



World Health Organization

REGIONAL OFFICE FOR **Africa**



Report on Regional Consultation

29 July – 1 August 2019

WHO PEN and Integrated Outpatient Care for Severe, Chronic NCDs at First Referral
Hospitals in the African Region (PEN-Plus)

Contents

Executive Summary

Introduction

Opening

Session 1

Regional Consultation on WHO PEN

Session 2

Scaling Up WHO PEN and Other Related Technical Packages

Session 3

Introduction and Overview of PEN-Plus

Session 4

Review and Feedback of PEN-Plus

Closing Ceremony

ANNEXES

Annex 1: Agenda

Annex 2: Attendance List

Executive Summary

The dynamic burden of NCDs in Africa encompasses both urban and rural settings with varying prevalence and severity across a broad spectrum of demographics. As urban-based, referral hospitals are frequently the only facilities, which may have reliable, broad NCD services, WHO released the Package of Essential NCD Interventions (WHO PEN) to support the decentralization of services to the primary care level. Adopted in 2010, this approach seeks to provide geographically accessible care at community health centers to treat common NCDs, including hypertension, type 2 diabetes, and chronic respiratory disease, in an integrated outpatient package. WHO PEN also looks to address early detection of breast and cervical cancer. Since 2010, several WHO AFRO member states have piloted and scaled WHO PEN. As a means to complement WHO PEN services, some member states have additionally begun focusing on the more severe spectrum of NCDs, such as type 1 diabetes, rheumatic heart disease, and palliative care for advanced malignancies. Given the greater complexity of services for these diseases, care delivery has primarily focused at first-level hospitals, as opposed to health centers. This approach to address severe NCDs through an integrated outpatient service at first-level hospitals is called “PEN-Plus.” In order to address the dynamic and broad spectrum of NCDs within the context of universal health coverage (UHC), WHO AFRO recognizes the importance of continuing to scale WHO PEN across the region while exploring an expansion of decentralized services through PEN-Plus.

The meeting was organized by the WHO Regional Office for Africa (AFRO) to exchange updates by member states surrounding WHO PEN pilot and scale-up, and additionally, WHO AFRO provided a forum to disseminate and discuss its collaborative progress together with Harvard Medical School and Partners In Health regarding the design of a draft regional strategy for PEN-Plus. It was attended by 17-member states and 24 participants from regional partners.

During the meeting, 13-member states presented progress to date on policy and implementation of WHO PEN. The critical value of WHO PEN as a decentralized model was

acknowledged. Specifically, member states shared successes and challenges with many member states highlighting the need for growth in trained clinical human resources, monitoring and evaluation capacity, and strategic partnership building. The exchange of knowledge and experience continued via breakout group sessions where member states collectively designed and described policy and implementation plans for scale-up of WHO PEN.

The regional consultation later included presentations introducing PEN-Plus as an expansion of WHO PEN services. Specifically, the decentralized approach addresses severe NCDs through integrated outpatient clinics led by mid-level providers at first-level hospitals. The Rwanda Ministry of Health, in particular, shared details surrounding their success and challenges in having scaled PEN-Plus services nationally. This included a national training program for nurses to lead care. Partners In Health – Rwanda also shared its role as a strategic partner in PEN-Plus implementation. Liberia and Malawi shared their progress to date in designing PEN-Plus national operational plans. The draft Regional Strategy for PEN-Plus was presented and produced valuable discussion and feedback, especially surrounding resource mobilization, inclusion of palliative care, sickle cell disease, and other NCDs in the package, national training of mid-level providers, and its role in supporting WHO PEN through mentorship and strengthened referral systems. The inputs will be incorporated in the draft regional strategy document. This document will continue to be shared and disseminated at relevant forums as to obtain further feedback and consensus in the region in regard to PEN-Plus and its role in supporting WHO PEN. The expectation is that this regional strategy will contribute to the acceleration of achieving UHC for NCDs in Africa.

The consultation highlighted the progress and remaining challenges in decentralizing care for both common and severe NCDs among some of the most vulnerable populations in the region. Member states called for continued knowledge exchange, partnership building, and resource mobilization as to achieve national scale-up and evaluation of WHO PEN. Upon further consensus building and discussion surrounding the role of PEN-Plus in supporting WHO PEN and decentralization, national NCD programs in the Africa region will target UHC for both common and severe NCDs.

Opening

Introductions & Welcome Address

Dr. Steven Shongwe, Director of NCDs at WHO AFRO

In Dr. Shongwe's opening address, he welcomed participants representing Ministries of Health and WHO country offices from 17-member states throughout the African region, in addition to regional partners. In his introductory remarks on behalf of WHO Rwanda, Dr. Shongwe recognized WHO PEN (Package of essential NCD interventions for primary care) for its innovative, cost-effective impact in resource-poor settings and invited participants to work together in the consultation to evaluate progress, challenges, and opportunities in implementing WHO PEN. Dr. Shongwe also acknowledged preliminary efforts that have been supported by partners at Harvard Medical School and Partners In Health to conduct a baseline survey and draft a regional strategy for integrated outpatient care for severe, chronic NCDs at first-referral hospitals in the African region (PEN-Plus). He welcomed the opportunity for member states and partners to provide critical feedback to PEN-Plus throughout the consultation.

High table during the opening.



Opening Speech

Dr. Gilles Ndayisaba, Director of NCDs at Ministry of Health Rwanda

Dr. Gilles Ndayisaba, Division Manager of Non-Communicable Diseases at the Ministry of Health Rwanda, provided remarks on behalf of Honorable Minister Dr. Diane Gashumba. Dr. Ndayisaba welcomed participants to the city of Kigali for the regional consultation and expressed gratitude for continued collaboration between the Rwandan Ministry of Health and the WHO Regional Office for Africa. Dr. Ndayisaba also acknowledged the commitment of governments like Rwanda to integrate NCD services into UHC efforts and the importance of defining and promoting packages of NCD care, such as WHO PEN and efforts to build on WHO PEN by offering “PEN-Plus” to address severe and complex NCDs at first-level hospitals.

