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Research Brief: Preliminary Results from Rapid Survey to Inform COVID-19 Response in Sierra Leone

BACKGROUND

The Massachusetts Institute of Technology Governance Lab (MIT GOV/LAB) and the Institute for Governance Reform (IGR), in partnership with Sierra Leone's Directorate of Science, Technology and Innovation (DSTI) and Ministry of Finance's Research and Delivery Division (MoF-RDD), conducted a nationally representative survey of 2,395 respondents 11-18 April 2020 to gather critical information on citizens' COVID-19 awareness and preparedness across all 16 districts.

NOTE: Below are preliminary results (pending verification and subject to change). Additional analyses forthcoming. Follow-up phone surveys are planned to inform a series of research briefs.

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Maps – Findings by District 5

Charts – Findings by District 9

PRELIMINARY - SUBJECT TO CHANGE

SUGGESTED CITATION

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ABOUT

MIT Governance Lab (MIT GOV/LAB) is a group of political scientists focusing on innovation in citizen engagement and government responsiveness (https://mitgovlab.org/; mitgovlab@mit.edu].

Institute for Governance Reform [IGR] is an independent, multi-disciplinary, policy-oriented research team based in Sierra Leone (http://igrsl.org/; info@igrsl.org].

Directorate of Science, Technology and Innovation (DSTI) supports the Government of Sierra Leone to deliver on its national development plan effectively and efficiently; and to help transform Sierra Leone into an innovation and entrepreneurship hub (https://www.dsti.gov.sl/].

Ministry of Finance's Research and Delivery Division (MoF-RDD) is mandated to formulate and implement sound economic policies and public financial management, ensure efficient allocation of public resources to promote stable economic growth and development [https://mof.gov.sl/].

ACKNOWLEDGEMENTS

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Priority Policy Questions

The survey covers a wide range of topics related to COVID-19 and was developed to address priority policy questions to inform national and district-level actions. Links to relevant data.

POLICY QUESTION	LINK TO DATA:
Data to inform public health messaging campaigns	
1. What do citizens already know about Coronavirus?	Table 1
2. What public health messages need to be communicated as a priority?	Table 1
3. Which districts need targeted messaging for Coronavirus response?	Map 1, Map 2, Map 3, Figure 9, Figure 10
Data to inform lockdown policies	
4. How long should the lockdown be?	Table 1
5. Which districts are most at risk of going hungry during a lockdown?	Map 8, Figure 11, Figure 12
6. Which districts are most vulnerable to the impacts of lockdown?	Map 5, Map 6, Map 7, Figure 13, Figure 14
7. What is the capacity for community-led coronavirus response by district?	Map 4

Summary statistics of respondent demographics:

- Nationally-represented sample: 2,395 total respondents across all 16 districts
- Mean age: 38.4 years old
- Gender: 51% male, 49% female
- Geography: 53% rural, 47% urban
- Religion: 75% Muslim, 24% Christian, 1% other
- Occupation: Most respondents work in agriculture (37%) or petty trading (15%)

Findings at the National Level

Table 1: Findings at the National Level

RESULTS	ACTION NEEDED
Knowledge of COVID-19 Symptoms and Control Measures	
• Almost everyone (98% of respondents) has heard of Corona. • Almost everyone (85%) knew that the Corona hotline was 117. • 81% correctly named coughing as a symptom of Corona. • Almost no one (less than 1%) volunteered that witchcraft or juju was a way to get Corona.	Awareness is high. Good news for Coronavirus control and response.
A lot of people don't know the all symptoms of Corona: • 43% don't know fever is a symptom, • 59% don't know difficulty breathing is a symptom • 81% don't know sore throat is a symptom.	Need to message the public about symptoms of Corona.
• Only 15% said they would self-isolate if they or a member of their family caught Corona or showed Corona symptoms. • Only 3% said they would stay home and take care of a family member who caught Corona or showed Corona symptoms.	Message the public that they should stay home as much as possible if they have Corona symptoms.
• 26% said it was false or did not know that Corona can spread through the air. • 25% said it was false or did not know that Corona can be spread by asymptomatic people.	Message the public that Corona is transmitted through the air and by asymptomatic people.
• 62% of people incorrectly believe that there is a cure for Corona.	Message that there is no cure for Corona; provide information on how to best manage symptoms and prevent spread.
• More than half of respondents (55%) said they are not willing to vaccinate their children now for measles or polio.	Message around the continued importance of vaccination.
• More than half of respondents (60%) report that their community does not have an active COVID-19 community group.	Build capacity for community mobilization.

