

MED BOX

 THE AID LIBRARY

ANNUAL REPORT
2022

INTRODUCTION

MEDBOX – The Aid Library is an open-access online library aiming to increase healthcare quality worldwide.

Quality assurance and accountability are important values in humanitarian action and healthcare settings, which receive growing attention from affected populations, healthcare workers, humanitarian actors, donors and the public. The easy-to-use structure of **MEDBOX** facilitates the application of common health standards, increasing the impact and quality of the different interventions carried out by health workers.

EXECUTIVE SUMMARY

Since its launch in October 2013, **MEDBOX** has achieved a remarkable reputation.

The growing numbers of views, downloads, and an enormous increase in users are an excellent testament to our work in terms of quality and utility

2022 was a demanding year, containing various challenges. Especially during the first half of the year, Covid-19 represented the main content of the **MEDBOX**, particularly because the **COVID-19 TOOLBOX** has become the largest of all **MEDBOX** Toolboxes. The **MEDBOX** team tried to stay up to date and keep the **COVID-19 TOOLBOX** current. This was extremely challenging as many research stands were revised or expanded over time, and the documents had to be constantly checked for currency and current research.

The first Toolbox we could launch in 2022 was the **PHARMACY TOOLBOX**. We are very grateful that *Apotheker helfen e.V* has taken on a large share of the research work here, as their expert knowledge has contributed greatly to the high quality of the Toolbox. As they also supported us with the **AMR TOOLBOX** before, we arranged to revise and extend this TOOLBOX and present it to the participants of the online course of the GIZ project “Northeast Syria Health Cluster Organisations COVID-19 and Public Health Capacity Programme”.

Another central topic that shaped the research work of **MEDBOX** in 2022 was the Ukraine war. A sub-category on Ukraine was created in the **CONFLICT TOOLBOX**, which contains reports on the situation, guidelines, manuals and information about the impact of the war on a global level. In addition to English literature, many Ukrainian and Russian documents were uploaded here. Furthermore, documents for Ukrainian refugees living in Germany have been

uploaded to the **CONFLICT TOOLBOX**.

We are pleased that we could launch the **PLANETARY HEALTH TOOLBOX** in 2022 due to the support of Apo Bank and Misereor. Referring to the statement of WHO General Director Dr Tedros Adhanom Ghebreyesus, who said that “The climate crisis is a health crisis: the same unsustainable choices that are killing our planet are killing people“. The **PLANETARY HEALTH TOOLBOX** provides an up-to-date collection of guidelines and clinically relevant training materials that revolve around the cutting-edge interface between climate change and human health.

Another big project was implementing the **NEGLECTED TROPICAL DISEASES (NTDs) TOOLBOX**, which will be launched in spring 2023. Neglected tropical diseases have a major impact on global health. The occurrence and spread of the diseases can only be attributed to climatic conditions to a limited extent. This is why we created a Toolbox providing relevant documents about key resources, clinical aspects or training material regarding the most important NTDs.

Furthermore, **MEDBOX** 2022 experienced a change of personnel in the project lead. After 30 years of work at the Institute, Mrs Sieglinde Mauder is taking her well-deserved retirement. She has left her mark on **MEDBOX** from the beginning and has made outstanding contributions to the online library. While the **MEDBOX** was initially intended for a smaller user group, it has become increasingly popular thanks to Mrs Mauder’s tireless commitment and passion. The entire **MEDBOX** team would like to sincerely thank Mrs Mauder for her passionate commitment, her expertise and wishes her all the best for the future.

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CURRENT STATUS IN NUMBERS AND FACTS

In 2022, the **MEDBOX** was further expanded. The actuality of the topics continues to increase the number of views and downloads. There are now more than 27750 documents on the **MEDBOX**, which have been downloaded over 11.595.132 times. It should be taken into account that we revised many of the categories and deleted outdated documents. The documents are collected thematically in now more than 1000 categories and sub-categories. In 2022, in addition to the development of a toolbox and the expansion of other toolboxes, updating all documents that can currently be found was started. In this process, all documents made available so far will be reviewed again for up-to-dateness and availability. Regionally, Africa and Asia have a high audience share, followed by Europe. In Central America, **MEDBOX** has the fewest viewers. The **MEDBOX** team would like to work on this in the future and provide more Spanish and Portuguese literature and documents corresponding to the context of health issues in Latin America. We have taken a good step in the right direction by providing Spanish and Portuguese language literature on COVID-19 with the support of Adveniat. In addition, the country pages for COVID-19 have also been

supplemented with the two languages. The countries Brazil, Argentina, Chile, Ecuador, Colombia, Paraguay and Peru have been expanded and more than 1200 documents are available. As a result, the number of users from the respective countries has increased, especially in Brazil and Peru. Also, we strive to provide more documents in French; more on this in the **TOOLBOXES** section and the **CAREGIVER TOOLBOX** chapter.

In addition, more literature has been included in Arabic as part of a collaboration with the GIZ project (Northeast Syria Health Cluster Organisations COVID-19 and Public Health Capacity Programme). Currently, around 300 documents in Arabic for the Middle Eastern region have been uploaded, for example, in our **COVID-19** or **AMR TOOLBOX**.

Much literature was uploaded in Ukrainian and Russian in response to the Ukraine conflict (see chapter „Ukraine Crisis“, page 36). As the Ukrainian material has been well received, we hope to expand it in 2023 to continue providing the information needed to as many people as possible affected by the Ukraine war, either health workers on the ground or refugees seeking shelter in other countries, especially in Germany.



27.750

Documents uploaded



1.595.132

Documents downloaded



192

Countries reached



21

Toolboxes online

Figure 1: Highlights of key statistics

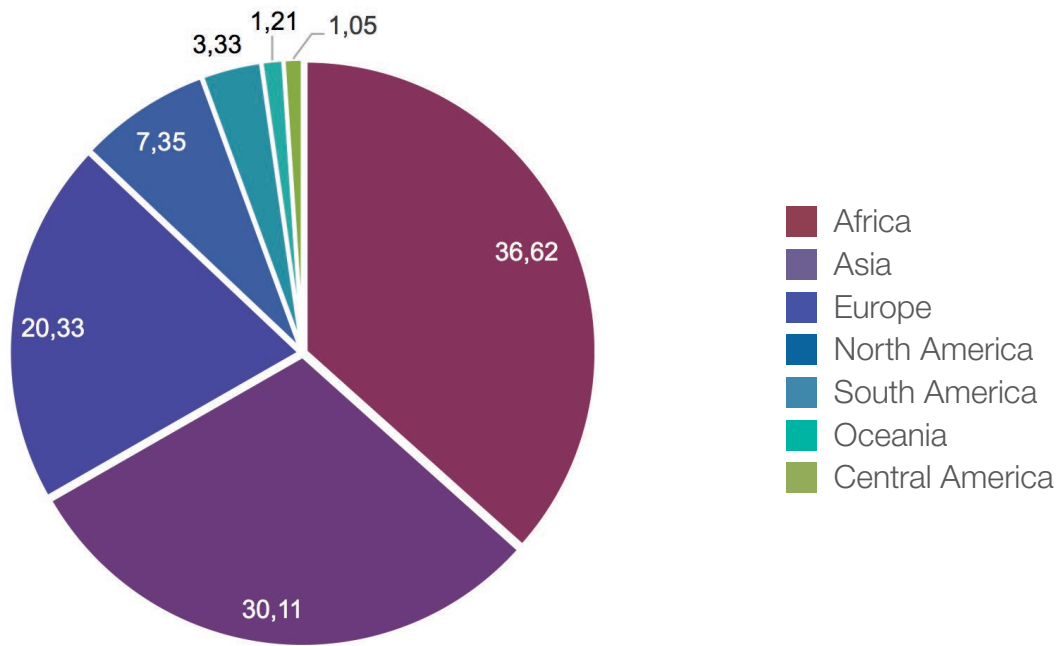


Figure 2: Visitors split by region for January 2022 to December 2022

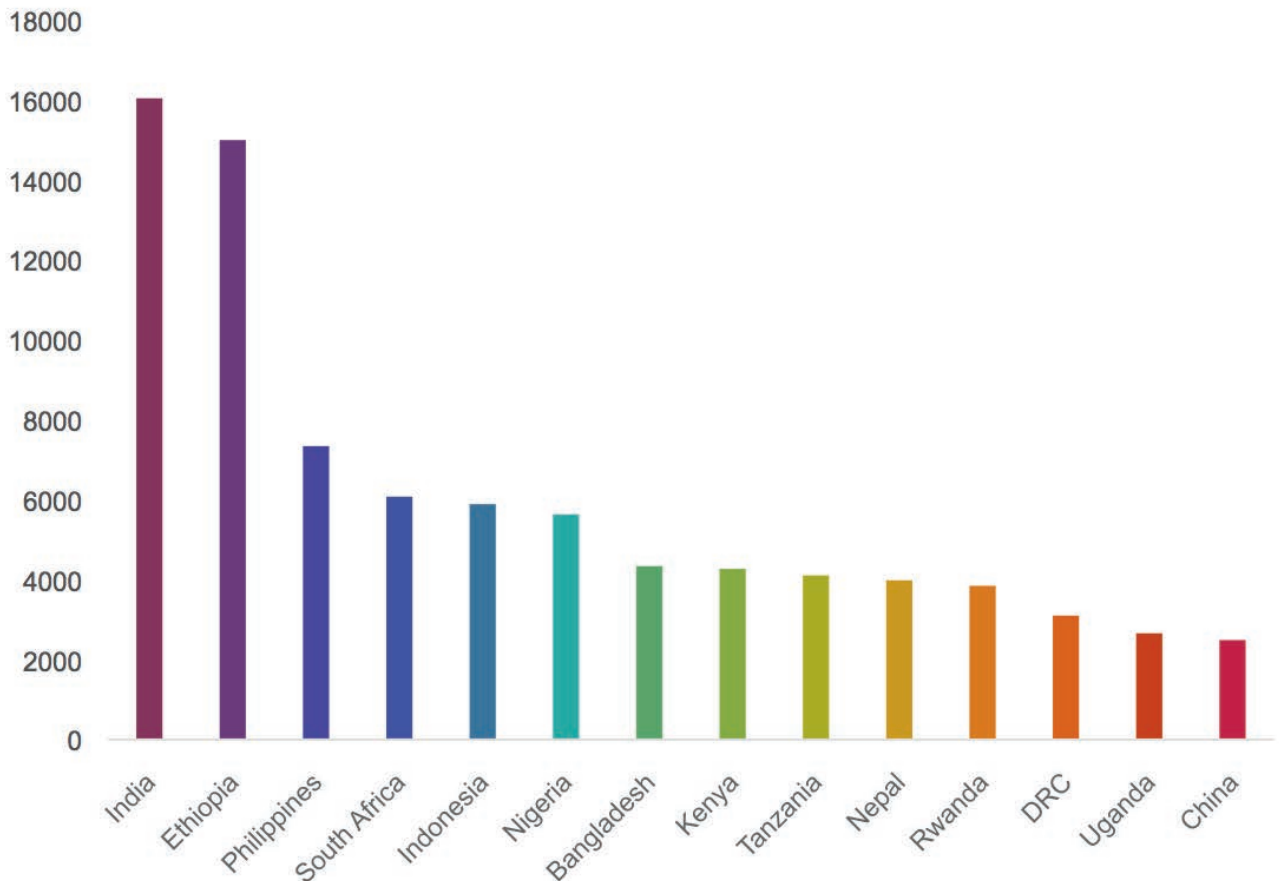


Figure 3: Visitors split by country for January 2022 to December 2022 (excluding Europe)

RANKING OF CATEGORIES

In 2022, the **MEDBOX** categories continued to be sorted and updated. This year, documents were mainly searched via the Toolboxes.



Figure 4: Seize of categories by number of downloads in 2022

RANKING OF TOOLBOXES

In 2022, the TOOLBOXES provided in the **MEDBOX** continued to be very popular. The Toolboxes contain practical, up-to-date information on selected topics on a single page. This simplifies the search and provides a quick overview and access to various documents. We now provide 21 TOOLBOXES covering epidemic outbreaks, disasters, diseases and other aspects.

As announced in last year's report, 2022 started with the release of the **PHARMACY TOOLBOX** in February (see chapter The Role of Medicines, Knowledge and Value – **THE PHARMACY & AMR**

TOOLBOX page 41). Another TOOLBOX was published in May 2022: the **PLANETARY HEALTH TOOLBOX**, which was financially supported by the *apoBank* and with content support from the *Planetary Health Alliance* and the *Deutsche Allianz Klima und Gesundheit e.V.* (see chapter **PLANETARY HEALTH TOOLBOX**, page 29) as well as *Misereor*.

Updating the already existing TOOLBOXES is also an everlasting process. We could add a lot of French literature to the **CAREGIVER TOOLBOX** in 2022 (see chapter **CAREGIVER TOOLBOX**, page 39) with the support of *Misereor*.

In response to the situation in Ukraine in the short term, we added a sub-category “Ukraine Conflict” to the **CONFLICT TOOLBOX** in February (see chapter “UKRAINE CRISIS”, page 36). The addition of this sub-category, which provides essential information for humanitarian workers as well as guidelines and practical guidance on how to deal with specific health issues in the context of the conflict, has also significantly increased the views of the **CONFLICT TOOLBOX** (see Figure 5). We have also created a sub-category on the Ukraine crisis in the **REFUGEE TOOLBOX**.

