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IN THIS ISSUE

SPEAK OUT

"Africa consumes 12% of global vaccines, yet only produces less than 1%"

Prof. Roma Chilengi

About the Health Press

The Health Press is an open-access and peer-reviewed public health bulletin published by Zambia National Public Health Institute (ZNPHI). It was founded with the mission of offering a forum for the exchange and dissemination of health-related research and knowledge in Zambia and around the world. Its goals include spreading information on Zambia's public health security status and guide policy direction on health security in the country. The issue of the Health Press typically includes a research article, outbreak investigation, field notes and epidemiological bulletin. A new issue is published quarterly online and can be accessed at https://thp.znphi.co.zm/index.php/the-healthpress.

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FOREWORD

Dear Readers,

I am delighted to present to you the third issue of the 2024 Health Press on behalf of the editorial team. During the third quarter of 2024, the World Health Organization declared Mpox a Public Health Emergency of International Concern. This has significant implications for Zambia which is at high risk given our proximity to the Democratic Republic of Congo, the outbreak's epicenter.

In response, the Ministry of Health and ZNPHI have intensified surveillance in communities, healthcare facilities and points of entry. A National Contingency Plan has been developed, with key strategies including staff orientation and enhanced screening at priority international borders. Additionally, the National Public Health Reference Laboratory is prepared to provide diagnostic capacity to support these efforts.

This issue features notable highlights, including an editorial on advancing vaccine development in Africa, and a commentary on addressing gaps in post-car crash care in Zambia. I hope this publication informs and inspires readers to take action toward improving public health security in Zambia.

Dr. Cephas Sialubanje
Editor-in-Chief, The Health Press

The African Vaccine Narrative Must Change to Unlock the Continent's Potential

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Vaccines remain among modern science's most powerful tools against infectious diseases. Globally, they have prevented deaths and disabilities to the quantum of billions, eradicated once- devastating diseases like Smallpox and brought others, such as Polio, to the brink of elimination. Vaccine Research and Development (R&D) as a field has advanced rapidly over the years, leveraging cutting edge technologies such as applied genomics (RNA and DNA), nano-particle platforms, and powerful adjuvants. These advancements have significantly cut down product development time from decades to practically a few months. The development of vaccines during the COVID-19 pandemic in record time is testament to this progress. Africa bears a substantial burden of vaccine-preventable diseases globally, with more than 30 million children under five suffering from vaccine preventable diseases each year.

Figure 1 Routine vaccination saves approximately 2–3 million lives (Ngwa et al., 2022)

Of these, over half a million die annually due to limited access to immunization services, accounting for 58% of all global deaths from vaccine-preventable diseases (Ngwa et al., 2022). Recurrent outbreaks also continue to affect many countries across the continent and have been on the rise since the COVID-19 pandemic. Despite advancements in vaccine R&D and the continent's pressing need for vaccines, Africa continues to lag behind in vaccine production. Africa consumes 12% of global vaccines, yet only manufactures less than 1% of global vaccine volumes, all

of which are consumed domestically (Thompson et al., 2023: World Health Organisation, 2023). For comparison, India produces 25% of global vaccine volumes, 60% of its domestically consumed vaccines, and supplies a substantial number of vaccines to Africa, accounting for 20% of its exports (WHO, 2023, see figures 2 and 3). This stark contrast suggests that Africa has been relegated primarily to the role of a consumer, missing critical opportunities to build local industries, drive economic growth, and, crucially, ensure **regional vaccine supply security**. Vaccine development is a multibillion-dollar industry, and Africa must position itself to actively participate. In this article, we address three critical challenges at the core of this issue: poor R&D capacity, inadequate regulatory systems, and polarised markets.

Issues affecting Africa's pursuit for local vaccine production

1. Poor R&D Capacity

Historical and colonial trends where our education systems do not drill down to innovation and invention have persisted in the 21st century. This legacy has limited Africa's capacity for innovation and invention, perpetuating dependency and leaving us to access to only products handed down to us by the North and West. This affects the prioritization agenda and it means we are unable to address our challenges as we see them. This dependency was glaringly evident during the COVID-19 pandemic (Thompson et al., 2023). While wealthier nations prioritized their populations, Africa was left to wait. Beyond pandemics, this has meant that diseases unique to the continent, remain neglected and the case in point are diseases such as Lassa fever, dengue, trypanosomiasis, and mpox, to mention a few.

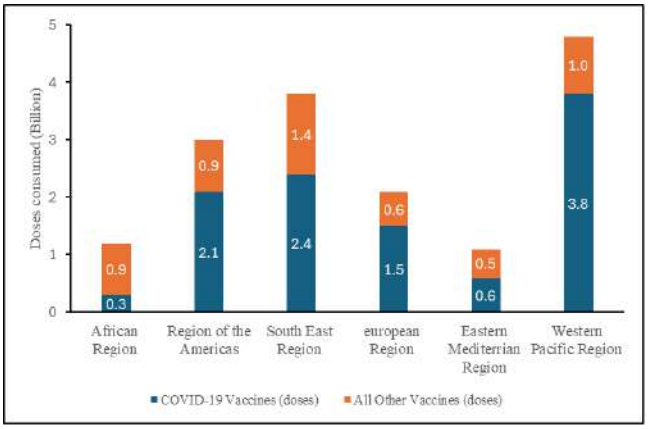

Figure 2 Comparison of volume of COVID-19 vaccine and all other vaccines used (WHO, 2022)

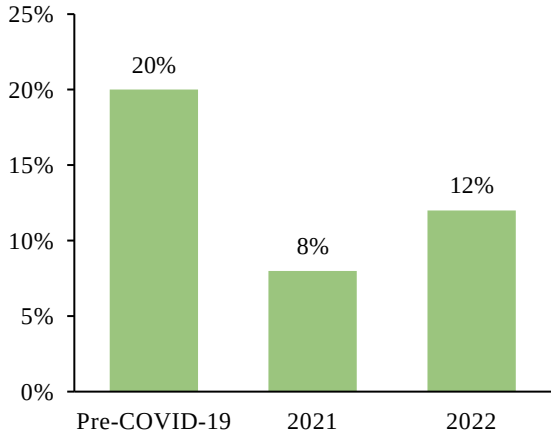

Figure 3 Africa region's percentage consumption of Global Vaccines has dropped from approx. 20% to 12%. This drop

has been mainly attributed to the region's lower consumption of COVID-19 vaccines (WHO, 2023)

2. Weak Regulatory Systems

Africa's capacity to regulate and oversee vaccine R&D and licensure remains very poor. Only a handful of countries have appropriate regulatory capacity to support research, development and licensure of vaccines. Most African nations operate at World Health Organisation (WHO) regulatory capability levels 1-2, far below the level 3 minimum required to support vaccine development. Figure 4 depicts the countries with National Regulatory Authorities operating at maturity level 3. This means that even where technical and infrastructural progress is made, poor regulatory support hampers any advancement. It is evident that industrialization and regulatory capacity must develop in tandem for meaningful progress to occur.

