



Practicing Medicine in Rwanda: Health Care Challenges and Lessons in the Wake of the 1994 Genocide against Tutsis

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Outline

- **My journey towards becoming a doctor**
- **Rebuilding after the Genocide against Tutsi**
- **Practicing Medicine in Rwanda**
- **Partnerships and collaborations**



Sub-Saharan Africa



Sub-Saharan Africa



Rwanda

Area: 10,120 square miles
(State of Maryland)

Population: 11.6 million
(State of Ohio)



Parental Plans vs. Personal Goals



Parental Plans vs. Personal goals





- **Shared story with many Rwandans**
- **The 1994 Genocide against Tutsi cost 1,000,000 lives in 100 days**



- Shared story with many Rwandans
- The 1994 Genocide against Tutsi cost 1,000,000 lives in 100 days
- **Stopped by Rwanda Patriotic Front**

Peace



- **Rwanda described as one of the safest countries in the world**
- **Rwandan troops in Peace keeping missions abroad**

Justice



- **1995:** Approximately 130,000 alleged genocide perpetrators populated Rwanda's prisons
- **1995:** The International Criminal Tribunal for Rwanda (ICTR) was the first international tribunal in history to deliver verdicts against persons responsible for committing genocide
- **2015:** Dissolved December 2015
Only 93 indicted, **62 sentenced!**

24 years after the 1994 Genocide Justice



Gacaca courts

24 years after the Genocide:

- **Gacaca:** “Justice amongst the grass”
- This traditional, communal justice was adapted in 2001 to fit the needs of [Rwanda](#) in the wake of the Genocide
- Gacaca courts tried more than **1 million** ordinary people who served as the foot soldiers of the genocide
- Over **60 %** ended in **Verdict of guilty**
- Reconciliation: ongoing process



<http://gacaca.rw>

24 years after the 1994 Genocide



Women Empowerment

- **Women:**
 - 64% of seats in Rwanda's parliament
 - more than any other country in the world.
- **The female majority:**
 - ensured that laws aimed at raising the status of women are at the forefront of political discourse.

Education



- **61% of the population < 24 years**
 - the Rwandan government has made education a top priority.
- **The government spends 17% of budget on education**
 - primary & secondary school free
 - compulsory for both boys and girls.
- **11 Public universities**
- **24 Private universities**
 - Carnegie Mellon
 - University of Global Health Equity
 - Partners in Health and affiliated with Harvard University



History of Health Education

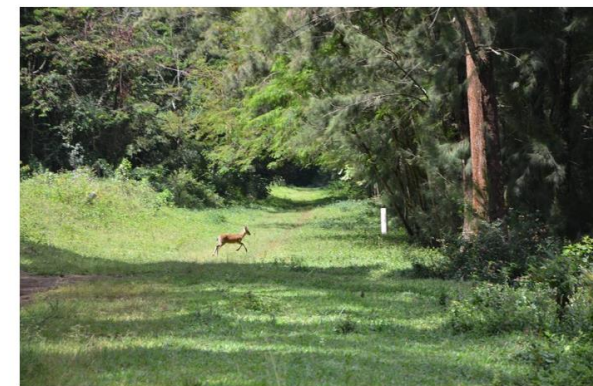
1963: First University in Rwanda

- The government in cooperation
 - Congregation of the Dominicans from the Province of Quebec, Canada
- 3 academic units:
- **Faculty of Medicine**
- Faculty of Social Sciences
- Teacher Training College (ENS)



Rwanda Selects Ruhande Arboretum For Queen Elizabeth Canopy

By [Oswald Niyonzima](#) February 15, 2018 at 8:25 pm



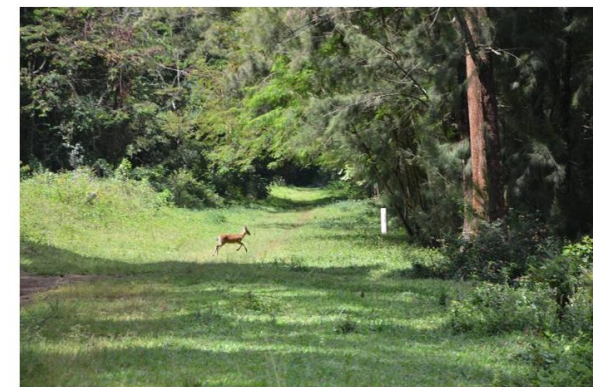
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At 90, retired Dr Ntabomvura's medical passion just won't wane

At 11 am on Tuesday, February 23, 2016, Dr Venant Ntabomvura engages in examining a patient at the University Teaching Hospital of Butare (CHUB). The 90-year-old started medical practice in 1946 and it is now about two years since he retired.

