

Medical Care In Rwanda



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Rwanda





Rwanda



- **Population: 12 million**
- **Neighbors:**
 - Burundi
 - Tanzania
 - Uganda
 - Democratic Republic of the Congo

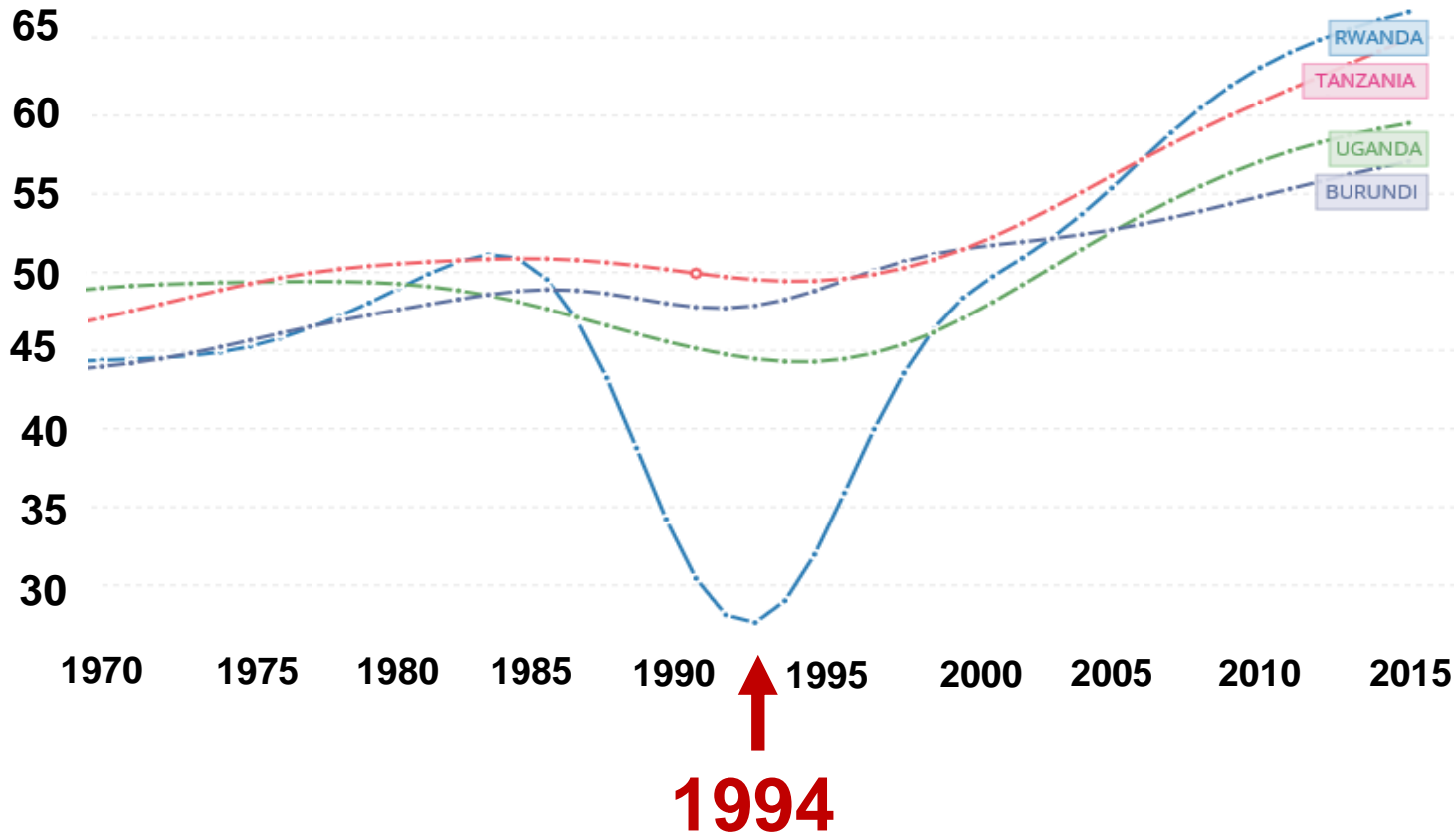
Rwanda

A beautiful country

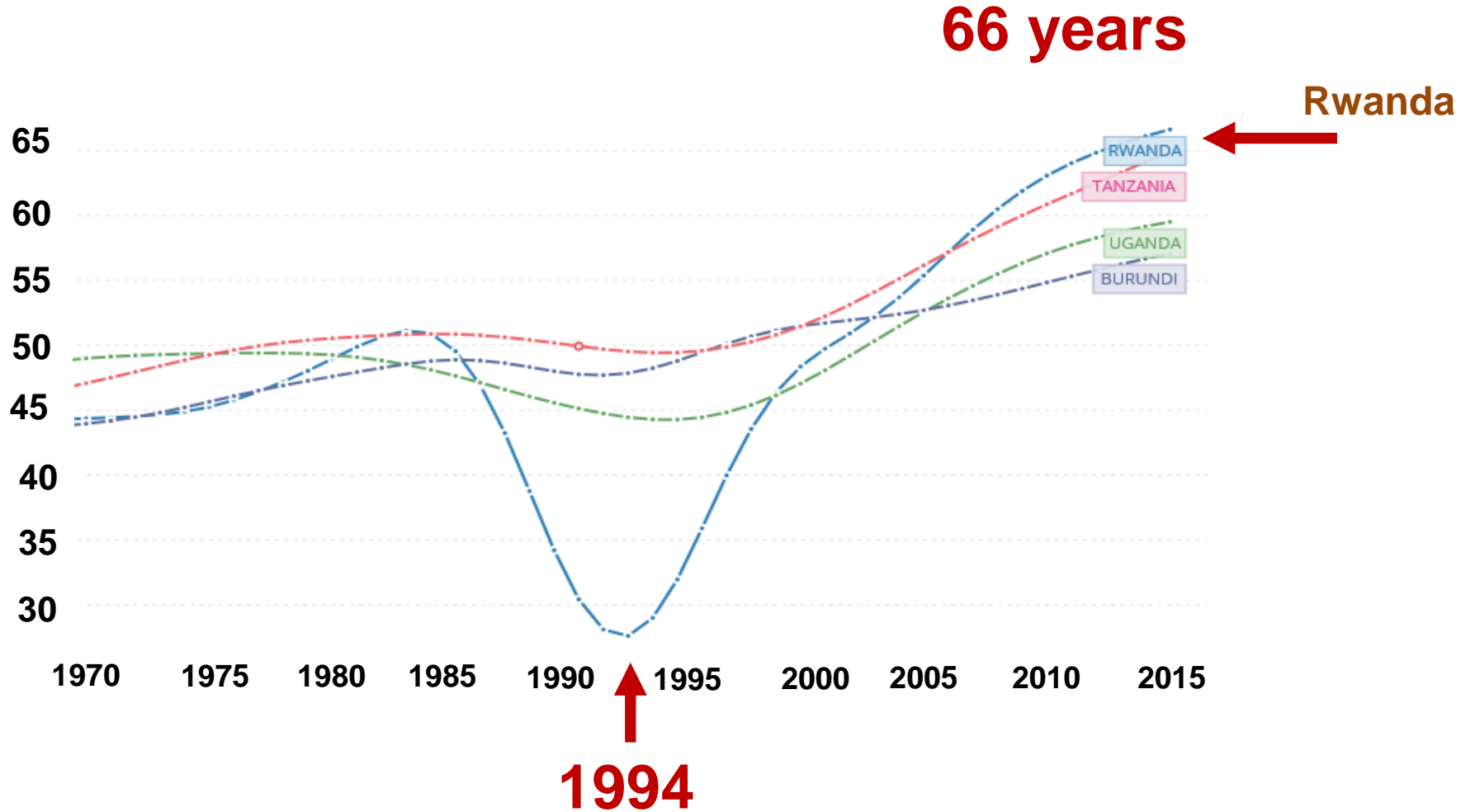
- **Ravaged in 1994 Genocide against Tutsis**



