

Using Word Clouds to Compare Second-Order Impacts of COVID-19 Between Three C2M2 Hubs

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Highlights

- This study **identifies** and **compares** the most prevalent second-order impacts of COVID-19 in three C2M2 partner hubs -- Africa, Asia, and Latin America -- by **analyzing causal loop diagrams (CLDs)** created by the C2M2 partner cities and using them to create word clouds.
- Across all three hubs, the **most prevalent second-order impacts were access to healthcare, unemployment, and school closures**. The main second-order impacts affecting all hubs correspond with governmental lockdown policies.
- Further research on this topic may include an **analysis of the cause-and-effect relationship between impacts** and provide further insight into the impact of COVID-19 on communities.

Study Area

Cities' COVID Mitigation Mapping (C2M2)



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Methods



1. A word cloud “dictionary” with groups for phrases in the CLDs was created to **maintain consistency**.

2. Groups on the spreadsheet were combined into 6 further categories, used to **distinguish between impacts**.



3. Spreadsheets were created for **each individual city**, where the “word” represented the group from the dictionary sheet.

4. A **standard font** (Goudy Bookletter 1911) was used. The “weight” (size) of each group referred to the **number of CLD phrases appearing in that group for each city**.



5. Spreadsheets were inputted into **wordart.com** to create the final word clouds.

Word Clouds*



Latin America Hub: Lima, Cusco, Ouro Preto, Santiago, and Santa Cruz.



Africa Hub: Pemba, Nairobi, and Bukavu.



Asia Hub: Kathmandu, Ulaanbaatar, and Dhaka.



All Hubs Combined.

*Word clouds were also made for each city individually.

Analysis

- Across all three hubs, the most prevalent second-order impacts were **access to healthcare, unemployment, and school closures**.
 - In Africa: school closures; in Asia: access to healthcare; in Latin America: crime ratings.
- The main second-order impacts affecting all hubs correspond with **governmental lockdown policies**.
 - Weak health infrastructure.
 - Inability to support virtual schooling.

Conclusion

This research **deepens our understanding of the impact** of COVID-19 beyond the statistics of cases and deaths.

When developing policies for economic or social rehabilitation after the pandemic, public policymakers should **consider the most impacted sectors** (i.e. healthcare accessibility and education) and **target these areas first**.

As the most prevalent **second-order impacts also varied across cities within hubs**, this should be considered for city-level policies.

Future Plans

- Creating **general information infographics** for each city and hub using baseline reports and CLDs.
- Creating **comparison infographics** comparing cities and hubs among each other.
- Developing **training activities** detailing the process of creating infographics and word clouds.

