HIV Coverage, Quality, and Impact Network Integration of HIV and Hypertension Services: Case Studies from Kenya & Eswatini

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27 PUBLICATIONS **46** CITATIONS
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Sylvester Kimaiyo
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104 PUBLICATIONS **4,657** CITATIONS
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Integration of HIV and Hypertension Services:

Case Studies from Kenya & Eswatini

A CQUIN Webinar | July 11, 2023

HIV Coverage, Quality, and Impact Network

Welcome/ Bienvenue

Peter Preko
CQUIN Project Director
ICAP at Columbia University

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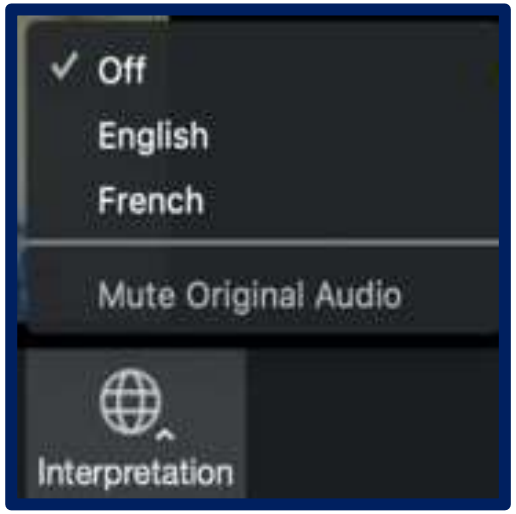


Housekeeping

- 90-minute webinar with presentations followed by a panel discussion with Q&A
- Slides and recording will be available on the CQUIN website (www.cquin.icap.columbia.edu)
- Please type questions in the Q&A box located on the toolbar at the bottom of your screen
- If you would prefer to speak, please use the “raise hand” function on the toolbar and we will unmute you so that you have control of your microphone
- If you are a French, or English speaker, please ask your question in your language of choice and the interpreters will translate as needed

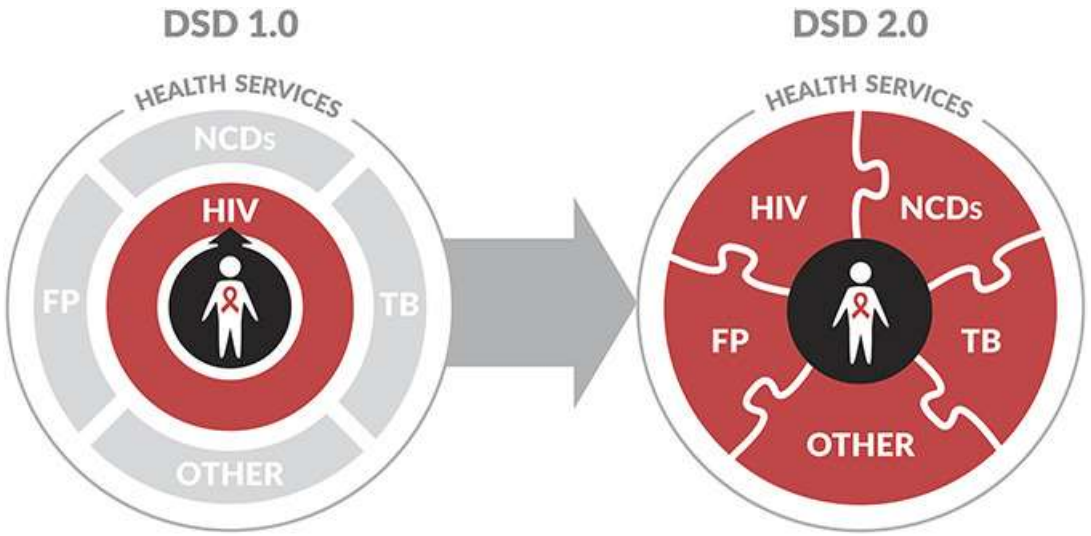
Background – 1

- CQUIN 2.0 has an expanded focus that includes the **integration of non-HIV services into HIV programs** (and, more specifically, into DSD models) with the goal of providing holistic person-centered care
- In 2023, CQUIN will focus on:
  - ✓ SRH / Triple Elimination: starting with integration of **FP services** [June webinar]
  - ✓ NCDs: starting with integration of **HTN services** [today's webinar] and **Mental Health services** [August webinar]
  - ✓ TB: continued focus on integrating TPT and case finding into DART models

Background – 2

CQUIN conceptual framework:

- ✓ Integration is a means not an end – the goal is not integration itself, but improved coverage, quality, and impact of health services
- ✓ Differentiated approaches contribute to this goal by delivering person-centered services that meet the needs and expectations of recipients of care
- ✓ Our hypothesis is that integrating non-HIV services into HIV programs will expand and accelerate these efforts



Ehrenkranz P, Grimsrud A, Holmes CB, Preko P, Rabkin M. Expanding the Vision for Differentiated Service Delivery: A Call for More Inclusive and Truly Patient-Centered Care for People Living With HIV. *J Acquir Immune Defic Syndr*. 2021 Feb 1;86(2):147-152. PMID: 33136818; PMCID: PMC7803437.

Framing Remarks

Herve Kambale
CQUIN Consultant
ICAP at Columbia University

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Framing Remarks

Herve Kambale

HIV Coverage, Quality, and Impact Network

Why focus on HIV/NCD integration?

