

Data Quality Review (DQR) Toolkit

Overview of the Data Quality Review (DQR) Framework and Methodology

https://www.who.int/healthinfo/tools_data_analysis/en/



World Health
Organization

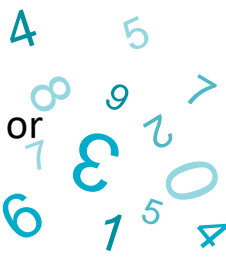


The Global Fund



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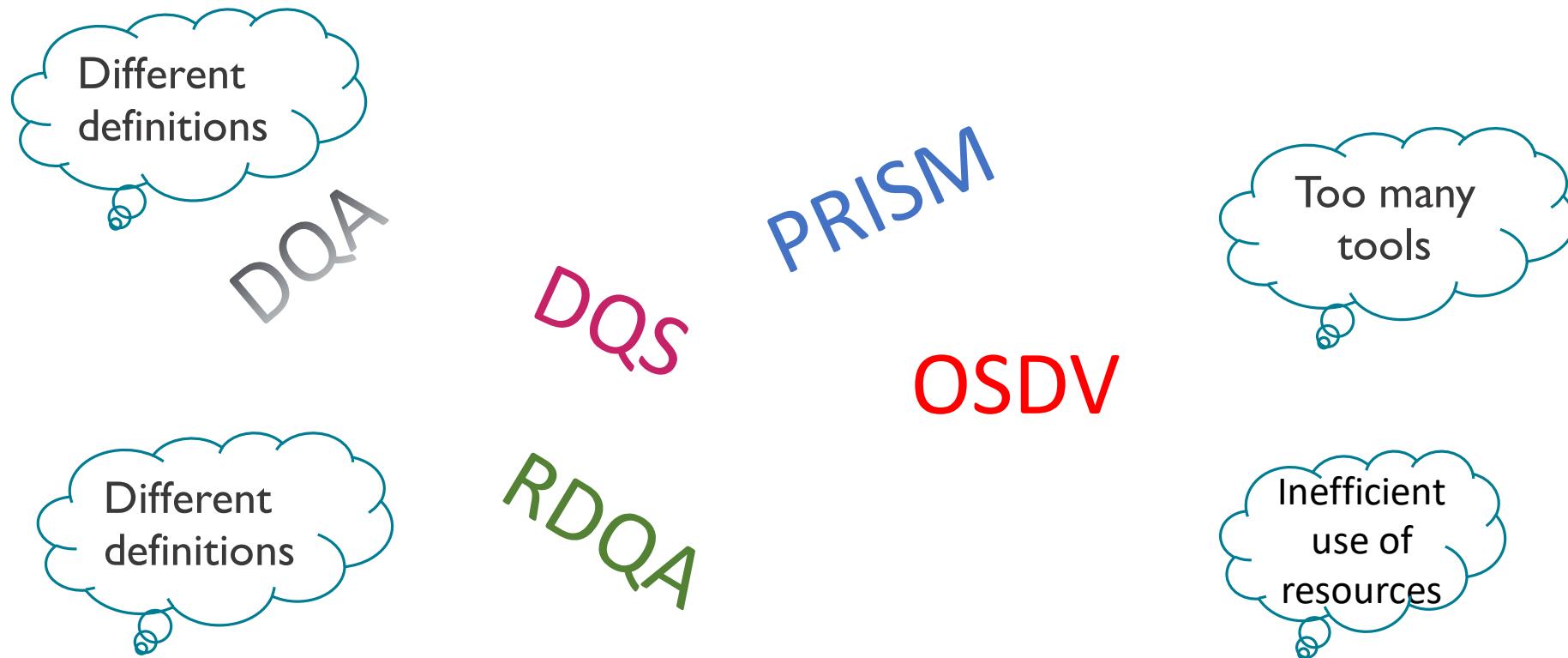


Quality of health facility data – why do we care?

