

Health, Climate Change and the Environmental Impact of Immunization

National Mitigation and adaptation approaches

Yifru Brehan (Prof)

Minister Of Health, Ethiopia

Background:

we were not too late to start vaccination

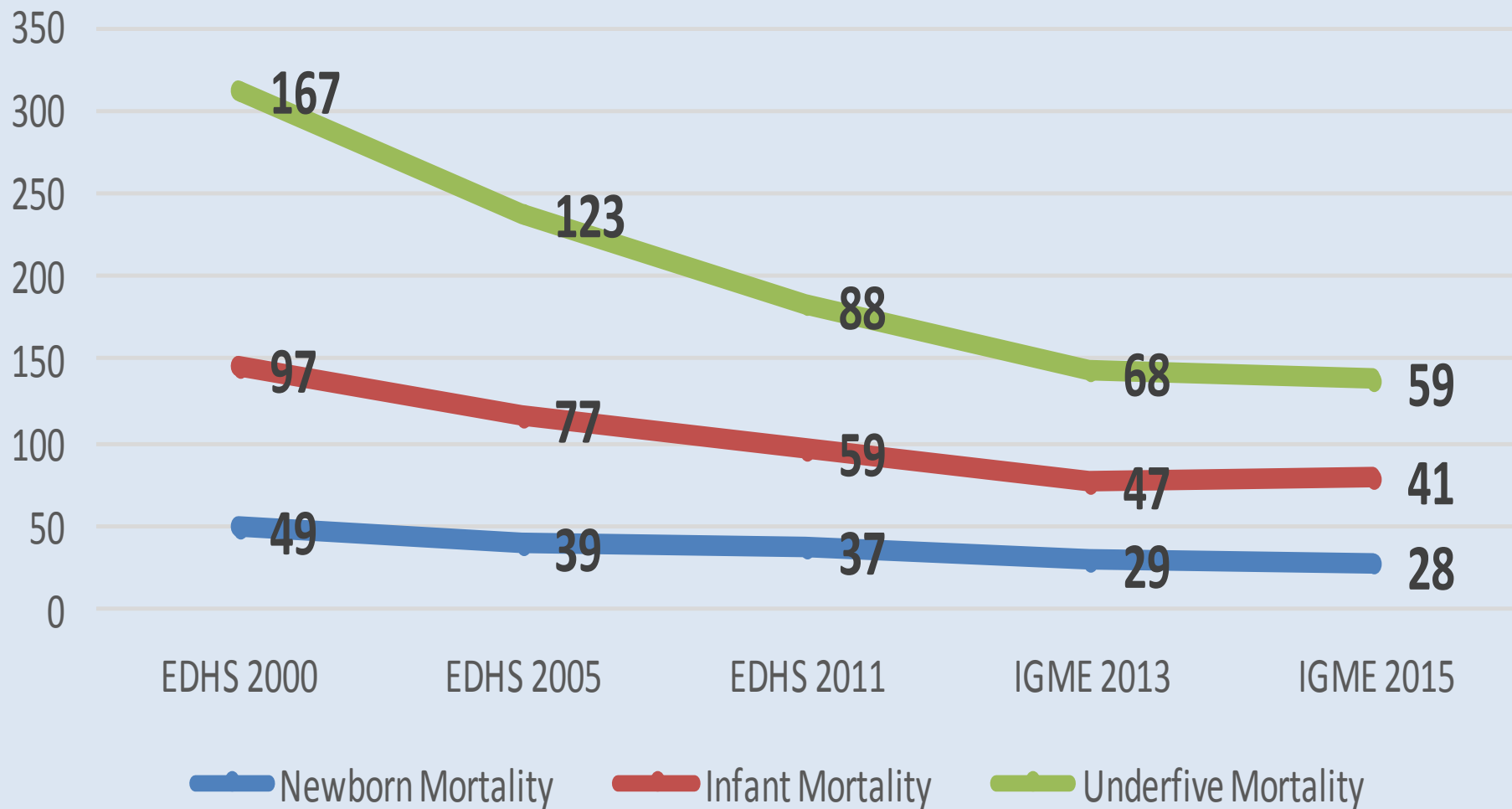
- **Small pox vaccination campaign 1964 - 1977.**
(WHO declared campaign 1966 – 1980)
- **EPI was declared in 1980.**
(WHO declared in 1974)
- **Polio eradication campaign since 1996.**
(WHO declared in 1988)
- **Polio free since 2014. (WHO expected in 2000).**

Background... Cont'd

The vaccination program contributed to significant decline in:

- **Under-five mortality (65%)**
- **Infant mortality (58%)**
- 2-3 million deaths averted each year.
- Achieved MDG4 three years prior to 2015.