- The scale-up of HIV treatment programs has led to increased longevity for people living with HIV, who now have similar life expectancy as their HIV-negative peers
- NCDs, such as cardiovascular disease, cancer, and diabetes, have become the leading cause of mortality in the world. Every year, 41 million people die from NCDs, 15 million of them between the ages of 30 and 69. *(World Health Organization. NCD Key Facts. 2021).*
- As the cohort of people living with HIV grows older, new health services are required.
    - For example, 20% of people supported by PEPFAR are now > 50 years old, but models of HIV service delivery have not been designed or implemented to address the health needs of older adults *(Godfrey C et al. Journal of the International AIDS Society 2022, 25(S4):e26002).*
    - While African countries continue to scale up ART programs, a concomitant rise in non-communicable diseases (NCDs) and NCD-related deaths has also been observed over the last decade *(UNAIDS. Global AIDS Update 2016)*

Scaling up integrated HIV/NCD services

- There is a robust discussion in the international HIV treatment community about how best to build capacity within the healthcare system to provide holistic care for chronic diseases and provide integrated services for those with multiple co-morbidities, including HIV.
- This integration should build on successful strategies including the public health approach and existing differentiated service delivery models widely implemented in CQUIN network countries
- People with “stable” HIV and NCDs should be able to access less-intensive models for both
- Lessons learned about differentiated NCD services can inform broader NCD programs, including for HIV-negative people

Defining HIV/HTN integration

The term “integration” is often not clearly defined. At the health services level, common elements typically include:

- ✓ **Co-location** of HIV and HTN services (*e.g.*, both provided at the same site)
- ✓ **Co-scheduling** of HIV and HTN services (*e.g.*, both provided at the same time)
- ✓ **Coordination of HIV and HTN medication refills** to maximize recipient of care convenience and minimize visits to health facilities / pharmacies

Integrating HTN services into DART models: the building blocks

IAS Decision Framework

CQUIN's Community of Practice on HIV & NCDs

- Launched in 2020
- 16 CQUIN network partner countries currently engaged
- Supports webinars, satellite sessions, meeting breakout sessions, and virtual country-to-country exchanges between CQUIN countries
- Partners include ministries of health, recipients of care, donors, implementing partners and stakeholders including the Differentiated Service Delivery project of the IAS, Resolve to Save Lives, PATH, the NCD Alliance, PEPFAR, and others.
- Objective is to support countries to move from pilot HIV/NCD programs to implementation at scale

Agenda

- **Framing Remarks**
  - Herve Kambale, Consultant, ICAP/CQUIN
- **Case Studies**
  - Sylvester Kimaiyo and Jeremiah Laktabai, AMPATH Kenya
  - Florence Anabwani-Richter, Baylor Eswatini
- **Panel Discussion**
  - Helen Bygrave, IAS (Moderator)
  - Bolanle Banigbe, Resolve to Save Lives
  - Katy Godfrey, PEPFAR
  - Patricia Asero, International Community of Women Living with HIV, Kenya
  - Sylvester Kimaiyo, AMPATH, Kenya
  - Jeremiah Laktabai, AMPATH Kenya
  - Florence Anabwani-Richter, Baylor Eswatini
- **Closing Remarks**
  - Peter Preko, CQUIN Project Director, ICAP Eswatini

Thank you!

Presenters

Sylvester Kimaiyo
Program Director
AMPATH Kenya

Jeremiah Laktabai
Population Health
Program Lead
AMPATH Kenya

Florence Anabwani-Richter
Clinical Director
Baylor Eswatini

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Integration of HIV and Hypertension Services

EXPERIENCE FROM WESTERN KENYA

PRESENTER: PROF S. KIMAIYO. DR. J. LAKTABAI

Affiliation: MOI UNIVERSITY AND AMPATH

HIV Coverage, Quality, and Impact Network

AMPATH

ampath
Leading With Care

HYPERTENSION

- In Kenya, among population screened for HTN, HTN prevalence was found to be 23.8%, those on treatment were 8% and only 4% had controlled HTN (STEPS Survey, 2015).

- It is projected that 47% of annual deaths will be from NCDs in Kenya by the year 2030 (Kenya Health Policy 2014-2030).

HIV NUMBERS 2021 (*UNAIDS*)

- 1.4 million
- 4% adult prevalence
- 35,000 new infections
- 22,000 AIDS related deaths
- 78% on ART

KENYA HIV GUIDELINES

- Screening, prevention and management of specific NCDs are included in the standard package of care for PLHIV
- *HIV and other NCDs require health systems that support chronic care and adherence; their management should be integrated at the health facility, including at the primary care level*.
- Hypertension, Diabetes, Dyslipidemia, Chronic kidney disease, Cancer, Mental health

SCREENING MODELS

Community level

- Door to door
- Public events/Markets
- Workplace
- Community groups (Peer/economic groups)

Facility level

- Triage desks
- Clinics: CCCs

CARE MODELS

Non-integrated

- Medical outpatient clinics. HIV&NCD clinics separated days
- Community based group care.

Integrated

- HIV care within CCCs
- HIV and Non-HIV hypertensives managed within CCC

The Bungoma HIV/HTN Integration Model (BHIM)

Objectives:

- Implement an integrated HIV/HTN community-based screening and linkage strategy and evaluate whether it can improve early diagnosis of HIV and/or hypertension.
- Evaluate feasibility of integrated care for chronic diseases (HIV and HTN) leveraging a common workforce and infrastructure.

