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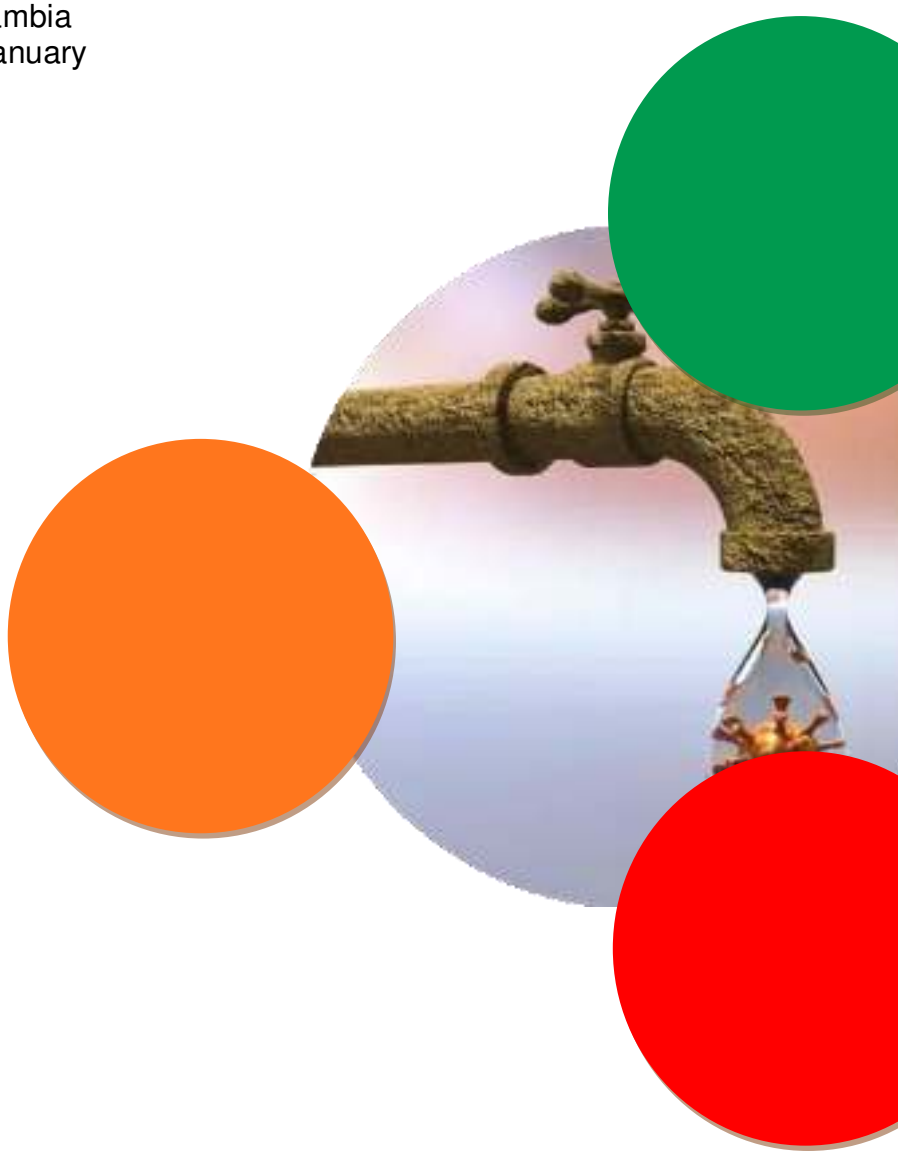

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EDITORIAL

Responding to Outbreaks During a Pandemic: Lessons Learned from the COVID-19 Pandemic and Future Strategies

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Introduction

While in the 21st century we boast of global development and great innovations to secure national and global public health securities, the COVID-19 Pandemic revealed our vulnerabilities within the developed and developing nations across the globe.

The COVID-19 pandemic disrupted lives, economies, and healthcare systems across the globe. The world was indeed caught off-guard, and the response was, at times, chaotic especially with other health emergencies to respond to. However, it is noteworthy that in the face of this unprecedented crisis, the human race has also displayed remarkable resilience, adaptability, and innovation.

Zambia while responding to the COVID-19 Pandemic faced other outbreaks including Measles, Cholera, Anthrax and Polio. We review and reflect on the global response and Zambia's response to the COVID-19 Pandemic and use the information to suggest plans, specifically on how we should respond to outbreaks during a pandemic.

What were the lessons learnt in the COVID-19 Pandemic Response?

- Timely and Coordinated Action: One of the most vital lessons learned during this pandemic is the importance of timely and coordinated action. Countries that reacted promptly and effectively fared better. Zambia, through its National Public Health Institute (ZNPHI) immediately on learning of the outbreak referred to as '2019 novel coronavirus' set up an incident management system, activated its Public Health Emergency Operations Center (PHEOC) in alert mode. Aligned to public health security guidelines, Zambia along with other Governments ensured clear communication, decisive government policies, and collaboration between international organizations and governments which played a pivotal role in controlling outbreaks.
- Healthcare System Strengthening: Pandemics expose the vulnerabilities of healthcare systems. It's imperative that governments invest in strengthening their healthcare infrastructure, ensuring adequate resources, and bolstering the capacity to respond to surges in cases.

Zambia placed emphasis in internal and external resource mobilization, adapted existing successful and innovative management systems, as well as new therapeutics. Capacity building of responders in all areas including for case management, diagnosis, data management, risk communication and community engagement were in place. This capacity is being utilised to respond to other outbreaks during and after the COVID-19 Pandemic.

- Data and Surveillance: The pandemic highlighted the significance of data and surveillance. Real-time data sharing and analysis allowed for targeted interventions. It's essential to maintain this approach to detect and respond to outbreaks during a pandemic. Zambia continues to strengthen its surveillance capacities including establishing and strengthening its electronic data management system, the e-IDSR and COVID-19 tracker.
- Vaccine Development and Distribution: The development and distribution of vaccines against COVID-19 were a remarkable feat of science and global collaboration. The process of rapidly developing and distributing vaccines must serve as a blueprint for future pandemics. While Zambia does not manufacture any vaccines, heightened community engagement has facilitated increased uptake. Zambia by 29th September had vaccinated.

Suggested Strategies for the future.

- Develop and strengthen comprehensive early warning systems that detect unusual outbreaks of diseases. These systems may rely on artificial intelligence with caution, genomic sequencing, and global surveillance networks to identify and confirm potential threats before they escalate.
- With various bodies responsible for epidemic and pandemic management at national, regional, and global level a consideration for coordinated bilateral and multilateral partnerships outlining the responsibilities and commitments of organizations and nations during a pandemic in place. A coordinated global response mechanism to ensure equitable access to resources and vaccines is admirable.
- Vaccine Research and Development for a broader spectrum of vaccines at regional level to allow for equitable and timely access. Key is innovation in platform technologies that can be rapidly improved to manage new threats, thus reducing the time required for vaccine development.
- Improved local or regional manufacturing for medical supplies and improvement. We saw the continent fail to get medicines, medical supplies, and consumables timely during the COVID-19 pandemic.
- Strengthen public risk communication, health education and communication towards health behavioral change and ensure that citizens are well-informed and understand the importance of following guidelines during a pandemic. Widespread campaigns, crisis communication, fact-based messaging, and debunking misinformation.
- Capacity Building: Empower local healthcare systems and communities with the knowledge and resources to respond effectively to outbreaks. This involves building up healthcare infrastructure, training healthcare workers, and stockpiling essential supplies.

- Mental Health Support: Recognize the importance of mental health support during a pandemic. The mental health repercussions of isolation, loss, and uncertainty should not be underestimated, and systems should be in place to address them.

