

How basic economics can improve sustainability for national EQA providers

Companion presentation to Lab Culture paper
Submitted January 2020
Daniel G. Taylor | Kato Kayembe | Simon Anderson

Outline

- Oneworld Accuracy
- What is collaborative EQA?
- Five practical suggestions to improve EQA sustainability
- Open source EQA Sustainability dashboard

Oneworld Accuracy



Oneworld Accuracy

- Started operations in 2000
- Based in Vancouver, Canada with satellite office in Messina, Italy
- Social enterprise commitment to make EQA globally sustainable
- Directly manage accredited national EQA programs in Canada, US + Europe
- +200 accredited programs
- Coordinator to *collaborative EQA*

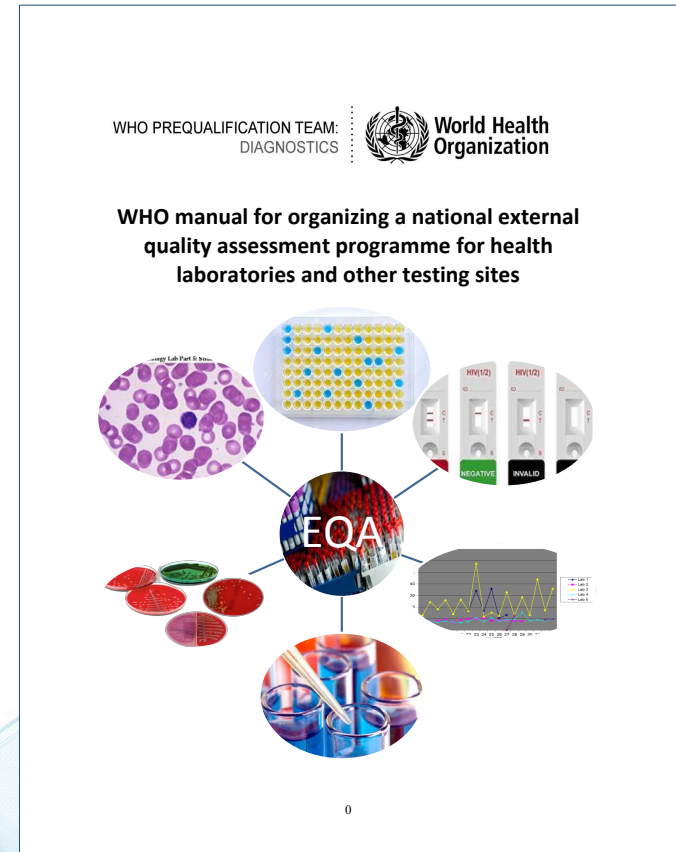
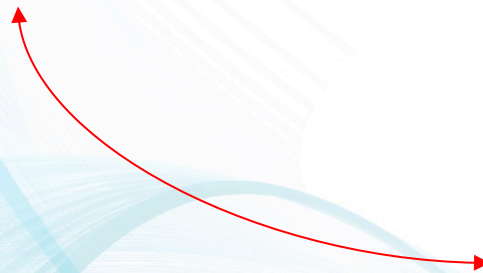
What is collaborative EQA?

- Goal is to help governments start or improve national EQA programs
- Provide informatics, training, business development
- Help develop sample strategy
 - make or procure in-country wherever possible (with training)
 - adopt samples from +200 accredited programs wherever needed
- Meet international standards with sustainable cost structure
 - samples / shipping / training at cost
 - informatics within every budget

