Annual Report 2020

Journey towards GPW13 Goals through the achievement of UHC in Eritrea

WHO Eritrea Country Office

World Health Organization

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The WHO Eritrea is grateful to the Country Representative, Dr Martins OVBEREDJO for his leadership during the development of this report. The report was developed through the collective efforts of all the staff in the CO. The Editorial Team included Mr Joel Motswagole, Dr Francis Magombo and Mr William Sila Mawia from UNDP Eritrea who provided valuable expertise in editing, graphic design and typesetting.

In loving memory of our dear departed colleague, Dr Yohannes Ghebrat, 10th January 1961 - 5th April 2020, who was the National Professional Officer for Disease Prevention and Control, WHO COUNTRY OFFICE, ASMARA, ERITREA

Dr. Ghebrat joined the WHO on 2nd January 2002 as a National Professional Officer for at the Country office in Asmara, Eritrea. Before then, he worked with USAID as a Public Health Advisor in Asmara, Eritrea.He brought enormous experience in the Country to bear on disease prevention and control including NTDs, Emergency and Non-Communicable Diseases. His dedicated and committed support working tirelessly with colleagues in the Ministry of Health for the Guinea Worm eradication Program, Eritrea led to the country being certified Free of Guinea Worm in 2011.

Following the interruption of transmission and final certification of Eritrea as Guinea worm free, he was a strong advocate for safe water supply for Guinea worm eradication efforts, as well as the implementation of the SAFE strategy for trachoma control in the Eritrea. His efforts on the coordination of NTD mapping and control included championing the smart "4 Ones" Model. This model included Collaboration Mechanism, Planning and Budgeting, Coordination of Delivery of Integrated Package of Interventions and Monitoring & Evaluation Framework that coordinated concerted action to move towards elimination of the NTDs. To aid the NTD program attain its ambitions, he strongly adhered to the WHO strategies that included Mass Drug Administration (MDA) for PCT –NTDs, strengthening case detection and management of IDM-NTDs. The transmission control was brought through effective and comprehensive vector control, improved safe water supply and sanitation by prioritizing endemic communities in collaboration with relevant agencies and Intensive health education and promotion activities to improve including improved environmental and personal hygiene.

He passed away on the 5th April 2020 in Asmara, Eritrea

May his soul rest in peace

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Acronyms & Abbreviations

ACPR	Adequate Clinical and Parasitological Response
ADR	Acquired HIV Drug Resistance
AEFI	Adverse Event Following Immunization
AFP	Acute Flaccid Paralysis
AFRO	Regional Office for Africa
AIDS/STI	Acquired Immune Deficiency Syndrome- Sexually Transmitted Infections
AL	Artemether-Lumefantrine
ALMA	African Leaders Malaria Alliance
ANC	Anti-Natal Care
ART	Antiretroviral Therapy
ASAQ	Arte-Sunate-Amodia-Quine
AU	African Union
AYPFHS	Adolescent and Young People Friendly Health Services
BCP	Business Continuity Plan
CCM	Country Coordination Mechanism
CDCP	Centers for Disease Control and Prevention
CERF	United Nations Central Emergency Response Fund
COVID-19	Corona Virus Disease
DAO	Delivering As One
DDT	Dichloro–Diphenyl Trichloroethane
DFATD	Department of Foreign Affairs Trade and Development
DFC	Direct Financial Cooperation
DFID	Department for International Development
DHIS	District Health Information System
DPG	Development Partners Group
DRS	Drug Resistant Survey
ENASP	Eritrean National Aids Strategic Plan
EOC	Emergency Operations Centre
EPI	Expanded Program on Immunization
ERP	Emergency Response Framework
EVD	External Ventricular Drain
FGM	Female Genital Mutilation
GAVI	Global Alliance for Vaccine and Immunization
GIS	Geographic Information System
H1N1	Hemagglutinin Type 1 and Neuraminidase Type 1
HCT	HIV Counseling and Testing
HIV/AIDS	Human- Immune-Deficiency Virus/ Acquired Immune Deficiency Syndrome
HMIS	Health Management Information System
HPV	Human Papilloma Virus
HR	Human Resource
HRP	Histidine Rich Protein
HSSDP	Health Sector Strategic Development Plan
ICT	Information Communication Technology
IDSR	Integrated Disease Surveillance Response
IHR	International Health Regulations
IMNCI	Integrated Management Neonatal and Childhood Illnesses

IRS	Indoor Residual Spray
IVM	Integrated Vector Management
JEE	Joint External Evaluation
JICA	Japan International Cooperation Agency
KEMRI	Kenya Medical Research Institute
KPI	Key Performance Indicator
LF	Lymphatic Filariasis
LLIN	Long lasting Insecticide Net
MCH	Maternal Child Health
MDA	Mass Drug Administration
MDGs	Millennium Development Goals
MDR	Multiple Drug Resistance
MIS	Malaria Indicator Survey
MLHW	Ministry of Labour and Human Welfare
MOH	Ministry of Health
MPDSR	Maternal, Perinatal Death Surveillance and Response
MTB/Rif	Mycobacterium Tuberculosis/ Rifampicin
NAPHS	National Action Plan for Health Security
NCC	National Certification Committee
NCDs	Non-Communicable Diseases
NHP	National Health Policy
NMR	Neonatal Mortality Rate
NORAD	Norwegian Agency for Development Corporation
NPEC	National Polio Expert Committee
NPHEMC	National Public Health Emergency Management Committee
NPT	National Philantrophic Trust
NRS	Northern Red Sea Region
NTDP	Neglected Tropical Diseases Programme
NTDs	Neglected Tropical Diseases
OPV	Oral Polio Vaccine
PB	Programme Budget
PBM	Pediatric Bacterial Meningitis
PCR	Polymerase Chain Reaction
PCT	Preventive Chemo-Therapy
PDR	Pre-treatment HIV Drug Resistance
PHC	Primary Health Care
PITC	Provider Initiated testing and Counseling
PLDH	Plasmodium Lactate De-Hydrogenase
PMDS	Performance Management Development System
PMTCT	Prevention of Mother to Child Transmission
POE	Point of Entry
QC\QA	Quality Control and Quality Assurance
RDT	Rapid Diagnostic Test
RDTs	Rapid Diagnostic Tests
REC	Reach Every Child
RED	Reach Every District
RO	Regional Office
SAM	Semi Annual Monitoring
SANA	Situational Analysis and Needs Assessment
SARA	Service Availability and Readiness Assessment
SCH	Schistosomiasis
SDG	Sustainable Development Goals

SOS	Sustained Outreach Services
SPCF	Strategic Partnership Cooperation Framework
STH	Soil Transmitted Helminthiasis
TB	Tuberculosis
DOTS	Direct Observation Treatment
TET	Therapeutic Efficacy study
TM	Traditional Medicine
UHC	Universal Health Coverage
UN	United Nations
UNCT	United Nations Country Team
UNEP	United Nation Environment Programme
UNFIP	United Nations Foundation
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
USAID	United Stated Agency for International Development
WCO	WHO Country Office
WHO	World Health Organization
WHO/HQ	WHO/ Head Quarters
WHO-PEN	WHO Package for Essential NCDs
Zoba	Districts/Region

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Foreword

Dr Martins Ovberedjo
WHO Representative, Eritrea

The 2020 Eritrea WHO Country Office (WCO) annual report highlights our contribution to public health development in Eritrea in 2020. The WCO supported the Ministry of Health and partners to ensure the implementation of Sustainable Development Goal number 3 (SDG 3) with emphasis on Universal Health Coverage (UHC) ensuring that no one is left behind. The work of the WCO focused on the implementation of WHO's General Programme of Work 13 (GPW 13) triple billion goals which were elaborated in the WCO workplan in support to the Ministry of Health's (MOH) Health Sector Strategic and Development Plan II (HSSDP II) 2017-2021

During the year 2020, Eritrea, like the whole world was greatly impacted by the unprecedented COVID-19 pandemic which halted and disrupted the implementation of some of the WHO's planned activities. However, the WHO Country Office(WCO) took measures to repurpose its staff to enable it deal with the pandemic response and at the same time it also took action to support and protect staff from the pandemic through the implementation of the business continuity plan. WCO also mobilized additional resources to help Eritrea respond to the pandemic including technical support to strengthen delivery of essential health services across the county.

As part of our commitment to deliver the first of the Triple Billions "One Billion More People Benefitting from Universal Health Coverage" WCO provided technical support to strengthen policy, strategic planning, norms and standards. Highlights of support availed included the conduct of the HSSDP II midterm review, development of the new National Health Policy, and elaboration of the Essential Health Care Package (EHCP). WHO also supported development of the following important technical products: HIV, Tuberculosis and Malaria strategic plans review and development of the Global Fund funding request for HIV, TB and Malaria. The WCO also supported emergency work as part of the Second Billion "One Billion More People Better Protected from Health Emergencies". On the global emergency response to COVID-19, the WCO played a critical role in the country's preparedness and response. The WCO provided technical support in the formulation of the MoH COVID-19 response plan as well as the response plan for the UNCT. Additionally, WHO provided vital and essential supplies for the COVID-19 response.

Plans are at an advanced stage to complete the National Emergency Preparedness Plan. Demand driven technical and financial support was also provided to the MOH towards institutional capacity building and support the provision of quality and continuity of essential services including NCDs services as part of addressing the Third Billion "One Billion More People Enjoying Better Health and well-being"

The health sector in Eritrea enjoys strong political commitment for health including use of domestic resources by Government. While WCO also enjoys a very good working relationship with the MOH and national authorities , development partners and the UNCT, the absence of a formal multisectoral coordination mechanism for SDGs hampers speedy implementation of planned activities. The country also faces challenges adequacy for skilled health personnel and logistical challenges in delivering health services especially to hard to reach areas.

Moving forward the WCO plans to augment programme implementation actions to achieve the GPW 13 objectives through the implementation of the WHO Triple Billions. The key outstanding issues are the finalization of the National Health Policy, the formulation of the Health Sector Strategic and Development Plan 2022-2026 (HSSDP III), finalization of the Essential Health Care Package (EHCP). Lastly, I commend WCO staff members for their diligence and hardwork , the Ministry of Health for their confidence and trust in WHO , the UNCT for their collaboration, the donors and development partners, and WHO AFRO and HQ for their continued support.

The Eritrean Public Health System

The health sector in Eritrea is guided by the National Health Policies and is implemented through five-year strategic plans. At the present, the Health Sector Development Strategic II (HSSDPII 2017- 2021) is under implementation. In addition, program-specific strategic plans such as Reproduction Maternal Neonatal and Child Health (RMNCAH) and Human Resources for health (HRH) have been developed in alignment with the HSSDPII.

The Health Sector Strategic Development Plan-II (HSSDPII) 2017 -2021 has been completed with monitoring and evaluation (M&E) plan. This strategy has adequately addressed the key dimensions of UHC. It emphasizes a whole-of- system approach; factors in health system resilience at all levels and takes into account the SDG goals, health security (epidemics, pandemics and disasters, both man-made and natural induced) and cross-cutting issues such as water and sanitation (WASH), workplace safety and climate change.

The nature and focus of required health services in Eritrea has evolved significantly over the years. While communicable diseases continue to be a major problem, additional challenges including non-communicable diseases (NCDs) which are partly being fuelled by globalization and changing lifestyles and road traffic accidents (RTAs) are a concern, thus changes in policies are needed to address them. The NCD burden is particularly related to non-communicable diseases, including diabetes, hypertension, cancer, chronic respiratory diseases and cardiac diseases, which share common risk factors that include tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol

Meanwhile, the reductions in mortalities associated with many previously high priority diseases like HIV and Malaria is improving overall survival rates. However, Eritrea is faced with emerging complex issues that have a direct effect on health. These include:

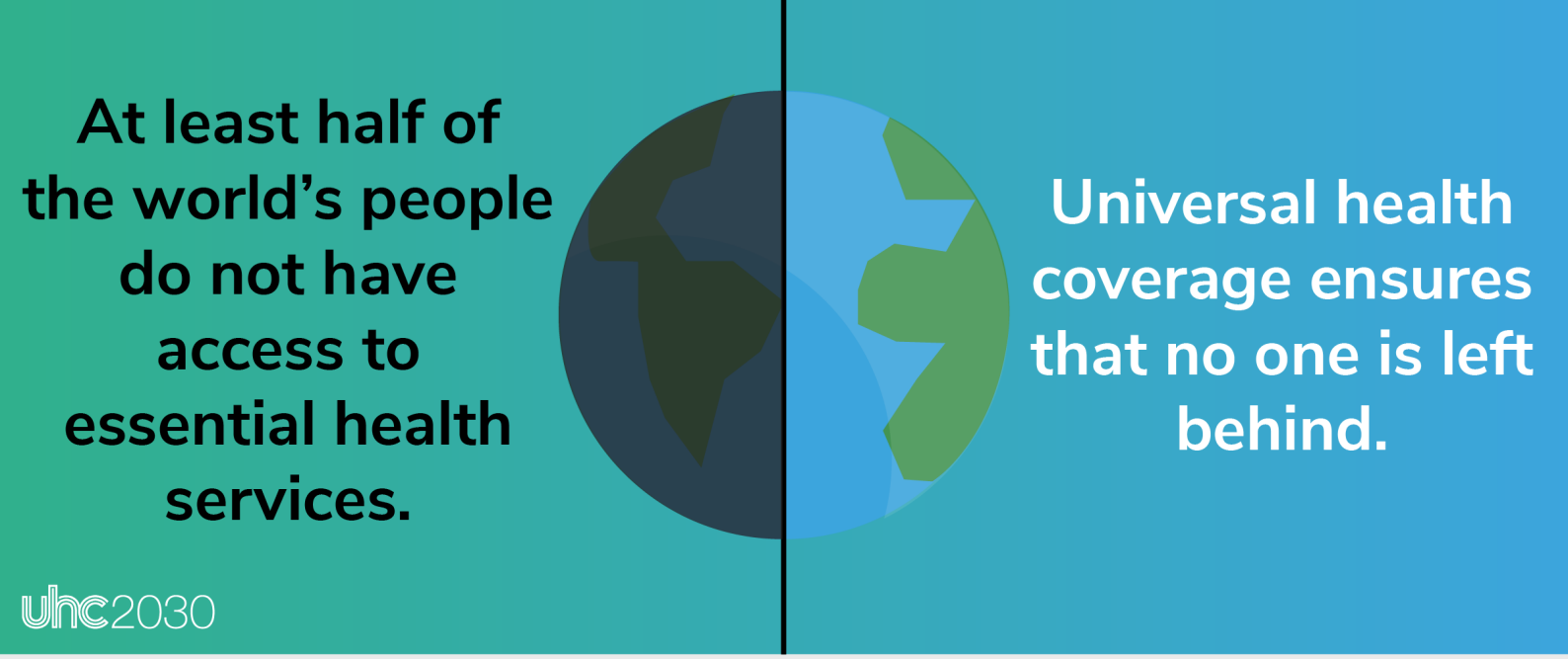
1. **Demographic transitions**: The country is witnessing decreasing mortality and fertility, migration and increasing life expectancy which has resulted in an increase in the proportion of the elderly population

2. **Epidemiologic transitions**: Eritrea is facing a triple disease burden, with a significant increase in non-communicable diseases and injuries coupled with the existing communicable diseases burden

3. **Socioeconomic transitions**: following the signing of the Joint Declaration of Peace and Friendship between the State of Eritrea and the Federal Democratic Republic of Ethiopia in 2018, which has led to the resumption of diplomatic, political and economic relations, Eritrea is now faced by the reality of cross border health care systems and issues, globalization and unplanned urbanization, which have the potential to impact on the health care systems.

4. **Health security threats**: Eritrea needs to develop and strengthen its core capacity for emergency preparedness and response and for implementing the International Health Regulation (IHR).

5. **Environmental threats:** Globally, climate change has resulted in changing disease epidemiology, with infectious diseases recurring in areas where they had previously been eliminated . In addition, climate change, which has resulted in changing patterns of rainfall as well as man-made and natural induced shocks and disasters have affected food security leading to an increasing burden of malnutrition.



SERVICE DELIVERY + FINANCING + GOVERNANCE → UHC

Universal Health Coverage: Improved access to Quality Essential Health Services

The current estimate of UHC service coverage for Eritrea is 54.9 (WHO) and the country has been striving with more emphasis and focus, to strengthen health systems for UHC.

1. Health Governance

As one of the focus countries of the WHO Regional office for Africa (AFRO) Flagship program on UHC, an initial scoping mission was conducted in Eritrea in 2017 upon which a UHC roadmap was developed. Detailed recommendations were made on governance including the need for the development of a National Health Policy, national health laws and the establishment of sustainable development goals (SDG) steering mechanisms. The country has recently finalised the NHP (2021) and planned to undertake the development of the National Health Law after that, to ensure all subject matters that need legal tools in the NHP are reflected in the National Health Law. The UHC roadmap is regularly monitored and evaluated at the central level, with the Honourable Minister for Health chairing the meeting.

The HSSDPII is translated into operational plans implemented at the Zoba levels, in collaboration with all key stakeholders and programs. In the first quarter of 2020, a midterm review of the HSDDPII was conducted and the report finalized. The annual review of the health sector is conducted at Zoba level, with the Honourable Minister, Director Generals (DGs), partners attending the meetings.

Major Achievements

1. **National Health Policy:** The national health policy 2010 have served the country over the last decade. More recently, with the support of WHO, the Ministry of Health (MoH) has developed a new National Health Policy (2021), in line with the SDGs, UHC and taking into account the current COVID-19 pandemic.

2. **District Health Systems Strengthening:** At the regional level, there are 6 Zonal (Zoba level) MoH branch offices. The sub-zoba or District Medical Offices are in being implemented in a phased manner, with District Health Management Team (DHMT) established in 23 sub-zobas. In 2020, an additional 35 districts have been targeted, with procurement of computers, printers, and computer desks in pipeline for each district.

3. **Midterm Review Report:** The midterm review (MTR) of the Health sector Strategic Development Plan II (2017-2021) was conducted and the report finalised in the first quarter of 2020. The MTR noted that there is good progress in addressing communicable diseases (HIV, Tuberculosis and Malaria), and great EPI coverage across the nation. However, accelerated high impact interventions in RMNCAH are critical as well as in Non-Communicable Diseases.

HSSDPII Midterm Review Workshop. Credit, WHO Eritrea

4. **Fifth Regional Forum on Health Systems Strengthening (HSS) For UHC and other Health SDG Targets**: The Regional Forum is an annual assembly of the top-level technical decision makers from the 47 Member States comprising the WHO African Region, who meet to deliberate on emerging issues relating to health systems development in the context of Universal Health Coverage and other health related SDG targets. The WHO supported a team comprised of Director Generals and Directors from the MoH to participate in the forum. . Furthermore, the WHO Country office (WCO) technically supported Eritrea's presentation construction, through active leadership, data collection, coordination, and composing the report.

Key Opportunities & Challenges

1. The Government of the State of Eritrea has clearly prioritized with the health sector receiving about 29percent of the national budget according to the Ministry of Finance . This prioritization supports other governance mechanisms which are centred on implementing existing strategies and plans.

2. The absence of a formal/statutory multisectoral coordination body for SDGs has been a gap. The existing collaboration between health and other sectors needs to be better grounded in formal coordinating structures even at a high political level. An active and functional multisectoral SDG committee that oversees joint planning and implementation of SDG actions will further strengthen the country's efforts.

3. The health sector itself will benefit from better coordination of partners and programs in ways that ensures that funding is aligned to the national plan and creates efficiencies and effectiveness.

2. Human Resources for Health

The State of Eritrea has made progress in addressing human resources needs for health despite critical resource constraints. The MoH recognizes that the success of all planned interventions is contingent on availability of the right numbers, effective deployment and utilization of the healthcare workforce.

The MoH employs majority of the HRH and is responsible for managing and developing human resources for health sector. Most HRH development responsibilities are shared with the National Commission of Higher Education (NCHE), where the Medical School and Asmara College of Health Sciences are domiciled. Long-term development is guided by policies that MoH develops to guide human resources' management and development initiatives. The MoH's Human Resources Policy and Strategies (June 2003), highlights broad policy statements covering four key practice areas namely: planning, training, continuing education, and staff management, all anchored on principles of relevance, competence, equity, quality of care, gender sensitivity, efficiency and community involvement. At the present, the HRH department in collaboration with stakeholders is implementing the 2017-2021 HRH strategic plan.

As health service delivery is labour intensive, the Government of the State of Eritrea has been making concerted efforts to improve the stock of healthcare workers for the attainment of health targets. Operational reports show that the healthcare workforce stock has been increasing by 3percent - 4percent annually, reaching a total of 10,208 by the end of 2018, up from 4,464 in 1999.

Major Achievements

1. **Registration and Licensing Policy**: The MoH was supported to develop a licensing and certification policy that aims to improve the quality and safety of health services. Furthermore, regulation of health workers will be systematically strengthened, with regular renewal of licenses as well as screening and approval of foreign health workers, as outlined in the policy.

2. **CPD policy and Guideline**: The continuous professional development (CPD) policy and guideline are complementary to the registration policy. As such, WHO has supported the country to develop these tools in consultation with key stakeholders. Introduction of CPD points will actively promote health workforce growth and capacity, as it is a prerequisite for renewing one's license.

3. **Assessment of National Health Research System of Eritrea**: The WHO supported MoH to assess the country's research system. The assessment investigated the various elements of research, including the various stakeholders' role and responsibilities, enabling and constraining factors, and actions needed at the country level.

4. **Health Workforce Assessment Report**: The assessment was conducted based on the health workforce standardized regional questionnaire, looking into health workforce in the country and was disaggregated by cadres over a period of three years. Additionally, the assessment explored the HRH policies, strategies and plans, governance capacity and regulation and supply and demand. Although the assessment was conducted at the end of 2019, the report was finalized, endorsed and shared in 2020, after the buy in, support and endorsement of all key stakeholders.

Key Opportunities and Gaps

1. The HRH planning and coordination could greatly benefit from a comprehensive HR needs assessment based on the workload (preferably using workload indicators of staffing needs) and institutionalisation of National Health Workforce Account

2. The HRH production still faces challenges in meeting demands of the population. Thus, there is need to explore creation of partnerships within Asmara College of Health Science (ACHS), neighbouring and partnering countries, to enhance specialist training in line with the increasing trend of NCDs observed in the country

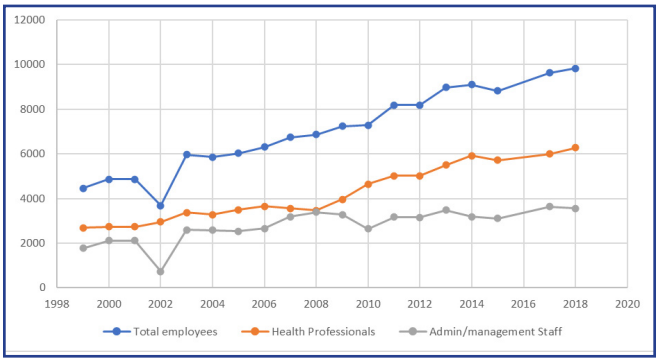


Figure 1: Human Resource for Health (1999 - 2018)

3. With regards to HRH Management, performance appraisal of health workers needs strengthening. Instituting a comprehensive performance management 'building-blocks' systems such as supportive supervision and appraisal mechanisms aimed at incentivising high performing staff is key.

3. Service delivery

The expansion and quality of health service delivery has been facilitated by the wide scope of health cadres being produced in the country. At the sub-zoba level, nurses have been trained to improve the quality of care, enhance emergency care and infection prevention and control (IPC). To standardize service delivery across facilities, the country developed medical and surgical emergency guidelines, training manuals (such as for IPC and Field training for EPI) and a laboratory services' supervision mechanism.

Following the introduction of the basic health care package in the first HSSDP, there has been a marked increase in access and coverage of health services. For example, skilled delivery was estimated at 40 percent (Health Management Information Systems report, 2019) compared to 32percent in 2010 (EPHS 2010) while Immunization coverage rate for Penta-3 and MCV1 stand at 98% in 2019 (HSSDPII MTR Report, 2020). The MoH is in the process of developing an Essential Healthcare Package (EHCP), that covers services from preventive to palliative care at the various levels of service delivery.

It is clear that health services are a priority of the government. The current sector strategic plan provides for additional services focusing on NCDs risk factors and services for adolescents and elderly persons and expansion of the continuum of care to include sub-specialties, and to scale-up access to services of primary referral services (community hospital) levels. A key finding from the UHC scoping mission field visit is that all hospitals and health centres visited offered NCD services. It was also noted that there was extensive ongoing community awareness and sensitization on NCDs.

Major Achievements

1. **Essential Healthcare Package (EHCP):** In December 2019, 52 senior officials were engaged in an internal appraisal of the EHCP in Mendefera. In 2020, as part of the core team, the document was enriched with comments compiled from the internal appraisal. In addition, a list of conditions selected for inclusion were revised according to the updated information and data presented with each age cohort interventions appraised thoroughly. Furthermore, the palliative column was rebuilt with an agreed new format and categorization of the interventions namely physical, psychological, spiritual and financial. At the time of writing this report, the draft has been shared to staff in specialty hospitals for further consultation before finalizing the document.