RESULTS	ACTION NEEDED
Food Insecurity, Access to Water, and Implications for Lockdown Policies	
• 60% reported they only can prepare and store less than 3 days of food in house before a lockdown. • Only 12% said they can prepare 1 week or more of food.	More than 3 days of lockdown at a time would not work for most people.
• 47% of respondents reported that they went without food at least once in the 7 days before the survey. • 24% reported that they went without food several times, many times, or all the time.	Ensuring food access will be critical for a lockdown of any length.
• 96% of respondents walk outside of their home/compound to access water for handwashing. • On average, people walk 8 minutes to get water for handwashing.	Provision of water will be critical during lockdown and quarantines.

List of District-Level Maps and Figures

Map 1: Mean Score On Knowledge About Coronavirus, By District 5
Map 2 : Percent Of Respondents Who Say They Would Stay Home Or Self-Isolate If They Have Coronavirus, By District 5
Map 3: Percentage Of All Respondents Reporting That They Are Unwilling To Vaccinate Their Child, By District 6
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Map 5: Percentage Of All Respondents Reporting That They Cannot Survive A Lockdown For More Than 3 Days, By District 7
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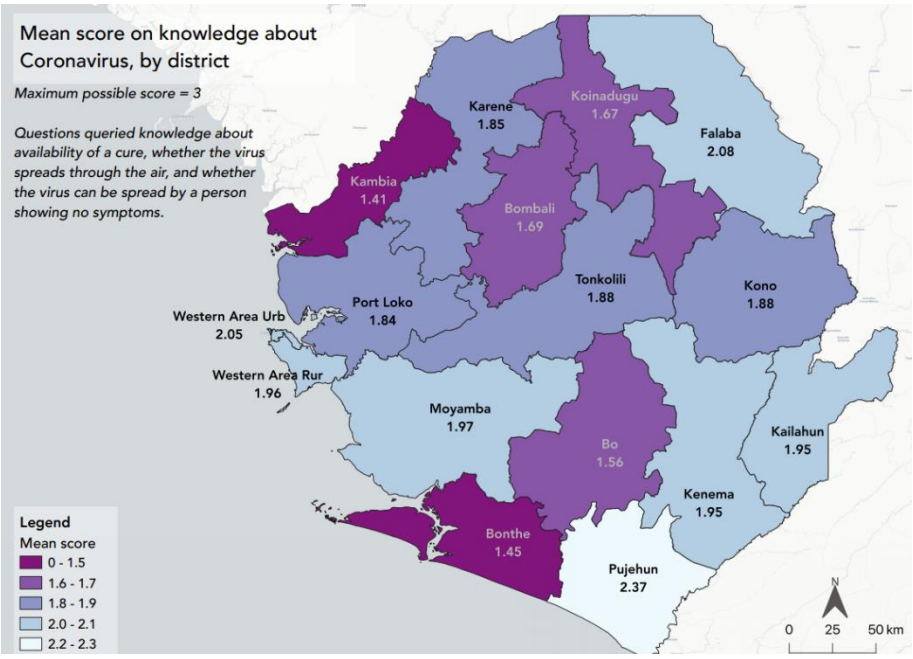
Figure 11: Percent Of Families That Have Gone Without Food In The Past Week At All (Red) Or Never (Blue), By District 10
Figure 12: Number Of Times A Child In The Household Went To Bed Hungry In The Last Week, By District 10
Figure 13: Average Walk Time (In Minutes) To Get Water, By District 11
Figure 14: Percent Of Respondents Who Cannot Survive A Lockdown Of 3 Or More Days, By District 11

Maps – Findings by District

Knowledge of COVID-19 Symptoms

Takeaways for Map 1: Districts in dark purple show where knowledge about how the virus spreads is lowest across districts. Respondents are scored from 0 to 3. Note that a score of 1.5 is consistent with randomly guessing at the questions.[1]