3. Polarized Markets

Consequent to the above challenges, procurement of vaccines and other commodities across Africa remains largely tied to colonial legacies, limiting opportunities for local manufacturers. Although the renowned WHO Pre-qualification process is well intended, it inadvertently perpetuates Africa's dependence and is a hindrance when it comes to development of the industry on the continent. Small and emerging African industries will struggle to compete on an open market dominated by pharmaceutical giants with over a century head-start. Unless deliberate continental efforts are instituted to protect development of local manufacturing industries for example through appropriate positive discriminatory strategies, the gap will only widen. The only way to close this gap is for Africa to take the bold stance, "*Africa must begin to buy African"*

Figure 4 Only six countries in Africa (Egypt, Chana, Senegal, South Africa, United Republic of Tanzania and Zimbabwe) have National Regulatory Authorities operating at Maturity Level 3 (WHO, 2024).

Rewriting Africa's Vaccine Narrative

I was honored to address these issues at the African Academy of Health Sciences, where I was recently appointed to the Board of Directors. Headquartered in Dakhla, Morocco, the Academy brings together leading African

experts to foster collaboration in health research and innovation. I was inspired by the Academy's collective spirit and remain deeply grateful to His Majesty King Mohammed VI of Morocco for supporting this initiative. In the same spirit of Pan-Africanism, we must work together to rewrite Africa's vaccine narrative. Achieving this requires deliberate action and bold strategies, including:

1. **Enhanced Collaboration and information sharing:**

We must identify and address the root causes of our inability to produce vaccines and work together to address these issues through better networking and information sharing.

2. **Support for Continental Initiatives:**

Initiatives such as the African Vaccine Regulatory Forum (AVEREF) and the Pan-African Vaccine Manufacturing Network must be recognised locally and supported within countries to complement the rhetoric at continental political level.

3. **Investment in Infrastructure and Basic Science Research:**

There is need for investment in infrastructure, equipment and basic science research to produce a new generation of graduates and researchers abreast with current technologies, Additionally, to realise this, universities must establish targeted research departments and partner with the pharmaceutical industry.

4. **Protective Legislation:**

We must enact laws and regulations that promote and safeguard local intellectual property rights to encourage homegrown innovation. Frankly speaking, the West will not do this for us!

5. **Facilitate Upstream Research:**

There is need for bold and deliberate decision that encourage and support more upstream research including first-in-human and human infection challenge studies, to advance vaccine R&D.

6. **Positive Discrimination in Procurement:**

Serious measures to support positive discrimination in procurement of medicines including vaccines is the ONLY way African pharmaceutical industry will develop. The African pooled market is a potential game changer and finding new ways of accessing it is needed to curb the monopoly of global pharma giants.

By confronting these challenges head on, we can shift the continent's role from a passive consumer to an active producer and innovator in the global vaccine landscape. The stakes are high, but the opportunities are even greater. With deliberate and strategic action, we can unlock Africa's immense potential - not only in vaccines but across the broader spectrum of health innovation. This is our moment to rewrite the narrative and secure a healthier, more resilient future for the continent.

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Bridging the Gaps in Post-Crash Care in Zambia: Key Insights from the ZNPHI EHCO Road Safety Webinar

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Road traffic crashes pose a substantial public health challenge in Zambia, leading to significant injury, disability, and death. Effective post-crash care is essential in mitigating these outcomes, yet Zambia's emergency medical systems face numerous obstacles. This article synthesizes insights from an August 2024 webinar which focused on improving post-crash care in Zambia, identifying key challenges across the pre-hospital, intra-hospital, and post-hospital stages of care. It emphasizes the need for enhanced coordination of emergency services, better training for first responders, and the integration of standardized clinical protocols. In addition to addressing clinical and logistical gaps, this article highlights critical deficiencies in financing treatment for crash victims, focusing on inadequate insurance coverage, delayed fund disbursement, and policy gaps leading to severe underfunding. By proposing targeted policy reforms and advocating for the adoption of WHO-recommended tools and practices, the article offers a practical roadmap for improving Zambia's post-crash care system. The recommendations provided here aim not only to reduce the burden of road traffic injuries and fatalities but also to serve as a model for similar contexts in other low- and middle-income countries.

Introduction

Road traffic crashes (RTCs) represent a significant public health challenge in Zambia, contributing to a substantial burden of injury, disability, and death (RTSA 2022b, Mwale, et al. 2023). RTCs are among the leading causes of death in the country. The impact of these crashes extends beyond immediate fatalities, resulting in long-term injuries and disabilities placing significant strain on Zambia's healthcare system and economic resources. The cost associated with road traffic injuries—including medical expenses, loss of productivity, and the broader economic impact on families—further exacerbates the challenge, particularly in a country where healthcare resources are already limited (WHO 2023).

Effective post-crash care is crucial in mitigating these outcomes, as timely and adequate medical intervention can save lives and reduce the long-term impact of injuries. This involves not only the immediate response at the scene of a crash but also the continuity of care through emergency services, hospital treatment, rehabilitation, and community reintegration. The ability to provide such comprehensive care hinges on a well-coordinated and well-resourced healthcare system, which, in the case for many countries in the WHO

Afro Region, remains a significant challenge (WHO 2024).

Recent literature has highlighted the critical importance of effective post-crash care in reducing road traffic fatalities and improving outcomes for crash victims. A systematic review by Callese et al. (Trauma system development in low- and middle-income countries: a review. 2015) found that improvements in emergency care interventions could significantly reduce mortality and disability from road traffic injuries in low- and middle-income countries. Additionally, Haghparast-Bidgoli et al. (Exploring the provision of hospital trauma care for road traffic injury victims in Iran: a qualitative approach. 2013) emphasized the need for integrated trauma systems, noting that well-coordinated pre-hospital and hospital care can substantially improve survival rates for severe injuries. In the African context, Adeloye et al. (Global and regional child deaths due to injuries: an assessment of the evidence. 2018) identified several key barriers to effective post-crash care, including inadequate emergency communication systems, lack of trained personnel, and insufficient equipment in rural areas.

A retrospective hospital-based study at Monze Mission Hospital in Zambia highlights significant challenges in post-crash care, including poor data quality, high pre-hospital mortality, limited resources, and underreporting, which collectively hinder effective intervention and policy development (Sichembe, Manyozo and Moodie 2019). Furthermore, a cost-effectiveness analysis by Wesson et al. (The cost of injury and trauma care in low- and middle-income countries: a review of economic evidence, 2014) demonstrated that investments in trauma care systems could yield substantial economic benefits, with interventions being highly cost-effective in low- and middle-income settings. These studies underscore the urgent need for comprehensive improvements in post-crash care systems, particularly in resource-limited settings like Zambia.