- High-quality data provide evidence to providers and managers to optimize healthcare coverage, quality, and services.
- High-quality data help:
 - Form an accurate picture of health needs, programs, and services in specific areas
 - Inform appropriate planning and decision making **at every level of the health system (including district and below)**
 - Inform effective and efficient allocation of resources
 - Support ongoing monitoring, by identifying best practices and areas where support and corrective measures are needed



How did we
measure quality
of data?



-Confusion in measurement of DQ



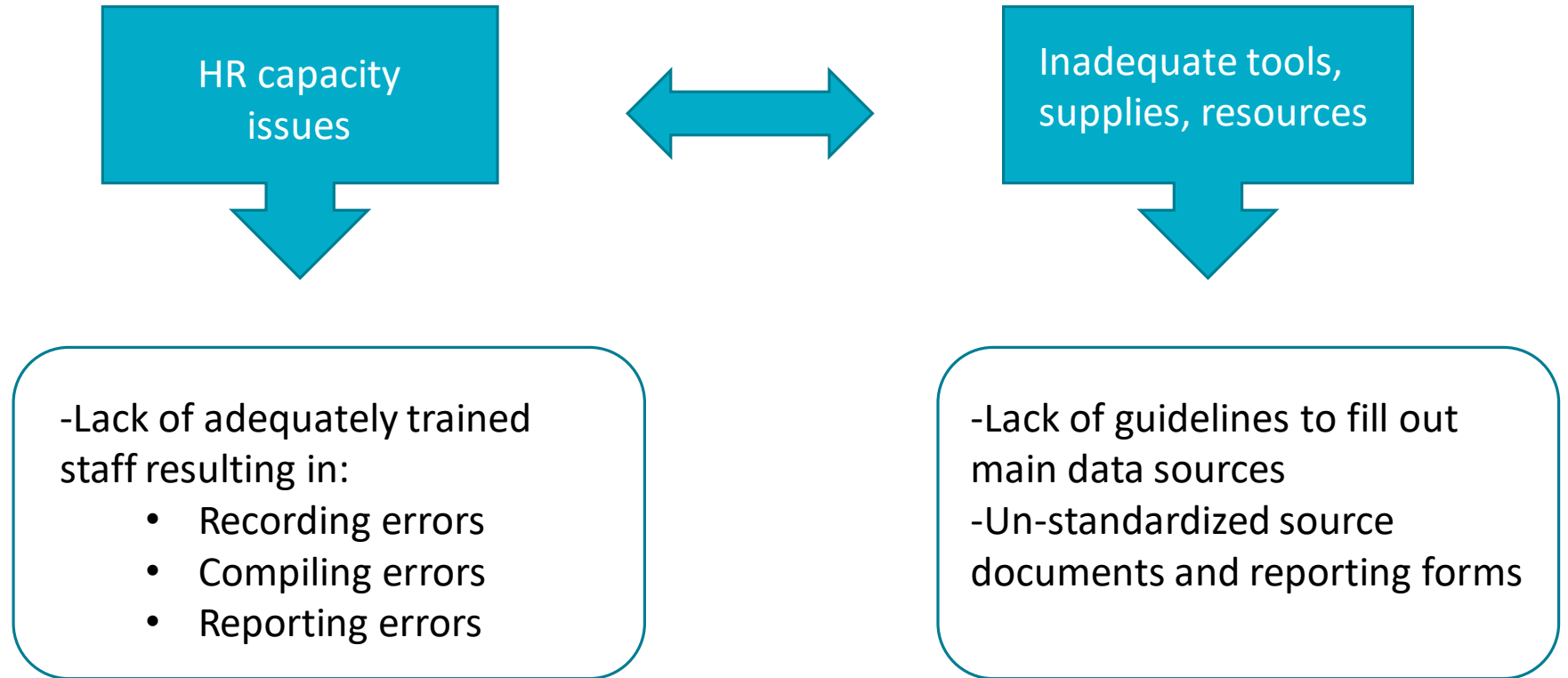
-Lack of country ownership of results



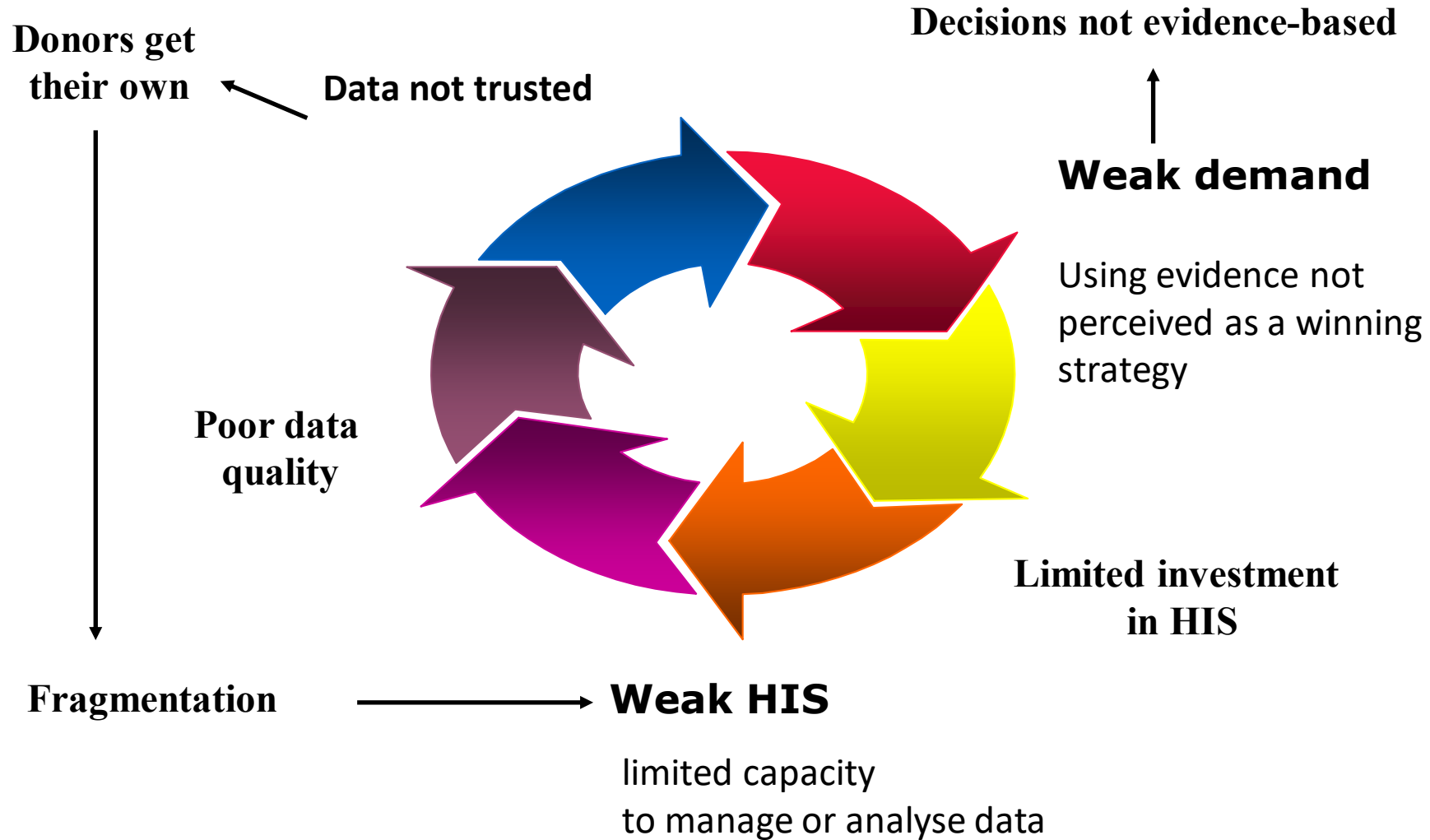
-Little improvement in quality of data



Why do we have poor quality of data?