Partner Remarks

Dr. Gene Bukhman, Director of the Program in Global Noncommunicable Disease and Social Change at Harvard Medical School and Director of NCD Synergies

In his remarks, Dr. Gene Bukhman thanked WHO/AFRO, Rwanda Ministry of Health, and WHO Rwanda for convening the meeting and reiterated Harvard Medical School and Partners In Health’s willingness to support and accompany emerging efforts to define and implement “PEN-Plus” as to complement existing WHO PEN interventions.

Objectives & Expected Results

Dr. Prebo Barango, NCD Focal Point, WHO Intercountry Support Team East & Southern Africa

As opening speeches concluded, Dr Prebo Barango from WHO/AFRO presented Aims & Objectives for the regional consultation. Dr. Barango emphasized the importance of community level primary care for NCDs – as well as mentorship and more advanced services at first-level hospitals – to ensure that access to care is available closer to the community. WHO PEN, for instance, helps ensure an efficient use of health care resources.

Meeting objectives and expected outputs were then presented to participants, in addition to the method of work for plenary sessions and group work.

Session I Regional Consultation on WHO PEN

Overview of WHO PEN

Dr. Gojka Roglic, Medical Officer, Noncommunicable Diseases and their risk factors, WHO

In Dr. Gojka's presentation, she reiterated Dr. Barango's introduction to the utility to WHO PEN as a strategy for the implementation of prioritized NCD interventions delivered by primary care workers. WHO PEN supports countries by investing in health systems strengthening through an evidenced-based primary health care approach, in parallel with tobacco control policies and policies to promote healthy diet and physical activity. In her presentation, Dr. Gojka reviewed available WHO PEN treatment protocols and tools, essential medicine and equipment lists, and recommendations for organization of service delivery at this level.

Country Presentations

Through the remainder of Session I, participants listened to presentations from the following member states:

- Benin (Dr. Salmane Amidou)
- Botswana (Dr. Gontse Tshisimogo)
- Burkina Faso (Dr. Küssome P. Somda)
- Côte d'Ivoire (Dr. Adoueni K. Valery)
- Eritrea (Mr. Tesfalidet Weldeab)
- Eswatini (Ms. Sijabulile Dlamini)
- Ethiopia (Dr. Asmamaw Bezabeh)
- Guinea (Dr. Kake Amadou)
- Lesotho (Mr. Thato Mxakaza)
- Malawi (Dr. Jones Kaponda Masiye)
- Nigeria (Dr. Nnenna Ezeigwe)
- Sierra Leone (Dr. Santigie Sesay)
- Uganda (Dr. Mugabe Frank)

Country representatives were asked to present on the progress of WHO PEN implementation in their national context. In presentations, member states emphasized achievements in scale up of NCD care under the WHO PEN framework, the number of health facilities implementing WHO PEN, the status of efforts to increase access to essential medicines, equipment, and technologies, number of staff trained by cadre, and coordination efforts at national level. In addition to a status report on service provision and roll out, member states presented challenges in implementing WHO PEN and opportunities for NCD efforts moving forward. Presenters then responded to audience Q&A in panel discussions.

A number of common themes emerged. In discussing barriers to scale up, many presenters stressed limited financing and availability of affordable, quality medication, equipment, and diagnostics as a consistent challenge. Many member states also discussed the difficulty of consistent and coordinated reporting and data at the national level, as well as siloed care and fundraising across health conditions. Human resources for health was referenced often, with some member states acknowledging limited scale up of training efforts that isn't geographically equitable across districts, as well as challenges in maintaining retention of NCD staff and strong supervision and mentorship support across cadres. Opportunities that many member states highlighted included strong partnerships supporting pilot efforts at district level that have potential to be leveraged for national scale up, in addition to encouraging efforts to adapt and implement training materials and facility-based tools, and successful initial experience in integrating NCD and mental health services across the health system. In the Q&A portion, member states shared experiences across an array of topics, including how to build national buy-in and coordination for WHO PEN implementation, strengthen data and EMR systems, support palliative care efforts, and carry out advocacy strategies for raising funding for NCDs at national level.

Cross section of the participants during the country presentations



Session II

Scaling Up WHO PEN and Other Related Technical Packages

Opening Presentation

Dr. Gojka Roglic, Medical Officer, Noncommunicable Diseases and their risk factors, WHO

Dr. Roglic provided a brief overview of Member states that have scaled WHO PEN and similar technical packages. Of countries attending the meeting, Benin and Cote D'Ivoire are scaling up fastest and shared lessons from their experience on Day 1. There are also examples from the SEARO and WPRO regions, but WHO is still working on gathering evidence to document this work. Dr. Roglic also discussed the HEARTS program, and the success of the program in Latin America. A key role in the success of the scale-up of the program was political commitment from governments. Without it, Dr. Roglic noted, it is challenging to have long-term success.

Group Work

Meeting participants worked in eight groups comprised of Member States and respective WHO Country Representatives, with partner organizations invited to observe the group discussions. Each group was asked to complete the following matrix for their respective country:

Action Point	Action Matrix <i>(What are the next steps/specific actions we need to take that will help us overcome these challenges)</i>	Responsible Org/Dept <i>(Who is in charge of ensuring this step/action gets done?)</i>	Stakeholders <i>(Who needs to be involved or consulted to complete this step/action?)</i>	Timeline
Resource Mobilization				
Community Participation & Engagement				
Access to medicines/ technologies				
M&E Surveillance				
Capacity Building				
Decentralization				
Policies/ Guidelines/ Protocols				

Group work session.