2. **National Infection Prevention Control (IPC) guideline:** The national guideline on IPC was developed and updated to incorporate current information on COVID-19 using the interim WHO guidelines and other tools for reference. Furthermore, training and dissemination of information has been conducted throughout the country on the updated guidelines.

3. **Provision of technical training on blood regulation:** The training (conducted 7-8 October 2020) aimed to improve country knowledge and capacity on how to strengthen blood bank systems through effective blood regulation. A total of 5 directors and technical officers from the blood bank and regulatory agency undertook the training, gaining valuable experience from other countries and key WHO recommendations that Eritrea opted to explore.

Key Opportunities and Gaps

1. There is still substantial room to improve on the scope and quality of services. Although training for hospital managers was conducted in the country (2017), further training for facility and services management will assist to ensure adequate management capacity at all levels

2. A health infrastructure development plan is needed along with development of new infrastructure norms and standards to clarify the gaps that need to be filled to attain UHC

4. Pharmaceuticals and Health Products

The main regulatory legal provision in Eritrea is the Proclamation No. 36/1993. Since 2012, the Pharmaceutical Services became the National Medicines and Food Administration (NMFA) which currently constitutes the regulatory body under the Ministry of Health. The WHO benchmarking assessment was conducted for NMFA in 2017.

The overall growth of the regulatory system has been evaluated and rated with the highest score being observed in vigilance, which met the minimum score of 3, whereas the other arms were rated quite low (Maturity level 1), thus indicating the need for improvement. However, since 2017, the country has introduced sound regulation of medicines and medical devices, with guidelines produced for registration. Further, capacity building was conducted on evaluation of dossiers, understanding regulation framework of medical devices, production of procurement and donation guidelines as well as strengthening human and institutional capacity of the quality control laboratory. Additionally, the essential national list of medicines was updated and reviewed.

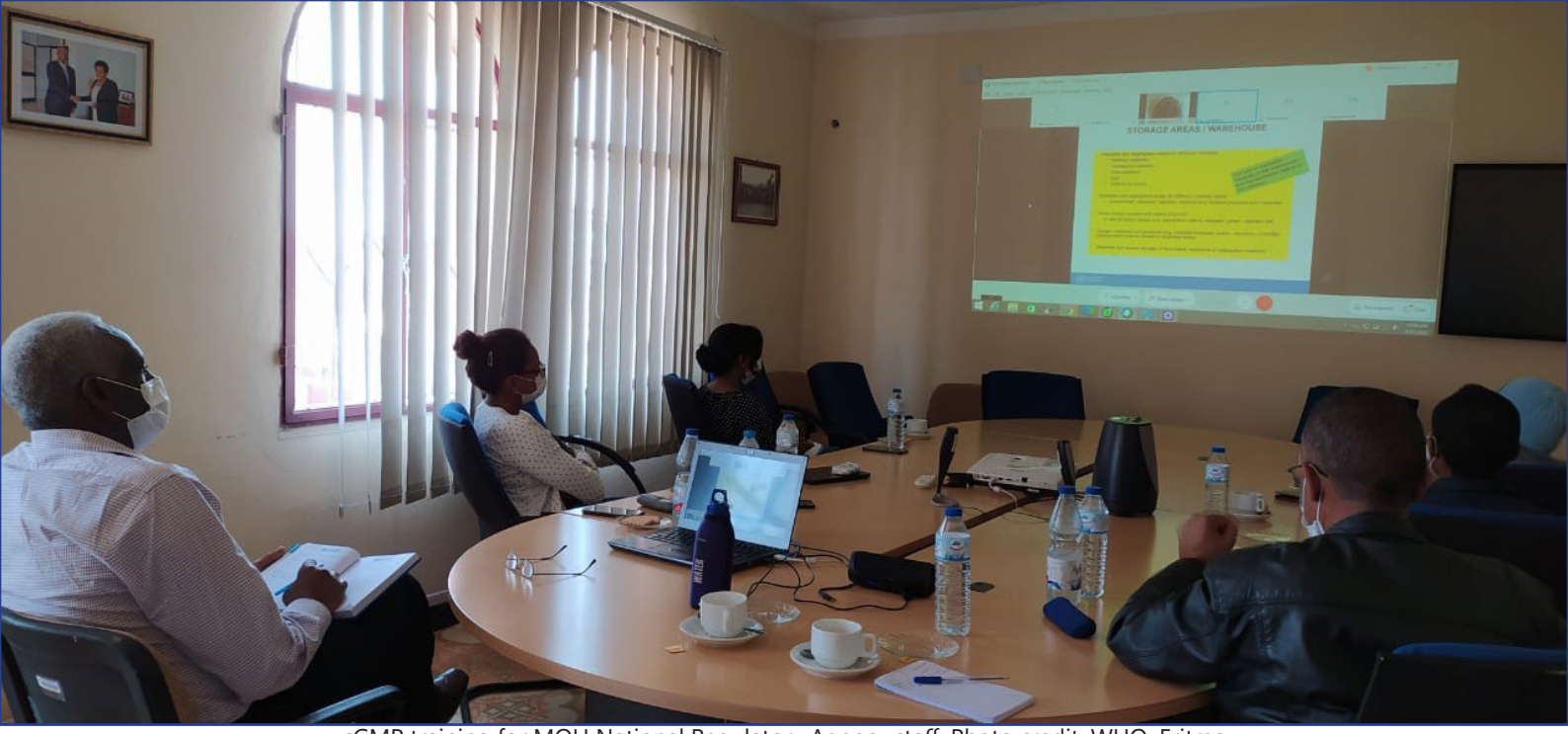
Marketing Authorization

The current practice of adoption and adaptation of the regional or WHO guidance and the Common technical document (CTD) is commendable as well as adoption of. More recently, capacity building has been conducted on CTD and registration guideline for medical devices developed.

PharmacoVigilance

The strengths observed are comprehensive legal provisions for a national pharmacovigilance system that includes Adverse Reactions (ADRs), Adverse Events Following Immunisation (AEFI) and Substandard and Falsified (SF), defined structure with clear responsibilities to conduct vigilance activities, established collaborations between all stakeholders in pharmacovigilance, procedures established and implemented to perform pharmacovigilance activities and established good collaboration with international partners in pharmacovigilance

The Traditional Medicine (TM) Unit falls under the NMFA. Its policy was developed in 2017. In 2019, a TM survey was conducted in Gash Barka and Debub, and a report produced and disseminated to all stakeholders. Furthermore, WHO supported the team to participate in the first WHO Interregional Online Training Workshop on ensuring the quality of traditional, complementary and integrative medicine (TCI) products, in October 2020.



cGMP training for MOH National Regulatory Agency staff. Photo credit, WHO, Eritrea

Major Achievements

1. **Current Good Manufacturing Practice (cGMP) marathon training:** With the support of WHO, the cGMP training was provided over 12 sessions (from 7 Sep to 30 Nov 2021) for key personnel of the national regulatory agency.

2. **Procurement of IT tools for regulatory agency expansion:** Based on the recommendations of the WHO benchmarking assessment conduced in 2017, the National Medicines and Food Administration and the MoH is planning to introduce automated registration of medicines and medical products, as well as establish sub-divisions at Zoba level to ensure regular monitoring and vigilance is present. In line to this, WHO supported procurement of 30 computers, 6 printers, and other information technology accessories.

3. **Updating working documents:** WHO supported the MoH to update the standard operating procedures (SOPs) and tools of working documents, namely:

- Recall protocol for medical products,
- Pharmacovigilance data management process,
- Pharmacovigilance (PV) signal management process,
- Risk communication plan

4. **Dissemination of medical devices' registration guideline**: WHO supported the development and printing of the medical devices' registration guideline.

5. **Quality control laboratory:** a training needs' assessment was supported. The QCL chemical store has been renovated. In addition, there has been support for chemical referencing and procurement of reagents as well as the deployment of personnel.

Key Opportunities and Gaps

1. The quality control laboratory needs drastic investments and inputs, as checking for quality of samples in country is difficult for all type of medicines. The current efforts and investment towards accreditation of quality control laboratory need to be supported and augmented.

2. Although there are policies in place for the NMFA, there is need to revise proclamation 36 to fully state the authority given to the nation's regulatory agency

3. The magnitude of TM practices in the country needs to be fully investigated and protocols/guiding tools developed on how the MoH is planning to close the gap

5. Data and Information

To meet its HSSDP II goals on data and information use, Eritrea prioritized the establishment of electronic data systems. By 2019, Eritrea had installed and rolled out the District Health Information Software (DHIS 2) in all Zobaspercent. In Eritrea, as in many countries in the African Region, routine data collection is still paper based and is collected by health care workers in health facilities and then sent to the Zobas for entry into DHIS 2. Eritrea uses the offline version of DHIS 2 which is working

well with high reporting rates and fairly consistent data sets. The routine health information system remains the only major source of health data in Eritrea. With routine data, Eritrea has been able to assess performance of several facility as well as population-based indicators and produces annual statistics for many such indicators.

The reporting rate in Eritrea is way above the 75percent threshold set by WHO for good reporting and is one of the highest in the African Region. The quality of routine health facility data in Eritrea is generally good, with very high reporting rates and consistent datasets. As such, almost all facilities in Eritrea (98percent) submit their routine reports every month, and almost all (98percent) submit the reports timely.percent.

Population-based surveys that provide comprehensive and representative data on health and population are rare in Eritrea. over the last five years, twelve population-based surveys have been done, with only four of them covering major health dimension and being aligned to international standards. This suggests that Eritrea is unable to obtain adequate and timely data and information on coverage of interventions, prevalence of diseases and mortality.

According to the data quality assessment conducted in 2019, the overall systems' performance at the National Level was at 57percent.. In addition, according to the recently concluded SCORE 2020 (survey, count, optimize, review, enable) assessment, Eritrea has data available for only half (51percent) of the health-related SDG indicators. The SCORE for health data technical package was conducted by WHO to assist Member States in strengthening country health information systems and capacity to monitor and track progress towards the health-related SDGs, including UHC, and other national and sub-national health priorities and targets.

Major Achievements

1. **Health observatory:** the NHO establishment is ongoing following the official nomination of the NHO head which was endorsed by the Minister while the revised roadmap was endorsed by the senior management team. The terms of reference for the steering committee have been drafted, and stakeholders mapped. Implementation of the roadmap has started with office space designated, responsible persons assigned to tasks in the roadmap with timeline, and draft annual plan for operationalization of the office produced. WCO supported the team to undertake orientation on the integrated African Health Observatory (iAHO) and the revised roadmap reflected the plan for joining iAHO instead of establishing a stand-alone national observatory

2. **ICD-11 capacity building**: 15 persons from the MoH and National Statistics office were supported by WHO to participate in the training on ICD-11, verbal autopsy and cause of death certification with active participation and hands-on exercise on coding the cause of death using ICD-11.

Key Opportunities and Gaps

1. There is need to introduce and rollout the civil registration and vital statistics system for collecting data on births and deaths. For community-level reporting of deaths, systems such as verbal autopsy should be given consideration.

2. Population-based surveys should be carried out more frequently to increase the reliability of planning data for decision making

3. Accelerate implementation of the Eritrea national health observatory to facilitate the centralization and dissemination of health data and information and products

Below: ICD-11 training. Credit: WHO Eritrea

Communicable Diseases

HIV/AIDS

The multi-sectoral response of HIV has been successful in reducing HIV related infections and deaths. Between 2005 and 2019, HIV prevalence was nearly halved, dropping from 1.1 percent to 0.6 percent, with incidence declining from 0.43 percent per 1000 people to 0.11 percent. According to estimates by Spectrum, HIV related mortality declined from 1,400 deaths in 2005 to 310 in 2019 or 9 out of every 100,000 people (National Eritrean HIV/AIDS/STI Strategic plan 2021-2026). Among key and priority populations, the pattern on VCT attendance among expectant mothers has registered a decline in positivity from 2.5 percent to 0.21 percent, while among other VCT clients, HIV prevalence declined from 4.34 percent to 0.37 percent between 2003 to 2019.

HIV Testing and Counseling Center in Keren Hospital

This momentum has been maintained between 2017 and 2020. According to the Spectrum 2020 estimation, the status of the UNAIDS 90:90:90 Fast-Track targets progress in Eritrea was at 86 percent73 and percent85 percent respectively by the end of December 2019. The second 90 improved from 65.5 percent in 2018 to 73 percent in 2019. A study among female sex workers (FSWs) in 2019 showed that the 90:90:90 targets reached 91,100 and95 percent respectively. This indicates that the program is working towards the achievement of the Fast Track targets – commonly known as the 95-95-95 targets and moving on towards ending AIDS by 2030 as stipulated in the Eritrea's National Strategic plan 2021-2026.

Since the effort to achieve the UNAIDS 90-90-90 targets is dependent on HIV counselling and testing (HCT), HIV testing services have been expanded from 239 in 2012 to 267 in 2019 as shown in figure 1 below with almost 80 percent of the facilities providing testing services across the country.

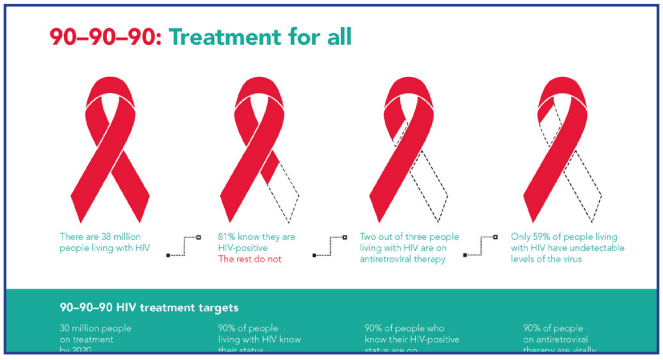


Fig. 2. UNAIDS 90.90.90 targets

Study Tour of MOH & WHO HIV focal persons in South Africa for the introduction of HIV Self Testing and PrEP in Eritrea.

According the 2019 Lot Quality Assurance Survey (LQAS) survey result, the proportion of men aged 15-54 years who have ever been tested for HIV increased from 55 percent in 2013 to 77 percent in 2019, while in women aged 15-49 years, the proportion increased from 62 percent to 84 percent. According the Integrated Biological & Behavioral Assessment (IBBS) in 2019, among female sex workers, HIV testing is almost universal with 97.5 percent having accessed HIV testing.

Scaling up the prevention of mother-to-child transmission (PMTCT) service was another area that received great focus in the national strategic response. The service is fully integrated. Sexual and reproductive health data is collected and reported through the routine Health Management Information System (HMIS). The LQAS 2019 result showed that 98 percent of mothers of infants aged between 0 -11 months attended ANC in the 252 ANC sites while 96 percent took and received HIV test results during their last pregnancy. The HIV positivity rate in those tested for PMTCT services was 0.21 percent in 2019.

Since the introduction of free provision of ART, the number of sites offering ART and refill has increased from 21 in 2013 to 53 in 2020 as shown in figure 4 leading to improved access and reduced loss to follow up and late starts. In 2016, the WHO "Treat All" guidelines

Above: A mother received PMTCT services at Keren Hospital

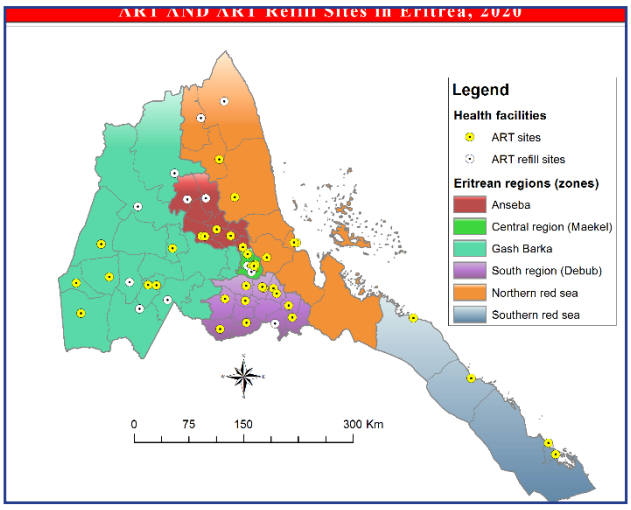


Fig. 3: Distribution of ART and Refill Sites, 2020

Above: ARV drugs in one of the pharmacies

was adopted while routine viral load monitoring was introduced in 2017. The 2016 guideline contains key recommendations to "treat all" people living with HIV, including children, adolescents, adults, pregnant and breastfeeding women, and people with coinfections. They also include new service delivery recommendations on how to expand coverage of HIV treatment to reach all people living with HIV.

The recommendations aim to improve the quality of HIV treatment and to bring the world closer to the universal health coverage ideals of integrated services, community-centred and community-led health care approaches, and shared responsibility for effective programme delivery. The use of GeneXpert platforms, viral load testing and early infant diagnosis (EID) has been decentralized and is now available in Zoba hospital laboratories as shown in figure 5 below. The National Health Laboratory (NHL) supports VL testing and EID in the referral hospitals and monitors quality assurance

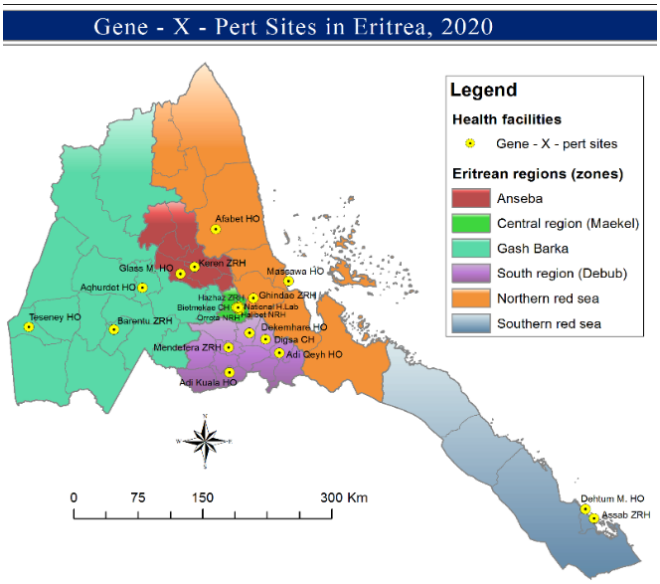


Fig. 4 Gene/Xpert Platforms in Eritrea, 2020

Major Achievements

In 2020, the WCO support focused on:

1. **HIV drug resistance monitoring**: With WHO technical support, the national HIV DR monitoring and prevention strategy was set in 2014. Further, in 2018 , HIV DR study was conducted, and the report finalized with support of WHO HQ and is in process for publication. The study result showed that the overall prevalence of pre-treatment HIVDR (PDR) resistance to non-nucleoside reverse transcriptase inhibitors (NNRTI) was 7.1 percent, with no significant difference observed by gender. Further, it was noted that resistance to NRTI or PI was not observed among ART initiators while the prevalence of PDR to NNRTI was significantly higher among ART initiators with prior exposure to ARV (42.4 percent) compared to the ART initiators without prior ARV exposure (3.9 percent). The prevalence of PDR to NNRTI was significantly higher among male ART initiators without prior ARV exposure (9.3 percent) compared to female ART initiators without prior ARV exposure (0.9 percent).

The MoH and WHO HIV Team during the collection of Data for the HIV DR survey in Tessene Hospital, Gash Barka

2. **HIV End Term Program Review**: Resources mobilized from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) was transferred to WHO through an MoU. The WHO provided technical support from all levels of the organization. Through this support, the HIV end term review of the 2017-2021 strategic plan was conducted and a report produced. Recommendations were issued while evidence was provided for the new 2021-2026 strategic plan development and Global fund funding proposal development.

During the End term Review visits to the health facilities, Pharmacy and Laboratory by the review team

3. **HIV/STIs Strategic Plan**: The WHO staff provided technical support at all levels to conduct the end term program review of the existing strategic plan 2017-2021. This is to provide evidence for the development of the 2021-2026 HIV strategic plan for implementation of the integrated high impact interventions including elimination of HIV and syphilis.

4. **Global Fund funding requests for HIV**: the WHO CO supported and facilitated the development and submission of the 2021-2023 Global Fund funding requests for HIV, TB and Malaria which was successful, and fund was received for implementation.

5. **Commemoration of the World AIDS Day (WAD) 2020**: the WHO with other UN agencies supported the commemoration of World AIDS Day (WAD) 2020 with the theme "Global solidarity – shared responsibility". As part of the commemorations, the WHO supported the production of branded face masks with HIV messaging to address the evolving COVID-19 pandemic.

6. **2020 WHO Global HIV Report**: the WHO supported the MoH in collection, compilation, validation and submission of HIV data on the WHO online website of HIV to monitor the health trends which also informed the WHO HIV global report of 2020.

The MoH HIV, TB & Malaria Team on TC with WH/AFRO & HQ team during the finalization of the HIV, TB & Malaria strategic plans and GF Funding requests in WHO Country Office in Eritrea

Caps for commemoration of World AIDS Day

Below: Commemoration of World AIDS Day

Actual demonstration of distribution of HIV ST kits at a bus station in South Africa during the study tour of MoH & WHO HIV focal persons in South Africa

Challenges

Although updated strategic plan and guidelines are in place there is a need of regular monitoring through supportive supervisions

Way Forward

There is need to provide technical and financial support to the MoH to:

1. Reach the 90.90.90 UNAIDS targets by updating the HIV testing strategy in line with the updated WHO 2019 testing Strategy.

2. Provide technical and financial support to the MoH to initiate HIV self-testing (HIVST) and scale up HIV pre-exposure prophylaxis (PrEP) implementation

3. Scale up, as a matter of public health priority, the elimination of mother to child HIV and syphilis (eMTCT) transmission.

4. Provide technical and financial support to conduct the regular evaluation of laboratory in Eritrea using WHO standard checklist and questionnaire to collect information and conduct HIV DR survey

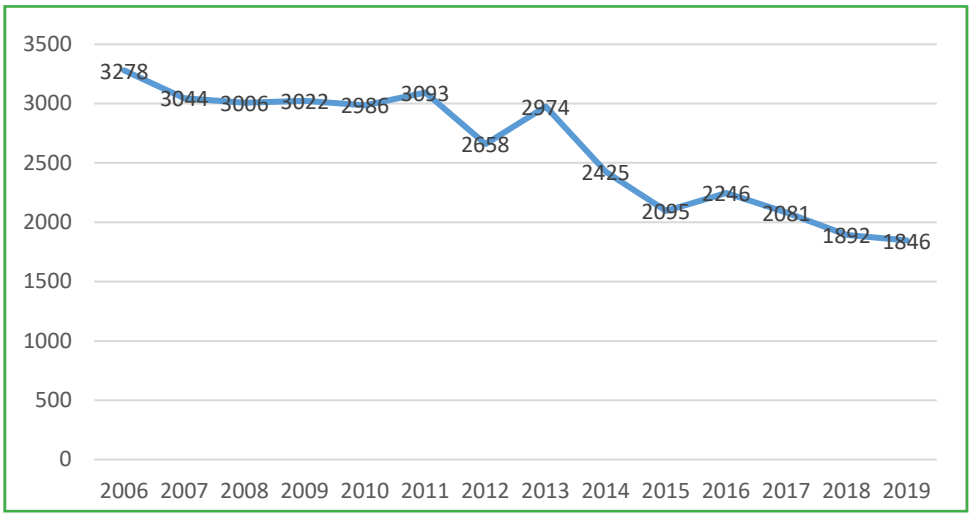
Tuberculosis

Eritrea has made significant progress in reducing TB incidences and TB related deaths, with the estimated TB incidence having reduced from 108/100,000 in 2016 to 89/100,000 in 2018 while death reduced from 19 to 16/100,000 in the same period The proportion of bacteriologically confirmed cases among new pulmonary patients has increased from 54.8 percent in 2016 to 68 percent in 2019, which is attributable to the increased access to GeneXpert. The proportion of childhood TB cases diagnosed has consistently remained high at an average of 15 percent of all notified patients.

However, TB notifications, as observed in all the six regions of the country, has been declining in the past 13 years at an average rate of 6.1 percent per year. In 2018, the Northern Red Sea region had the highest TB notification rate at 58.3/100,000 people while Debub region had the lowest rate at 27.8/100,000 people. Similarly, during 2014 -2018, the fastest (-21.4percent) decline in TB notification was observed in the Southern Red Sea region whereas the lowest decline (- 6percent) in notification was noted in the Northern Red Sea region. Prisoners, identified as key populations, are screened for TB routinely and reports submitted regularly to the National TB Control Program (NTP) .

The NTP provides all the TB diagnostics including reagents and anti TB medicine for the prisoners. In 2019, 10.34 percent of all presumptive cases screened for TB and 3 percent of all TB patients treated in the country were from the prisons. Another high-risk group regularly screened for TB is for people suffering from diabetes Similarly, TB patients are tested for diabetes.