SCREENING

Strategies:

- Community and health facility level.
- Clients screened for hypertension followed by screening for HIV test eligibility: CHVs.
- HIV screening by HTS Counselors if eligible.

REFERRAL AND LINKAGE

- Clients with elevated BP referred to clinician for confirmation and linkage to care.
- Client testing HIV positive, same-day linkage to care.
- Follow-up by CHVs of clients failing to be referred, disengaged from care or missing clinic appointments.

CARE AND RETENTION

- Integration of HTN care within HIV clinics.
- Integration within the out-patient departments and special NCD clinics.
- Roving clinicians and *pharmacists* during clinic days.
- Access to HTN medications through Revolving Fund Pharmacy

SUPPLY CHAIN

Seed Funding

Initial Medicine Supply
Set up of the Pharmacy

Revolving Fund Pharmacy

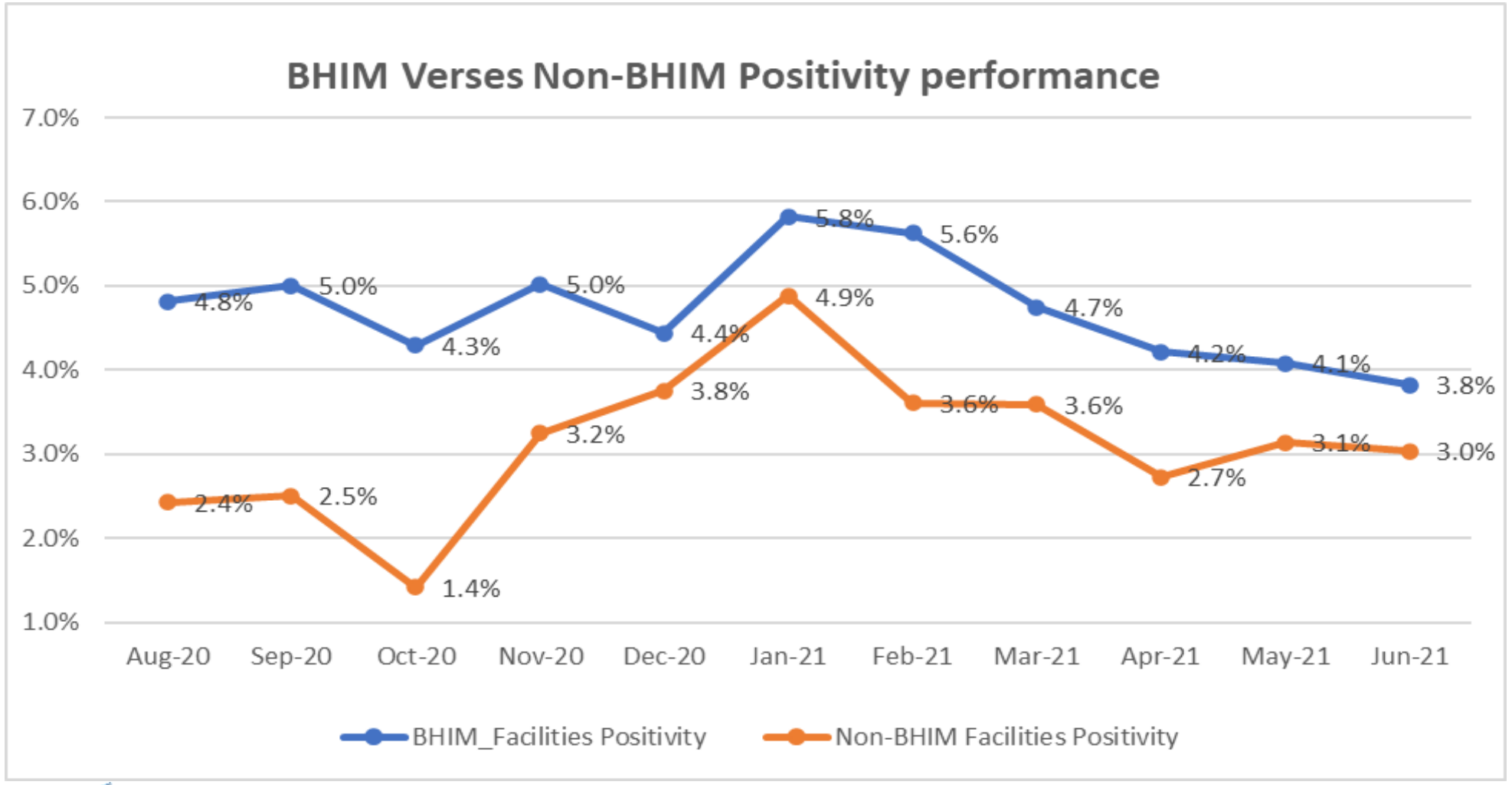
Medicines sold/portabilized

Quality, and

Funds generated

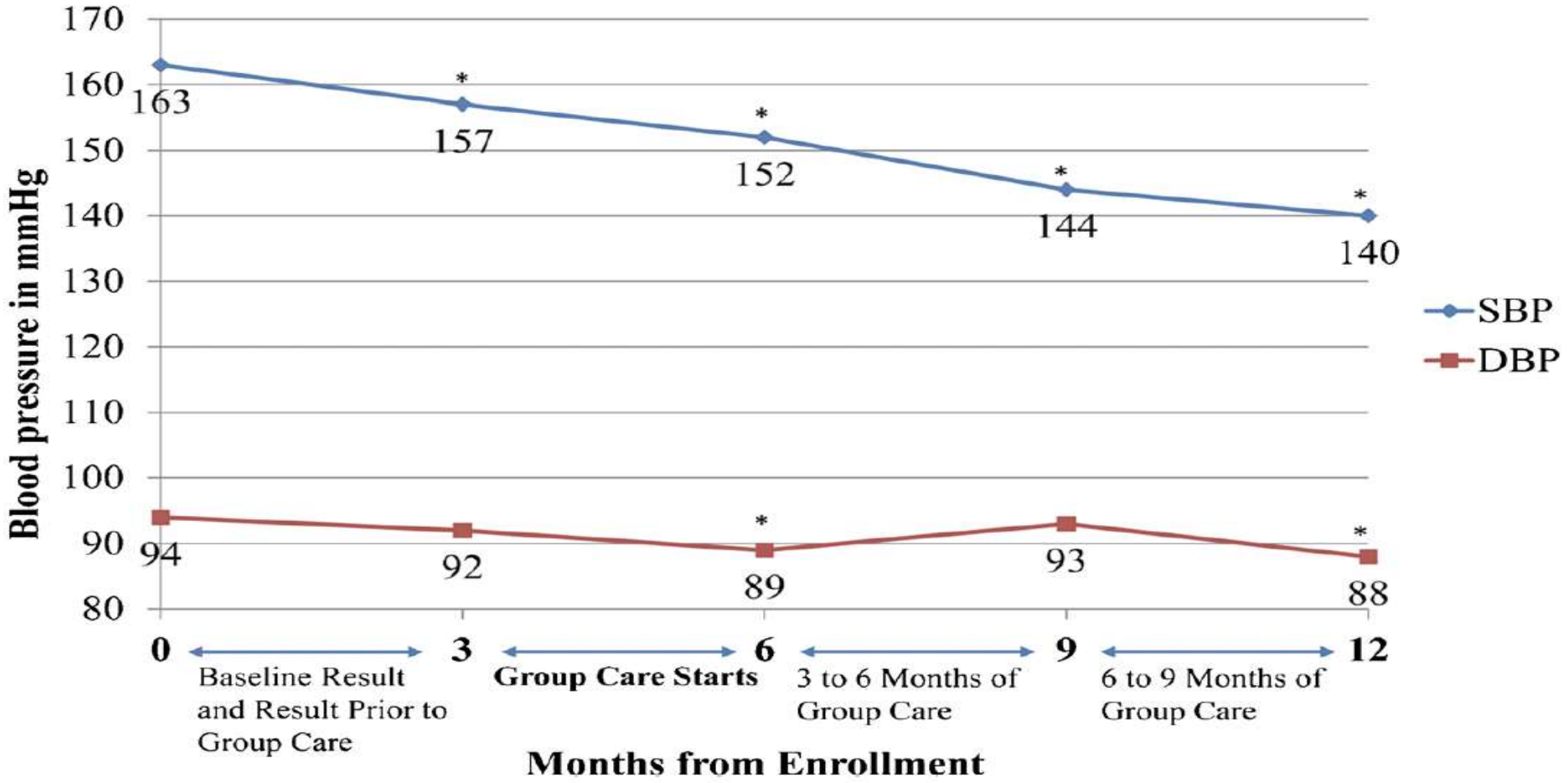
Replenish stocks

HIV POSITIVITY WITH INTEGRATION



GROUP MEDICAL VISIT

GROUP MEDICAL VISITS: BP OUTCOMES



CHALLENGES

- Financing: hypertension medicine
- Staffing:
- Data: Different systems

Acknowledgement

Thank you!

Integration of Management of Hypertension into Mainstream Clinic Care

Dr. Florence Anabwani-Richter
Clinical Director
Baylor College of Medicine Children's Foundation - Eswatini