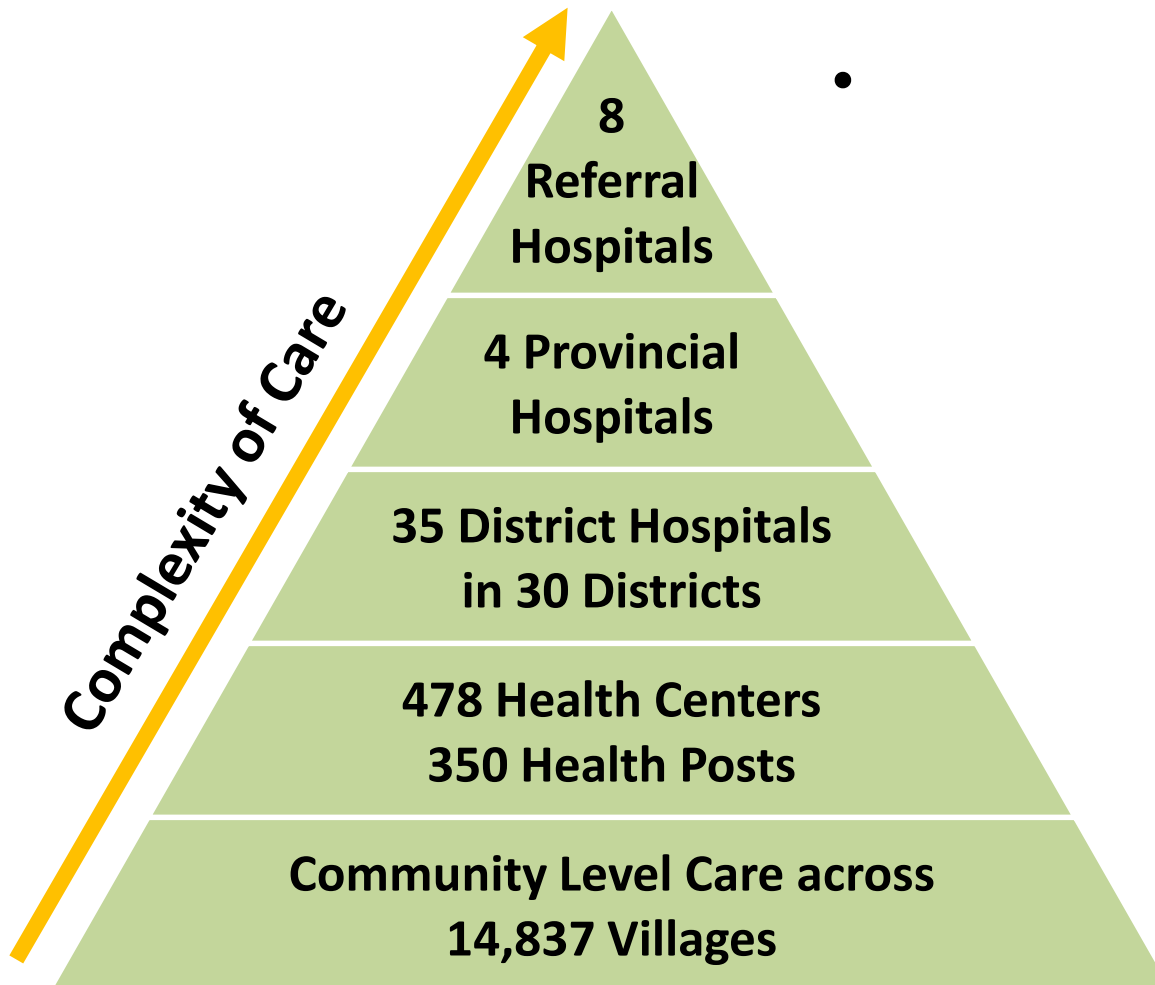
East African Life Expectancy in 1994



East African Life Expectancy in 1994



Rwanda Healthcare System



Rwanda Healthcare System

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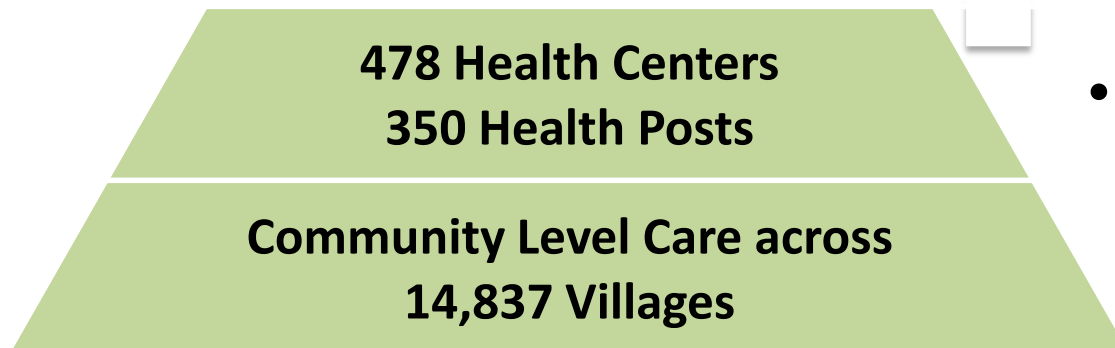


**Community Level Care across
14,837 Villages**

- 45,011
Community
Health Workers

Rwanda Healthcare System

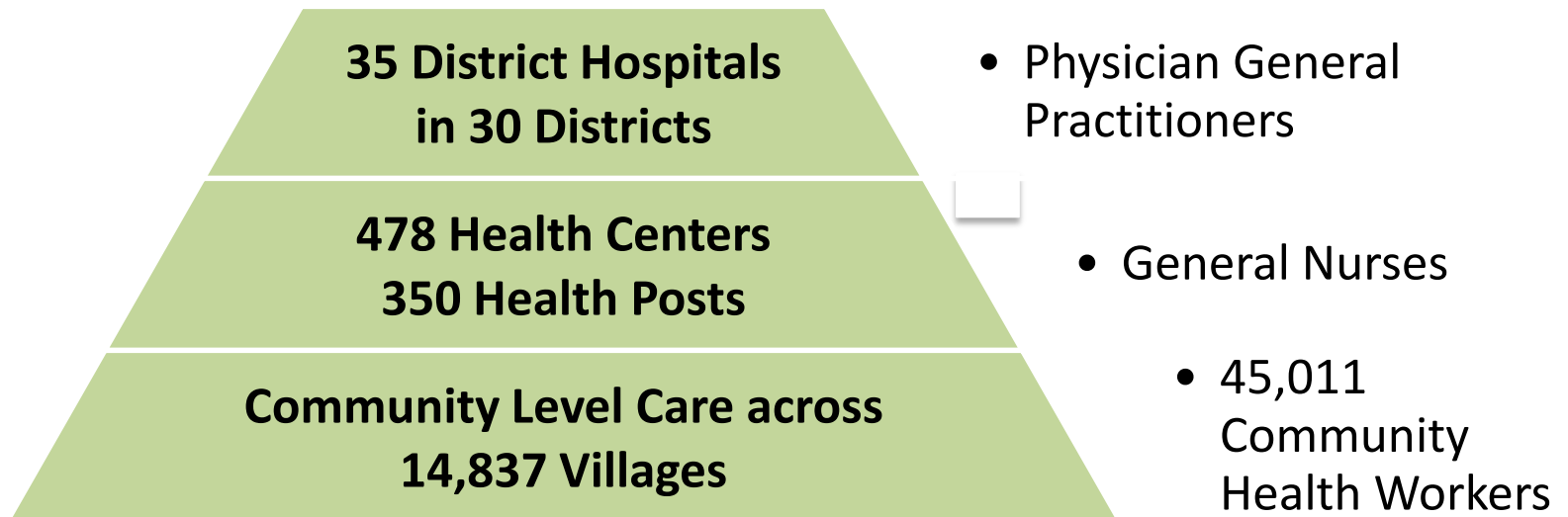
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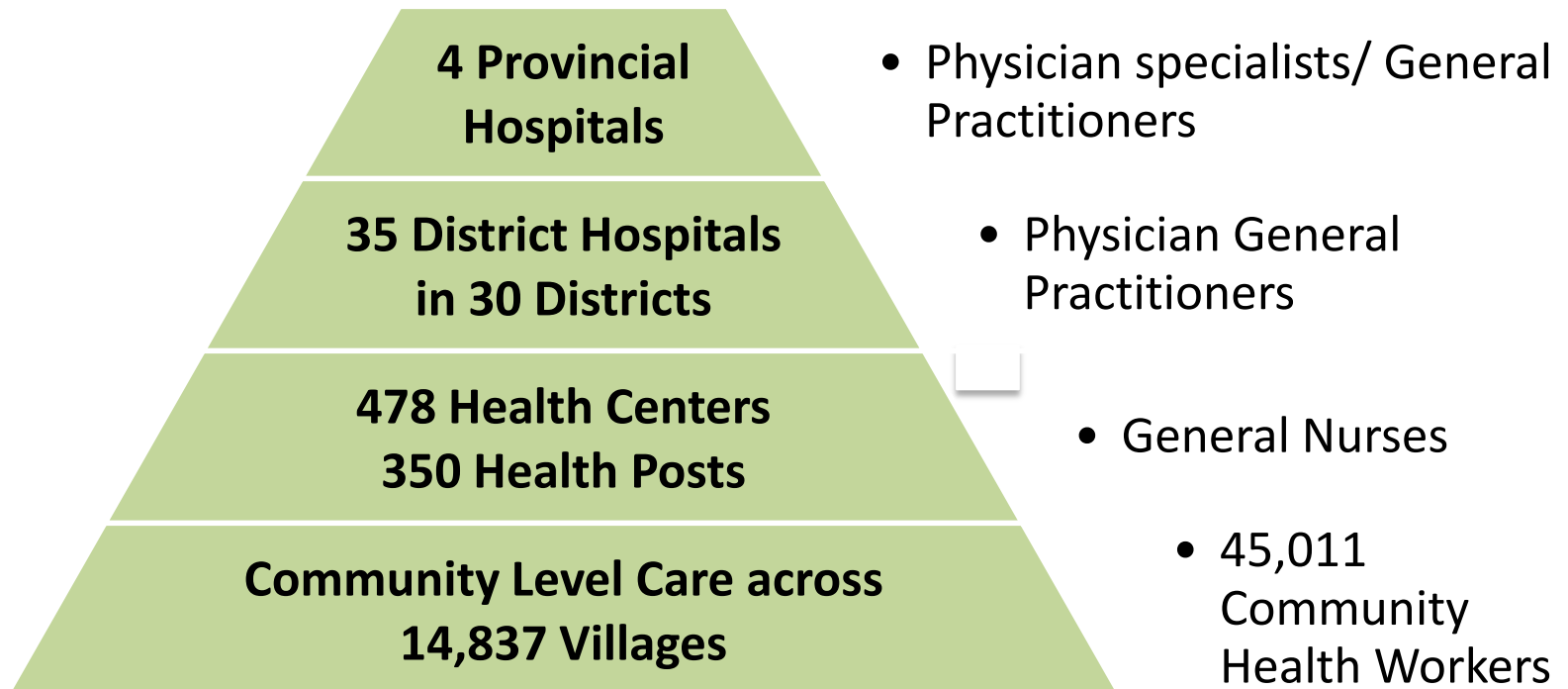
- General Nurses
- 45,011
Community
Health Workers