Fig 5: TB notifications, 2006-2019



A health worker in Keren Hospital demonstrating GeneXpert machine functioning during the End Term Review of National TB Strategic Plan 2017-2021

The expansion of the lab services has been instrumental in TB diagnosis in Eritrea. The network has been markedly improved with the provision of 79 microscopy [24 LED] sites and 29 GeneXpert (GXP) (110 modules) by the end of 2019, up from 9 in 2015 and 14 functional at the end of 2017. Currently, 90 modules are functional. All the regions (Zobas) have a GeneXpert machine though the distribution and access are not even in addition to inadequate availability of a reliable transport system for sample referral to the GeneXpert sites. In 2019, 70 percent of presumptive TB patients had GeneXpert as the initial diagnostic test.

Despite the availability of the machines, they are not connected to the GXAlert due to poor internet connectivity in the country. The National TB Reference Laboratory is now doing first and second-line Drug Susceptibility Testing (DST) using Line Probe Assay (LPA) (molecular) and mycobacteria growth indicator tube test (MGIT) (phenotypic). The 8-laboratory staff were trained and are performing the tests. The current, sample transport system relies on either the health workers, ambulances, motorcycle or public transport. The Uganda supranational reference lab (SRL) has facilitated the development of a Transportation of Sputum Referral System manual and quality sample transport mechanism to improve the current sample transportation system in Eritrea.

In Eritrea, all diagnosed TB cases are enrolled to TB treatment. The majority, (72 percent) of treatments are supervised by health workers while the remaining 28 percent is supervised by DOTs (Directly, Observed, Treatment, short course) promoters, which has contributed to the high treatment success. The proportion of under 5-year-old contacts eligible for iisoniazid preventive therapy (IPT) enrolled on treatment has progressively increased from 38.8 percent in 2015 to 44 percent in 2019.

Eritrea has made significant progress in the implementation of TB/HIV collaborative activities over the years with high uptake of TB/HIV services. The proportion of TB patients with documented HIV status increased from 59 percent in 2012 to 100 percent in 2015 and has remained at this high level to date as shown in figure 8 below. There was also an improvement in antiretroviral therapy (ART) and cotrimoxazole prophylactic treatment (CPT) initiation from 92.9 percent and 87 percent in 2015 to 97 percent and 94 percent in 2019 respectively.

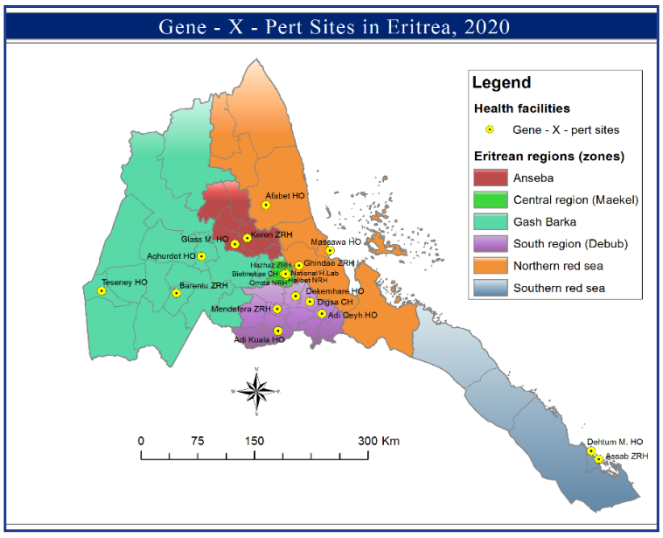


Fig 6: GeneXpert Sites in Eritrea, 2020

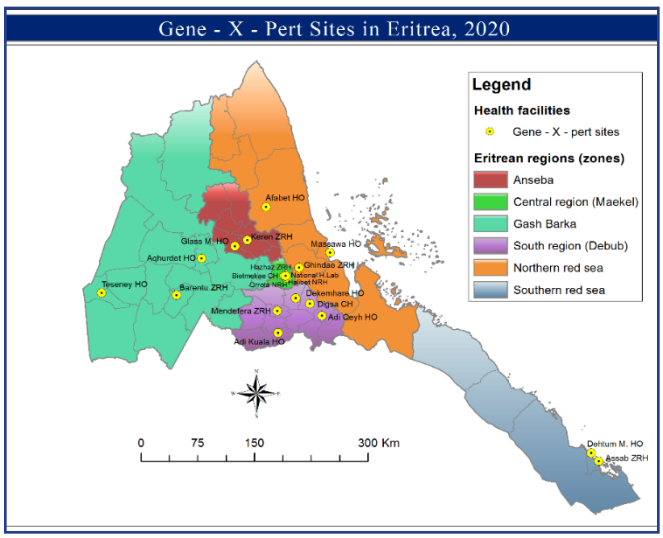
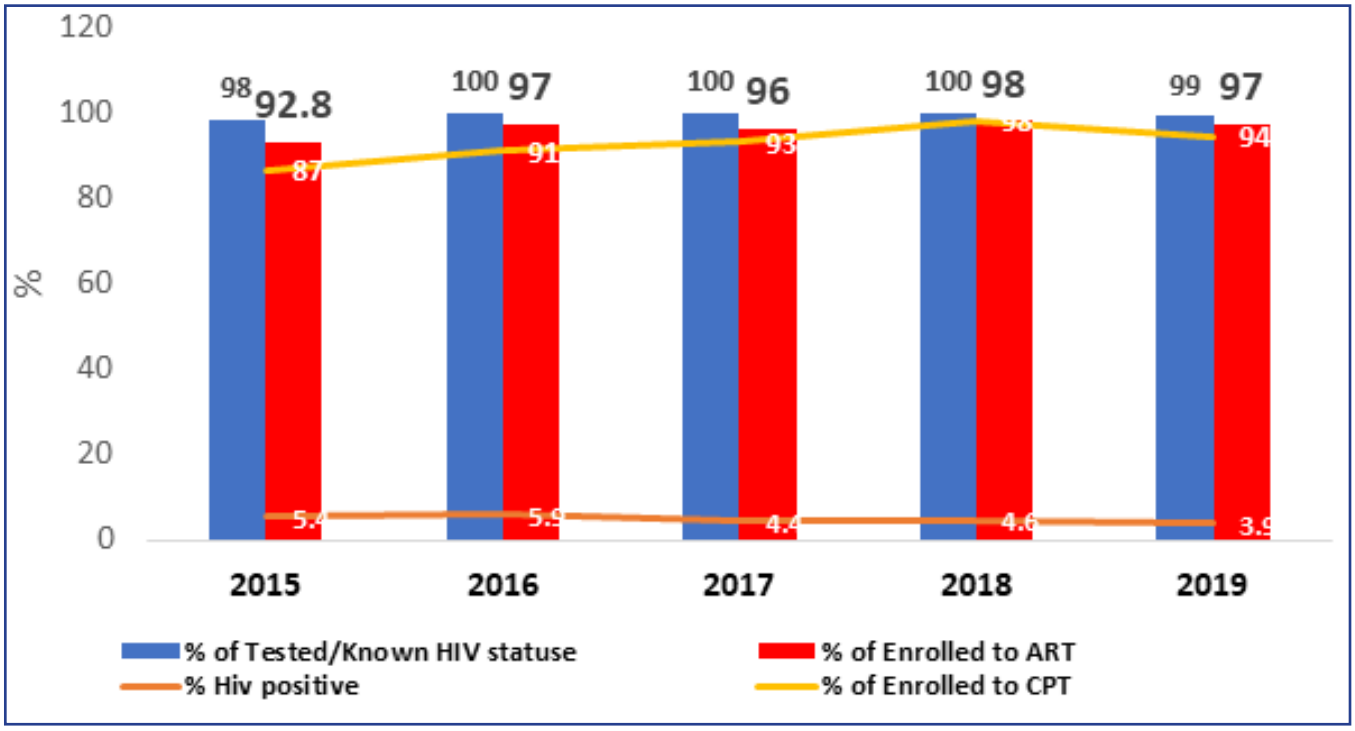


Fig 7: TB Diagnostic Sites in Eritrea, 2020

Treatment success for drug susceptible TB has progressively improved from 84 percent for the 2011 cohort to 93 percent for the 2018 cohort as shown in figure 9 below. Among the regions, only Gash Barka region has a treatment success below the 90 percent target i.e. 89 percent in cohort 2018. Furthermore, the adverse treatment outcomes for TB patients reduced, with death rates dropping from 5.8 percent in 2013 to 3.2 percent in 2018 while lost to follow-up dropped from 2.6 percent to 1 percent in the same period. Both treatment failure and cases not evaluated decreased from 2 percent in 2014 to 1 percent over the same period Appropriate treatment provision with no experience of drug stock out and continuous monitoring of patients with the involvement of community DOTs promoters has contribute to the successful TB treatment in the country.

Below. Fig 8: TB/HIV Collaborative Activities, 2015-2019



A drug resistance survey was conducted in 2017/2018 and showed a prevalence of Rifampicin resistance (RR) for multidrug-resistant (MDR)-TB (RR/MDR-TB) of 2.0 percent (1.0 - 3.6) among new and 7.5 percent (2.1 - 18.2) among previously treated TB patients, which is lower than previous WHO estimates of 2.6 percent and 18 percent respectively in 2016. No Pre/ extensively drug-resistant tuberculosis (XDR)-TB was found The DST coverage in all bacteriologically confirmed cases increased from 7 percent in 2014 to 39 percent in 2018 and 70 percent in 2019. The number of RR/MDR-TB cases diagnosed has remained low, standing at 17 in 2019 compared to the estimated 66 when the DST coverage was highest. Treatment success rate for the 2017 cohort reached 91.6 percent as compared to 67 percent in 2016 The establishment of the true burden of TB has remained a challenge as neither a TB prevalence survey nor a population census has been done, hence these are estimates which keep changing, thus making measuring of coverage and achievements a challenge. In 2018, the incidence of RR/MDR-TB was estimated to be 66 cases but only 16 cases were diagnosed and treated the same year. The number diagnosed in 2019 was 17 indicating a 76 percent treatment coverage gap. This is despite 70 percent of all bacteriologically confirmed patients having been diagnosed using the GeneXpert. In the 2021-2023 grant, the aim is to have 100 percent of bacteriologically confirmed tested by GeneXpert in addition to measures to increase TB case finding. The HIV prevalence among the general population has remained below 1 percent over the period while the prevalence of HIV among TB patients was 3.9 percent among the

regions with Maekel region recoding the highest prevalence of HIV (10.6 percent) among TB patients while the Southern Red Sea region recorded zero percent of HIV cases among TB patients in 2019.

Fig 9: TB Treatment Success Rate, 2012-2019

Major Achievements:

In 2020, the WCO support focused on:

1. **TB drug resistance monitoring**: With WHO technical support, the National TB DR monitoring and prevention strategy was set in 2014. Further, in 2018, an TB DR study was conducted, and the report finalized with support of WHO HQ and is in process for publication. The study result showed that the prevalence of multidrug-resistant (MDR) TB was 1.0 percent and 3.8 percent among new and previously treated cases, respectively, as was the prevalence of rifampicin resistance (RR) without isoniazid resistance. All RR cases had a phylogenetic marker causing capreomycin resistance, confirming the presence of a predominant resistant TB sub-lineage in the Horn of Africa region. However, extensively drug-resistant (XDR) TB was not detected.

2. **TB End Term Program Review**: Resources mobilized from Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) was transferred to WHO through an MoU. The WHO provided technical support from all levels of the organization. Through this support, the HIV end term review of the 2017-2021 strategic plan was conducted and a report with key recommendations produced. Evidence for the new 2021-2026 strategic plan development and Global fund funding proposal development

3. **TB Strategic Plan Development**: the WHO, through its staff, provided technical support at all levels to conduct the end term program review of the existing strategic plan 2017-2021. This is to provide evidence generation for the development of 2021-2026 TB strategic plan for implementation of the integrated high impact interventions including ending TB.

4. **2020 WHO Global TB Report**: the WHO supported the MoH in the TB data collection, compilation, validation and submitting it on the online website of TB to monitor the health trends. Additionally, this contributed for the WHO TB Global report of 2020.

Below: Eritrea MoH & WHO team in WHO/HQ during the presentation and finalization of the TB DR survey report

Challenges

1. Limited capacity of human resources especially in conducting studies.
2. Supportive supervisions were limited due to COVID-19 lock down

Way Forward

There is need to provide technical/financial support to MoH:

1. Facilitate the e-training on TB strategic information and social mobilization.
2. Strengthen the National Health Laboratory (NHL) and Supranational Reference laboratory (SRL) linkage
3. Update the Tuberculosis (TB) preventive treatment (TPT) guideline in line to the [updated 2020 WHO guideline]
4. Scale up the implementation of end TB strategy.
5. Conduct the MDR-TB survey

Above: TB Patients receiving TB treatment in one of the Health facilities

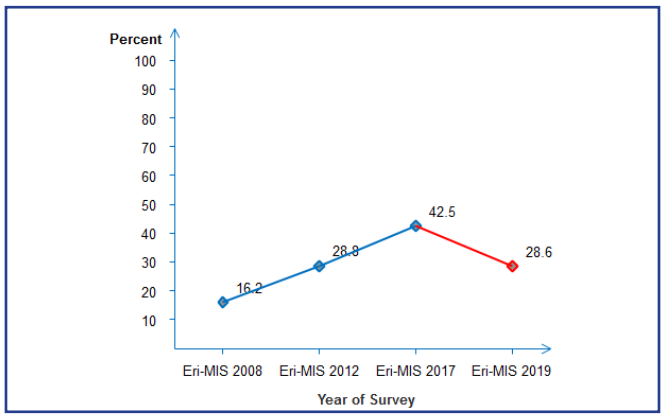
Above: TB Unit Head making a speech during TB Commemoration day

Malaria

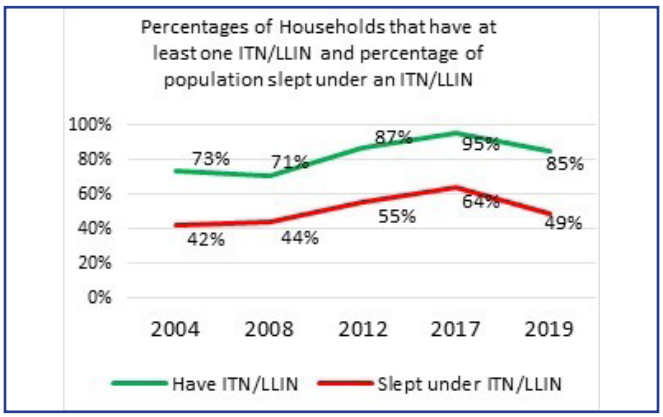
Between 1998 and 2019, Eritrea has made significant progress in controlling malaria, reducing the incidence rate from 157 to 25.6 cases per 1000 people per year. Malaria-specific deaths have decreased exponentially in all ages, recording a 99 percent decrease from 404 deaths in 1998 to 3 deaths in 2019. Despite recently reported upsurges in malaria cases in some sub-zobas , Eritrea is steadily progressing towards malaria pre-elimination.

The parasite species distribution did not show significant change in the past 3 – 5 years. Still, *plasmodium falciparum* is the predominant malaria parasites accounting for 70 percent of all malaria infections followed by P. vivax at 28 percent, while P. malariae and mixed infections constitute 2 percent of infections. According to a 2003 Malaria study, the *Anopheles Arabiensis* remains as the predominant and primary vector, recording at 96 percent. Gains in malaria control are mainly due to scale up of curative and preventive malaria interventions. Over the years, the program managed to maintain high levels treated net ownership, with the percentage of households owning at least one net standing 95 percent and 85 percent in 2017 and 2019, respectively. The de facto population with access to long-lasting insecticidal nets (LLIN) decreased from 82 percent in 2017 to 53 percent in 2019 while the general population who slept under LLIN decreased from 64 percent in 2017 to 49 percent in 2019. The percentage of those who slept under LLIN among the de facto population with access to LLIN was 66.9 in 2017 and 67.3 in 2019.

The 2017 Malaria Indicator Survey (MIS) was conducted immediately after the last mass campaign of LLINs and thus the decline in ownership of LLINs in 2019 may be explained by the wear and tear and/or loss that happened after 2 years of the campaign. Overall, 63 percent of the existing LLINs were used the night before and this was comparable for the surveys done in 2017 and 2019. According to the MIS 2017 and 2019 surveys, the national indoor residual spraying (IRS) coverage improved from 17 percent in 2017 to 31 percent in 2019



A: Early care-seeking behaviour Percentage for whom advice or treatment was sought same/next day

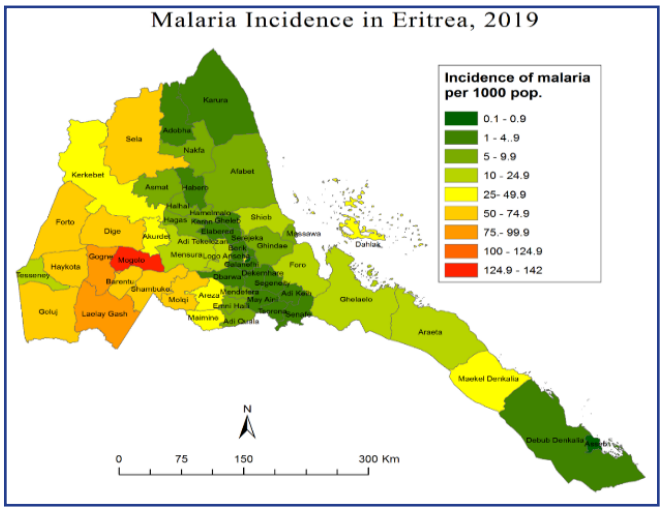


B: LLIN ownership and use

Above: Fig. 10: Health care-seeking behaviour (A), LLIN ownership and use (B) in Eritrea

The current stratification shows malaria is highly heterogenous, ranging from incidence of 3.0 to 142.0 cases per 1000-people per year. 41 of the total 58 sub-Zobas of the country (70 percent) are malaria endemic localities with Gash Barka, Debub and Semenawi Keih Bahri Zobas bearing over 90 percent of the national burden. Gash Barka has the highest malaria burden in Eritrea, recording around 55,000 cases (80 percent) of the total

68,756 cases reported in 2019. This translates to percent incidence of 58: range 13.4–142.0 cases per 1000 people per year. Only 11percent of the all malaria cases were under-five children and nearly 1 percent of malaria infections occurred in pregnant women.



Above: Fig. 11: Malaria Incidence Rates in Eritrea, 2019

In 2019, there were 22 sub-Zobas with incident levels below 5 per 1000 people per year, with Anseba, Maekel, and Debubawi Keih Bahri Zobas (central highlands and eastern lowlands) (), meeting requirements for pre-elimination. Moving forward, Eritrea will develop a refined sub-national stratification map based on epidemiological data triangulated with appropriate metrics namely entomological, ecological/demography and interventions coverage data to better disaggregate malaria situation and inform targeting of interventions. Stratification will be done at village and/or foci level in very low and focalized transmission settings implementing elimination activities.

2020 Major Achievements

The WCO support focused on:

1. **Antimalarial Drug Resistance Monitoring**: Therapeutic efficacy and safety study of Artemesinin and Amodiaquine: The result showed that quality assurance of malaria diagnosis and treatment is a focus, thus a need to conduct therapeutic efficacy studies (TES) and monitor the prevalence of Histidine-rich protein II (HRP-II) deletion in *P. falciparum* parasites from infected patients, as stipulated in WHO guidance. Quality assurance of malaria diagnosis and treatment is a focus, thus a need to conduct therapeutic efficacy studies (TES) and monitor the prevalence of Histidine-rich protein II (HRP-II) deletion in *P. falciparum* parasites from infected patients, as stipulated in WHO guidance.

Below: Table 1: List of Sub-Zobas eligible to conduct malaria elimination in Eritrea in 2020

Zoba	Sub-Zoba	Zoba	Sub-Zoba
Anseba	Adi-Tekelezan	Semenawi keih Bahri (North Red Sea)	Adobha
	Elabered		Dahlak (Island)
	Habero		Karora
	Keren	Debubawi Keih Bahri (Southern Red Sea)	Areta
Maekel	Berikh		Assab
	Ghala Nefhi		De-Denkalia
	North East Asmara		Makelay Keyhi Bahri
	North West Asmara	Debub	Adi Keih
	Serejeka		Dbarwa
	South East Asmara		Segheneyti
	South West Asmara		Senafe

2. **Malaria End Term Program Review**: Malaria End Term Program Review: The WHO provided technical support for the conduct of the end term review. A report has been generated to provide evidence both for the new strategic plan and GF funding request.

3. **Malaria Strategic Plan**: provided technical support through WHO staff at all levels in conducting the end term program review of the existing strategic plan 2017-2021. This is to provide evidence generation for the development of 2021-2026 Malaria Strategic Plan for implementation of the integrated high impact interventions including its elimination.

4. **Global Fund funding requests for Malaria**: Supported and facilitated in the development and submission of Global Fund funding requests for TB and grant confirmation received for implementation.

5. **WHO 2020 Global Malaria Report**: Supported MoH in the Malaria data collection, compilation, validation and submitting it on the online website of Malaria to monitor the health trends and for the World Malaria Report of 2020.

Challenges

1. The National Malaria Control Program still faces challenges in Human resources both in number and capacity especially as the country is going for malaria elimination. Thus, the need to have an expert as long term

2. The NMCP is greatly limited in monitoring the program interventions as the supportive supervisions are being conducted irregularly.

Way Forward

Provide technical/financial support to MOH to the HRH planning and coordination could greatly benefit from a comprehensive HR needs assessment based on the workload (preferably using workload indicators of staffing needs) and institutionalization of National Health Workforce Account to

- Facilitate malaria elimination feasibility assessment
- Conduct Therapeutic efficacy and safety of antimalaria drugs
- Conduct Insecticide Resistance Study
- Conduct accreditation of malaria microscopists
- Build capacity in Malaria Case Based Surveillance and SMS

Below: Mother and baby sleeping under a treated mosquito net.

Credit: United Nations Population Fund

Sexual Reproductive Health for Maternal and Newborn Children, Adolescent Health and Healthy Ageing

Maternal and child health is one of the priority programs that is defined in the National Health Policy and Health Sector Strategic Plan and is described in the Essential Healthcare Package. The maternal health situation remains poor leading to weak health outcomes for both mother and child. The adjusted maternal mortality rate remains exceptionally high with 486 maternal deaths per 100,000 live births, a burden which is disproportionately clustered among the poor. Nationally, over the last 5 years facility based maternal mortality ratio is not showing reduction, though in 2017 there was some reduction

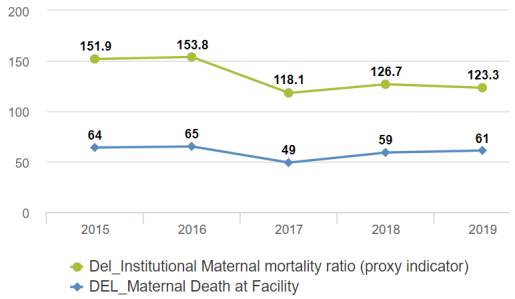


Fig. 12:. Facility based death and maternal mortlity ratio during 2015-2019

The Neonatal Mortality in Eritrea is stagnating. According to the data reported by Health Management Information System (HMIS) from Health facilities, there were 145 neonatal deaths during delivery in 2019 which was 43 percent greater compared to the 2018 neonatal deaths.

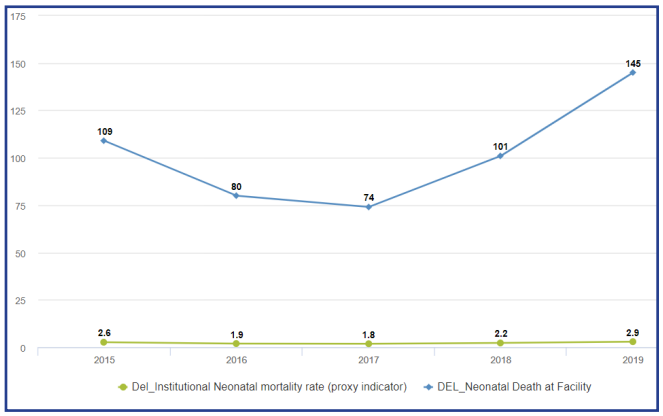


Fig. 13: Neonatal mortality rates in Eritrea

Antenatal Care Services

Since 2018, antenatal care services (ANC) were provided in 252 of the 338 health facilities accounting for 75 percent of the health facilities. 76 percent of the ANC services are provided in health stations. During this continuum of care, the services provided include HIV counselling, testing and in case of a positive test result, initiation into the ART program.