Conclusion:

The COVID-19 pandemic has been a global wake-up call, shedding light on the importance of preparedness, cooperation, and innovation in responding to outbreaks during a pandemic. The

Success Story Title: An Evaluation of the Acute Flaccid Paralysis (AFP) Surveillance System in Eastern Province: Zambia, 2020-2022

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Correspondence: Martha Malasa (martha.malasa@yahoo.com)

Citation style for this article

M. Malasa. Success Story Title: An Evaluation of the Acute Flaccid Paralysis (AFP) Surveillance System in Eastern Province: Zambia, 2020-2022. Health Press Bull. 2023;07(2):6-7.

Key Messages:

- Evaluation of AFP surveillance system in Eastern province
- Declaration of Polio outbreak by WHO in 2022
- Areas of improvement identified.
- Recommendations made to improve AFP surveillance system in Eastern province.

Key informant interviews on attributes of AFP surveillance system at Mkumbuzi Rural Health Centre in Chadiza district.

A Zambia FETP resident using the skills and knowledge gained from surveillance system evaluation. He led a team from Eastern Province Provincial Health Office, Chadiza, Chipata, Petauke and Vubwi District Health Offices in evaluating the AFP surveillance system in February 2023. This followed the declaration of an outbreak of wild poliovirus in Malawi and Mozambique by WHO in 2022.

The aim of the evaluation was to assess the effectiveness of the AFP surveillance system in Eastern province as it was at risk due to its proximity to Malawi and Mozambique. The AFP surveillance system facilitates for investigation and reporting of 20 health care workers (HCWs) using the CDC MMWR attributes guidelines for evaluating public health surveillance systems.

The evaluation identified areas of improvement as being poor performance on timeliness, lack of understanding of the AFP case definition (simplicity), incomplete data entry on case investigation forms and low AFP suspicion index.

Recommendations were made to train HCWs in effective and efficient use of AFP surveillance system in Eastern province to ensure early detection, investigation and reporting of AFP cases in children below 15 years.

Perspective

Factors Associated With SARS-Cov2 Infection in A Respiratory Disease Sentinel Surveillance System in Zambia, January 2021 to June 2022

Grace Funsani[1], Mwaka Monze[2], Peter J. Chipimo[3], Edward Chentulo[2], Miniva Mwanza[2], Dabwitso Banda[1], Paul Simusika[2], Muzala Kapina[3], Nyambe Sinyange[3], Malambo Mutila[1].

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Citation style for this article

Grace Funsani[1], Mwaka Monze[2], Peter J. Chipimo[3], Edward Chentulo[2], Miniva Mwanza[2], Dabwitso Banda[1], Paul Simusika[2], Muzala Kapina[3], Nyambe Sinyange[3], Malambo Mutila[1]. Factors Associated With SARS-Cov2 Infection in A Respiratory Disease Sentinel Surveillance System in Zambia, January 2021 to June 2022. Health Press Bull. 2023;07(2):8-9.

Understanding the parameters related to SARS-Cov2 infection is the prerequisite to effective control and prevention against COVID-19. This study investigated the risk variables for SARS-CoV2 infection in Zambian patients with severe acute respiratory illness (SARI) and influenza-like illness (ILI). Ten ILI/SARI sentinel sites in Zambia that collected data between January 2021 and June 2022 had their data examined. Oropharyngeal/nasopharyngeal swabs were obtained for SARS-CoV2 testing using reverse transcription-polymerase chain reaction, and a case investigation form was given out. Multivariable logistic regression was used to measure the odds of testing positive for SARS-CoV2 among patients with ILI/SARI.

A total of 6,378 patients enrolled (52.51% ILI, 47.39% SARI) the median age of the population (IQR 2.31-36.0) was 19 years, and 50.4% of people were female.12.56% of all patients tested positive for SARS-CoV2. Adults older than five years had lower odds of testing positive compared to children under five years (OR 0.54 [95% CI: 0.43-0.67]). Additionally, patients between the ages of 26 and 65 and those under 65 had lower risks of infection (ORs of 0.41 (95% CI: 0.33-0.50) and 0.60 (95% CI: 0.42-0.88, respectively). Weight loss was linked to higher risks of testing positive (OR 1.4 [95% CI: 1.18-1.75]), whereas patients with heart disease had lower odds (OR 0.65 [95% CI: 0.44-1.0]).

In contrast to previous research, this study discovered that people over the age of five and those who had heart illness had lower likelihood of contracting SARS-CoV2 infection, whereas people who had lost weight had higher chances.

Given the high SARS-CoV2 positive rate, immunization is strongly advised for children under the age of 18. These results demonstrate the necessity for focused preventative tactics and additional research into the specific variables impacting SARS-CoV2 transmission in Zambia.

Keywords: SARS-CoV2, surveillance, sentinel, Zambia

Perspective

Empowering Progress: Reflections on Zambia's 2023 Antimicrobial-Resistance Quarterly Meeting

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Citation style for this article:

Roureen Landson[1], M Haketa[2,] ML Mazaba [3], R. Mzungu Saeluzika[4]. Empowering Progress: Reflections on Zambia's 2023 AntimicrobialResistance Quarterly Meeting. Health Press Bull. 2023;07(2):10-11.

Introduction

Understanding the parameters related to SARS-Cov2 infection is the prerequisite to effective control and prevention against COVID-19. This study investigated the risk variables for SARS-CoV2 infection in Zambian patients with severe acute respiratory illness (SARI) and influenza-like illness (ILI). Ten ILI/SARI sentinel sites in Zambia that collected data between January 2021 and June 2022 had their data examined. Oropharyngeal/nasopharyngeal swabs were obtained for SARS-CoV2 testing using reverse transcription-polymerase chain reaction, and a case investigation form was given out. Multivariable logistic regression was used to measure the odds of testing positive for SARS-CoV2 among patients with ILI/SARI. A total of 6,378 patients enrolled (52.51% ILI, 47.39% SARI).

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whereas people who had lost weight had higher chances. Given the high SARS-CoV2 positive rate, immunization is strongly advised for children under the age of 18. These results demonstrate the necessity for focused preventative tactics and additional research into the specific variables impacting SARS-CoV2 transmission in Zambia.

Keywords: SARS-CoV2, surveillance, sentinel, Zambia

Research Articles

Health Worker Resilience in The Face of Climate Change - A Review of Published Literature and Compilation of Recommendations Which Can Be Applied to The Zambian Context

Carol Milambo – Mufana[1], Dr. Nyambe Sinyange[2], Dr. Raymond Hamoonga[3], Mr. Timothy Phiri[4], Dr. Naeem Dalal[5]

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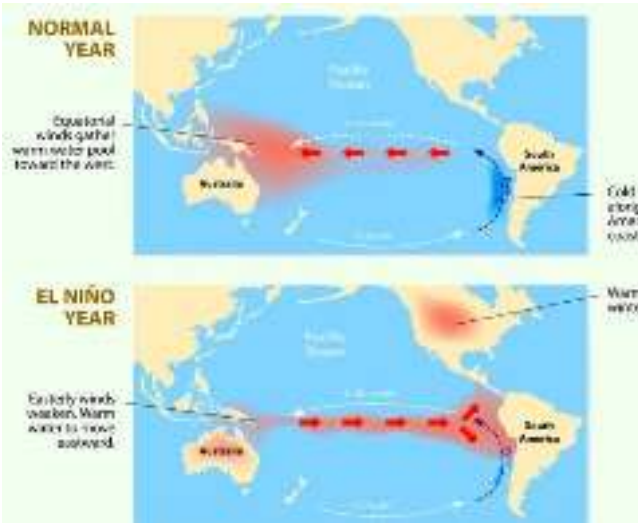
Carol Milambo – Mufana, Dr. Nyambe Sinyange, Dr. Raymond Hamoonga, Mr. Timothy Phiri, Dr. Naeem Dalal, Health Worker Resilience in The Face of Climate Change - A Review of Published Literature and Compilation of Recommendations Which Can Be Applied To The Zambian Context. Health Press Bull. 2023;07(2):12-18.

