

# Annual Report 2024

# MED BOX

 THE AID LIBRARY

## INTRODUCTION

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

Quality assurance and accountability are essential values in humanitarian action as well as healthcare settings, and they 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

As we reflect on the past year, we take pride in the strides we have made at MEDBOX to enhance access to reliable medical information. The year 2024 was marked by both planned advancements and rapid responses to emerging global health challenges, underscoring our commitment to supporting healthcare professionals and organizations worldwide.

One of our most significant developments was the faceted search enhancement of our website. This improvement has made it easier for users to navigate our extensive collection of medical resources, enabling faster and more efficient access to the information they need. By refining search functionalities and categorization, we have further strengthened MEDBOX's role as a trusted repository of medical knowledge. In response to global health emergencies, we mobilized swiftly to provide essential information during the mpox outbreak in Africa. The outbreak, which spread across multiple countries, underscored the need for timely and accessible medical guidelines. We responded by curating and updating relevant materials in multiple languages to ensure that healthcare workers had immediate access to accurate information for diagnosis, treatment, and prevention strategies.

We also marked a milestone with the launch of our Non-Communicable Diseases (NCD) TOOLBOX. This initiative aimed to address the growing burden of NCDs, which remain a leading cause of morbidity and mortality worldwide. Accompanying the launch were outreach activities designed to raise awareness and facilitate the practical use of these resources in various healthcare settings.

Later in the year, we responded to the Marburg virus outbreak in Rwanda by expanding our EBOLA TOOLBOX into a comprehensive EBOLA-MARBURG TOOLBOX. The addition of crucial documents and guidelines ensured that frontline health workers had up-to-date resources to tackle both viral haemorrhagic fevers effectively. This rapid adaptation of our platform once again demonstrated our agility in responding to emerging public health crises.

As we move forward, MEDBOX remains dedicated to its mission of providing free, reliable, and accessible medical knowledge. We are grateful to our partners, contributors, and users for their ongoing support. Together, we continue to bridge gaps in healthcare information and empower medical profess

# CURRENT STATUS IN NUMBERS AND FACTS

In 2024, MEDBOX experienced a shift in its global audience, with varying trends across different regions. While total visitor numbers declined in Africa, Asia, Europe, and Oceania compared to the previous year, the Americas showed a positive development. North, Central, and South America collectively saw an increase in visits, making the region the only one with growth in engagement.

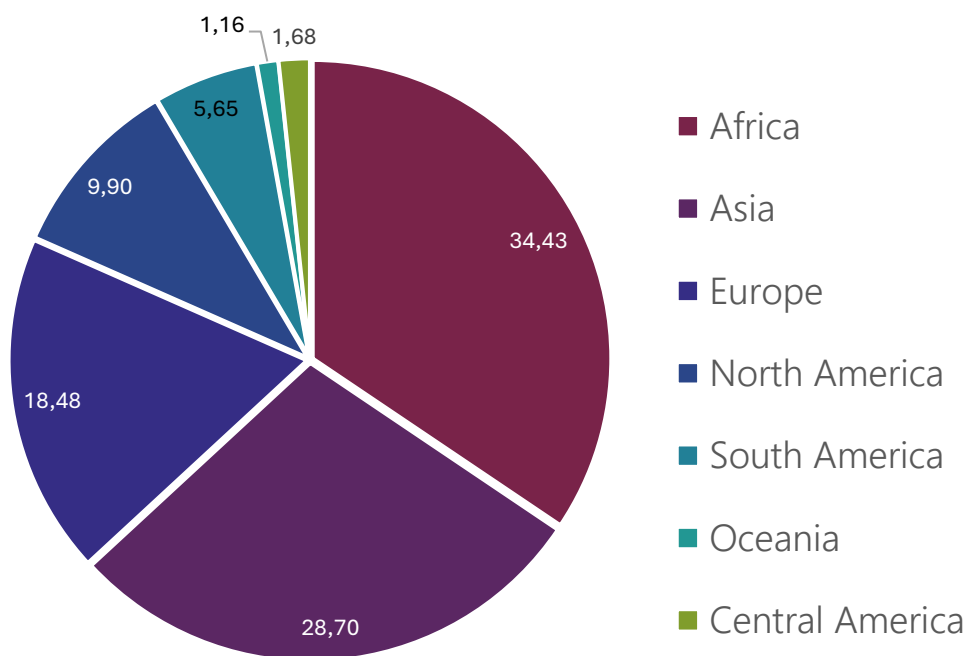


Figure 1: Visitor split by region for Jan – Dec 2024 (in percent)