Rwanda Healthcare System

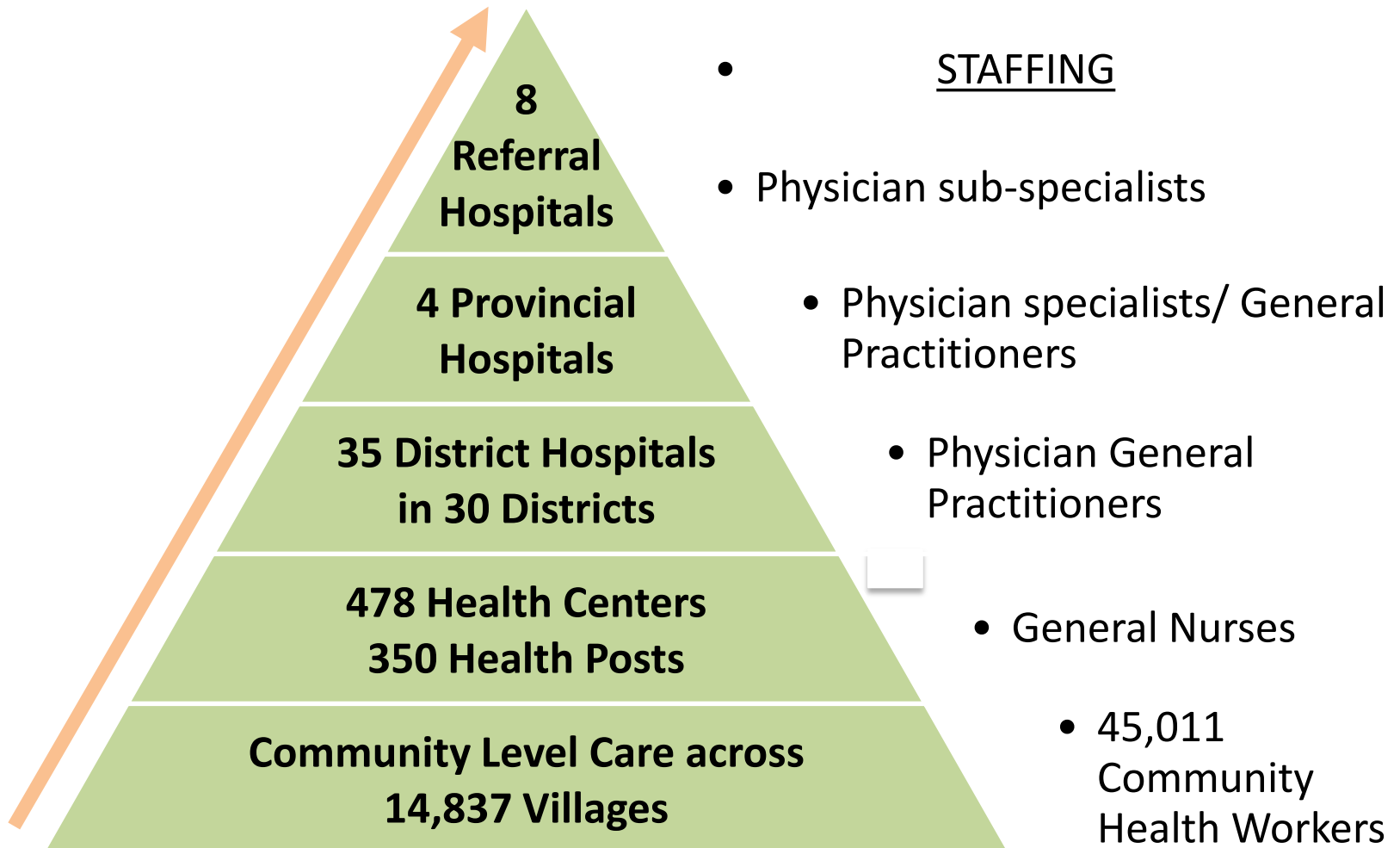
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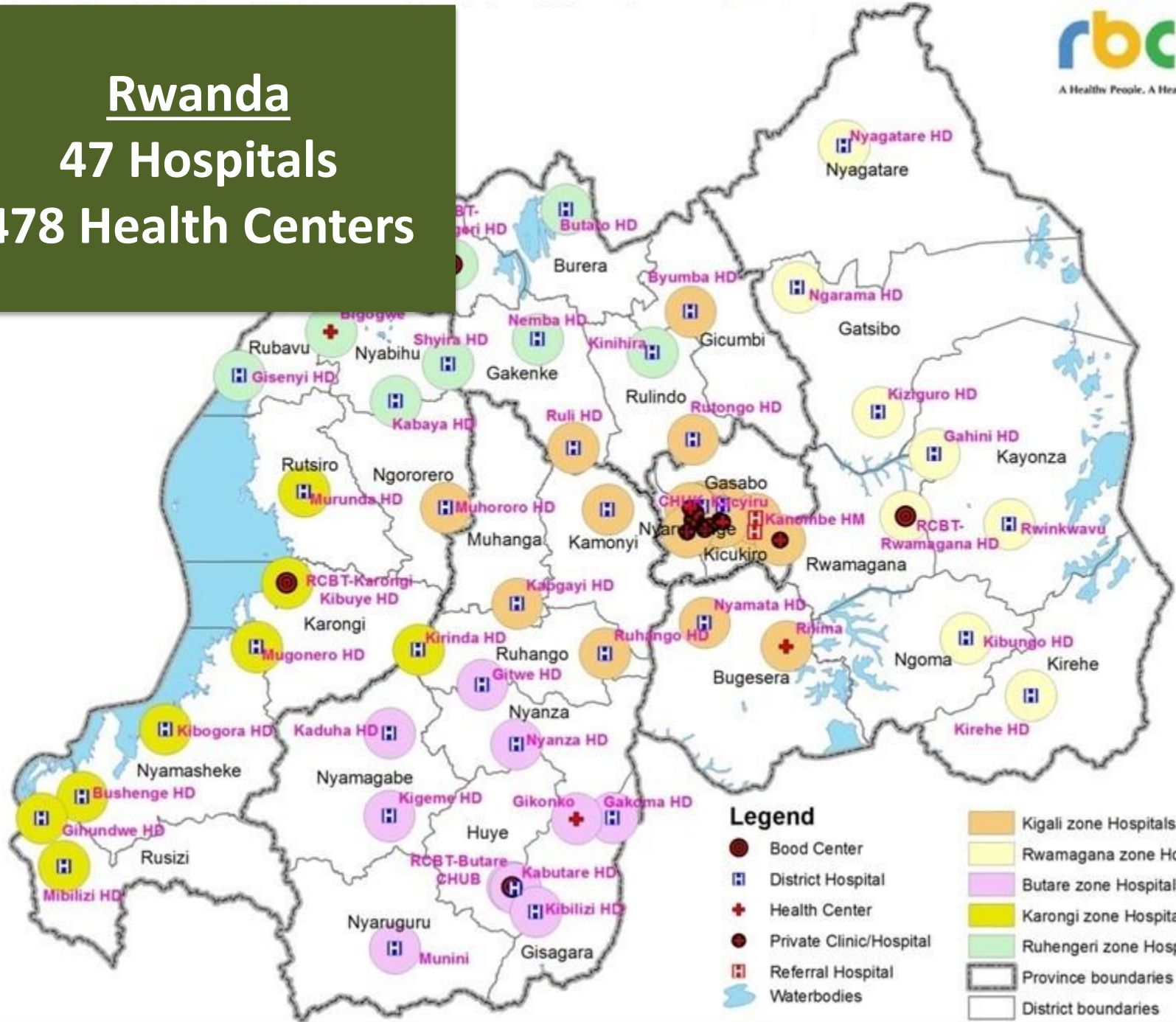
Rwanda Healthcare System