On August 21, 2024, a webinar titled “Improving Post-Crash Care Services for Road Traffic Crash Victims in Zambia” was convened to examine the current state of post-crash care in the country. The event featured a series of presentations by leading experts who offered valuable insights into the strengths, weaknesses, and opportunities within Zambia’s post-crash care system. The presenters included specialists from the World Health Organization (WHO) in Geneva, the WHO Country Office in Zambia, and the Centre for Surgical Healthcare Research (CSHR) within the Department of Surgery at the University Teaching Hospitals in Lusaka, Zambia. Their collective expertise provided a comprehensive analysis of the challenges and potential solutions for enhancing post-crash care in Zambia.

This article synthesizes key insights from the webinar, focusing on the challenges Zambia faces in providing effective post-crash care and proposing actionable solutions based on expert recommendations. It is believed that addressing these issues can help Zambia move closer to achieving its road safety targets under the United Nations' Decade of Action for Road Safety 2021-2030.

1. Zambia's Road Safety Profile

Findings from the Global Status Report on Road Safety (GSRRS) 2023 (WHO 2023) were presented, focusing on Zambia's profile (WHO, Road Safety Zambia 2023 Country Profile 2024). The GSRRS reports that Zambia has a road traffic mortality rate of 17.1 deaths per 100,000 population, which, while lower than the African average of 19.4, remains above the global average of 15. This statistic highlights the ongoing risk that road traffic crashes pose to public health in the country.

Table 1 Comparison of Country-Reported Deaths vs. GSRRS Estimated Number of Deaths in Zambia (2007-2021

Year	Country Reported Deaths	GSRRS Estimated No. of Deaths	% Diff
2021	2,163	3,338	54%
2015	1,851	3,586	94%
2013	1,388	3,117	125%
2007	1,266	3,056	141%

As illustrated in Table 1, there has been a positive trend in the reduction of underreporting of road traffic fatalities in Zambia over the years. In 2007, the discrepancy between the number of deaths reported by Zambia and the estimates provided by the GSRRS was 141%. However, by 2021, this discrepancy had decreased significantly to 54%. For example, in 2021, Zambia officially recorded 2,163 road traffic fatalities, while the GSRRS estimated the actual number to be around 3,338 (WHO, Road Safety Zambia 2023 Country Profile 2024). This reduction in the percentage difference over time reflects Zambia's progress in improving the accuracy of its data collection and reporting systems. This positive trend is a crucial step toward better understanding the true scale of road traffic injuries and fatalities in the country. As Zambia continues to enhance its reporting mechanisms, it will be better positioned to implement targeted and effective road safety policies and interventions. Accurate data is essential for crafting strategies that can further reduce the mortality and morbidity associated with road traffic crashes, ultimately leading to safer roads and healthier communities.

It was observed that Zambia's road infrastructure and vehicle safety standards also contribute to the high rate of road traffic injuries. The country has nearly 10,000 kilometers of paved roads, but systematic road safety audits are lacking, and there is no national law mandating road safety inspections. In terms of vehicle safety, while periodic technical inspections are conducted, significant gaps in laws regarding seat-belt standards, pedestrian protection, and anti-lock braking systems were noted (WHO, Road Safety Zambia 2023 Country Profile 2024). These deficiencies exacerbate the risks faced by road users and complicate the provision of post-crash care.

2. Challenges in Post-Crash Care

The country's emergency medical systems grapple with complex issues across all stages of post-crash care following a road traffic crash. From the critical moments immediately following a crash to long-term rehabilitation, the country faces significant hurdles in providing adequate and timely

care to victims. This section delves into the key challenges identified across three crucial stages: pre-hospital care, intra-hospital care, and post-hospital care. Each of these stages is marked by specific obstacles that collectively contribute to suboptimal outcomes for crash victims and highlight the urgent need for comprehensive improvements in Zambia's post-crash care system.

Pre-Hospital Care

The webinar underscored that one of the most critical challenges in Zambia is the inadequacy of pre-hospital care. The country's communication systems are poorly coordinated, lacking a central command structure to oversee emergency responses. This fragmentation is further complicated by the existence of multiple emergency lines, making it difficult for victims or bystanders to know whom to contact in the event of a crash.

Additionally, it was noted that Zambia lacks trained primary responders. While attempts have been made by the private sector and NGOs to establish paramedic services, these efforts have been limited to Lusaka and have not been sustained. The absence of trained personnel at crash sites means that initial medical management, which is crucial for improving outcomes, is often inadequate. Furthermore, bystanders, who frequently arrive first at crash scenes, lack the necessary training to provide basic first aid or trauma care, leading to suboptimal outcomes and sometimes even exacerbating injuries.

Intra-Hospital Care

Challenges extend into hospital care, where the capacity to manage trauma patients is severely constrained. It was pointed out that many district hospitals, which are often the first point of contact for crash victims, are staffed by junior doctors with limited experience in trauma management. These facilities often lack the necessary equipment and supplies, further complicating the provision of effective care.

Ambulances, when available, are frequently inadequately equipped and staffed by personnel who lack training in using the medical equipment they carry. This situation is particularly dire in rural areas, where health facilities may be understaffed or closed after hours, leaving victims without timely care. The delays in transferring patients to better-equipped facilities can result in preventable deaths or the worsening of injuries.

Post-Hospital Care

Post-hospital care, including rehabilitation and psychological support, was identified as another critical area where Zambia's healthcare system falls short. Many victims of road traffic crashes face long-term disabilities, yet access to rehabilitative services is limited. Psychological support for both victims and their families is virtually non-existent, despite the significant mental health toll that such incidents can take.

The financing of treatment for traffic crash victims in Zambia presents a significant challenge, revealing inconsistencies between policy intentions and practical outcomes. The National Health Insurance Management Authority

(NHIMA) does not extend coverage to road traffic crash victims, based on the premise that all vehicles are mandatorily insured and should, therefore, cover hospitalization costs. However, the webinar identified several issues with the implementation of this policy. Firstly, funds from compulsory motor vehicle insurance often experience delays in disbursement to healthcare facilities. Secondly, when funds are received, they are frequently insufficient to cover the full spectrum of care required, particularly for complex surgical interventions. This misalignment between policy and practice has notable consequences. It places a substantial financial burden on victims and their families, who must bear the costs of expensive surgical procedures and ongoing care. Additionally, healthcare providers face challenges in delivering necessary treatments due to financial constraints. The current system, while designed to ensure coverage for crash victims, appears to be falling short of its intended purpose. This situation underscores the need for a comprehensive review of the existing policy framework and its implementation to address the gap between intended coverage and actual financial support for traffic crash victims.

3. Integrated Emergency and Critical Care

The webinar emphasized the need for an integrated approach to emergency, critical, and operative care. Effective post-crash care requires a seamless integration of services across the health system, from pre-hospital care through to rehabilitation. The World Health Organization's (WHO) clinical protocols and tools, such as the Emergency and Critical Care Toolkit, offer a framework that can be adapted to the Zambian context to enhance care quality and patient outcomes. The WHO Emergency Care System Framework (WHO 2018) offers a comprehensive approach to improving emergency care, crucial for better post-crash outcomes in Zambia. The framework covers the entire care process—from the accident scene to emergency unit and inpatient care—ensuring timely, coordinated responses. Figure 1 of the inforgraphic highlights key elements like bystander response, dispatch, and patient transport, all essential for reducing fatalities and disabilities from road traffic crashes. Clinical protocols and operational guidelines. Figure 2, standardize care, aligning it with global best practices.