Above: A mother receiving ANC services in one of the health centers

Other tests include syphilis where treatment is initiated for positive results. In addition, expectant mothers receive Iron & Folic Acid; hemoglobin (Hgb) determination during the 1st and 4th visits. For male partners, they are tested for HIV and if positive, are initiated into the ART program. Male partners in sero-discordant couples receive pre-exposure prophylaxis services. Some key ANC performance indicators over the last 5 years shows increasing or sustaining trend as shown in figure 14.

ANC service coverage has been incresing especially duirng the first trimester through out the zobas with Gash Barka recording the highest coverage of 83.6 percent as seen in figure 15 below. The fourth visit is still low at 40 percent while the drop out rate was recorded at 60 percent as shown in figure 16.

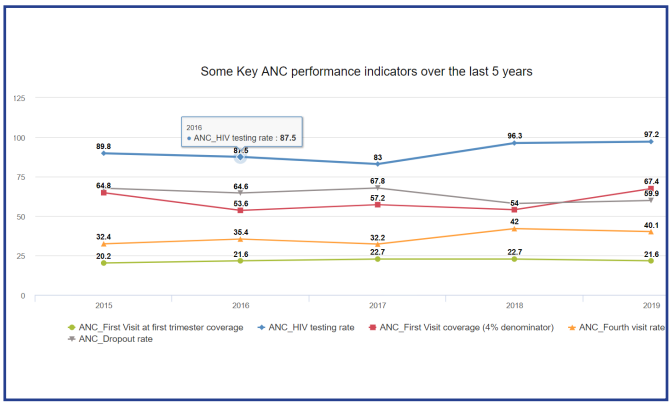


Fig. 14: Five Key ANC performance indicators during 2015-2019

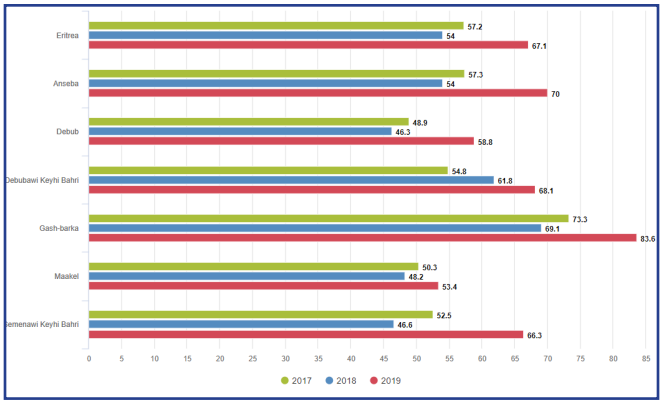


Fig. 15: First ANC coverage by Zoba 2017-2019

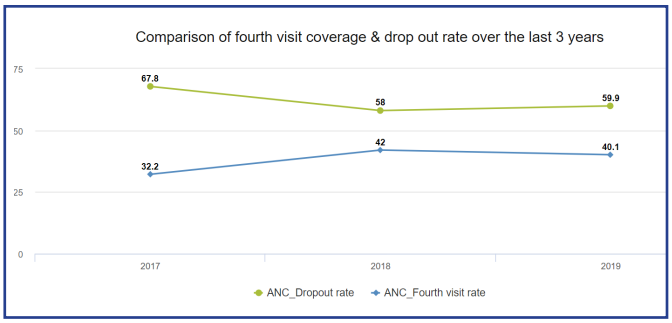


Fig. 16: Comparison of fourth visit and dropout rates 2017-2019

Prevention of Mother-to-Child Transmission (PMTCT)

The PMTCT testing rate is also showing significant improvement. In 2018, across all Zobas, the results posted, 95 percent, were above the target value (percent while the overall PMTCT HIV positivity trend posted a decreasing rate starting 2019. This low prevalence is one criterion fulfilled for Eritrea to proceed to HIV elimination. The provision of intervention delivered to expectant mothers includes a syphilis test. It was noted that the positivity rate was at 1.5 percent in 2018 and 0.015 percent in 2019. The highest positivity rate was posted at the Gash Barka Zoba that accounted for 4.7 percent and 4 percent in 2018 and 2019 respectively.

Maternity Waiting Homes

Key. Roles of Maternity Waiting Homes

1. Avoids heavily pregnant women having to travel long distances
2. Safe and comfortable place for pregnant women to stay before delivery
3. Allows women to network and learn how to care for themselves and the baby
4. Access to well-equipped, quality health facility
5. Newborn care
6. Improved pregnancy and birth outcomes

Source: Maternity Waiting Homes Alliance

To reduce maternal and neonatal death during delivery and to improve skill birth attendance in the country, the MoH has invested in a total of 43 maternity waiting homes in the hard to reach areas in Zobas outside of Zoba Maekel. MoH reports indicate an increase in skilled birth attendance between 2017 and 2019. According to the 2019 DHIS report, total deliveries in health facility were 41,974, 47,648 and 50,290 in 2017, 2018 and 2019 respectively.

Likewise, deliveries attached to maternity waiting homes have shown slight increases over the years standing at 7,699, 8,670 and 9,173 deliveries in 2017, 2018 and 2019 respectively. The disaggregation of the deliveries by skilled attendants indicates that about 48.9 percent of all deliveries were carried out by the lower level health facilities which include health center, health station and MCH clinic, all of which need strengthening through the provision of necessary equipment and human resources for better performance.

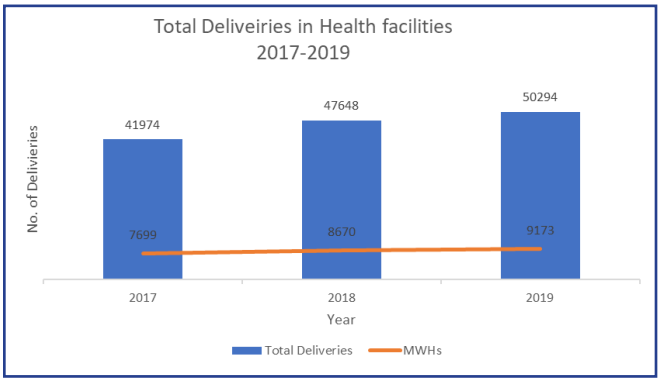


Figure 17: Total deliveries in all Health facilities and Health facilities with MWHs 2017-2019

Thus, the maternity waiting homes are contributing to the increase of skilled care attendance in the Zobas with hard to reach areas. The Southern and Northern Red Sea Zobas have contributed higher rates of skilled care delivery as they have many hard to reach areas as shown in figure 18.

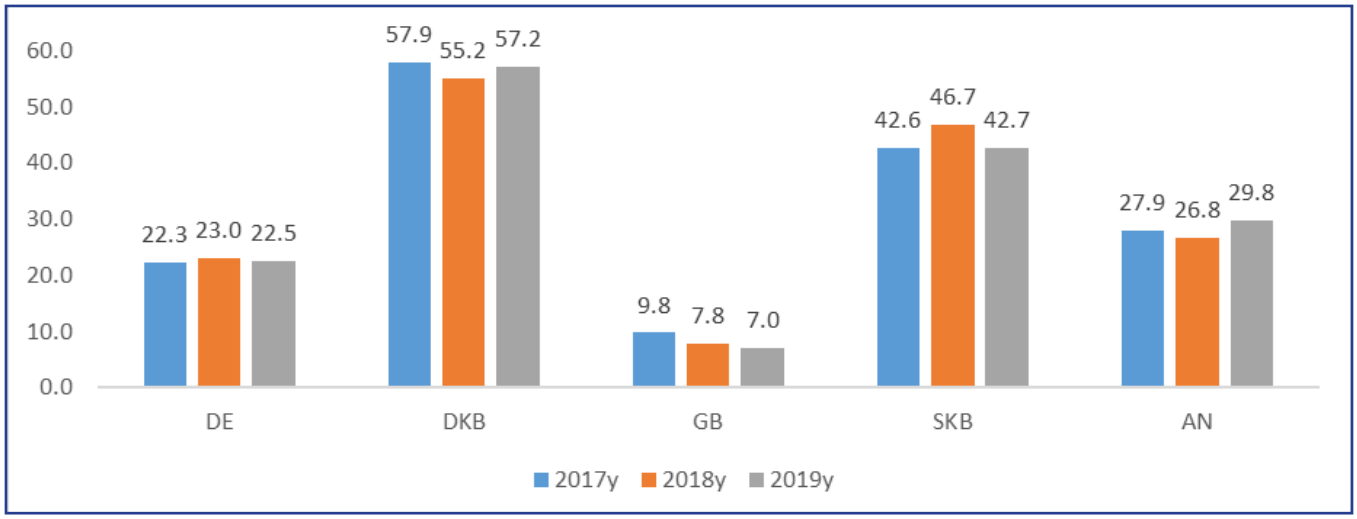


Figure 18: Percentage of deliveries in the health facilities with Maternity Waiting Home by Zoba

Caesarean Section Rates

Between 2018 and 2019, C/S rates increased slightly from 6.1 percent to 6.5 percent. More than 40 percent of the total caesarean section are done in the National Referral Hospitalscas they are well equipped. The table 2 below shows the number and percentage of C/S conducted in each Zoba.

Table 2: Number and percentage of cesarian section conducted by Zoba (2018-2019)

	2018				2019			
Zoba	Skilled Birth attendants	Abnormal Deliveries	Caesarean section	Percent of caesarean	SBA	Abnormal Deliveries	Caesarean section	Percent of caesarean
AN	8248	638	384	4.7	8437	646	389	4.6
DE	9938	844	559	5.6	10290	993	682	6.6
DKB	982	55	29	3.0	1162	94	58	5.0
GB	10444	700	350	3.4	11800	840	516	4.4
MA	4657	96	37	0.8	4921	193	136	2.8
NR	8057	1633	1466	18.2	7833	1657	1422	18.2
SKB	5660	293	123	2.2	6147	238	104	1.7
National	47986	4259	2948	6.1	50590	4661	3307	6.5

2020 Major Achievements

1. **Implementation of integrated service delivery strategies**: the WHO supported the MoH to implement integrated service delivery strategies and evidence-based interventions for Maternal, Newborn and Child Health by:

- Developing the neonatal care standards including kangaroo mother care (KMC)
- Adapting the 2019 updated WHO Integrated Management of Childhood Illness (IMNCI) guideline The guidelines are currently being printed for dissemination and implementation.
- Building capacity of health workers on life saving skills. Six medical doctors from remote areas of the country were trained for 12 weeks on comprehensive emergency obstetrics and neonatal care (c-EmONC).

2. **Maternity Waiting Homes**: The WHO supplied essential equipment and supplies to support the full functionality of the Maternity Waiting Homes in remote areas.

- The equipment included solar equipment and appliances with 20 fetal dopplers, 40 rechargeable headlamps with micro USB cable, 20 multi-tip phones chargers and 20 solar panels to the rural health facilities in need of reliable, simple, accessible, and affordable electricity. The essential supplies included 650 maternal pajamas, 650 baby cover and kits and 400 bed.

Maternity Homes: Pictorial

1

2

3

4

Key

1. 1-3 Maternity Waiting Homes in Foro, Northern Red Sea region and Afambo, , Southern Red Sea region
2. Officials from the MoH and WHO deliver supplies to one of the maternity waiting homes

3. **Finalization of the Maternal and Perinatal Death Surveillance and Response (MPDSR) strategy:** the WHO supported the finalization of the MPDSR strategic guideline and is on the printing process for implementation through capacity building and monitoring of the implementation to improve the quality of primary health care of maternal and peri-natal health. This, it is hoped, will eventually reduce maternal and newborn mortality and morbidity.

Above: The technical team debriefs the HON. Minister for Health after the finalization of the MPDSR guideline

4. **Cervical Cancer Prevention, Control and Management guideline:** the WHO supported the MoH in the development of the Cervical Cancer Prevention, Control and Management guideline. The document is in the printing process for implementation and capacity building of health workers.

Key: 1 & 2: Clinicians being trained on use of Cryotherapy for the management of cervical cancer

5. **Healthy & Active Ageing (HAA):** the WHO supported the MoH to finalize the Healthy and Active Ageing Framework (HHA) and the Integrated Care of the Older People (ICOPE) guideline. The documents are currently being printed for implementation and capacity building of health workers and stakeholders for the HAA interventions.

Challenges

1. The Family and community health services still faces challenges in human resources especially in capacity especially during the scale up of interventions to reduce MMR and Neonatal deaths.

2. Although updated strategic plan, guidelines are in place there is a need of regular monitoring of the interventions implemented to strengthen the gaps through regular supportive supervisions.

Way Forward

1. There is need to provide technical and financial support to the MoH to reach the 90.90.90 UNAIDS targets by updating the HIV testing strategy in line with the Updated WHO 2019 Testing Strategy to test more people, initiate HIV self-testing (HIVST) and scale up HIV pre-exposure prophylaxis (PrEP) implementation and work on a long term basis for the elimination of mother-to-child HIV and syphilis (eMTCT) transmission.

2. There is need to provide technical and financial support to conduct the evaluation of laboratories in Eritrea using WHO standard checklist and questionnaire to collect information and conduct HIV DR survey to enhance regular monitoring of HIV drug resistance

There is need to provide technical and financial support to MoH to:

- Conduct the end term program review of 2017-2021 reproductive, maternal, newborn, child, and adolescent health (RMNCAH) strategic plan
- Develop the 2022-2026 RMNCAH strategic plan
- Conduct quality of care, integrated with Harmonized Health Facility Assessment (HHFA)
- Equip the maternity waiting homes for full functionality.
- Strengthening capacity of health workers on life saving skills (LSS), c-EmONC, neonatal care, cervical cancer management and management of elderly people

MoH and WHO staff randomly selecting 25 boys and 25 girls who are part of the sample size of the Schistosomiasis sentinel site in one of the Zobas. Photo courtesy of WHO Eritrea CO.

Neglected Tropical Diseases (NTDs)

Data available in the WHO NTDs portal helps to monitor global and country progress towards achieving the targets for control and elimination, as defined by the new WHO Road Map 2021-2030. Climate change affects social and environmental determinants of health including clean air, clean and safe drinking water, food security and shelter. The indirect effect of climate change is climate mediated change seen in the incidence of infectious diseases and deaths.

Climate change alters several environmental conditions that cause morbidity and mortality. For instance, changes in temperature, amounts of rainfall and humidity may cause a proliferation of the malaria-carrying mosquitoes at higher altitudes, thus resulting in an increase in malaria transmission. In dry areas, heavy rainfall can provide good breeding conditions for the mosquitoes thus leading to the increase in malaria cases. Some diseases related to climate change and water are Malaria, malnutrition, Diarrhea, Schistosomiasis, Leishmaniasis, Dengue fever and Chikungunya. The burden of these diseases in endemic countries is high and despite the availability of safe and cost-effective interventions for their prevention and control, the resource allocated for NTDs is still inadequate.

In Eritrea, the known NTDs are Schistosomiasis, Intestinal Helminthiasis, Trachoma, Lymphatic Filariasis, Leprosy, Dengue Fever and Leishmaniasis Exceptionally Eritrea was certified free of Guinea worm disease in 2011. The Neglected Tropical Diseases Program(NTDP) focuses on an integrated control of the endemic 7 out of the 13 diseases that WHO has classified as common NTDs.

Schistosomiasis

According to the Sentinel Site Surveillance report of Schistosomiasis and STH in Eritrea Dec. 2019 the overall prevalence of *Schistsoma mansoni* infection in this survey was 2.82 percent. *S. mansoni* was found in five out of the six zobas of Eritrea (all except Debubawii Keih Bahrizoba). The highest infection rate (8.68 percent) was found in Debub zoba. The prevalence in the remaining four zobas, Semenawi Keih Bahri, Anseba, Maekel and Gash Barka was 1.20, 1.18, 0.66 and 0.38 percent, respectively. Out of the total 58 sub zobas in the country, schistosomiasis found only in 28 sub zobas. In the sub zobas with S. mansoni infection, prevalence ranged from 0.17 percent in Goluj to 15.35 percent in Dekemhare sub-zoba

The vulnerability and spread of Schistosomiasis in Eritrea indicates that the disease is prevalent in Anseba, Debub and Makel. The Ministry of Health has been giving mass drug administration (MDA) tablets to school going children whilst creating awareness on the disease in schools. The MoH has also been introducing environmental sanitation to control the population of snails in water bodies. Water shortage and droughts from climate change could increase demand for irrigation particularly in arid regions, a situation that is likely to increase snail populations resulting in higher risks of infection with Schistosomiasis parasite. See figure 19 below on the vulnerability and spread of Schistosomiasis in Eritrea in 2015.

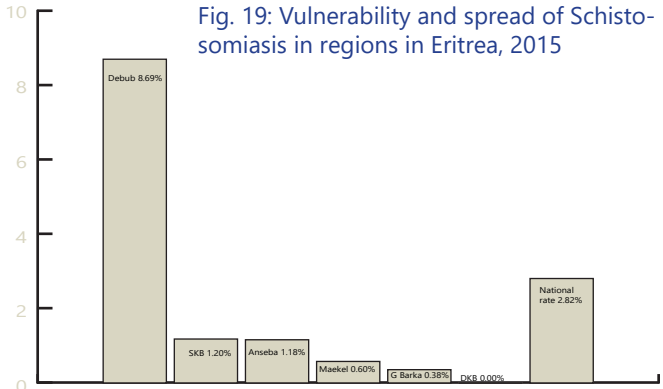


Fig. 19: Vulnerability and spread of Schistosomiasis in regions in Eritrea, 2015

Situation Analysis

Out of the total 58 sub Zobas in the country, schistosomiasis was found only in 28 sub zobas.

Implimented Activities in 2020

1. A mass drug administration (MDA) for SCH was conducted in Mendefera sub zone where 96.5 percent (46,625) people recivied praziquantel tablets.

2. An MDA for Lymphatic Filiariasis (L.F) was conducted in Forto-Sawa sub zone where 87.0 percent (35,340) people received Diethilcarbamazine (DEC) and Albendazole tablets.

Multiple integrated interventions through multisectoral approach to the control of NTDs with increased access of effective preventive chemotherapy (MDA), effective vector control, provision of safe drinking water and sanitation and consistent health messages and information plus drugs treatment to the infected individuals are of priority interventions.

Above: MoH Laboratory staff preparing Kato Katz smears to samples and identify *S. Mansoni* eggs (inset, below) found from the sample of a 13-year-old boy

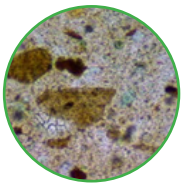


Table 3. Mass drug administration of SCH & L.F

	Sub Zone	Target Population	Coverage		2- 4 years		5-14 years		15 and above	
			No.	Percent	M	F	M	F	M	F
1.	Mendefera	48,2834	46,615	96.5	0	0	9,620	9.723	12,822	14,450
2.	Forto-Sawa	40562	35,340	87.0	2,314	2,299	4,946	5,021	10,849	9,911

The was no major adverse effect following the MDA, however some minor symptoms were reported including 4 cases of vomiting, 2 cases of abdominal pain, 1 case for nausea, 1 head ache case and 1 fatigue case).

Activities not Implimented

1. An MDA to three sub zones with moderate prevalance of SCH

2. An MDA to three sub zones for school age childeren with low prevalence of SCH

3. An MDA for L.F to one sub zone.

4. Capacity buiding for Health works (HWs), Community Health Workers (CHWs), and school teachers on drug distribution and signs of side effects.

5. Impact assesment for SCH and STH

6. Capacity building (ToT) HWS, Lab technicians in six subzones on selective NTDs.

7. Conduct sentinel site survey in 28 schools, confarmotory mapping in endemic sub zones of L.F and Molluscide application for breeding sites of snails.

Challenges

1. Due to the COVID-19 lock down measures, MDA activities were not exercised.

2. Delays and shortage of budget from WHO to MoH

Recommendation

To meet the target of annual plan proposed for the year, allocation of a sufficient budget and the early transfer of funds to the MoH is important for better and timely implementation.

COVID-19 RESPONSE

Below: The late Dr Yohannes demonstrating effective donning of Personal Protective Equipment kit as part of Infection Prevention and Control of COVID-19 in Eritrea

Eritrea recorded its first confirmed COVID-19 case on 21st March 2020. The index case was an Eritrean national returning from Norway. By the end of March, the country had recorded 15 confirmed cases. Subsequently, testing was conducted at border quarantine centres as many nationals continued to come back to Eritrea from neighboring countries through legal and illegal border crossings. On 2nd April 2020, a 21-daynationwide lockdown was imposed and was subsequently extended indefinitely.

As of 31st December 2020, the total confirmed COVID-19 cases were 1,320 with 676 confirmed recoveries and 3 recorded deaths from patients who were on COVID-19 treatment. On March 23, 2021, following a year of implementing the lockdown measures, the government announced the gradual easing of the measures including the reopening of schools by April 1, 2021 and the resumption of public transport.

Measures such as wearing facemasks and sanitation will remain in force. In addition, travel between cities and villages remains banned. The MoH continues to deliver essential health services to the public through existing health service delivery hubs.

Major Achievements

1. **Readiness Assessment:** WHO supported the MoH to conduct a baseline readiness assessment which guided the implementation of identified evidence-based interventions. Among the 9 COVID-19 thematic pillars assessed. The laboratory, infection prevention control (IPC), case management and surveillance were identified as weak. The WCO advocated for the conduction and use of the COVID-19 Country Readiness Assessment Report. The office supported the orientation of laboratory technicians on COVID-19 diagnostic and polymerase chain reaction (PCR) testing procedures.

2. **Enhancing surveillance:** The WCO supported surveillance activities including provision of updated guidelines, COVID-19 Standard Operating Procedures and case definition tools. Health workers were oriented on the updated guidelines.

3. **Laboratory/testing capacity, activities (starting 17 May, random testing in Asmara):** The WCO provided WHO's updated Guidelines and Standard Operating Procedures to the MoH for laboratory management of COVID-19. Laboratory staff were trained on safe handling of infectious and hazardous materials. The adaptation of WHO PCR techniques and guidelines were also supported. Eritrea adopted the use of WHO-recommended real time PCR antigen testing for COVID-19 confirmation

Infection Prevention and Control (IPC)

Some of the support provided by WHO in IPC are as follows:

1. **Procurement:** Procured and distributed personal protective equipment (gloves, masks, googles and gowns) to MoH.

2. **Simulation:** Supported a simulation exercise at Asmara International Airport point of entry and Villago hospital treatment center

3. **Updated guideline:** Supported the MoH to update the National IPC guideline to include updated information on COVID-19

4. **Orientation:** Health workers were oriented on the use of the National Guideline.

5. **Support:** Led by WHO, the UN supported the MoH, Ministy of Education (MoE) and the Water Resources Department (WRD), in providing water, sanitation and hygiene (WASH) in health facilities and schools, through provision of soap and support for local production and distribution of hand sanitizers as part of the COVID-19 response

6. **Capacity building:** WHO provided training materials, videos, and interim guidelines to the national and sub national health facilities to build capacity.

Case Management

WHO supported the MoH to adapt the interim guidelines and SOPs on COVID-19 case management. Treatment centers and health facilities follow these standard IPC and case management protocols. In addition, the WCO conducted training of health workers on COVID-19 case management.

Coordination with UN agencies and development partners

The WCO provided guidance to UN agencies in the sourcing, specification, quality of equipment, reagents and essential supplies for COVID-19 response using approved WHO guidelines. WHO coordinated the development of both the National and UN COVID-19 preparedness and response plan and mobilized US$ 2.5 million resources to support the plan. The WHO played a key role in bringing together partners and mobilizing resources. Within the UN Country Team (UNCT), the WHO led the meeting in sharing regular COVID-19

updates to UN agencies. This included technical analysis of the situation to identify the critical areas of support needed. Furthermore, WHO coordinated the UN support to MoH's division of labor based on agencies' comparative advantage. The WHO facilitated and coordinated UN technical working groups which developed the UN preparedness and response plan.

During the early phase, the briefing to the diplomatic corps was on COVID-19 general information, key public health measures and advocacy for resource mobilization to support contingency plans. Moreover, WHO held one-on-one meetings with development partners to further explore resource mobilization opportunities to support the COVID-19 response.

Other investments during COVID-19 Pandemic

The country undertook, with WHO support, 2 important evidence generation exercise, namely: International Health regulations (IHR assessment) and COVID-19 country readiness assessment. The results of the above assessments provided key evidence and guidance, to a large extent, the calibrated investments made by Eritrea.

Continuing Essential Services

The WCO supported the country's efforts to continue providing essential health services despite the COVID-19 pandemic. These were;

1. **Polio surveillance acute flaccid paralysis (AFP) activities.** The WCO facilitated two rounds of shipment to the regional reference laboratory in Addis Ababa

2. **Supported introduction** of Men A into the routine immunization to boost immunization update

3. **Provided financial support** to ensure uninterrupted services and logistics

Key Challenges

1. Increasing number of COVID-19 cases, some of whom have no travel history, signifys community transmission.

2. Delays in customs' clearance for COVID-19 related procurement and supplies.

3. The UN and all development partners, including the government, are faced by challenges of maintaining operations in a lockdown context, given that only a few critical staff had authorization for movement to the office, and due to challenges of internet connectivity.