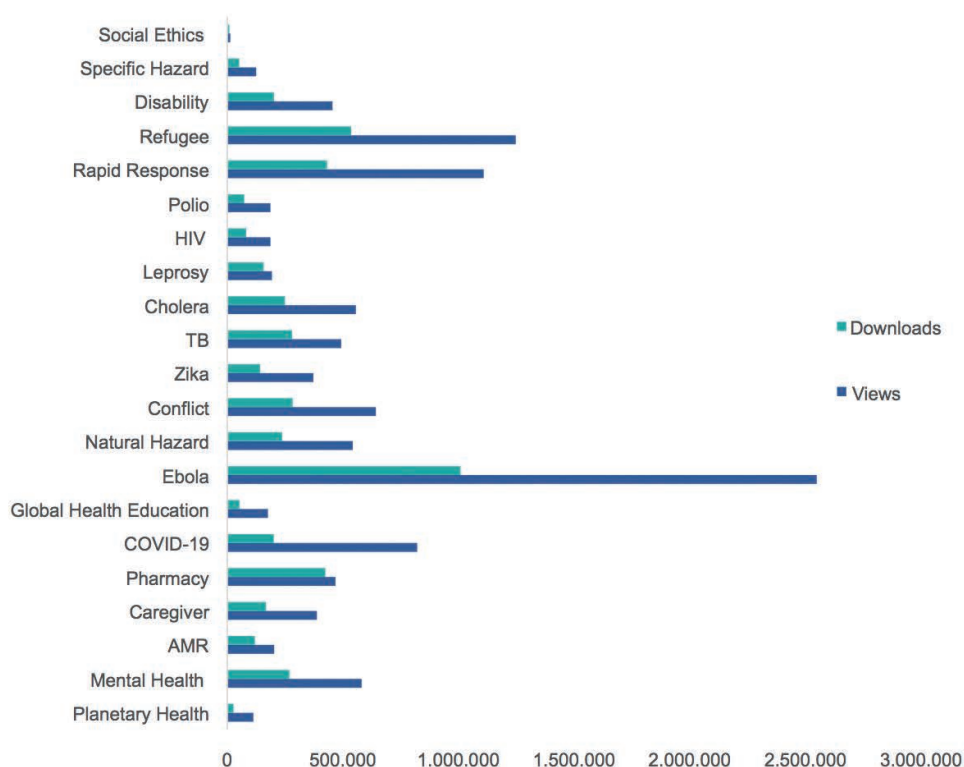


Figure 5: Views and downloads of the different Toolboxes since their launch until January 2023

MEDBOX ISSUE BRIEF

This year, the **MEDBOX** team has again published numerous issue briefs on important topics and current challenges and outbreaks in which we summarise the most important documents for public health experts, health professionals and caregivers worldwide always to be up-to-date and to react quickly and adequately.

We published **11 issue letters** in 2022 in English, French, German and Arabic.

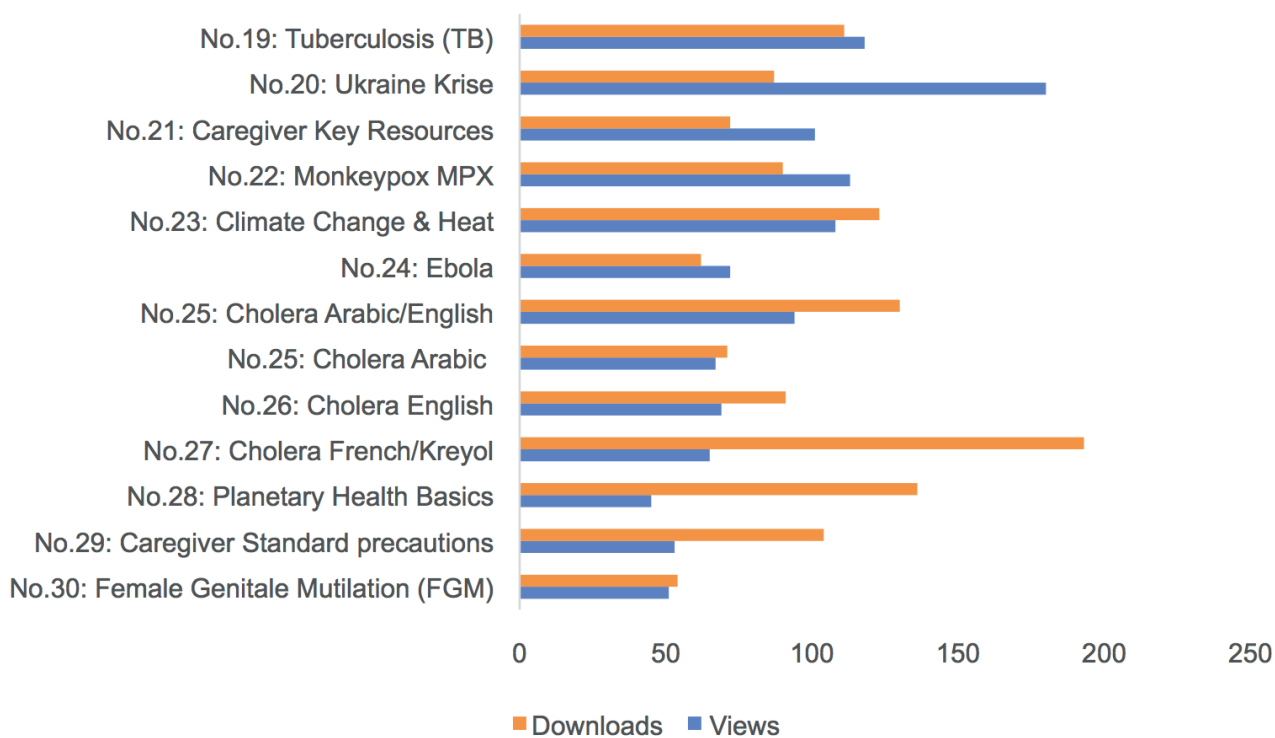


Figure 6: Views and downloads of the Issue Briefs of 2022

ISSUE BRIEF NO. 19: TUBERCULOSIS (TB)

On the occasion of World TB Day in March 2022, with the theme: “Invest to end TB. Save lives”, we published an issue brief with the latest epidemiological updates, treatment guidelines, esp. for childhood TB, policies & strategies, TB/COVID-19, training and online courses.

The Global Tuberculosis Report 2021 (WHO, 2022) does not show a very positive picture of the current situation. None of the 2020 milestones of the “WHO END TB Strategy” were reached, neither the treatment targets nor the funding targets. The only target reached is the 6 million PLHIV to receive TB preventive therapy (7.2 million). The report states: “The COVID-19 pandemic has reversed years of progress in

providing essential TB services and reducing TB disease burden. Global TB targets are mostly off-track, although there are some country and regional success stories”.

The most obvious impact is a significant global drop in newly diagnosed with TB and reported. This figure fell from 7.1 million in 2019 to 5.8 million in 2020, an 18% decline back to the level of 2012 and far short of the approximately 10 million people who developed TB in 2020. Sixteen countries accounted for 93% of this reduction, with India, Indonesia, and the Philippines the worst affected. Provisional data up to June 2021 show ongoing shortfalls.

Approximately 1.1 million children develop TB every year. Two-thirds of these



children have a non-severe disease, defined as extra-thoracic lymph node TB or non-severe respiratory TB (confirmed on chest x-ray). The outcome of the SHINE study is “TB programmes should consider moving from six months to four months of treatment for children with minimal TB”. A shorter treatment period could make the treatment easier for children and caregivers and reduce costs to patients and the health care system.

ISSUE BRIEF NO. 20: UKRAINE CRISIS/CONFLICT

Russia's invasion of Ukraine in February 2022 has resulted in another humanitarian catastrophe of the 21st century, joining the protracted conflicts in Syria, Iraq, Yemen, Libya, Afghanistan, and Darfur in Sudan. In recent months, millions have been displaced within and to neighbouring countries. The international community must provide far more humanitarian assistance, including medical evacuations across Europe and adequate supplies and support for displaced populations.

The overall situation in Ukraine is deteriorating daily. Currently (as of 16.11.2022), 17.7 million people are affected by the conflict, and according to data from the UN Refugee Commission UNHCR, over 15 million refugees have left Ukraine.

In this Issue Brief, we have provided information on the situation in Ukraine, on entering and further staying in Germany, educational material on COVID-19, vaccinations, and medical care for Ukrainian citizens.



ISSUE BRIEF NO. 21 AND 28: CAREGIVER PART 1: KEY RESOURCES; CAREGIVER PART 2: STANDARD PRECAUTIONS

Caregivers have a significant impact on maintaining health services and improving the health status of the population. However, the daily work of caregiving requires good organisation, a strong sense of responsibility, and continuous education on the latest standards of care. Particularly in low- and middle-income countries (LMICs), caregivers can make important improvements in priority areas of health care, including through disease prevention education,

reducing child malnutrition, improving maternal and child health, providing palliative care, expanding access to family planning services, and helping to combat infectious and non-communicable diseases.

We have created a new issue brief series on the **CAREGIVER TOOLBOX** to keep you up-to-date on ongoing topics. In every caregiver issue brief, we will focus on one of the categories from this toolbox. First, we would like to introduce the



category “Key Resources”. The second one focused on “Standard Precautions”, including hand hygiene, medical waste management and infection prevention and control measures (IPC).

ISSUE BRIEF NO. 22: MONKEYPOX MPX

In early May 2022, monkeypox cases were reported from countries where the disease is not endemic, and continue to be reported in several endemic countries. Most confirmed cases with travel history reported travel to countries in Europe and North America rather than West or Central Africa, where the monkeypox virus is endemic. This is the first time many monkeypox cases and

clusters have been reported concurrently in non-endemic and endemic countries in disparate geographical areas. In November 2022, more than 70.000 cases of monkeypox were reported, including 26 deaths. But it seems that the number of reported cases is now declining globally.

In our **RAPID RESPONSE TOOLBOX**, you can find more information about



clinical aspects, risk communication and outbreak prevention & control.

ISSUE BRIEF NO. 23: CLIMATE CHANGE & HEAT

Heatwaves, or heat and hot weather that can last for several days, can significantly impact society, including a rise in heat-related deaths. Heatwaves are among the most dangerous natural hazards but rarely receive adequate attention because their death tolls and destruction are not always immedia-

tely apparent. From 1998-2017, more than 166 000 people died due to heatwaves, including more than 70 000 who died during the 2003 heatwave in Europe. This summer, we experienced more heat waves around the world. Due to climate change, these are increasing in frequency, duration and magnitude. Experts predict that heat waves will increase even more in the coming years. In 2022 alone, regions in Europe, North Africa, the Middle East and Asia had over 40° Celsius temperatures. (WHO;2022: https://www.who.int/health-topics/heatwaves#tab=tab_1)

Prolonged heat can significantly impact health, especially for children, the elderly and people with chronic diseases. Populations in urban and rural areas are at risk from heat, and certain populations are better or worse able to adapt to extreme heat because of their geographical location. This issue brief aims to raise awareness of heat waves due to climate change and its impact on health. For more information on the topic of climate change and planetary health, please have a look at our **PLANETARY HEALTH TOOLBOX**.



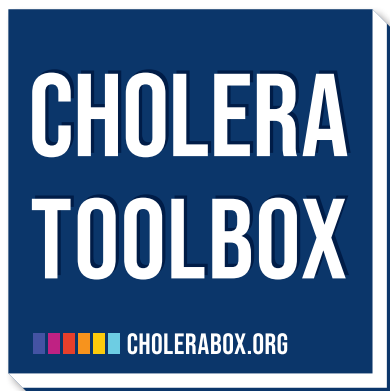
ISSUE BRIEF NO.24: EBOLA

Uganda declared an outbreak of Sudan ebolavirus on the 20th of September. As of the 14th of November 2022, 141 confirmed and 22 probable cases (total of 163 cases) and 55 confirmed and 22 probable deaths (77 total deaths) were reported. Nineteen health workers have been infected with the virus,

and seven have died. Due to our **EBOLA TOOLBOX**, equipped with numerous important documents on clinical guidelines on treatment & diagnostics, infection and prevention (IPC) measures, educational materials, etc., we were able to react quickly and prepare this important issue brief and to send it at once to our partners in Uganda.



ISSUE BRIEF NO. 25-27: CHOLERA



Cholera is an acute diarrhoeal infection caused by eating or drinking food or water contaminated with the bacterium *Vibrio Cholerae*. Cholera remains a global threat to public

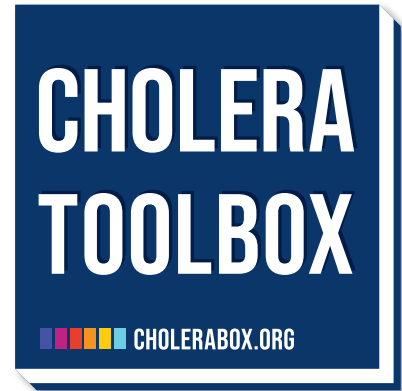
health and indicates inequity and a lack of social development. Researchers have estimated that every year, there are 1.3 to 4.0 million cases of Cholera and 21.000 to 143 000 deaths worldwide due to the infection (https://www.who.int/health-topics/cholera#tab=tab_1). However, Cholera remains a neglected and underreported disease. Many cases are not recorded due to limitations in surveillance systems and fears of the potential impact on trade or tourism.

Today Cholera affects 47 countries across the globe. Almost every developing country faces cholera outbreaks or the threat of Cholera. Major ongoing outbreaks are reported from Afghanistan, Bangladesh, the Democratic Republic of Congo, Ethiopia and Nigeria. Major outbreaks are currently in Syria, Malawi and Haiti. Therefore, the MEDBOX team produced several issue briefs on this topic in English/Arabic, Arabic, French/Creyole and English.

ISSUE BRIEF NO. 27: CHOLERA HAITI

The current Cholera outbreak in Haiti started on the 2nd of October 2022 with 2 cases in Port-au-Prince. Haiti had been Cholera-free until 2010, when an outbreak spread from leaking sewage pipes from a United Nations base housing Nepalese peacekeepers. This Issue Brief gives an overview of the Cholera outbreak in Haiti. It is

written in French and provides the reader with background information about Cholera to enable them to understand how such a large Cholera outbreak could occur in Haiti and what can be done about the disease. It contains clinical guidelines, information about the treatment, infection control and training material in French and Creole.