Introduction

Climate change is defined by the United Nations Climate Action as long-term shifts in the earth's temperatures and weather patterns. Climate change has health effects which include increases in water borne and vector borne infectious diseases, allergic diseases, malnutrition, health-related illnesses, storm surge-related injuries and increases in mental illnesses, self-harm, and injuries. Health workers are expected to address these health effects of climate change in their facilities but are often not well prepared to do so effectively.



Figures 1,2,3 showing the effects of climate change on the environment, the difference between global warming and climate change and the current El Niño event respectively. Sources:https://www.noaa.gov/education/resource-collections/climate/climate-change-impacts; https://www.yourdictionary.com/articles/global-warming-climate-change-difference; https://wmo.int/

Methods

Figure 4: A Community Health Worker providing services during the COVID-19 pandemic - https://www.clintonhealthaccess.org/blog/community-health-worker-sustains-continuity-of-essential-services-despite-covid-19-restrictions-and-community-fears/.

A review of 33 published pieces of literature was conducted to identify health worker resilience tools which can be applied to the Zambian context. These included scientific journal articles on climate change and health and global guidelines from organisations such as the Centre for Climate Change Communication, the Global Climate and Health Alliance as well as the World Health Organisation.

Climate Change and Health

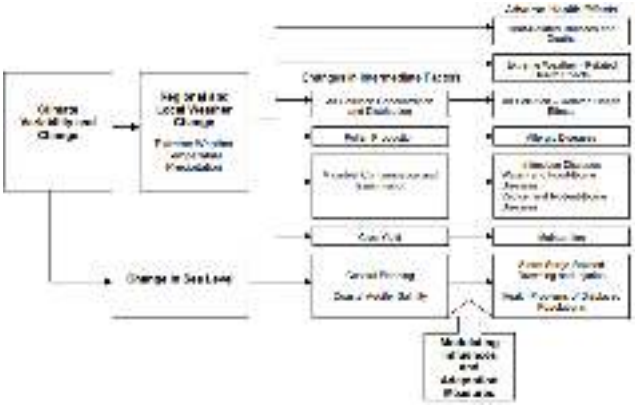


Figure 5. Adverse health effects of climate variability and change.Source:https://www.bu.edu/sph/files/2012/08/Haines_2006_Climate_Change_and_Human_Health__Impacts_Vulnerability_and_Public_Health.pdf

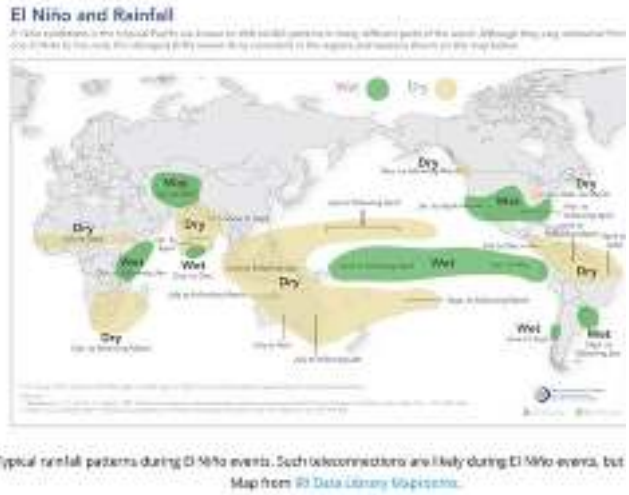


Figure 5. El Niño and rainfall. Source - https://wmo.int/

Impact on Health Workers

Climate change has an impact on both the physical and mental health of health care workers as detailed in figure 6 below.

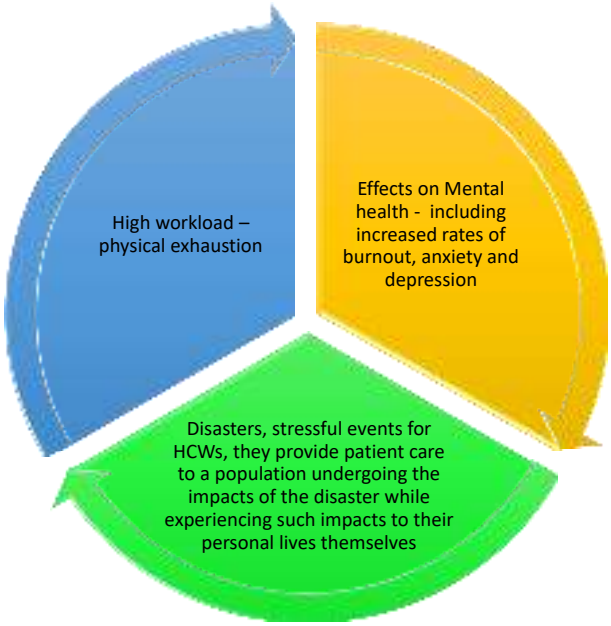


Figure 6. Climate Change Effects on Health Care Workers Source:https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-022-13761-1

Results

The literature reviewed had recommendations of tools which health workers could use to increase their resilience in the face of climate change in several parts of the world. The recommendations which would be applicable to the Zambian context fell in two themes of Gaining Factual Knowledge and Action. As part of gaining factual knowledge, the two sub-themes identified were Health Worker Education (climate change, effects, mitigation), Health Worker Communication (health workers well informed of imminent local climate events).

(institutional and personal protective equipment).