11th July 2023




Objective

To discuss integration of hypertension screening and treatment services into TB/HIV care at Baylor Clinics in Eswatini

Key Milestones and Differentiators

- Established 2005.
- Local NGO: 1 Clinic and 2 satellite sites.
- Clinical team: 7 doctors, 13 nurses, 4 laboratory technologists, 2 pharmacists, 1 clinical audiologist, 1 radiographer, 2 social workers
- Key technical partner in pediatrics and adolescent HIV and TB management in country
- Partnership with Baylor College of Medicine and Texas Children's Hospital in the US
- Integrated care introduced in 2006
- Government subverted since inception
- Other funders: UNICEF, CDC, ViiV, CANGO-Global Fund, Serious Fun Children's Network, NIH, Thrasher

Key Milestones and Differentiators

- National leaders in paediatric HIV care and treatment; patient population comprises 40% of the HIV+ paediatric population in Eswatini
- Over 30,000 children ever enrolled into care at Baylor COE since the Clinic inception in 2006
- 5812 active patients
- All our health care services are free of cost
- Family-centered model since 2006; HIV+ children are the entry point into our clinics
- Integrated NCD services: >21,000 clients screened in 3yrs
- Integration: Daily screening of CALHIV and their caregivers for hypertension at triage (1˚ prevention)
- Risk factors discussed during daily health talks