ISSUE BRIEF NO. 29: PLANETARY HEALTH BASICS



Planetary Health is an interdisciplinary academic collective of many scientific disciplines. In addition to environmental and social sciences, human health is one of many. Because of the many disciplines involved in this topic and the many

resources available, we would like to share in this Issue Brief the most important documents related to Planetary Health. These documents and many more can be found in our **PLANETARY HEALTH TOOLBOX** launched this year.

ISSUE BRIEF NO. 30: FEMALE GENITAL MUTILATION (FGM)

According to WHO, 200 million women and girls worldwide are affected by female circumcision; by 2030, another 70 million girls will be at risk of the practice.

Female genital mutilation/circumcision (FGM/C) describes partially or wholly removing or otherwise injuring the external female genitalia for non-medical reasons. FGM is mainly

performed on young girls between infancy and 15 years of age and is a serious violation of the human rights of girls and women, as it violates the right to health and physical integrity. All forms of female circumcision can have serious physical, psychological and social consequences and, in the worst case, lead to death. Therefore, it is of enormous

relevance to ensure more visibility on this topic to guarantee the best possible help for those affected.

The **MEDBOX** would like to do its part by providing information material from various disciplines to enable differentiated education, especially for staff in the context of refugees. The issue brief was written in German.

COVID-19 TOOLBOX

By Piet Reijer and Tilman Ruppel, medmissio – Institute for Global Health

The **COVID-19 TOOLBOX** is, with almost 4,300 documents, the largest of all **MEDBOX** Toolboxes. The recent increase in new cases in China shows that COVID-19 is not something of the past. The China surge can lead to new variants that the available vaccines might not cover.

Staying up to date with the developments around COVID-19 was, especially in 2020, extremely difficult. Besides misinformation and fake news, we had to cope with guidelines that almost changed daily. “Today’s news is obsolete tomorrow”. The contents of the **COVID-19 TOOLBOX** had to be updated daily. In addition, many organisations and governmental institutions produced guidelines, IEC materials and preventive strategies. The World Health Organisation “invented” a new word: *infodemic* describing the enormous amount of new documents.

Besides the fear that new variants might cause new outbreaks, “Long COVID” or “Post-Covid Syndrome” is an ongoing problem. Long COVID is defined by the WHO as: *“The continuation or development of new symptoms three months after the initial SARS-CoV-2 infection, with these symptoms lasting for at least two months with no other explanation”*.¹ Long-COVID can occur in both children and adults. We published Issue Brief no.15² (September 2021, updated on the 19 of October 2021) on the subject. Long-COVID has affected millions of people worldwide. Little data on Long-COVID is available from LMIC. The effects of Long-COVID in High-Income Countries can lead to the inability to work

for months, even years. In some West-European countries, shortages of essential workers are (partly) contributed to Long-COVID. *“Long-COVID is likely to cost the US economy trillions of dollars and will almost certainly affect multiple industries, from restaurants struggling to replace low-wage workers, to airlines scrambling to replace crew, to overwhelmed hospitals, experts are predicting”*.³

The effects of the pandemic are many, and the severity of many of the effects is unclear. For instance, what will be the effect of school closures in the long run? School closure was relatively short in some countries, and lessons could be followed online. In other countries, the closure lasted almost two years⁴. Many children in the LMICs could not attend classes virtually and have been deprived of education over a long period. Several countries reported increasing teenage pregnancies due to lockdowns and school closures⁵. Millions of people lost their job. The Coronavirus pandemic shows that solidarity between rich and poor countries is still a dream. The global distribution of COVID-19 vaccine doses especially exemplifies this. Particularly in 2021, the worldwide production capacities for COVID-19 vaccines were far too low to meet global demand. The scarce vaccine doses were mainly allocated to economically rich nations paying for them or remained in those few countries where the production sites were located. Even though the World Health Organization had developed a plan for equitable global dissemination

1 <https://www.who.int/europe/news-room/fact-sheets/item/post-covid-19-condition>

2 <https://www.medbox.org/document/long-covid#GO>

3 <https://www.webmd.com/covid/news/20220928/long-covid-could-cost-economy-trillions-experts>

4 <https://theconversation.com/ebola-ugandas-schools-were-closed-for-two-years-during-covid-now-they-face-more-closures-something-must-change-194924>

5 <https://gh.bmj.com/content/7/1/e007666>

of COVID-19 vaccine doses, this was the case.⁶ As stated in this plan, first, the health personnel in all countries of the world and then the risk groups should have been vaccinated, and the vaccine doses distributed accordingly. This would have been much better from a medical and human rights point of view. A recent estimate in the professional journal *Nature* puts the number of preventable deaths worldwide at around 1.3 million because this equitable distribution was not carried out.⁷ Instead, COVAX's distribution mechanism of COVID-19 vaccines lacked funding, political say, and the participatory inclusion of economically poor nations and civil society.⁸ Therefore, COVAX fell far short of its allocation target at the end of 2021 and could not supply low- and middle-income nations with sufficient vaccine doses.⁹ Overall, COVID-19 vaccine-producing private companies failed to share the knowledge, technologies and intellectual properties (e.g. patents) on how to

manufacture COVID-19 vaccines, resulting in idle potential production capacities.¹⁰ By insisting on the monopolistic use of their vaccines, although the vast amount of financing stemmed from public funds, the opportunity was missed to substantially increase world-wide production capacities for COVID-19 vaccine doses.¹¹

Regrettably, political advances to change this state of affairs, like the vaccine technology pool C-TAP and the push for a so-called TRIPS waiver in the World Health Organization, were derailed by the pharmaceutical sector and several high-income countries. As a result, financially poor nations only started receiving sizable amounts of COVID-19 vaccine doses through donations from economically affluent countries since those had secured ample oversupply while low-income and most middle-income nations were struggling.

The **MEDBOX** team plans a complete review of the **COVID-19 TOOLBOX** in 2023.

6 <https://www.who.int/publications/m/item/fair-allocation-mechanism-for-covid-19-vaccines-through-the-covax-facility>

7 <https://www.nature.com/articles/s41591-022-02064-y>

8 <https://msfaccess.org/covax-broken-promise-world>

9 <https://www.gavi.org/sites/default/files/covid/covax/COVAX-Supply-Forecast.pdf>

10 <https://msfaccess.org/pharmaceutical-firms-across-asia-africa-and-latin-america-potential-manufacture-mrna-vaccines>

11 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3851737

THE COVID-19 & PUBLIC HEALTH CAPACITY BUILDING PROGRAMME – NORTHEAST SYRIA

By Hussein Ahmed, medmissio – Institute for Global Health

The Covid-19 and Public Health Capacity Building Programme Training was held in Northeast Syria for 75 clinicians from 14 Deir Ez-Zor and Ar Raqqa governorates health facilities. These facilities provide medical care for approximately 420,201 individuals. The training consisted of weekly two-hour webinars for a total of nine weeks.

Topics covered included Covid-19 case definition and diagnostic tests, virus transmission, clinical management, vaccination, and management in ICUs, as well as specific information for pregnant women and children. Experts from Germany and Syria were also invited to present their expertise on certain topics.

The **MEDBOX** team was involved in the training. It provided recorded lectures on the purpose and use of the **MEDBOX** Library, including information on the targeted group and registration process, as well as the contents of the **COVID-19 TOOLBOX**. The recorded lectures were uploaded to Google Classroom to provide accessibility for the participants to refer back to them at any time, and a link to the **MEDBOX** library. In addition, during the training, the medmissio team shared a COVID-19 brief issue, which was created prior to the training and distributed through WhatsApp groups. This brief issue contained resources that were deemed necessary for COVID-19 management.



Figure 7: Communication with participants of the COVID-19 Training group via WhatsApp

THREE YEARS OF PANDEMICS, LATIN AMERICA SITUATION

By Alicia Ponte-Sucre – Universidad Central de Venezuela

The pandemic had widespread economic, social, and political effects on Latin America and the Caribbean (LAC) besides those directly related to the disease itself. The direct impact is reflected on the fact that the region recorded 1.74 million deaths (over 26% of deaths worldwide) from the beginning of the pandemic through early December 2022, with Brazil, Mexico, Peru, Colombia, and Argentina having the region's highest numbers of deaths and Peru the highest recorded COVID-19 mortality rate in the region in deaths per 100,000 people, followed by Chile, Brazil, Trinidad and Tobago, Argentina, Colombia, and Paraguay.

As there is a worldwide concern of experts about undercounted deaths for various reasons in countries worldwide, including in LAC, the real numbers may be significantly higher. In fact, LAC and the Caribbean faced an unmatched catastrophic toll. As of March 2022, the region has reported approximately 15% of cases and 28% of deaths worldwide.

Although the arrival of SARS-CoV-2 was relatively late, several LAC regional factors were determinants of the humanitarian crisis faced. Pandemic unpreparedness, fragile healthcare systems, forthright inequalities, and poor governmental support facilitated the spread of the virus throughout the region (see Figure 1). Additionally, reliance on repurposed and ineffective drugs such as hydroxychloroquine and ivermectin – to treat or prevent COVID-19 created a false sense of security and poor adherence to social distancing measures and still continues. Finally, for some, understanding the risks involved with the community spread of SARS-CoV-2 led to increased willingness to follow social distancing measures. But for many others, the decision to continue to work, albeit exposed to a potentially deadly infection, was the only way to ensure survival. Up to date, the social distancing measures have almost disappeared.

While the battle continues, LAC is compelled to address additional problems that arose as a consequence of the pandemic. As internal care units (ICU) and emergency services were presented with an overwhelming influx of cases, and the infrastructure was already poor, it remains to be seen how the healthcare system will face the population suffering disability from the long-term effects of COVID-19. On the other hand, children in the region have missed more school than anyone else worldwide. This disruption in education, and its effects, may continue to be felt for years to come. Another secondary impact of the pandemic, which is very sad, has been the distressing number of children affected by orphanhood, the estimates talk about more than 1 in 1000 children in several countries in LAC. Last but not least, stay-at-home measures contributed to the rise in domestic violence and sexual abuse, with, for example, calls to help hotlines increasing massively in Colombia – which received 127% more reports than usual – and in Argentina, with sexual violence rising more than two-thirds.

Finally, whilst the region has shown signs of economic growth, a complete rebound is not expected to occur in the following years, imposing added misfortune to the citizens of LAC

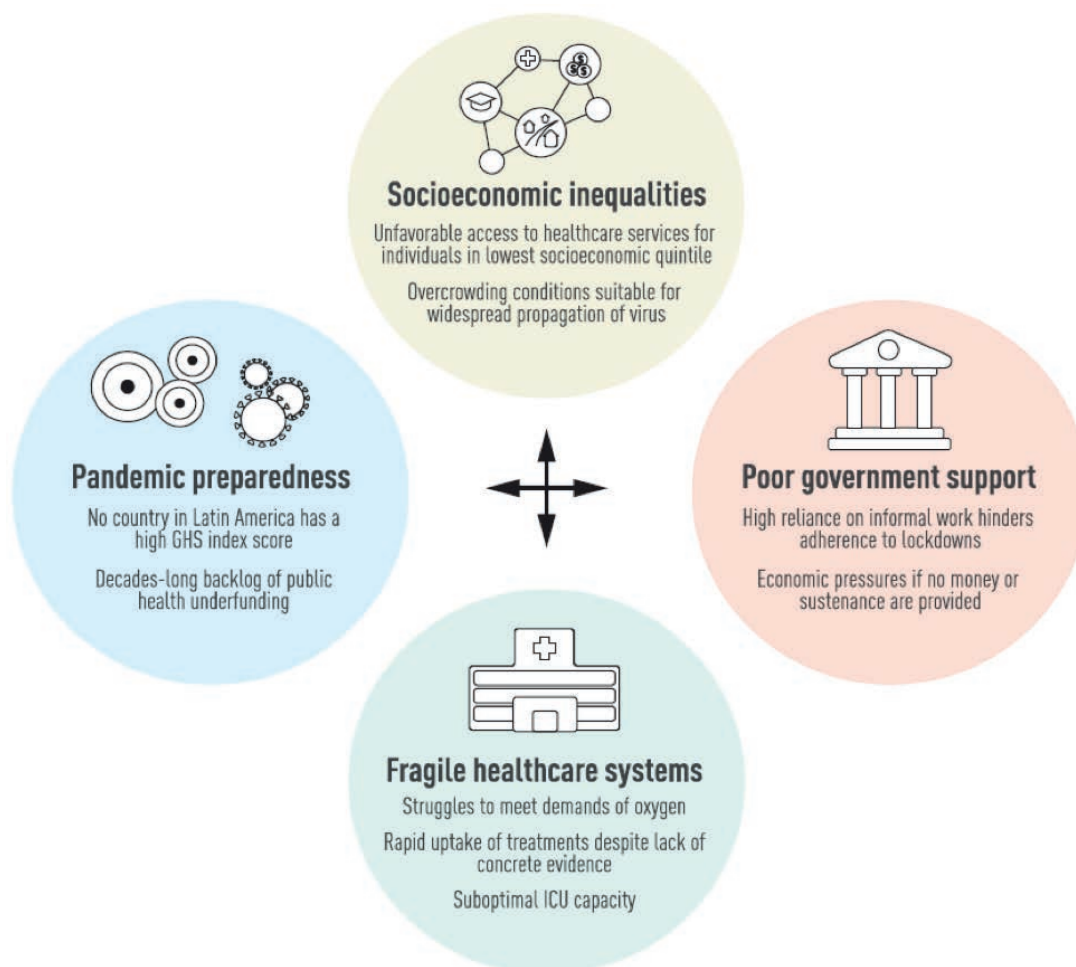


Figure 8: Interconnected determinants for the overwhelming death toll and crippling socioeconomic impact in Latin America and the Caribbean during the COVID-19 pandemic. Taken from Schwalb et al. 2022.