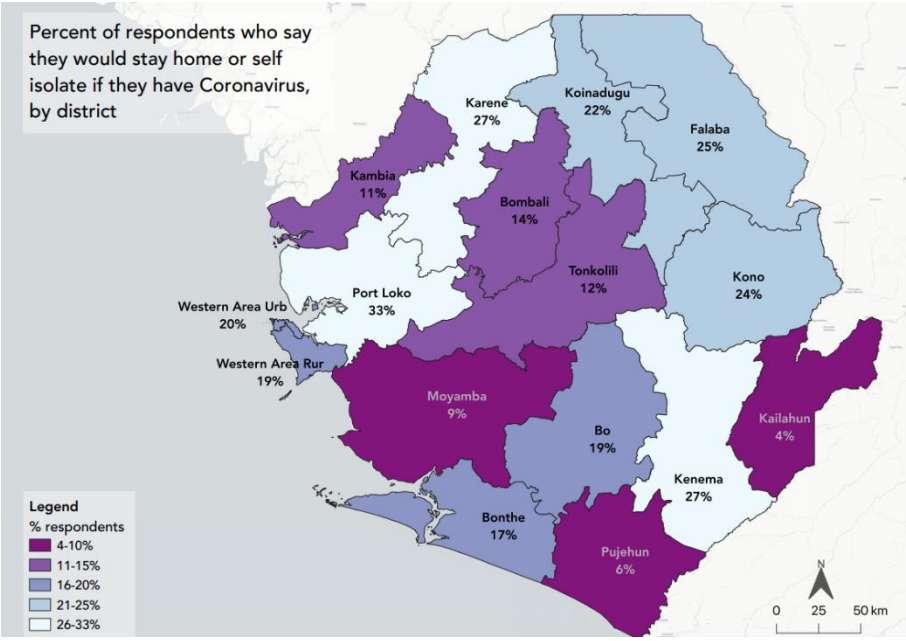
Map 1: Mean score on knowledge about Coronavirus, by district



Willingness to Stay Home or Self-Isolate If Sick

Takeaways for Map 2: Districts in dark purple show where willingness to stay home or self-isolate if they have Coronavirus is the lowest. Districts overall report low willingness to stay home if sick, especially districts in the center and the south.

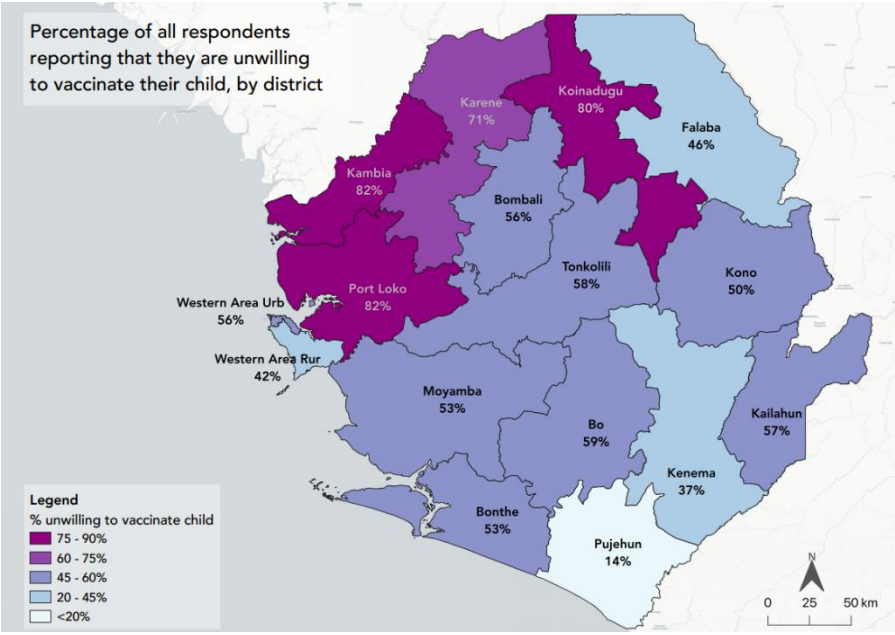
Map 2 : Percent of respondents who say they would stay home or self-isolate if they have Coronavirus, by district



[1] True or false questions included: 1) Coronavirus can be spread through the air. 2) If someone has Coronavirus, they can spread it even before they show any symptoms. 3) There is a cure for Coronavirus.

Willingness to Vaccinate

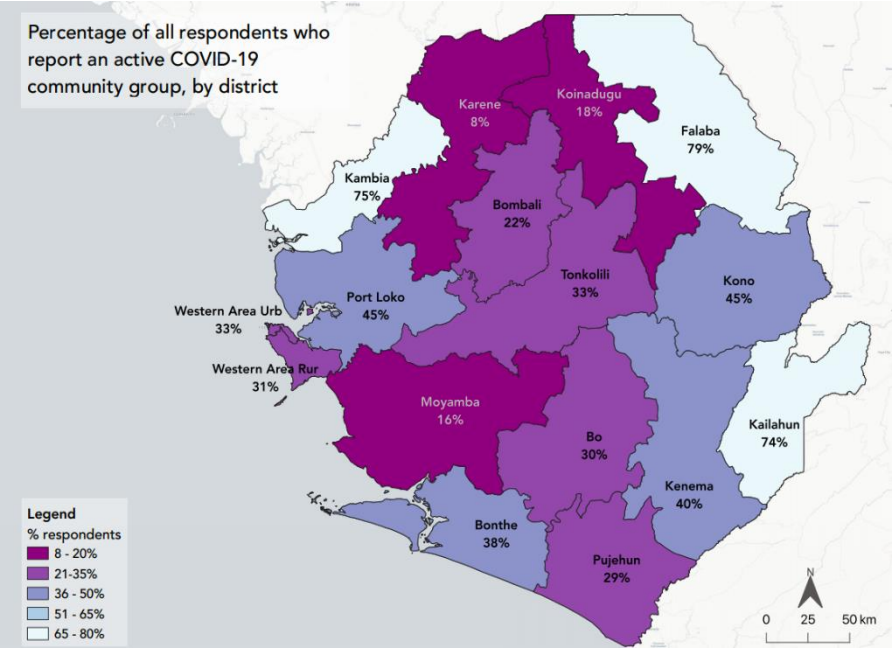
Takeaways for Map 3: Districts with the least willingness to vaccinate children for measles or polio are shown in dark purple. Unwillingness is widespread, but especially intense in the northwest.