The framework also ensures governance through provider certification and legal mandates, addressing access barriers common in Zambia. By implementing this framework, Zambia can build a more effective and resilient emergency care system, improving outcomes for crash victims and other emergencies. The discussion also emphasized the importance of standardized clinical protocols, ensuring that all patients receive consistent, high-quality care regardless of where they are treated. These protocols include guidelines for triage, resuscitation, and trauma management, which are vital for improving survival rates and reducing the long-term impact of injuries.

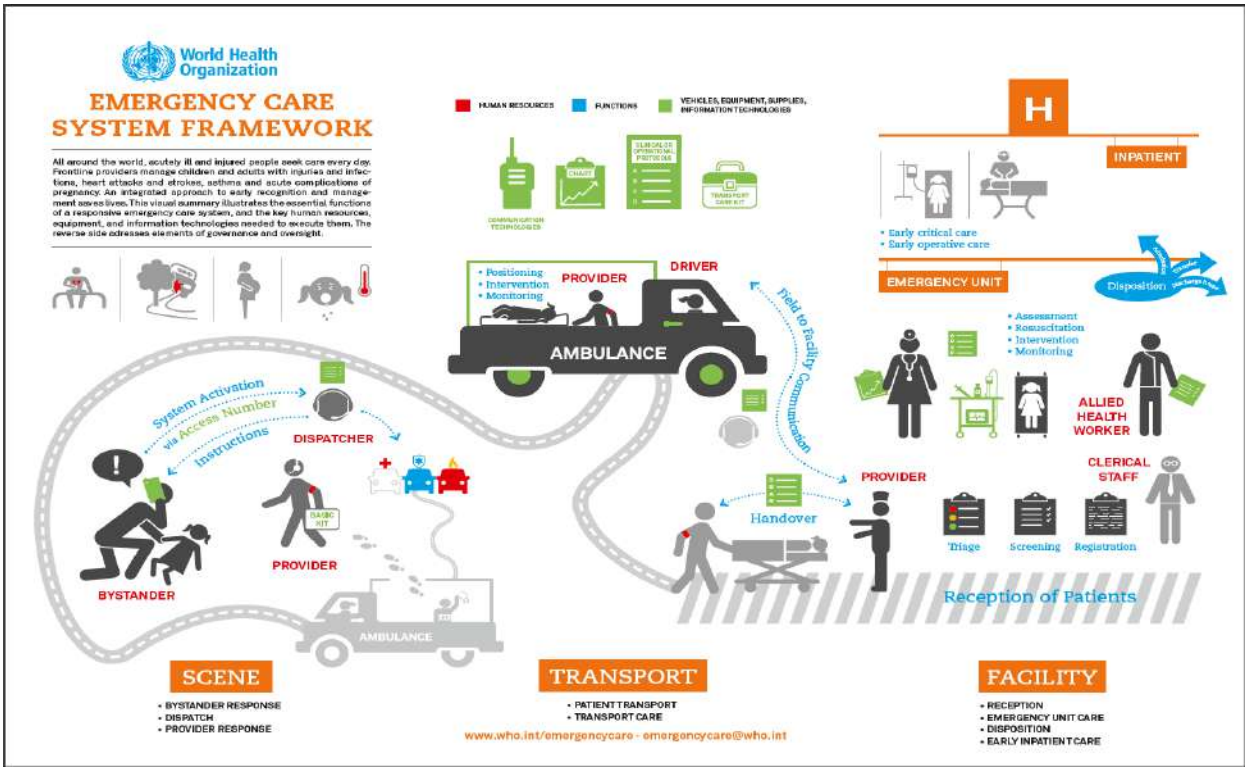

Figure 1 Key Components of the WHO Emergency Care System Framework: Essential elements from the scene of injury to emergency unit care, emphasizing coordinated and timely responses (WHO 2018).

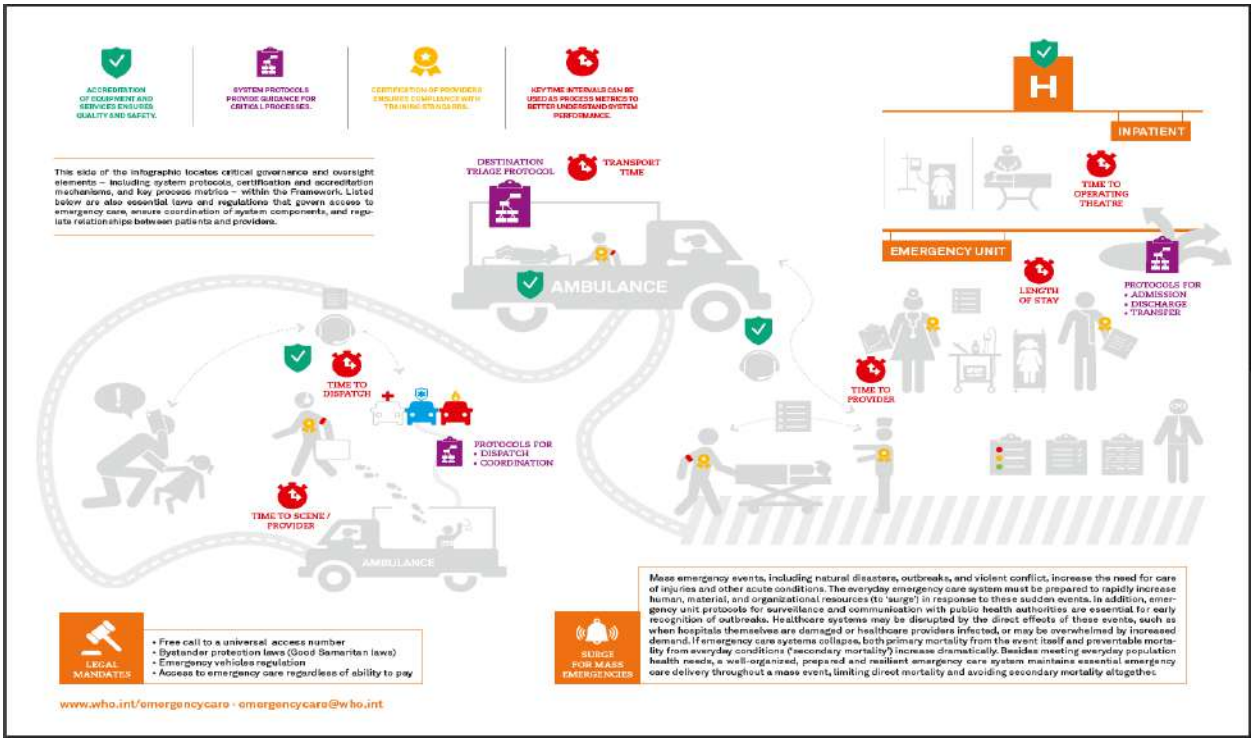

Figure 2 Clinical and Operational Protocols in the WHO Emergency Care System Framework: Standardized guidelines for effective emergency care, ensuring best practices and governance (WHO 2018).

