

Fighting Infectious Diseases, Antimicrobial Resistance and Misinformation

Srista Tripathi, 2025, School for Public and International Affairs

One Health Trust, formerly the Center for Disease Dynamics, Economics, and Policy, in Bangalore, India
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Work profile

Overall Goals: “The One Health Trust (OHT) uses research and stakeholder engagement to improve the health and well-being of our planet and its inhabitants.”(One Health Trust)

• Communications, Interdisciplinary work to combat disease and antimicrobial resistance

- antimicrobial resistance
- low vaccination rates
- infectious diseases

- Working with policymakers to draft relevant and applicable communications and strategies.

Objective of Internship

Collecting useful information and data metrics for various low-income countries in order to later facilitate important conversations on how to better increase vaccination coverage.

Introduction

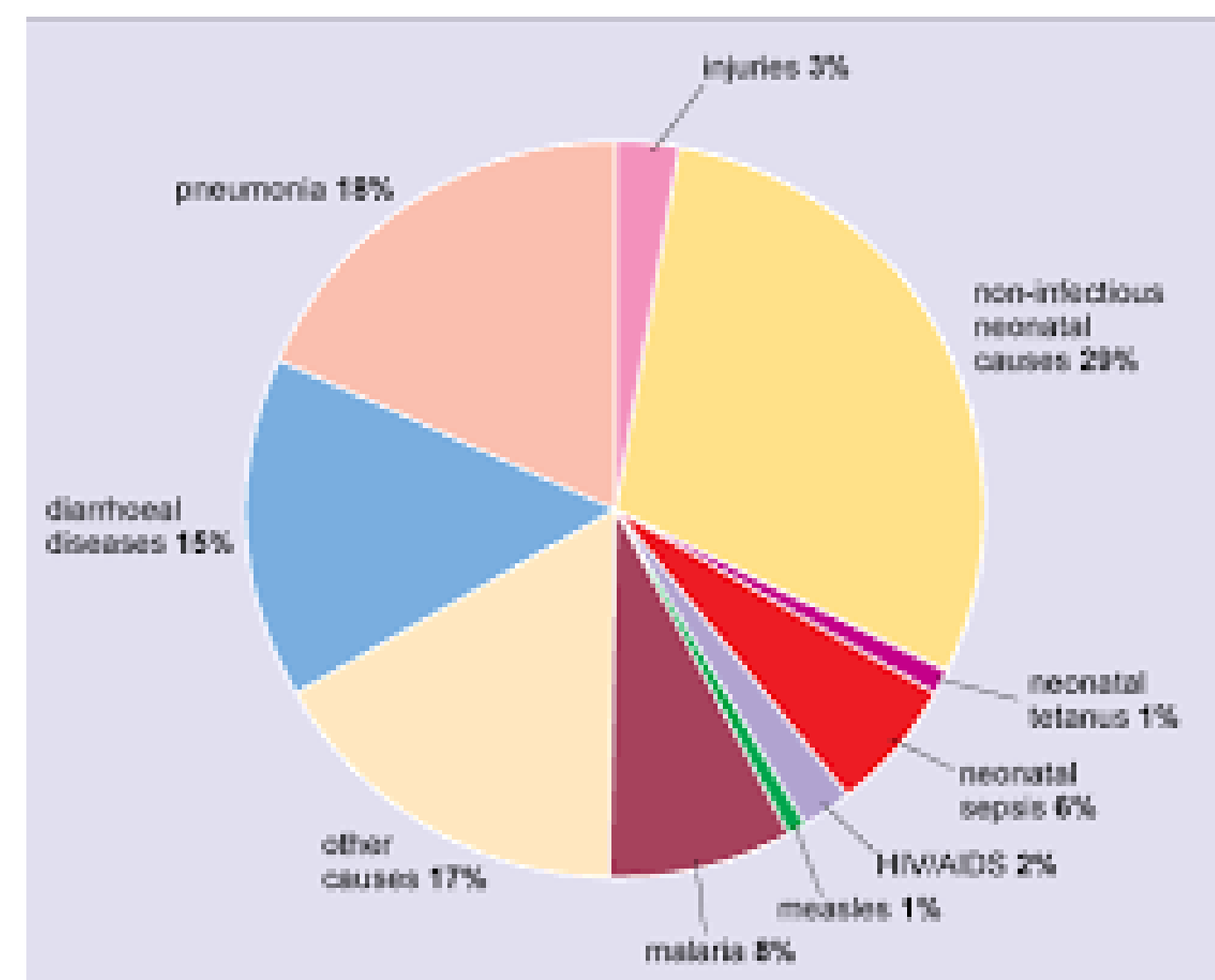
- Gathering information on South Africa and India, specifically which diseases are prevalent, general trends, spatial distribution, disease burdens, and vaccination coverage rates.