4. Increasing trend of COVID-19 cases in neighboring countries namely Sudan, Djibouti, Ethiopia, and Yemen might pose a risk of spike in cases in Eritrea.

5. Limited information available from MoH on the COVID-19 needs and gaps if any.

Immunization and surveillance of vaccines preventable diseases in Eritrea

Above: Mothers living in hard to reach areas riding donkeys to access vaccines for their children

In 2020, Eritrea provided routine immunization services 6 days per week in 302 (85 percent) health facilities in the country. Outreach vaccination services is also providing in every catchment areas of these health facility. In areas with full of mountains and raged roads and villages located 10 km apart from the health facility, where public transport not available. There are 450 outreach sites in the country. Periodic Intensified Routine Immunization (PIRI) services are implemented every quarter for nomadic population groups and people living in 16 districts of the hard to reach and less accessible geographical areas. As of 2020, the National Immunization targets includes antigens against 12 vaccine preventable diseases.

The EPI program has a central as well as regional cold chain stores. There are four immunization supply chain levels in the country, at National, Zoba, sub-Zoba, and service delivery points (health facilities). Currently, there is a net positive storage capacity of 26, 845 litters at national level and 25,240 litters capacity at Zonal level to store all vaccines for routine and supplementary immunization activities.

The EPI program was introduced with a mission to make immunization services available, accessible, and equitable to all children in the country. The goal of the program was to reduce morbidity and mortality of children due to vaccine preventable diseases to a level that the diseases will no longer be a public health problem in the community. The target was to sustain immunization coverage of infants above 95 percent at national level and above 85 percent at each district level by addressing the problems affecting the various components of the EPI program and obtaining accessible and equitable immunization services towards successful implementation of the EPI program.

EPI Coverage Survey

With WHO financial and technical support, the country conducted the EPI coverage survey in February and March of 2020 using WHO tools and guideline.The survey results revealed that 99.9 percent of children aged between 24 to 35 months, had vaccination or health card or other document where vaccination of children was recorded. A vaccination card was seen for 97.7 percent of the children. Percent The proportion of children with vaccination card seen has shown significant increase from that reported by the 2010 Eritrea Population and Health Survey for children aged 12-23 months (85.2 percent) while it was similar with that reported by the 2017 EPI coverage survey (97.2 percent).

Overall, 95.1 percent of the children aged 24-35 months were fully vaccinated in all of the eight antigens (Bacillus Calmette–Guérin (BCG), three doses each of oral polio vaccine (OPV) and 5-in-1 vaccine also called PENTA, and Measles-containing-vaccine first-dose (MCV1)) based on information observed from vaccination card and mother's reports. The results show that 99.4 percent had received the BCG vaccine, 98.9 percent had received

OPV 3 vaccinations, 98.8 percent had received Penta3 vaccinations, and 96.9 percent had received MCV1 vaccine. If information from the card is only considered, the full vaccination coverage would be slightly lower, standing at 92.4 percent with coverage of 97.1 percent for BCG, 97 percent for OPV3 and percent Penta3, and 93.8 percent for MCV1. Overall, 93.3 percent of mothers had received at least two doses of tetanus, diphtheria, and pertussis (Td) vaccines; which was slightly lower at 95.4 percent compared to the estimate reported by the 2017 EPI coverage survey. The proportion of mothers who received at least two doses of Td was 98.7 percent for Zoba Anseba, 96.2 percent for Debub and 91.9 percent for Southern Red Sea. Mothers in urban areas were more likely, at 95.5 percent, to receive at least two Td doses than those in rural areas 92.2 percent.

Table 4: National Immunization Targets, and schedule VPD

Children targeted for vaccination			Women of child bearing age (15-49 years)		
Age	Dose	Antigen	Dose	Interval	Antigen
Birth	1dose	BCG, bOPV0	1st dose	(as early as possible)	Td1
6 weeks	1st dose	Penta1, bOPV1, Rota1, PCV1	2nd dose	4 weeks	Td2
10 weeks	2nd dose	Penta2, bOPV2, Rota2, PCV2	3rd dose	6 months	Td3
14 weeks	3rd dose	Penta3, bOPV3, PCV3	4th dose	Subsequent pregnancy	Td4
9 months	1st dose	Measles/Rubella	5th dose	Subsequent pregnancy	Td5
18 months	2nd dose	Measles/Rubella and Men A			
6-59 months	1dose every year	Vitamin A Supplement, given every year			

There is lack of adequate funding for the health promotion division in the Ministry of Health for developing promotional activities and documentation of the experiences achieved. Monitoring for communication interventions and documentation of best practices and absence of rumors or crisis management are some of the key limitations in the program, documentation of activities was also initiated recently by WHO.

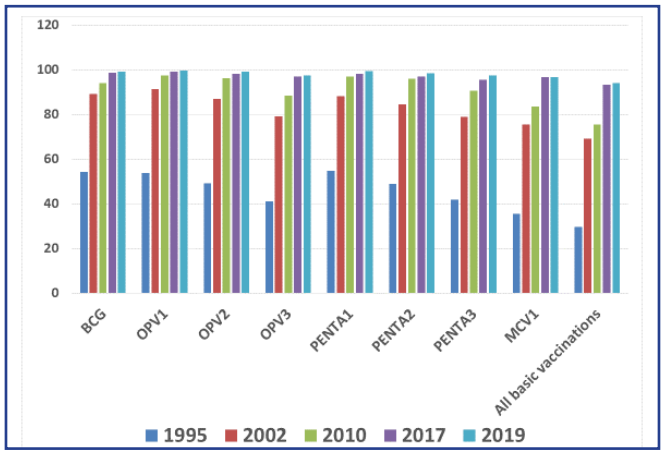
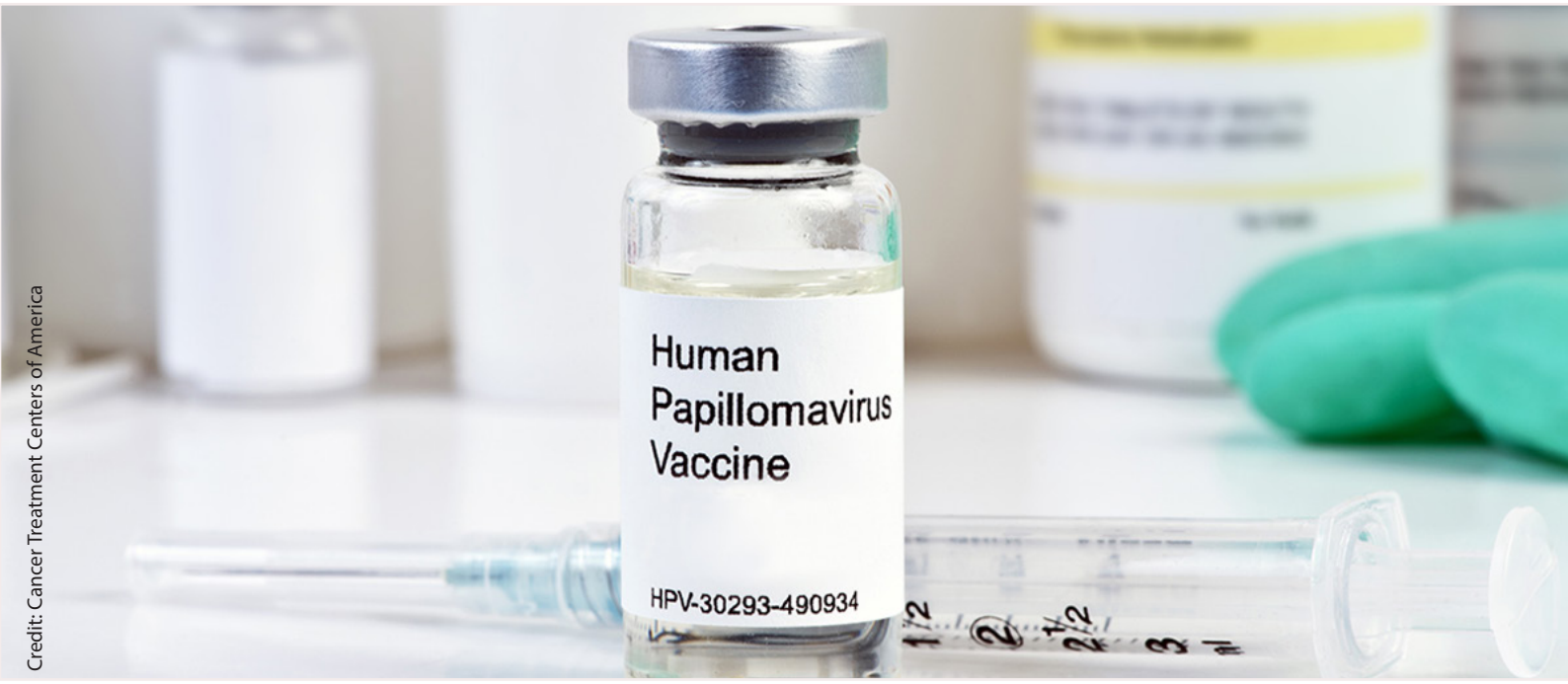


Figure 20: EPI coverage survey 2020 in Eritrea

Above: WHO supported Outreach Immunization sessions. Credits: WHO Eritrea

Above: Dr Martins, WR/Eritrea, briefing attendants during the opening ceremony of EPI and Men A Vaccination and vitamin A supplementation campaign. Credit: WHO Eritrea



Credit: Cancer Treatment Centers of America

Human Papilloma Virus Vaccine Introduction Plan (HPV)

HPV vaccination is one of the recommended primary prevention interventions for cervical cancer. Between 2002 and 2018, the Government of the State of Eritrea, through the MoH EPI program, introduced 6 new vaccines into routine immunization schedule and new technologies to keep and deliver the vaccines safe and potent. In this regard, the country was able to equip the health facilities with WHO pre-qualified solar direct-drive (SDD) refrigerators and freezers, with the technical and financial support of immunization partners namely GAVI, UNICEF and the WHO, especially GAVI, to ensure adequate storage capacity. Eritrea is preparing to introduce HPV vaccine for girls aged 13 years in two consecutive doses, 6 months apart, starting from December 1st, 2021. WHO/Country Office and WHO/IST RTWG provided technical assistance to develop a proposal for resource mobilization. The summary of the report is as follows (Table 5).

Table 5: Prevalence of female and male genital cancer in Eritrea 2013-2017

Data	2013	2014	2015	2016	2017
OPD_ICD malignant. neoplasm male genital organs (078)	8	5	10	2	14
OPD_ICD_malignant neoplasms female genital organs (076)	7	7	44	10	2
OPD_ICD_Malignant neoplasms other uterus parts (075)	8	8	69	24	13
OPD_ICD_Malig. neoplasm of cervix uterus (074)	77	73	61	32	128

Rationale for HPV Introduction in Eritrea

It is estimated that complete coverage with HPV vaccines in the female population could reduce up to 90 percent of cervical cancer incidence worldwide with the existing vaccines. Strategic Advisory Group recommends that HPV immunization should remain the primary prevention strategy for cervical cancer, which is best achieved through immunization of girls prior to sexual debut. SAGE also recommends that, in case they have not done so already, all countries globally should proceed with nationwide introduction of HPV vaccines.

Phased introductions should only be an alternative for countries where financial or operational constraints prevent an immediate country-wide immunization programme. HPV vaccination programmes are cost-effective in countries where high-quality screening is not widespread, where vaccination coverage is high (> 70 percent). The cost of a 2-dose course is low going for <US$10-25.

Objectives of HPV Vaccine Introduction

1. To introduce HPV vaccine into the national routine immunization programme among girls aged 13 years and achieve >85 percent coverage

2. To strengthen the existing vaccine preventable diseases surveillance system and plan for the establishment of cervical cancer sentinel surveillance sites

3. To strengthen multi-sectoral collaboration with Ministry of Local Government, Ministry of education, National Union Eritrean Youth Students, National Union Eritrean Women, Ministry of Local Government and Social Welfare , faith organizations and so on, to reach in and out of schoolgirls and achieve >85percent coverage

4. To increase community awareness on HPV vaccination, hence; increase uptake of the vaccine doses as per the recommended schedule.

5. To monitor impact of HPV vaccine through screening and post introduction evaluation

The immunization targets 59,236 girls aged 13 years. As per the socio-cultural context in Eritrea, underage marriage is common, therefore; vaccinating girls at 13 years of age gives the girl protection against HPV infection as this age is also considered the average age of menarche. According to the social norms, the onset of menarche suggests that a girl is ready to get married. To avoid wastage rate of the vaccine, a low single age cohort and five dose presentation will be used.

Integrated Disease Surveillance and Response (IDSR)

Surveillance of the priority communicable diseases activity is a major function of the IDSR Unit. All the monthly and weekly routine reports of the National priority diseases will be reported to the Ministry of Health and IDSR unit from all health facilities. The report coverage and timeliness will be analyzed at Zonal and National levels. Trend of these diseases will be analyzed at all levels, and feedback given to all Zones through the telephone and other means of communication. Appropriate measures have been provided in a timely manner to reduce morbidity and mortality from priority communicable diseases based on the trends.

Epidemics and rumors from communities and health facilities have been promptly investigated and appropriate control measures taken. To strengthen the IDSR at all levels, modular training was given in 2020 to 125 newly deployed health workers in all Health Facilities . The training on active AFP surveillance also has been given to all zones and health facilities that are classified as low, medium and high priority. The operational budget for active AFP surveillance was transferred from WHO to the Ministry of health which transferred to zones. However, there was delay of financial settlement and as a result, the transfer of the budget also was delayed.

The IDSR still maintains its focus on the priority diseases:

1. **Eradication of** Neonatal Tetanus, Acute Flaccid paralysis polio, Dracunculiasis and Measles;

2. **Epidemic** – prone diseases namely Cholera, Shigellosis, Plague, Viral Hemorrhagic Fevers (VHFs), Yellow Fever and Meningitis

3. **Diseases of Public Health Importance**, namely Diarrhea in <5 years old children, Pneumonia in <5 years old children, HIV/AIDS, Malaria, STIs, Tuberculosis, Rabies, Infectious Hepatitis and Schistosomiasis.

4. **Eritrea has also finalized the process** of adapting the updated Generic WHO Technical Guideline 2010, to include Non-Communicable diseases as priority IDSR diseases

Training and Orientation on Integrated Disease Surveillance and Response

The IDSR modular training was given to 450 health care workers to build capacities for the entire health care system. Trainings of IDSR modules were held in each Zoba bringing together IDSR Focal Points, heads of District Hospital Laboratories and Data Managers. participants from sub Zoba hospitals and and health centers for training on IDSR strategy, the importance of the district's role in its implementation, support early detection and accurate reporting on priority diseases to relevant authorities, analyze, interpret and use data to respond to priority diseases, investigate and respond to suspected outbreaks including preparing the district on controlling outbreaks, supervise and provide feedback, advocate for support of the IDSR implementation, monitor and evaluate performance of IDSR implementation and develop a plan for strengthening IDSR in districts.

The training, which was participatory in nature, involved the use of the IDSR training manual, the facilitator manual and the participant's manual and IDSR Technical Guideline. The training outcome was satisfactory. Trainees were equipped with knowledge on the identification of cases using standard case definitions, analyzing and interpreting data, case-based reporting and compiling and submitting weekly reports to the next level. Additional to courses provided on all aspects of IDSR, the training was an opportunity to give to laboratory its rightful place in the response and management of epidemics.

Diseases Targeted for Elimination/Eradication

Polio

Surveillance of Acute Flaccid Paralysis (AFP) involves a very sensitive system that involves rapid detection, reporting, investigation and response to confirm suspected poliomyelitis cases. To facilitate this, the WHO, in 2020, provided financial (US$120,000) and technical support to the MoH for the implementation of active surveillance of AFP, measles/rubella, rotavirus, PBM and NNT.

In 2020, a total of 247 sites were visited by the surveillance staff across the country according to their priorities. Surveillance staff collected data from individual cases, registers, medical records or logbooks at a reporting site to ensure that no case was missed. As of 31 Dec 2020, a total of 145 AFP cases had been detected. All samples were sent to Ethiopia's National Polio Lab for viral isolation where 69 cases were classified and discarded by the National Polio Expert Committee (NPEC), because lab results were negative for wild polio viruses. At the time of the writing of this report, the remaining 76 AFP cases were pending because lab results were yet to be received.

145 AFP cases were negative for wild polio virus, or vaccine derived polio virus. The performances of active AFP surveillance system is very good. The indicators and milestones set by WHO were achieved. A total of 22 NPEV cases were positive and were discarded as non-polio viruses. The Non-Polio enterovirus result indicates that the samples arrived in the lab in good condition which is an important indicator that shows that the integrity of the cold chain system is maintained for the results received. The National non-polio AFP rate was 4.7 percent while the stool adequacy rate was 100 percent of all the cases detected.

Figure 21. Non polio AFP Detection rate and stool adequacy by Zone, 2020. *Source, MoH, IDSR unit, 2021*

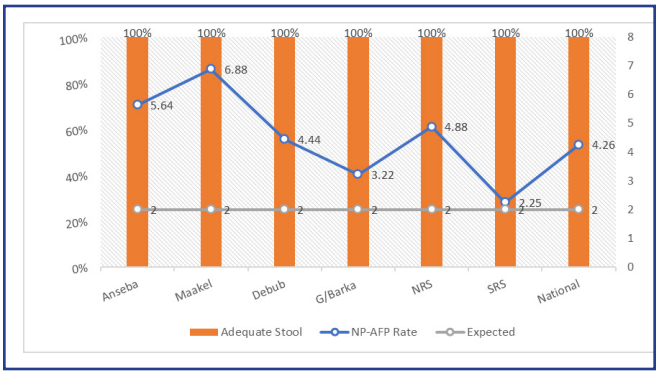


Figure 22. Map showing Non-Polio AFP rate by Zoba in the year 2020 (Source, MOH, IDSR unit, 2021)

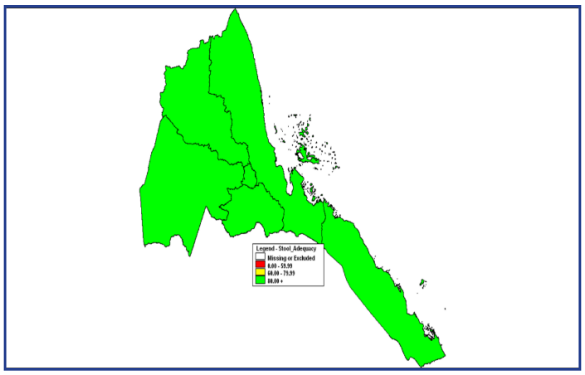


Figure 23. Map showing Stool adequacy rate by Zoba in the year 2020 (Source, MOH, IDSR unit, 2021)

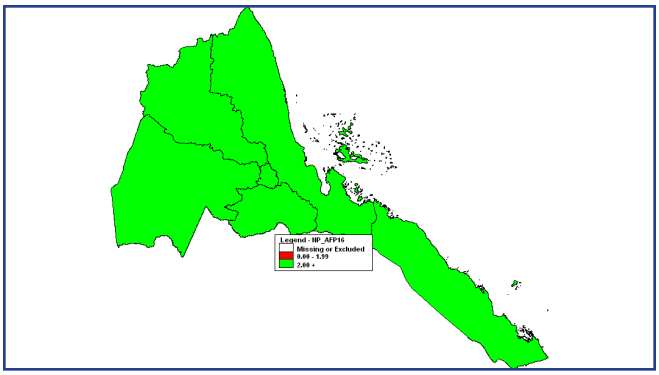


Figure 24. Map showing silent districts for reporting at least one AFP case in the same period (2019 and 2020)

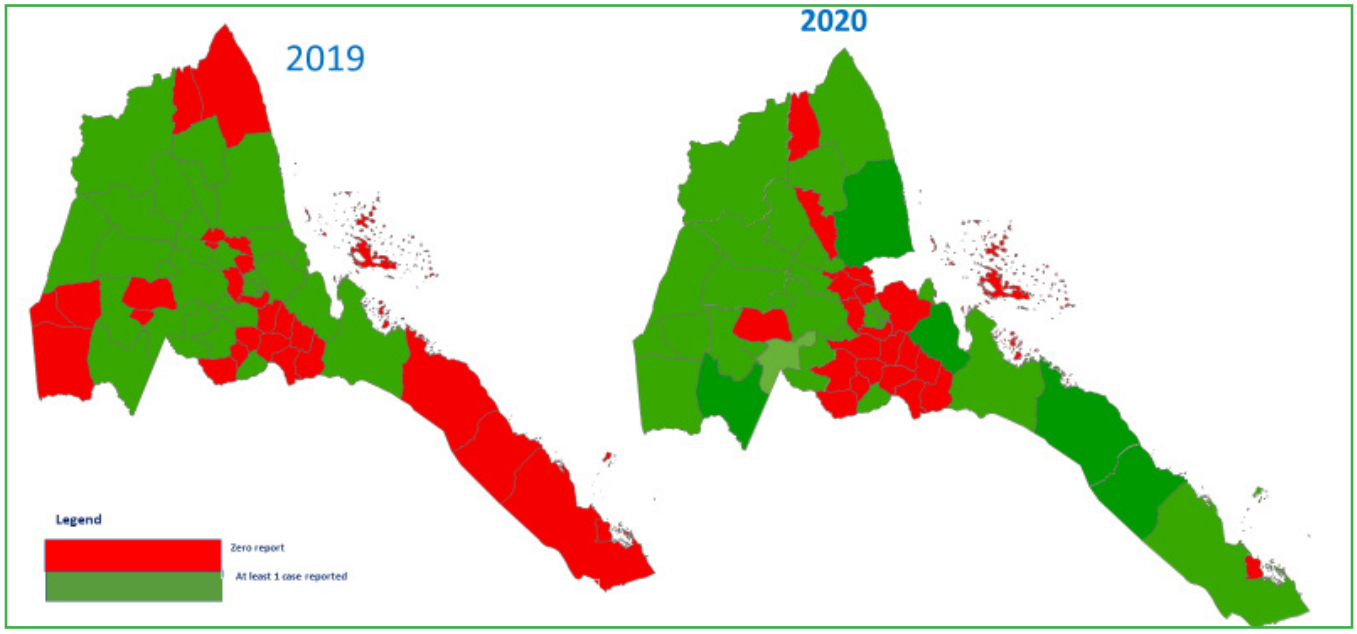


Table 6. Active AFP/Measles/NT surveillance (weekly, monthly & quarterly visit) 2020

ZONE	High Priority Site	Medium Priority Site	Low Priority Site	Total Priority Site
Anseba	8	7	26	41
Debub	10	19	35	64
G/barka	6	21	44	71
Maekel	11	9	12	32
NRS	10	9	20	39
SRS	4	8	4	16
MHPH	3	0	0	3
National	49	73	141	266

All Zobas achieved the Non-polio AFP rate of ≥2/100,000 of children less than 15 years of age and stool adequacy rate of 100 percent.The completeness of the routine report was 98 percentpercent while the timeliness was 97 percent.percent Routine Immunization coverage was 98.7 percentpercent and the coverage for supplemental immunization was 99 percentpercent . The Quarterly polio risk assessment was completed, and mitigation plan developed accordingly.

Polio Risk Assessment and Mitigation Plan

A Polio Risk Assessment is done on quarterly basis with specific focus on the population residing in 16 Sub -Zobas (Districts) bordering Sudan, Ethiopia and Djibouti, which are at high risk for polio importation. This is in part due to sharing a border with countries with a potential risk of polio, frequent cross boarder movement of population, displaced people kept in refugee camps and nomadic population groups. In most of these high-risk districts, the status of routine immunization coverage and the NP- AFP surveillance performances are relatively low. At the national level, routine administrative coverage of OPV3 for 2020 was below 73 percent. Even though immunization coverage of the country is high, there were pocket of geographical areas and nomadic population groups located in mountainous and raged road is given high attention . In this regard, the program developed a quarterly strategy to reach the unreached children using Periodic Intensified Routine Immunization (PIRI) in these hard to reach areas, to increase routine immunization coverage and minimize drop-out rates of immunization services.

To increase immunization coverage and boost the herd immunity, the program conducts defaulters tracing activities during child health and nutrition week. Moreover, periodic intensified routine immunization service is provided in a scheduled way. Collectively, these activities addressed the herd immunity and increased routine immunization coverage of the target population.

Based on the risk assessment, the pocket of less accessible geographical areas and nomadic population groups were identified and addressed through sustainable Outreach Immunization services (SOS). However, due to COVID-19 lockdown, the outreach immunization services were not fully implemented and were postponed to 2021. To implement this approach, there was meaningful involvement of the community during the micro planning stage.