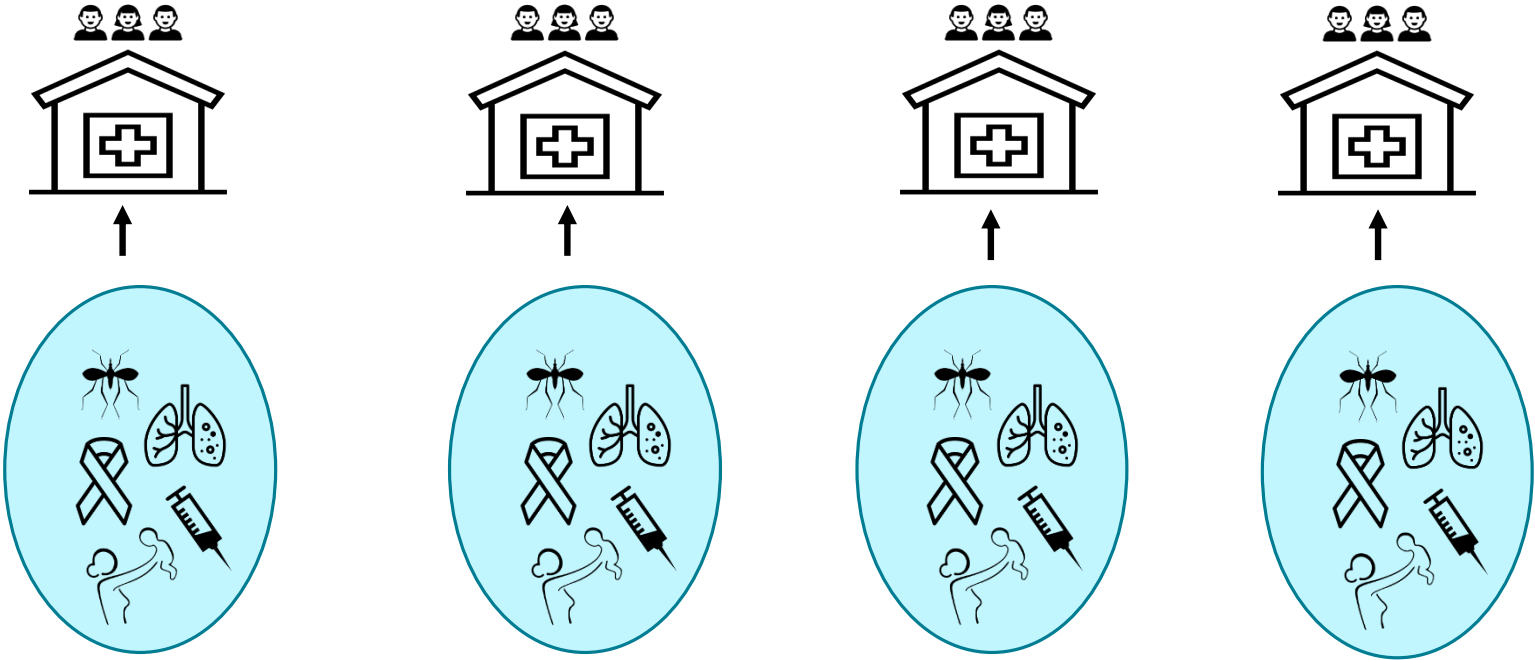


A vicious cycle



How can we address these issues?

When the **same** health personnel treat different diseases, can HR capacity issues on recording and reporting data be addressed programmatically?



NO!



What is
needed?

A harmonized approach to:
-measuring data quality
-improving data quality

Overview of DQR



What does a harmonized approach look like?

Routine & regular review and feedback

(e.g. monthly) of data quality – desk review of data quality and system of supervision and feedback

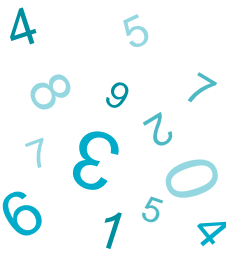
Annual independent cross-cutting review and feedback

examining quality of health facility data for annual health sector planning & program monitoring

Periodic independent in-depth review and feedback

focus on single disease/program area; conducted periodically (e.g. every 3 years)

Overview of DQR



What is the approach called and what does it do?