By Emmanuel Ntiringanya Published : March 01, 2016

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The Genocide against Tutsi



1994

- University closes
- Students and Staff killed or exiled
- Infrastructure destroyed



History of Health Education



- **1995: National University of Rwanda** Re-opening – Including **medical school**
- **1997:** Residency program
- **2018**
 - 2 Medical schools functioning , 2 Medical schools opening in 2019
 - Several schools of nursing

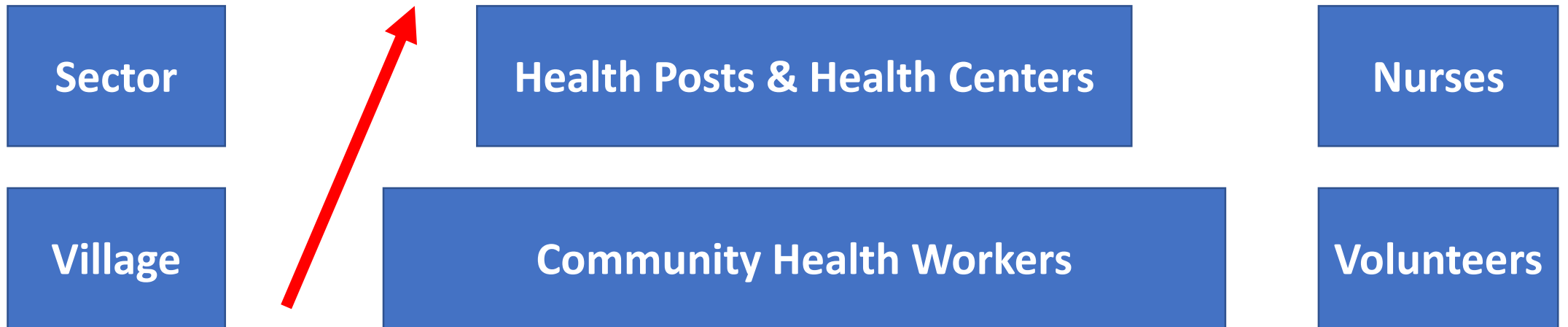
REFERRAL PATHWAY

Village

Community Health Workers

Volunteers

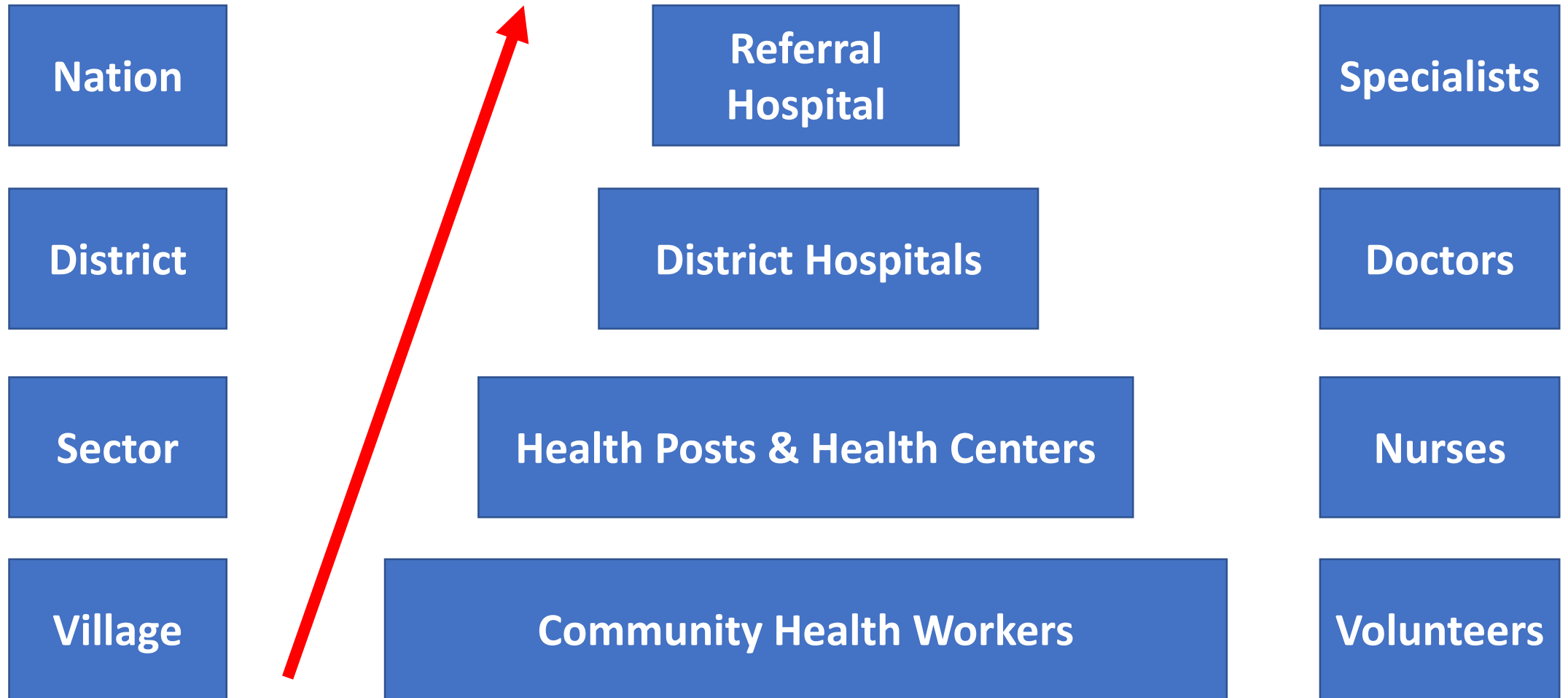
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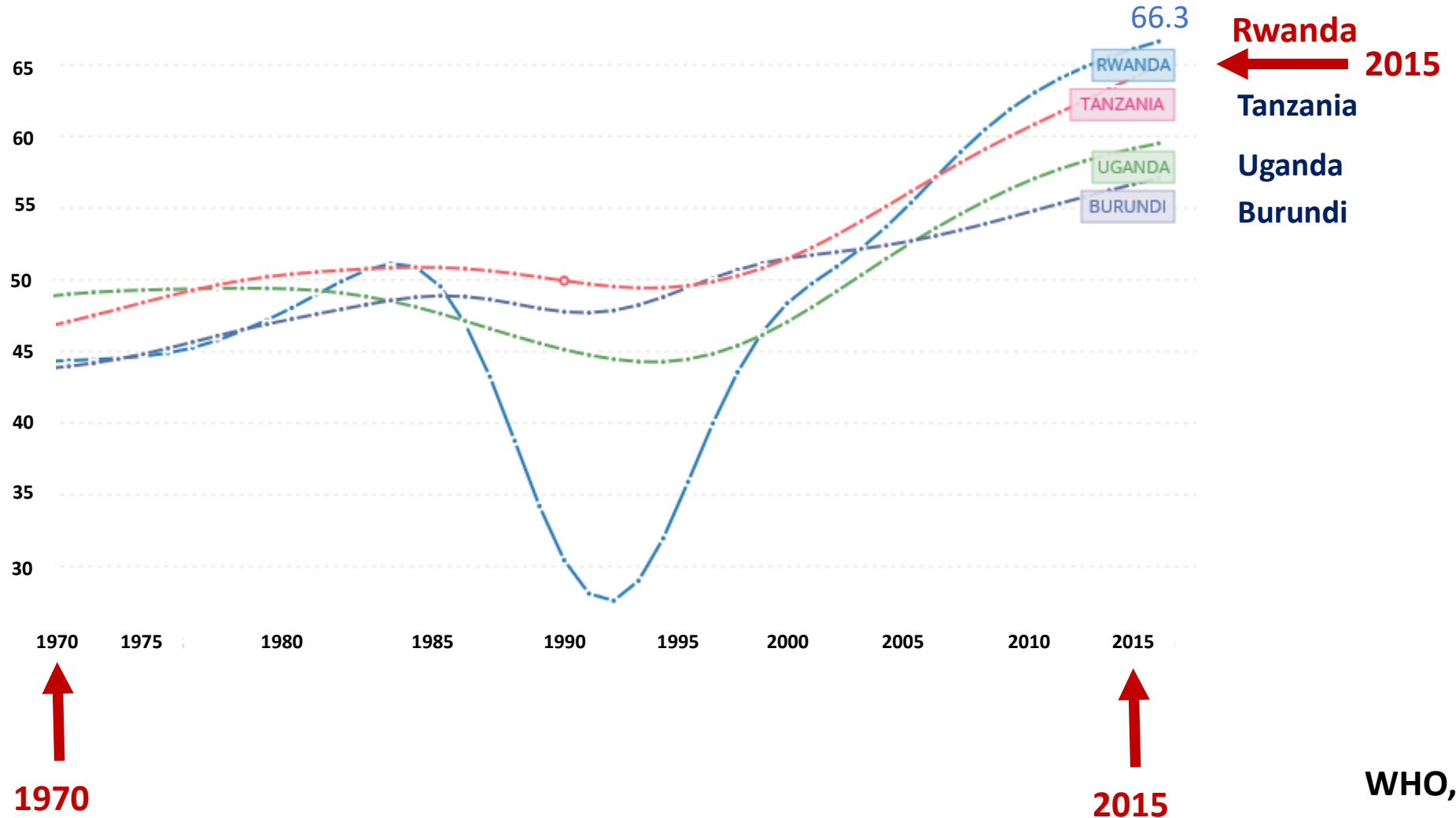