Table 7. Non-Polio AFP rate and stool adequacy rate by zoba, 2015- 2020

	2015		2016		2017		2018		2019		2020	
Zones	NP-AFP rate	Stool adequacy rate	NP-AFP rate	Stool adequacy rate	NP-AFP rate	Stool adequacy rate	NP-AFP rate	Stool adequacy rate	NP-AFP rate	Stool adequacy rate	NP-AFP rate	Stool adequacy rate
Anseba	5.1	100	5.4	100	3.7	100	9.3	100	5.1	100	3.1	100
Debub	2.8	100	3.5	100	3.3	100	1.5	100	0.6	100	3.6	100
G/Barka	3.9	93	3.8	100	6.1	100	4.6	100	2.5	100	3.5	100
Maekel	5.7	95	10.5	96.9	8.3	100	7.2	100	10.1	100	4.1	100
NRS	5.6	91	9.5	94.7	5.6	100	7.1	100	9.2	100	6.2	100
SRS	2.7	100	10.7	100	7.5	100	0.0	100	3.3	100	3.3	100
Total	**3.2**	**92.9**	**6.1**	**98.0**	**5.4**	**100**	**5.2**	**100**	**4.7**	**100**	**4.7**	**100**

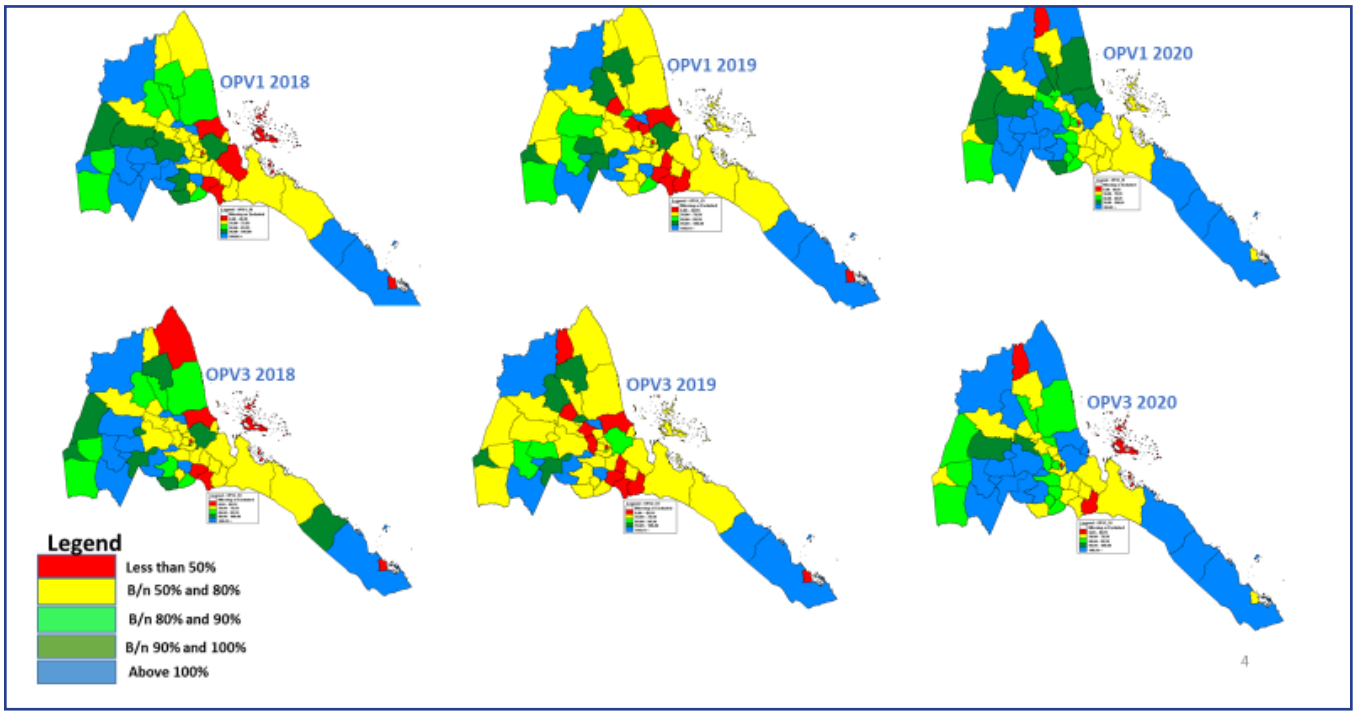
Laboratory Containment Inventory and Survey conducted in 2020

The Laboratory Containment Inventory and Survey was conducted in Eritrea in 2020. To implement the plan, the country established a team made up of the focal points on containment from both Ministry of Health (MoH) and the WHO Country Office (WCO), including the chair and Coordinator of the National Task Force for poliovirus laboratory containment National Task Force (NTF), with the objective of establishing an inventory for the in-country implementation of the Wild Polio Viruses type 1 and 3 and circulating Vaccine Derived Polio Viruses (WPV3, WPV1/cVPDV3 & cVDPV1) survey. The AFRO WPV3/cVDPV3 inventory and survey was implemented as planned for the country. Existing inventory was updated prior to the in-country implementation. 38 laboratories/facilities were surveyed based on the defined inclusion criteria that ensured that all the WPV3/cVDPV3

and possibly related entities were not left unattended remotely through document sharing and reviews, using the telephone communication for monitoring and vested some on-site to ensure transparency. At the end of the survey, all 38 laboratories/facilities surveyed submitted completed inventory and duly signed survey templates as planned. Inventory/survey response were compiled as a national master template for data analysis by the country team. The findings are as shown below:

- 38 (100 percent) of the inventory/survey templates were received, translating to a 100 percent response rate
- 38 (100 percent) of the laboratories/facilities did not have WPV3 or cVDPV3 infectious materials and potentially infectious materials;
- All the quality indicators were rigorously implemented which ensured quality outcome, despite the COVID-19 restrictive movements and challenges
- Feedback to laboratories/facilities was promptly responded to, which aided in the timely survey implementation in the 38 laboratories.
- This report and the national master template were shared in 30 December 2020 with AFRO/ISTs/HQ for feedback to finalize the required processes for AFRO validation of the report.

Figure 25: Districts reporting at least one AFP case in 2019



Credit: Paul Hennessy/NurPhoto via Getty Images

Measles/Rubella Surveillance and Disease Incidence

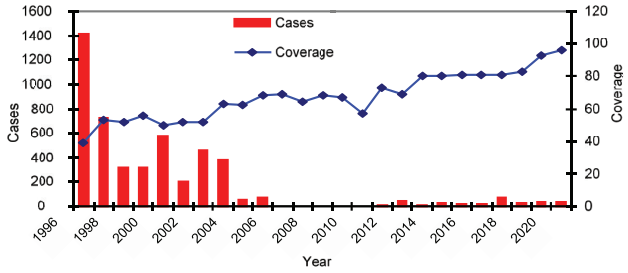
The Measles immunization administrative coverage has increased from 39 percent in 1996 to 81 percent 2020 as shown in the figure below. The surveillance shows that there is a tremendous reduction of measles cases in the country. To increase herd immunity and decrease susceptible individuals, the country introduced a second dose of Measles-containing-vaccine second dose (MCV2) in 2012 and conducted measles rubella campaign in 2018 before the introduction of MR vaccines into routine immunization.

After the MR follow-up campaign, the MR vaccine was introduced to the routine immunization coverage to boost the herd immunity. The measles rubella laboratory in Eritrea was accredited by WHO in May 2019. As part of the national accelerated measles control strategy, reliable case-based lab support for measles surveillance exists in the country. Since, the establishment of measles lab through the support of WHO, the country can determine and understand the prevalence of the measles cases in the country.

Based on the surveillance result, the country has now reached the measles elimination phase. The surveillance system has demonstrated a decline in confirmed measles cases to negligible levels and has shown an increased trend of confirmed rubella cases which is the sign of successful measles control activity. In spite of the high measles vaccination coverage in all districts in the country (70-85 percent), there were few measles sporadic cases with laboratory confirmed cases in adults. In 2020, more than 33 percent of the Zobas sent blood specimens to the National Laboratory for confirmation.

Further, 159 suspected measles cases were reported to the National Lab, out of which 18 were positive for measles IgM (confirmed cases). Most of the positive cases were reported from Zoba Gash Barka and from Zoba NRS. Of the total cases, 88 percent of the measles cases were adult, who were likely not to have been immunized when the programme was not well established and did not seroconvert after their vaccination. Appropriate measures were put in place to control the sporadic cases. The community was sensitized and mass immunization of children less than 15 years old undertaken. The national annual measles investigation rate

Figure 26: Measles Immunization Coverage and cases detected 1996-2020



was sustained at 7.4/100,000. Based on this, the recommended minimum target of 2-3 per 100,000 populations has been achieved. Suspected measles and rubella cases detected, and lab confirmed measles IgM are shown in the table 8.

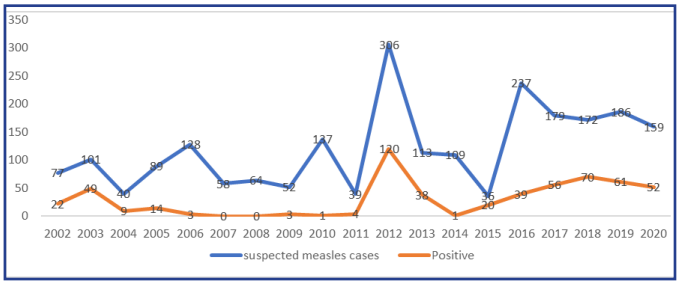
The National level target of Non-Measles Febrile Rash Illness cases per 100,000 population (NMFRI) has been met. However, Eritrea has not attained 80 percent target for districts reporting suspected measles cases with blood specimen. There is no sentinel surveillance system in place to investigate and report congenitalrubella syndrome (CRS) cases, and no retrospective review has been done to date. On average, annually, 150 suspected measles cases were reported through the case-based surveillance system. More than half (60.5 percent) of the confirmed measles cases reported are more than 15 years of age.

As of December 2020, the country has not yet established the National Measles Verification Committee (NVC), which is necessary to document the progress with measles elimination. Eritrea conducted preventive supplemental immunization activities (SIAs) against measles/rubella in 2018, targeting children from 9 months to 15 years of age and reached a total of 1,047,862 children (99 percent of the target) with the coverage averaging 97.8 percent at the National level.

Table 8: Measles Rubella Case based surveillance 2020, (Source IDSR)

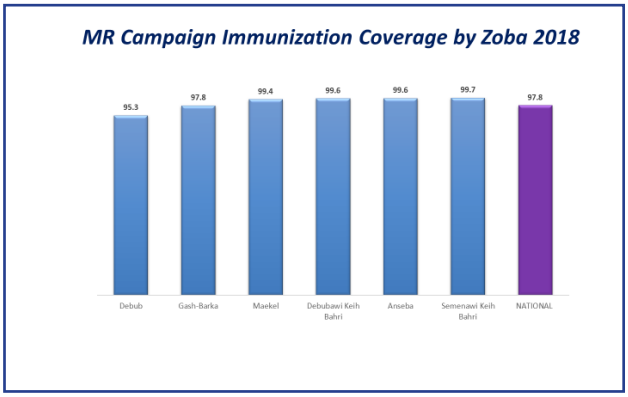
Zoba	Total Population	Suspected measles reported	Annualized rate of Measles investigation	Lab Confirmed measles	Epidemiological Linkage
Anseba	616564	26	16.9	12	0
Debub	1,007,641	7	2.8	0	0
Gash Barka	912,026	84	1.8	36	0
Maekel	709,026	33	18.6	4	0
NRS	465,240	0	0.0	0	0
SRS	87,717	0	0.0	0	0
Total	3798214	159	7.4	52	0

Figure 27: Measles suspected cases and positive cases in the years 2002-2020



Below: Community involvement in Measles/rubella campaign, achieved high immunization coverage (Source, MOH, EPI unit, 2021)

Figure 28: Community involvement in MR campaign



Credit: Sanofi Pasteur

Meningococcal Disease Surveillance and Incidence

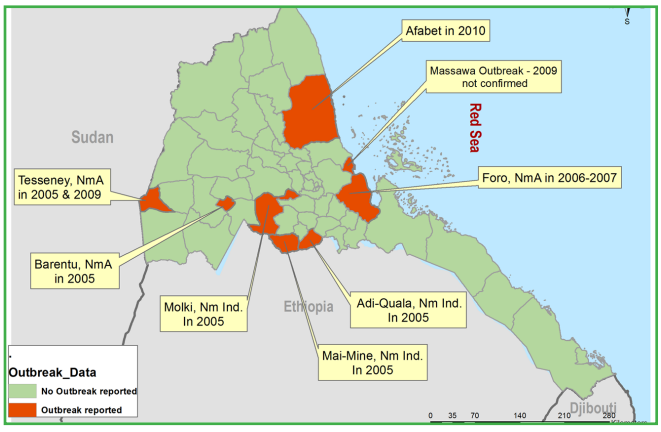
Eritrea is in the meningitis belt and contributes to lower the epidemic risk in all parts of the belt by further building a geographic herd protection and maintaining the benefits of the mass campaigns conducted in neighbouring countries. The country experienced sporadic outbreaks of meningococcal disease in the past, in particular in the Southern and Western part of the country bordering Ethiopia and Sudan. Confirmation of the causal meningococcal sero-group was not always determined. However, circulation of Neisseria Men A was reported in the past 13 years in various sites almost on a yearly basis and outbreaks were reported in Gash Barka (Tesseney, Barentu and Molki) and Zoba Debub (Adi-Quala and Mai-Mine); in Northern Red Sea Zone (Foro). However, since 2010 no meningitis outbreak was reported in the country.

Based on the meningitis risk assessment results and geographic location of the country, preventive Men A and vitamin A supplementation vaccination campaign were conducted for wide age range in 2019. Thereafter, the country conducted a post campaign coverage survey with WHO financial and technical assistance. The survey was integrated to include EPI, Men A and Vitamin A supplementation campaign and was implemented by WHO with the support of international consultants. It was designed to be national representative and carried out using the new WHO guideline undertaking EPI coverage surveys was conducted. A total of 2,747,862 people was vaccinated recording a 95.8 percent coverage at the National level.

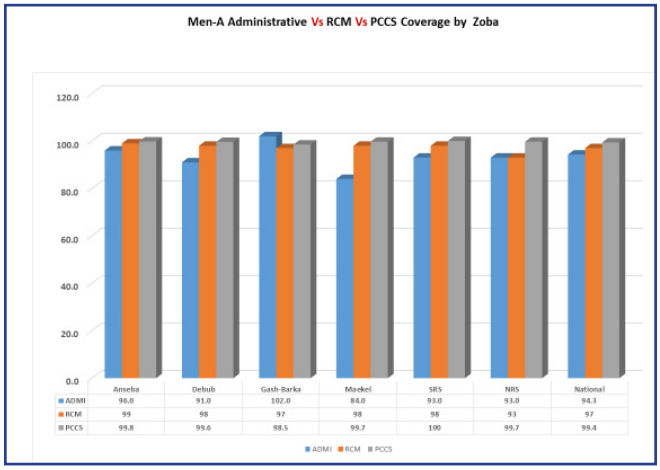
Following a wide age range campaign, Men A conjugated vaccine was introduced into routine immunization programin June 2020 for children at 18 months of age. The country also took the opportunity to strengthen the surveillance for bacterial meningitis program. During the Men A and vitamin A supplementation campaign, a training was given on Men A vaccines to the EPI and surveillance focal persons in all health facilities of the country. WHO guidelines and data collection tools were developed during the campaign. Hence, the country introduced Men A vaccine to the routine immunization program successfully in June 2020.

Above: Her Excellency, Minister for Health, administering Vitamin A at the launching ceremony of Men A vaccination campaign and vitamin A supplementation which was held at Zoba Maekel.

Below. Figure 29: Map of Eritrea indicating meningitis outbreaks in Eritrea 2005-2016



Below. Figure 30: Men A administrative vs coverage survey conducted in 2020 by Zoba (Source, MOH, EPI unit, 2021)

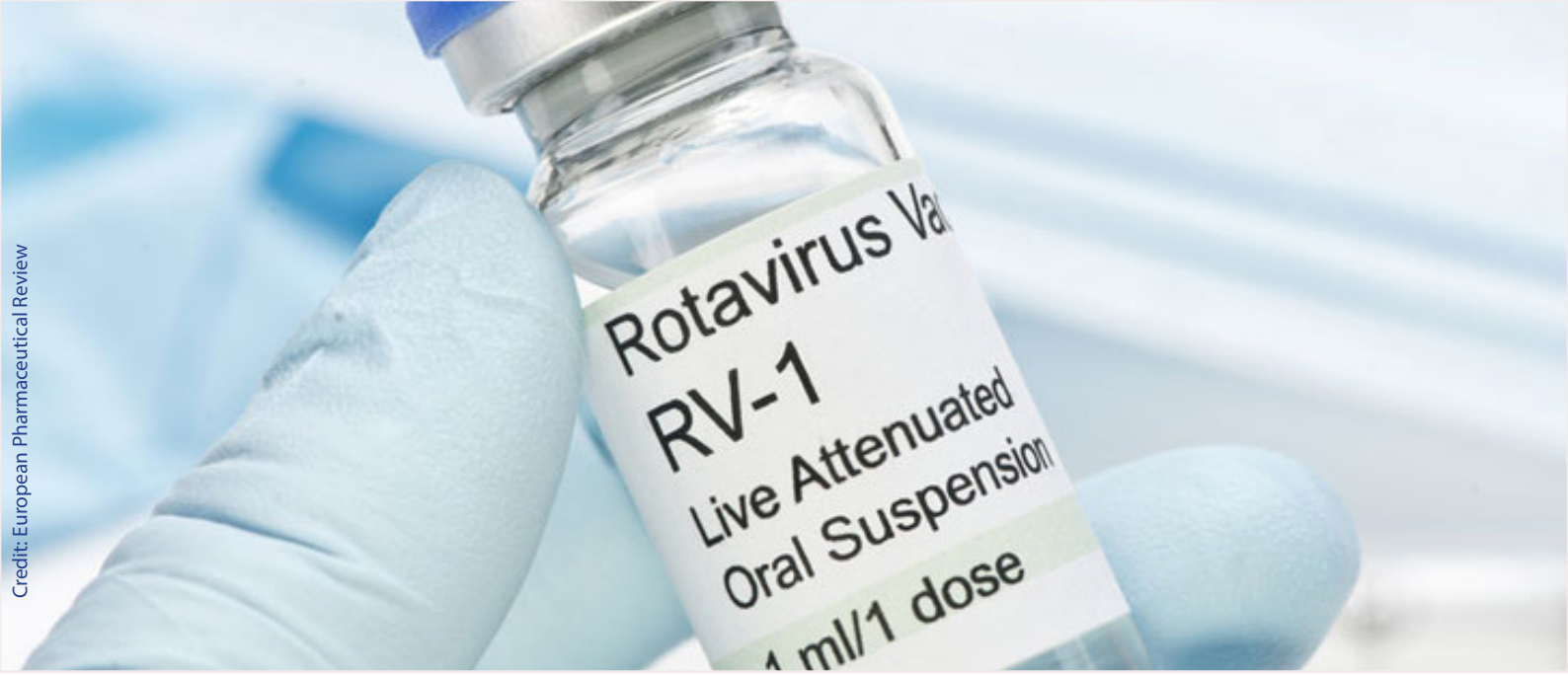


Paediatric Bacterial Meningitis (PBM)

Since 2005, Eritrea established a sentinel site of the Paediatric Bacterial Meningitis (PBM) network in Orotta Paediatric Teaching Hospital in Asmara. A total of 418 Cerebrospinal Meningitis (CSF) samples of suspected meningitis cases (data collected in the PBM network concern < 5-year-old children only) were collected out of which 21 (percent) were positive including 3 Neisseria meningitidis (Nm). No Nm sero-grouping results are available for this report as of December 2020. Nineteen countries among the 26 in the meningitis belt have succeeded in eliminating the risk of meningitis A outbreaks with a tremendous regional public health effort and achievement being currently underway.

Table 9: Bacteriological test results from suspected meningitis cases among children < 5 year-old, in Orotta Paediatrics Hospital, Eritrea 2009-2020. Source - *PBM database, Eritrea 2020*

	2013	2014	2015	2016	2017	2018	2019	2020
Suspected Cases Total	**81**	**22**	**70**	**50**	**42**	**62**	**32**	**15**
LP Done (CSF Collected)	81 (100 percent)	22 (100 percent)	70 (100)	50	42 (100 percent)	62	32	5
Culture Done	81	22	70	49 (98 percent)	42	60	30	15
Showed Growth	19	4	13	2	2	3	2	1
S. Pneumonia	2	-	-	1	-	-	-	-
N/ Meningitides	-	-	-	-	-	-	-	-
Other Organisms	17	4	13	1	2	3	2	1
No Growth	62	18	57	47	40	57	29	13
Died	0	0	0	0	0	0	0	0



Credit: European Pharmaceutical Review

Rota virus Surveillance

The Rotavirus sentinel site was established in 2010 in Orotta Paediatrics Hospital. Training and sensitisation to the surveillance staffs in the hospital is given on a yearly basis and the working tools have been updated. At the beginning, 53 specimens were collected of which 22 (40 percent) of the cases were positive for Rota Virus. In 2020, 80 stool specimen were collected and tested for rotavirus, of which 24 (30 percent) were positive. However, no detailed report was generated in 2020.

Maternal and Neonatal Tetanus Elimination

In Eritrea, provision of tetanus toxoid vaccine (Td) is one component of ANC services, and is provided to pregnant and non-pregnant women of childbearing age, 15-49 years old. Td is given to prevent tetanus in newborns and women during delivery in unhygienic environments. If a woman has received no previous Td injections, she needs two doses of Td during pregnancy for full protection.

However, if a woman was immunized before she became pregnant, she may require one injection or not require any Td injections during pregnancy, depending on the number of injections she has already received and the timing of the last injection. For a woman to have lifetime protection, a total of five Td doses are required. The EPI coverage survey of 2020 indicates that the average household size of the surveyed households for the mother's immunization was 5.4 persons. The results of the mother Td immunization survey revealed that 93.5 percent mothers reported that they had had a Td vaccination card or other document.

Consistent with the fact that higher proportion of mothers reported delivering at health facilities (68.5 percent), the assistance given during delivery was predominantly from skilled health personnel. Nurses aided 43.4percent of deliveries, midwifery to 31.8 percent, doctors to 7.9 percent, and community health workers to 0.7 percent. 15 percent of the deliveries were assisted by traditional birth attendants and 8.7percent by relatives or friends. Overall, 93.3 percent of mothers had received at least two doses of Td vaccines, which were slightly lower compared to the estimates reported by the 2017 EPI coverage survey of 95.4 percent.

The proportion of mothers who received at least two doses of Td for Zobas Anseba was 98.7 percent, for Debub 96.2 percent) and Southern Red Sea it was 91.9 percent. Mothers in urban areas were 95.5 percent more likely to receive at least two Td doses than those in rural areas at 92.2 percent hence mothers in urban areas were 90.7 percent more likely to be protected against neonatal tetanus than those in rural areas at 84.7percent. Like the 2017 EPI coverage survey estimate of 88.4 percent, in 2020, 86.8 percent of children were protected against neonatal tetanus. The likelihood of protection against neonatal tetanus by background characteristics of mothers have similar pattern as to that of mothers who received at least two doses of Td injections.

Protection against neonatal tetanus was significantly higher among children in Zobas Debub (94.7 percent), Anseba (89.6 percent), and Maekel (89.6 percent) compared to the other Zobas. Protection was the least in Zoba Gash-Barka at 78.3 percent. The level of protection has shown significant increases with an increasing age of children of mothers from 81.4 percent of mothers below 25 years of age to 87.5 percent of children of mothers aged 35 years and above. Level of education of mothers also plays significant positive role towards protecting children against neonatal tetanus.

More than nine in ten of children of mothers with someform of education were protected compared to three-fourths of children to mothers with no education. The survey results also showed that 44.6 percent of the mothers did not receive vaccinations because they were unaware of the need of vaccination while 37.6 percent were not aware of the need to return for subsequent doses . Others, 8.4 percent reported

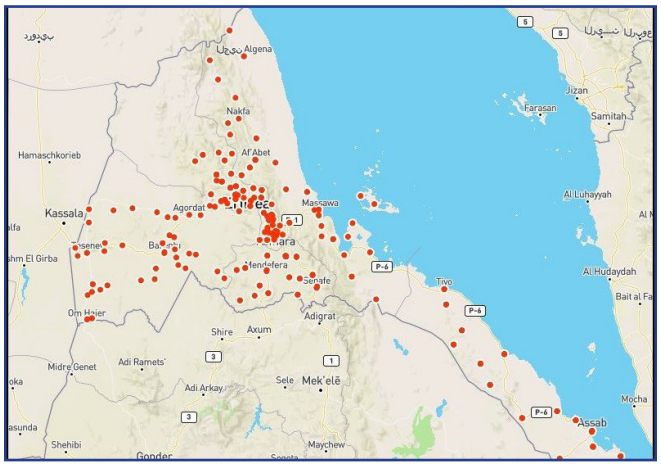
that the place of immunization too far while 6.8percent reported that the busy nature of their work as the reason why mothers did not get the Td injections.