VACCINATION SITUATION

In October 2022, PAHO’s director (Carissa Etienne at that moment) recalled that the region showed a potential transition of the pandemic from an acute phase into a phase of sustained control. In her words, over 70% of the population of LAC had been fully vaccinated, although several countries and territories had yet to reach the 40% mark, as was the case for Grenada, Haiti, Jamaica, St. Lucia, and St. Vincent and the Grenadines that as of early December 2022, had fully vaccinated less than 40% of their populations.

The most extreme situation is in Haiti, with just over 2% of its population fully

vaccinated. While there were hopes that herd immunity could be achieved after the region’s disastrous first peak, the emergence of the Gamma, Lambda, and Mu variants made this unattainable. In the meantime, despite the brutal reality and shortcomings, the pandemic has not drastically altered trust in the healthcare system, and the reality of vaccine hesitation has been very small. The vaccination campaigns and adherence to public health guidelines have started to alleviate the pandemic, with the LAC region becoming the global leader in vaccination, if the vaccines arrive. This has been really the bottleneck suffered by the region.

VACCINATION PROGRAMS

The contribution of PAHO with country vaccination campaigns has been fundamental through the COVID-19 Vaccines Global Access (COVAX) Facility, a mechanism developed by global health organisations to facilitate equitable distribution of COVID-19 vaccines. In fact, 22/33 countries in the region have signed agreements to access vaccines through the facility. Additionally, the COVAX-Advance Market Commitment (COVAX AMC), launched by Gavi, the Vaccine Alliance, to provide donor-funded vaccines for low- and middle-income economies benefit from the program.

This all means that in early December 2022,

over 151 million doses had been delivered through COVAX, although COVID-19 vaccines from other sources, including China, Russia, India, and EE.UU. (in 2021) have also reached LAC. The population can finally steadily and safely resume its social interactions and start down the road to recovery.

COVID-19 vaccine manufacturing in LAC has seen initiatives in Cuba, Brazil, and a partnership between Argentine and Mexican companies. Although PAHO announced a program in 2021 to boost COVID-19 vaccine manufacturing in the region and selected biomedical centres in Argentina and Brazil to produce the vaccines, still not real products have been seen.

ECONOMIC AND SOCIAL IMPACTS

Already in 2020, The International Monetary Fund (IMF) had reported a 7.0% economic contraction for LAC and the Caribbean. Caribbean nations depend mostly on tourism; deep economic recessions (with gross domestic product declines of 10% or more) were seen in 2020. In 2021, some of the 'region's economies began to recover, the IMF estimating a growth rate of 6.9% for LAC and forecasting 3.5% growth in 2022. This will slow again to 1.7 % in 2023, one percentage point behind projected world growth. The lingering effects of the COVID-19 pandemic, a global increase in energy and food prices due to 'Russia's invasion of Ukraine, and China's economic slowdown represent major economic challenges to the regional economies.

Latin America was already in 2020, the most unequal region in the world in terms of income, the challenges posed by the pandemic increased, even more, the poverty

and inequalities seen. In 2021 the U.N. Economic Commission for Latin America and the Caribbean (ECLAC) estimated an additional 17 million people in LAC that moved into poverty in 2020 (poverty rising to 32.8% from 30.4% in 2019).

This means that COVID-19 led to a humanitarian crisis in the region. A decades-long backlog of public health underfunding was a determinant of the impact encountered during the pandemic and social disparities have been exacerbated. According to ECLAC, extreme poverty rose to 13.1% in 2020 and remain in those numbers (13.1%) in 2022. The relief programs implemented by governments to protect their economies and vulnerable populations, with the aid of international organisations, helped partially, at least in some countries, to offset the fall in income in the region; this means that without that help, poverty would have reached higher levels.

FINAL WORDS

As stated in the Atlantic Council report released recently (<https://www.atlanticcouncil.org/in-depth-research-reports/2025-post-covid-scenarios-latin-america-and-the-caribbean/#executive>) for most world regions, the central challenge is defined as the swift return to a pre-pandemic normal or embrace of opportunities in a new normal. For LAC, the former will not be enough. For several significant reasons, the region needs to improve upon the conditions that existed in

early 2020. The pandemic not only exposed the region's structural vulnerabilities but became a significant stressor with medium- and long-term impacts. While each country is unique, many overarching challenges are shared across the region.

We invite the audience to read the whole report in order to have a full view of the challenges faced by this region that represents just 8 percent of the global population, has reported 26 percent of all deaths related to COVID-19.

LEISHMANIASIS IN LATIN-AMERICA, 2022 PANORAMA

By Alicia Ponte-Sucre for MedBox/MedMissio 2022

A brief description of the fate of the Leishmaniasis during 2022 in the Latin-American and the Caribbean (LAC) region is herein described. Due to the pandemic, that had widespread economic, social, and political effects on LAC, the situation may be full of opacities by the facts related to COVID-19; however, we made our best to find the best reports for describing the situation.

The reports used for summarizing the situation are:

Leishmaniasis: Epidemiological Report on the Region of the Americas

© <https://iris.paho.org/handle/10665.2/51742>

WHO report on Leishmaniasis 2021

https://apps.who.int/neglected_diseases/ntddata/leishmaniasis/leishmaniasis.html

Drug for Neglected Diseases Initiative report on Leishmaniasis / Info LEISH Boletín informativo de la redLEISH - 6ª edición Julio de 2022 (In Spanish)

https://www.dndial.org/wp-content/uploads/2022/10/informativo_infoleish_edicao_6_ESP_v5.pdf

Guideline for the Treatment of Leishmaniasis in the Americas. Second Edition

<https://iris.paho.org/handle/10665.2/56120>

Respuesta Mundial Para El Control De Vectores 2017–2030 (in Spanish)

<https://www.paho.org/es/documentos/respuesta-mundial-para-control-vectores-2017-2030-0>

GENERAL SITUATION

In dealing with vector-borne zoonotic diseases and those at the human-animal-environment interface, such as leishmaniasis, it is important to implement integrated approaches across different spheres of disease bio-ecology. In this regard, PAHO approved the Plan of Action on Entomology and Vector Control 2018–2023 in 2018 and the One Health, as a “Comprehensive Approach for Addressing Health Threats at the Human-Animal- Environment Interface in 2021”. Although to achieve the commitments by Member States of The Pan American Health Organization (PAHO), it is important to undertake joint actions targeting human cases, vectors, and the domestic reservoir, the last years have seen an impairment of this goal due to the pandemic situation. However, the work continues. Here we

would try to summarize the most recent data available.

In LAC Leishmaniasis continues to be a major health problem, being one of the 4 eco-epidemiological regions of the world together with East Africa, North Africa and West and South-East Asia with the 4 main forms of the disease: visceral leishmaniasis (VL, also known as kala-azar), post-kala-azar dermal leishmaniasis (PKDL), cutaneous leishmaniasis (CL) and mucocutaneous (MCL) leishmaniasis being spread all over the regions. For LAC the Tegumentary leishmaniasis comprises both the CL and MCL with additional names such as disseminated and diffuse CL. CL is the most common form of the disease in LAC, being VL is the most serious and almost always fatal if untreated.

According to the World Health Organization (WHO), scientific publications and the WHO Expert Committee, countries are classified as “endemic” if at least

(i) 1 autochthonous case has been reported and the entire cycle of transmission has been demonstrated somewhere in that country;

(ii) having “previously reported cases” if at least 1 autochthonous case has been reported, but the entire cycle of transmission has not been demonstrated in that country;

or **(iii)** having “no autochthonous cases reported” if no case has been reported in the country. In LAC, there are 20 endemic countries recording yearly around 53,000 new cases of the cutaneous and mucosal forms of the disease and 3,400 cases of visceral leishmaniasis.

In early 2020, the COVID-19 pandemic hampered essential services worldwide, according to the intensity and scale of spread in countries. To mitigate the effects, countries prioritized containment and response through measures such as movement restrictions and re-assignment of health personnel to COVID-19 critical response teams. The impact of COVID-19 on health services in general and on leishmaniasis surveillance, for example, is yet to be assessed.

Actually, Leishmaniasis continues to spread to new areas in LAC even in countries known to be endemic. Continuous, close monitoring of the situation is thus necessary since in LAC there exists all the elements of the transmission cycle and the parasite, being of different or the same species can cause different types of leishmaniasis. Surveillance in non-endemic and low-burden

areas and countries is fundamental, to collect data on imported cases and be prepared to detect, investigate, manage and report to WHO any potential new leishmaniasis focus or outbreak. Upon detection, full-scale intervention strategies should be implemented to contain and control the infection. To monitor disease trends and efficacy of treatment, WHO encourages countries to collect disaggregated information on the type of patient as new, relapse or unspecified. Some high-burden countries, such as Brazil for example, may face challenges to surveillance, with the consequence for examples that a low capacity to diagnose relapse cases makes issues difficult and promote the classification of cases as unspecified.

What is clear is that although so many challenges, (PAHO), through the Regional leishmaniasis Program, with support from the communicable disease area at PAHO, continues to provide technical cooperation to countries where there is transmission of leishmaniasis, with the objective of achieving the goals set in the PAHO Disease Elimination Initiative: A Policy for an Integrated Sustainable Approach to Communicable Diseases in the Americas, with goals and targets aligned with the Road Map for Neglected Tropical Diseases 2021–2030 and adapted to the epidemiological characteristics and other specific features of the Region of the Americas, even with the COVID pandemic present.

The purpose of the Plan of Action on Leishmaniasis is to support PAHO countries and territories in achieving the commitment made in the framework of the first mandates

approved by the WHP and the PAHO. The plan details lines of action to strengthen leishmaniasis surveillance, diagnosis, treatment, and control in the Region and presents the main process indicators to assess progress: epidemiological and operational indicators to monitor the disease and progress in the quality of

the surveillance and services provided. As such, regional goals were established for CL and VL in order to reduce morbidity and mortality due to leishmaniasis in LAC and we will summarize the advancement according to the most recent report from PAHO (<https://iris.paho.org/handle/10665.2/51742>).

GOAL 1

Reduce fatality by visceral leishmaniasis by 50% in the Region by 2022

This goal was not reached for the Region as a whole. The case fatality rate in 2021 (9.45%) was approximately three times higher than the established goal (3.44%) and there was an increase of 37% relative to the baseline (2012–2015). However, when analyzing data from the 13 countries with VL transmission individually, six countries (46.15%) reported no deaths from the disease in 2021 (Argentina, Bolivia [Plurinational State of], Colombia, El Salvador, Guatemala, and Uruguay) and four countries (30.79%) reported no VL cases in the period.

This means 10 countries (76.92%) reached the goal in these individual-level analyses. Of the three countries that did not reach the goal, two countries (Paraguay and Venezuela [Bolivarian Republic of]) reduced the fatality rate relative to the baseline.

Qualitative analysis of the goal to reduce the proportion of cutaneous leishmaniasis cases in children under 10 years of age by 50%, Region of the Americas, 2021.

Taken from PAHO report

(<https://iris.paho.org/handle/10665.2/51742>).



- Countries that achieved the goal in 2021
- Countries that did not achieve the goal but have reduced the proportion of cases
- Countries that did not achieve the goal and experienced an increase in the proportion of cases
- Countries with no cutaneous leishmaniasis transmission
- Countries with no data reported to the Pan American Health Organization

GOAL 2

Reduce visceral leishmaniasis incidence in the Region by 2022: in countries with expanding and stable transmission, by 50%; and in countries with sporadic transmission, no increase in incidence

The incidence of VL for the Region in 2021 was 2.19 cases per 100 000 population, representing a 30% reduction from baseline. However, the goal of 2.17 cases per 100 000 population has not yet been reached. When analyzing the data for individual countries, it is observed that two countries (Brazil and Colombia) reached

their goals and two countries (Argentina and Venezuela [Bolivarian Republic of]) did not. Although Paraguay did not reach the goal, incidence was below the baseline. For countries with sporadic transmission, it was not possible to assess progress towards the goal, as it is not possible to calculate the baseline (Table 2).

GOAL 3

Reduce deaths due to cutaneous and mucosal leishmaniasis by 90% in the Region by 2022

At the regional level, the progressive goal of five deaths by CL in 2020 and two deaths in 2022 was not reached. In 2021, a total of 16 deaths by CL were reported in the Region, which represents a value 3.2 times higher

than the goal of a 70% reduction by 2020 and 8 times higher than the goal of a 90% reduction by 2022. Notably, 15 of the 17 countries with transmission met the goal by reporting no deaths by CL (Table 3).

GOAL 4

Reduce the cutaneous leishmaniasis proportion in children under 10 years of age by 50% in the Region by 2022

The regional proportion of CL cases in children under 10 years of age was 10.1%, meaning that the goal (6.05%) was not reached in 2021. However, despite not reaching the regional goal, there was a 16.7% reduction in the

proportion relative to the baseline. Notably, only two countries reached the goal; among those that did not, 10 showed progress, with a reduction in the CL proportion in children under 10 years of age relative to their individual baselines.

FINAL WORDS

For the 2001–2021 period, the regional analysis shows a trend towards a reduction in cases of cutaneous leishmaniasis since 2005 and visceral leishmaniasis since 2011, but these trends have become more significant in the last five years.

At the regional level, none of the goals set for 2022 had been met in 2021. However, it was individually verified that in different countries, some of the goals were met or showed considerable improvement. The end of the current Plan of Action on Leishmaniasis in 2022 and the approval of PAHO document CD57/7 in 2019 and the WHO 2030 road map, as well as PAHO documents CD56/11 on entomology actions in public health in 2018 and CD59/9 on the “One Health” approach in 2021, affirmed

the need to update the Plan of Action on Leishmaniasis considering the progress made and the challenges identified in the Region.

It is necessary to continue supporting countries and establishing technical cooperation in order to continue strengthening leishmaniasis surveillance, prevention, control, and treatment. The new plan is currently being prepared for presentation, discussion, and approval by PAHO Member States.

