



The Telephone-Based Syndromic Surveillance Survey of COVID-19 in Malawi

Preliminary Findings on Morbidity and Mortality Trends in the General Population

WHAT IS THE SYNDROMIC SURVEILLANCE SURVEY?

Syndromic surveillance is a system of collecting data on non-specific health indicators, such as signs and symptoms of illness. It is a critical public health tool, particularly during outbreaks of novel viruses (like COVID-19), when the virus is spreading rapidly, but there is limited or no access to diagnostic tools and commodities. The Telephone-Based Syndromic Surveillance Survey of COVID-19 in Malawi was designed to provide critical data to assist public health leaders in decision-making on guidance, implementation, and evaluation of programs and policies for the **prevention and control of COVID-19**. The survey gathers COVID-19-related information from mobile phone users to assist the Ministry of Health with its efforts to **monitor and mitigate direct and indirect effects of the pandemic**.

WHAT DOES THE SURVEY EXPLORE?

The survey targets adults in the general population of Malawi. Data are collected on a variety of indicators to monitor trends in suspected COVID-19 illness, testing, and death; access to and use of health services; COVID-19 knowledge; and COVID-19 vaccine perceptions. This brief highlights results related to:

- **ILLNESS:** How many respondents report having recent influenza-like and/or COVID-19-like symptoms? Which symptoms were reported?
- **TESTING:** How many symptomatic respondents report being tested for COVID-19 in the last 2 weeks?
- **HOUSEHOLD DEATHS:** How many respondents report having had a death in their household since the pandemic began? What were the reported symptoms before death?
- **ACCESS TO AND USE OF HEALTH SERVICES:** Are respondents experiencing disruptions in access to health services? What reasons are reported for not accessing health services?

HOW DOES THE SURVEY WORK?

The survey is conducted by trained research assistants and nurses who interview consenting adult respondents by phone. Phone interviewers dial phone numbers that have been randomly generated from mobile service providers AirTel and TNM. Interview data are collected electronically and saved on a secure server that is linked to a dashboard. The dashboard allows EGPAF and the Ministry of Health to analyze survey data in near real-time.

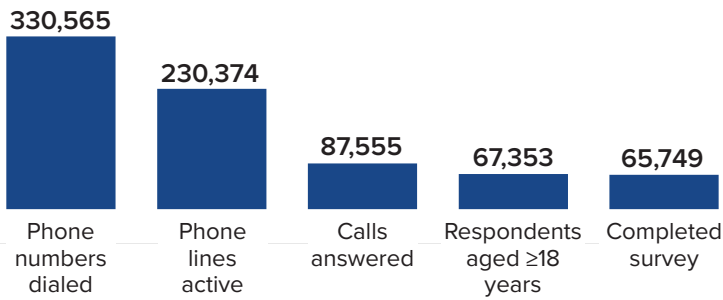


HOW ARE THE DATA USED?

The dashboard is available to the Ministry of Health, other government agencies, and health partners in Malawi to inform COVID-19-related plans, strategies, and guidance through the Malawi Analytic Platform. Survey data are compared with the Public Health Institute of Malawi's data on confirmed cases and deaths to assist in identifying epidemic trends and potential hotspots for COVID-19. Data are also regularly presented to the national health cluster to keep public health officials across the country informed about the COVID-19 epidemic.

WHO HAS PARTICIPATED IN THE SURVEY?

Enrollment Cascade for the General Population, July 2020 - September 2021



Over 330,000 phone numbers were dialed. About 38% of active phone lines were answered. Nearly 77% of respondents reported they were age 18 years or older. Over 97% of those respondents consented and completed the interview for a total of **65,749 completed surveys**.