- Data Quality Review (DQR) is a **framework** and **methodology** that builds on the earlier program-specific data quality tools and methods by:
 - Providing a **common language** (standard metrics) for the measurement of data quality;
 - Proposing a harmonized approach to **measuring** and **improving** data quality that addresses the **systemic nature** of data quality problems;
 - Including **tools** that can be adapted by users

Overview of DQR



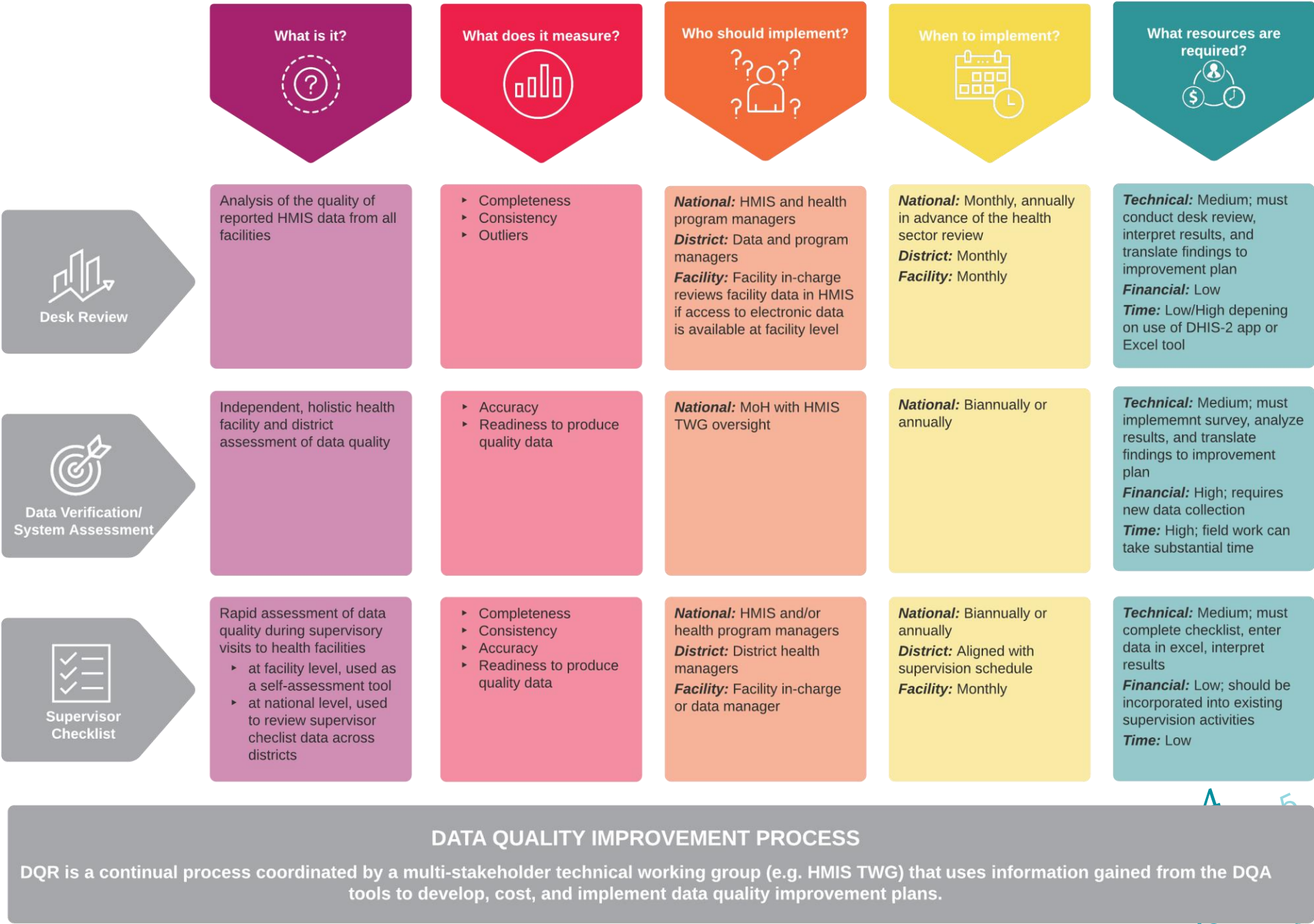
What are the resources included with the harmonized approach?