Tools and Resources

A wide range of tools and resources designed to support the integration of emergency care services, available through the World Health Organization (WHO), were presented. These include:

- *UHC Service Package Delivery & Implementations (SPDI) Tool: Supports* the delivery and implementation of UHC service packages (see www.UHCC.who.int).
- *Pathway to Care:* Outlines the steps required for timely and appropriate patient care from injury through rehabilitation
- *Emergency Care Systems Framework:* Provides guidance on developing and strengthening emergency care systems (WHO 2018).
- *WHO Emergency Care Toolkit:* A freely accessible set of interventions designed for use in hospital emergency units, especially in resource-limited settings (WHO n.d.).
- *Community First Aid Response:* Emphasizes the importance of training community members in basic first aid.
- *Basic Ambulance Provider Course:* Equips ambulance personnel with essential skills for managing emergencies.
- *Mass Casualty Management Systems:* Ensures effective response to incidents with large numbers of victims (WHO 2007).
- *Basic Critical Care Course:* Trains healthcare providers in the management of critically ill patients (WHO n.d.).
- *SBAR Structured Handover Tool:* A communication tool for efficient patient handovers (National Guideline Centre (UK). 2018).
- *Acute Transfer Checklist:* Ensures that the sending facility team completes all necessary actions before transferring a patient to another facility for urgent health needs (WHO 2024).
- *Operative Care at the First Level Hospital:* Guidelines for providing surgical care in primary healthcare settings.
- *Guidelines for Essential Trauma Care:* Outlines minimum standards for trauma care services (WHO 2012)
- *Prehospital Trauma Care Systems:* Manual to guide policymakers with affordable, sustainable, and minimally resource-intensive interventions, covering system organization, capacity development, data collection, transportation, communication, and ethical and legal consideration (WHO 2005).
- *Guidelines for Trauma Quality Improvement Programmes:* Provide practical methods for enhancing trauma care by monitoring services, identifying issues, and implementing corrective measures, applicable universally across different healthcare systems (WHO 2012).
- *WHO Trauma Care Checklist:* Ensures timely, life-saving interventions in emergency units by reviewing critical actions to prevent missing life-threatening conditions, adaptable to any emergency care setting (WHO 2016).

- *WHO Clinical Registry:* Enhances emergency care by collecting and analyzing data to identify care gaps, enabling targeted quality improvements and saving lives (WHO 2023).
- *Advocating for emergency care: a guide for nongovernmental organizations:* This guide, developed by WHO and partners, outlines how NGOs can advocate for emergency care, especially for road traffic injuries, using step-by-step actions and case studies (WHO 2023).

The implementation of WHO tools and resources has a profound impact on improving injury outcomes, particularly in low-resource settings like Zambia (Reynolds, Wilkinson and Bertram MY 2023). These tools, such as the WHO Trauma Care Checklist, Emergency Care Systems Framework, and the Basic Critical Care Course, are designed to standardize and elevate the quality of care across all stages of emergency and trauma management.

By providing structured guidelines and training, these resources help healthcare providers deliver more consistent, timely, and effective care. The study highlights how even in challenging environments, the use of WHO tools ensures that essential care is accessible and meets a high standard of safety and efficiency, ultimately leading to significantly better outcomes for those who suffer injuries from road traffic crashes and other emergencies.

4. Research, Legislation, and Policy Recommendations

Research and Information Management

The webinar emphasized the need for robust research and data management systems to inform policy decisions. Establishing trauma registries and quality improvement mechanisms was identified as crucial for monitoring and enhancing the effectiveness of post-crash care. Accurate and comprehensive data collection is essential for identifying gaps in care and ensuring that resources are allocated where they are most needed (Mwale, et al. 2023).

Legal and Policy Gaps

Several critical gaps in Zambia's legal and policy framework for post-crash care were highlighted. Notably, there is no Good Samaritan law to protect individuals who assist crash victims, which discourages bystanders from providing aid. Additionally, there are no laws mandating universal access to emergency care or offering free rehabilitative and psychological services to crash victims and their families. The absence of these legal protections leaves victims vulnerable and places additional strain on the healthcare system.

5. Recommendations for Policy Improvement

To address these challenges, several policy reforms were recommended:

- **Strengthening Legal Frameworks**: Enacting laws that ensure universal access to emergency care, establishing a Good Samaritan law, and providing financial support for rehabilitative and psychological services.

- **Enhancing Data Collection and Research**: Investing in trauma registries and data management systems to improve the quality of care and inform policy decisions.
- **Improving Emergency Services**: Increasing the availability and training of primary responders, ensuring that ambulances are adequately equipped, and establishing central coordination for emergency responses.

Conclusion

The webinar on post-crash care in Zambia revealed critical challenges, including inadequate pre-hospital services, gaps in intra-hospital trauma management, and limited access to post-hospital rehabilitation. Despite these challenges, the insights gathered offer a clear pathway toward strengthening Zambia's post-crash care system. By integrating WHO-recommended tools and fostering coordinated efforts across all levels of care, Zambia has the opportunity to make meaningful progress in reducing road traffic fatalities and improving the outcomes for crash victims.

This article has highlighted the pressing need for targeted legal reforms, better data management, and the expansion of emergency services—areas that are crucial for bridging the current gaps in care. The practical recommendations outlined here, grounded in both global standards and local realities, provide a blueprint for stakeholders committed to advancing road safety and public health in Zambia.

As Zambia strives to meet its road safety targets under the United Nations' Decade of Action for Road Safety 2021-2030, the findings and strategies discussed in this article can serve as a catalyst for change. By adopting these evidence-based approaches, Zambia can not only enhance its post-crash care but also set a precedent for other low- and middle-income countries facing similar challenges. The journey toward comprehensive post-crash care is complex, but with the actionable steps provided, significant improvements are within reach.

Disclaimer

The views expressed in this article are those of the authors and do not necessarily reflect the views, policies, or positions of the World Health Organization (WHO) or the Zambia National Public Health Institute (ZNPHI).