Map 3: Percentage of all respondents reporting that they are unwilling to vaccinate their child for polio or measles, by district

Community Mobilization

Takeaways for Map 4 Districts in dark purple show where respondents reported the lowest percentage of active COVID-19 community groups. Community mobilization is low in most places, though there are a few scattered districts — Kambia, Falaba, Kailahun — that report relatively high community mobilization

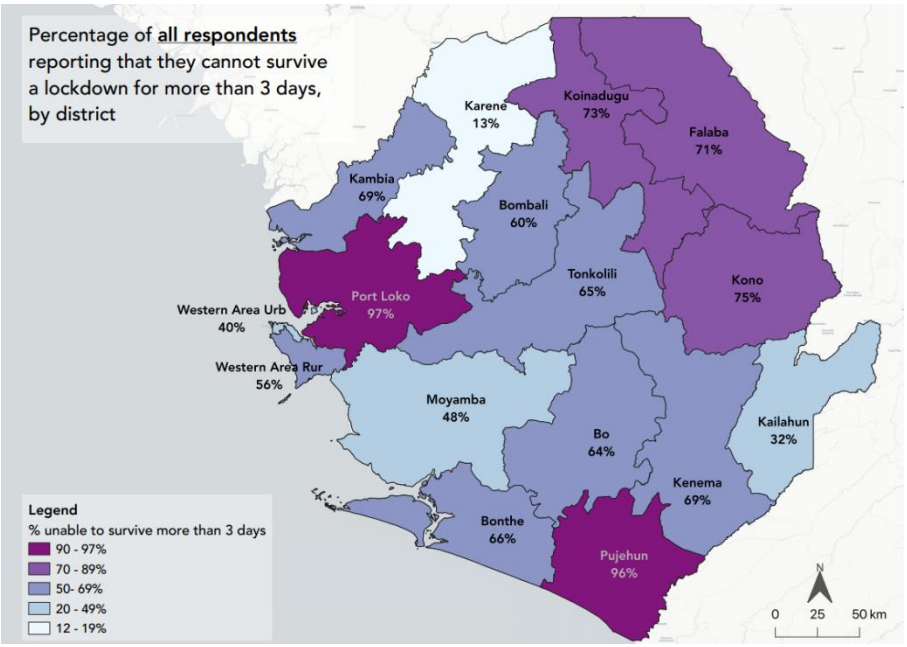


Map 4: Percentage of all respondents who report an active COVID-19 community group, by district

Implications for Lockdown Policies

Takeaways for Map 5: Districts in darker colors on the map below are least able to survive a lockdown of more than 3 days at a time would not work. Almost all respondents in Port Loko and Pujehun fell into this category. A cluster of districts in the northwest also had high numbers of respondents in this category.

Map 5: Percentage of all respondents reporting that they cannot survive a lockdown for more than 3 days, by district