Community Health Insurance

- The Rwanda Miracle
 - COST to the Rwandan Individual: **Four dollars per person**
- Therefore
 - 91% of the Rwandan population has national health insurance program:
 - **Mutuel de Sante**

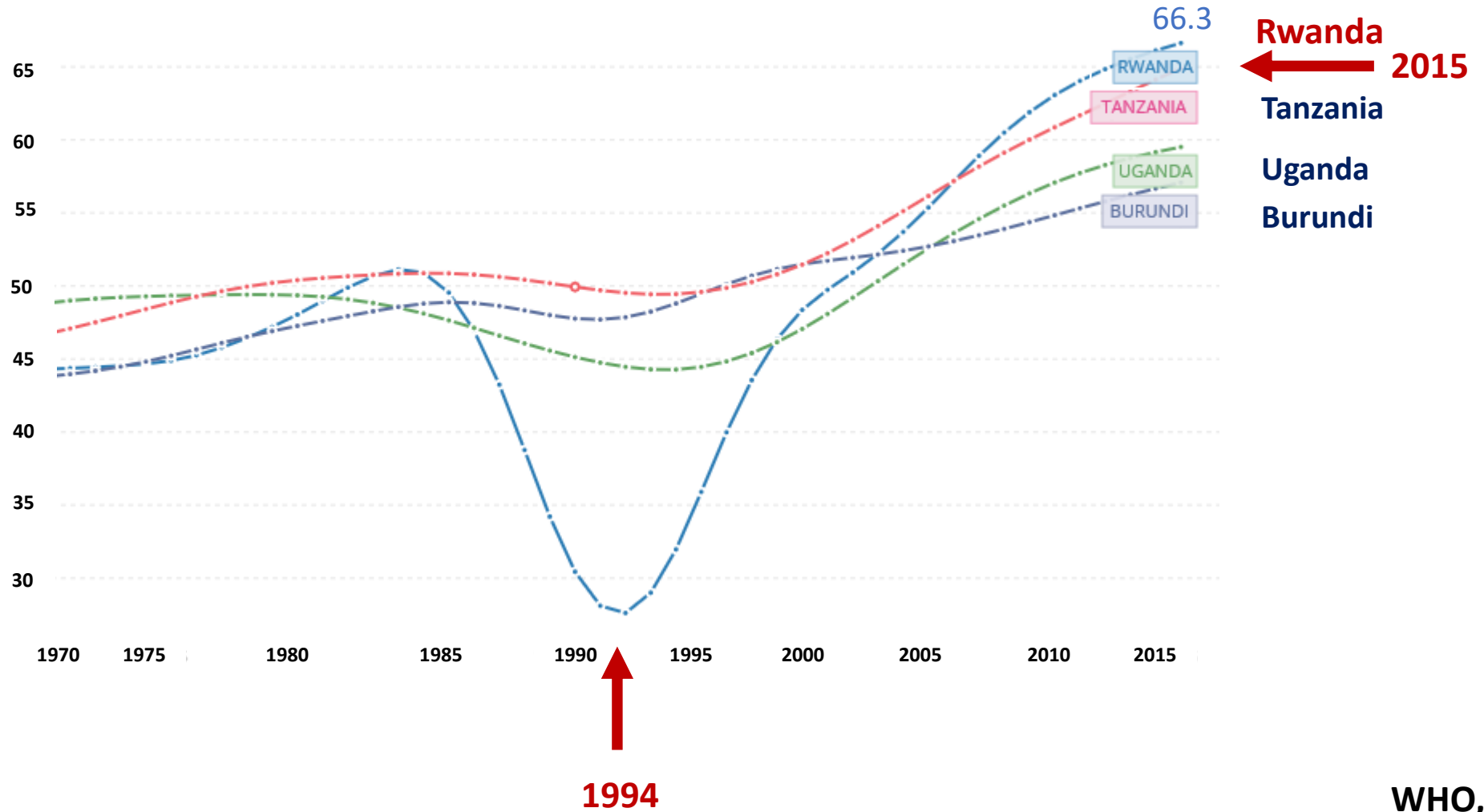
24 years after the 1994 Genocide

Life expectancy

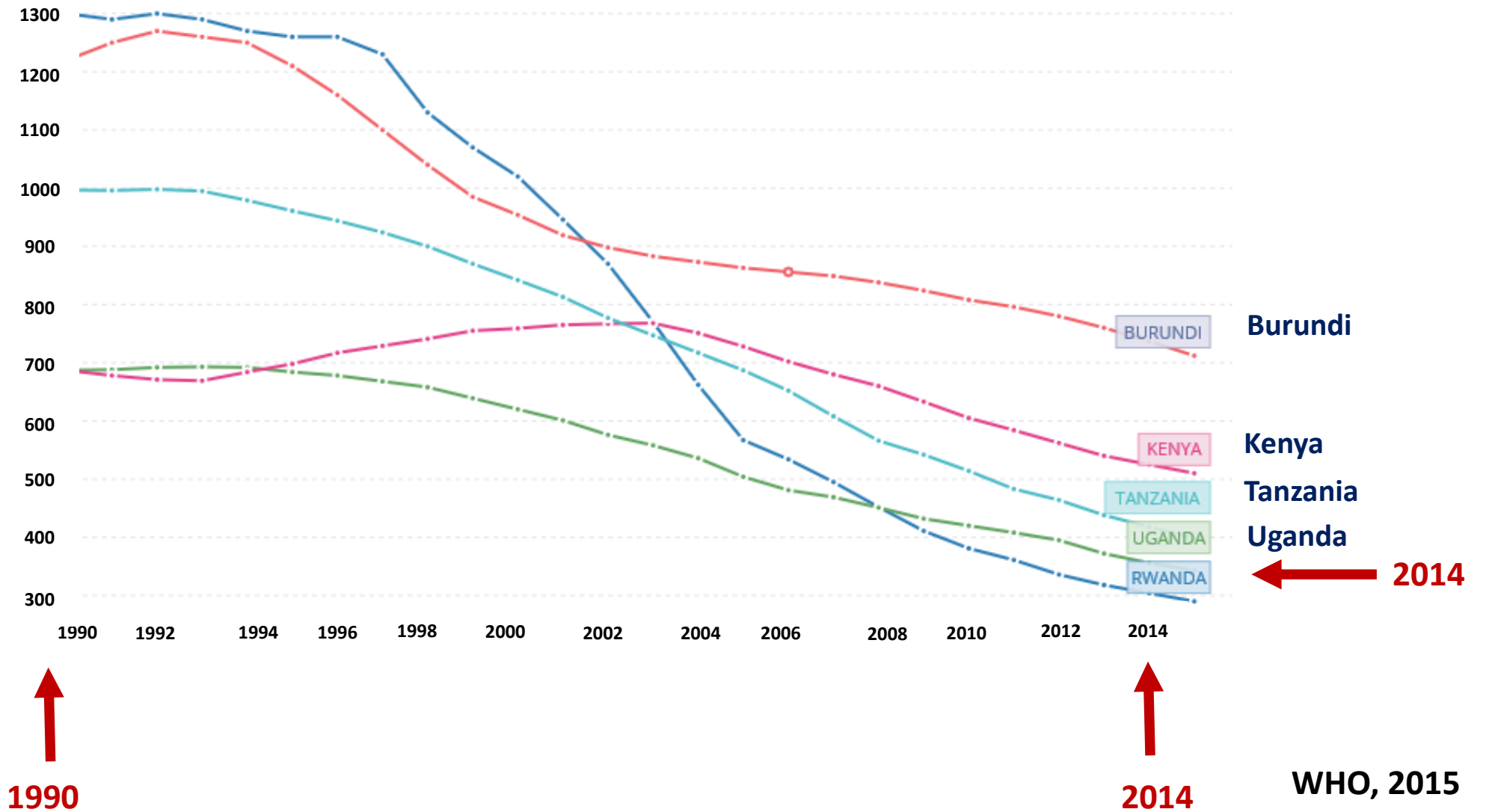


24 years after the 1994 Genocide

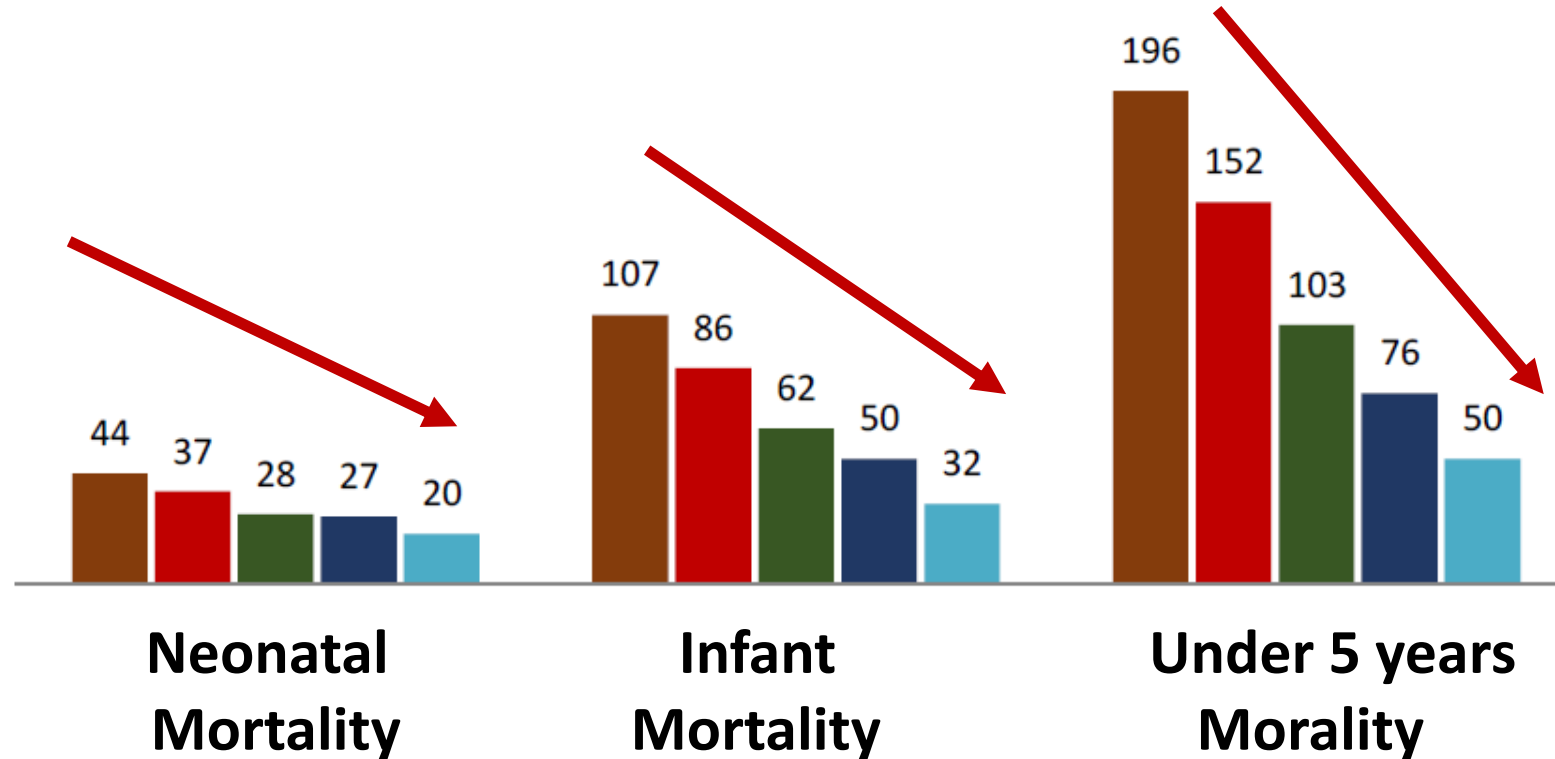
