




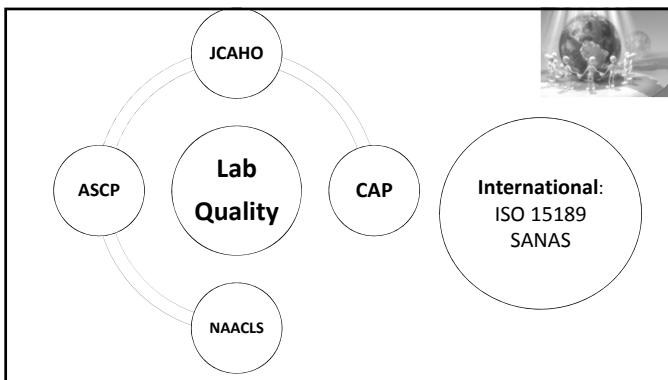
Laboratory Services in Low-Income Countries

Cathy Robinson, MSA, MLS(ASCP)CM
 Assistant Professor, LSUA
 crobenson@lsua.edu




Objectives:

1. Discuss the role of standards in assessing lab quality
2. List WHO Sustainable Development Goals (SDGs)
3. Describe challenges low- and middle-income countries face
4. Discuss responsibilities of faculty and preceptors in building capacity and sustainability in laboratory services
5. Appreciate universal challenges all countries face




WHO: Sustainable Development Goals (2016-2030)

1. No Poverty	2. No Hunger	3. Good Health	4. Quality Education	5. Gender Equality
6. Clean Water & Sanitation	7. Renewable Energy	8. Good Jobs & Economic Growth	9. Innovation & Infrastructure	10. Reduced Inequalities
11. Sustainable Resources and Communities	12. Responsible Consumption	13. Climate Action	14. Life Under Water	15. Life on Land
16.	17.			




Update on Laboratory Services Globally

- Laboratory Infrastructure
- Supply Chain Management
- Quality Management Systems
- Laboratory Capacity
- IQC and EQA
- University Curricula
- Sustainability
- Partnerships



Challenges Low-Income Countries Still Face

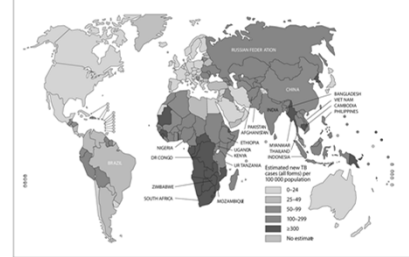
- Laboratory Infrastructure
- Supply Chain Management
- Quality Management Systems
- Laboratory Capacity in Rural versus Urban settings
- IQC and EQA
- University Curricula
- Sustainability
- NCD diagnoses vs HIV/Acute diagnoses
- Partnerships



The global situation (2)

- The number of NCD deaths has increased worldwide and in every World Health Organization (WHO) region since 2000.
 - Over 80% of NCD deaths — 29 million — occur in low- and middle-income countries.
 - **Cardiovascular diseases** account for most NCD deaths, 17.3 million people annually, followed by **cancers** (7.6 million), **respiratory diseases** (4.2 million), and **diabetes** (1.3 million).
- These four groups of diseases account for around 80% of all NCD deaths.

Estimated TB incidence rates, 2010



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate borders to which there may not yet be full agreement.

Source: Global Tuberculosis Control 2011. WHO, 2011.

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The Role of the MLT/MLS Educator- Globally

- **Not only EDUCATE but ROLE MODEL**
 - good laboratory practice
 - Professionalism
 - Ethics
 - Passion
 - Respect and collaboration with laboratory preceptors
 - Continuing education

The Role of laboratory Preceptors- Globally

- **Not only EDUCATE but ROLE MODEL**
 - Good laboratory practice
 - Professionalism
 - Ethics
 - Passion
 - Respect & collaboration with educators
 - Continuing education

Why Assess laboratory Quality?

At 3 am, what lab will you take your child, spouse, parent to
if:

There is an emergency?



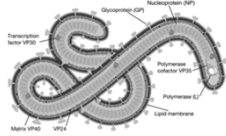
Why Does it Matter What happens in Low- and Middle-Income Laboratories Globally?

- Every human life is valuable:
- The Ebola outbreak in 2014:
 - 19,340 cases
 - 7,518 deaths
 - 8 Countries (Guinea, Liberia, Sierra Leone, Nigeria, Senegal, United States, Spain, Mali)
- Hartsfield-Atlantic Airport:
 - Averages 250,000 passengers every day
 - Direct flights to 95 cities in 57 countries
 - Within 2 hours of 80% of the US population

Why Does it Matter What happens in Low- and Middle-Income Laboratories Globally?



- Thomas Eric Duncan
 - Texas Health Presbyterian Hospital
 - September 2014
- Craig Spence
 - Bellevue Hospital, NYC
- Pregnant mothers/Others
 - Zika Virus
- Olympics 2016 in Brazil
 - Are you going?

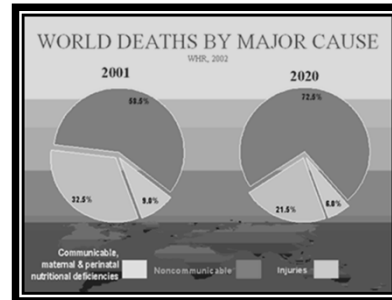


Next Steps to Promote Quality Lab Services



- Each country **MUST** take responsibility
- Countries and partners **MUST** collaborate
- Health Care **MUST** be a priority beginning with the Ministries of Health and Education
- Laboratory capacity **MUST** be maintained
- Current laboratory **quality** status **MUST** be sustained
- Quality Management Systems **MUST** be applied to ALL LABORATORY testing including NCDs

Global Health



**If you want to go fast, go alone.
If you want to go far, go together.**



Thank You