Recommendations & Closure

Each group provided a brief update in plenary. Although each group presented on a different country, there were proposed recommendations from each of the categories, based on shared experiences. According to representatives present at the meeting, member states should:

Resource Mobilization:

- Advocate for an NCD budget line within the existing budget of their respective Ministries
- Advocate for taxation on health harming commodities to fund National NCD programs
- Leverage existing partnerships and ongoing collaborations to access funds from other programmes and stakeholders
- Develop business plans and proposals to attract partners and generate funding
- Build in NCD-specific budget lines as well as and NCD components of other programs

Community Engagement:

- Enhance health literacy and empower communities for NCD prevention and control

- Engage community leadership, thought leaders and community structures in NCD work
- Have ongoing awareness campaigns with relevant materials and harmonized messaging
- Educate appropriate teachers, including traditional healers

Access to medicines and technologies:

- Explore potential of regional/pooled procurement among neighboring countries
- Explore discrepancies between what appears in WHO PEN package vs. national EMR list and address those discrepancies
- Ensure availability of essential meds at district level

Monitoring & Evaluation

- Agree on standard M&E indicators for WHO PEN and incorporate those indicators into HMIS at all levels of the health system (understanding of course that tracking of indicators may be a challenge, given lack of capacity particularly at district level)
- Ensure quality of data quarterly, including ongoing supervisory activities

Capacity Building

- Standardize curricula and train more health workers with sufficient mentoring
- Ongoing refresher trainings for WHO PEN
- Train & empower non-medical staff to strengthen NCD service provision
- Develop, adapt and utilize supervisory and mentorship tools
- Provide necessary equipment and supplies to support service expansion nationally

Decentralization:

- Must have coordination staff to oversee rollout, expand NCD services in coordination with districts and with partners
- Set a clear target for a number of facilities to roll out to each month, determined by each MOH

Policies, Guidelines and Protocols:

- Review and update NCD policies, plans and strategies regularly

- Ensure that NCDs are well documented and captured in other health and multisectoral plans
- Develop and utilize policies to strength NCD treatment, prevention and control
- Develop and strengthen normative tools to guide quality NCD service delivery

It was not all work. There were periods to stretch and have fun in-between group work and presentation sessions



Session III**Introduction and Overview of PEN-Plus****Welcome & Opening Remarks*****Dr. Steven Shongwe, Director of NCDs at WHO AFRO***

Dr. Shongwe' opening address introduced integrated outpatient care for severe, chronic NCDs at first referral hospitals in the African Region (PEN-Plus) and described its synergies with the WHO PEN package. The PEN-Plus model addresses integrated treatment and care for severe, chronic NCDs with a narrow therapeutic window including conditions such as type 1 diabetes, rheumatic heart disease, sickle cell anemia and palliative care. He welcomed Member States and partners to address the PEN-Plus model with a critical eye, and to provide ongoing feedback in the coming two days.

Presentation: Overview of the PEN-Plus Model***Dr. Gene Bukhman, Director of the Program in Global Noncommunicable Disease and Social Change at Harvard Medical School and Director of NCD Synergies***

Dr. Bukhman presented the concept of PEN-Plus, and provided an overview of what meeting participants could expect in the consultation.

Dr. Bukhman first [introduced The *Lancet* Commission on Reframing NCDs and Injuries for the Poorest Billion](#), a policy and research initiative supported by the Program in Global NCDs and Social Change at Harvard Medical School and the NCD Synergies project at Partners In Health. The Commission examines the burden of NCDs and injuries among the world's poorest people, and prioritized interventions to address these conditions with a focus on equity and severity, that put the needs of the poorest and most vulnerable populations first.

In addition, members of the Commission have worked with 16 countries to host a National NCDI Poverty Commission or group. Each group has conducted parallel country-led analysis that examines the national burden of NCDs and injuries and prioritizes interventions that reflects this disease burden. National Commissions have often focused on severe NCDs as typically the services for these diseases are not reaching poor or rural communities, instead are highly centralized in capital cities and other larger urban areas with extremely low coverage of services at first-level hospitals.

In October 2017, the teams supporting The Lancet NCDI Poverty Commission, along with several NCD leads from Ministries of Health in the AFRO Region first met with WHO AFRO and WHO HQ to begin discussing integrated strategy. In August 2018, these groups hosted an official side-event on PEN-Plus at the [68th Session of the WHO Regional Committee for Africa in Dakar, Senegal](#), with strong interest emerging in co-developing a product.

Dr. Bukhman presented that WHO PEN and the draft PEN-Plus strategy should be part of the same cohesive strategy. PEN-Plus will push decentralization of more severe, lower prevalence diseases to first-level referral hospitals in order to better treat conditions that have a narrow therapeutic window and more advanced medication management that must be precise to avoid harm to the patient. PEN-Plus will require targeted training of mid-level health providers given human resource challenges faced by Member states, to be able to respond to conditions including, but not limited to: type 1 diabetes, cardiomyopathies, malignant hypertension, heart failure management, sickle cell disease. These conditions are of significance due to the higher burden of both Years of Life Lost (YLL) and Disability-Adjusted Life Years (DALYs) and their impact among children and young adults.

Dr. Bukhman presented that WHO PEN effectively addresses more common, low severity diseases. WHO PEN care is standardized, with a much wider therapeutic window. This will encompass conditions such as mild to moderate cases of type 2 diabetes, hypertension, and asthma. Dr. Bukhman emphasized the distinctions

between the two models of care but highlighted how they complement one another, further strengthening the national health referral system.

The following table provides a breakdown of the differentiation between PEN and PEN-Plus:

	WHO PEN	PEN-Plus
Facility Level	Most Peripheral	First-Referral
Disease Prevalence	High	Low
Disease Severity	Low	High
Standardization	Standardized	Individualized
Therapeutic Window	Wide	Narrow
Training Model	Short, didactic	Longer, didactic & clinical practice

Dr. Bukhman then explained a proposed training framework for member states interested in adopting PEN-Plus. Due to the complexity of conditions and specialized skills, PEN-Plus training will consist of both didactic and clinical components during a three-month time block. National scale up requires exemplary first-level hospitals to become national training sites for other mid-level providers in neighboring districts. In addition to skilled health workers, necessary equipment and medicines also need to be available.