These trends highlight the need for continued efforts to enhance accessibility and outreach in regions with declining numbers while building on the momentum in the Americas.

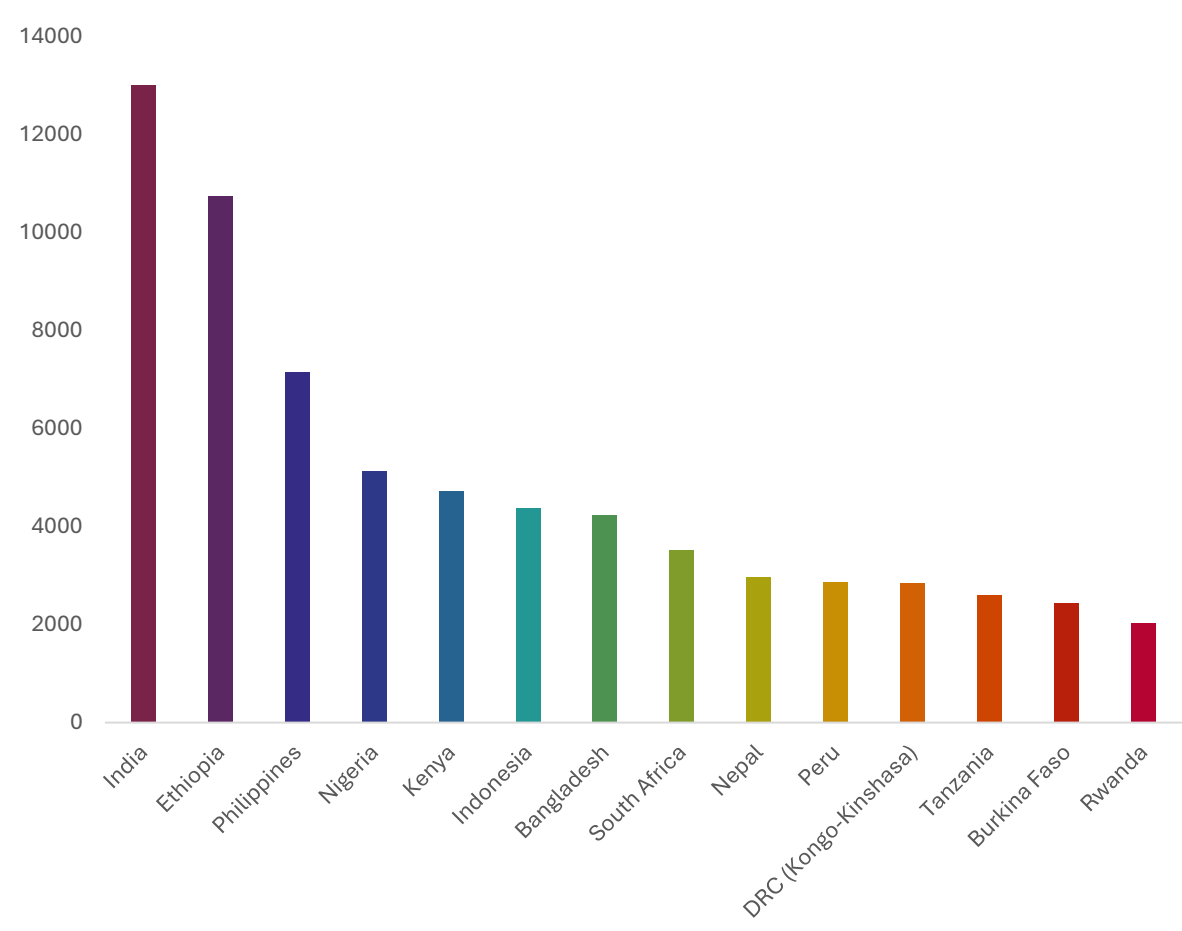


Figure 2: Visitor split by country (excluding Europe) for Jan – Dec 2024, absolute numbers

The composition of the top 14 countries accessing MEDBOX saw two new entries in 2024: Peru, marking the only South American country on the list, and Burkina Faso. Aside from these additions, the ranking remained consistent with the previous year. As in past reports, high-income countries are not included in this statistic.