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Q3 Public Health Bulletin 1st July – 30th September

Summary of outbreaks

Measles

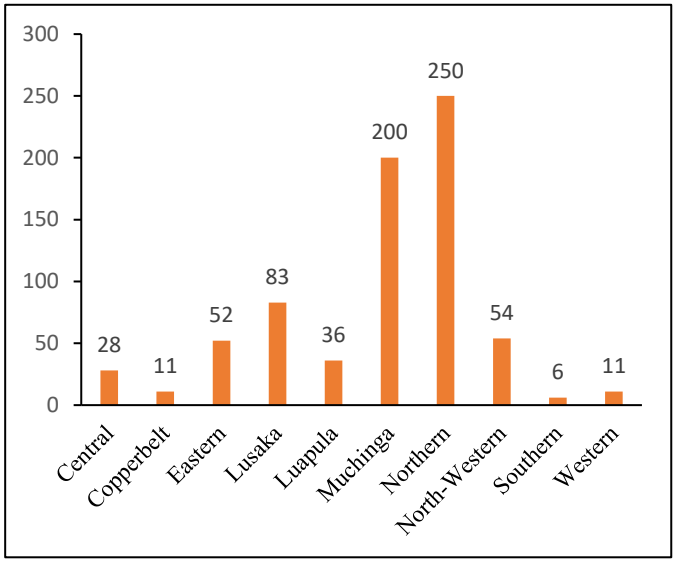

Figure 1 Quarter 3 Suspected Measles Cases by province (Source eIDSR, 2024)

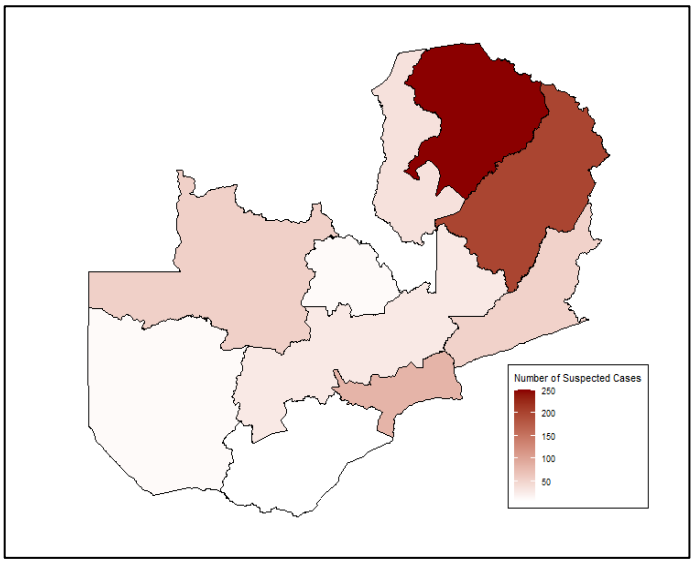

Figure 2 Map showing the distribution of suspected Measles cases

A total of 731 suspected measles cases were reported across all ten provinces in Quarter 3, 2024, representing a significant decrease from the 1,331 cases reported in Quarter 2, 2024. Northern Province saw the largest reduction, with suspected cases dropping from 724 to 250, a decrease of approximately 65%. Eastern Province also experienced a notable decline, with cases falling from 101 to 52, a reduction of about 51.5%. Despite these reductions, Northern Province still reported the highest number of suspected cases (250), followed by Muchinga Province (200) and Lusaka Province (83). Southern Province reported the lowest number of cases with 6. The geographical distribution of these cases highlights the urgent need to enhance immunization coverage and implement targeted vaccination campaigns in high-burden areas, particularly in Northern and Muchinga Provinces, to curb the spread of measles

Anthrax

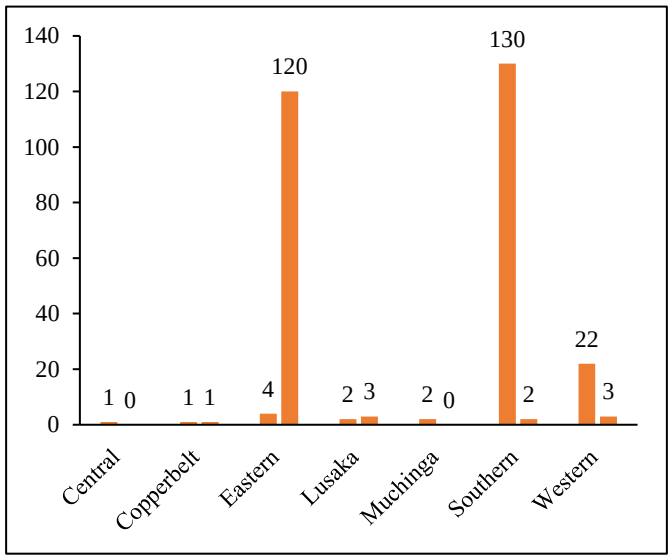

Figure 3 Quarter 3 Suspected Anthrax Cases by province (Source eIDSR, 2024)

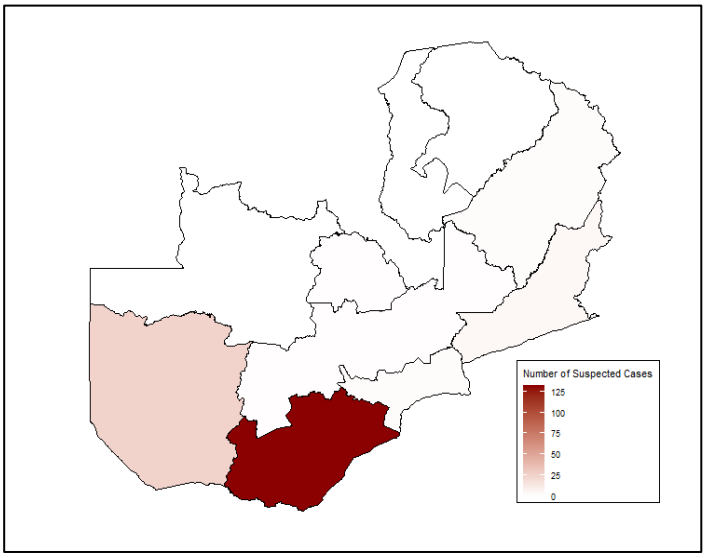

Figure 4 Map Showing the distribution of Suspected Anthrax Cases

A total of 166 suspected Anthrax cases were reported across seven provinces in Quarter 3, 2024, excluding Luapula, Northern, and North-Western Provinces. This marks a significant increase compared to the 58 cases reported in Quarter 2, 2024, and highlights a reversal of the previous downward trajectory observed nation-wide. Southern Province reported the highest number of cases with 132, followed by Western Province with 24. With drought conditions persisting, the public is urged to take precautions, such as purchasing meat from reliable sources, thoroughly cooking meat, and promptly reporting any animals that appear sick.