Next, Dr. Bukhman provided an overview of a costing analysis that was conducted in Rwanda of a clinic implementing a PEN-Plus package. In Rwanda, the PEN-Plus model was first introduced by Partners In Health Rwanda/Inshuti Bu Muzima in three districts, and then scaled nationally by the Ministry of Health to all 42 district hospitals in 2015. The published study notes that initial start-up costs of operating a PEN-Plus clinic in Rwanda

are \$50,000 per facility, with an additional \$70,000 per annum once established. This includes the cost of all labor, equipment, training and medicines.¹

Dr. Bukhman concluded by noting that should the African region come together on this strategy, it is feasible that every first-level hospital could provide high quality care by 2030. He suggested the potential to build a social and financing movement that addresses this group of conditions -- with the right financial backing and passionate partners, there are the means to make significant progress within a humanitarian movement.

Presentation: Results from regional survey on availability and demand for integrated care at first-referral level hospitals for severe, chronic NCDs

Dr. Chantelle Boudreaux, Research Associate for the Program in Global Social Noncommunicable Disease and Social Change at Harvard Medical School

Dr. Boudreaux provided an overview of an ongoing survey being conducted by the Program in Global NCDs and Social Change at Harvard Medical School, in partnership with WHO AFRO. Preliminary results captured feedback from 11 countries. The survey predominantly focuses on district hospitals but does address health centers and referral hospitals as well. Dr. Boudreaux provided an overview of the 12 identified services within the survey and mapped out where they are available within the health system based on respondents to date. The survey also examined priorities for each country over the coming five years.

Following the morning's presentations, Dr. Paul Park moderated a panel discussion with Dr. Prebo Barango, Dr. Chantelle Boudreaux and Dr. Gene Bukhman. They each responded to questions regarding the survey and discussed in more detail how Member states could participate and share their feedback. In particular, they cautioned that this presentation only highlighted preliminary results from a small group of countries. There were also

¹ Eberly LA, Rusangwa C, Ng'ang'a L, et al Cost of integrated chronic care for severe non-communicable diseases at district hospitals in rural Rwanda BMJ Global Health 2019;4:e001449.

questions about other conditions and disease categories that were not captured in the survey, with the panelists explaining that they were limited due to the length of the survey.

In addition, some questions were raised about prevention of NCDs and how this could be built in further to PEN-Plus efforts. The panelists recognized the crucial role of prevention, particularly for common NCDs, but emphasized that there is no prevention possible with many severe NCDs such as type 1 diabetes, and therefore high-quality treatment should be available at first-level hospitals while preventative measures should be focused at primary health centers. The panel also discussed health system structure and the need to shift care for common NCDs to health centers. By preserving referral and district hospitals for more severe conditions and shifting care for common NCDs to health centers, the cost of care is kept low, and ensures that patients with severe NCDs are able to access the care they need.

Final discussion points centered on training, and the need to engage professional societies and Ministries of Education in structured planning, as what each health professional is licensed to do will differ per country. There will also need to be a strong understanding among and between healthcare workers of what their role is on an integrated care team, and who is responsible for each step of the care cascade.

Presentation: The PEN-Plus Experience in Rwanda

Dr. Gilles Ndayisaba, Director of NCDs at Ministry of Health of Rwanda

Dr. Ndayisaba presented on the substantial work that Rwanda's Ministry of Health has done to pilot PEN-Plus clinics in specific districts, document its success and then scale the model nationally to all 42 districts. Dr. Ndayisaba first introduced the national burden of NCDs in Rwanda, highlighting that NCDs affect young people, and fall across a much broader spectrum than what is captured in the "4x4" paradigm. Rwanda addressed the diversity of the NCD burden by integrating its NCD strategic plan into a multisectoral, socioeconomic development policy platform to respond comprehensively.

Dr. Ndayisaba then explained the structure and system of PEN-Plus in Rwanda. Every district hospital has a NCD clinic that is run by nurses. All nurses working in the NCD clinic

and one GP have completed the same national NCD training. The Ministry of Health in Rwanda is also working to address stigma communities and encourage people to visit the clinic regularly, rather than when they are feeling ill.

Dr. Ndayisaba emphasized the crucial role of task shifting. NCD nurses in Rwanda were cross-trained in care for severe, chronic NCDs to lead PEN-Plus clinics as well as one GP per clinic who will be supervising this care. The skills that are shifted to nurses have included simplified echocardiography, anti-coagulation and insulin management. The success of this program relies heavily on a structured mentorship program, with hands-on supervision and oversight. The success of this program has led to patients in rural areas now able to access high quality care without traveling to Kigali, as the necessary equipment and medicines have also become more readily available.

Dr. Ndayisaba also reflected on ongoing challenges that the Ministry is working toward addressing. He noted that NCDs are a huge cost and emphasized the need for prevention when possible. As previously noted in the discussion, many NCDs, particularly those affecting poorer populations are not preventable, and treatment comes with a high price. Making those services available at a low-cost is essential but continues to present challenges for the Ministry. Additionally, related to cost, the Ministry does its best to avoid drug stockouts and challenges procuring and maintaining equipment, but does continue to encounter challenges. Finally, Dr. Ndayisaba discussed language barriers in Rwanda, and the need to better inform patients and end stigma surrounding chronic diseases.

Presentation: PIH Rwanda on PEN-Plus Support

Dr. Fred Kateera, Chief Medical Officer at Partners In Health Rwanda/Inshuti Mu Buzima

Dr. Kateera presented on the role of Partners In Health Rwanda/Inshuti Mu Buzima (IMB) in accompanying the Rwanda Ministry of Health in their development and expansion of the PEN-Plus model at district hospitals. Dr. Kateera explained that IMB began with investment of time, human resources and a financial commitment over an extended period. Then, IMB continued their accompaniment of the Ministry with ongoing growth and an investment in innovation to ensure that care packages reached the poorest and most vulnerable communities.

Dr. Kateera provided an overview of IMB's history – IMB works in three rural districts in Rwanda and supported the Rwanda MOH to open the first PEN-Plus clinic at Rwinkwavu District Hospital in 2006. At the time, nurses were trained to manage patients with cardiovascular disease, and an outpatient follow-up system was formed. In time, additional disease categories were added, including hypertension and diabetes. In 2015, IMB successfully supported the Ministry of Health in scaling the PEN-Plus model to NCD clinics to all 42 districts in the country, with the Ministry leading and funding a significant amount of hiring and leading national NCD training.