However, when looking specifically at high-income countries, a notable shift occurred: for the first time, Germany was no longer the top visitor country. Instead, the United States took the lead, showing a significant increase both in global comparison and relative to last year’s numbers.

Additionally, data on browser language settings reveals that the majority of visitors access MEDBOX using English as their primary language. However, French and Spanish browser settings are also frequently used, reinforcing the need to expand MEDBOX's collection of resources in these languages. Enhancing multilingual access can further strengthen MEDBOX's reach and usability for diverse audiences.

## RANKING OF TOOLBOXES

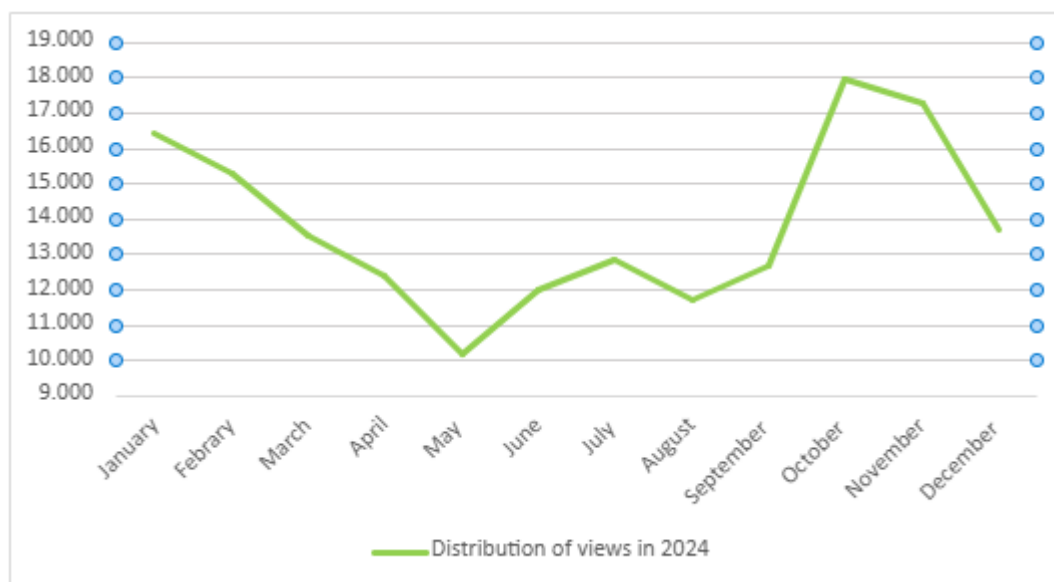
23 TOOLBOXes, most documents (biggest TOOLBOX) the COVID19 TOOLBOX (4576 documents), after that is the MENTAL HEALTH TOOLBOX (2110 documents), REFUGEE (1926), EBOLA-MARBURG (1446), followed by the HIV (1327) and the TB TOOLBOX (1270). The NCD, NTD, CAREGIVER, CONFLICT, RAPID RESPONSE, PLANETARY HEALTH and DISABILITY have more than 800 Documents while the AMR, GLOBAL HEALTH EDUCATION, NATURAL HAZARD and CHOLERA TOOLBOX have between 400 and 800 Documents. Less than 400 Documents are contained in the PHARMACY, ZIKA, POLIO, SPECIFIC HAZARD, SOZIAL ETHICS and HEALTH FINANZING TOOLBOX.