Integrated Supportive Supervision (ISS/ ODK)

Supportive supervision is an effective strategy for continuously enhancing staff performance. It is carried out with the focus on using supervisory visits as an opportunity to improve the knowledge and skills of health staff. An Open Data Kit (ODK) was used to build a data collection form for survey. The collected data was aggregated and sent to the servers in Asmara and was collated and extracted to useful formats.

It is an Integrated Electronic Checklist used by all Zoba for supervision during Active case search and Routine Immunization via smart mobile phones in the field at Health Facilities and focal sites. These supportive visits are automatically mapped on a WHO server in AFRO.

Figure 31: Distribution of health facilities visited by ODK during ISS in 2019-2020.



Timeliness and Completeness of Monthly and Weekly Reports

An important indicator of a good-quality reporting system is the timeliness and completeness of reporting at each level. In the event reports are sent and received on time, the feasibility of detecting a problem and conducting prompt and effective response is greater. If, however, reports are incomplete, then the information cannot describe the problem, and if they are late, or not submitted at all, aggregated information will not be accurate. All zones achieved the target set by WHO (i.e. ≥80percent). Monthly timelines in all zones achieved greater than 90 percent and in the monthly completeness, reported 100 percent for all the zones. The weekly timelines score is greater than 90 percent with the lowest coverage being Zoba Gash Barka and SRS which reported 92 percent. The completeness of weekly report for all the zones is 100 percent.

Recommendation

- Based on the cMYP 2017-2021 the country has made significant progress towards disease elimination and eradication of VPD (Polio, Measles, MNT, PBM etc) and has managed to sustain very high coverage above 95percent with Penta3, OPV3, MCV1 for more than 5 years. The dropout rate between these two doses is less than 8 percent at national and district levels in the last three years. However, coverage is not homogeneous across all Zobas especially in hard to reach areas and nomadic population. To achieve disease elimination and eradication, Eritrea needs to sustain the program.

- The National EPI and Men A vaccination coverage survey done in 2020 identified programmatic strengths that included the delivery of integrated services offered 6 days a week and good caretaker awareness of the benefits of immunization and high demand for services. However, it was also noted that lack of transportation has posed a risk of delaying vaccine availability to the population, and to reaching the hard to reach populations which the county needs to be addressed it.

- The country has had low routine immunization and SIAs administrative coverage, but significantly high coverage by surveys, indicates that the official population figures may be overestimated. These denominator figures are generated as projections. Eritrea has never done any population census to know exactly its population figure, which it needs to conduct population census as to resolve the problem of denominator.

- Ensure that all districts report and investigate suspected cases and conduct regular risk assessment to identify and address immunity gaps. The triangulation of data from coverage monitoring, surveillance and risk assessment exercises helps to target tailored interventions within the routine immunization service delivery and through the Periodic Intensification of Routine Immunization (PIRI). These performance gaps should be addressed

- The country should set up a national verification committee to document the progress with measles elimination. As a way of monitoring the impact of the introduction of rubella vaccine, the country should consider conducting a retrospective review of CRS in a few tertiary care centers and initiate sentinel CRS surveillance on a prospective basis.

Table 10: Timeliness and completeness of the surveillance of VPD weekly reports as of June 2020

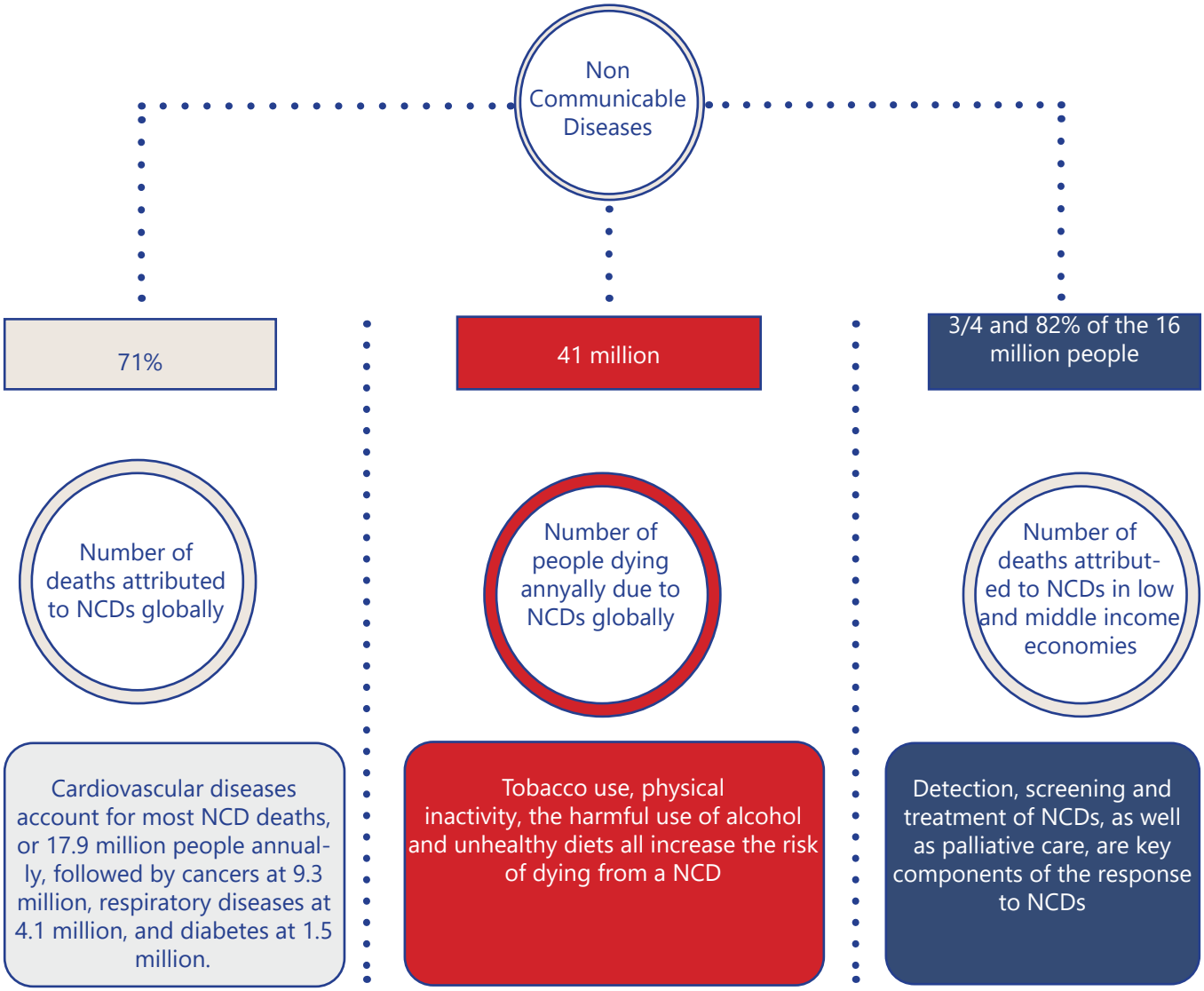
Zoba	Reporting health Facilities	Timeliness (percent)	Completeness (percent)
Anseba	42	97	100
Debub	64	84.8	90.2
Gash -Barka	71	90.6	95.4
Maekel	31	95.4	100
NRS	41	100	100
SRS	15	82.5	100
OPH	1	100	100
Total	265	93	98

Table 11: Major gaps and ways for ward on immunization and surveillance of VPD

No	Targets	Gaps	Ways forward
1	Planned 4 rounds of SOS in 16 hard to reach areas and nomadic population	Sustainable outreach activities interfered by the COVID-19 pandemic in four Zobas of hard to reach areas and nomadic population.	Four rounds of SOS planned in 16 hard to reach areas and nomadic population. SOS is rescheduled for 2021
2	Transport should be available at every level of health facility for monitoring, supervision and to collect and transport sample specimen.	There is acute shortage of transport support to conduct monitoring, supervision and collect samples from the cases and transport from health facilities to the National lab.	Due to COVID-19 lockdown, transport support was interfered (rental cars not permitted).
3	Shipment of sample specimen (AFP, measles and Rota virus) to the WHO accredited regional labs	Regular flight interruption delayed shipment of AFP, Measles samples to Ethiopia National Polio and Uganda Measles Labs as a result delayed classification and timely discarding of the samples	WHO Country Office used irregular air flight to ship AFP samples to WHO accredited regional lab, but flight not reliable.
4	Timely use and liquidate funds transferred to the MOH by WHO and other partners.	Delayed liquidation of DFC fund transferred to the MoH by WHO and other partners.	Process on going to liquidate fund transferred to the MoH
5	Synchronize surveillance and immunization activities between neighboring countries (Sudan, Ethiopia and Djibouti).	Risk assessment done on quarterly bases, it reveals that there is high cross border population movement residing in the borders of Sudan, Ethiopia and Djibouti. These people are at high risk for polio importation due to polio viruses (cVDPV) outbreak in Sudan, Ethiopia and South Sudan.	Surveillance and immunization activities has to synchronized with neighboring countries.
6	Introduce IPV1/IPV2 vaccine to the routine immunization program.	There is a cohort with OPV2 immunity gap from the switch of tOPV to bOPV). The country introduced IPV 1st dose into RI in August 2018. However, due to global shortage of IPV vaccine, catch up vaccination campaign was not conducted in 2020. Target population for the catch-up campaign for IPV are children born in January 2016 – June 2018.	IPV1 catch up vaccination campaign postponed for 2021, due to COVID-19 lockdown.
7	EPI and IDSR modules training and sensitization on VPD planned to be conducted on yearly bases, especially to the newly deployed staff.	Training and sensitization of EPI and IDSR modules was not conducted in three Zobas; due to COVI-19.	

Non Communicable Diseases.

A global perspective - source Data source: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases, accessed on May 19, 2021 at 9:57 am



NCDs, Eritrea Country Context

Chronic diseases are a major public health problems accounting for a considerable share of the national disease burden in low- and middle-income countries (LMIC), among which Eritrea belongs. The rise of NCDs has been driven by primarily four major risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets. The epidemic of NCDs poses devastating health consequences for individuals, families and communities, and threatens to overwhelm health systems. The socioeconomic costs associated with NCDs make the prevention and control of these diseases a major development imperative for the 21st century.

In Eritrea, the WHO continues to provide leadership and the evidence base for action on surveillance, prevention and control of NCDs. Beyond prevention methods, management of NCDs is critical. This includes detection, screening and treatment of the diseases, as well as palliative care for those in need. The prevention and control of NCDs in Eritrea is guided by the WHO Global Action for the prevention and control of NCDs 2013-2020.

On matters of cross-sectoral collaboration, the WHO is guided by the Global Coordination Mechanism on the Prevention and Control of NCDs in the management of NCDs in Eritrea.

2020 Activities

In 2020, the following activities were planned;

A. Health System Strengthening

1. Establish NCD committees at national and zoba levels
2. Develop and implement standards, manuals and guidelines
3. Conduct training of CHW on NCDs & their risk factors in each zone
4. Provide training of trainers (TOT) for selected nationwide health workers on WHO-PEN & other related protocols.
5. Conduct training of HW on WHO-PEN (early detection, prevention, control & management of MNCD)
6. Establish new NCD corners & NCD clinics in all zones and Equipped Health facilities with the minimum clinical equipment.
7. Development of CHW training manual & discussion guide
8. Conduct MNCD screening in NCD corners.
9. Conduct review meeting with the zonal NCD coordinators at national level & each zone annually

B. Health Promotion

1. Develop, Produce and distribute HP materials (stickers & posters)
2. Development of self-guided intervention packages to help patients with MNCD, risk factors and their families to monitor and manage their disease or condition.
3. Develop & distribute uniform national MNCD case reporting formats.
4. Develop & distribute uniform national Diabetes patient identification card (personal card).
5. Develop and implement an advocacy campaign to national, zonal, local community & religious leaders, and other partners that is consistent with and supportive of the national action plan for MNCD prevention and control.
6. Intensifying media campaigns using television, radio and printed media

C. Strengthening Surveillance, Research and Monitoring

1. Conduct screening of RHD for students.
2. Nation-wide implementation of MNCDs monitoring & supervision activities using the supervisory check list at national & zonal levels.

2. Activities Implemented

A. Health System Strengthening

NCD screening in NCD corners is ongoing .

B . Health Promotion

The routing NCD community sensitization at health facilities is ongoing

C. Strengthen Surveillance, Research and Monitoring

There was no activity done because of COVID 19 pandemic and budget constraints.

3. Epidemiology of Major Chronic diseases from NHMIS

The major chronic diseases including Cardio-vascular diseases, Cancer, Chronic Respiratory Diseases & Diabetes and their related complications generate a real and significant threat to Eritrea and are responsible for 51.7 percent of all deaths. According to the HSSDP II, the percentage of total deaths, under 70 years, in both sexes in Eritrea is mainly due to cardiovascular diseases at 37 percent, cancers at 27 percent, chronic respiratory diseases at 8 percent and diabetes at 4 percent.

Heart diseases (11.2 percent) is the first cause of death, stroke (5.7 percent) is the seventh cause of death while Diabetes Mellitus (5 percent) is the ninth cause of death are among the ten leading causes of mortality in Eritrea. Cardiovascular disease is largely preventable. Most cardiovascular diseases and diabetes are brought about and complicated by some combination of smoking, high blood pressure, elevated blood cholesterol, unhealthy dietary habits, excessive alcohol consumption, obesity, a sedentary lifestyle, and psy-

cho-social stress. Reducing or ideally, eradicating them will lead to a reduction not only in cardio-vascular diseases but also in other non-communicable diseases that share similar risk factor. Asthma is becoming one of the most prevalent chronic conditions affecting many Eritreans. Among the five major chronic non-communicable diseases; Asthma and Hypertensive have higher incidences, however, mortality due to Diabetic and heart disease is higher as shown in figures below.

Figure 32: IPD & OPD Mortality MNCD of 11 months of the past five year's comparison

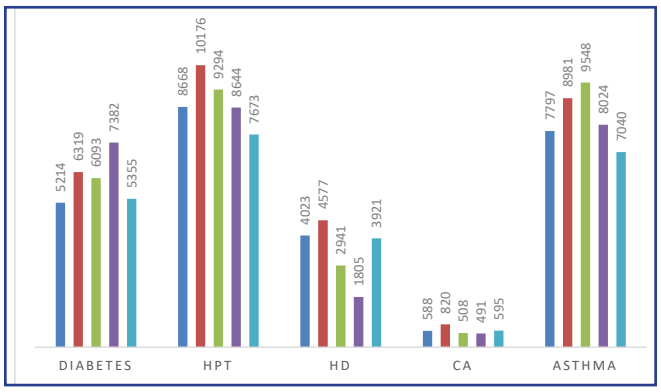


Figure 33: IPD & OPD Morbidity Major Malignancies of 11 Months of the past five year's comparison

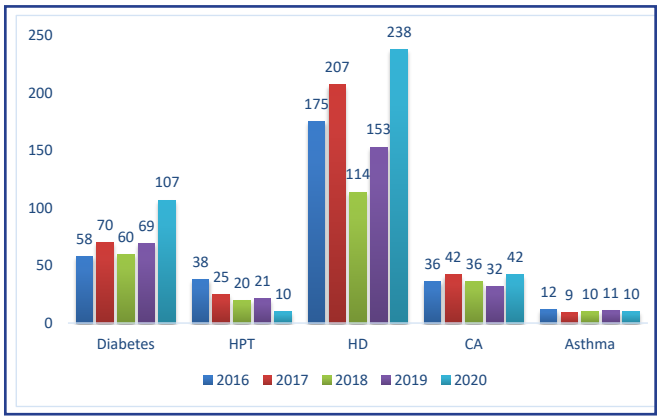


Table 12: Zonal comparison Morbidity of MNCD from (Jan. – Nov. 2020)

	DM	HTN	CVD	Cancer	Asthma
Anseba	293	448	216	17	687
Maekel	826	2102	267	25	1008
NRS	342	411	145	11	822
SRS	218	190	38	4	309
GB	727	1240	360	27	1517
Debub	756	1322	543	21	1203
Referal	2193	1950	2352	490	1494

Figure 34: IPD & OPD Morbidity Major Malignancies of 11 Months of the past five year's comparison

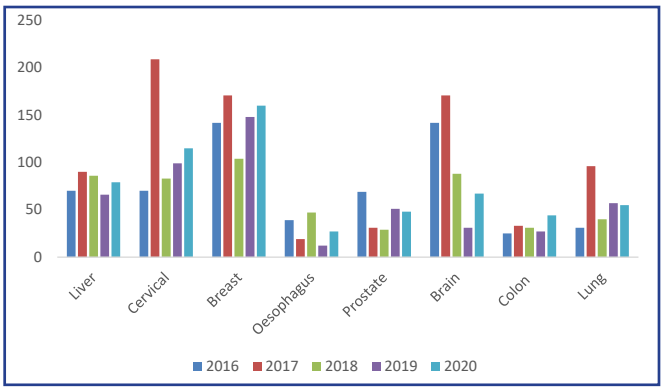


Figure 35: IPD & OPD Mortality Major Malignancies of 11 Months of the past five year's comparison

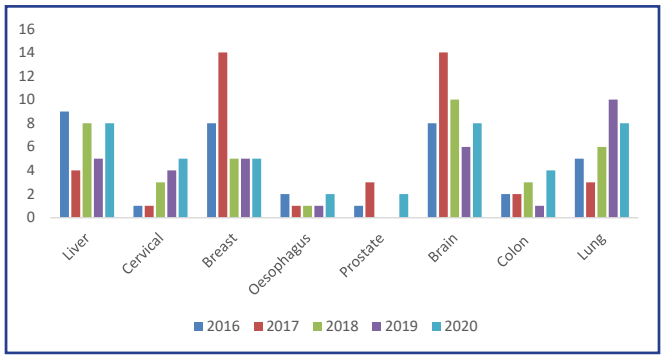


Figure 36: Zonal comparison Morbidity of MNCD from (Jan. – Nov. 2020)

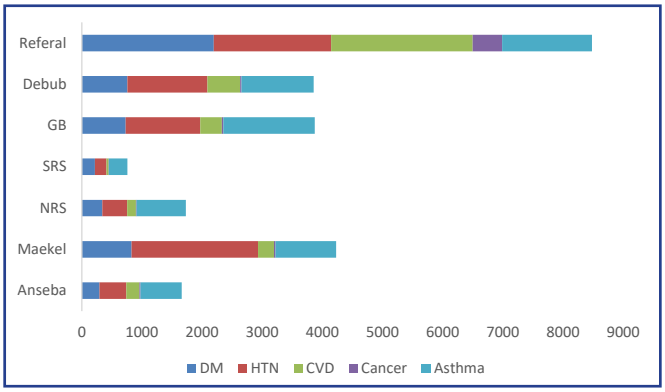
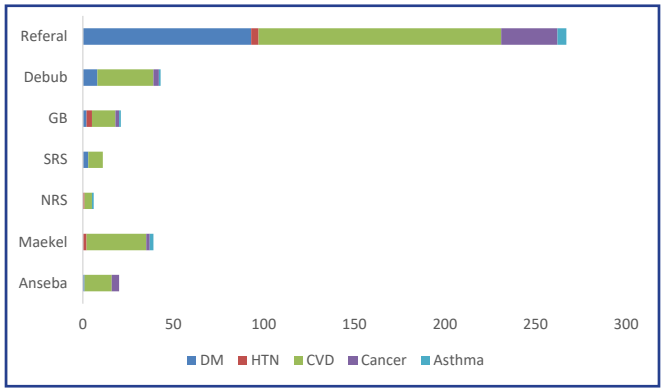


Figure 37: Zonal comparison Mortality of MNCD from (Jan. – Nov. 2020)



4. Challenges and Constraints

1. Unavailability of fund & transportation are the major constraints of the program. However, the unit is partially functional and is collaborating with the Zonal branches & other programs

2. The unit does not sufficient IT equipment (LCD projector, efficient and enough computers and printers) for efficient and effective work for the Zonal NCD coordinators

3. Continuous reshuffling of HW and little or no space for NCD corner & clinic provided

4. Insufficient & low quality (easily broken) basic medical equipment at HCF

5. Shortage of medication/drugs needed for MNCD (diabetic drug, Anti-hypertensive drug and Asthmatic drug)

6. Inadequate experienced human resources in the MoH

7. Inadequate financial resources to procure and distribute relevant equipment and supplies to the MOH

8. Challenges in obtaining travel permit to conduct supportive supervisory visits

5. Conclusions

1. **Chronic diseases:** Most of the chronic diseases like cardio-vascular diseases, diabetes, cancer, asthma, (chronic obstructive pulmonary diseases) are becoming a major public health concern in all developing countries.

2. **Effective prevention and control** of such diseases needs continuous capacity building of health workers and increasing awareness of the general public on the risk factors like smoking, physical inactivity, diet, and alcohol abuse. Such activities will require significant amount of budget allocation from government.

3. **The RHD screening** in school children was done in small scale by the Italian experts (UNCORE UNMONDE MASSA).

4. **Financial resources** are required to provide prevention activities that are simple and cheap. (Needs an intervention by other UN agencies)

Table 13: Zonal comparison Mortality of MNCD from (Jan. – Nov. 2020)

	DM	HTN	CVD	Cancer	Asthma
Anseba	1	0	15	4	0
Maekel	0	2	33	2	2
NRS	0	1	4	0	1
SRS	3	0	8	0	0
GB	2	3	13	2	1
Debub	8	0	31	3	1
Referal	93	4	134	31	5

WCO Supports for NCDs and Mental Health Activities in 2020

The WCO provided technical and financial support to the MoH for institutional capacity building to provide quality and continuity of essential services. The implementation outcomes were:

1. National Multi-Sectoral Strategic Plan for Non-Communicable Diseases (NCDs) 2019-2023 finalized printed and distributed.

2. As part of health system strengthening and continuity of essential health services, one - year supply of different types of Insulin (Short, Intermediate, and mixed types) and Glucagon was supplied by WHO to seven hospitals.

3. Some essential equipment supplies and essential drugs were procured for the lower health facility and community hospitals levels.

4. Risk factors reduction on Chronic NCDS and mental illness facilitated and supported by providing updated guidelines and offline teaching materials WHO video courses and lectures

5.

Mental Health

The vision for mental health service in Eritrea is to reduce the incidence and prevalence of mental disorders and improve mental health of the people of Eritrea by attaining equitable, accessible and cost-effective mental health care services for all people in Eritrea through the provision of comprehensive and community based mental health services integrated with other health services, provided by skilled personnel, with the involvement of all stakeholders. Most of the planned activities were not implemented mostly due to budget constraints and partly due to low focus on Mental Health Program especially at zonal level. However, some activities from within and outside of Mental Health planned activities that have been conducted were as follows;

1. A 7 days ToT workshop on the Mental Health Gap Action Programme (mhGAP) was conducted for physicians and psychiatric nurses IG and reached 42 health workers.

2. 7-day trainings on mhGAP were conducted in targeting 40 health workers from Central, 35 from NRS and 30 from Debub, Anseba and Gash zones each.

3. 900 copies of the second version of the Mental Health Gap (mhGAP) Intervention Guide aimed at promoting improved access to mental health services at primary health care level were adapted, printed and distributed.

4. Mental Health Policy and Strategic Plan of action 2019-2023 have been finalized, printed and distributed.

5. Procurement of psychotropic medicines still in process.

6. Awareness training on mental health for 150 11th grade students in Riesi – Adi (Embaderho) and for 500 11th grade students in Barka Secondary School in Asmara secondary school aimed at preparation to Sawa conducted for.

7. A mental health sensitization organized by MoH branch in SRS zone was conducted targeting 298 teachers and some community members in Southern Red Sea.

Recommendation

1. There is a need for all zones to consider establishing regular separate mental health OPD service and IPD word with separated beds to provide comprehensive mental health services.