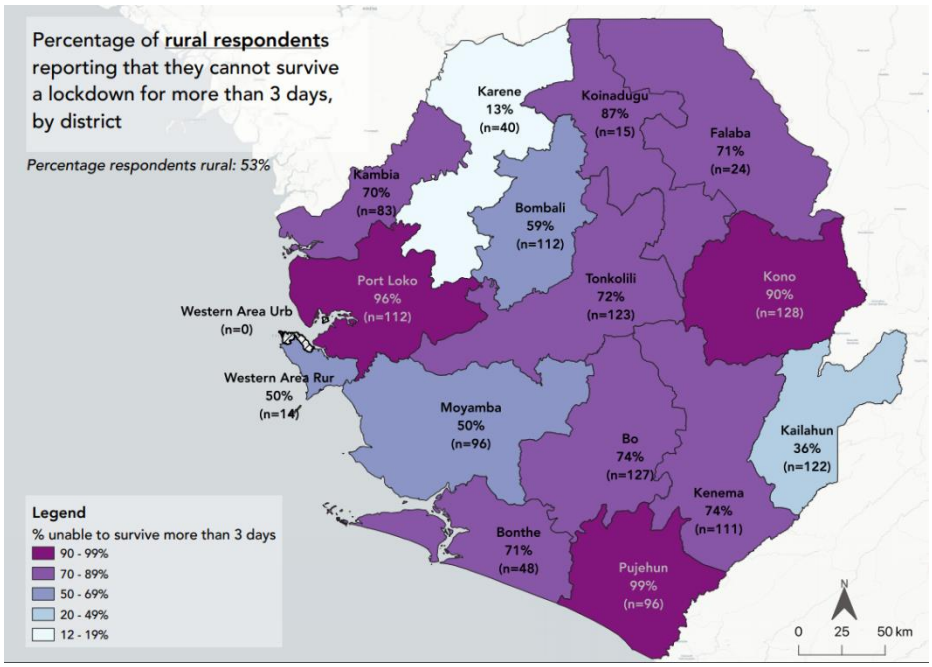
Comparing Urban and Rural Capacity to Withstand a Lockdown

Note: The sample is roughly split between rural and urban respondents (53% rural; 47% urban). Though the sample size is small, post-stratification weighting with fine-grained census data can provide more precise analysis.

RURAL

Takeaways for Map 6 The map shows rural respondents, districts in dark purple are least able to survive a lockdown of 3 or more days. Rural respondents report higher vulnerability to lock downs.

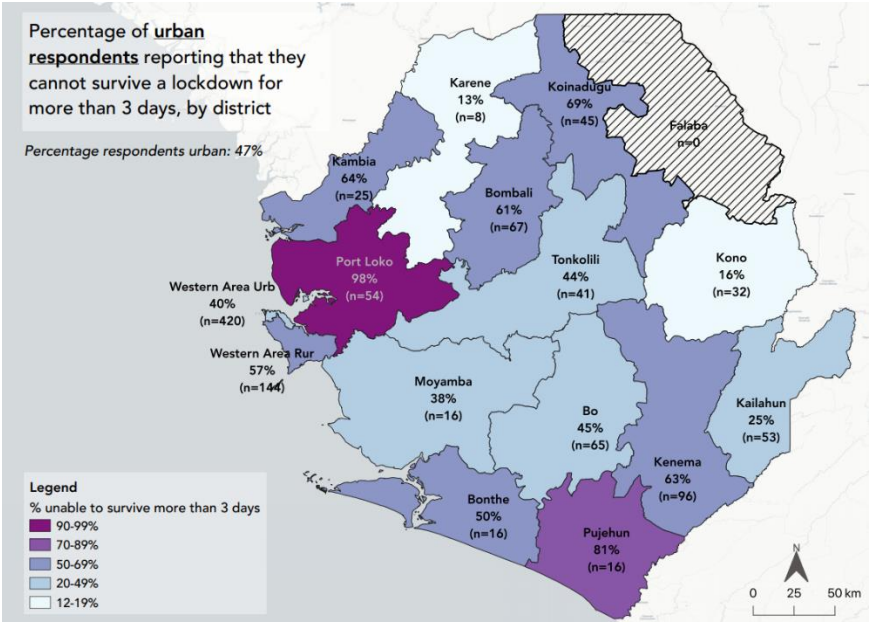
Map 6: Percent of rural respondents who say the maximum they could endure lockdown is less than 3 days



URBAN

Takeaways for Map 7: The map shows urban respondents, districts in dark purple are least able to survive a lockdown of 3 or more days. 50% of rural respondents reported that a lockdown of more than 3 days at a time would not work.[2]