# VIEWS BY MONTH

The total number of viewers in the year totalled 166,101, with significant fluctuations across the months. The highest figure was reached in October with 17,934 viewers, followed by November (17,277) and January (16,451). These months show a significant increase compared to the weaker months.

The lowest number was recorded in May with 10,209 viewers. The figures then rose slightly, particularly in June (12,010) and July (12,867), before peaking again in October.

A clear decline can be seen in the first five months of the year, while a stabilisation can be seen in the second half of the year with a peak in autumn. The reasons for this development could be seasonal effects, content adjustments or external factors.



*Figure 3: Overall Visitors by month for Jan – Dec 2024*

# CONCLUSION

These trends highlight key opportunities for further engagement. The growing presence of Peru in the rankings, along with rising numbers in the Americas, suggests an increasing demand for MEDBOX's resources among Spanish-speaking users. Strengthening outreach efforts—such as expanding Spanish-language content and targeted dissemination—could help sustain and accelerate this growth.

At the same time, the shift in high-income country engagement, particularly the strong increase in U.S. visitors, underlines the need to develop tailored strategies for this audience. While MEDBOX primarily serves low- and middle-income countries, ensuring effective access and awareness among high-income country users—who often play key roles in global health initiatives—can further amplify the platform's impact.

Lastly, the data on browser language preferences highlights a clear need for more literature in French and Spanish. Expanding multilingual content will not only improve accessibility but also enhance MEDBOX's effectiveness as a truly global resource for health information.



# ISSUE BRIEFS

In 2024, MEDBOX has published 4 Issue Briefs. The following text describes the contents of the individual documents.

## Issue Brief 36: Health Financing TOOLBOX

### Health Financing Toolbox

We have designed a TOOLBOX on healthcare financing. health financing is essential to provide prevention, diagnosis, therapy and further health-specific activities. Funding in this regard either stems from public or private sources. In order to avoid catastrophic health spending by individuals, public health insurance schemes and tax-funded healthcare provisions are crucial. However, several nation states such as low-income countries lack the economic foundation for sufficient domestic resource mobilization to adequately fund their health sectors. That is why official development assistance for health remains important to enable healthcare for all and leave no one behind. Therefore, MEDBOX decided to create the HEALTH FINANCING TOOLBOX which displays available resources in English as well as numerous world maps and data tables to shed light on health financing indicators.

## Issue Brief 37 & 38: Ukraine Conflict and the Impact on Mental Health (English & Russian/Ukrainian)

### Mental Health

The ongoing conflict between Russia and Ukraine is a humanitarian catastrophe with global impacts. Especially the affected people and their mental health are at great risk. We compiled an issue brief focusing on the impact on different population groups, psychological disorders and helpful resources.

## Issue Brief 39: Mpox Update (English and French)

### Rapid Response

On August 14, 2024, the World Health Organization (WHO) declared a Public Health Emergency of International Concern about the upsurge of mpox cases in the Democratic Republic of the Congo (DRC) and a growing number of countries in Africa. This issue brief summarises an overview of the current situation, clinical aspects, prevention and control as well as training material. From January 1 through November 15, 2024, about 12,000 confirmed cases of clade I mpox and at least 47 deaths have been reported in Central and Eastern African countries. These countries include Burundi, Central African Republic, Democratic Republic of the Congo, Republic of Congo, Rwanda, and Uganda (CDC). Therefore, the MEDBOX has created an Issue Brief in order to help minimizing transmission risk by providing information about prevention measures.

## Issue Brief 40: Marburg Virus Disease (MVD)

### Ebola & Marburg

Marburg virus disease (MVD) is a very virulent disease that can cause haemorrhagic fever and is clinically related to Ebola virus disease. Marburg and Ebola viruses both belong to the Filoviridae family (filovirus). People get infected when they have close contact with Rousettus bats that can transmit the Marburg virus. The Marburg virus is then transmitted from person-to-person through direct contact (via injured skin or mucous membranes) with secretions, blood, organs or other body fluids of infected persons or with surfaces and materials that are contaminated with these fluids (bed linen, clothing). This issue brief is intended to provide healthcare professionals with the most relevant treatment guidelines, prevention measures, posters and much more

# Expansion of the MEANTAL HEALTH TOOLBOX with focus on Eastern Europe

Natalie Berger, medmissio – Institute for Global Health

The Ukraine conflict escalated on 24 February 2022 with the Russian military operation, which claimed many victims among the civilian population and caused major destruction to infrastructure, industry and farmland. Millions of Ukrainians are on the run, especially women and children, while many more internally displaced persons are dependent on medical aid. Elderly people in particular need stable medical care.