Life expectancy



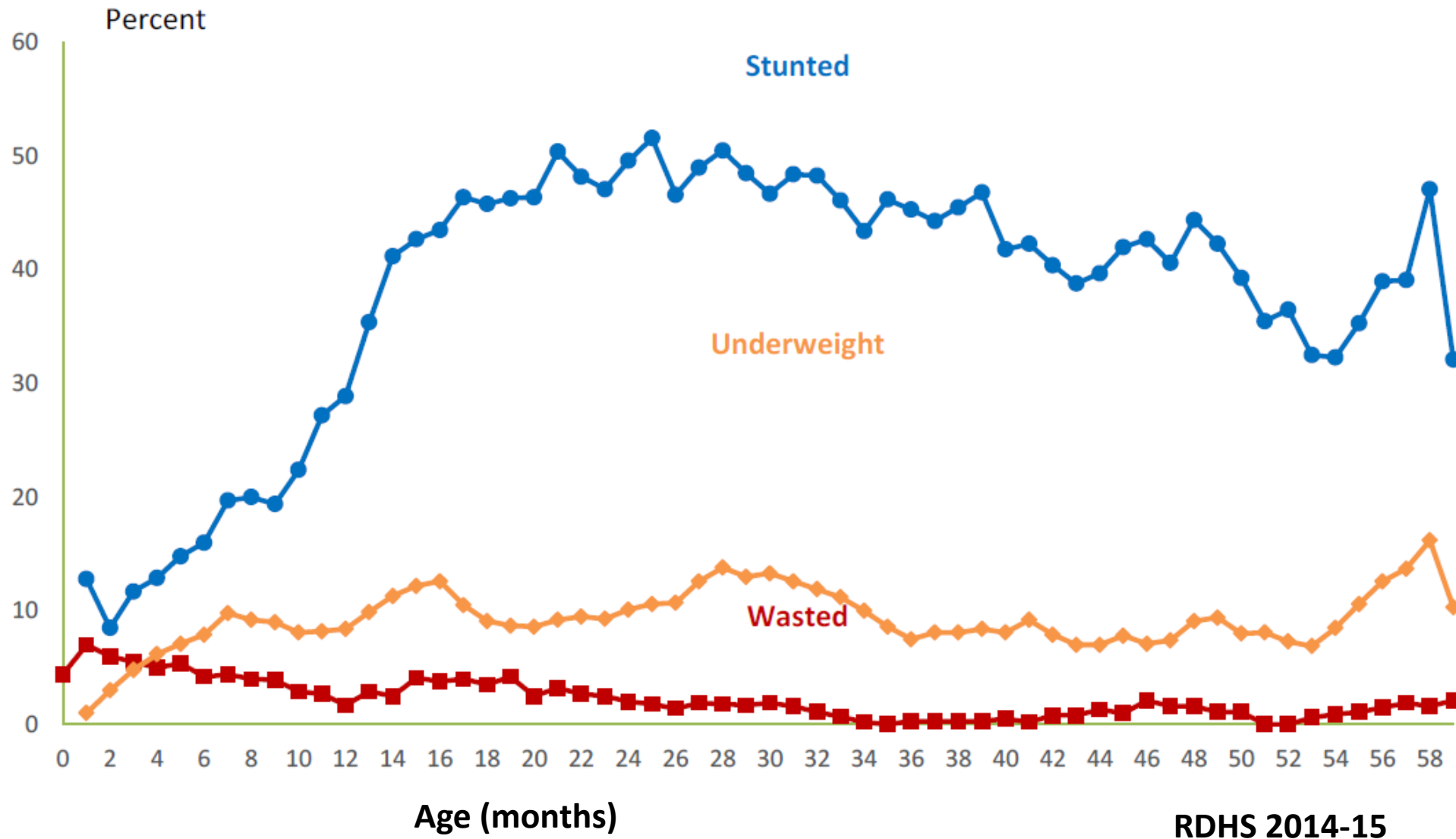
Maternal mortality ratio (per 100,000 live births)



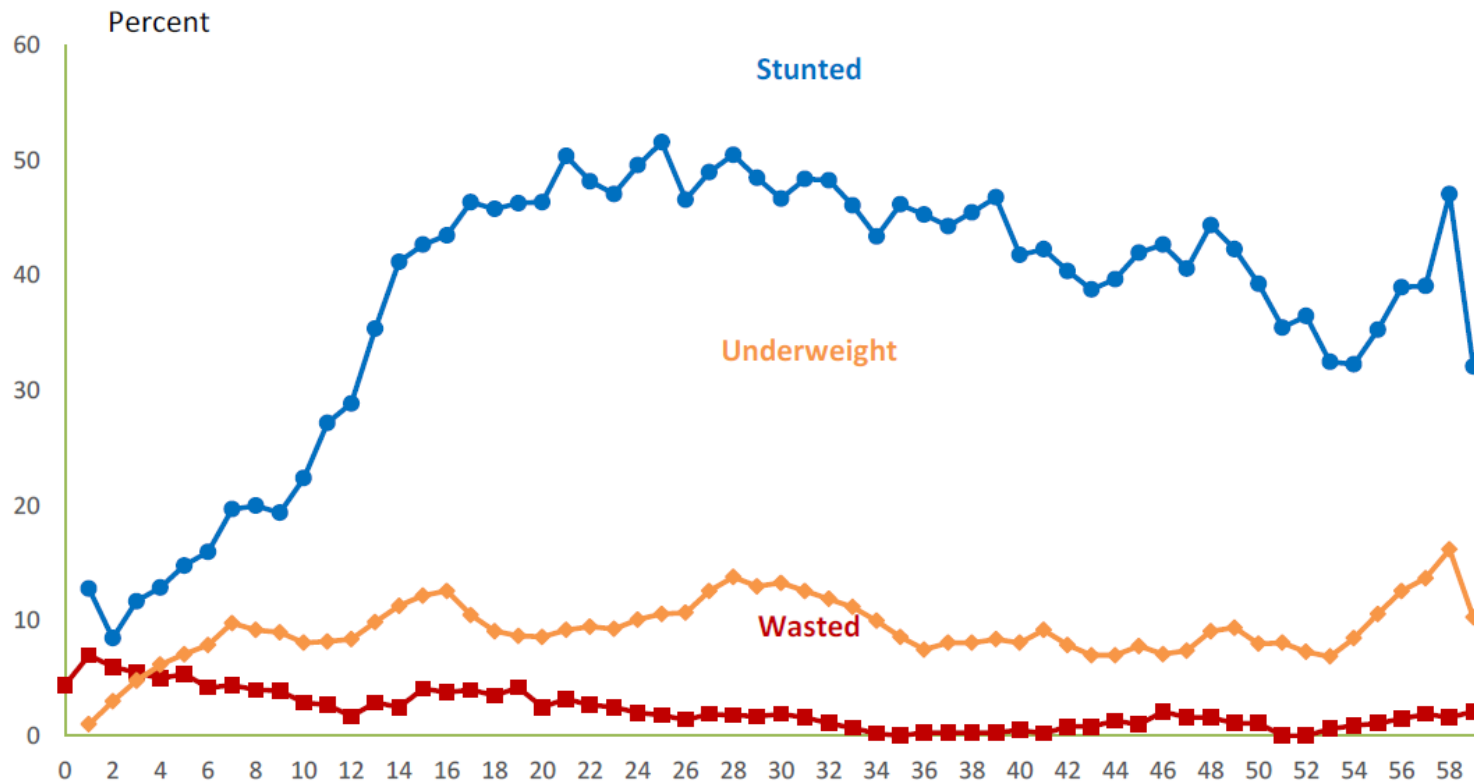
Trends in Childhood Mortality per 1,000 live births 2000 to 2015