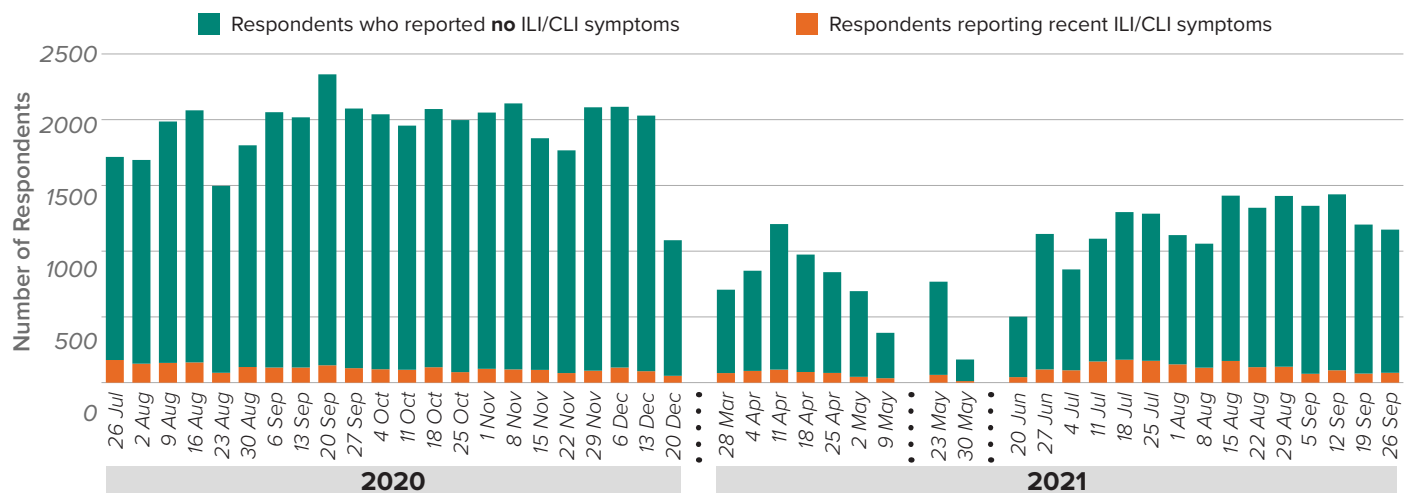
WHAT ARE THE KEY PRELIMINARY RESULTS?

These preliminary results cover the period of July 27, 2020 through September 30, 2021. Pauses in data collection occurred at times due to regulatory approval processes, with dates noted below.

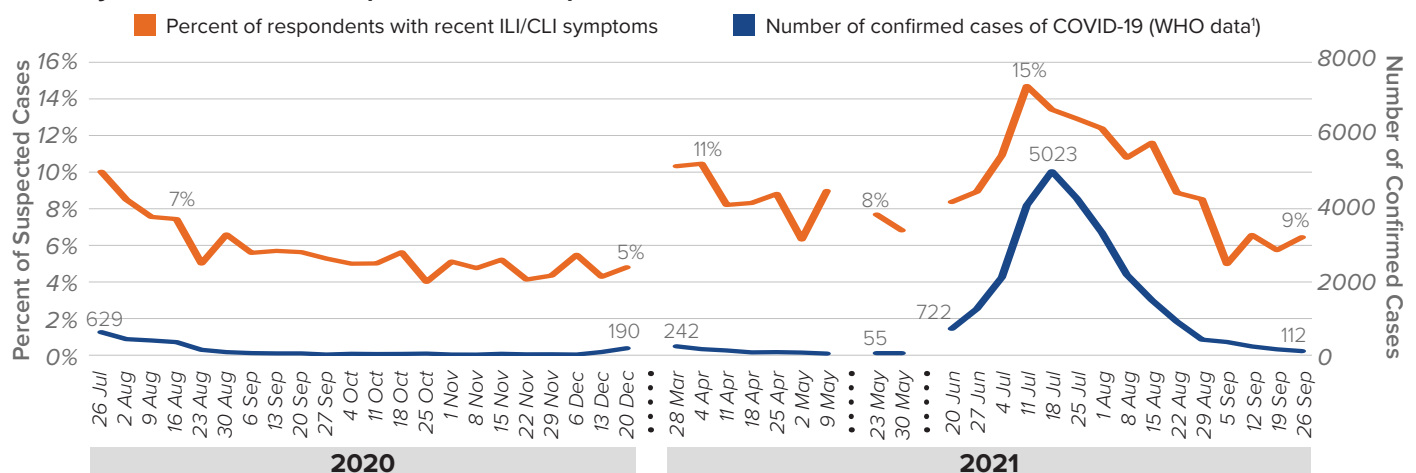
Recent Symptoms of Influenza-Like Illness (ILI) or COVID-19-Like Illness (CLI)

Respondents were asked if they had experienced at least one symptom of ILI (sore throat, cough, shortness of breath or difficulty breathing) and/or sign or symptom of CLI (fever, headache, fatigue, general body pains, loss of smell and taste, diarrhea) in the past two weeks.