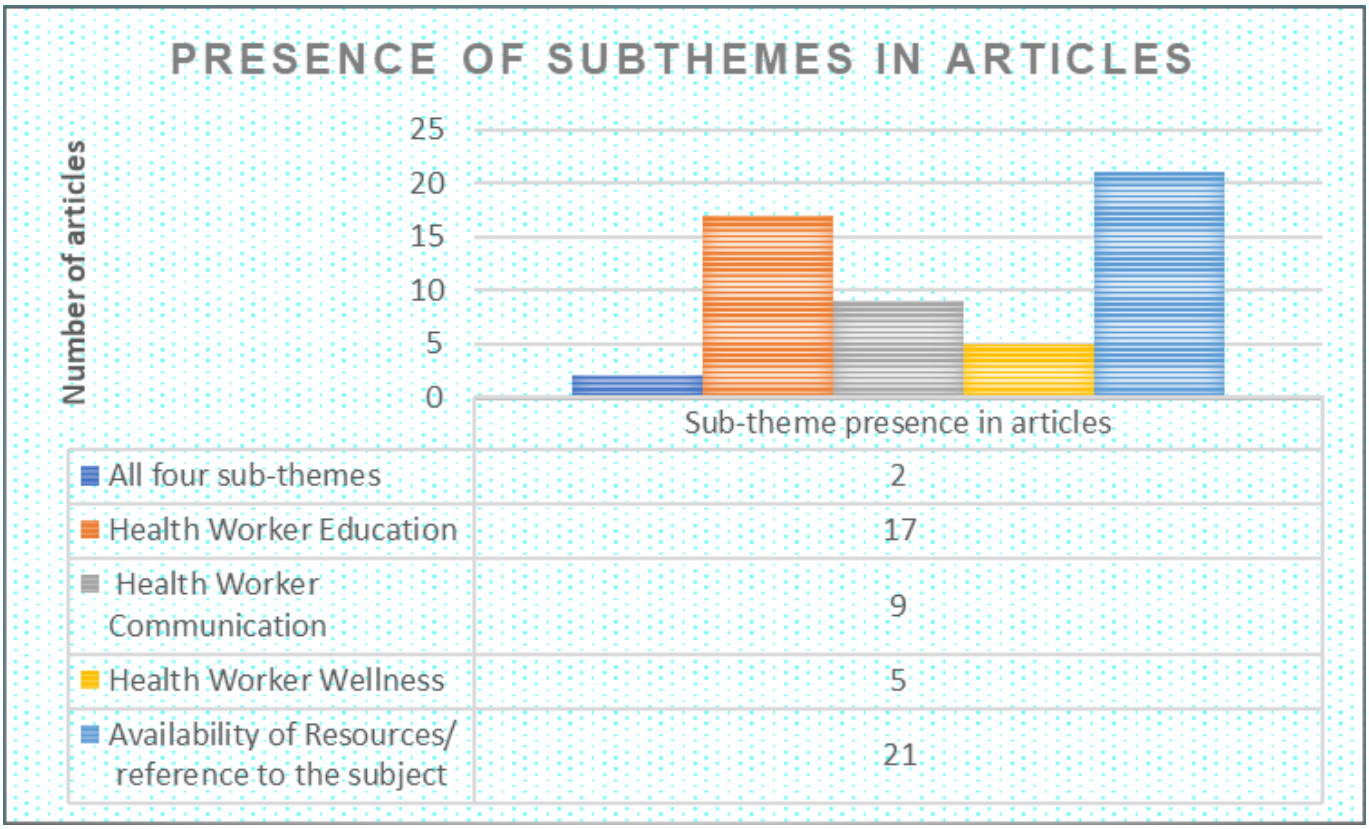
As part of action, the two sub-themes identified were **Health Worker Wellness** (continuous physical and mental health work) and **Availability of Resources** (institutional and personal protective equipment).

Of the 33 articles and resources reviewed, 21 referenced availability of resources, five referenced health worker wellness, nine referenced health worker communication and only two referenced all the sub-themes or areas as shown in figure 7 on the next page.

Conclusion and Recommendations

The articles and resources reviewed have several recommendations of ways through which health worker resilience can be enhanced in the face of climate change. It is recommended that Zambia forms multi-sectoral and multi-disciplinary teams at national and subnational level to explore how the two resources which had all four sub-themes in them and are detailed below can be adapted to the country context and implemented using a One Health approach.

The two resources which have all sub-themes are the World Health organisation (WHO) tool kit on climate change and health, as well as the health care worker's resilience tool formulated by Ali et



The World Health Organization tool kit includes detailed information on health impacts of climate change, building resilience of health systems and health care facilities as well as training and educational. The kit can be found on the following link: *https://www.who.int/teams/environment-climate-change-and-health/climate-change-and-health/capacity-building/toolkit-on-climate-change-and-health*

The Healthcare Workers' Resilience Toolkit for Disaster Management and Climate Change Adaptation (Ali, et al 2022) is accessible on the following link*:* *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9564616/*

The tool kit includes health worker wellness, education, resources, and communication required to enhance health worker resilience in the face of climate change as summarized by the toolkit authors and shown below:

Figure showing the Healthcare Workers' Resilience Toolkit for Disaster Management and Climate Change Adaptation (Ali, et al 2022) is accessible on the following link*:*
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9564616/
The tool kit includes health worker wellness, education, resources and communication required to enhance health worker resilience in the face of climate change as summarized by the toolkit authors and shown below:

References

1. Mohtady Ali H, Ranse J, Roiko A, Desha C. Healthcare Workers' Resilience Toolkit for Disaster Management and Climate Change Adaptation. Int J Environ Res Public Health. 2022 Sep 29;19(19):12440. doi: 10.3390/ijerph191912440. PMID: 36231739; PMCID: PMC9564616.
2. Mohtady Ali, H.; Ranse, J.; Roiko, A.; Desha, C. Healthcare Workers' Resilience Toolkit for Disaster Management and Climate Change Adaptation. *Int. J.* Environ. Res. Public Health 2022, 19, 12440. https://doi.org/10.3390/ijerph191912440
3. Mohtady Ali, Heba & Ranse, Jamie & Roiko, Anne & Desha, Cheryl. (2022). Healthcare Workers' Resilience Toolkit for Disaster Management and Climate Change Adaptation. International Journal of Environmental Research and Public Health. 19. 12440. 10.3390/ijerph191912440.
4. Helen D Robertson, Alison M Elliott, Christopher Burton, Lisa Iversen, Peter Murchie, Terry Porteous and Catriona Matheson British Journal of General Practice 2016; 66 (647): e423-e433. DOI: https://doi.org/10.3399/bjgp16X685261
5. Healthcare worker resilience during the COVID-19 pandemic: An integrative review Rachel G. Baskin, MSN, RN, CPN1 and Robin Bartlett, PhD, RN 2
6. Sustainable and Resilient Health Care in the Face of a Changing Climate Jodi D. Sherman, Andrea J. MacNeill, Paul D. Biddinger, Ozlem Ergun, Renee N. Salas, Matthe J. Eckelman, Annual Review of Public Health 2023 44:1, 255-277
7. PCC. Summary for Policymakers. In: Stocker TF, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley, editor. Climate Change 2013: The Physical Science Basis Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.2013.
8. Smith KR, Woodward A, Campbell-Lendrum D, Chadee D, Honda Y, Liu Q, et al. Human health; Impacts Adaptation and co-benefits. In: Field CB, Barros VR, Dokken DJ, Mach KJ, Mastrandrea MD, Bilir TE, et al., editors. Part A: Global and Sectoral Aspects Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press; 2014.
9. Jo Longman, Maddy Braddon, Blanche Verlie, David Schlosberg, Lisa Hampshire, Catherine Hawke, Anna Noonan, Emily Saurman,
10. Building resilience to the mental health impacts of climate change in rural Australia,The Journal of Climate Change and Health,Volume12,2023,100240,ISSN 26672782,https://doi.org/10.1016/j.joclim.2023.100240.(https://www.sciencedirect.com/science/article/pii/S2667278223000408)
11. Jagals P, Ebi K. Core Competencies for Health Workers to Deal with Climate and Environmental Change. Int J Environ Res Public Health. 2021 Apr 7;18(8):3849. doi: 10.3390/ijerph18083849. PMID: 33916887; PMCID: PMC8067548.