Finally, Dr. Kateera noted that data systems have been a key point of focus. Data systems have continued to be updated and improved, and now the entire country of Rwanda uses the OpenMRS Platform. In order to ensure the continued success of this national program, colleagues from IMB continue to meet with the Ministry regularly to discuss district and national matters, and work closely together to achieve shared goals.

Following these presentations, Dr. Gene Bukhman moderated a discussion with Dr. Gilles Ndayisaba and Dr. Fred Kateera. Key questions that emerged from the discussion touched on how to produce relevant training materials and protocols for both clinicians and patients, and who is responsible for overseeing ongoing clinical supervision and mentorship. Dr. Kateera described the success of the training model in Rwanda – by identifying and investing in NCD nurse champions during training, they can become leaders in training

others. This helps to address turnover and identifies professional development opportunities for nurses that excel. Dr. Ndayisaba emphasized the crucial role of partnerships with universities, teaching hospitals and NGO partners to facilitate and oversee the educational components. However, the Ministry should remain responsible for the mentorship and supervision that occurs at hospitals. Many of the training tools discussed in this portion of the meeting were developed in collaboration with the Rwanda Ministry of Health and IMB [are available for public access here](#).

Presentation: Overview of the Regional Strategy for PEN-Plus

Dr. Paul Park, Director of Implementation for NCD Synergies at Partners In Health

Dr. Park introduced the draft Regional Strategy for PEN-Plus to those in attendance, in order to provide additional context behind the structure of the strategy prior to the opportunity for member states to share consultative feedback. Dr. Park reviewed each section of the draft strategy and discussed its importance in the current global health agenda. The need for a strategy like this is evident from growing global advocacy, particularly with the [UN's first High Level Meeting on UHC in 2019](#), and the passing of [Resolution A71/25 on rheumatic heart disease at the 71st World Health Assembly](#).

As Dr. Park explained, the strategy was developed through an equity lens that complements WHO PEN. Specifically, the strategy prioritizes the most vulnerable, especially children and young people, as these populations face a greater level of early mortality and disability if severe NCDs are left untreated. Dr. Park emphasized the crucial role of a mid-level provider (nurses, clinical officer, physician's assistant etc.) in operating and providing care in a PEN-Plus clinic. He also noted that despite the recognized importance of treating severe NCDs, many of the medicines needed to treat these conditions are currently included on the National Essential Medicines list but not actually available at first level hospitals. He also reiterated points made by previous speakers on the crucial role of sustained training through the development of national training sites, as well as addressing inevitable turnover. PEN-Plus providers also play a critical role in training and mentoring WHO PEN providers at nearby health centers.

Dr. Park also discussed what potential goal outcomes of the strategy will be by 2030, such as that every member state within the AFRO region will have integrated PEN-Plus clinics available with accompanying national operational plans to guide the implementation, training and documentation of these programs.

Member states continued the discussion by asking of how NCD nurses can be retained once they've acquired this level of specialization. Dr. Park addressed this by recognizing the lack of professional development opportunities for nurses, and that the role of a NCD nurse needs to be nationally recognized by nursing councils and councils of education. Finally, Dr. Roglic called for even further synergy between WHO PEN and PEN-Plus, reinforcing the referral network and connected mentorship between the two programs.

Site Visit: District Hospital with operational PEN-Plus Clinic

To conclude the third day, all participants were invited by the Rwanda Ministry of Health to visit one of three first-level hospitals near Kigali in Masaka, Rutongo and Nyatanga. Each group, comprised of 18-20 participants, had the opportunity to speak with the Director General of the hospital and the NCD nurse lead from the respective NCD PEN-Plus clinic. Visits were well received, with positive feedback from each of the participating member states. Meeting participants enthusiastically reviewed sample forms, protocols and guidelines and had engaging conversations with district hospital staff about Rwanda's model of care for severe NCDs. There was strong recognition of how much nurses were able to do independently in Rwanda, and the strength of the mentorship program to WHO PEN providers was applauded. A resounding theme from each visit was that outpatient care for severe NCDs is feasible and plausible, even in rural district hospitals, with sufficient financial resources, human resources and partnership.

Session IV**PEN-Plus Review & Feedback****Drafting National Operational Plans for PEN-Plus*****Dr Fred Amegashie, Liberia Ministry of Health & Social Welfare***

In Dr. Amegashie's presentation, he charted Liberia's current state of NCD services and plans, in collaboration with partners, to support implementation for WHO PEN and "PEN-Plus". In Liberia, PEN-Plus is being developed and implemented to complement the existing PEN framework as a strategy for leveraging mid-level providers for advanced NCD care and help ensure that NCD services are comprehensive and accessible to all. National objectives for the PEN-Plus Operational Plan will be to 1) establish a long-term framework for national implementation policies for PEN-Plus clinics in all county hospitals, 2) implement, monitor, and evaluate PEN-Plus clinics in all county hospitals by 2025, and 3) collaborate with WHO AFRO regional leadership and other partners to establish and strengthen national PEN-Plus programs. In Liberia, very few staff have been trained in NCD care and there is particularly low coverage of services in rural areas. PEN-Plus could help increase access to services for severe, chronic NCDs to underserved regions of Liberia.

In order to address national training and mentorship for NCDs, Liberia has started piloted training and implementation efforts in Maryland county through a PEN-Plus clinic at JJ Dossen Hospital, in collaboration with Tubman University's nursing program. The PEN-Plus package will be nurse-led and include services for type 1 diabetes, insulin-dependent type 2 diabetes, rheumatic heart disease, severe hypertension, heart failure, chronic liver disease, severe asthma, COPD, sickle cell disease, and palliative care. Retention of patients in care is of particular attention to the team working together to build the referral network, track loss-to-follow up, and strengthen social support services for patients. Nationally, a technical working group composed of the MOHSW, Ministry of Education, WHO Liberia, Liberia National NCDI Poverty Commission, academic partners, county hospital directors, regulatory

bodies, and implementing partners like Partners In Health are overseeing curriculum development and the mentorship model for PEN-Plus. Coordinated efforts to support strengthened data systems, including EMR and M&E, are also under development.