2. There is "no health without mental health" and thus adequate emphasis should be given to mental health at all health divisions and other sectors,

3. Advocacy for the allocation of adequate human and financial resources to mental health interventions should be strengthened,

Proposed Way Forward

1. Fasttrack the appointment of the Regional Mental Health focal person and Coordinators in the 2021-2022 FY

2. Develop a training manual for community mental health workers by December 2021

3. Conduct mhGAP 'Training of Trainers and Supervisors' workshops for 150 health workers composed of doctors, psychiatric nurses, public health Officers, degree nurses, pharmacist and physiotherapist for 7 days at 6 zones by December 2021

4. Increase mental health OPD service at regional hospital and community hospital level and IPD at Regional Hospital (RH) and Regional Referral Hospitals (RRH)) by December 2021. This to include an increase of 4-6 beds and one OPD for mental illness from the current zero

5. Ensure procurement of psychotropic medicines and the distribution of adequate psychotropic medicines to all Health facilities providing mental health services by Pharmaceutical Eritrea

6. Coordinate with the MoE to integrate a school based mental health program with existing life skill program

7. Conduct developmental and behavioral screening programs at 60 kindergarten schools

8. Train and encourage 300 employers and 300 employees on mental health problem for 2 days at 6 zones

9. Train basic training to 150 HIV/AIDS counselors and ARV information officers on the relationship between mental disorders and HIV/AIDS for 3 days at 6 zones

Environmental Health

The 2012-2016 Health Services Sector Development Program (HSSDP) stated that due to the current and anticipated increments in industrial, agricultural, mining and port among other development activities in Eritrea as well threats from emerging and re-emerging diseases, there is need to scale up interventions in Occupational Health. There is also need of promoting OH services and practices in workplaces with special emphasis on the high-risk sectors. Accordingly, a unit was established in the Division of Environmental health to plan, implement, and monitor the program. However, not much has been done thus this is another important area that deserves due attention in the second HSSDP (HSSDP 2017-2021). The environmental Health Division in close cooperation with all its units and specially the workplace health and safety unit is committed to improve the health conditions of the working force of the people of Eritrea by introducing standard working and living conditions in the country.

Table 14: Number of Health workers trained on HCWM & IPC

Zone	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Maekel*				145			50	80	30	0	30
Debub			109	0	162	204	114	29	33	74	
Anseba	179	150	144	49	395	344	48	33	50	0	96
NRS						317	100	45	22	0	65
SRS			93	253	253	280	170	120	-	89	33
GB		72	167	198	265	206	150	0	94	72	0
National	1995	313	2023	645	2173	1351	632	307	229	235	224
Percent											
N.B.: in addition to the above, 94 cleaners were trained on proper HCWM in SRS											

Major planned activities of Workplace Health and Safety Unit

1. National Occupational Health and Safety situation analysis conducted.
2. Health risks of climate change are assessed, and document is in place.
3. National Plans of Joint Action (NPJA) on Health & Environment for Eritrea is developed in 2020..
4. A national guideline and adapting tools on climate change developed in 2020.

Implementation Status

The major achievements of WHS Unit on Climate Change and Health in 2020 were;

1. The third national communication (TNC) report which is a requirement to the UNFCCC non-annex I parties was finalized and circulated to UNFCCC for approval.
2. A study on Climate Change sensitive diseases that are associated with water was done. and will be disseminated when the national lock down is lifted.
3. Healthy workplace promotion was conducted in 2020 through multiple channels to the community , health work force and employees and employers.
4. Interview on TV on healthy workplace promotion was done in 2020 through multiple channels to the community, health work force and employees and employers.

Health Care Waste Management (HCWM) achieved activities

Due to the shortage of budget and the COVID-19 global pandemic, there were limited activities in healthcare waste management. As part of IPC, health care waste management was included in the interim guidelines were distributed from WCO plus as part of covid19 preventive measures cascade training was given in Zobas.

Climate Change and Health

1. The workplace health and safety unit has been participating in preparing the third national communication (TNC) report as a requirement to the UNFCCC non-annex I parties. The report was completed in 2020 and directed to UNFCCC for approval.
2. Programs of Ministry of Health (Malaria, IDSR, HMIS, NCDs, NTDs, Blindness prevention and control, and vector borne diseases etc) relevant to the subject were communicated.

3. Data related to the health sector was shared to the consultancy firm i.e. the Higher board of education.

4. Health sector's climate change vulnerability impacts and adaptation options document was finalized and incorporated into the TNC.

It has been described that malaria, dengue fever and yellow fever are the main vector-borne disease concerns that might result due to climate change by the technical working group of the TNC Moreover, based on desktop qualitative assessment, that are climate change and water related diseases are Malaria, Malnutrition, Diarrhea, Schistosomiasis, Dengue fever and Chikungunya.

Recommended Adaptation Options

1. Establish/Strengthening Climate Resilient health systems

- Providing policies, guidelines and resources on climate change and health

- Update the existing health policies and develop new policies to meet the current international and national standards

2. Creating awareness and precautions

- Raise community awareness and knowledge on climate change and health

- Increasing the number of trained personnel in climate change and health at the higher learning institutions and research organizations is needed and

- On job training for health personnel related to climate change and health is needed.

3. Strengthening the research capacity on climate change and health.

- Currently there is no expert on climate change and health in the country so in job training and providing technical support to academic and research institutes is crucial.

- The health research centers should be equipped with adequate laboratory facilities and

- Strengthening of national research collaborations related to climate change and health.

4. Vector-borne diseases

- Integrated vector control including environmental management, and indoor residual spray

- Treated bed net distribution and continuous follow-up for their use of insecticide-treated bed-nets

- Malaria case management including early diagnosis and prompt treatment
- Community-based management of malaria by training community health agents

- Ensuring availability of drugs for treatment and laboratory supplies.

- Operational research including malaria surveys, drug sensitivity and drug resistance, entomological studies, etc.

5. Nutrition

- Improving maternal nutrition before, during and immediately after pregnancy

- Early and exclusive breastfeeding for at least six months; and

- Timely introduction of safe, appropriate, and high-quality complementary food for infants, accompanied by appropriate micronutrient interventions.

6. Diarrhea

- Feeding and supply of oral rehydration solutions (ORS)

- Safe and hygienic stool disposal

- Introduction of Water Safety Plans (WSP)

- Household water treatment and safe storage

- Development of climate resilient water infrastructure
- Vaccination including Rota virus

A Study on potential climate change sensitive diseases related to water

In Eritrea, the most common CC sensitive diseases related to water resources are water and food-borne diseases (water-based, water-washed and water-related diseases).

Recommendation

1. Establishment of climate resilient public health systems
2. Strengthening surveillance, early warning, and communication systems.

Health Promotion and Social Determinants of Health

Risk Communication and Community Engagement (RCCE): Situation Analysis

On 30 January 2020, the World Health Organization (WHO) declared the outbreak of a novel coronavirus as a public health emergency of international concern. COVID-19, previously called coronavirus infection, is a new strain of coronavirus, not previously identified in humans. The first case of COVID-19 in Eritrea was reported in in March 2020 and was imported through international travel. By December 2020, the Ministry of Health (MoH) had issued reports that pointed to community transmission

The MoH, in collaboration with development partners, has developed a national COVID-19 Preparedness and Response Plan delineating government, partner and community roles. Ready communication plays a critical role in the implementation of this national plan. Through communication, transparency and public trust are maintained and appropriate guidance is disseminated, to prevent panic and the spreading of rumors which pose major challenges to the management of COVID-19.

To ensure the implementation of the national plan, a multiparters Risk Communication and Community Engagement (RCCE) Committee has been established under the Health Promotion Division of the MoH. This committee will continually provide oversight and conduct quality assurance of the implementation process.

At the subnational level, the RCCE committees are responsible for the adaptation and promotion of existing mitigation measures, while the provision of essential services continues as usual. The RCCE Committee will coordinate population sensitization and activate mechanisms for gathering community feedback and for tracking rumors. A multi-channeled strategy will be used to implement the activities that will be coordinated by the RCCE Subcommittee under the general guidance of the COVID-19 National High-Level Task Force.

The following strategies were taken to accelerate the implementation of the activities:

1. **Advocacy:** The objective is to raise awareness and commitment at national level to mobilize resources (human, material and financial) and gain commitment to contain the COVID-19 pandemic.

2. **Information and outbreak announcements:** Announcements of outbreaks will come through the COVID-19 High-Level Task Force only. Any information, communication and education aimed at behavioral practices should be developed/reviewed by the RCCE Subcommittee so that its dissemination can be supported by the mass media, thus maintaining public trust by using appropriate channels.

3. **Mixed communication channels:** Continuous training/sensitization of partners and stakeholders is needed at various stages of the pandemic to create national awareness and build broad-based partnerships. Community health workers, school health promoters, social workers, etc., who link the communities and service providers will be provided with up to date COVID-19 information.

4. **Communication for behavioral change:** The structures established at each level are equipped to take the lead in the RCCE activities and to ensure 'two-way' communication. While messages will be developed by the National Level Risk Communication and Community Engagement teams to ensure uniformity, community mobilizers will focus on tools that conform to the cultural and social ethos of different communities to prevent and reduce COVID-19 transmission.

5. **Community engagement:** There are over 30 thousand behavioral change communication peer facilitators, integrated management of newborn and childhood illnesses promoters, malaria agents, water, sanitation and hygiene promoters, teachers, community health workers, etc., at community level, 125 thousand youth members, 300,444 women members, over 2,700 anti-female genital mutilation committees, 67 sub-Zoba level child wellbeing committees and over 1 thousand school health fo-

cal points, all of which will be activated to initiate and sustain dialogue with communities during the preparedness, prevention and response stages of the pandemic. The change agents were activated (especially the behavioral change communication peer facilitators, sanitation and hygiene promoters, teachers, community health workers, youth members; women members and the school health focal points) and are actively engaging in the community.

Implemented RCCE Activities

1. **Rapid Need Assessment** for Risk Communication and Community Engagement-COVID plan developed and conducted in March 2020 as a base for the community engagement plan.

2. **Eritrea risk communication** and community engagement for COVID-19 response developed and implemented.

3. **Community influencers** (leaders, women's, youth, artists, law enforcement) engaged and mobilized communities to comply with preventive measures. According to the 2020 mid-line KAP survey, 99.9 percent of the participants have knowledge and awareness on COVID-19 and 73 percent comprehensive knowledge of at least three signs and symptoms.

4. **Local governments and relevant authorities** engaged to provide essential services to address social and economic impacts on COVID-19. All governors were engaged in the advocacy

5. **Regular national updates and timely alerts** on community transmission to help the public improve understanding of risks and susceptibility

6. **Rumors monitored** and managed to mitigate mis and disinformation

7. **Daily advocacy** by media hubs and influential figures to increase awareness on reducing stigma, address misinformation, and promote behavioral change and social responsibility.

8. **COVID-19 KAP Survey** conducted the source of COVID-19

- 75.9 percent Radio/Television
- 39.4 percent Community-based platforms
- 38.2 percent Health workers
- 35 percent Eritel 600/601
- 4.2 percent 24/7 call center

9. **In the 2020 mid-line,** a COVID-19 knowledge, attitude, and perception (KAP) survey among the general public in Eritrea was conducted in 2020 and published.

- 99.9 percent of the participants have COVID-19 awareness/ knowledge and
- 73 percent comprehensive knowledge of at least three signs and symptoms

Conclusion

Drivers to positive behaviors: Access to information, knowledge, positive attitude, and risk perception

The survey was important in understanding the level of knowledge, attitude, and perceptions of the public towards COVID-19. The findings suggested that majority of the population have an acceptable level of knowledge on signs and symptoms as well as on ways of protection from COVID-19. Higher levels of knowledge on signs and symptoms as well as ways of protection was also found to be associated with higher level of confidence and positive attitudes towards the disease.

Hence, these findings, complemented by an enabling environment, could be key drivers to bring positive behavioral change among the public in practicing ways of protection from COVID-19 infection such as hand washing, respiratory hygiene, and self-isolation for suspected cases.

Barriers-lower level of comprehensive knowledge, level of risk perception, and level of confidence

There are, however, segments of the population with lower level of comprehensive knowledge on COVID-19 including, particularly, respondents from Zobas Gash-Barka and Anseba, and those in the youngest age group (below 25 years). Moreover, a higher proportion of the respondents in Zobas Maekel, Debubawi Keih Bahri, and Debub; those in the older age categories (45 years and above), and females believed that there is treatment for the disease.

16 percent of the respondents, with significantly higher proportion in Zoba Anseba, at 23.4 percent and those in the youngest age group at 20.4percent, reported that they were not at risk of contracting the disease. Furthermore, a considerable proportion of

the respondents in Zobas Anseba and Debub, those with no comprehensive knowledge on COVID-19, and those below 34 years of age reported that they were not confident of preventing infection from the disease.

Lack of sanitation materials and face masks were among the main reasons mentioned by respondents who were not confident to prevent the disease. Radio and/or Television were found to be the most common sources of information about the disease.

Recommendation

RCCE efforts should address the following issues:

1. **Consistent messaging** and tailored health education programs to further improve the level of knowledge, attitudes and perceptions of the general public in Eritrea so as to bring behavioral change among the general public in properly practicing the ways of protection from COVID-19 infection such as hand washing, physical distancing, mask wearing etc. across all aspects of daily life.

2. **Proactive approach** and focus on dispelling misinformation in the form of conflicting opinions and incorrect information.

3. **Involvement of key influencers** such as humanitarians, service providers, religious and community elders, political and armed forces, and youth groups in an effort of enhancing the level of knowledge, attitude, and perception on the disease as well as advocating and promoting positive behaviors of wearing masks and physical distancing in areas such as markets and funerals.

4. **Giving emphasis** to the segment of the population that have lower level of comprehensive knowledge on COVID-19, lower level of confidence to prevent infections, and wrong belief that there is treatment for COVID-19.

5. **Studies done in other countries** revealed that there are confirmed COVID-19 cases that are asymptomatic. Therefore, education materials developed in Eritrea should consider and revise materials to cover these new developments (this has been put in to action and will be finalized in Q2 of 2021). Similar future studies in the country should include items measuring practices of respondents on the different ways of protection. There is a need to conduct similar studies based on more systematic and inclusive probabilistic sampling method so as to get more representative and reliable estimate of the level of knowledge, attitude, and perception of the general public towards COVID-19 in the country.

National response efforts should address the following issues

1. Enhance the use of different communication channels, both mainstream and social media, to better reach the public with important messages related to COVID-19.

2. Ensure availability of sanitary materials and face masks as well as provide a clear guidance on the use of face masks.

3. Share information on daily status of national outbreak response through mainstream and social media channels.

4. Encourage community influencers such as humanitarians and authorities to lead by example on following the COVID-19 measures.

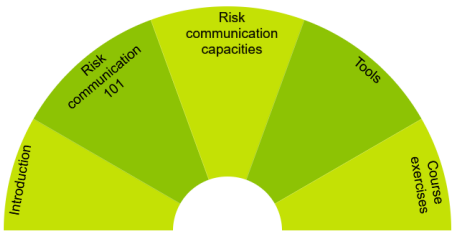
Achievements

1. At the onset of the COVID-19 Pandemic, to strengthen the existing national multi-sectoral RCCE platform, the WHO provided technical support to the existing national multi-sectoral RCCE platform and strengthened The committee includes the Ministries of Health represented by the Advisor to the Minister and Health promotion Division, Ministry of Information, Students and Youth Associations, Women's Association, Ministry of Defense, WHO and UNICEF.

2. The WHO provided technical support on the development of the National and sub-national RCCE response and implementation plan based on rapid preparedness assessment

3. Technical support was provided for better information access to the public through community and media engagement on development and distribution of relevant risk communication materials and tools. As a result, there was high community engagement and support.

4. Interim guidelines, WHO OPEN video offline Risk Communication courses and teaching materials was shared as part of capacity building



Credit: WHO emergency risk communication

5. Guidance and key messages for COVID-19 were developed in Tigrigna and distributed.

6. The technical support was provided for the implementation of the plan both at national and sub-national levels which includes Zoba Administration, Ministries of Education, Information, Defense, Immigration Affairs, Cultural and Religious Affairs, Youth, Women and Workers Association, Police, 'Baito' and Assembly and Eri Telephone

7. A 24/7 call center operated by the RCCE was established and helped the community on coordination, contact tracing, linkages with treatment center and quarantine sites, dealing with difficult conversations, referral to ambulatory services and daily updates on global, regional and country level COVID status. Information received was fed into the mainstream media to continually mitigate and address COVID-19 related fears, rumors and , misinformation within the community. Feedback received through the call center is being used to track misinformation and adjust media programmes accordingly

8. One-directional sensitization reached an estimated 2.8 million people (80 percent of the population). SMS and audio messaging via EriTel registered users reached an estimated 2 million people. printed materials; 300 tv and radio spots on COVID-19 prevention & continuity of immunization services were produced and disseminated. An offline mobile application as RMNCAHN services and vaccination scheduler/ reminder.

9. Community engagement using community health workers/ barefoot doctors and /one-to-ten youth/ women approach reached an estimated 1.2 million people reached, with a focus on an outreach strategy targeting hard-to-reach mobile communities, returnees etc.

10. Technical support was provided to develop COVID-19 prevention, safe school opening SOPs, guidelines, psychosocial support materials etc.

11. RCCE in collaboration with the Ministry of Education established an Emergencies national committee for COVID-19 prevention in preparation for safe school opening

12. The RCCE and EIE also prepositioned back-to-school radio and TV spots and supplementary co-curricular materials were developed in the forms of comic book, reader, wallchart and cartoons.

13. The RCCE developed social diagnostics tools to conduct midline assessment of the COVID-19 response.

14. 2000 contact tracing job aids in Tigrigna were developed, printed and distributed to quarantine sites, hospitals, institutions and hot spots areas

15. In collaboration with the Health Promotion Division, UNICEF and WHO supported the development of health messages for the integrated COVID-19 prevention and continuity of essential health services in areas of chronic NCDs, Mental health, Reproductive Health, Maternal, Neonatal, Child and Adolescent Health

16. Guideline and videos were in nine local languages explaining the proper usage of a mask as well as reasons for wearing one

17. At the sub national level, the MoH in collaboration with NUEYS and NUEW, using appropriate infection prevention protocols, continues to sensitize communities on COVID-19 using megaphones and printed IEC materials. At least 86 thousand COVID-19 fact sheet have been printed in all 9 local languages for use by youth mobilisers to reach communities in all six Zobas.

Challenges

1. Limited funding

2. Difficulty to supervise the Zobas because of the lock down measures

Good Practice

Comprehensive COVID-19 Risk Communication and Community Engagement (RCCE) resource package guidance has been developed and shared with MoH and partners:

1. Risk Communication and Community Engagement (RCCE) action plan Guidance COVID-19 Preparedness and Response

2. Risk Communication and Community Engagement (RCCE) Readiness and Response to COVID-19

3. Risk Communication and Community Engagement (RCCE) Global Partners strategy

4. COVID -19 Community Guidance for social mobilizers, community workers, volunteers

5. COVID-19 Stigma Guide

6. Focal Group Discussion Guide for Communities

WHO team led by Dr Martins OVBEREDJO briefing the Honourable Minister of Health of the State of Eritrea, Mrs Amina Nuurhusein on WHO's leadership in coordinating health development partners in Eritrea

WHO Eritrea Country Support

The WCO responds to partners needs in a timely manner and plays a decisive role in priority and target settings. The MoH is supported technically with catalytic funding given for some of the national programs. The WCO is innovative in brokering solutions with its partners and ensuring that solutions comply with WHO rules. All the 3 levels of WHO and the national authorities were consulted when policies and business processes including the Functional Review were developed. The WCO has also adopted multi-sectoral approach during implementation

The WCO is currently developing guidelines to mainstream GER into programs and processes and will lobby the national authorities to mainstream GER into its programs. Data disaggregation remains a challenge with a need for the WCO to beef its human resources by recruiting a Strategic Health Information Officer at P4 who will also build capacity of the national authorities. The WCO is also in the process of building the capacity of its staff to mainstream GER into its programs has thus allocated resources based on GER. Intensive lobbying to support organizational culture that embraces change including mainstreaming of GER. The non-availability of technical personnel in the WCO and the country to manage data continues to be a hindrance in disaggregation of data.

The WCO has adopted health in all policies as a way of leaving no one behind in all its interventions and continues to work with the national authorities to prioritize reaching previously hard to reach population in rural areas. A different mix of interventions has been developed to reach different target groups and the interventions are agile enough to suit different needs of partners and targeted population. The WCO planning strategy is

Below: Transforming leadership skills of WHO Eritrea staff members continues to be a priority. WHO Staff attending an internal leadership pathway training

based on an agile program management concept and planning is bottom up as a way of achieving maximum impact with interventions including the GPW13 and SDG targets in the country. The WCO has strengthened its performance management system and accountability framework to ensure that results are achieved using interventions that give value for the money invested. The WCO continues to provide leadership in coordinating health partners and building external relations with other partners as a way of driving the impact of GPW13 and SDG strategic goals in Eritrea. The WCO also ensures that the health agenda is promoted at all levels and the impact of all health interventions is aligned to the Eritrean country priorities.

Monitoring and evaluation of programs and interventions is done on a regular basis as a way of identifying gaps and strengthening the capacity of the WCO and partners. Data management remains a handicap to reach optimum capacity building and there is need to deploy Strategic Health Information. The WCO has managed to develop an implementation plan for the functional review process and it has a functional HR plan with most recruitment being work in process. At the present, there are 20 positions in the WCO which are occupied and fully funded to the end of the biennium, with three being funded by the VC while 17 are funded by AC.

There are currently three priority positions which are vacant and are also in the functional review structure and the WCO is in the process of filling them. One vacant position is not a priority position, however, the WCO is currently mobilizing resources to fund it. Due to the policy of self-reliance adopted by the national authorities, a majority of the AC funds goes towards funding positions and not to activities as the national authorities finances most of them. Though the WCO has got a functional review implementation plan, it has not been implemented due to funding challenges.

The national authorities have played an important role in developing the functional review plan and continues to support the WCO with clearances for recruitment of staff .The other two levels of WHO have supported the WCO with HR matters including efforts to mobilize resources to fund positions. The staff association is in place and actively assists the HR in resolving conflicts in the workplace. The WCO managed to successfully host virtual meetings that assisted in continuity of health services despite the COVID-19 restriction and internet connectivity, which remains a challenge in terms of enabling staff and partners to work from home and therefore causing the WCO to continually host virtual meetings in the office.

Amidst a lack of a maintenance plan and strategy in WCO, the CSU managed to do a thorough maintenance of the building and managed to secure it. Infrastructure upgrade of ICT equipment amounting to US$ 70,000 was done during the period under review. In the next half of the midterm period, the WCO is going to upgrade its board room and will also refurbish its security safe room. The Eritrean operational context has a small number of suppliers and partners thus there is limited competition in the market and thus the WCO does not always get maximum value for money in procurement and partner engagement. The WCO, as part of its OMT/UNCT, role has adopted the BOS Strategy as a basis for negotiating and finding solutions.

It is expected that sustainable solutions to the limited supplier/partners challenges in the next six months will be found and thus WHO best practices in procurement will be adopted. Segregation of duties in the WCO is respected and followed up as evidenced by the HR Assistant who currently approves all finance related matters in GSM as well as cheques in the absence of the OO. The budget and finance assistant who is the acting OO does not approve any financial related matters in GSM to respect the segregation of duties. The CSU is working with the Staff Association to put in place a formal conflict resolution mechanism in the WCO under the leadership of the WR.

To enhance and address staff conflicts, the WR has established an open-door policy that encourages staff dialogue. Due to the ongoing COVID-19 lockdown and social distancing protocol, the WCO has reduced general staff and technical meetings. The WCO has strived to work towards continuous improvement of achievement of results in the CSU trough sharing of expenditure reports and managerial KPI's at least once every month. Corrective action is taken by the WR in any area of non-compliance. The WCO was audited in 2007 and currently has no pending audit and compliance issues. The state of Eritrea has adopted the spirit of self-reliance. As such, the WCO has established innovative ways to ensure that the national authority accepts international cooperation support from other partners.

For instance, correspondences for request for clearance of goods imported into the country is no longer reflected as goods being donations as a way of aligning the WCO to the national spirit of self-reliance. COVID-19 travel restrictions impacted on delivery of operational services and it is expected to weaken achievements of results. In addition, due-to the lock-down of the country, clearance of goods has been a challenge. On matters relating to security, due to limited security companies in the country the WCO has engaged the services of one company which has led to high operational cost.

Development Partners of WHO in Eritrea

The WHO collaborates with all development partners to advance results-oriented partnerships in order to promote Universal Health Coverage in Eritrea by working together with the partners to take advantage of complementarity and comparative advantages of collaborating. Significant efforts are therefore made to ensure strong partnerships with all stakeholders, including multilateral and bilateral.

WHO continues to leverage its convening powers in accessing and utilizing the largest share of partnership on offer in the health landscape in Eritrea. The development partners who supported WHO Eritrea in 2020 includes the EU member states, Bill & Melinda Gates Foundation, the Foreign, Commonwealth & Development Office (FCDO) of the UK Government, GAVI, GIZ, AFDB, China, Global Fund and the USA

AFRICAN DEVELOPMENT BANK GROUP

BILL & MELINDA GATES foundation

Government of People's Republic of China

European Union

Foreign & Commonwealth Office

Gavi The Vaccine Alliance

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Government of the Federal Repblic of Germany

Government of Japan

Government of the United States of America

The Global Fund

Below: WHO continues to play decisive role in brokering health solutions in Eritrea. The WHO team led by Dr Martins OVBEREDJO and the MOH Team led by the Honourable Minister of Health Mrs Amina Nuurhusein briefing the Chinese team on a proposal to eradicate Malaria and NTDs in Eritrea

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