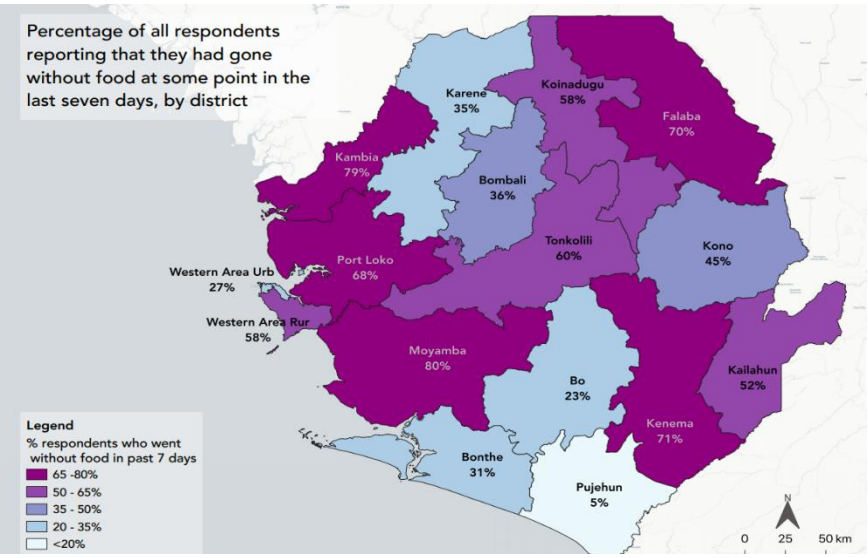
Map 7: Percent of urban respondents who say the maximum they could endure lockdown is less than 3 days



Food Insecurity

Takeaways for Map 8: Districts in dark purple have higher rates of food insecurity. Insecurity is distributed across the country, although a few districts in the south are less worrisome.

Map 8: Percentage of all respondents reporting that they had gone without food at some point in the last seven days, by district



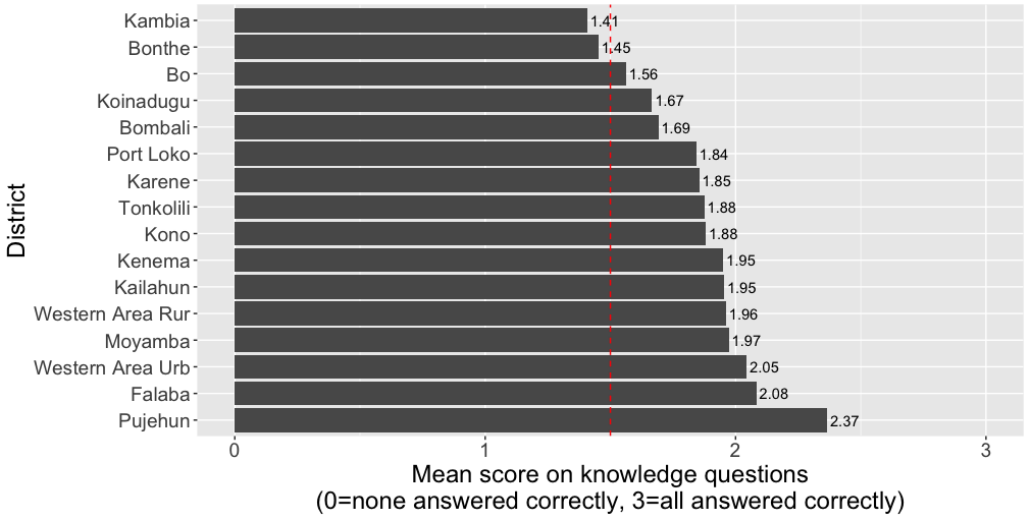
[2] Note: Falaba District did not have any urban respondents for this study.

Charts – Findings by District

Knowledge of COVID-19 Symptoms

Takeaways for Figure 9: The top of the graph highlights districts with the least knowledge of Coronavirus.

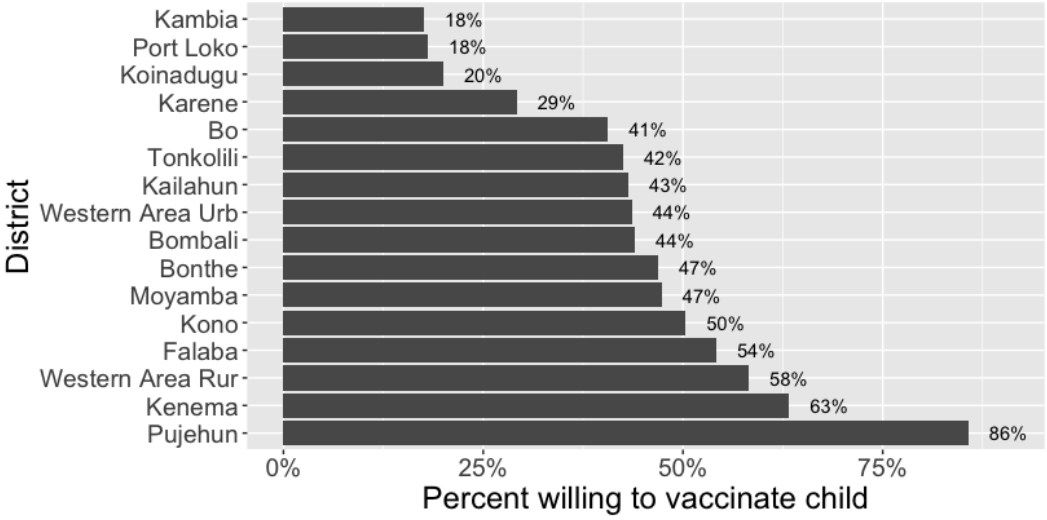
Figure 9: Coronavirus knowledge (true or false questions), by district



Willingness to Vaccinate

Takeaways for Figure 10: The top of the graph highlights districts with the least willingness to vaccinate children for measles or polio, with less than 30% respondents in four districts reporting their willingness to vaccinate, and eleven districts reporting less than 50% willingness to vaccinate.