Rwanda Healthcare System



Rwanda
47 Hospitals
478 Health Centers



Legend

- Kigali zone Hospitals
- Rwamagana zone Hospitals
- Butare zone Hospitals
- Karongi zone Hospitals
- Ruhengeri zone Hospitals
- Kibungo zone Hospitals
- Bood Center
- H District Hospital
- + Health Center
- Private Clinic/Hospital
- H Referral Hospital
- ~ Waterbodies
- Province boundaries
- District boundaries

Health insurance in Rwanda

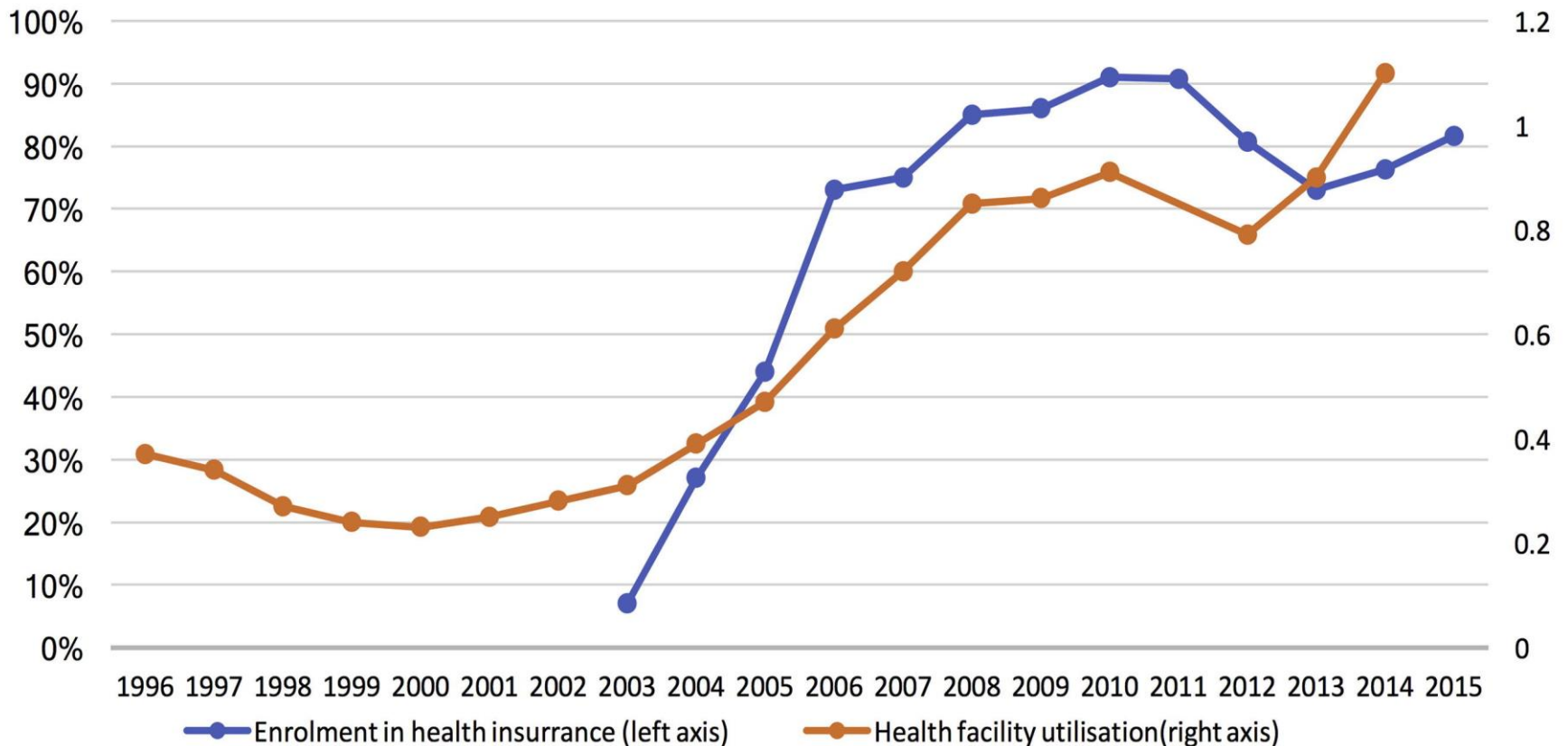
Health Insurance Coverage: 91% are insured!

- *Mutuelle de Santé*: 85%
 - Public insurance
 - Cost \$3/year, 10% co-pay
- Private or government employee: 6%

Health insurance in Rwanda

% of population with a health insurance

Visits/ person/ year





University of Rwanda

- Home of the **only medical school**
 - College of Medicine and Health Sciences

Medical school

- **Medical school: 6 years**
 - **Apply after high school**
 - **Requirement: Science background with top grades**

Medical school

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 - **2 years: Pre-clinics**

White Coat Ceremony



Medical school

- **Medical school: 6 years**
 - Apply after high school
 - Requirement: Science background with top grades
 - 2 years: Pre-clinics
 - **4 years: Clinics**



Medical school

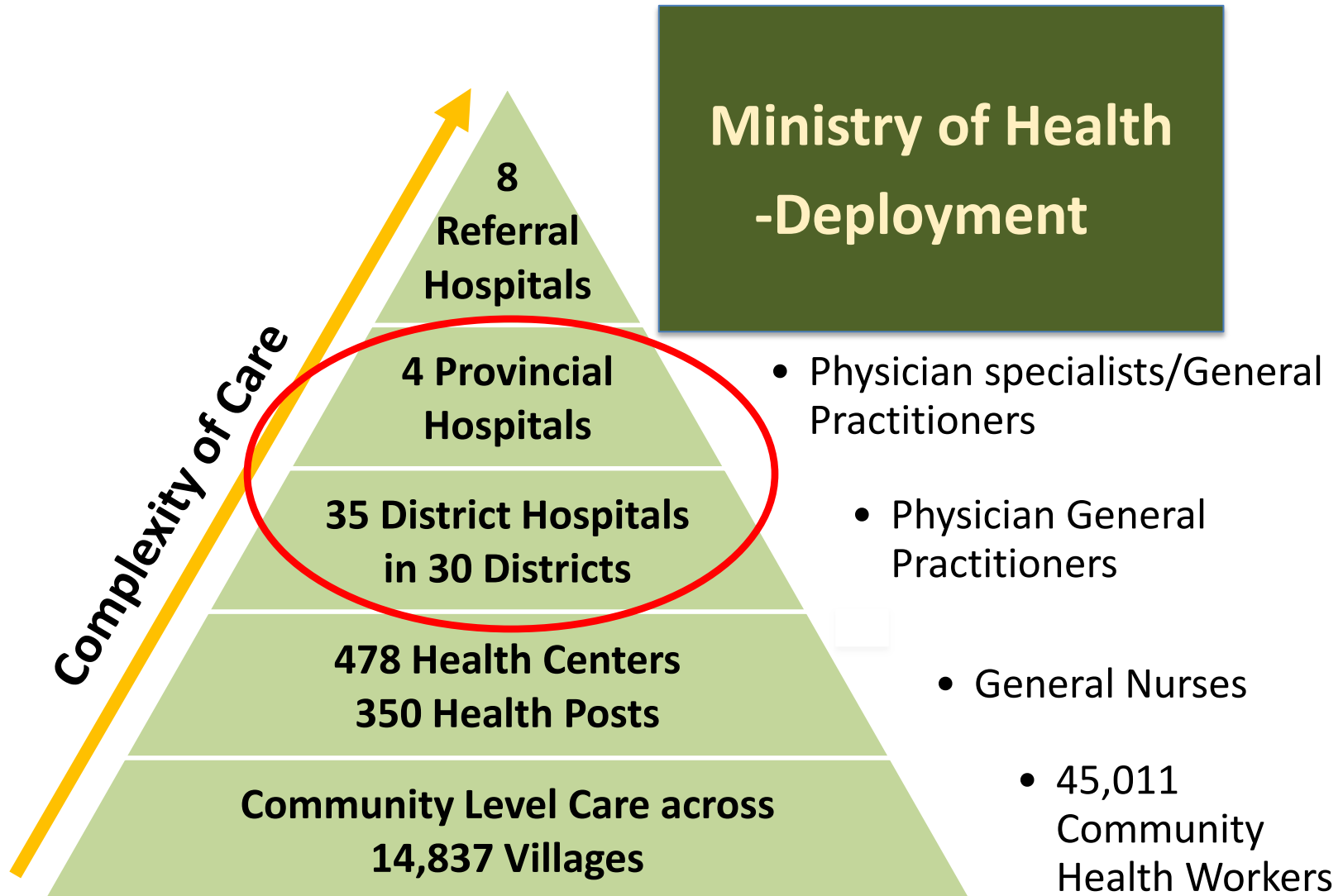
- **Medical school: 6 years**
 - Apply after high school
 - Requirement: Science background with top grades
 - 2 years: Pre-clinics
 - 4 years: Clinics
 - **Board Exam**