12. Watts N., Amann M., Arnell N., Ayeb-Karlsson S., Belesova K., Boykoff M., Byass P., Cai W., Campbell-Lendrum D., Capstick S., et al. The 2019 report of The Lancet Countdown on health and climate change: Ensuring that the health of a child born today is not defined by a changing climate. *Lancet.* 2019;**394**:1836–1878. doi: 10.1016/S0140-6736(19)32596-6. [PubMed] [CrossRef] [Google Scholar]
13. Werner A.K., Vink S., Watt K., Jagals P. Environmental health impacts of unconventional natural gas development: A review of the current strength of evidence. *Sci. Total Environ.* 2015;**505**:1127–1141. doi: 10.1016/j.scitotenv.2014.10.084. [PubMed] [CrossRef] [Google Scholar]
14. Kociubinska, J. Human health, climate change and PPE use during the COVID-19 pandemic. Br Dent J **233**, 778 (2022). https://doi.org/10.1038/s41415-022-5247-x
15. Seth Wynes,Guidance for health professionals seeking climate action,The Journal of Climate Change and Health,Volume 7,2022
16. Leticia Nogueira, Narjust Florez,The Impact of Climate Change on Global Oncology,Hematology Oncology Clinics of North America,Volume 38
17. Kreslake JM, Sarfaty M, Roser-Renouf C, Leiserowitz AA, Maibach EW. The Critical Roles of Health Professionals in Climate Change Prevention and Preparedness. Am J Public Health. 2018 Apr;108(S2):S68-S69. doi: 10.2105/AJPH.2017.304044. Epub 2017 Oct 26. PMID: 29072941; PMCID: PMC5922192.
18. Jagals, Paul, and Kristie Ebi. 2021. "Core Competencies for Health Workers to Deal with Climate and Environmental Change" International Journal of Environmental Research and Public Health 18, no. 8: 3849. https://doi.org/10.3390/ijerph18083849
19. A call for strengthening climate change education for all health professionals (2023) World Heart Federation. Available at: https://world-heart-federation.org/news/a-call-for-strengthening-climate-change-education-for-all-health-professionals/
20. A call for strengthening climate change education for all health professionals (2023) World Heart Federation. Available at: https://world-heart-federation.org/news/a-call-for-strengthening-climate-change-education-for-all-health-professionals/
21. Henderson, I. conducted by E. (2022) How can healthcare professionals help address climate change?, News. Available at: https://www.news-medical.net/news/20211012/How-can-healthcare-professionals-help-address-climate-change.aspx
22. A call for strengthening climate change education for all health professionals (2023) World Heart Federation. Available at: https://world-heart-federation.org/news/a-call-for-strengthening-climate-change-education-for-all-health-professionals/
23. A call for strengthening climate change education for all health professionals (2023) World Heart Federation. Available at: https://world-heart-federation.org/news/a-call-for-strengthening-climate-change-education-for-all-health-professionals/

Summary of outbreaks

Cholera Outbreak

Zambia continues to respond to cholera outbreak that began in the initial quarter of 2023, with an increasing trend particularly in the outbreak hotspot province of Northern province.Since January 21st, Zambia has recorded a total of 757 suspected cases of cholera from nine affected districts; Mpulungu, Vubwi, Nsama, Nchelenge, Mwansabombwe, Chipata, Chipangali and Lusangazi. The outbreak has been closed in seven of the nine districts, Mpulungu and Chiengi district remain the only two districts with active cholera outbreaks.

The Ministry of Health working with various stakeholders has continued to make significant efforts in combating the Cholera outbreak in Zambia, to help reduce the number of cases and increase community sensitization by encouraging good hygiene practices in the community.

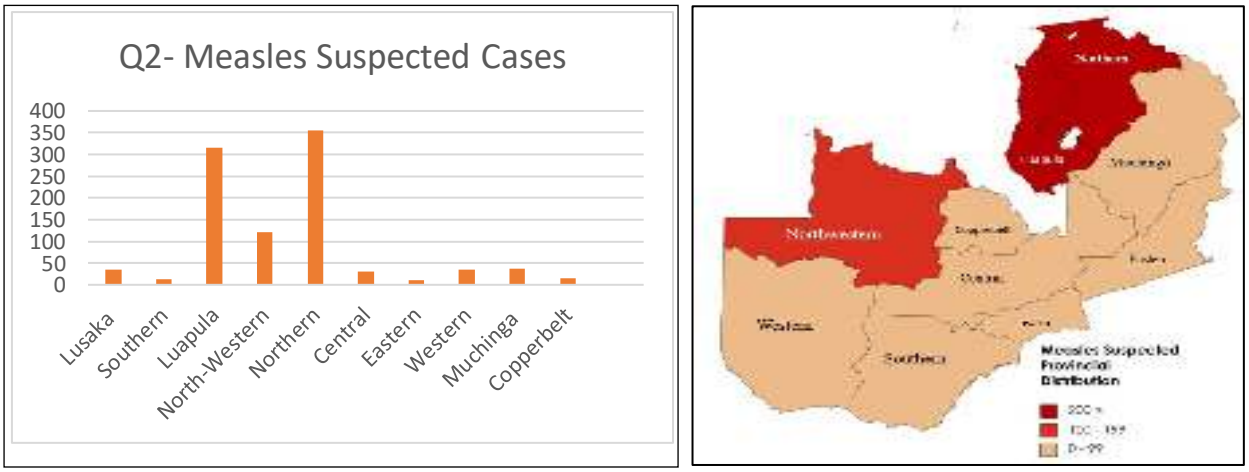
Measles Outbreak

Measles continues to be a matter of public health concern in quarter 2 of the year 2023, as the outbreak continues in the week 14 to week 26. During this period a total of 950 suspected cases were recorded out of which 26 were confirmed to be positive. This shows a downward trend from quarter 1 in which a total of 127 cases were confirmed. Notably Northern province continues to record the highest number of cases of suspected measles with 356 cases recorded in Q2 while Luapula province is close behind it with 315 suspected cases.

It is estimated that 90% of non-immune people exposed to an infectious individual will contract the disease due to its highly infectious nature widespread outbreaks among unvaccinated individuals is common.

Vaccines provide lifelong immunity with an uptake of at least 95% with two doses of measles-containing vaccine (MCV) being necessary to ensure the level of immunity required in the population to interrupt disease circulation and achieve elimination.

The Ministry of Health continues to promote vaccinations especially in the vulnerable populations through campaigns and initiatives, Outbreaks are still common in the unvaccinated population especially the immunocompromised. There is a need for the country to achieve vaccination coverage ≥95% of the general population at national and subnational levels to ensure that measles circulation is interrupted, and the outbreak is controlled.



Graph showing Q2- Suspected measles cases and Map showing Provincial Measles suspected cases.

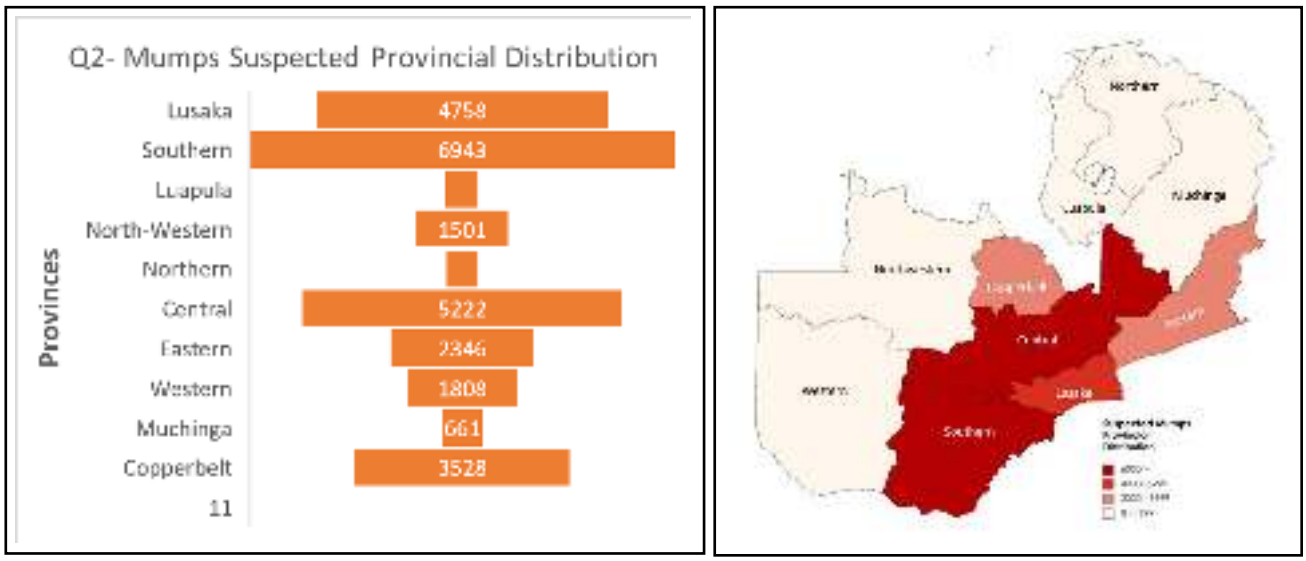
References

1. Aaby P. Malnutrition and Overcrowding/Intensive Exposure in Severe **Measles** Infection: Review of Community Studies. Reviews of Infectious Diseases. 1988;10:478–91. [PubMed]
2. Africa **Measles** Partnership. 2004. "**Measles** Investment Case." Board of the Global Alliance for Vaccines and Immunization. http://www.vaccinealliance.org/resources/Measles_Investment_Case_FINAL_w_addendum.pdf.
3. Strebel PM, Orenstein WA. **Measles**. N Engl J Med. 2019 Jul 25;381(4):349-357. [PubMed]