PLANETARY HEALTH TOOLBOX

By Laura Liebau, medmissio – Institute for Global Health

Planetary health refers to the health of our planet's natural system, including the atmosphere, oceans, forests, and ecosystems. It includes the well-being of all species that depend on them and encompasses the interrelated issues of environmental degradation, climate change, biodiversity loss, and the impacts of human activities on the natural world¹².

This focus is important because these systems provide essential life-support services, such as clean air and water, soil fertility, and food production, that sustain human well-being and survival. Human activities, such as deforestation, pollution, and climate change, are disrupting these systems and compromising their ability to provide these services, which has wide-ranging impacts on health and livelihoods. Therefore, preserving planetary health is crucial for securing a healthy and sustainable future for all. The term "planetary health" was introduced to describe the interconnectedness between human health and the planet's health. Since then, there has been growing recognition of the importance of considering the health of the planet in addressing public health issues. Multiple international organisations and governments have tried integrating planetary health into their agendas and policies¹³. The World Health Organization has emphasised the importance of a holistic approach to health that includes both human and planetary health. Many countries have incorporated principles of planetary health into their environmental and health policies¹⁴. Additionally, there has been an increase in research and education on planetary health, including the establishment of academic

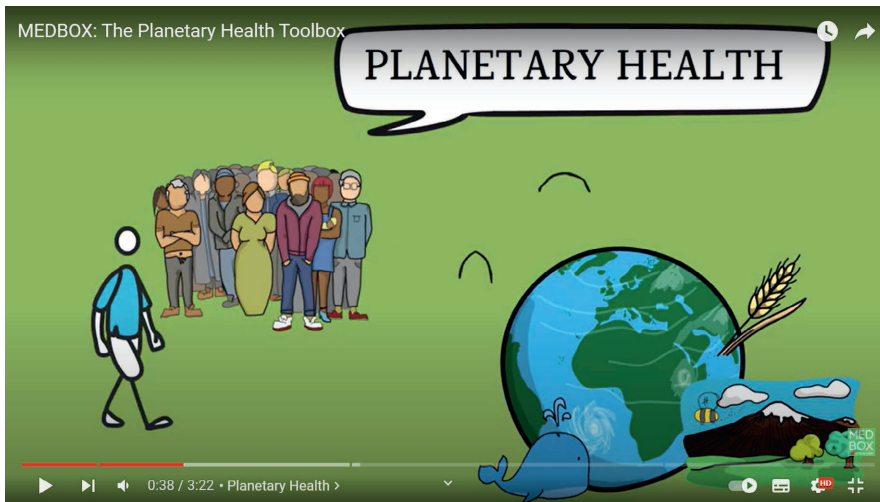
programs and research initiatives dedicated to this field. The advancement of technology and data analysis has also enabled a more comprehensive understanding of the impact of human activities on the planet and its health. Overall, the development of planetary health as a field has demonstrated the need for a multidisciplinary approach to addressing public health challenges, recognising the interconnectedness of human health and the planet's health. In recent years, the concept of planetary health has received more attention and recognition as a critical issue. The Planetary Health Toolbox was created in response to this long-known and continuing escalating global crisis. A particularly significant challenge for the **MEDBOX** team was to go beyond the human health factor and gather data from various scientific disciplines. The **PLANETARY HEALTH TOOLBOX** was developed with the expertise of a team of medical and health scientists and in collaboration with organisations such as KLUG (German Alliance for Climate Change and Health) and the Global Health program at the University of Würzburg.



¹² <https://www.planetaryhealthalliance.org/planetary-health>

¹³ <https://unfccc.int/climate-action/un-global-climate-action-awards/planetary-health>

¹⁴ <https://www.who.int/news-room/fact-sheets/detail/one-health>



The Planetary Health Toolbox video is available in various languages

In addition, we launched a Planetary Health Toolbox video, giving an overview of the topic and explaining the content of the new TOOLBOX. The video is available in various languages. In 2021, we created a clear sitemap, searched for articles, and sorted them into categories, finally publishing the Toolbox in May 2022.

The **PLANETARY HEALTH TOOLBOX** contains basic documents on the most important topics with high practical relevance and goes beyond human health issues. Throughout 2022, the **MEDBOX** team continued to collect more high-quality literature to keep the Toolbox up to date. We used opportunities to promote the Toolbox as a resource in student education

or for practical outreach in the global South. We have collected over 720 publications, divided into nine categories. Some deal with specific topics like Planetary Boundaries or One Health, while others are more general, like Climate Change or Green and Healthy Living. Our goal is to provide free, open-access materials to support the integration of planetary health concepts into everyday practice, policy-making, and education. In the short time that the **PLANETARY HEALTH TOOLBOX** has been available, we have already registered over 115,000 viewers (see percentage distribution among the categories in Figure 9). We strive to continue searching for relevant literature and making it available to users.

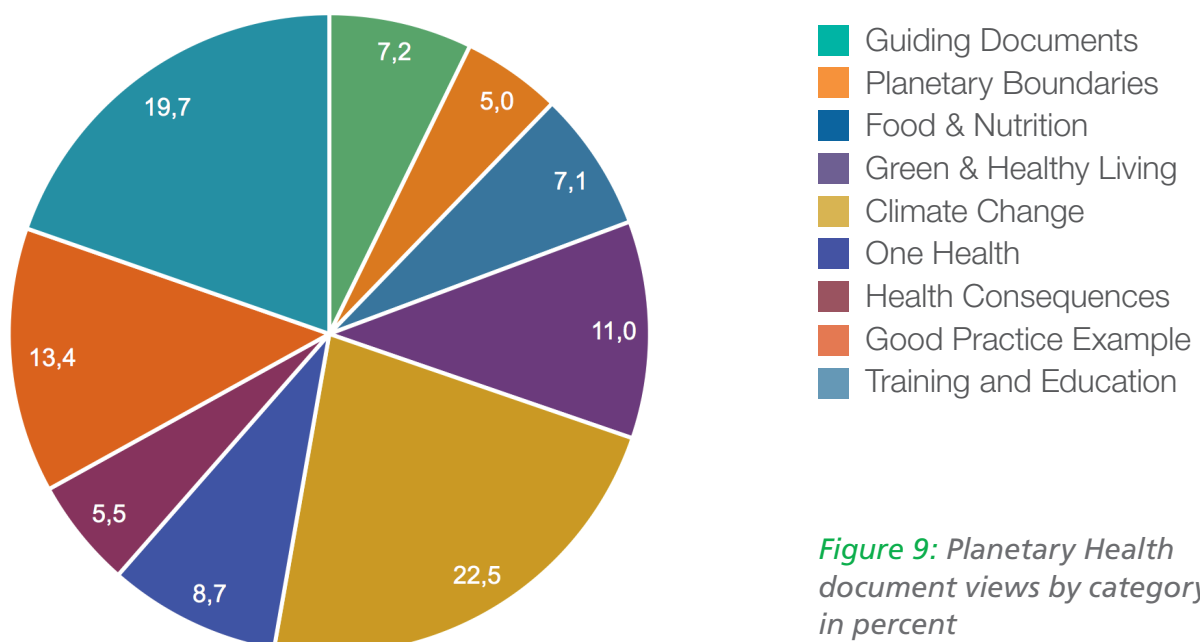


Figure 9: Planetary Health document views by category in percent

PLANETARY HEALTH SUMMER SCHOOL

By Klemens Ochel, medmissio – Institute for Global Health

Climate change has become tangible for everyone. With flood disasters in Bangladesh or drought in East Africa, the wildfires in the USA or Siberia, or the melting glaciers with loss of drinkable water in the Alpes and sea level rise through ice cap melting at the North and South Poles, it is already having catastrophic and life-threatening effects on an ever-increasing number of people all over the world. The overwhelming majority of climate researchers agree that humans are the driving force, especially through the still-growing use of fossil fuels and the associated emission of climate-damaging exhaust gases such as CO₂. Although denialists lose grounds, political action – especially by the countries causing

climate change – is not reversing the trend to limit the heating to a manageable 1.5°C average temperature increase. There is even a growing threat of reaching so-called tipping points, natural phenomena that can no longer be reversed and themselves accelerate negative effects. We do not need to save the earth, but we need to rescue humanity and preserve survival opportunities on our planet. Planetary health is a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to earth's natural systems on human health and all life on earth (Source: <https://www.planetaryhealthalliance.org/planetary-health>).



University of Würzburg, Germany
University of Eldoret, Kenya
Catholic University of Health and Allied Sciences in Mwanza, Tanzania
in cooperation with
Eise Kröner Center and
German Alliance for Climate Change and Health (KLUG)
invite



students, scientists & practitioners
of all
climate, environment &
health-related disciplines
to the international & transdisciplinary



Summer School „Planetary Health“
October 7-16, 2022
in Würzburg, Germany

Although the topic has arrived at the reality of life, especially of the disadvantaged and vulnerable in the Global South, there is a lack of academic discussion in academic training and teaching. The University and the University Hospital of Würzburg (UKW) wanted to do something about this. UKW organised and implemented a summer school from October 7-16, 2022. Nearly 50 participants from a wide range of backgrounds have been invited to share perspectives from Eastern Africa and Europe. The aim has been to identify solutions for mitigation and adaptation relevant to European and African contexts by applying a planetary health lens. Just in time for the start of the Summer School, medmissio's **MEDBOX** team has launched a toolbox on the topic. This makes freely available publications on a wide range of planetary health issues easily

accessible. In particular, as the climate crisis is also a political-ethical crisis of justice, peace and sustainable economics and business, texts on this have been included in the Documents section of 'Guiding Documents'. Further topics are planetary boundaries, sustainable nutrition, healthy livelihoods, the political framework for action of the 'One Health' approach or the impact on global health. There are often complaints about the lack of action. However, the **MEDBOX** team identified publications on good practices in many areas, such as agriculture, environmental protection and of course, health. The participants of the Summer School were enthusiastic about the freely accessible resources. There are prospects for cooperation between SOPHEA and the **MEDBOX** team on the topic of "training opportunities".

NEGLECTED TROPICAL DISEASES (NTDS) - TOOLBOX

NEGLECTED TROPICAL DISEASES ARE A SYMPTOM OF POVERTY AND DISADVANTAGE

By Sieglinde Mauder and Piet Reijer, medmissio – Institute for Global Health

The **MEDBOX** team is developing a new TOOLBOX: Neglected Tropical Diseases (NTDs). We plan to launch the **NTD TOOLBOX** in the first half of 2023.

The World Health Organization (WHO) recognises the following conditions as NTDs:

- Buruli ulcer
- Chagas disease
- Dengue and chikungunya
- Dracunculiasis (Guinea-worm disease)
- Echinococcosis
- Foodborne trematodiasis
- Human African Trypanosomiasis (sleeping sickness)
- Leishmaniasis
- Leprosy (Hansen's disease)
- Lymphatic filariasis
- Mycetoma
- Chromoblastomycosis and other deep mycoses
- Onchocerciasis (river blindness)
- Rabies,
- Scabies and other ectoparasitoses
- Schistosomiasis
- Soil-transmitted helminthiasis
- Snakebite envenoming
- Taeniasis/cysticercosis
- Trachoma
- Yaws and other endemic treponematoses

“Neglected tropical diseases have afflicted humanity since time immemorial and, in their long histories, have acquired notoriety as disabling and deforming diseases. In the past, their serious impact on health and productivity led to considerable knowledge about these diseases, and effective control tools were developed for many. In addition, as living conditions improved, opportunities for transmission were drastically reduced. As a result, these diseases are rarely seen in populations that enjoy good access to health services and a reasonable standard of living.

Today, neglected tropical diseases are a symptom of poverty and disadvantage.

Those most affected are the poorest populations, often living in remote, rural areas, urban slums, or conflict zones. With little political voice, neglected tropical diseases have a low profile and status in public health priorities. Lack of reliable statistics and unpronounceable names of diseases have all hampered efforts to bring them out of the shadows.”¹⁵

NTDs are widespread in 149 countries. About 1.7 billion people are affected, including 500 million children. Source: https://www.who.int/health-topics/neglected-tropical-diseases#tab=tab_2
The term “neglected tropical diseases” is technically incorrect. Many of the

¹⁵ Dr Lorenzo Savioli, Director Department of Control of Neglected Tropical Diseases, World Health Organization
http://apps.who.int/iris/bitstream/handle/10665/69367/WHO_CDS_NTD_2006.2_eng.pdf;jsessionid=83EC099904CB678B5470589E2BC0C3AF?sequence=1

diseases listed can (or could) also occur in wealthy countries where people have good access to health care (e.g. scabies, leprosy, soil-transmitted helminthiases). Not all diseases listed are diseases, such as snakebites envenoming. The term “neglect” refers to several aspects. First, the importance of (some of) the NTDs has been underestimated. Many are asymptomatic and have long incubation periods. Because of this long period, the link between death and an NTD is not always clear. Another “neglect” is that many NTD patients live in low- and middle-income countries. In many ways, these countries are neglected, exploited and treated as “second class” by more affluent countries.

Neglected tropical diseases have a major impact on global health. The occurrence and spread of the diseases can only be attributed to climatic conditions to a limited extent. Other major reasons for the high disease burden of neglected tropical diseases are mainly the lack of drugs and vaccines or the fact that they cannot be used when resources are limited. There are hardly any economic incentives to develop these drugs and vaccines, as the economic power in the affected countries is low. In addition, the lack of or difficult access to health services contributes to the lack of care. Poorly developed hygiene standards and inadequate access to clean water are also the cause of many diseases.

However, it would be unfair to claim that the pharmaceutical industry is neglecting the development of new drugs for NTDs.

For some of the NTDs, there are now suitable treatment options, some of which are also made available free of charge: For example, the pharmaceutical company Merck has provided over 1.5 billion tablets of Praziquantel free of charge for the treatment of schistosomiasis in sub-Saharan Africa since 2007.¹⁶ Merck has also donated ivermectin for treating river blindness for over 35 years. The same drug is also used to treat lymphatic filariasis (along with albendazole donated by another pharmaceutical company, GSK). (For more information on drug donations, see <https://www.neglecteddiseases.gov/about/drug-donation-partnerships/>).