Internship

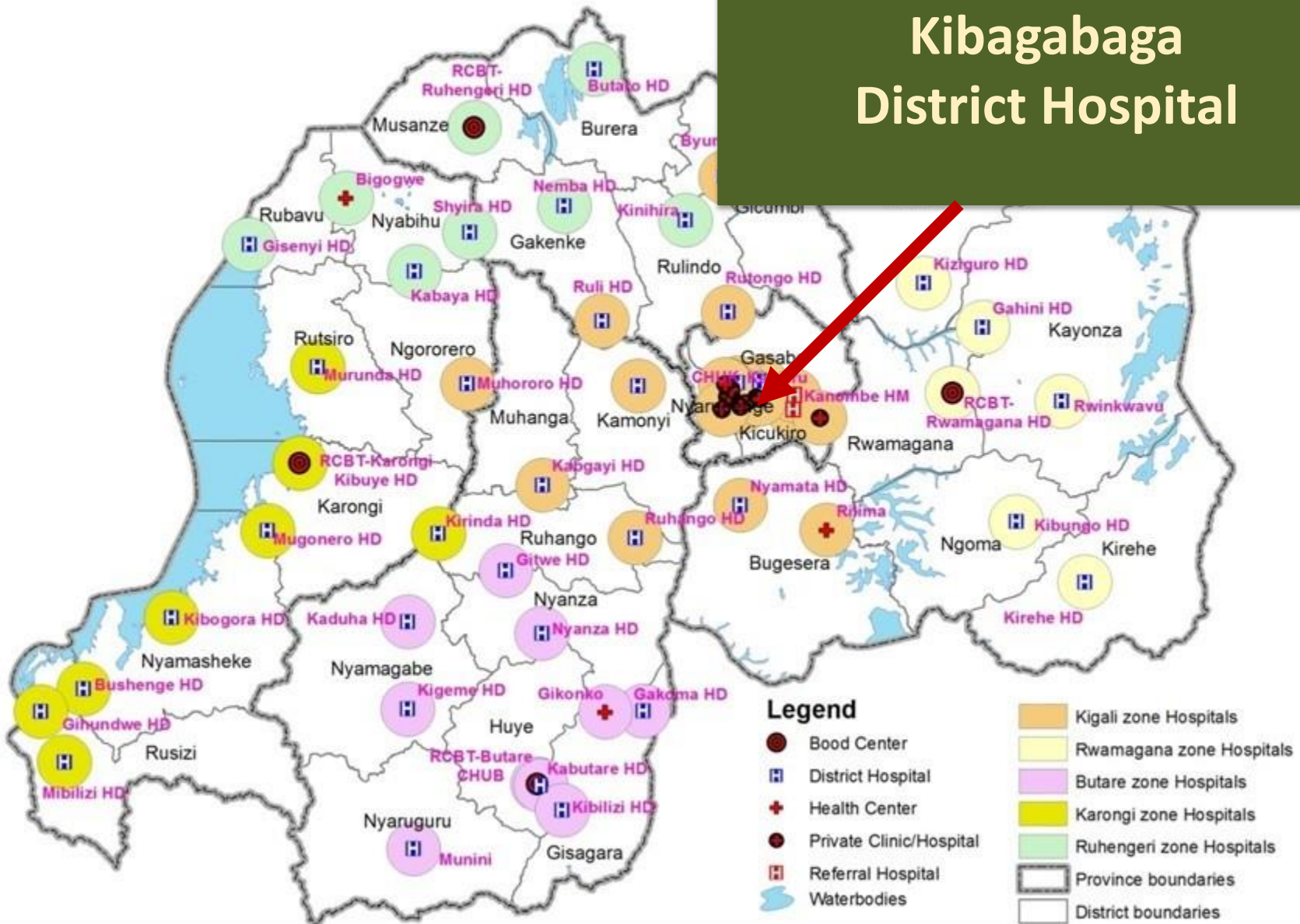
- **1 year**
 - **Supervised**
 - **Select provincial and district hospitals**
 - **Some have specialized services**
 - **Internships ONLY in hospitals with specialized services**
 - **Evaluation**
 - **Goal: Transition to independence**

Rwanda Healthcare System



My deployment

Kibagabaga District Hospital



Residency programs in Rwanda

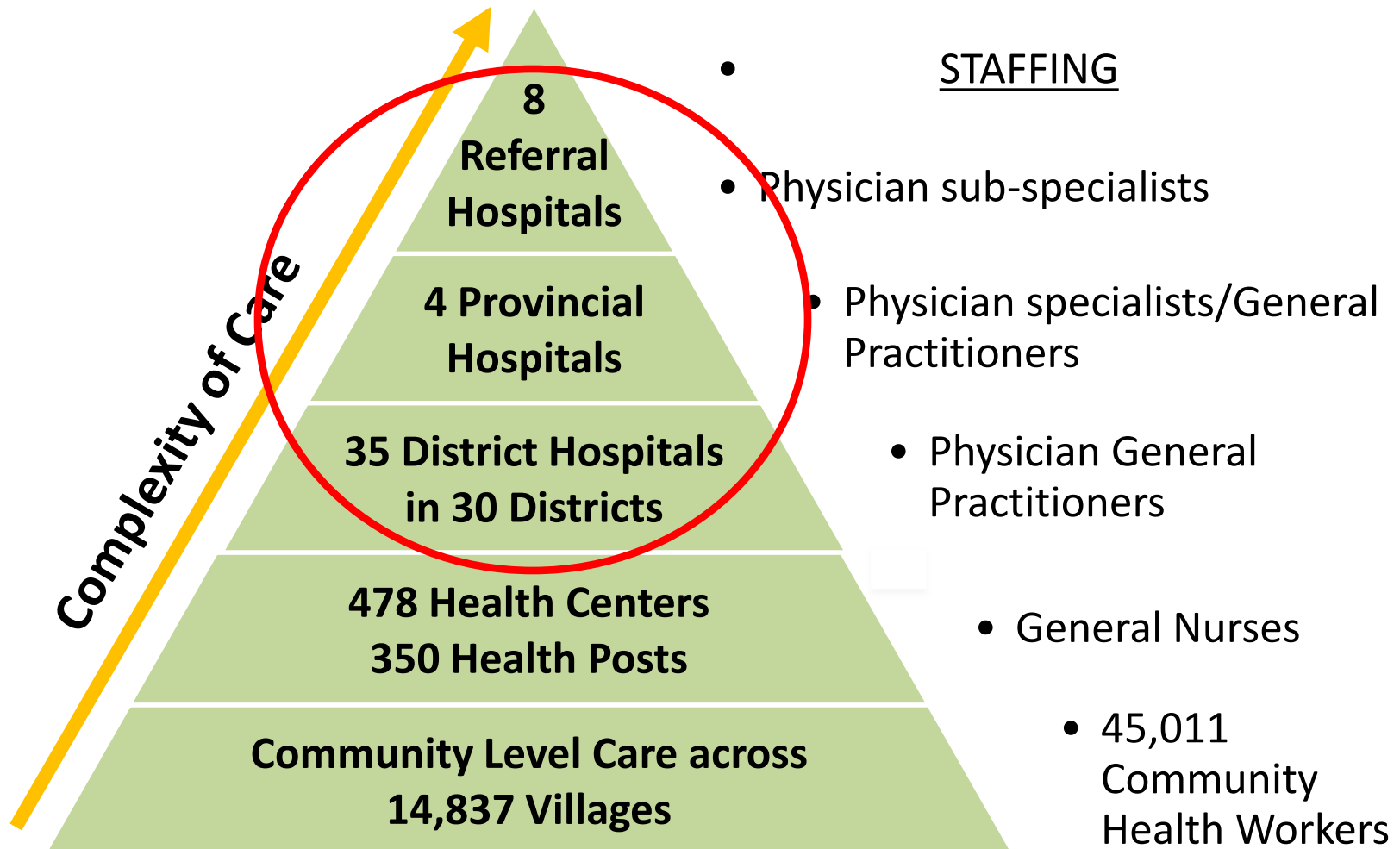
- **Requirements:**
 - 2 years working in District Hospital
- **Duration:**
 - 4-6 years