The war also increases psychological stress, which manifests itself in fear, sleep disorders and despair. According to estimates, around 9.6 million people in Ukraine could be suffering from mental illness. Particularly affected are people in war situations, where mental disorders such as depression and post-traumatic stress disorder are widespread. It is emphasized that rapid psychosocial help is needed to support the mental health of those affected and to promote reconstruction. The MEDBOX makes it possible to access valuable information anonymously and at any time.

This year, the MENTAL HEALTH TOOLBOX was expanded to include the relevant documents and to make treatment guidelines, self-help material and some resource platforms available free of charge and at a low threshold. Furthermore, the focus was on closing gaps on specific mental disorders such as depression or addiction. This also includes treatment guidelines and online courses to combat the stigmatization and underuse of people with mental illnesses. Many Russian and Ukrainian publications have been included to make the offer easily accessible. In addition, an issue brief was sent out in both English and Russian to provide an overview of the TOOLBOX and its content.

# Update on the TB TOOLBOX

Piet Reijer, medical doctor and volunteer MEDBOX

The TB TOOLBOX lists 1240 publications. Two WHO regions were not included, i.e. Western Pacific Region and Southeast Asia Region. These regions will be added in 2025.

The WHO South-East Asia (SEA) Region is home to around one-fourth of the world's population with more than 45% burden of annual TB incidence (new patients developing the TB disease). It is estimated that in 2022, more than 4.8 million people fell ill with TB and more than 600 000 died (excluding HIV+TB mortality) because of the disease which is more than half of global TB deaths. Treatment success for new and relapse TB cases was 88% (2021 cohort).

The Region also accounts for more than 38% of the estimated global incidence of MDR-/RR-TB patients. The estimated incidence of Rifampicin-resistant (RR) and multi-drug-resistant TB (MDR-TB) is 170 000 in 2022. Of these, 82 000 lab confirmed cases were detected in 2022 and only 74 300\* were enrolled on treatment.

Six of global high TB burden countries are in the SEA Region: Bangladesh, Democratic People's Republic of Korea, India, Indonesia, Myanmar and Thailand while for RR-/MDR-TB burden, Nepal replaces Thailand in the high-burden list for the Region.<sup>1</sup>

The Western Pacific Region has achieved substantial advancements in tuberculosis (TB) care and prevention, resulting in a reduction of TB deaths by 42% and incidence by about 17% compared to levels in 2000. Despite these achievements, TB remains a major public health concern in the Western Pacific. In 2021, the Region saw an estimated 1.9 million people fall ill with TB and 126 900 related deaths. This is a 6.5% increase in incidence and a 38% increase in deaths compared to the previous year. This is due to significant shortfalls in TB case notifications reported in the Region for both 2020 and 2021. In 2021, approximately 1.1 million people with a new or relapse episode of TB were notified and reported to national TB programmes, down 20% from 1.4 million in 2019. The increase in people falling ill with TB and dying from TB

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<sup>1</sup> <https://www.who.int/southeastasia/health-topics/tuberculosis>

in 2021 highlights the severe impact the COVID-19 pandemic has had on the TB response. Years of progress to end TB has been reversed.<sup>2</sup>

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<sup>2</sup> <https://data.wpro.who.int/tb-incidence-and-number-deaths>

# Non-Communicable Diseases (NCDs) and the MEDBOX's Initiative

Laura Liebau, medmissio – Institute for Global Health

Non-communicable diseases (NCDs) pose one of the greatest public health challenges of our time. These diseases, which include cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes, account for nearly 74% of global deaths, with a disproportionate burden on low- and middle-income countries. The increasing prevalence of NCDs is driven by multiple risk factors, including tobacco use, unhealthy diets, physical inactivity, harmful alcohol consumption, and air pollution. Addressing NCDs requires a comprehensive approach that integrates prevention, treatment, and management strategies while ensuring access to high-quality healthcare resources<sup>34</sup>.