In some areas, however, the drugs often do not reach the people who need them at all or only at great expense. The so-called last mile, i.e. the last few steps in the countryside, to the village that is not connected to any road, outside the supply radius of the health systems, cannot be overcome.

In 2012, leaders from several prominent global health and development organisations, as well as industry partners, formed the Uniting to Combat NTDs partnership and pledged to combine their efforts to support the achievement of the World Health Organization (WHO) 2020 targets of eradicating, eliminating or controlling ten NTDs by 2020.

Building on the progress of the **London Declaration on NTDs**¹⁷ and in line with the principles of country ownership and partnership, public and private sector

¹⁶ <https://www.merckgroup.com/en/news/praziquantel-tablet-donation-24-01-2022.html>

¹⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/67443/NTD_20Event_20_20London_20Declaration_20on_20NTDs.pdf

leaders in global health came together again to sign the 2022 Kigali Declaration on NTDs. With this declaration, stakeholders reaffirmed their commitment to tackling NTDs by making new pledges and addressing the human, economic and social burden of NTDs.

The Kigali Declaration on NTDs ¹⁸ adopts the goals of the WHO's new 2030 NTD Roadmap (WHO's Ending the neglect to achieve the Sustainable Development Goals: A Roadmap for NTDs 2021-2030) as a guiding framework for collective action. In compiling the new toolbox, we noticed another "neglect": the lack of available information, especially information, communication and education materials

for use in communities, patients and health workers. For some diseases, only a limited number of documents suitable for frontline health workers could be found.

Financial support from the *Verband forschender Arzneimittelhersteller VfA* <https://www.vfa.de/> and *Misereor* enabled us to develop this toolbox. In researching high-quality documents, we were supported by experts from various research fields, public health and the *German Network against Neglected Tropical Diseases (DNTDs)* <https://dntds.de/start.html>. As a separate toolbox for leprosy has existed for years, we have linked the Leprosy Toolbox to the new NTDs Toolbox.

¹⁸ <https://unitingtocombatntds.org/kigali-declaration/>

UKRAINE CRISIS

By Sieglinde Mauder, medmissio – Institute for Global Health

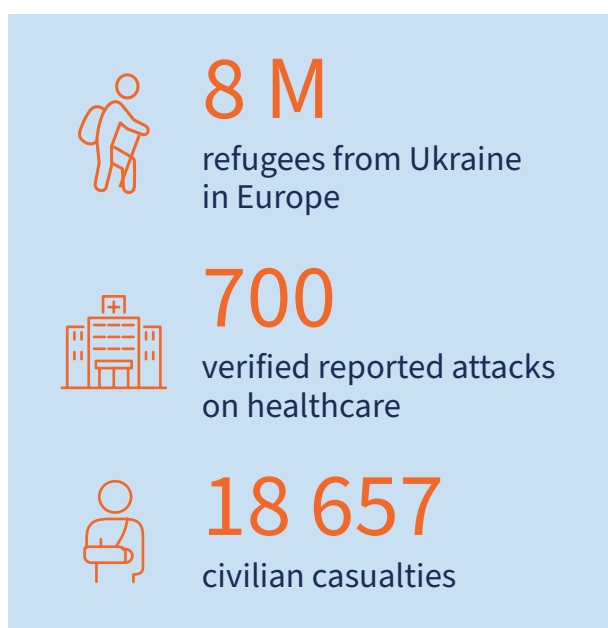
Russia's invasion of Ukraine in February 2022 has resulted in another humanitarian catastrophe of the 21st century, joining the protracted conflicts in Syria, Iraq, Yemen, Libya, Afghanistan, and Darfur in Sudan. In recent months, millions more people have been displaced within and to neighbouring countries. The international community must provide far more humanitarian assistance, including medical evacuations across Europe and adequate supplies and support for displaced populations. The overall situation in Ukraine is deteriorating daily. Currently (as of January 2023), 17.6 million people are affected by the conflict and, according to data from the UN Refugee Commission UNHCR, over 8 million refugees have left Ukraine and fled to other European countries.

The war has not only triggered the largest movement of refugees in Europe since the end of the Second World War. Its manifold

effects can be seen worldwide: for example, consumer prices have risen and, in view of blocked grain exports of wheat, barley, and maize, food security in Africa is at risk. As a result of the tighter supply, prices for agricultural products are skyrocketing. The war is also driving up the cost of fertiliser and transport, while at the same time, droughts in various regions of the world are further tightening food supplies. Rising prices have exacerbated hunger crises in Somalia, Yemen, and Madagascar.

Access to medical care is associated with many difficulties, such as hostile attacks, bombardments, and a lack of public transport restricting movement. Nearly 1000 health facilities are located near conflict areas. Hospitals have been converted to care for injuries. Due to the massive attacks on hospitals and critical infrastructure, access to medicines, health facilities, and medical staff is disrupted or very limited in some areas.

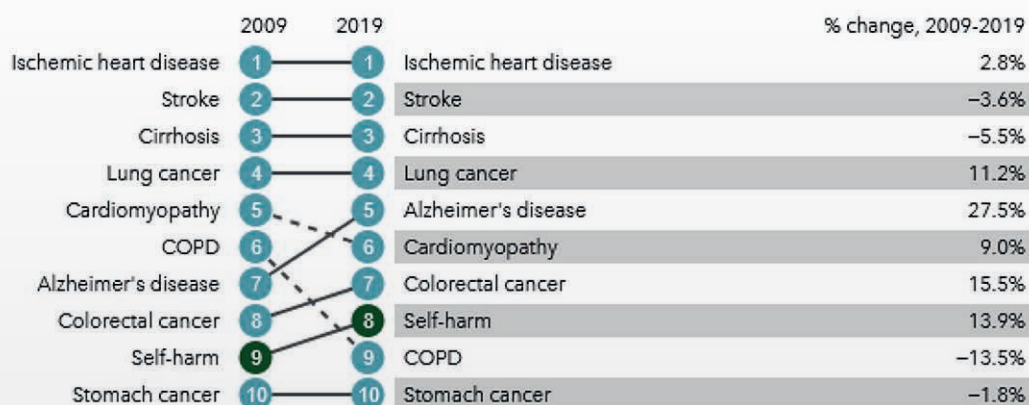
The onset of winter and falling temperatures are devastatingly impacting people in conflict areas. Thousands whose homes and flats were destroyed in the war face temperatures reaching double-digit sub-zero temperatures in some parts of the country. With half of Ukraine's energy and water infrastructure damaged or destroyed and attacks on health care continuing, millions of lives remain at risk. Access to critical and routine health care for the Ukrainian population is difficult to ensure and only possible with the support of the WHO and numerous aid organisations. Ukraine is facing a full-scale mental health crisis, with a quarter of the population at risk of developing a mental illness as a result of the war. The elderly, women,



Source: WHO, Europe: War in Ukraine. January 2023 Bulletin

What causes the most deaths?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries



Top 10 causes of total number of deaths in 2019 and percent change 2009-2019, all ages combined

Source: IHME, Healthdata, accessed 29 Nov. 2022, <https://www.healthdata.org/ukraine>

and children are particularly at risk. A World Vision report warns that due to the conflict, millions of children will have mental illnesses now and in the future. More than 22% of people affected by the conflict have a mental disorder. (World Vision: No peace of mind, July 2022; <https://www.wvi.org/publications/report/ukraine/no-peace-mind>)

Health system and data before the attack on Ukraine

The Ukrainian health sector was already confronted with the classic problems of a former Soviet system before the war. However, the health care system (National Health Services of Ukraine, NHSU) has undergone substantial reforms in recent years to reduce private catastrophic healthcare expenditures for the population and, above all, strengthen family doctor primary care.

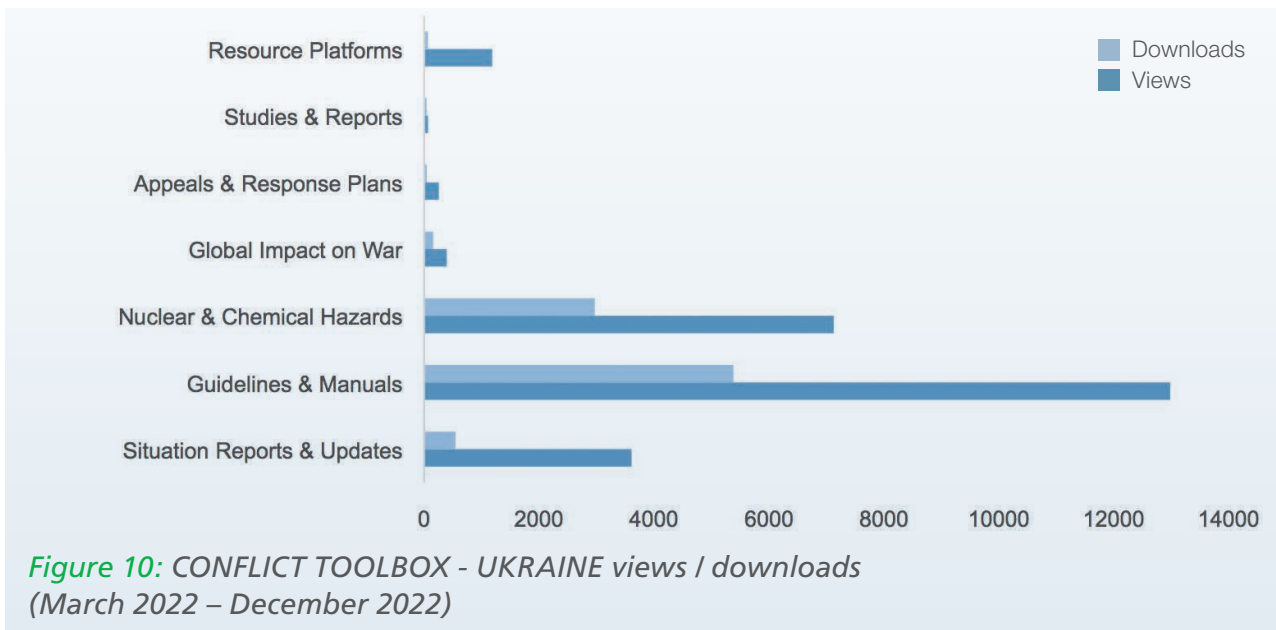
Due to a lack of preventive measures, non-transmissible diseases have exploded. Almost 80 % of deaths were attributed to cardiovascular, cancer, and respiratory diseases. In 2017, 400 deaths per 100,000 population were attributed to ischaemic

heart disease, compared to 63/100,000 in the EU in the same year. Overall, ischaemic heart disease, strokes, liver cirrhosis, lung tumours and Alzheimer's disease are among the five most common causes of death. Destruction of hospitals and its impact could set Ukraine's health system back decades.

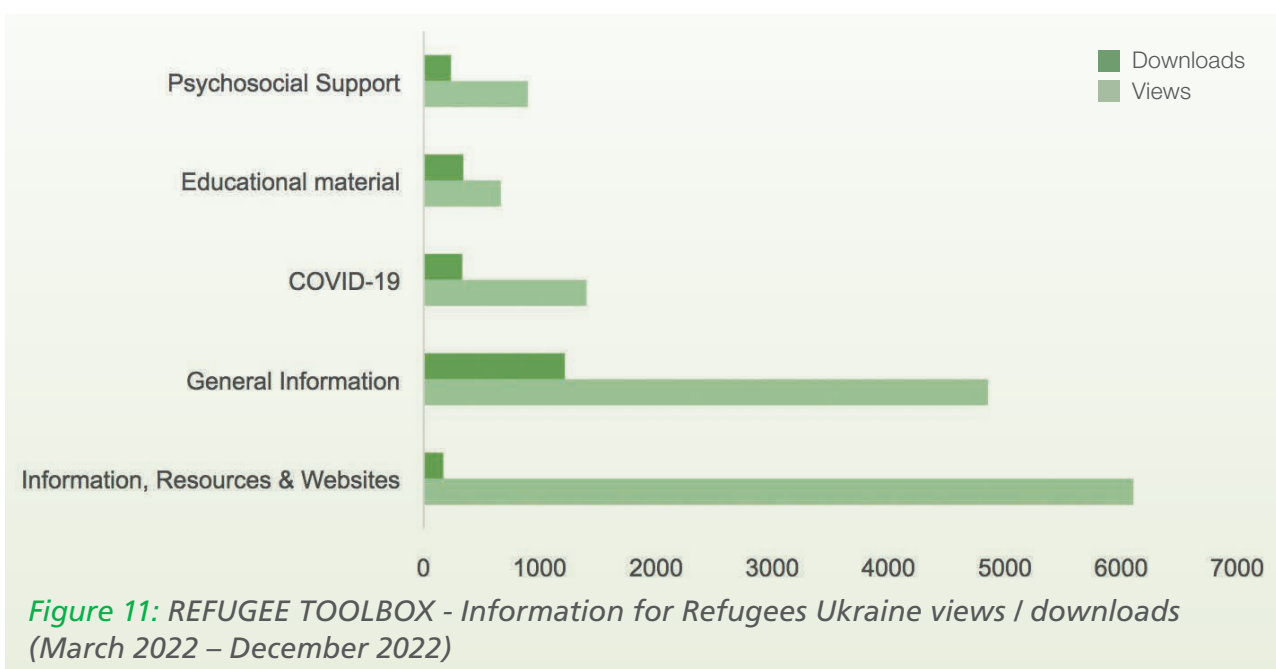
The **MEDBOX** team has immediately set up a new category in the **CONFLICT TOOLBOX – UKRAINE** on the Ukraine crisis. Here you will find current situation reports, emergency guidelines and manuals (especially for the care of war injuries), mental health & psychosocial support, analyses, appeals & response plans, and studies on the global impact of the war, i.e. impact on food security in Africa. The materials are available in English and Ukrainian.