Mumps

In Zambia, vaccine-preventable communicable diseases continue to disproportionately affect the unimmunized population. Mumps, a viral disease known for its serious complications such as orchitis, encephalitis, deafness, and, in extreme cases, death, has shown a significant increase in reported cases during the second quarter of 2023. Consequently, the country has initiated laboratory investigations for mumps cases due to the high number of suspected cases, leading to the identification of key sites and the transportation of specimens.

During the second quarter, a total of 27,899 cases were recorded, out of which 203 cases were processed. Among these processed cases, 107 tested positive for mumps (IgG/IgM), resulting in a positivity rate of 52.7%. It is noteworthy that the Southern Province has reported the highest number of suspected mumps (6943 cases), with Lusaka (4758 cases) and the Copperbelt (3528) closely following suit.



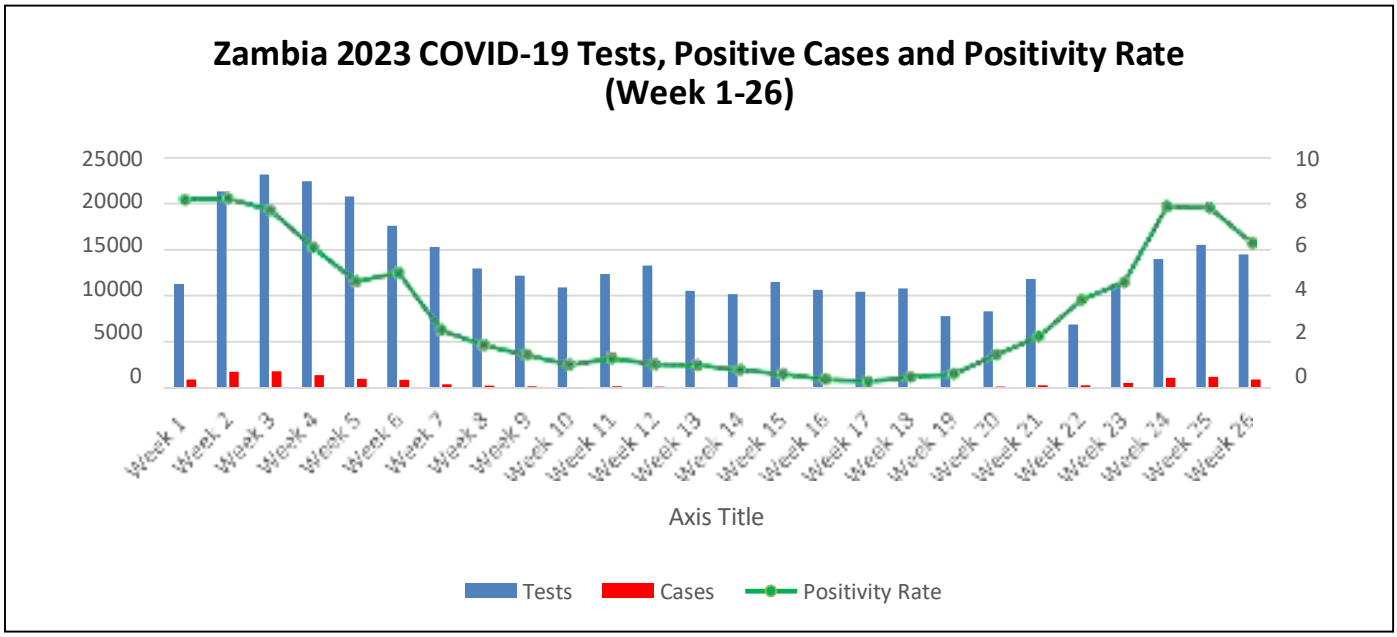
Graph showing Q2- Suspected Mumps cases and Map showing Provincial Mumps suspected cases.

References

1. Hviid A, Rubin S, Mühlemann K. Mumps. Lancet. 2008 Mar 15;371(9616):932-44. [PubMed]
2. Watson JC, Hadler SC, Dykewicz CA, Reef S, Phillips L. Measles, mumps, and rubella--vaccine use and strategies for elimination of measles, rubella, and congenital rubella syndrome and control of mumps: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep. 1998 May 22;47(RR-8):1-57. [PubMed]
3. Davison P, Morris J. Mumps. [Updated 2023 Aug 8]. In: StatPearls [Internet]. Treasure Island(FL):StatPearlsPublishing;2023Jan-.https://www.ncbi.nlm.nih.gov/books/NBK534785/

Covid-19

After over three years since the declaration of COVID-19 as a pandemic, the World Health Organization (WHO) officially declared an end to the global Public Health Emergency (PHE) for COVID-19 on May 5, 2023. Since March 18, 2020, Zambia has recorded a total of 348,430 confirmed cases, 4,133,891 samples tested, 342,983 recoveries, and 4,064 COVID-19 and COVID-19 related deaths cumulatively. The country's vaccine coverage now stands at 82% from an eligible population of 10,926,800. A total of 912 cases were recorded in week 26, representing a 24% reduction from the 1,215 cases recorded in week 25. In week 26, a total of 14,479 tests were carried out, which represents a 6% reduction when compared to the number of tests carried out in the previous week.



Summary

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- The country's vaccine coverage now stands at 82% from an eligible population of 10,926,800.
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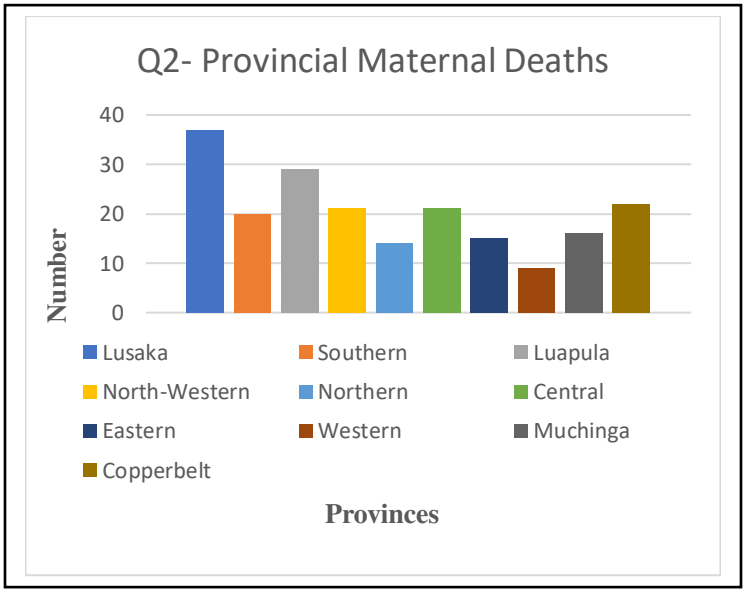
Summary Report Priority Diseases, Conditions and Events (Week 14-26)