Overview of DQR

| Approach | <div><div>DQR Framework</div><div></div></div> <div><div>DQR Implementation guide</div><div></div></div> |
|--|--|
| Routine and regular reviews | <div><div>Desk review</div><div><div><div>WHO app</div></div><div><div>WHO tool in MS Excel</div></div></div></div> <div><div>Supervisory checklists</div><div><div><div>Data Quality Review (DQR) District and Health Facility Level Data Quality Checklists</div></div></div></div> |
| Annual, independent cross-cutting review | <div><div>Desk review</div><div><div><div>WHO app</div></div><div><div>WHO tool in MS Excel</div></div></div></div> <div><div>DV/SA</div><div><div><div>CSPro application</div></div></div></div> |
| Periodic, independent in-depth review | <div>Adapted DQR, or programme-specific tools used (not covered here)</div> |

DQ tools overview – What? Who? When? How much?

Overview of DQR



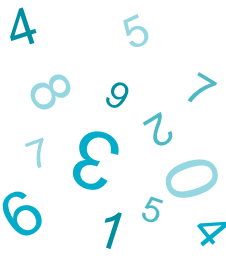
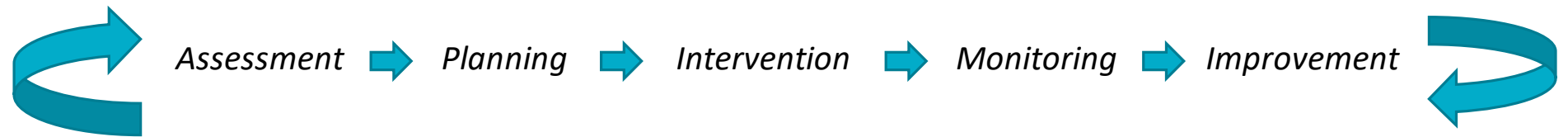
DQ tools use cases - by levels of health system