More work to do



More work to do



Age (months)

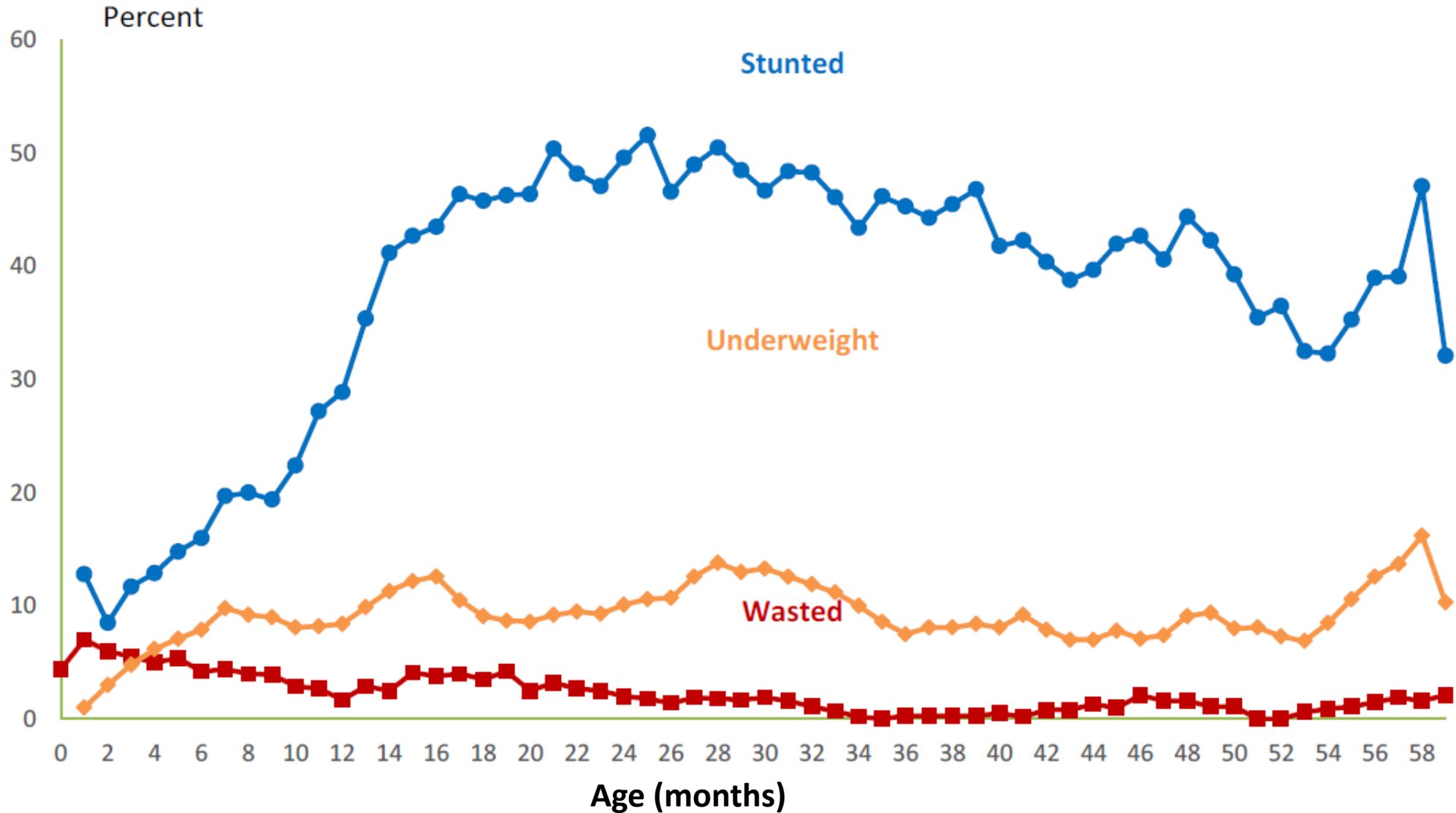
RDHS 2014-15



Nemba DH, June 2017

More work to do

Early Childhood Development Programs



THE WALL STREET JOURNAL.