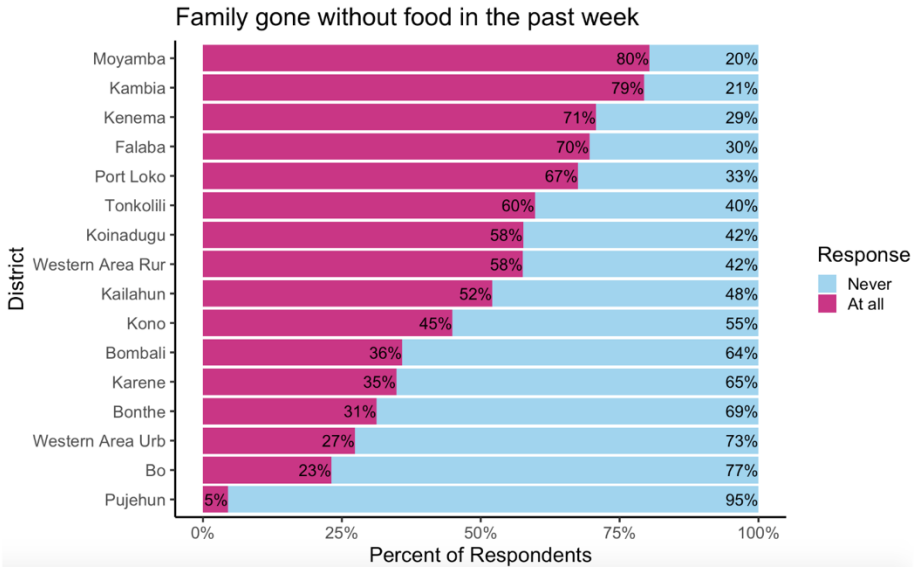
Figure 10: Percent of respondents who are willing to vaccinate their child(ren) for measles or polio, by district



Food Insecurity

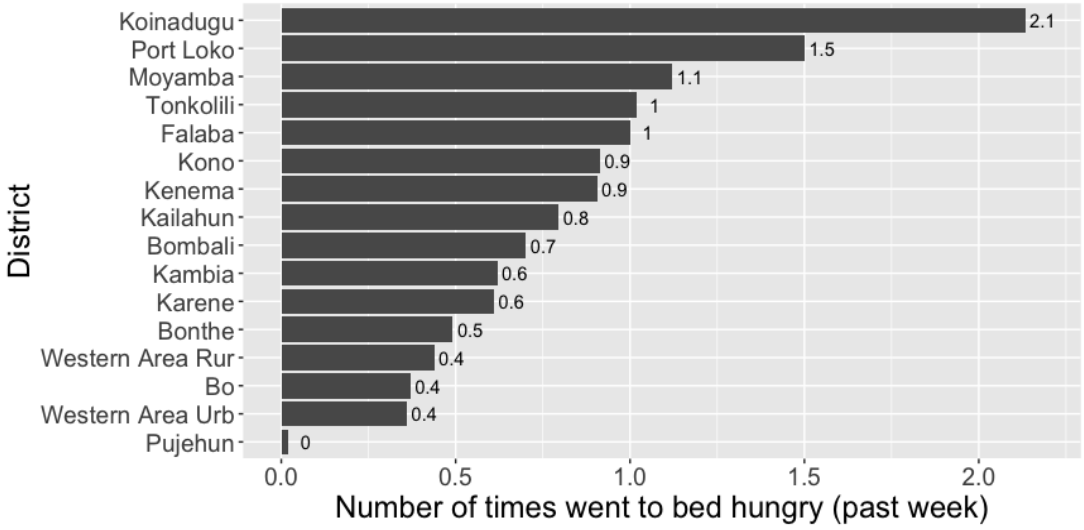
Takeaways for Figure 11: Districts at the top of the chart have higher rates of food insecurity (shown in red). In at least half of districts, more than 50% of respondents report having gone without food in the past week.