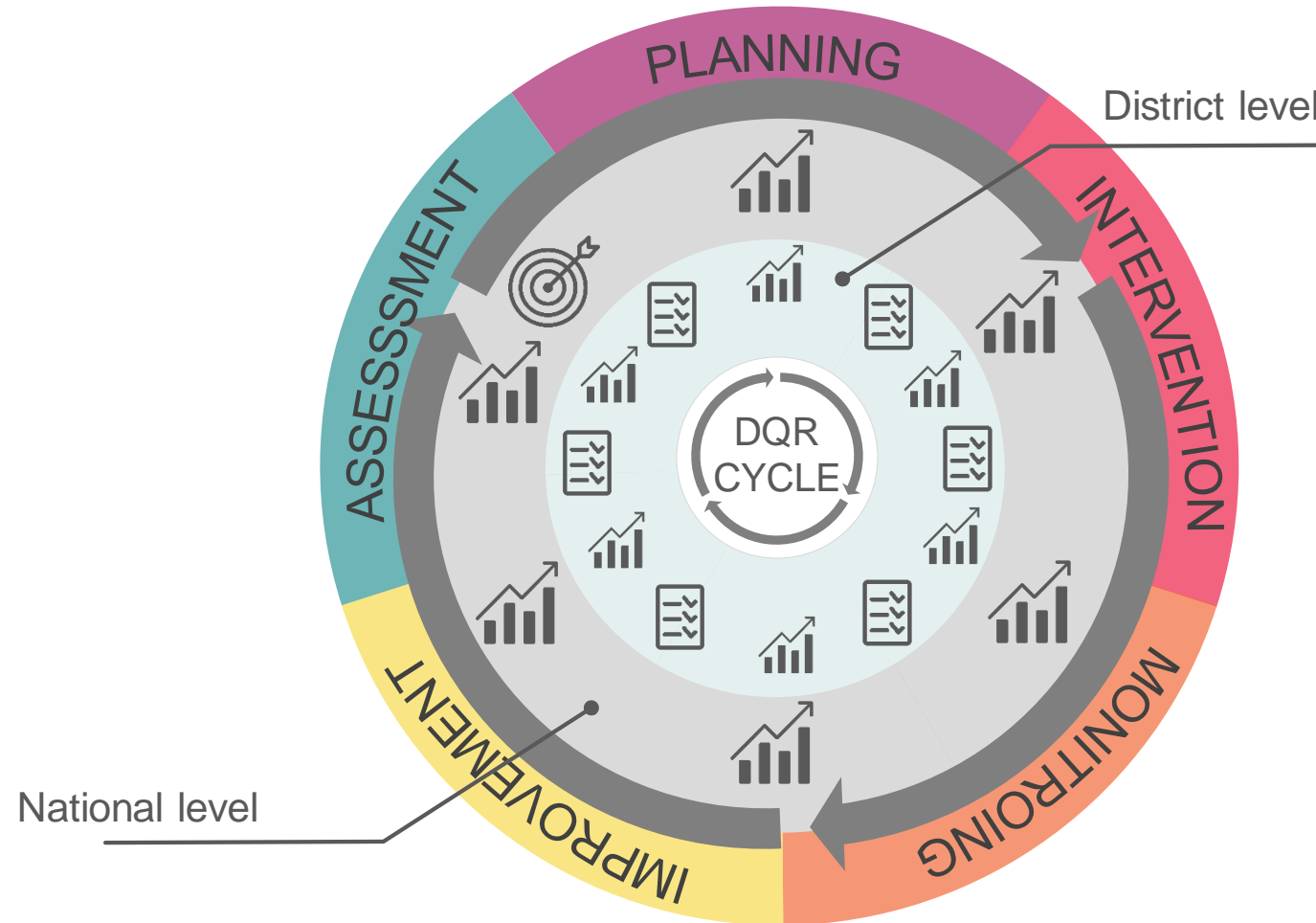
Overview of DQR



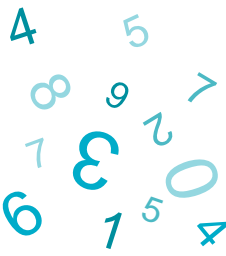
Using results for data management system strengthening

- We've conducted a DQR ... Now what?
 - Results should point to weaknesses in data management
 - A Data Quality Improvement Plan should be developed wherein interventions are outlined to address identified data quality problems.
 - The timing of the assessment and improvement plan should coincide with country health system planning cycles so interventions can be prioritized and funded.
 - A unit within the MOH (e.g. HMIS TWG) should be tasked with monitoring and ensuring implementation.





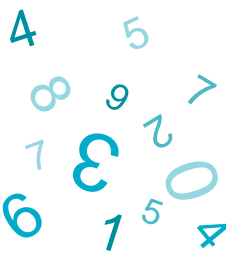
Desk Review Supervisor Checklist Data Verification & Systems Assessment



Link to country planning mechanisms

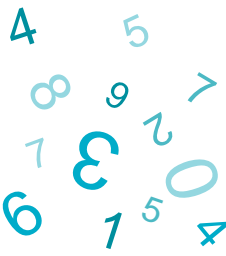
Link to planning

- The results of the Health Facility Data Verification and System Assessment (DV/SA) should be available for use during the annual health sector planning events.
- Ideally, the DV/SA was scheduled far enough in advance that the results are validated and compiled into a report for use at the planning event. But not too far in advance that the findings are no longer relevant.
- If the report is ready with findings and recommendations highlighted (e.g. executive summary) the issues uncovered during the assessment are more likely to receive consideration (and funding!) and then be addressed in the current budgetary cycle.



Data Quality Improvement Plan

- Based on the results of the data DQR (data verification, system assessment, desk review) the Data Quality (or HMIS) Technical Working Group (TWG) should lead the development of a Data Quality Improvement Plan (DQIP), an action plan for system strengthening, ensuring the involvement of relevant stakeholders.
- The DQIP should map out interventions designed to address problems found during the assessment and improve the quality of data.
- The plan should identify responsible agencies with appropriate staff to implement the plan, the timeline, and resources required to ensure completion.