Residency programs in Rwanda

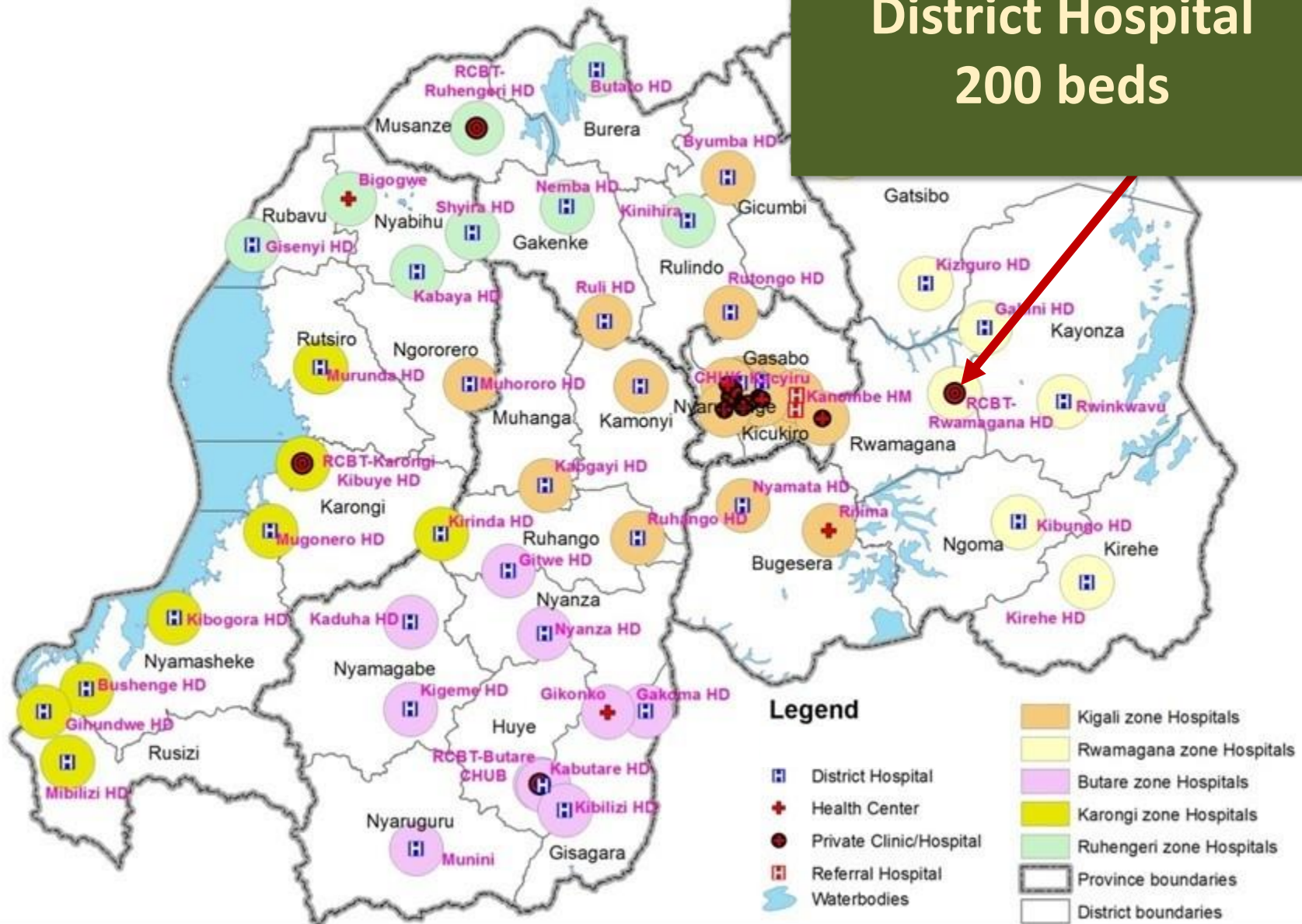
11 Specializations:

- Anesthesiology 4 years
- Ear, Nose & Throat 4 years
- General Surgery 4 years
- Gynecology-Obstetrics 4 years
- **Internal Medicine** **4 years**
- Neurosurgery 6 years
- Orthopedics 6 years
- Pediatrics 4 years
- Plastic Surgery 6 years **New!**
- Radiology 4 years
- Urology 6 years

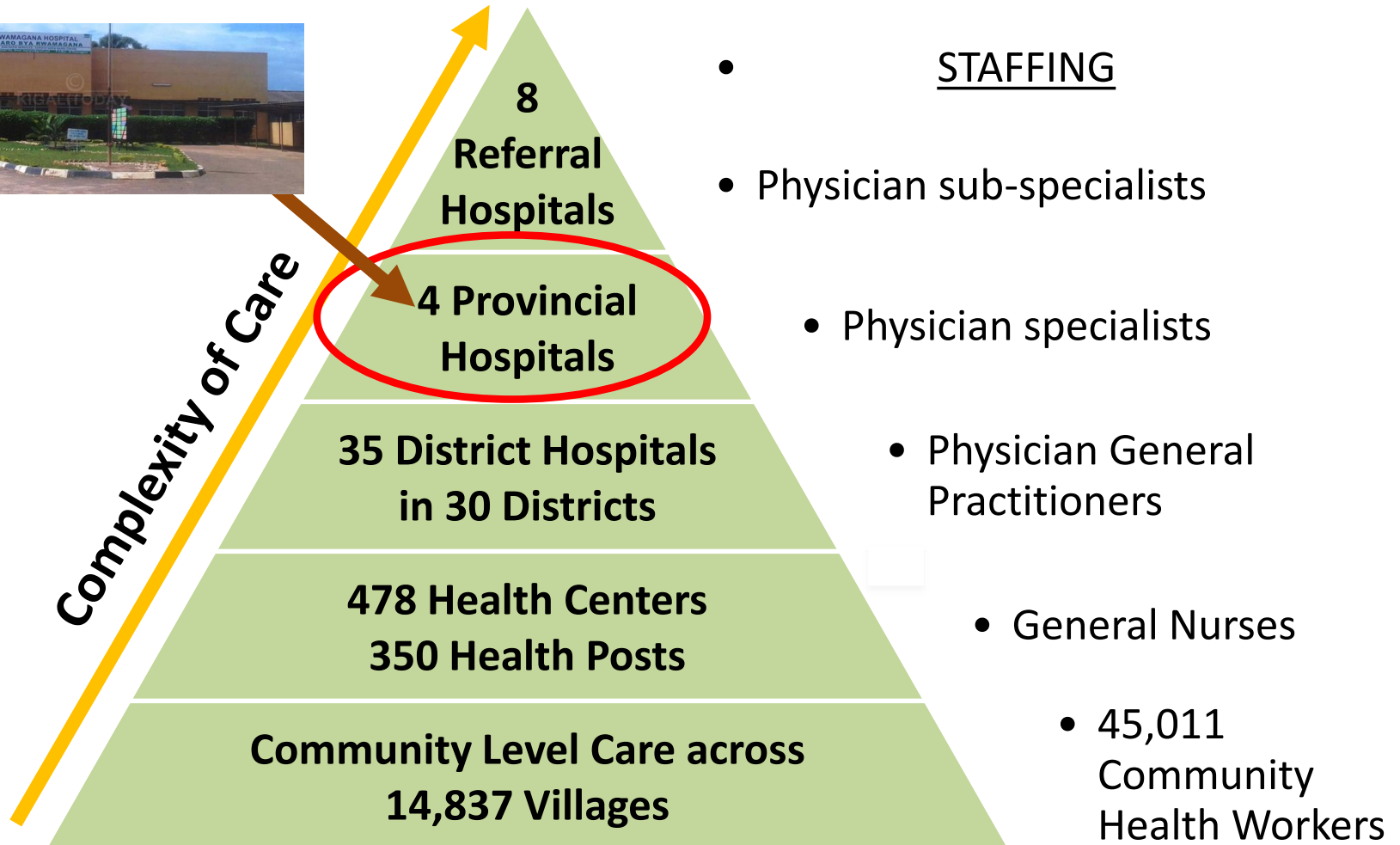
Rwanda Healthcare System



Rwamagana District Hospital 200 beds



Rwamagana Hospital



Clinical Resources in Hospital

- Inpatient, outpatient, emergency .
- Consultation services on site: general medicine ,HIV, dermatology, general surgery, OB/GYN, ophthalmology, ENT, dental, NCDS clinic
- Electrocardiogram, Chest-X-ray, Electroencephalogram and ultrasound
- Clinical laboratory services

Clinical Resources in Hospital

Limited resources :

- CT/ MRI
- ICU / HDU
- SPECIALIZED CARE: Endoscopy, cardiology, hematologist,...