In addition, we have created an extra information platform in German and Ukrainian for refugees from Ukraine to Germany with important materials on asylum and life in Germany in our **REFUGEE TOOLBOX – Information Refugee Ukraine**.

In the Ukraine section in our **CONFLICT TOOLBOX** there are nearly 200 documents, which have been viewed almost 25,000 times and downloaded more than 9,000 times.



In the section “Information for Refugees from Ukraine” in our **REFUGEE TOOLBOX** are now 125 documents included with almost 12,000 views and 2,000 downloads.



We were able to implement new categories with the financial support of *Renovabis*.

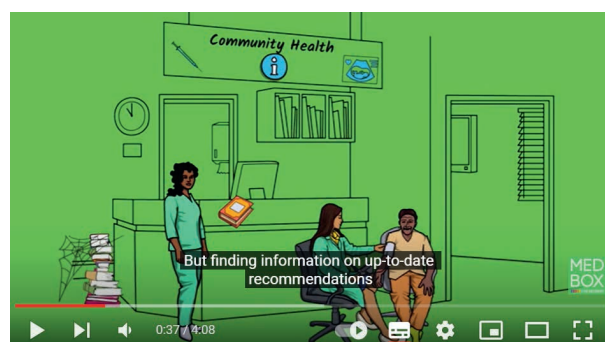
CAREGIVER TOOLBOX

By Karla Deininger, medmissio – Institute for Global Health

Caregivers have a significant impact on maintaining health services and improving the health status of the population. However, the daily work of caregiving requires good organisation, a strong sense of responsibility, and continuous education on the latest standards of care. Particularly in low- and middle-income countries (LMICs), caregivers can make important improvements in priority areas of health care, including through disease prevention education, reducing child malnutrition, improving maternal and child health, providing palliative care, expanding access to family planning services, and helping to combat infectious and non-communicable diseases.

Caregivers must have low-threshold, free access to relevant and reliable documents to reach their full potential and draw on complete resources. The **MEDBOX** team aimed to close this gap by creating a **CAREGIVER TOOLBOX**, which includes management and patient care guidelines, standard precautions, standard operating procedures (SOPs) and training material. Special care was taken to find documents, not only from Western countries, but particularly from low-income countries, where caregivers often work under difficult conditions. The Toolbox was created in November 2021. Because there is also a high demand for caregivers in the Francophone region, especially in Western Africa to have access to relevant health information, **MEDBOX** has expanded the

CAREGIVER TOOLBOX by including French-language literature. Furthermore, a video on the topic was created, which will be published in spring 2023. The video is specially addressed to caregivers and explains the structure and content of the **CAREGIVER TOOLBOX**, tells stories from caregivers worldwide and shows how the online library can simplify their work. We are very proud to say that the video included our partner from Kenya (St. Monica's Hospital) and India (CHAI organisation) who are the narrator of the video. We plan to produce a similar video for India soon.



Presently the Toolbox holds 768 documents. Some documents are also linked to appropriate categories in the **MEDBOX**. Since its launch in November 2021, caregiver-related documents have been viewed more than 338,631 and downloaded more than 167,793 times. The most selected categories are patient care, midwife-related documents and key resources.

CHOLERA IN NORTHEAST SYRIA

By Hussein Ahmed, medmissio – Institute for Global Health

In September 2022, the Syrian Ministry of Health announced the registration of 15 confirmed cases of Cholera and one death in the country. This announcement was a cause for concern as Cholera is a highly contagious and potentially fatal disease caused by the bacteria *Vibrio Cholerae*, which is usually contracted through contaminated water or food. The symptoms of Cholera include severe diarrhoea, dehydration, and vomiting, which can lead to death within hours if left untreated. Additionally, there were at least 936 reported cases of severe acute watery diarrhoea and six related deaths in Syria at the time, which the outbreak of Cholera may have also caused. These reports were a reminder of the ongoing challenges related to the availability of clean water and

sanitation in Syria, which can exacerbate the spread of Cholera and other waterborne diseases.

In response to the outbreak of Cholera, the **MEDBOX** team created an Arabic Cholera Issue Brief, which contains information and resources about the disease. This includes main references on Cholera, clinical guidelines for its treatment, and other resources that aid in infection control and public health education. The issue brief was distributed to health staff in Northeast Syria through WhatsApp groups to ensure they have access to the most up-to-date and relevant information on the disease and its management. This can help them better protect the population they serve and respond to the outbreak more effectively.

The screenshot shows a Google Classroom interface. At the top, there is a navigation bar with 'Stream', 'Classwork', 'People', and 'Grades'. The main content area displays a lesson titled 'الجلسة الافتتاحية والموارد الأخرى الرئيسية' (The introductory session and other main resources). The lesson is posted by 'المكتبة الإلكترونية ميدبوكس' (Electronic Library Medbox) on Dec 7, 2022. The lesson content includes a video titled 'KD_Medbox_Toolboxes...' and a PDF titled '2022-11_KD_Präsentation...'. The interface also shows a sidebar with 'All topics' and a search bar.

MEDBOX presentation records in the training Google classroom

THE PHARMACY & AMR TOOLBOX

THE ROLE OF MEDICINES, KNOWLEDGE AND VALUE

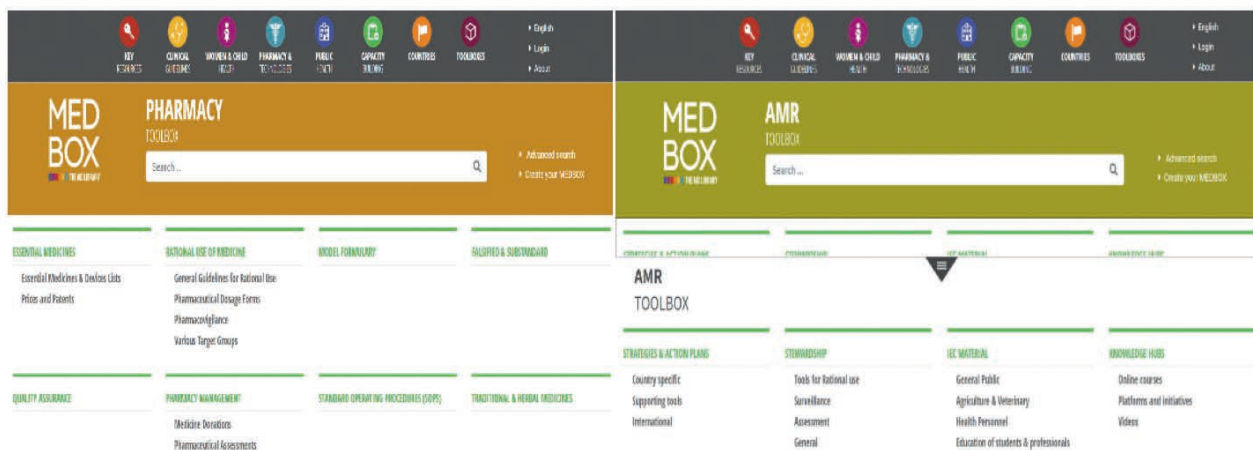
By Andreas Wiegand, Apotheker helfen e.V

Imagine you are sick, and the doctor prescribes a medicine. You enter a pharmacy at a health facility or a private business and receive a box with tablets. You hope to get cured, get relief for your symptoms and, in the best case, become healthy. What is the key to making the medicine work in your body as desired? Information! Any medicine is useless without any information on dose, intake, duration of intake, frequency, compatibility with food, interaction with other medications, etc. The package information leaflet is a formal paper seldom dispensed with medicine in poor countries and often never read in wealthier settings.

The role of the prescriber and dispensing personnel becomes important. Besides their professional training, resources of -based information are essential to select the proper medicine and giving sound

advice on the correct use of the medicine. Reference books on medicines in poor settings are often not available. Digital technology has marked a huge progress in access to information. Of course, information of any kind, even a lot of rumours and crude theories, is reaching out almost everywhere. But **MEDBOX** and all special boxes addressing specific health issues represent quality information health workers can rely on. Thanks to many institutions and organisations worldwide publishing this information and to medmissio and all organisations supporting the design and maintenance of all TOOLBOX(ES).

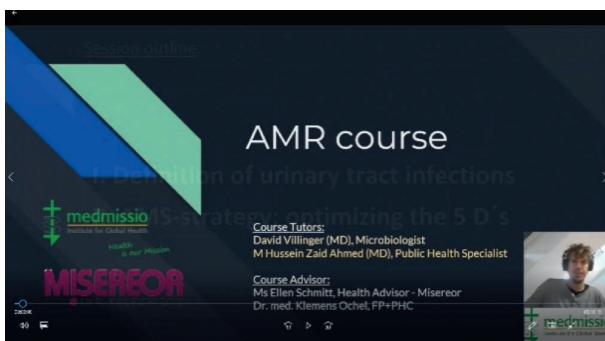
Antimicrobial resistance (AMR) is one of the biggest threats. Thus, an extra toolbox aims to spread valued information. That is the best measure to prevent spreading misuse of anti-infectives.



ANTIBIOTIC STEWARDSHIP E-LEARNING IN THE MIDDLE EAST, EASTERN AND SOUTHERN AFRICA

By David Villinger, Clinical Microbiologist, medmissio – Institute for Global Health

Antimicrobial resistance (AMR) is globally among the leading causes of death. The highest burden is observed in low-resource settings¹⁹. WHO recommends implementing National Action Plans (NAPs), but gaps in operationalisation are seen in many regions²⁰. The eLearning course “Optimising Antibiotic Prescribing” for medmissio – Misereor health partners discussed pressing issues on this topic. Finally, this resulted in developing setting-specific answers.



Online webinar by medmissio and Misereor

Misereor and medmissio offer capacity building and support to healthcare partners in Africa and the Middle East. Pilot experiences proved the concept of continued online collaboration. A challenge of the webinar was to overcome IT difficulties like fluctuating connections. Solutions were found using a multiplatform content management system, current communication channels or the online library **MEDBOX**



Relevant documents are found here

During the sessions, specific issues of AMR were discussed, whereas additional learning material and guidelines or NAPs could be

easily accessed through the **MEDBOX AMR TOOLBOX**.

The creation of two groups helped to facilitate peer-to-peer exchange. One group included participants from South Sudan, Kenya, Zimbabwe, Tanzania, and South Africa, and the other from Syria, Lebanon, and Iraq. The professional qualifications of participants enrolled have been programme coordinators, physicians, pharmacists or nursing staff.

WHO PRIORITY PATHOGENS LIST FOR R&D OF NEW ANTIBIOTICS

Priority 1: CRITICAL[#]

Acinetobacter baumannii, carbapenem-resistant
Pseudomonas aeruginosa, carbapenem-resistant
*Enterobacteriaceae**, carbapenem-resistant, 3rd generation cephalosporin-resistant

Priority 2: HIGH

Enterococcus faecium, vancomycin-resistant
Staphylococcus aureus, methicillin-resistant, vancomycin intermediate and resistant
Helicobacter pylori, clarithromycin-resistant
Campylobacter, fluoroquinolone-resistant
Salmonella spp., fluoroquinolone-resistant
Neisseria gonorrhoeae, 3rd generation cephalosporin-resistant, fluoroquinolone-resistant

Priority 3: MEDIUM

Streptococcus pneumoniae, penicillin-non-susceptible
Haemophilus influenzae, ampicillin-resistant
Shigella spp., fluoroquinolone-resistant

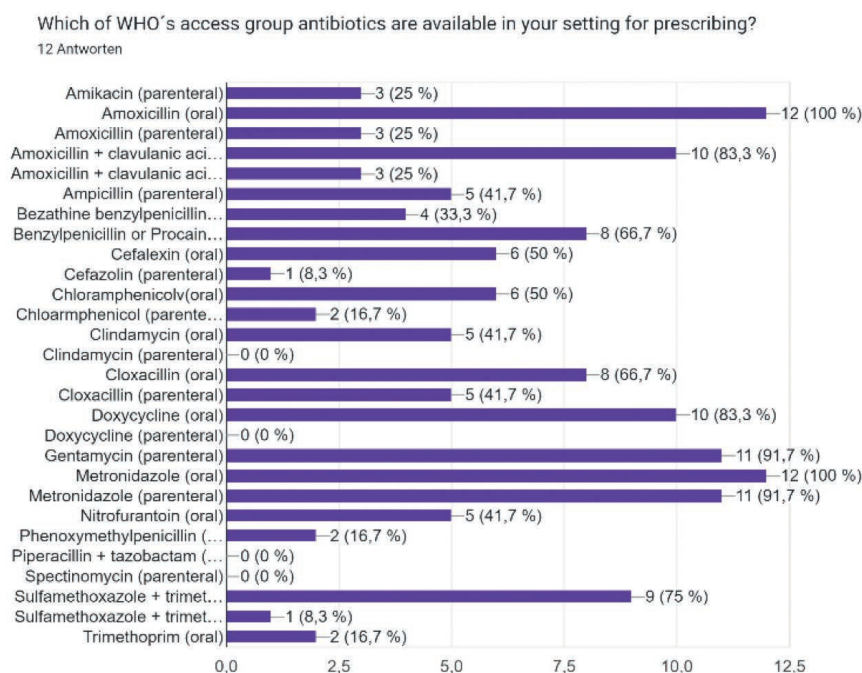
The most serious multi-drug resistant bacteria, source WHO

19 Murray CJ, Ikuta KS, Sharara F, Swetschinski L, Aguilar GR, Gray A, u. a. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. The Lancet. 12. Februar 2022;399(10325):629–55.

20 Charani E, Mendelson M, Pallett SJC, Ahmad R, Mpundu M, Mbamalu O, et al. An analysis of existing national action plans for antimicrobial resistance—gaps and opportunities in strategies optimising antibiotic use in human populations. The Lancet Global Health. 2023 Feb; S2214109X23000190.