- , OHT will be serving as a technical support, providing estimations and metrics to help guide policy making.

- Working on finding expert opinions and forms of literature which explain the status of antimicrobial resistance worldwide.

Reflection

- This summer, I was able to communicate with various OHT officials, work on gathering information from various sources, read and summarize articles, papers, and various literatures in order to provide context to data.
- During this internship, I was able to learn various research methods and procedures, as well as how to effectively present information and data based on context.

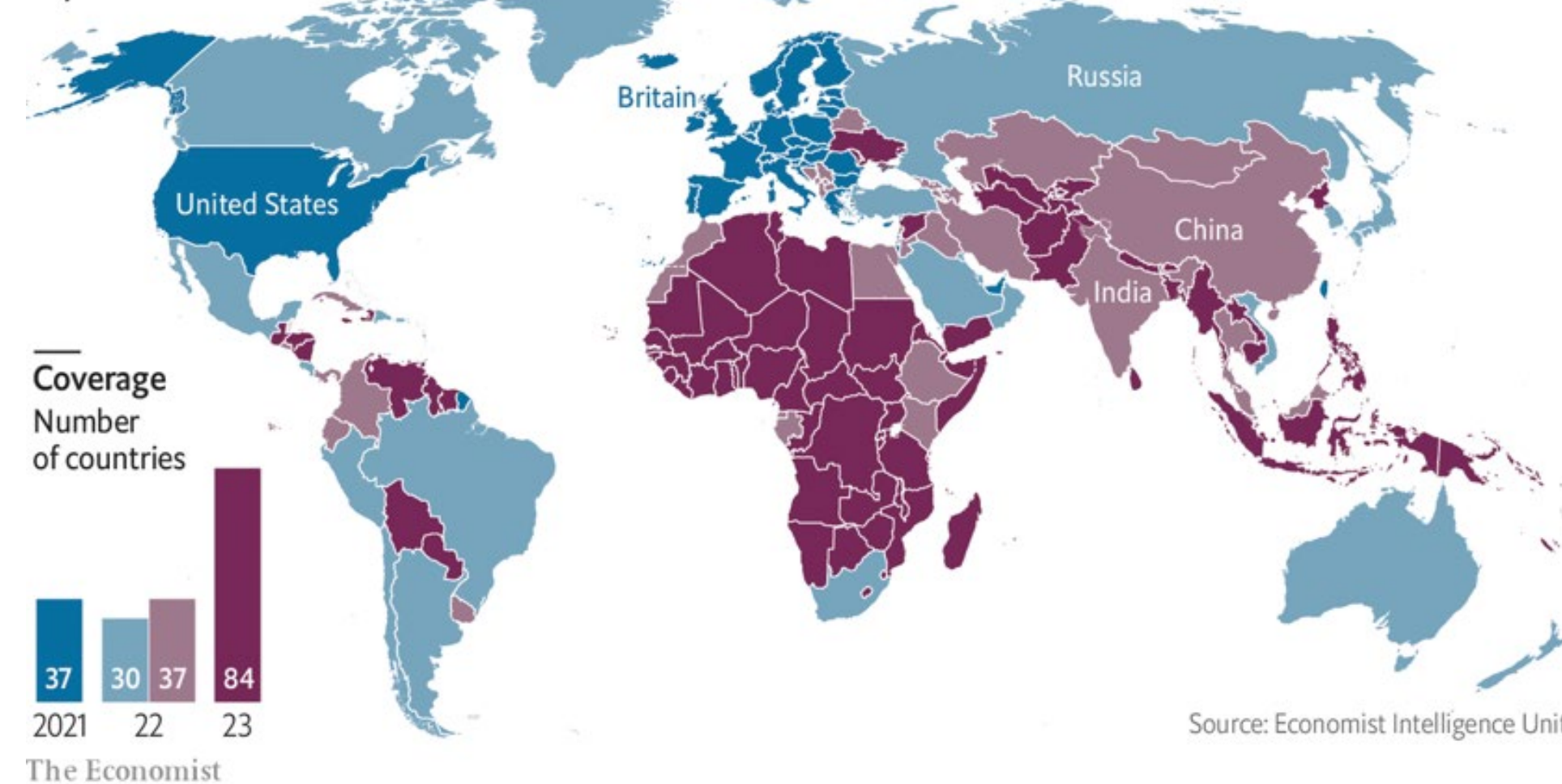


Open University

- Furthermore, we were able to begin an investigation into various journals, articles, and other forms of literature which represented the issue of antimicrobial resistance in various countries.
- Looking at key terms, such as “antifungal resistance,” and “invasive fungal infections”, we were able to begin a compilation which will allow to gain contextual and scientific understanding of the progress in this field.
- I gained experience I did not previously have in terms of public health research and analysis.

Waiting game

Covid-19, when will widespread vaccination coverage be achieved? Late 2021 Mid 2022 Late 2022 from early 2023



The Economist 2021

- After completing thorough research using the World Health Organization Immunization Dashboard and Global Burden of Disease, I was able to compile a large database of information for the organization to use.
- With new conversations and meetings beginning soon with these countries, this research will help provide support for claims.

Vaccine	Coverage	Notes
COVID-19 ¹	Partially vaccinated: 23.7% (AfricaCDC, 2022) Fully vaccinated: 31.7% (AfricaCDC, 2022) Booster Shots Received: 6% (AfricaCDC, 2022)	Out of the vaccines distributed, 61.3% are COVID-19, 27.3% are BCG, and 11.4% are African Vaccine Acquisition Trust (AVAT). South Africa has utilized 92% of its COVID-19 vaccines (7,146,219/40,169,910). AfricaCDC There were studies conducted to see whether or not BCG vaccinations provided any type of defense against COVID-19, but it was discovered to have little to no clinical support.