Bilharzia

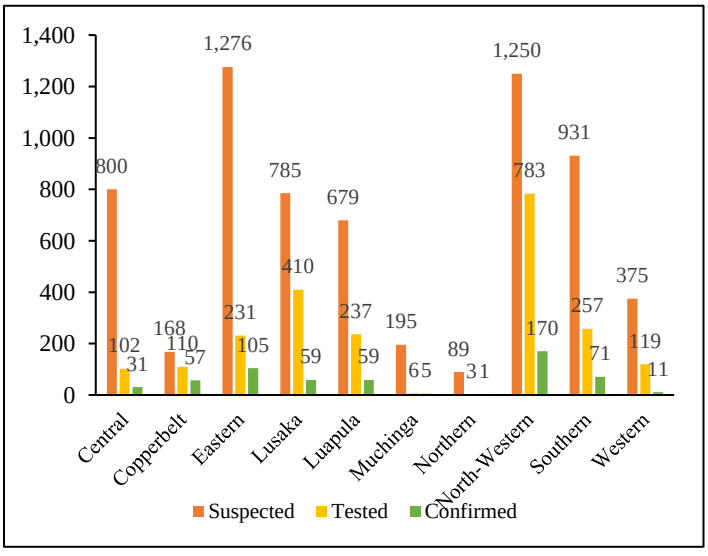

Figure 5 Quarter 3 suspected, tested and confirmed Bilharzia Cases per province (Source eIDSR, 2024)

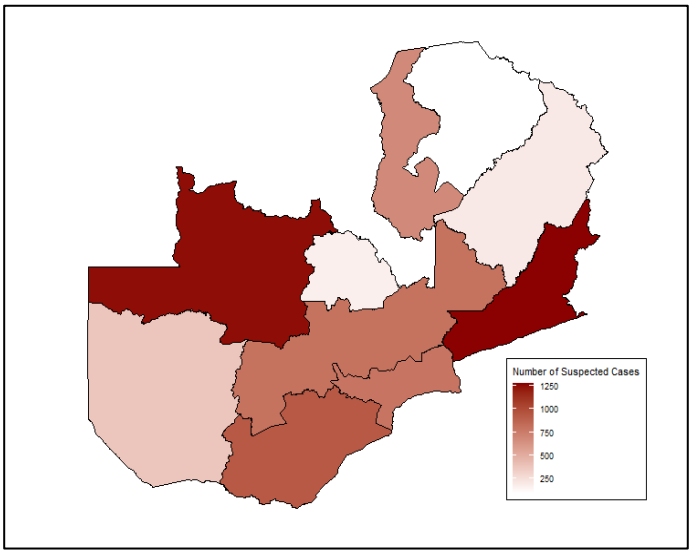

Figure 6 Map showing the distribution of suspected Bilharzia Cases

A total of 6,548 suspected Bilharzia cases were reported across all ten provinces in Quarter 3, 2024. Eastern Province continues to report the highest number of cases with 1,276, followed closely by North-Western Province with 1,250 and Southern Province with 931. Other provinces with high number of cases included Central Province (800), Lusaka Province (785), and Luapula Province (679). The lowest number of cases were reported in Northern Province (89). There is a need to intensify the distribution of Information Education and Communication (IEC) materials and community engagement in the affected provinces to promote the adoption of hygiene and sanitation practices These include boiling or treating water and avoiding bathing or swimming in contaminated lakes, rivers, or ponds where bilharzia is known to be present.

Typhoid Fever

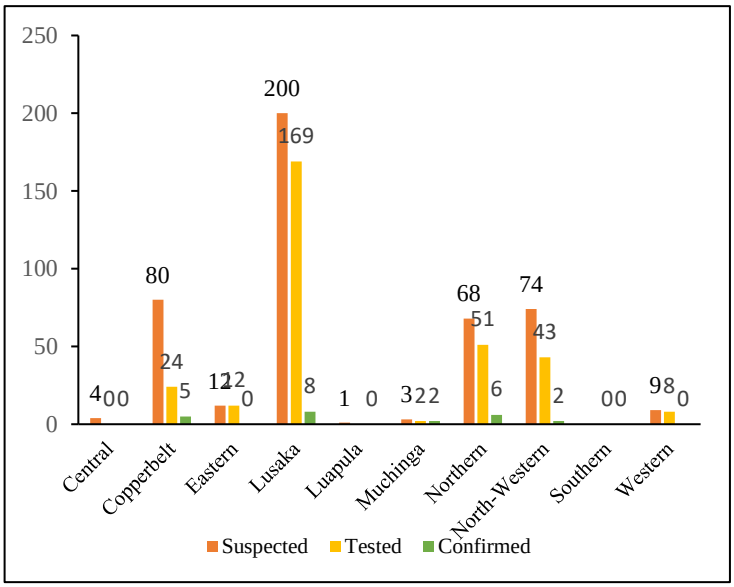

Figure 7 Quarter 3 suspected, tested and confirmed Typhoid fever (Source eIDSR, 2024)

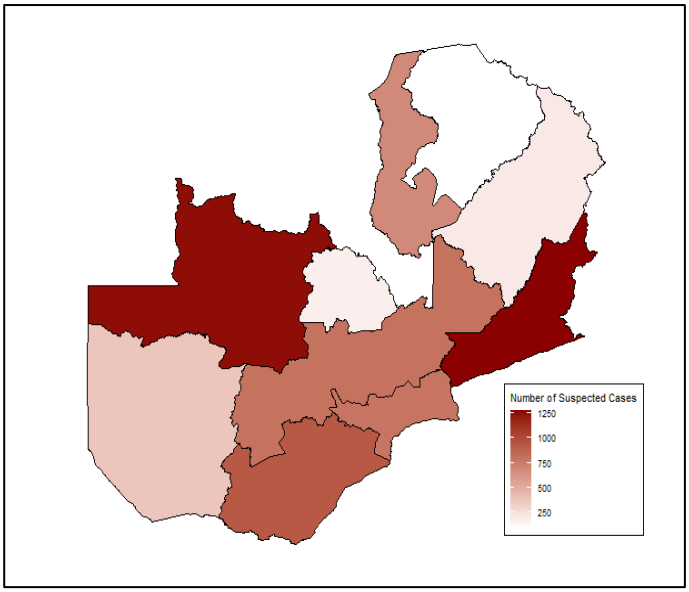

Figure 8 Map showing the distribution of suspected Typhoid Fever Cases

A total of 451 suspected Typhoid Fever cases were reported across nine provinces in Quarter 3, 2024, an increase from 381 cases recorded in Quarter 2. Lusaka Province reported the highest number of cases in Q3 with 200, up from 96 in Q2, indicating a continued upward trend. In contrast, North-Western Province experienced a significant decrease, with cases dropping from 157 in Q2 to 74 in Q3, approximately 47% decline. Muchinga and Luapula Provinces, which reported no cases in Q2, recorded 3 and 1 cases, respectively, in Q3 while Southern Province maintained its zero-case status across both quarters. Typhoid fever can be prevented through improved sanitation, use of clean or boiled water, handwashing and safe food preparation.