DIFFERENTIATED SERVICE DELIVERY (DSD) MODELS

HCW, CLIENT, FACILITY AND COMMUNITY-BASED DSD MODELS

Mother Baby Pair (MBP) 03

Baby Club, Teen Mother Club

Teen Club 04

Monthly Teen Clubs and Annual Adolescent Camps

High Viremia Clinics 02

Semi-weekly Challenge Clinic

Family-Centered / Community Groups 05

Facility and community ART refills, cancer screening and TB contact management

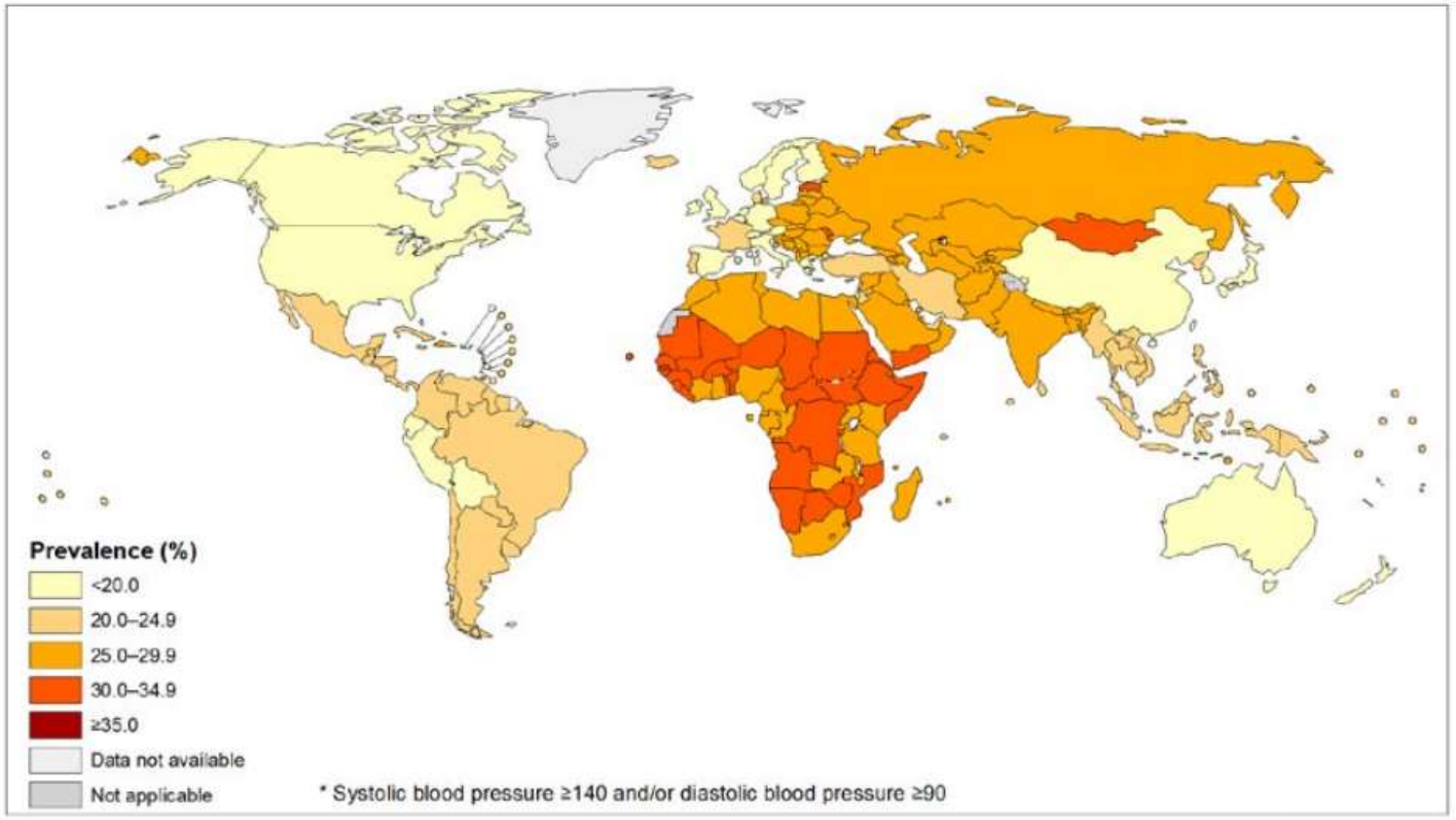
Fast Track 01

Fast track triage and prescriber models (3MMD, 6MMD)

NCD Clinic 06

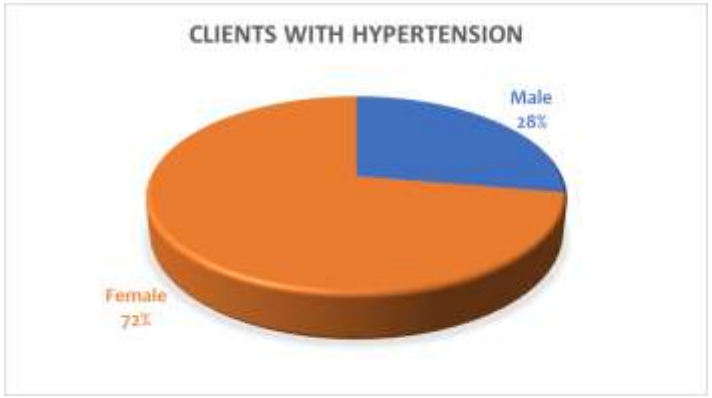
Monthly; last Wednesday of each month (3MMD if stable)