Collaborative EQA

Advances tenets within this manual

Trained > 30 African public health stakeholders



Five practical suggestions

1. Create a business plan



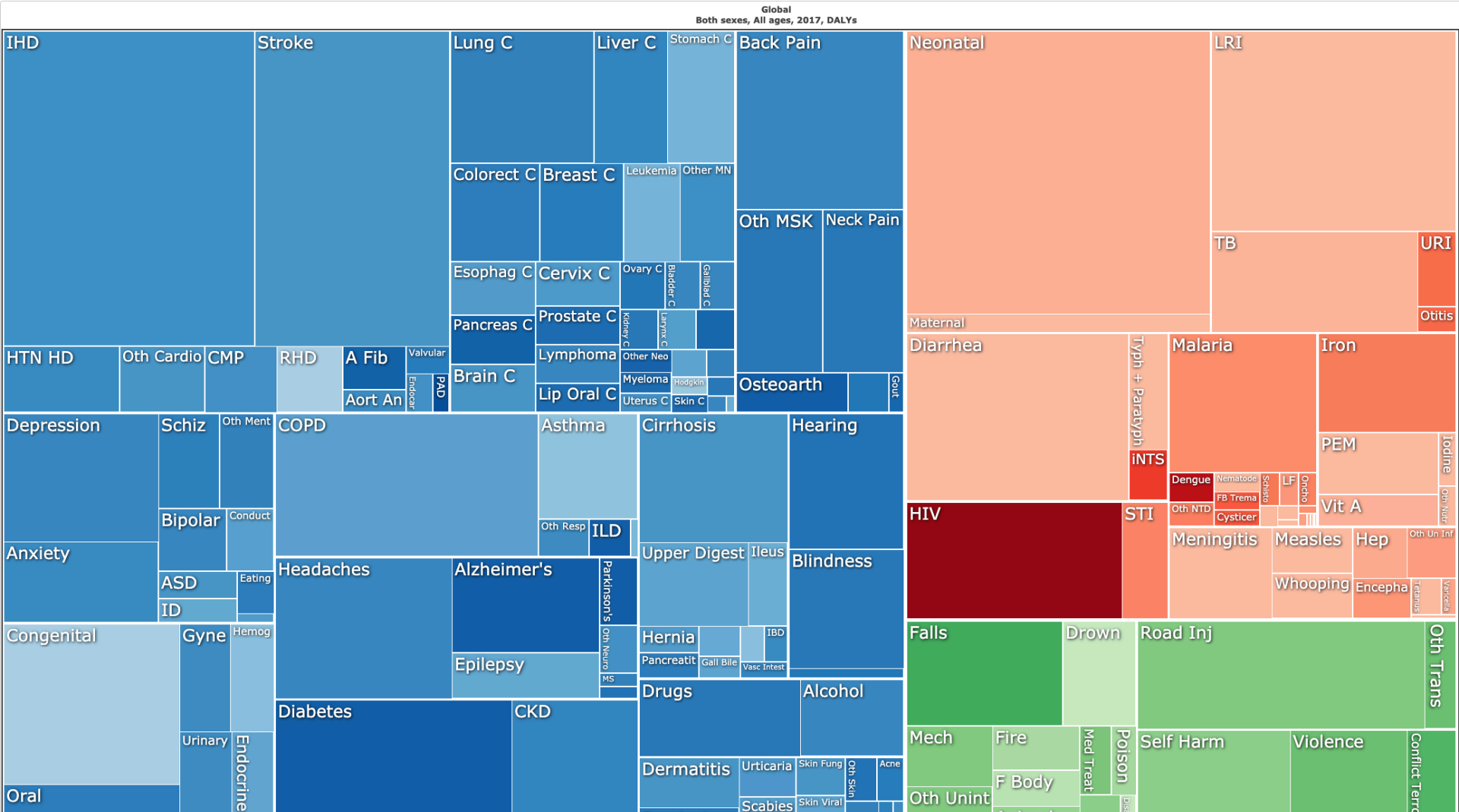
**A GOAL
WITHOUT A PLAN
IS JUST A
WISH**

1. Create a business plan

EQA providers need to plan for long-term sustainability

- Start with legal framework for EQA
- Define cost structure
 - fixed – occupancy / staff / equipment
 - variable – sample sets / shipping
- Informatics
- Revenue models
- End-user price list(s)
- Funding model
- *What happens when international funding ends?*