Disease/Event/Condition	Week 14 - 26		
	Suspected	Tested	Confirmed
COVID-19	347,421	347,421	13,801
HIV	741,379	576,214	26,178
Malaria	5,089,515	5,999,164	3,350,063
Non bloody diarrhea	294,789	10,207	6,155
Maternal deaths	N/A	N/A	360
Influenza	623	623	13
Dysentery	12,900	1,009	1,009
AFP	263	263	1
Cholera	755	755	306
Meningitis (Neisseria)	106	36	18
Measles	2,572	676	311
Scabies	68,481	2,594	1,953
Mumps	39,236	69	56

Specific diseases and summarized conditions

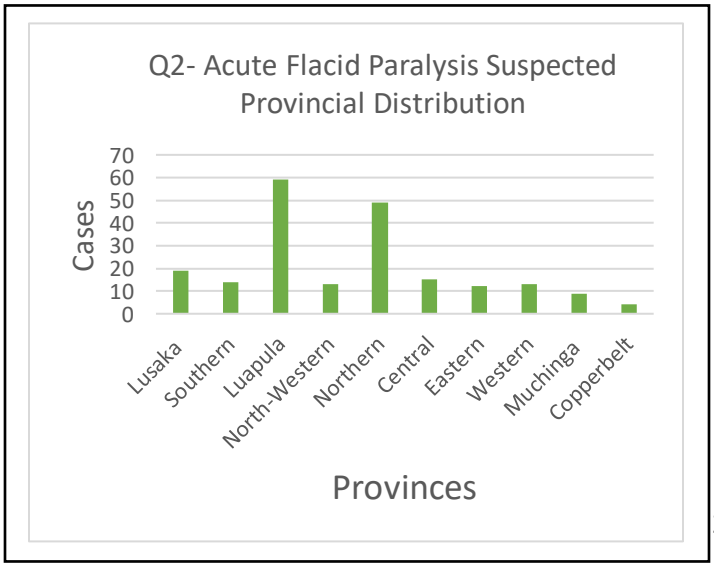
Maternal Mortality

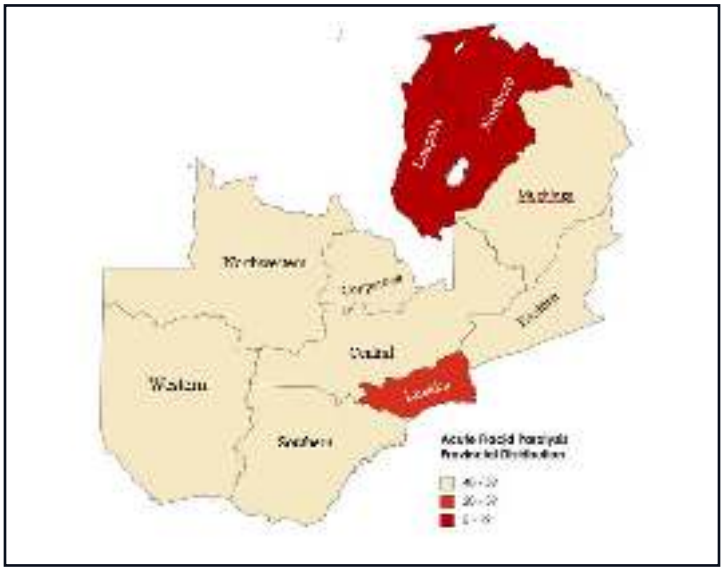


Maternal Mortality which is the demise of a woman during pregnancy or within one year of pregnancy or one year postpartum remains a crucial concern globally. An upward trend in the number of cases was seen in Q2 with a total of 204 cases recorded across all 10 provinces this brings the cumulative total to 378 cases for the weeks 1-26. Of note Lusaka province continues to record the highest number of cases recording 37 cases while Luapula was second with 29 cases.

Obstetric Hemorrhage continues to be the leading cause of maternal mortality in Zambia, despite the ongoing advancements and interventions. There is a need for continued efforts in the prevention of maternal mortality.

Acute Flaccid Paralysis

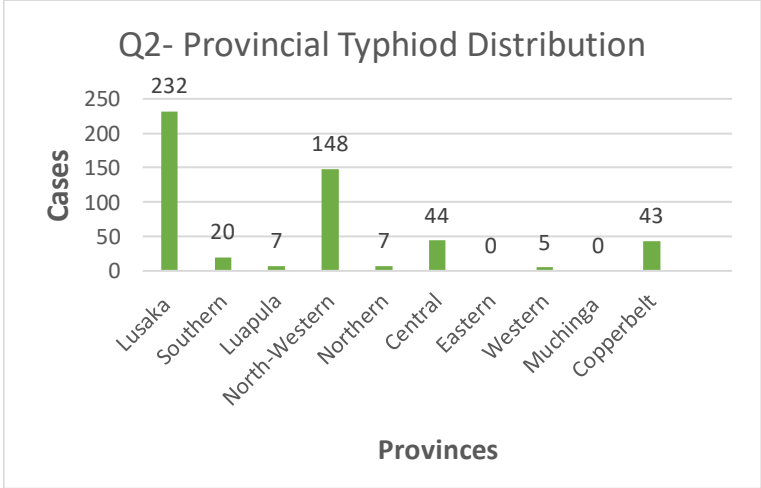




Acute flaccid paralysis in children remains a significant public health challenge in the pursuit of polio eradication in the unvaccinated population. AFP which is caused by both infectious and non-infectious has devastating consequences when left untreated.

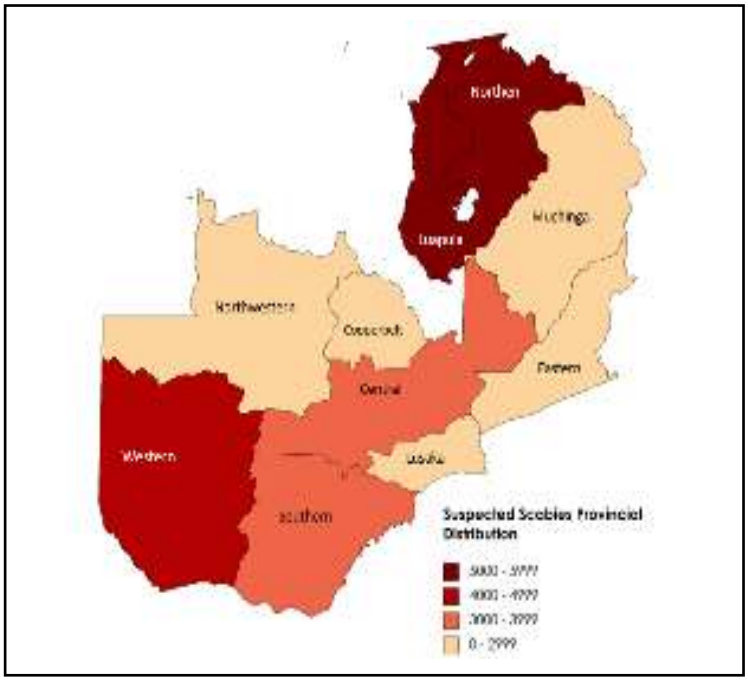
In the second quarter, there has been an upward trend in the number of AFP cases with a total of 210 cases reported, all of which underwent testing, one was confirmed positive to polio on 15th June 2023. The confirmed was reported from Mpulungu district of Northern province. Notably, in the second quarter Luapula Province reported the highest number of suspected cases, reaching a total of 59 cases, Northern Province came in second with a total of 49 cases recorded.