Data Quality Improvement Plan

- If sufficient funding is not available within the current budget, the TWG should conduct advocacy among the donor community to raise the necessary funding.
- Interventions to improve the quality of data should be prioritized so that those with the highest likelihood of success, and those making the greatest impact on overall data quality, should be implemented first.
- Interventions should have a basis in reality. Budgets should be realistic. Responsible agencies/personnel should be available and willing to take on the interventions (and should buy-in to the strategy).
- Timelines should be doable. The DQIP should not be a wish list!



DQIP – Example I

| Data quality finding | Evidence of finding (interpretation) | Remedial measures | Scope | Timeline | Responsible | Resources |
|---|---|--|------------------|-----------------------------------|--|--|
| Domain: Indicator definitions and reporting guidelines | | | | | | |
| Lack of understanding of indicator compilation techniques at health-facility level for PMTCT/HCT - Pregnant women are not disaggregated from HCT results | Systematic over-counting of HCT indicator values in some districts (as revealed by data verification) | Improved supervision and mentoring in affected districts Emphasis on indicator compilation during pre-service and in-service training -Ensure that printed copies of indicator definitions and compilation procedures are available in health facilities | Regions 2, 7, 10 | One year (2015), then re-evaluate | -District health information officers or their designates (whoever is conducting supervision at the facility) -Pre-service, in-service curriculum design team (HMIS unit at national level) | District health information budgets -HMIS training budget (2015 allocation) -MOH nurse training (2015 budget) Global Fund Round 9 HSS grant |

EXAMPLE



DQIP – Example 2

| Data quality finding | Evidence of finding (interpretation) | Remedial measures | Scope | Timeline | Responsible | Resources |
|--|---|--|--|------------------------|--|---|
| Domain: Data maintenance and confidentiality | | | | | | |
| Source documents are not available for data verification | <p>A significant proportion of service delivery for malaria could not be verified because of the non-availability of source documents</p> <p>-poor record-keeping/archiving of reported results</p> | <p>-Districts should work with affected health facilities to develop sound storage areas (closet or cabinet with locking mechanism in a cool, dry place)</p> <p>-shelves should be built using locally-available materials</p> | Identified health facilities in Region 2 (districts 4 and 6) and Region 9 (districts 27 and 34). | 2015, then re-evaluate | District health management teams; facility in charge; Regional Health Authority (facilities management unit) | <p>2015 Facilities Management Budget</p> <p>- Global Fund Round 9 HSS grant</p> |

EXAMPLE



Implementation of DQR – Progress, opportunities and gaps

| | Progress & opportunities | Gaps & constraints |
|---------------------|--|---|
| Routine supervision | <ul style="list-style-type: none"> Guidance for routine DQA well developed | <ul style="list-style-type: none"> High quality supervision/ DQA difficult to sustain |
| Desk review | <ul style="list-style-type: none"> Guidance and tools (Excel & DHIS2) well developed DHIS2-based tools automate aspects of desk review Training materials developed for routine use of DQ tools district level Capacity building through online videos and tutorials | <ul style="list-style-type: none"> Only a few countries conduct formal annual desk reviews and data cleaning exercises Implementation research needed to document routine use of DQ tools at district level |
| Data verification | <ul style="list-style-type: none"> Guidance and tools (model questionnaire, CS Pro files) well developed | <ul style="list-style-type: none"> DV/SA surveys are infrequent in many countries |
| DQIP | <ul style="list-style-type: none"> Guidance, including model SOPs, well developed With routine use of DQ tools, DQR can become DQA (data quality assurance) | <ul style="list-style-type: none"> Many DQR's, but fewer DQIP's Implementation research need to document that DQA can be practical (not burdensome), effective (measurably improves DQ) and sustainable over several years. |

Benefit and risks for Global Fund

- Benefit
 - Efficient use of resources in supporting a harmonized approach rather than uncoordinated single program data quality reviews
 - Will achieve data quality improvement in focus programme areas -- HIV, TB, and malaria – while supporting the RSSH agenda
 - Critical for measuring investment risk
- Risk
 - Need to ensure the results are translated into improvement
 - Need to institutionalize the process of data quality review and improvement – what is the best way?

Overview of DQR