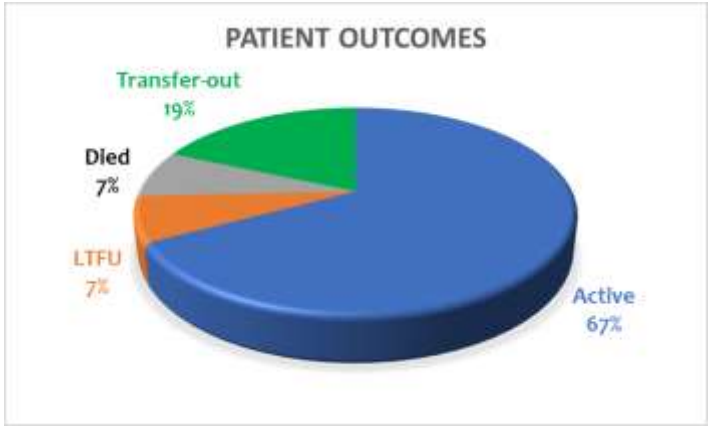
Global Prevalence of Hypertension

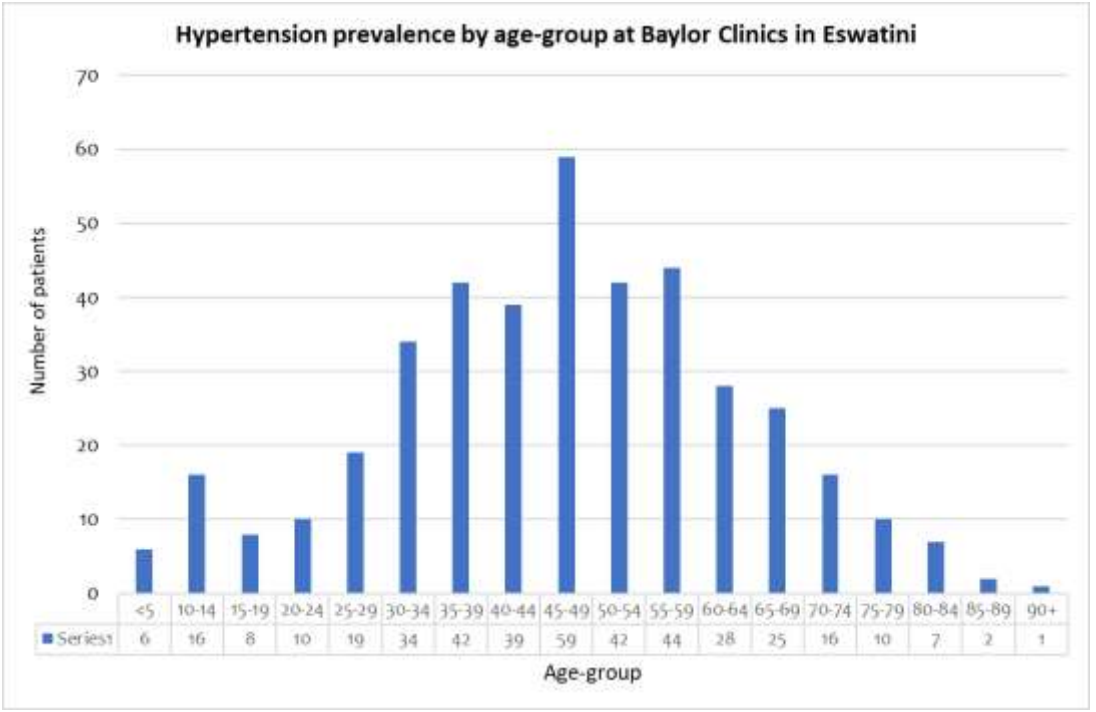


Age-standardized prevalence of raised blood pressure in adults aged 18 years and over, comparable estimates, 2014*