The global response to NCDs has been strengthened by the World Health Organization (WHO) and other international bodies, promoting policy frameworks. However, the need for accessible, reliable, and up-to-date information remains crucial in empowering healthcare professionals, policymakers, and communities to take effective action against NCDs. This is where the MEDBOX Team has stepped in to make a tangible impact.

At MEDBOX, we have been systematically collecting, curating, and categorizing literature on NCDs for a long time. Recognizing the urgency of strengthening responses to NCDs, we, together with the team from Apotheker Helfen e.V., have worked diligently over the past year to expand and update the NCD section of MEDBOX, creating a new section. The major highlight of our efforts in 2024 was the publication of the NCD TOOLBOX, a curated collection of essential resources designed to support healthcare professionals and policymakers in addressing NCDs. The NCD TOOLBOX provides practical tools, guidelines, and training materials that can be used in clinical settings, community health programs, and policy development. This effort has helped bridge the knowledge gap and enabled stakeholders to implement best practices in their respective fields.

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<sup>3</sup> <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>

<sup>4</sup> <https://www.thelancet.com/series/non-communicable-diseases>

As NCDs continue to pose an increasing burden on global health, MEDBOX remains steadfast in its mission to enhance access to critical health information. We will continue to expand our library, update the NCD TOOLBOX with emerging research and best practices, and collaborate with key stakeholders to drive meaningful progress in NCD prevention and management.

# Insights Into Volunteering

The MEDBOX lives thanks to the commitment of many motivated and competent people. We are grateful to have people in our team who are committed to the MEDBOX on a voluntary basis. That is why we will now introduce one volunteer each in our annual report.

## Insights into Volunteering: Fighting Cholera and More with Medbox

Klara Becker, volunteer MEDBOX

My name is Klara Becker, I am 28 years old, originally from Würzburg, and I have been studying medicine in Göttingen since 2019. Since early 2020, I have been volunteering for MEDBOX at the Medical Mission Institute Würzburg. My journey



began during my training as a nurse in Würzburg and a formative experience in India. During my time at the hospital in Shevgaon, as part of my training, I not only learned a great deal about nursing but also gained insight into cultural differences and the challenges faced by healthcare systems in different contexts.

*Figure 4: Klara Becker*

When I looked for ways to get involved with medmissio, I came across MEDBOX – and I was immediately fascinated. The idea of making medical knowledge accessible worldwide was something I found inspiring. In resource-limited regions, it's often not only the lack of resources but also the absence of the right information that poses the biggest challenge. That's why I decided to become part of this mission.

As a volunteer, my primary responsibilities include uploading articles and conducting research on specific topics. Currently, I am working on updating the CHOLERA TOOLBOX – a fascinating yet sobering topic. Cholera is a disease that we in Europe have almost forgotten, but it continues to have devastating impacts in many parts of the world. The goal of the TOOLBOX is to provide practical information to enable quicker and more effective responses to help those affected. This is particularly crucial



in the face of ongoing outbreaks, such as those currently occurring in Nigeria and Sudan.

Research sometimes requires persistence, as not all studies and reports are readily available or presented in an accessible manner. However, the satisfaction of contributing to the improvement of global healthcare, one resource at a time, is incredibly rewarding.

My practical year in medical school starts in May, and I hope I can continue to find time to contribute to MEDBOX during that period. Working with MEDBOX constantly reminds me that healthcare extends far beyond needles and stethoscopes – it starts with knowledge. Being part of this initiative is truly a joy.