Maternal Mortality

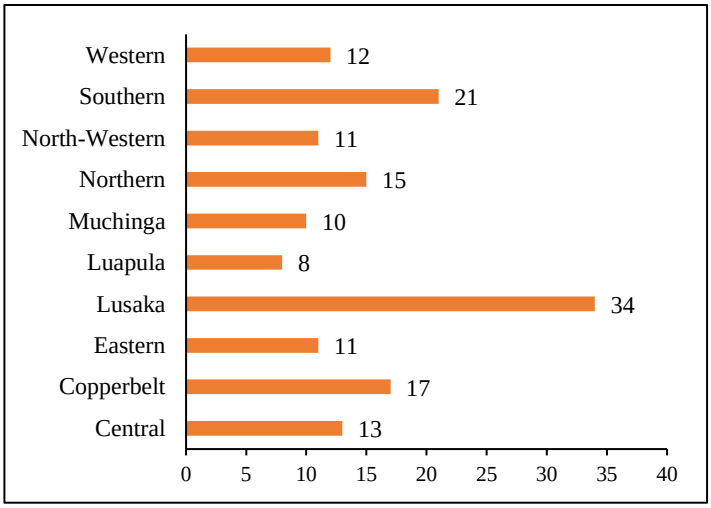

Figure 9 Quarter 3 reported maternal deaths per province (Source: Maternal Child Health Unit (Ministry of Health), 2024)

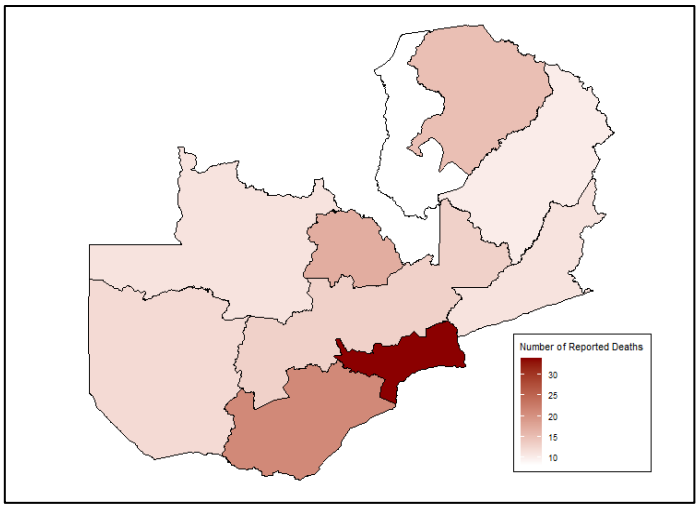

Figure 10 Map showing the distribution of reported Maternal deaths by province

In the third quarter of 2024, a total of 152 maternal deaths were reported, a slight increase from the 150 deaths recorded in the second quarter of 2024. Lusaka Province continues to report the highest number of deaths with 34, followed by Southern Province with 21 deaths and Copperbelt Province with 17 deaths. Notably, Muchinga Province experienced an increase from 5 deaths in Quarter 2 to 10 deaths in Quarter 3, 2024. Conversely, Luapula Province saw a decline in deaths, reporting 8 cases in Quarter 3 compared to 17 in the previous quarter.

Acute Flaccid Paralysis

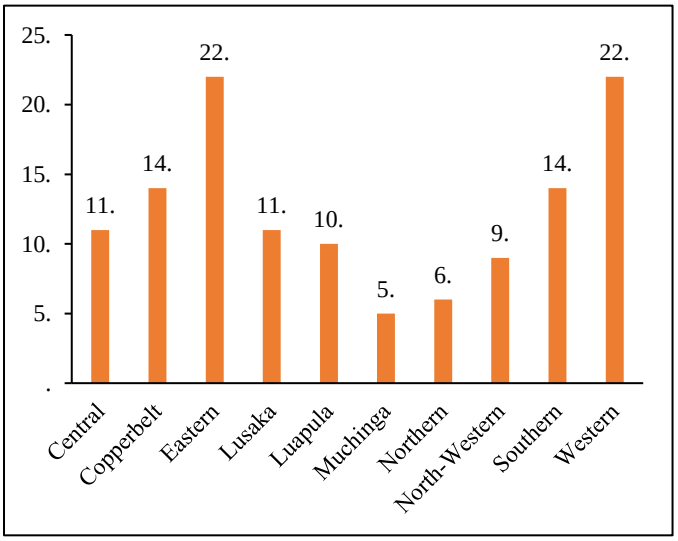

Figure 11 Quarter 3 suspected AFP cases (Source eIDSR, 2024)

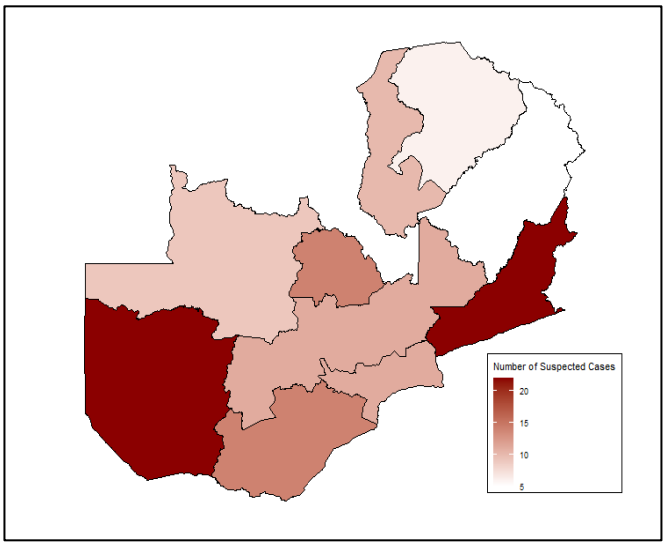

Figure 12 Map showing the distribution of AFP cases

In the third quarter of 2024, a total of 124 suspected Acute Flaccid Paralysis (AFP) cases were reported across all ten provinces, representing a slight increase from the 120 cases recorded in Quarter 2. Eastern and Western Provinces reported the highest number of cases in Q3, with 22 each, while Copperbelt and Southern Provinces followed with 14 cases each. Lusaka Province, which led in Q2 with 25 cases, recorded a significant decrease to 11 cases in Q3. Central Province, which had the least cases in Q2 with 3, reported an increase to 11 cases. North-Western Province also saw a rise, reporting 9 cases in Q3 compared to 4 in Q2. This slight increase highlights the need to sustain robust AFP surveillance systems and rapid case investigations, especially in regions reporting consistent or rising trends.

Summary Report Priority Diseases, Conditions and Events

Disease/Event/Condition	Week 27 - 39		
	Suspected	Tested	Confirmed
AFP	124	90	0
Anthrax	166	14	3
Cholera	41	30	2
COVID-19	10,670	9,305	218
Dog Bite	571	-	571
Dysentery	20,860	1176	409
Schistosomiasis (Bilharzia)	6548	2258	569
Malaria	2,078,468	1,974,305	612,170
Maternal Deaths*	152	0	152
Measles	731	353	185
Meningitis (Neisseria)	183	147	34
Monkey Pox	13	8	0
Tuberculosis	149,180	138,384	5,693
Typhoid Fever	451	309	23

*Data not extracted from eIDSR

Data used was extracted from eIDSR on 10th October, 2024.

About eIDSR

The Electronic Integrated Disease Surveillance and Response System (eIDSR) is a disease surveillance system that is used to continuously and systematically collect, analyse, interpret, and visualize public health data. Data is collected at facility level and captured by district surveillance officers. The data reported in this bulletin was extracted from the system (except where indicated otherwise) on the aforementioned date.

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