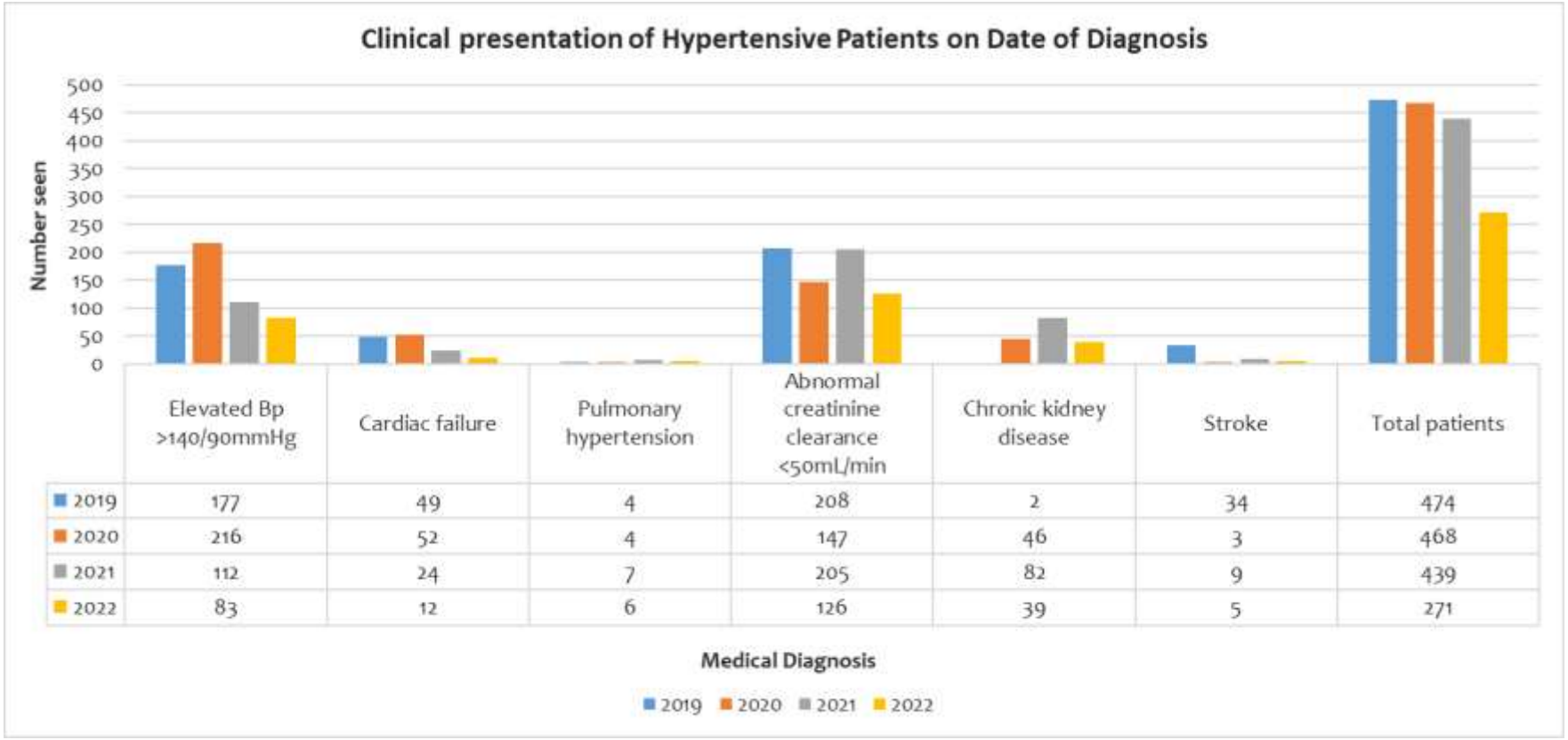
Demographics of Hypertensive Patients







Clinical Presentation



	Elevated Bp >140/90mmHg	Cardiac failure	Pulmonary hypertension	Abnormal creatinine clearance <50mL/min	Chronic kidney disease	Stroke	Total patients
2019	177	49	4	208	2	34	474
2020	216	52	4	147	46	3	468
2021	112	24	7	205	82	9	439
2022	83	12	6	126	39	5	271

Hypertension Integration strategy: Screen, Treat and Monitor Outcomes

1. Needs assessment
2. Resource evaluation: space, equipment, POC triage and lab tests, medication
3. Staff training: drug-drug interactions, active pharmacovigilance
4. NCD Clinic SOP/Guidelines
5. Integration of care: Last Wednesday/month
6. Collaboration: Internal medicine MD, volunteer nephrologist & dietitian
7. Monitoring and Evaluation
8. Patient education
9. Continuum of care
10. Community engagement
11. Research publications / evidence-based practice

HYPERTENSION DSD INTEGRATION

IDENTIFICATION AND MANAGEMENT OF ELIGIBLE CLIENTS

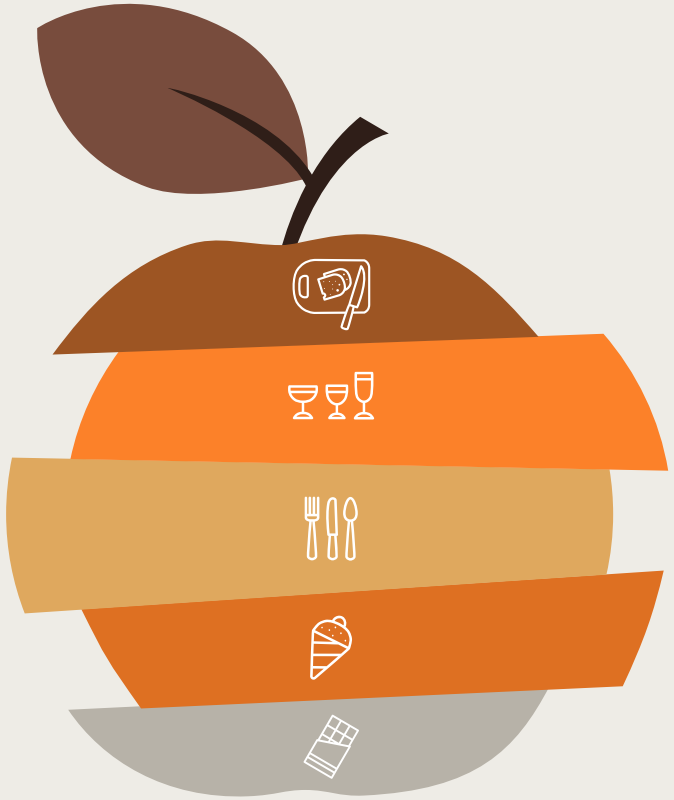
Specialized Care: Monthly NCD Clinic

- Problem: Increasing risk of hypertension and diabetes among our patient cohort.
- Key NCD Clinic Strategies: Aligned with Eswatini NCD guidelines and WHO guidelines
- Screening eligibility: CALHIV and their caregivers with age-standardized elevated Bp, including those on treatment for hypertension and/or diabetes
- Screening team: Triage team (Wt, Ht, wt/age, BMI), ER nurse, medical doctor, community outreach doctor
- MDT treatment providers: Baylor Clinic MD with Internal Medicine specialization, ER Nurse, Mentor Mother, Dietitian, Psychologist, Social Worker and a visiting nephrologist, MMD team