Figure 11: Percent of families that have gone without food in the past week at all (red) or never (blue), by district



Takeaways for Figure 12: The top of the chart shows districts reporting the highest incidence of children going to bed hungry in the past week, with five districts reporting that children in the household went to bed hungry an average of one or more times last week (and one district reporting an average of twice in the past week).

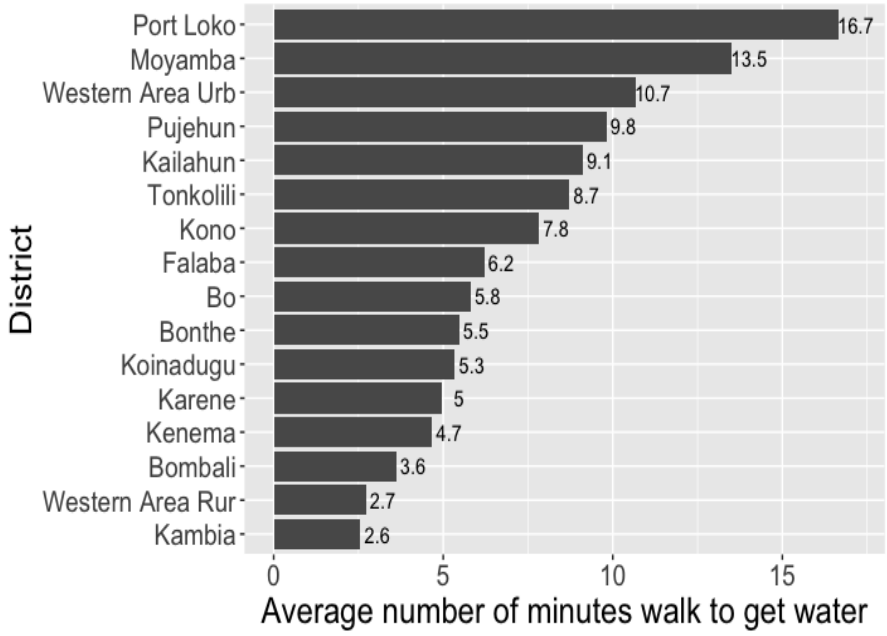
Figure 12: Number of times a child in the household went to bed hungry in the last week, by district



Access to Water

Takeaways for Figure 13: Access to water for household use is most difficult in the districts at the top of the bar chart, with respondents reporting that it takes, on average, more than a 10-minute walk to get water. Districts at the bottom of the chart have easier access to water, reporting an average walk of 5 minutes or less.

Figure 13: Average walk time (in minutes) to get water, by district



Implications for Lockdown Policies

Takeaways for Figure 14: The top of the chart shows districts that report they are most vulnerable to a lockdown, and have the least capacity to survive a lockdown of three or more days. More than half of respondents in 12 districts report that they cannot survive a lockdown of 3 or more days.

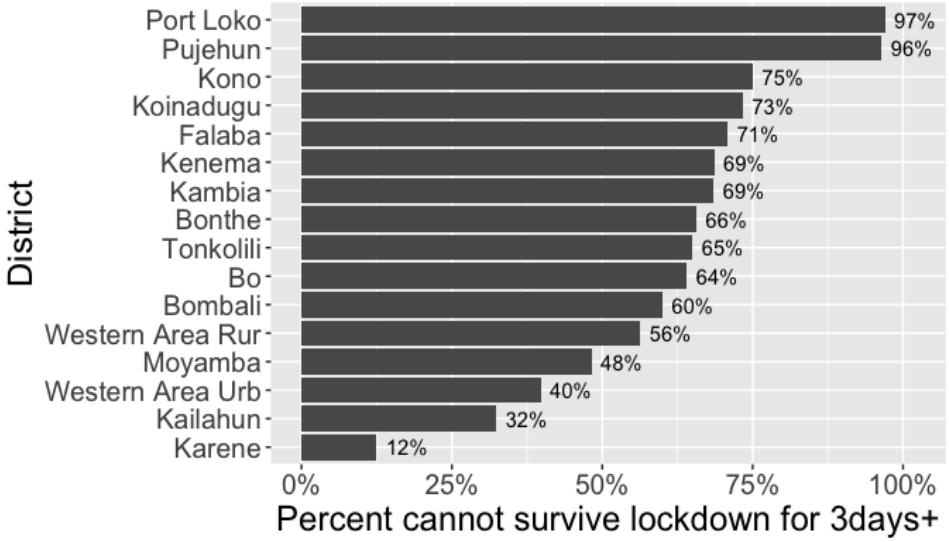



Figure 14: Percent of respondents who cannot survive a lockdown of 3 or more days, by district