Dr Jones Kaponda Masiye, Malawi Ministry of Health

Dr. Masiye followed Dr. Amegashie's presentation by sharing Malawi's progress towards implementing WHO PEN and their leadership thus far in moving towards PEN-Plus. In Malawi, 60% of the burden of disability-adjusted life years (DALY) occurs in patients under age 40, which the MOH recognizes as a significant loss to the working age population. Severe, chronic NCDs are only managed in central/referral hospitals and there has been no specialized cadre of mid-level providers equipped to address this burden, which has created challenges in terms of access and human resources. Through a consultative and inclusive process, the MOH's goal is to create an operational plan for Malawi that uses PEN-Plus principles to set the roadmap to delivering care in all districts for severe, chronic NCDs. In order to move forward on PEN-Plus, the MOH has committed to an operational planning and priority-setting process led by a team on the technical working group on NCDs, informed by senior MOH and academic stakeholders.

To date, Malawi has been piloting PEN-Plus at district hospital level in Neno, Malawi through the support of Partners In Health, a region that had also led impressive work integrated NCDs and HIV at primary care level consistent with WHO PEN. Training efforts for PEN-Plus are ongoing, with stepwise decentralization occurring to strengthen mentorship and referral loops between community-led screening and care, integrated chronic care at health centers, and the PEN-Plus clinic at district level. Training targets clinical officers and addresses many of the components of advanced NCD care that had previously only been available at referral level. Like with the Integrated Chronic Care model, the MOH with support from Partners In Health looks to expand PEN-Plus to additional districts and has been working closely with World Diabetes Foundation and Helmsley Charitable Trust as partners in these efforts. Similar to Liberia, the Malawi MOH and partners will also work on strengthening NCD indicators and the national M&E system for NCDs.

In the discussion following Liberia and Malawi presentations, panelists discussed how operational plans for PEN-Plus are intended to include decentralization of WHO PEN services as part of the timeline to scale up more advanced care at district level. As many mentioned, PEN-Plus has the opportunity of advancing WHO PEN and can help ensure that WHO PEN services are being delivered appropriately at health centers rather than overloading district hospitals designed for more advanced care.

Detailed review and feedback on draft regional PEN-Plus strategy – Breakout Groups and Report Back

In the remainder of the morning session, participants returned to their original working groups to discuss and critique the regional PEN-Plus strategy that had been drafted by Partners In Health and Harvard Medical School prior to the opening of the meeting. Member states reviewed all sections of the draft strategy:

- Introduction
- Situational Analysis and Justification
- Regional Strategy and Guiding Principles
- Priority Interventions
- Implementation Framework
- Monitoring & Evaluation
- Expected Outcomes
- Conclusion

Participants were asked to provide line edits and where needed, suggest additional points, objectives, priority interventions, and stakeholders. Through the afternoon session, member state leads from each working group shared their feedback in plenary with WHO/AFRO representatives. Feedback from the consultative process has been incorporated by WHO/AFRO and collaborating partners into the revision process for the second draft of the PEN-Plus strategy, which will be available for review in fall 2019.

Final Discussion

In the Final Discussion, Dr. Steven Shongwe (WHO/AFRO), Dr. Roglic Gojka (WHO/HQ), and Dr. Gene Bukhman (Harvard Medical School) heard final reflections from member states and fielded questions at the close of the two-day session on PEN-Plus. Most member states acknowledged the justification for creating a strategy to address more severe NCDs at first-level hospitals but had questions around the relationship between WHO PEN and the draft PEN-Plus strategy. Dr. Shongwe clarified that WHO PEN is an established protocol endorsed by member states, under the full purview of WHO – while the PEN-Plus work that had been presented at the meeting is a draft strategy meant to strengthen and accelerate PEN implementation while also addressing gaps regarding more severe and complex chronic conditions.

In his closing remarks, Dr. Gene Bukhman (Harvard Medical School) left participants with the call to action that in order to achieve UHC in low-resource settings, patients with severe, chronic conditions cannot be left behind. PEN-Plus can help accelerate the progress for the implementation of WHO PEN and the two strategies can work closely together to support the African region in ensuring better access to NCD care for those who need it most. He encouraged member states to rally together around addressing insufficient financing to avoid needless deaths of thousands of kids and young adults dying of severe NCDs. It is important for member states and the global health community to look at the optimal level of integration to deliver necessary NCD services most efficiently. Dr. Bukhman closed by reiterating that Harvard Medical School and Partners In Health are willing to help partner with member states and look forward to guidance and leadership from WHO/AFRO on how to move forward on PEN-Plus.

Closing Ceremony

Honorable Minister of Health Diane Gashumba closed the meeting on behalf of the Rwanda Ministry of Health. In her closing remarks, she expressed Rwanda's commitment to preventing and controlling NCDs. The Honorable Minister thanked attendees from WHO Headquarters, Regional, Sub-regional, and Country offices and Ministries of Health from across the African region for participating in such an important, productive consultation throughout the week. She commended WHO and Member State representatives on working together to expand integrated NCD management through WHO PEN and explore the development of a new strategy for severe, chronic NCDs being advanced through PEN-Plus. The Honorable Minister closed her remarks with a call to action, expressing that the Rwanda Ministry of Health welcomes the partnership of WHO, neighboring countries' Ministries of Health, and local and international partners so that united action can be taken against NCDs in the African region.