During twelve biweekly sessions, international experts covered the following topics:

1. A FIRST GLANCE INTO ANTIMICROBIAL RESISTANCE
2. ANTIMICROBIAL RESISTANCE OVERVIEW
3. BUKO PHARMA AMR CAMPAIGN
4. BASICS ABOUT BACTERIOLOGY
5. INFECTION PREVENTION AND CONTROL
6. AMR – ANIMAL, ENVIRONMENT AND FOOD LINKAGES
7. BASICS ABOUT ANTIBIOTICS
8. PRINCIPALS OF ANTIBIOTIC PRESCRIPTION
9. URINARY TRACT INFECTIONS
10. SKIN INFECTIONS
11. RESPIRATORY INFECTIONS
12. SEPSIS

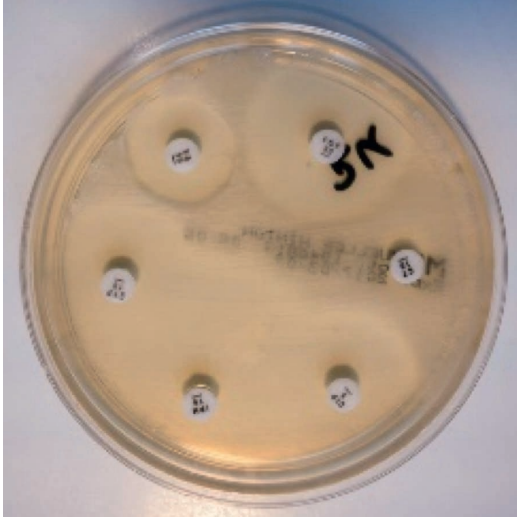


Among participants access to essential antibiotics is insufficient.

Twenty-eight continuously attending participants belonged to major church-based health networks or institutions with a regional service mandate. A baseline study revealed that nine out of ten had never been trained on AMR before. The lack of involvement in the NAPs, the lack of availability of 'access group' antibiotics in

the WHO essential medicine list, the high patient demand for antibiotics or the lack of reliable microbiology laboratory facilities have been identified as problems.

After the training, participants reported the establishment of multidisciplinary treatment teams, improvement of procedures of



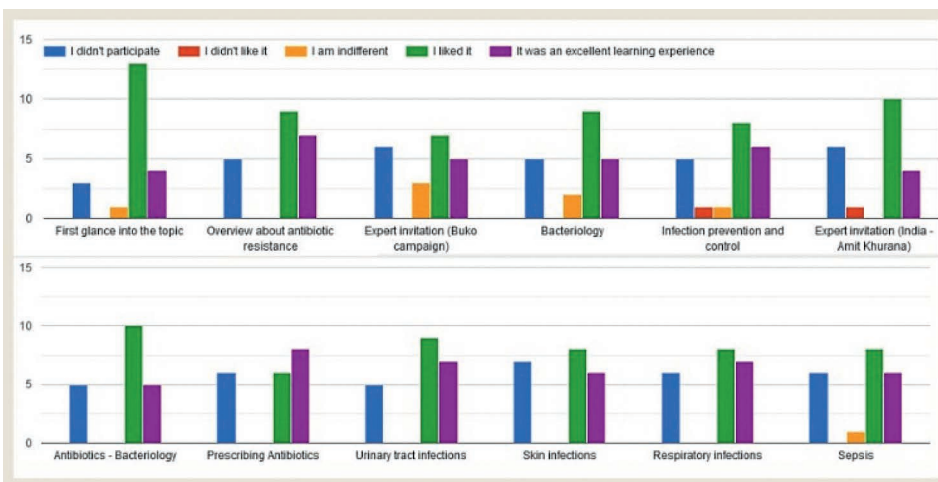
Access to susceptibility testing must be improved

Figure: Murray CJ, Ikuta KS, Sharara F, Swetschinski L, Aguilar GR, Gray A, u. a. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *The Lancet*. 12. Februar 2022; 399 (10325): 629–55.

antibiotic prophylaxis for surgery, update of institutionalised treatment guidelines or community awareness-raising actions. Participating institutions indicated the use of antibiotics following stewardship principles. In summary, WHO recommended NAP

to control AMR lack of involvement and operationalisation on the most decentralised level. Long-term online collaborations are feasible with the online library **MEDBOX** being a crucial component. We could show that eLearning is an efficient way to address deficiencies in Antimicrobial Stewardship, at least partially. Major challenges remain, like the provision of essential antibiotics or the access to appropriate microbiology capacities.

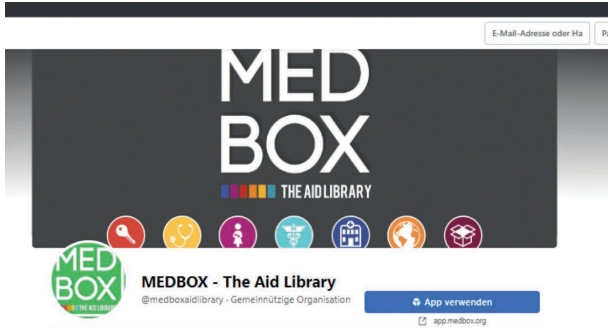
Antimicrobial stewardship (AMS) is the effort to measure antibiotic prescribing to improve antibiotic prescribing practices and the use of antibiotics by patients so that antibiotics are only prescribed and used when needed. This implies minimising misdiagnoses or delayed diagnoses leading to the underuse of antibiotics and ensuring that the right drug, dose, and duration are selected when an antibiotic is needed. Its overall objective is to improve antibiotic therapy’s success and fight against the silent pandemic of antimicrobial resistance (AMR).



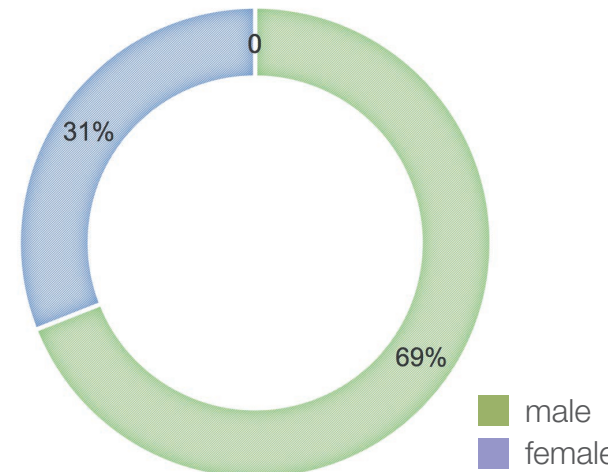
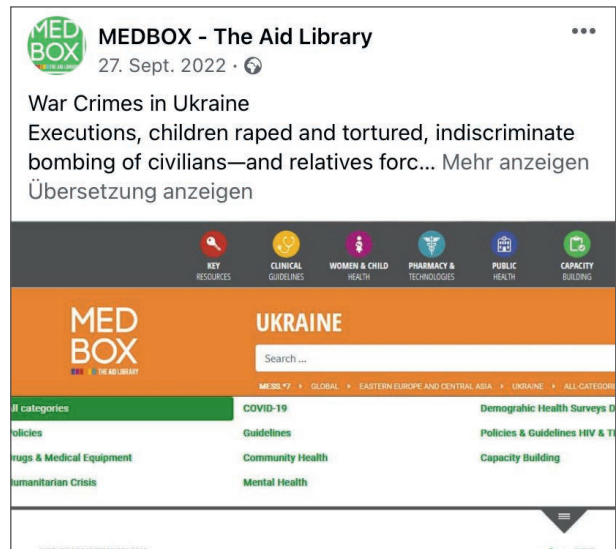
Positive results from the final course evaluation.

SOCIAL MEDIA & NETWORKING

By Natalie Berger, medmissio – Institute for Global Health



Over the last few years, social media platforms and their contribution to networking have increased steadily. Platforms are used for entertainment, trendiness, interaction, purchasing goods and receiving information. Since it is a widely used tool, we tried to improve our reach by building networks on different social media platforms. The most important ones for **MEDBOX** are Facebook and Instagram. Furthermore, the YouTube channel was used to share “how-to” videos and the promotion video for the launch of the **PLANETARY HEALTH TOOLBOX**. We tried conceptualising a social media strategy (in May and June) as a guideline. This concept included important awareness days, international holidays, and days for



Distribution of likes for Posts on Social Media

diseases and health topics until the end of 2022. Moreover, it was a goal to promote issue briefs and toolboxes in line with relevant topics, e.g. current outbreaks, breakthroughs in medicines or new guidelines. Insights on Facebook show that users from Pakistan (35.1%), Egypt (18.7%) and Bangladesh (10.8%) are the top three countries visiting and interacting with our posts as well as that most users are male. For the future work of **MEDBOX**, the platforms would need to be improved drastically. This would need more time, experience in social media marketing, and interaction with followers. Currently, social media platforms are a good place for promoting toolboxes but do not have a strong impact yet.

OUTREACH ACTIVITIES

We are very happy that we could participate again in 2022 in some congresses in presence, and virtually. At some events, we were also represented with our MEDBOX booth or gave lectures to promote **MEDBOX**.

29.01.; 02.04.; 08.10.

Basic seminar (Würzburg, Sieglinde Mauder & Laura Liebau, virtual): Practice-oriented presentation of the **MEDBOX** for doctors going abroad

19.02.

Humanitarian Symposium (Laura Liebau, virtual): **MEDBOX** presentation during lunch break.

15.03.

Association for Health Information and Libraries in Africa (AHILA) Conference (Pretoria, Piet Reijer in presence): **MEDBOX** presentation and how to provide access to timely, affordable and reliable health information

02.04.

Foring (Sieglinde Mauder and Laura Liebau,virtual): The **MEDBOX** had a virtual room in the break sections where interested people could enter and interact

08.10.

Planetary Health Summer School (Würzburg, Klemens Ochel ,virtual): Presentation of the **MEDBOX** with special focus on the **PLANETARY HEALTH TOOLBOX**

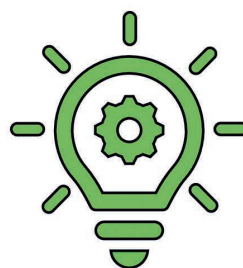
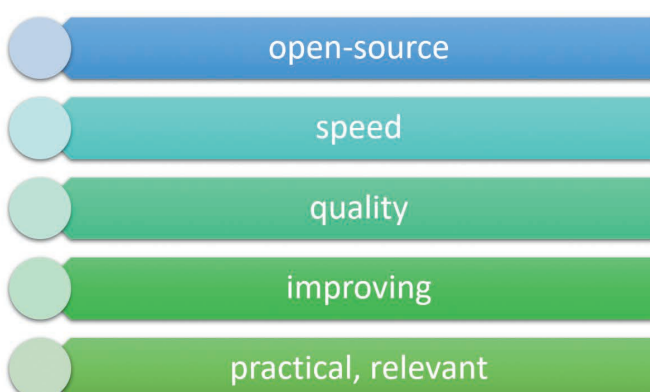
31.10.

Planetary Health Alliance Annual Meeting (Boston,Laura Liebau, virtual): Presentation of the **MEDBOX** with special focus on the **PLANETARY HEALTH TOOLBOX**

22.11.

E-Learning Course “Optimising Antibiotic Prescribing” (medmissio and healthcare partners of Misereor, Karla Deininger, virtual): Presentation of the **MEDBOX** with focus on the **AMR TOOLBOX**

MEDBOX – THE **IDEA**



Slide of a MEDBOX presentation

OUTLOOK

In 2023, some technical improvements regarding the layout will be implemented. Several filter options will make it easier to search for documents and make the website more user-friendly. Furthermore, we would like to extend our offers in various languages such as Spanish and French.

We also aim to publish an average of one Issue Brief per month, covering a wide range of topics related to global health work in different languages. Our users have very well received the Issue Brief concept. We are open to new suggestions for topics and look forward to receiving requests.

Of course, we will launch new TOOLBOXES in 2023! One of them will be the Neglected Tropical Diseases **NTD TOOLBOX**, which will be launched in spring 2023 and was supported by Vfa (Verband forschender Pharmaunternehmen). In addition, a toolbox will be developed for the large field of non-communicable diseases (NCDs). Non-communicable diseases are now the leading cause of death worldwide. Cancer, diabetes, cardiovascular disease and respiratory diseases account for over 80% of NCD-related deaths. Due to the WHO, annually 17 million people die from a NCD before age 70 and 86% of these premature deaths occur in low- and middle-income countries. For this reason, **MEDBOX** would like to provide information on the clinical pictures, including clinical guidelines, prevention options, education material and possible risk factors. We know this is an incredibly large, multidisciplinary field that will require a lot of time and leisure.

The **MEDBOX** team will continue to develop the **PLANETARY HEALTH TOOLBOX** to offer free open-access material collection further to help integrate planetary health concepts into daily practice, political decision making & education as it offers a holistic perspective to understand the challenges and provide solutions for sustainable living and the development of all people on this planet.

After years of the pandemic and limited opportunities to attend events, we look forward to participating in more conferences and representing **MEDBOX** in 2023. Planned events include the Humanitarian Symposium and Foring, as in previous years. As stated last year, we would like to include short sessions about **MEDBOX** in all training activities conducted by medmissio. Linking the participants during any training with the **MEDBOX** helps them understand the library's structure. It makes it easier to use **MEDBOX** for daily work and training purposes. It will expand our daily users and hopefully also the registered users. Registering the **MEDBOX** has many advantages for the user as they will receive our newsletter, save their searches, compose their personal library of interest and much more. Registration is free of charge. Data protection is assured, and you will not receive any commercial advertisements. If you want to register for my **MEDBOX**, you find access to the Login Menu on the right side of the webpage.

We look forward to receiving feedback from users and partners on our implemented and planned activities.

PARTNERSHIPS

The **MEDBOX** Team would like to thank all our partners who have supported **MEDBOX** since the beginning. We always like to welcome new partners who would like to support us with their expertise or financially.



CONTACT

MEDBOX is brought to you by medmissio – Institute for Global Health (formerly: Medical Mission Institute).

Feel free to contact us for further information at news@medbox.org

March 2023

MEDBOX – The Aid Library

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