2. Select programs based on LBD



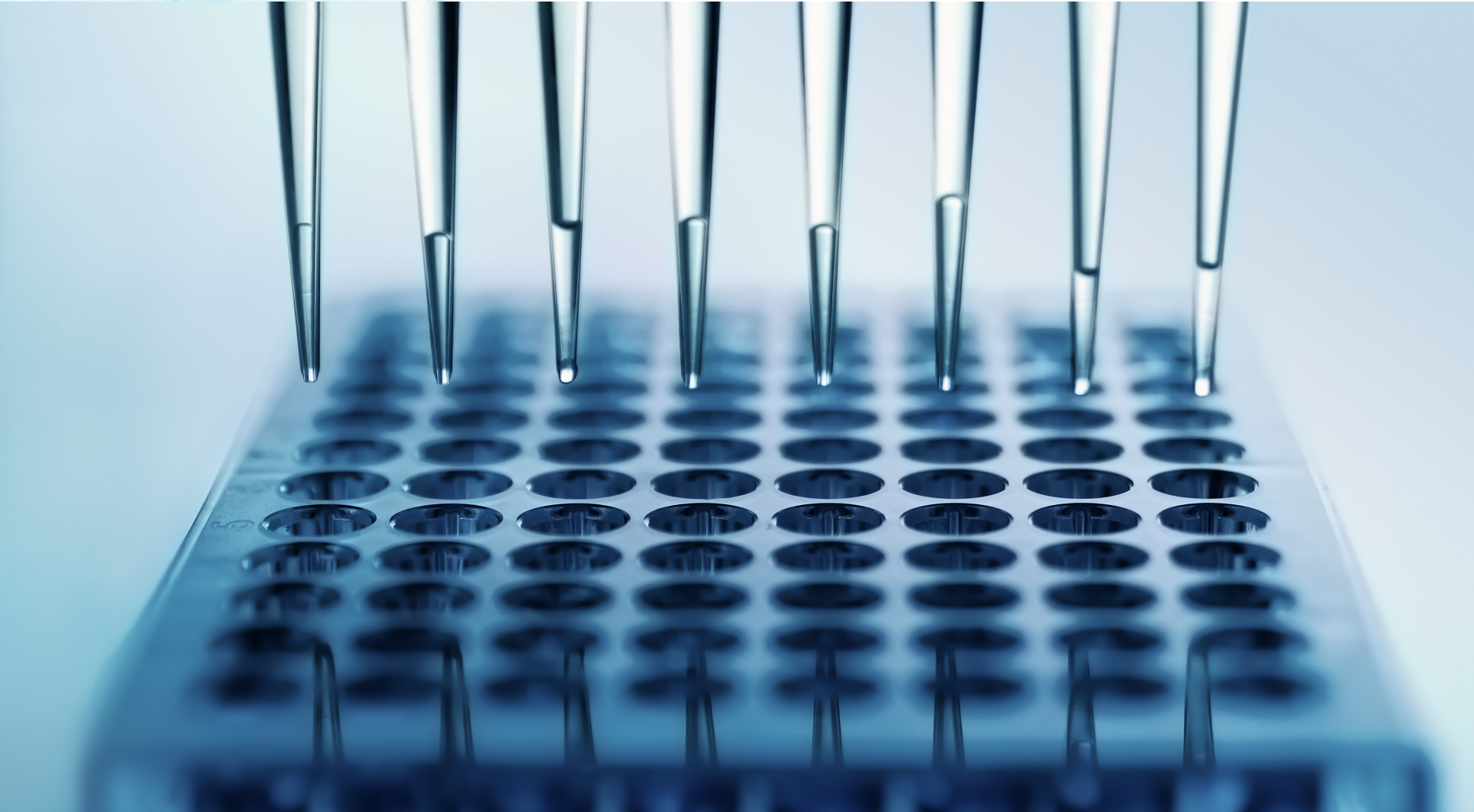
2. Select programs based on LBD

EQA providers should select programs that correspond to their LBD (local burden of disease)

- Definitive dataset of GBD and LBD - Institute for Health Metrics and Evaluation (IHME) of the University of Washington
 - premature deaths (YLLs, yearly lives lost)
 - disability (YLDs, years lived with disability)
 - sum of both (DALY, disability-adjusted life years)