The Honorable Minister of Health and the High table during the closing ceremony



ANNEX 1: Agenda

Regional Consultation on WHO PEN
29 – 30 July 2019, Kigali, Rwanda

Sunday 28 July 2019, Arrival		
Day 1: Monday, 29 July 2019		
Chairs: Rwanda (morning), Benin (afternoon)		
Rapporteurs: Sierra Leone, Burkina Faso		
8:00-8:30	Registration	Secretariat
8:30-9:30	<p>Opening Ceremony</p> <p>Introductions – WHO Rwanda</p> <p>Welcome address (10 min) – WHO/AFRO</p> <p>Opening speech (10 min) – MOH Rwanda</p> <p>Partner Remarks (5 min) – Partners In Health</p> <p>Objectives and expected results of the meeting (10 min) – WHO/AFRO</p> <p>Group photo</p>	<p>WHO Rwanda</p> <p>Dr Steven Shongwe, WHO/AFRO</p> <p>MOH Rwanda</p> <p>Gene Bukhman, Partners In Health</p> <p>Dr Prebo Barango, WHO/AFRO</p>
9:30-10:00	<p>Overview of WHO PEN</p> <p>Discussion</p>	Dr Gojka Roglic, WHO/HQ
10:00-10:30	Health Break	
10:30-11:30	<p>Country Presentations on PEN implementation: Achievements and challenges (Benin, Botswana, Burkina Faso)</p>	

11:30-12:30	Country Presentations on PEN implementation: Achievements and challenges (Cote d'Ivoire, Eritrea, Eswatini)	
12:30-13:30	Lunch Break	
13.30-14:30	Country Presentations on PEN implementation: Achievements and challenges (Ethiopia, Guinea, Lesotho)	
14:30-15:30	Country Presentations on PEN implementation: Achievements and challenges (Malawi, Sierra Leone)	
15:30-16:00	Health Break	
16:00-17:30	Country Presentations on PEN like Initiatives: Achievements and challenges (Kenya, Nigeria, Uganda)	

Day 2: Tuesday 30 July		
Chairs: Malawi (morning), Eswatini (afternoon)		
Rapporteurs: Botswana, Guinea		
8:30-9:00	Day 1 Rapporteurs report back from 29 July	Sierra Leone Burkina Faso
9:00-9:30	Presentation: Scaling up WHO PEN and other related technical packages	Dr Roglic Gojka, WHO/HQ

9.30- 10:30	Group Work on developing plans to scale up WHO PEN in Member States	Dr Prebo Barango, WHO/AFRO
10:30-11:00	Health Break	
11:00-12:30	Group Work (continued)	
12:30-13:30	Lunch Break	
13:30-15:00	Group Presentations in plenary	
15:00-15:30	Health Break	
15:30-16:30	Recommendations and Closure – Day 2 rapporteurs, WHO to summarize group work and plenary	Botswana Guinea WHO/AFRO

Regional consultation on the integrated outpatient care for severe, chronic NCDs at first-referral level hospitals in the African Region (PEN-Plus)

31 July – 1 August 2019, Kigali Rwanda

Day 3: Wednesday, 31 July 2019 – Strategy and Operational Plans		
Chairs: Liberia (morning), Ethiopia (afternoon)		
Rapporteurs: Kenya, Côte d'Ivoire		
8:30-8:45	Welcome & Opening Remarks	Dr. Steven Shongwe WHO/AFRO Dr. Gene Bukhman Harvard Medical School
8:45-9:00	Presentation: Results from regional survey on availability and demand for integrated care at first-referral level hospitals for severe, chronic NCDs	Chantelle Boudreaux, Harvard Medical School

9:00-9:30	Discussion	Moderator: Paul Park, Partners In Health
9:30-10:00	Presentation: Overview of the PEN-Plus model	Dr. Gene Bukhman Harvard Medical School
10:00-10:30	Health Break	
10:30-11:15	Presentation: The PEN-Plus Experience in Rwanda	Dr. Gilles Ndayisaba, Rwanda MOH
	Presentation: PIH-Rwanda on PEN-Plus support	PIH Rwanda
11:15- 12:00	Discussion	Moderator: Dr. Gilles Ndayisaba and Dr. Gene Bukhman
12:00-13:00	Lunch	
13:00-13:15	Presentation: Overview of the WHO AFRO Regional Strategy for PEN-Plus	WHO AFRO Harvard Medical School Partners In Health
13:15-14:00	Discussion	Moderator: WHO AFRO / PIH / HMS
14:15	Site visit: District Hospital with operational PEN-Plus clinic	Rwanda MOH

Day 4: Thursday, 1 August 2019 – PEN-Plus Review & Feedback Chairs: Tanzania (morning), Eritrea (afternoon) Rapporteurs: Lesotho, Benin		
8:30-9:30	Reflections from site visits on 31 July Rapporteur report back	Kenya Côte d'Ivoire
9:30-10:00	Presentation: Drafting National Operational Plans for PEN-Plus - Liberia - Malawi	Dr. Fred Amegashie, Liberia MOH Dr. Jones Masiye, Malawi MOH
10:00-10:30	Health Break	
10:30-12:30	Breakout Groups: Detailed review and feedback on Regional PEN-Plus Strategy - Situational analysis and Justification - Regional Strategy and Guiding Principles - Priority Interventions and Implementation Framework - Monitoring & Evaluation and Expected Outcomes	
12:30-13:30	Lunch	
13:30-15:15	Presentations: Report back by each working group	
15:15-15:45	Final Discussion: Consensus building and next steps	WHO AFRO / PIH / HMS
15:45-16:30	Closing Remarks	Dr. Steven Shongwe, WHO AFRO MOH Rwanda

ANNEX 2: Attendance List

	Name	Country	Title
1	Dr. Steven Shongwe	WHO/AFRO	NCD Director
2	Dr. Prebo Barango	Zimbabwe	NCD Focal Point, WHO Inter-country Support Team East & Southern Africa
3	Dr. Mohamed Ould Sid Mohamed	Burkina Faso	NCD Medical Officer, WHO Inter-country Support Team West Africa
4	Dr. Asmamaw Bezabeh Workneh	Ethiopia	NCD Focal Point, WHO Ethiopia
5	Dr. Gojka Roglic	Switzerland	Technical Officer on NCDs, WHO Global
6	Dr. Raoul Saizonou	Benin	NPO, WHO Benin
7	Mr. Moagi Gaborone	Botswana	NPO, WHO Botswana
8	Dr. Ambroise Ane	Cote d'Ivoire	NPO, WHO Cote d'Ivoire
9	Dr. Yohannes Ghebrat	Eritrea	NPO, WHO Eritrea
10	Dr. Kevin Makadzange	eSwatini	NCD Focal Point, WHO eSwatini
11	Dr. Barry Ahmoud	Guinea	NCD Focal Point, WHO Guinea
12	Dr. Joyce Nato	Kenya	NPO, WHO Kenya
13	Mr. Barkon Dwah	Liberia	NCD Focal Point, WHO Liberia
14	Mr. Thato Mxakaza	Lesotho	Health Promotion Officer, WHO Lesotho
15	Dr. Kelias Msyamboza	Malawi	NPO for Disease Prevention & Control, WHO Malawi
16	Dr. Janet Kayita	Sierra Leone	BPEHS, WHO Sierra Leone
17	Dr. Neema Kileo	Tanzania	NPO/HPR, WHO Tanzania