# Marburg Virus Outbreak

Laura Liebau, medmissio – Institute for Global Health

The first recorded outbreak of Marburg virus disease occurred in Rwanda at the end of September 2024, with the first cases detected in the capital Kigali. The outbreak primarily affected staff from two large hospitals in Kigali, who accounted for a large proportion of the 66 confirmed cases. The virus led to 15 deaths, which corresponds to a mortality rate of around 23%. Compared to other outbreaks of the same virus, the mortality rate was significantly lower, which speaks in favour of the excellent handling of the patients themselves, and the measures taken by the public health system. The Rwandan government, in collaboration with international partners, took swift action to contain the outbreak, including contact tracing, contact isolation and the administration of test vaccines to frontline workers and identified contacts. These measures proved to be effective and the World Health Organisation (WHO) and the Rwandan government were able to declare the outbreak over on 20 December 2024 after 42 consecutive days with no new cases<sup>56</sup>.

The MEDBOX supported partners by facilitating access to key resources on Marburg virus disease. Through its extensive collection of literature, guidelines, and best practices, MEDBOX enabled healthcare professionals and decision-makers to stay informed and implement evidence-based interventions effectively. Furthermore, it contributed to the development of an Issue Brief, consolidating essential information and response strategies, which served as a vital reference for stakeholders involved in managing the outbreak. This ensured that the response was guided by the latest knowledge and best practices in the field of infectious disease control. Since literature often addresses both diseases together due to their similarities, we also expanded our existing EBOLA TOOLBOX into an EBOLA-MARBURG TOOLBOX.

This extension ensured that key resources covered both viruses comprehensively, supporting medical professionals with up-to-date and relevant information for future outbreak preparedness and response.

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<sup>5</sup> <https://apnews.com/article/rwanda-marburg-outbreak-6975a9f1edca2970ccca0f14b957799e>

<sup>6</sup> <https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON543?>

The dedication and professionalism of Rwandan healthcare workers were instrumental in successfully containing the outbreak. Their swift action, expertise, and commitment to patient care played a crucial role in minimizing the impact of the virus and strengthening the country's preparedness for future health crises.

## OUTREACH ACTIVITIES

To publicise the **MEDBOX** widely and reach more healthcare workers and humanitarian aid workers worldwide, we were once again present at several events in 2024.

27.1; 20.4.; 12.10. 2024

Basic Seminar: Practice-oriented presentation of **MEDBOX** for doctors going abroad (Laura Liebau & Karla Deininger)

15.2.2024

Humanitarian Symposium, Munich: **MEDBOX** booth (Natalie Berger & Karla Deininger)

9.10.2024

Making More Health Together Convention, Ingelheim (Laura Liebau)

16./17.10.2024

Humanitarian Congress, Berlin: **MEDBOX** Booth (Karla Deininger & Laura Conejero-Russo)

16.12.2024

Visit at Apotheker helfen e.V, Munich



*Figure 5: Dr. Beate Lettmeier & Dr. Andreas Wiegand (Apotheker helfen e.V) with Laura Liebau & Karla Deininger in Munich*



*Figure 6: Intern Laura Conejero-Russo during the Humanitarian Congress in Berlin*



*Figure 7: Natalie Berger & Karla Deininger during the Humanitarian Symposium in Munich*

## OUTLOOK

There are also several projects in the pipeline for 2025. One of these is the development of a MALARIA TOOLBOX, which has been suggested to us repeatedly by partners and MEDBOX users. We are pleased to have the opportunity to highlight and provide relevant and up-to-date treatment guidelines, training materials and epidemiological aspects such as the influence of climate change on the spread of malaria in this TOOLBOX.

In addition, the East Africa region will be expanded with material and more context-specific, regional literature for the various East African countries will be bundled.

We also want to focus on the area of outbreak response and recognise developments at an early stage and provide our target group with adequate support through emergency health kits, situation reports, preventive measures, etc.

Anyone who would like to become part of the MEDBOX team and contribute to healthcare worldwide can contact us at any time at [news@medbox.org](mailto:news@medbox.org). We are pleased to be able to make our team and thus the output of MEDBOX as diverse and multidisciplinary as possible to cover a wide range of aspects of global health work.

# 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 financially or with their expertise.



# CONTACT

MEDBOX is brought to you by medmissio – Institute for Global Health. Feel free to contact us for further information at [news@medbox.org](mailto:news@medbox.org)

June 2025

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