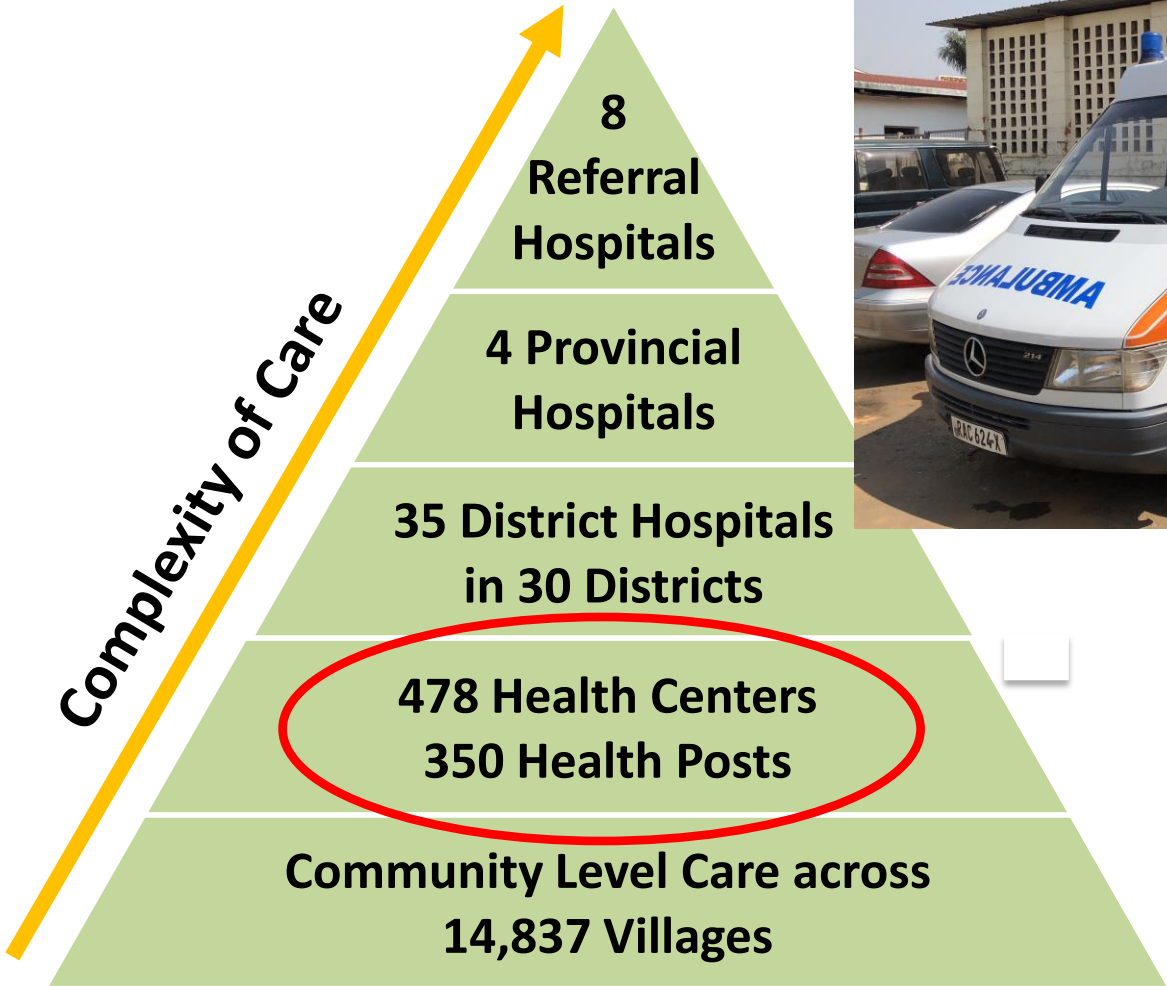
>>>REASON FOR TRANSFER

Patient vs. Rwandan health care system

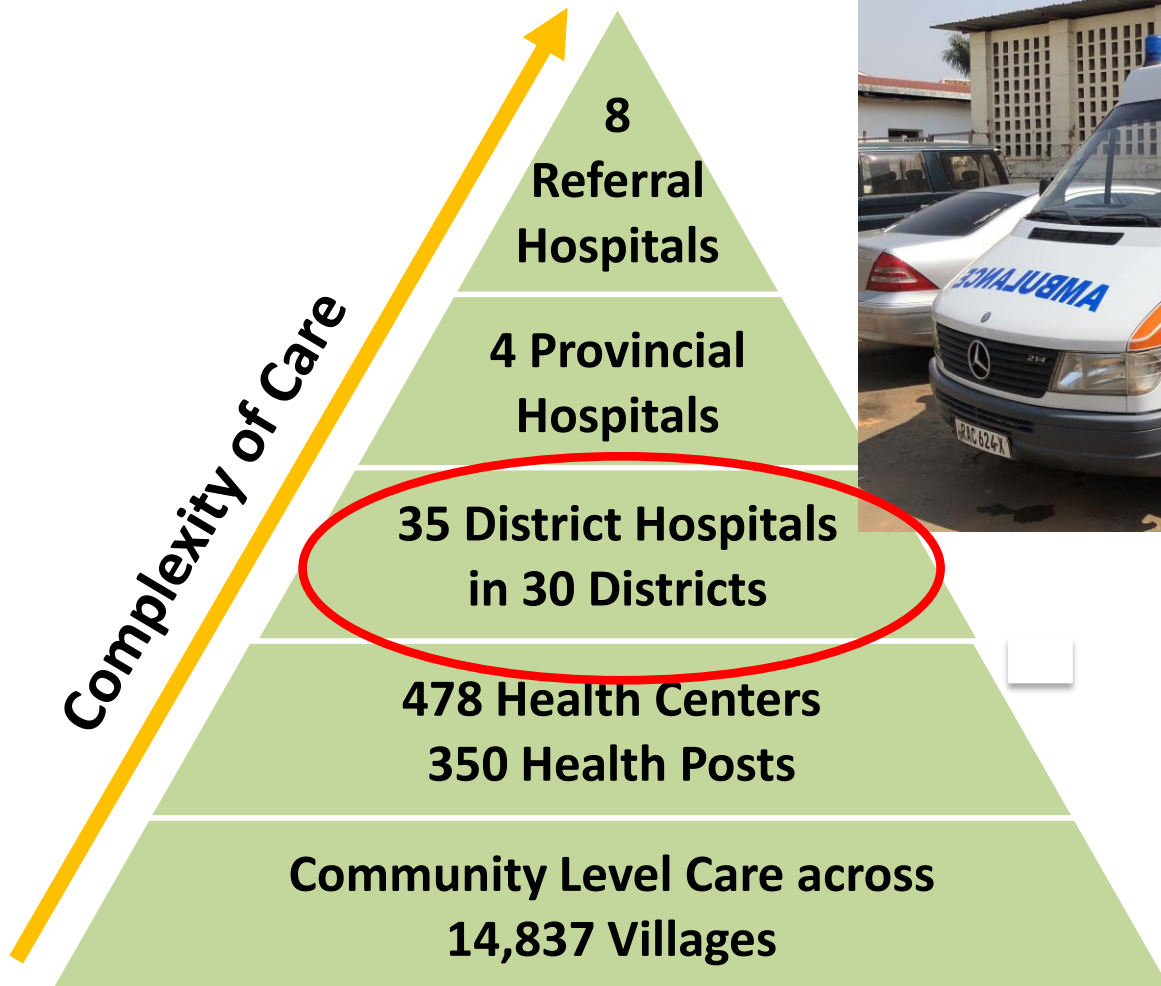
Case scenario

- 54 y.o. man who presented in a health center
 - c/c: **Abdominal pain for 10 days**
 - **Severe L flank pain and high blood pressure**
 - **Referred to District Hospital**