18	Dr. Andre Rusanganwa	Rwanda	NPO/DPC, WHO Rwanda
19	Dr. Lauriane Nyiraneza	Rwanda	NPO, WHO Rwanda
20	Mrs. Jesca Maswera	Zimbabwe	NCD Assistant, WHO Inter-country Support Team East & Southern Africa
21	Mrs. Olivia Endzanza	WHO/AFRO	NCD Administrative Assistant, WHO Regional Office
22	Dr. Salmane Ariyoh Amidou	Benin	Program Coordinator, MOH
23	Dr. Gontse Tshisimogo	Botswana	Principal Medical Officer, MOH
24	Dr. Kussome Paulin Somda	Burkina Faso	NCD Coordinator, MOH
25	Dr. Valery Katche Adoueni	Cote d'Ivoire	Coordinating Director, MOH
26	Mr. Tesfaldet Weldeab	Eritrea	NCD Focal Point, MOH
27	Mr. Afendi Ousman	Ethiopia	NCD Team Leader, MOH
28	Ms. Sijabulile Dlamini	eSwatini	NCD Focal Point, MOH
29	Dr. Amadou Kake	Guinea	NCD Program Coordinator, MOH
30	Dr. Fred Amegashie	Liberia	NCD Director, MOH
31	Miss Madavida Monica Mphunyane	Lesotho	NCD Manager, MOH
32	Dr. Jones Kaponda Masiye	Malawi	Deputy Director of Clinical Services, NCDs & Mental Health, MOH
33	Dr. Nnenna Ezeigwe	Nigeria	National Director of NCDs, MOH
34	Dr. Santigie Sesay	Sierra Leone	Director of NCDs & Mental Health, MOH
35	Dr. Sarah Jenniffer Maongezi	Tanzania	NCD Focal Point, MOH

36	Dr. Frank Mugabe Rwabinumi	Uganda	Principal Medical Officer & Deputy Program Manager of NCDs, MOH
37	Mrs. Diane Mukasahaha	Rwanda	Coordinator, MOH
38	Mrs. Irene Bagahirwa	Rwanda	Director, MOH
39	Mr. Cadet Mutumbira	Rwanda	Senior Officer for Cardiovascular Diseases, MOH
40	Mr. Antoine Munyarugo	Rwanda	Officer for Lung, Renal, Diabetes & Other Metabolic Diseases, MOH
41	Dr. Edson Rwagasore	Rwanda	Ministry of Health/Rwanda Biomedical Center
42	Dr. Simon Pierre Niyinsenga	Rwanda	Ministry of Health/Rwanda Biomedical Center
43	Dr. Evariste Ntaganda	Rwanda	Ministry of Health/Rwanda Biomedical Center
44	Dr. Isaac Odame	Canada	Medical Director, Global Sickle Cell Disease Network
45	Dr. Dagnaw Wubaye Walelgne	Ethiopia	NCD Officer, Partners In Health
46	Dr. Darius L. Fenelon	Haiti	NCD Program Manager, Partners In Health/Zanmi Lasante
47	Dr. Zipporah Ali	Kenya	Executive Director, African Palliative Care Association, Kenya
48	Dr. Jacquelin A. Pierre	Liberia	NCD Program Director, Partners In Health
49	Dr. Melino Ndayizigiye	Lesotho	Clinical Director, Partners In Health

50	Dr. Noel Kasomakera	Malawi	Technical Advisor, Partners In Health
51	Dr. Marta Lado	Sierra Leone	Chief Medical Officer, Partners In Health
52	Dr. Jeremiah Mwangi	Switzerland	Executive Director, REACH
53	Dr. Flora Ndobho	Tanzania	Clinical Coordinator, Sickle Cell Program, SPARCO
54	Dr. Emmy Okello	Uganda	Consultant Cardiologist, PASCAR
55	Ms. Emily Kobayashi	USA	Director of New Market Opportunities, Clinton Health Access Initiative
56	Dr. Christian Ntizimira	Rwanda	City Manager, City Cancer Challenge
57	Dr. Fred Kateera	Rwanda	Chief Medical Officer, Partners In Health/Inshuti Mu Buzima
58	Mr. Gedeon Ngoga	Rwanda	NCD Director, Partners In Health/Inshuti Mu Buzima
59	Dr. Joel Mubiligi	Rwanda	Executive Director, Partners In Health/Inshuti Mu Buzima
60	Dr. Anju Goel	Rwanda	Rwanda Diabetes Association
61	Dr. Gene Bukhman	USA	Director, Program in Global NCDs and Social Change at Harvard Medical School
62	Dr. Paul Park	USA	Director of Implementation, NCD Synergies, Partners In Health
63	Ms. Amy McLaughlin	USA	Program Associate, NCD Synergies, Partners In Health

64	Ms. Kelsey Soderberg	USA	Program Coordinator, NCD Synergies, Partners In Health
65	Ms. Arielle Eagan	USA	Research Associate, Program in Global NCDs and Social Change at Harvard Medical School
66	Ms. Maia Olsen	USA	Program Manager, NCD Synergies, Partners In Health
67	Ms. Chantelle Boudreaux	USA	Post-Doc, Program in Global NCDs and Social Change at Harvard Medical School
68	Mrs. Maria Pavlidis	Kenya	Interpreter
69	Ms. Evelyn Ndirangu	Kenya	Interpreter
70	Mr. Methode Sentabyo	Rwanda	Interpreter
71	Mr. Jean Fleury Sindayigaya	Rwanda	Interpreter