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In Rwanda, Drones Deliver Medical Supplies to Remote Areas

Such services help people in isolated regions—and could yield lessons for making shipments elsewhere



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Latest News  Light, sweet crude oil leads U.S. production growth

World Bank president hails Rwanda's use of drones in healthcare delivery



Source: Xinhua | 2017-03-22 16:12:17 | Editor: huaxia



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- **Practicing Medicine in Rwanda**
- Partnerships and collaborations

Practicing Medicine in Rwanda

- **Research**

- Hugely impactful studies/interventions

- **Education**

- Short term: shorter-duration trips for educational purposes

- Long term: fellowship training programs

- **Health Systems**

- Tremendous gains can be made by streamlining health systems

Practicing in Rwanda as an **individual physician**

- Individuals matter
- Bedside medicine matters
- There are few sub-specialists (readily) available
- Great teaching opportunity

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Partnerships in the country

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL REPORT

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Helen Lamphere McPherson, B.A., Jean de Dieu Ngirabega, M.D., Ph.D., Anne Sliney, R.N.,
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N Engl J Med 2013; 369:2054-2059

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Partnerships in the country

Table 1. Training Targets for the Human Resources for Health Program in Rwanda, 2011–2018.*

Objective	Baseline, 2011	Target, 2018
	<i>number</i>	
Increase the total number of physicians	625	1,182
Increase the number of specialists in priority clinical areas	150	551
Increase the total number of nurses and midwives	8513	11,384
Increase the number of nurses and midwives with A0 credentials	104	1,011
Increase the number of nurses with qualifications upgraded from A2 to A1 level credentials	797	5,095
Introduce the role of health manager at the district hospital level and increase the number of health managers	7	157
Increase the number of oral health professionals, including dental assistants, therapists, and surgeons	122	424

Doctor-Population ratio: 1/8,592 WHO: 1/10,000

N Engl J Med 2013; 369:2054-2059

Partnerships between Rwanda & USA

- Johnson and Johnson Scholars program at **Yale University**
- Memorandum of Understanding with **University of Utah**
 - includes a pediatric global health fellow year-round in Butare as well as multiple **medical students** and **residents** who come through
- Relationship with the **University of Cincinnati** cardiology fellowship to develop Rwanda as a **training site**.

Partnerships in the country

Partners in Health- The University of Global Health Equity



Partnerships in the country

Team Heart



Ruli DH, June 2017

International Partnerships the country

NIMHD-NIDDK-Rwandan Health Program

- Year 1: Dr. Utumatwishima
- Year 2: Dr. Kabakambira (me)
- **Year 3: Dr. Regine Mugeni**
- Year 4: To be recruited
- Year 5: To be recruited



My Journey to Medical School

But...my most rewarding experience

Medical Students Mental Health Association (MMHA)

Volunteers for psychological intervention Genocide commemoration week



But...my most rewarding experience

Medical Students Mental Health Association (MMHA) Psychoeducation during Umuganda



My advice to Medical Students

- Stop being a victim of time: Live the present
- Get some time for extra-curricular activities



My advice to Medical Students

- Do not be a victim of time: Live the present
- Get some time for extracurricular activities
- Remain flexible: you can change!



Big tasks ahead

- **Diabetes data for my country ...**

12 countries with Diabetes registry
Undiagnosed DM

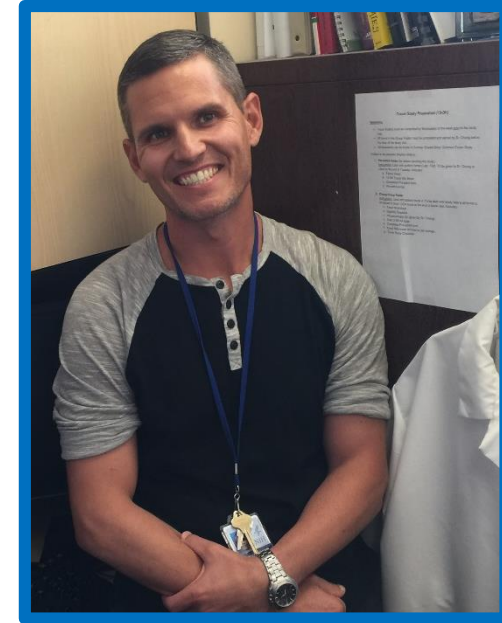
**For me:
I refuse to be an ordinary Doctor who
treats patients
goes home
maintains the routine!**

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treats patients
goes home
maintains the routine!

**I am capable of far more,
and you are too!**

Don't let one failure summarize your day





Dr. Anne E. Sumner
Dr. Stephanie T. Chung
Mr. Christopher W. DuBose
Mr. Rafeal L. Baker. Jr
Ms. Sara M. Briker

Thank you

Murakoze



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