, how many are actually screened, tested (X-ray, IGRA/Mantoux), results, referred to specialist, started on TB treatment/TPT
    - Labour migrants – same cascade

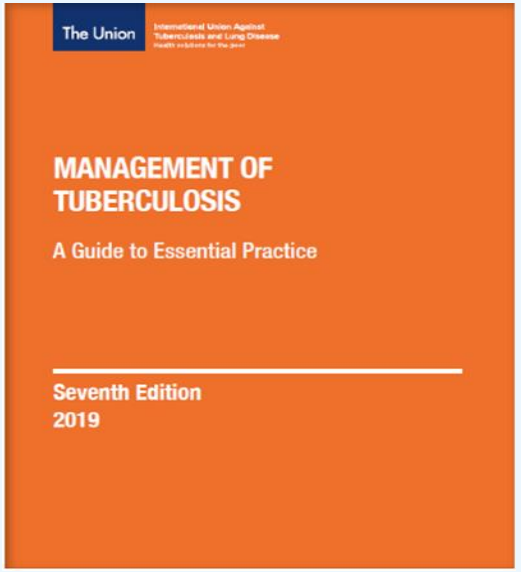
Slide credit: E Heldal

# Conclusion


TBData4Action:

- Contributes to finding 'missing' people with TB
- Strengthens quality of TB management
- Builds capacity and ownership among health professionals
- Can be adapted to any context

*Thank you!*




# TBData4Action: references

*For comprehensive 'HOW TO' guidance,*
*please refer to Union's Orange Guide, chapter 7.7 and Supplementary materials:*

Dlodlo RA, Brigden G, Heldal E, et al. Management of tuberculosis: a guide to essential practice. Paris, France: International Union Against Tuberculosis and Lung Disease, 2019. ISBN: 979-10-91287-27-2 https://www.theunion.org/what-we-do/publications/technical/management-of-tuberculosis-a-guide-to-essential-practice and https://www.theunion.org/what-we-do/publications/technical/body/TheUnion_Orange_2019_Supplementary.pdf

Heldal E, Dlodlo RA, Mlilo N, et. al. Local staff making sense of their tuberculosis data: key to quality care and ending tuberculosis. Int J Tuberc Lung Dis 2019; 23(5): 612-618. https://doi.org/10.5588/ijtld.18.0549

Angala P, Dlodlo RA, Wanjala S, et al. TB training in Kenya: building capacity for care and prevention. PHA 2022; 12(1). doi: https://doi.org/10.5588/pha.21.0075