Specialized Care: Adolescent Camp

- Camp Sibancobi: Curriculum for 1˚ prevention of Hypertension among ALHIV includes.
  - Primary prevention of NCD's is discussed as part of the curriculum
  - Screened for hypertension
  - Modifiable behavioral risk factors addressed
  - Metabolic risk factors are discussed
  - BMI assessment
  - Nutrition classes
- Care Providers: Camp staff, medical team and Paramedics
- Sessions: August Camps and Weekend Family Camps

NUTRITIONAL EDUCATION



- **PROPER FOOD PREPARATION**
  Incorporate sources of protein, such as meat, fish, eggs and beans
- **ADEQUATE FLUID CONSUMPTION**
  Including milk and diary foods or non-dairy alternatives
- **ADEQUATE CALORIC INTAKE**
  Plenty of starchy foods such as bread, rice, potatoes, pasta
- **VITAMINS, MINERALS AND ANTIOXIDANTS**
  Eat plenty of fruit and vegetables
- **REDUCTION OF SUGAR INTAKE**
  <24 grams of added sugar per day

Research Publications

1. Thivalapill, N., Simelane, T., Mthethwa, N., Dlamini, S., Lukhele, B., Okello, V., Kirchner, H.L., Mandalakas, A.M. and Kay, A.W., 2021. Transition to dolutegravir is associated with an increase in the rate of body mass index change in a cohort of virally suppressed adolescents. Clinical Infectious Diseases, 73(3), pp.e580-e586.

2. Imani, P.D., Elyanu, P.J., Wanless, R.S., Perry, S.H., Katembo, K., Lukhele, B., Steffy, T., Seetane, T., Thahane, L., Haq, H. and Bell, C.S., 2022. Chronic kidney disease among children living with the human immunodeficiency virus in sub-Saharan Africa. Journal of Clinical Virology Plus, 2(4), p.100123.

3. Petrus, J., Balungi, J. and Wanless, S., 2022. COVID-19 Ignited a Successful Growth Spurt in Pediatric HIV Differentiated Service Delivery Programming. Current Tropical Medicine Reports, 9(4), pp.243-249.

4. Kay, A.W., Sandoval, M., Mtetwa, G., Mkhabela, M., Ndlovu, B., Devezin, T., Sikhondze, W., Vambe, D., Sibanda, J., Dube, G.S. and Stevens, R.H., 2022. Vikela Ekhaya: a novel, community-based, tuberculosis contact management program in a high burden setting. *Clinical Infectious Diseases*, *74*(9), pp.1631-1638.

5. Bacha, J.M., Dlamini, S., Anabwani, F., Gwimile, J., Kanywa, J.B., Farirai, J., Bvumbwe, M., Tsotako, M., Steffy, T., Nguyen, D. and Mendez-Reyes, J.E., 2023. Realizing the Promise of Dolutegravir in Effectively Treating Children and Adolescents Living With HIV in Real-world Settings in 6 Countries in Eastern and Southern Africa. The Pediatric Infectious Disease Journal, 42(7), p.576.

Trainings & Capacity Building

- Clinical attachments
- Clinical Lead Forum discussions
- Telemedicine for satellite clinics
- Didactic lectures provided within the Baylor CME structure
- Inter-network collaboration (CoP)
- Trainings for community cancer educators, doctors and regional clinics
- Interpretation of ECG, CXR, electrolytes, Urinalysis, total cholesterol, blood glucose
- Laboratory training towards ISO Accreditation

Lessons learned

- Thorough needs assessment and resource mobilization pre-implementation contributed to our success
- Adolescent engagement / friendliness are key in addressing Hypertension prevention
- Multidisciplinary engagement and staff training on hypertension screening services are crucial
- Buffer stock of antihypertensive medication allows 3MMD refills for well-controlled clients, ↑↑↑ client + HCW satisfaction
- Telemedicine platforms contributed to continuity of care
- Challenges: Drug Stockouts, no food-by-prescription, stigma with community ART refills, resource constraints for transport/food support

Adolescent-friendly Clinical Team at the Baylor College of Medicine Children's Foundation in Eswatini

Dr. Florence Anabwani-Richter

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Baylor College of Medicine Children's Foundation Eswatini

Dr. Florence Anabwani-Richter

Panel Discussion Moderator

Helen Bygrave
Consultant
International AIDS Society- the IAS

Panel Discussants

Bolanle Banigbe
Technical Director
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Resolve to Save Lives

Katy Godfrey
Senior Technical Advisor
OGAC/PEPFAR

Patricia Asero
Chairperson
International
Community of Women
Living with HIV, Kenya

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Baylor Eswatini

Slides and recordings from today's session will be posted on the CQUIN website:
https://cquin.icap.columbia.edu/

Join us 1st of August for the next CQUIN webinar:
Mental Health and HIV Integration for DSD

Thank you!