Case scenario



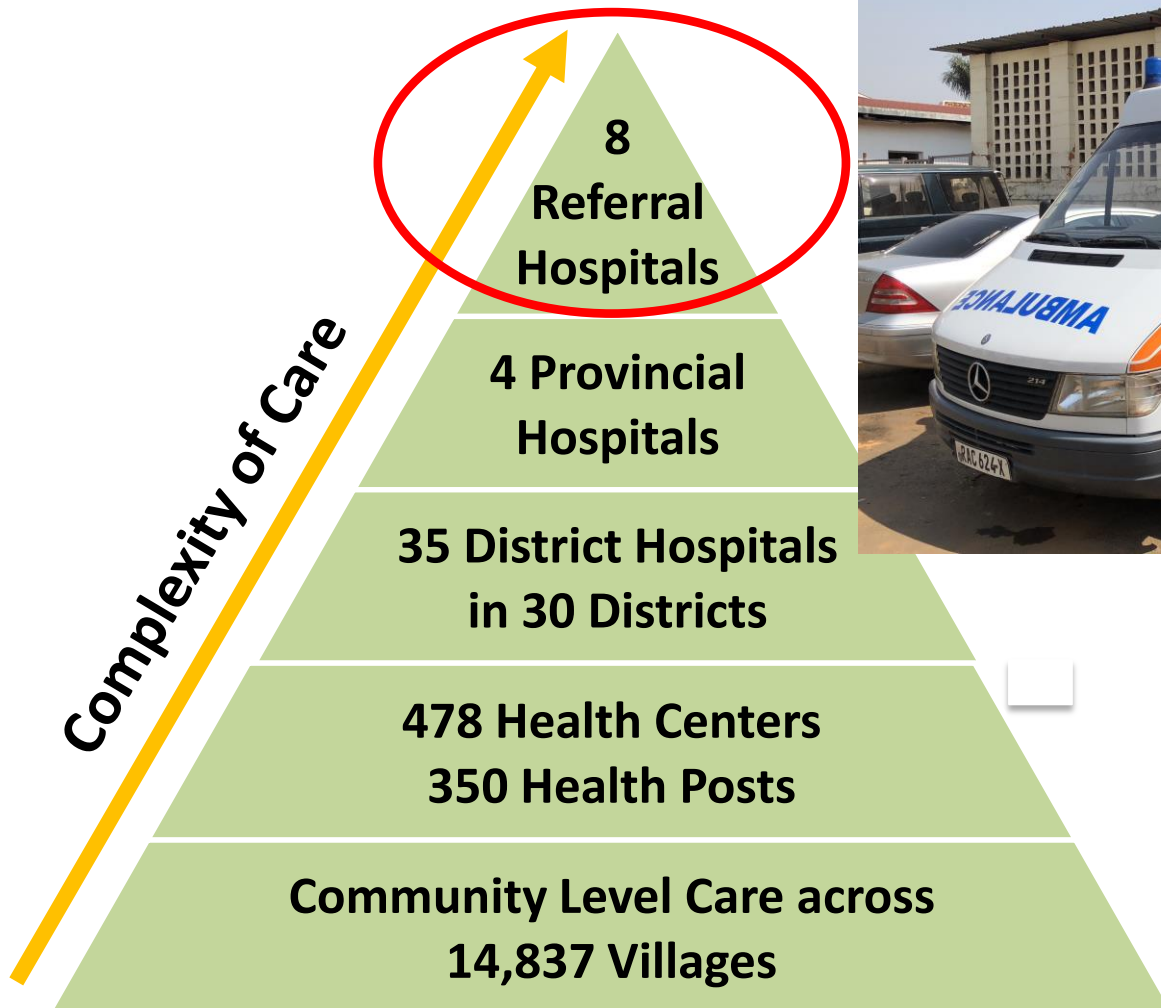
Case scenario:



Case scenario

- **54 y.o. man transferred to District Hospital**
 - **c/c: Abdominal pain for 10 days**
 - **Severe L flank pain and hypertensive emergency**
 - **Hx of confusion 1x**
 - **Referred for CT-Scan to rule out stroke**

Case scenario



Case scenario

- 54 y.o. man referred to Referral Hospital, Feb 30th, 2015
 - c/c: **Abdominal pain for 12 days**
 - **Severe L flank pain and hypertensive emergency**

Case scenario

- **Previously Healthy man**
- **No chronic disease**
- **12 days history of L flank pain 8/10- 4/10**
- **Not related to any activity, or food intake, or exertion, or defecation, no SOB**

Case scenario

- **ROS: Hx 1x of confusion at DH**
- **PMH: unremarkable**
- **Social Hx: alcohol occasionally, no smoking**
- **FHX: unremarkable**
- **Allergy: none**
- **Rx: Nifedipine prior to admission, pain killers tramadol**

Case scenario

Physical Exam:

- Fair general condition
- Vitals :
 - BP 159/90 – 189/104 (Variables from ED)
 - HR: 118-120, RR 16, SO₂: 96% on RA
 - Temperature: 36.7°C
 - SaO₂: 1x transient hypoxia 88% - 90

Case scenario

Physical Exam:

- **CVS: Tachycardia, regular s1, s2, PMI not displaced, good pulse, NO JVD**
- **Abdomen: normal**
- **Other systems: unremarkable**

Case scenario

Lab results

- Full blood count: Normal
- Electrolytes: Normal; Glucose: Normal
- LTFs: Normal; RFTs: Normal; Normal lipid profile
- ECG: Sinus tachycardia Serial ECGs, no changes
- AB/US: normal liver, kidneys, no free abdominal fluid

Case scenario

Summary

- Middle aged man, subacute L flank pain, high blood pressure and persistent tachycardia.
- No signs of heart failure or respiratory distress

Case scenario

Discussion of Differential Dx (March 2nd, 2015)

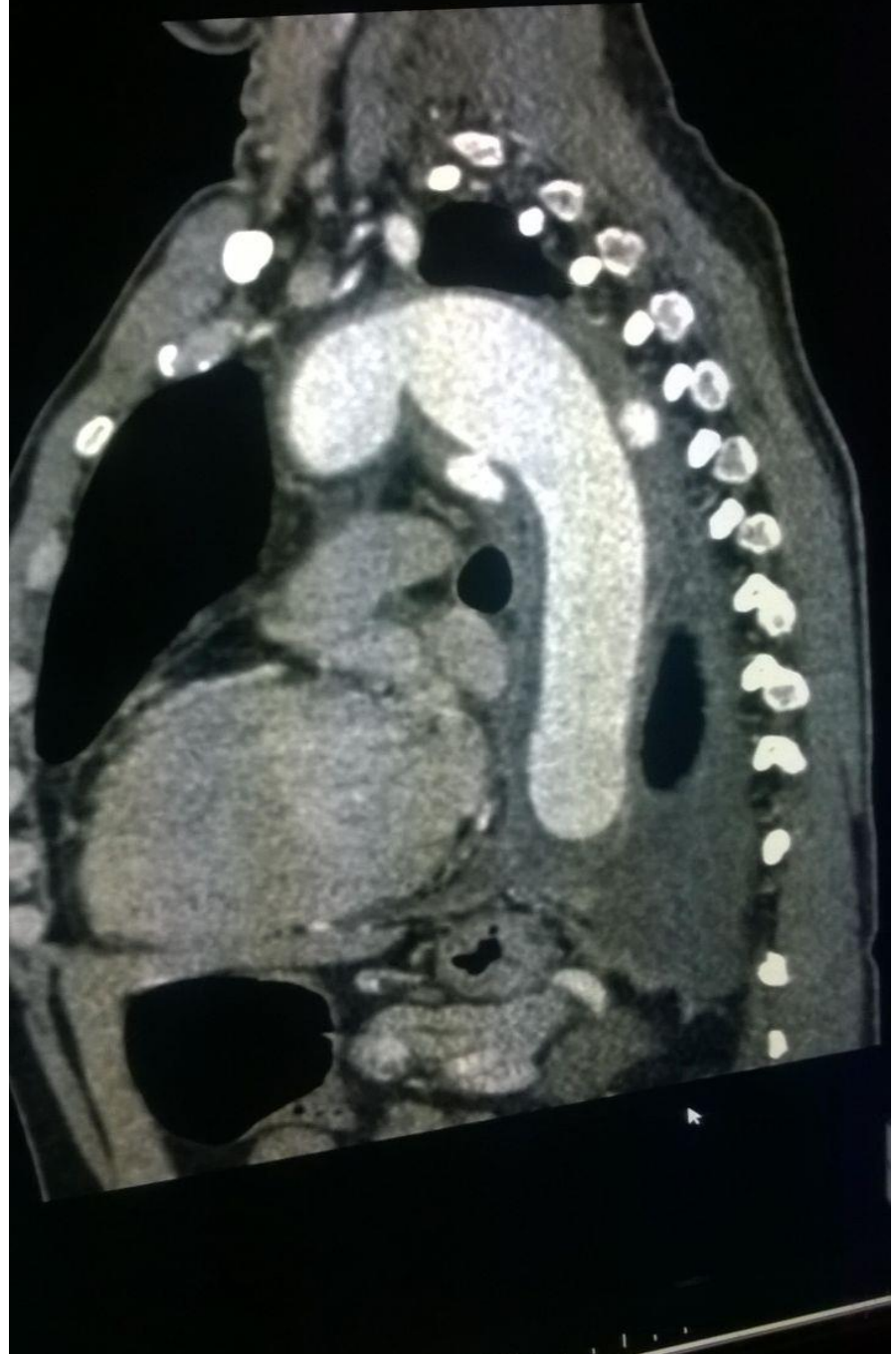
- **Tachycardia**
 - R/S: Pulmonary embolism
 - CVS: Mi/Angina EKG: Sinus tachycardia
- **Left flank pain**
 - GIT: No other GI symptoms
 - Renal: Nephrolithiasis
 - Abdominal Ultrasound: Normal

Case scenario



Case scenario

- Multifocal aortic leak with multifocal aortic rupture
- Level of superior mesenteric artery



Case scenario

Management

- **Blood pressure and heart rate control (Rx)**
- **Cardiothoracic surgery**

Case scenario

Challenges :

- No cardiothoracic surgeon
- Visiting surgeon (once in 2 months)
- No further referral options

Alternative:

Transfer abroad “Money”

Key characteristics of our patients

- **Vulnerability**
 - Unusual disease
- **Disease severity at presentation**
 - Late diagnosis >>(HTN)
 - Now: Screening NCDS, all over the country
- **Understanding of disease**
 - Level of education
 - Health beliefs
- **Attitude towards illness**
 - Understanding of referral pathways (patient & provider)

Conclusion

-Rwandan healthcare system is functional

to serve our nation

-We need more...

Future is promising

Thank you!