Bacillus Calmette Guerin (BCG)	~84.27% (administrative coverage) (UNICEF, 2021) ~86.22% (official coverage) (UNICEF, 2021) ~86.6% (WUENIC, UNICEF, 2021)	South African HIV-infected infants receiving the BCG vaccine at birth are at higher risk of developing adverse events. 53% of children enrolled in a public access HIV treatment programme in the Western Cape experienced local or regional BCG adverse events. In 2007, the Global Advisory Committee on Vaccine Safety (GACS) and Strategic Advisory Group of Experts (SAGE) reviewed data on BCG safety in HIV-infected infants in 2007, recommending that the BCG vaccine continue to be

¹Countries are tracked to report routine immunization coverage using the administrative method, that is, using data from the registry system on the number of doses administered. Only doses given that are part of the national immunization schedule are to be included (UNICEF, 2022).
²Official estimates may be based on data from the administrative method, from surveys, or from other sources. Immunization coverage figures from administrative systems can be biased or inaccurate. Hence, national authorities have the opportunity to provide estimates of what the most likely true coverage is. This will help to integrate the administrative data (UNICEF, 2022).
³Calculated by UNICEF and the WHO.

Questions

- What are the main factors leading to low vaccination coverage rates and high burden of infectious diseases in low-income countries? What do the statistics show?
- How can we tackle the issue of misinformation and a lack of understanding regarding antimicrobial resistance?

Looking ahead

- I hope to continue working with the organization in various capacities, to learn how the process continues until policymaking.
- This experience has been extremely insightful into the various aspects of global health and public policy, informing my decision on my concentration and studies even further.

Conclusion

- Based on this experience, I have been able to recognize trends within specific countries, and the skills and perspectives used are extremely relevant to public health overall.
- It has also allowed me to gain further interest in mapping out distributions based on geographic locations and various factors such as age, gender, sexual orientation, and socio-economic status.
- Recognizing the need to bridge the gap between completion of research and communication.

Acknowledgements

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