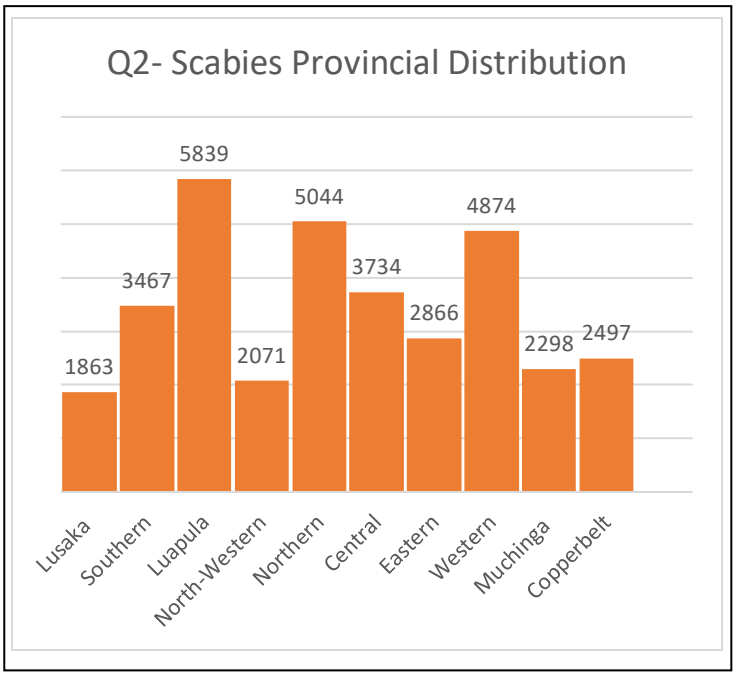
Typhoid



Enteric fever is more prevalent in temperate and tropical climates, it is directly associated with sanitation, sewage, and water treatment systems. New cases of typhoid fever have been increasing worldwide due to rapid increases in population, pollution, and shortages of pure drinking water. Enteric Fever cases continue to be recorded in the country In the Second Quarter of 2023, Zambia encountered significant reports of suspected enteric fever cases totaling 503 instances. Notably Lusaka stood out with 232.It is important to highlight that Muchinga and Eastern Provinces did not report any cases during this period. There is a need for heightened awareness and effective strategies in the prevention of typhoid through improved WASH systems.

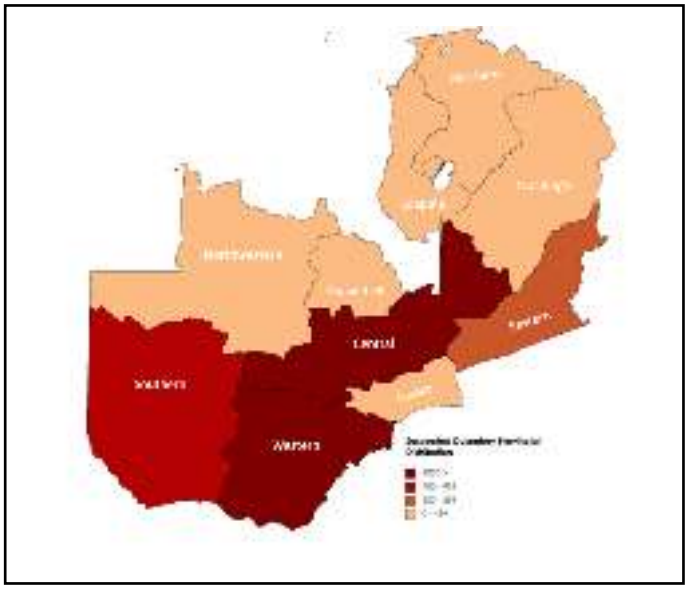
Scabies

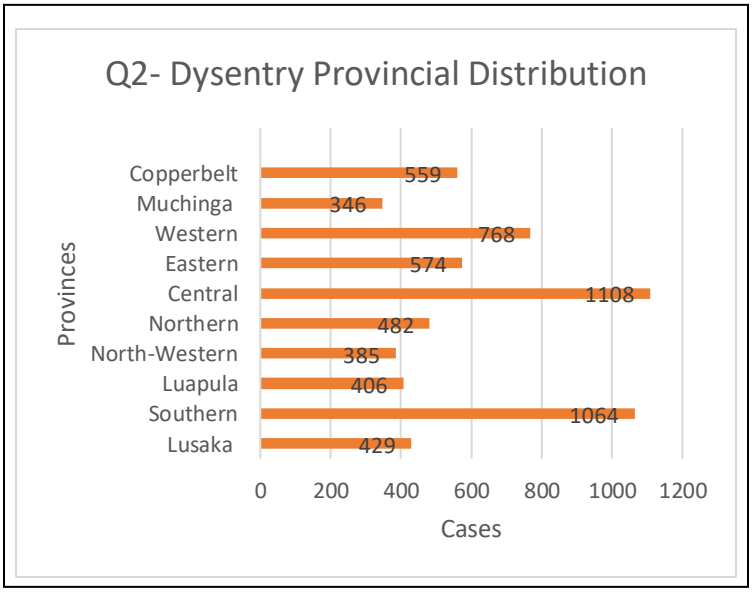




In subtropical regions of Southern Africa, scabies remains to be an ongoing concern as a neglected Tropical disease, poor hygiene and impaired host immunity continue to stand out as major risk factors. Scabies has an estimated worldwide prevalence of 200 million infected individuals each year, though not fatal, it can cause severe morbidity and a poor quality of life. In the second quarter Zambia recorded 34,553 suspected cases of scabies reported out of which 802 cases were confirmed diagnosis, this has shown a reduction in the number of cases when compared to quarter one.

Dysentery





In the second quarter of 2023, there were 6121 suspected cases of dysentery recorded, out of which 410 cases underwent testing with 88 cases confirmed. This shows an upward trend in the number of cases of dysentery that were confirmed in comparison to quarter one. The quarter Central province stood out with the highest number of suspected cases, reaching 1,108 instances. This data demonstrates the importance of significant effective healthcare responses to address and control the spread of dysentery, particularly in the provinces where the outbreak appears to be most pronounced.

References

1. Loudon I. The transformation of maternal mortality. *BMJ.* 1992;**305**:1557–1560. [PMC free article] [PubMed] [Google Scholar].
2. Micali G, Lacarrubba F, Verzì AE, Chosidow O, Schwartz RA. Scabies: Advances in Noninvasive Diagnosis. PLoS Negl Trop Dis. 2016 Jun;10(6):e0004691. [PMC free article] [PubMed] [Reference list]
3. Rasul CH, Das PL, Alam S, Ahmed S, Ahmed M. Clinical profile of acute flaccid paralysis. *Med J Malaysia.* 2002;57(1):61–65. [PubMed] [Google Scholar].
4. Romani L, Steer AC, Whitfeld MJ, Kaldor JM. Prevalence of scabies and impetigo worldwide: a systematic review. Lancet Infect Dis. 2015 Aug;15(8):960-7. doi: 10.1016/S1473-3099(15)00132-2. Epub 2015 Jun 15. PMID: 26088526.
5. Stelzer-Braid S, Rawlinson W. Outbreaks of acute flaccid myelitis in the US. *BMJ Internet.* 2018;363(December):18–19. doi: 10.1136/bmj.k5246. Available from: [PubMed] [CrossRef] [Google Scholar].
6. WHO. World Health Organization; Geneva: 2023. Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. February 2023. [Google Scholar]