<https://vizhub.healthdata.org/gbd-compare/>

3. Prioritize participants by test volume

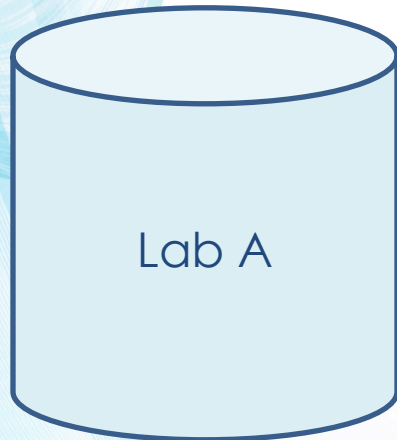


3. Prioritize participants by test volume

EQA providers should allocate participants based on patient test volumes

- An EQA subscription has a fixed **cost** independent of patient test volume
- However, the **value** scales directly with patient test volume

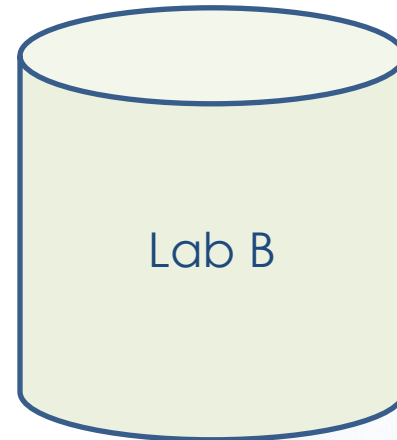
Example – \$500 viral load program



Lab A

1,200 patient results / year

EQA costs \$0.42 / patient result



Lab B

12,000 patient results / year

EQA costs \$0.04 / patient result

4. Prioritize follow-up by patient impact

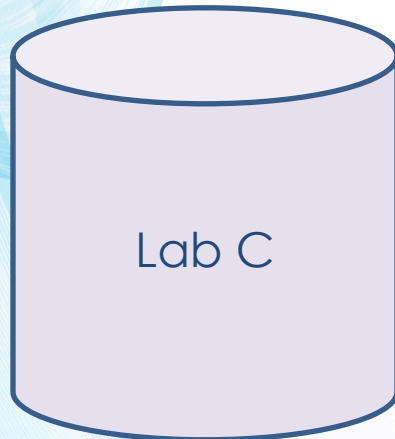


4. Prioritize follow up by patient impact

EQA providers should prioritize remedial follow up based on patient impact

- Without patient test volumes, follow up is typically based on **failure rates**
- This could lead to a misallocation of resources

Example – \$2,000 remedial follow-up



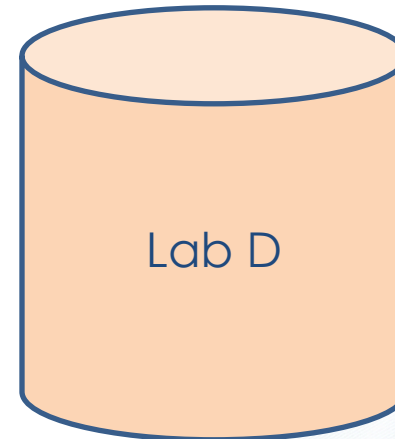
Lab C

1,200 patient results / year

20% pass / **80% failure**

960 affected patient results

FU costs \$2.08 / affected patient result



Lab D

12,000 patient results / year

80% pass / **20% failure**

2,400 affected patient results

FU costs \$0.83 / affected patient result

5. Provide ROI for EQA funders

If EQA is an **investment**, not a cost, what is its ROI?

- Reduced re-testing due to greater doctor's confidence in quality
- More timely treatment
- Better healthcare outcomes
- Delivering credible ROI facilitates EQA funding

EQA Sustainability Dashboard

Developing an open source dashboard as a resource for EQA providers

Making improvements requires measuring progress

1. business plan template
2. link curated data on local burden of disease from IHME
3. map disease burden to specific tests and associated EQA programs
4. add participants' test menus and test volumes
5. properly cost EQA programs
6. include standard troubleshooting checklists by discipline
7. develop cogent ROI models for EQA with healthcare economists

Thank-you

Questions / comments

dtaylor@1wa.org

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