Child Mortality Rates in 1000 live births in Ethiopia



Equity of the health service

- **GAVI and partners generous support**
- **The Health extension program**
- **The Ethiopian government's commitment**
- **Health facilities expansion for the PHC**

Equity of the health service cont...

- Malaria incidence & malaria related mortality
↓ by 50% and 60%, respectively.
- TB prevalence and TB related mortality
↓ by 50% and 70%, respectively.

Climate Change Risk in Health and Immunization

- **Climate changes - higher temperature;**
 - **Increase the incidence of**
 - **Malaria, Meningitis, Measles, Acute lower respiratory infection (ALRTI), yellow fever, dengue fever**
- **Climate changes - drought**
 - **Increase the incidence of**
 - **Measles, diarrheal disease (rota v, cholera), TB, malnutrition, ALRTI**

Climate Change Risk ... Cont'd

- 63% of an estimated 36,800 child deaths due to ALRTI was attributable to Household air pollution during dry season.
(WHO, 2012).

Challenges ... Future

As per WHO's estimate in Ethiopia,

- High emissions of climate pollutant contribute to **10% of the estimated 42,000 diarrheal deaths** in children by 2050.
- By 2030, about 248,000 additional people may be at risk of river floods.

Ethiopian approaches to mitigation & adaptation to climate change

- Addressing climate Change is a priority in our GTP2.**
- Our HSTP also identifies climate change as one of the threats in order to meet SDG.**

Approaches to mitigation & adaptation

Ethiopia's climate-resilient green economy strategy - 4 pillars

- **Agriculture:** Improving crop and livestock production --- significant attention to irrigation
- **Forestry:** Protecting and re-establishing forests
- **Power:** Expanding electricity generation from renewable energy – hydro, wind, solar, geothermal
- **Transport, industrial sectors and buildings:** Energy efficient and zero waste leak technologies

Approaches to mitigation & adaptation

Integration of health & climate adaptation

- ✓ Provision of clean water and sanitation,
- ✓ Secure essential health care, including **vaccination** and child health services,
 - **Vaccines protect vulnerable children from diseases that will be made worse by climate change.**
- ✓ Increase capacity for disaster preparedness and response, and alleviate poverty.

Approaches to mitigation & adaptation

- Developed a strategic framework for Climate Change National Adaptation Program (CNAP) to mitigate the impact of **climate change on health**.
- Ethiopia has also implemented action to build institutional & technical capacity on **climate change and health**, including climate resilience infrastructure

Approaches to mitigation & adaptation

Public Health Emergency Management institute establishment is in the pipeline.

Favorable conditions for public health emergencies

- Recurrent attack from climate change
- Fast population growth and urbanization
- Multiple mega projects and industrialization
- People mobility (inward and outward migration)

Approaches to mitigation & adaptation ...

- FMHACA developed health care waste disposal directives.
- **Wastewater treatment plant** with 100 million USD - having a capacity of treating 100,000 cubic meter/d
- Reducing emissions of greenhouse gases through
 - Replacement of Kerosene based refrigerators by Solar Direct Drive (SDD) refrigerators
 - GAVI's CCEOP – Awaiting approval
 - More than 2000 SDDs distributed in the past three years and more to go.

Approaches to mitigation & adaptation

- Energy Supply - renewable heat and power
 - Hydropower – Great Ethiopian renaissance dam
 - Solar – Household, Health Facilities
 - Wind farm – Ashegoda, Adama 1 and 2
 - Geothermal energy
 - Liquid and solid waste
- The country is part of Ozon diplomacy and negotiation process
 - Climate Vulnerable Forum

Thank you