Respondents Reporting Recent Symptoms of ILI/CLI by Week, July 2020 - September 2021



Weekly Trends of the Proportion of Suspected COVID-19 Cases and Confirmed COVID-19 Cases



Overall, **4,669 respondents (7%) reported having ILI/CLI symptoms** in the two weeks prior to the phone interview, with a range of **4% to 15% per week**. The most commonly reported CLI/ILI symptoms were cough (41%), shortness of breath (37%), fatigue (28%), runny/stuffy nose (35%), and fever (19%). As shown above, the trend in the proportion of respondents with recent ILI/CLI symptoms was **consistent with the trend of confirmed COVID-19 cases** as reported by the Public Health Institute of Malawi (PHIM) and the World Health Organization (WHO).

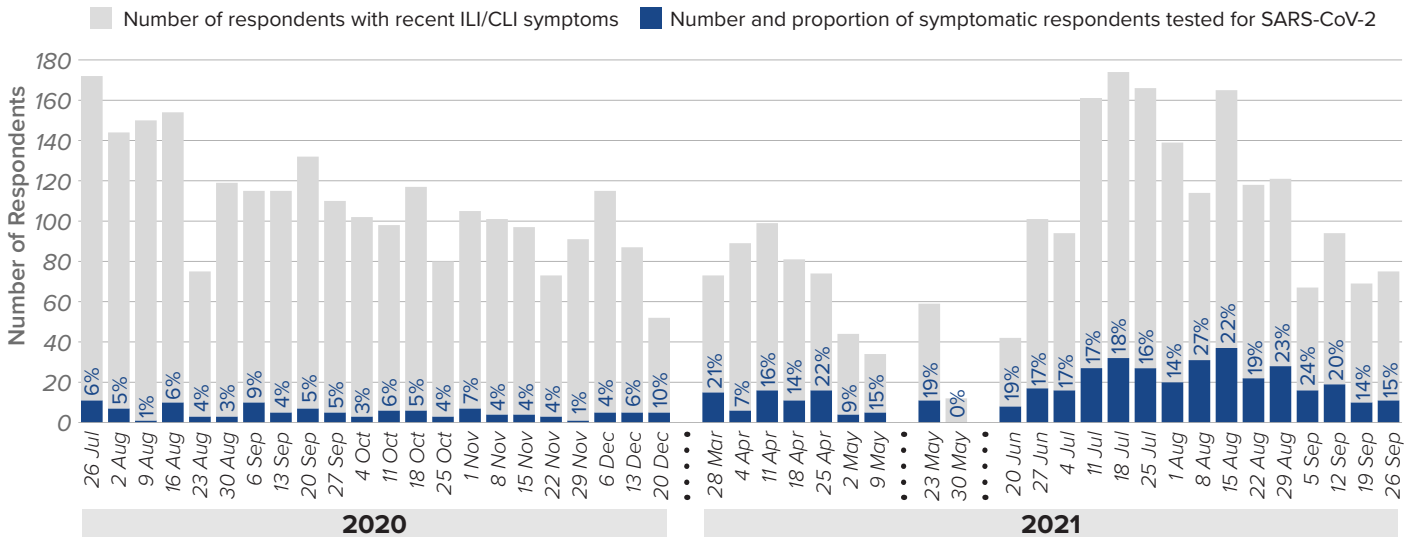
¹ WHO COVID-19 data are available at <https://covid19.who.int/region/afro/country/mw>

Comparison of Respondents with Recent ILI/CLI Symptoms by Age, Gender, and District

Nearly 60% of survey respondents were between 25 and 44 years of age, which is consistent with mobile phone usership. While rates of reported ILI/CLI symptoms varied over time, the proportion of respondents reporting ILI/CLI symptoms was **similar across age groups**, with 18-24-year-olds least likely to report ILI/CLI symptoms. The proportion of respondents reporting ILI/CLI symptoms was **similar between males and females** and there were **no significant differences among districts**.

COVID-19 Testing

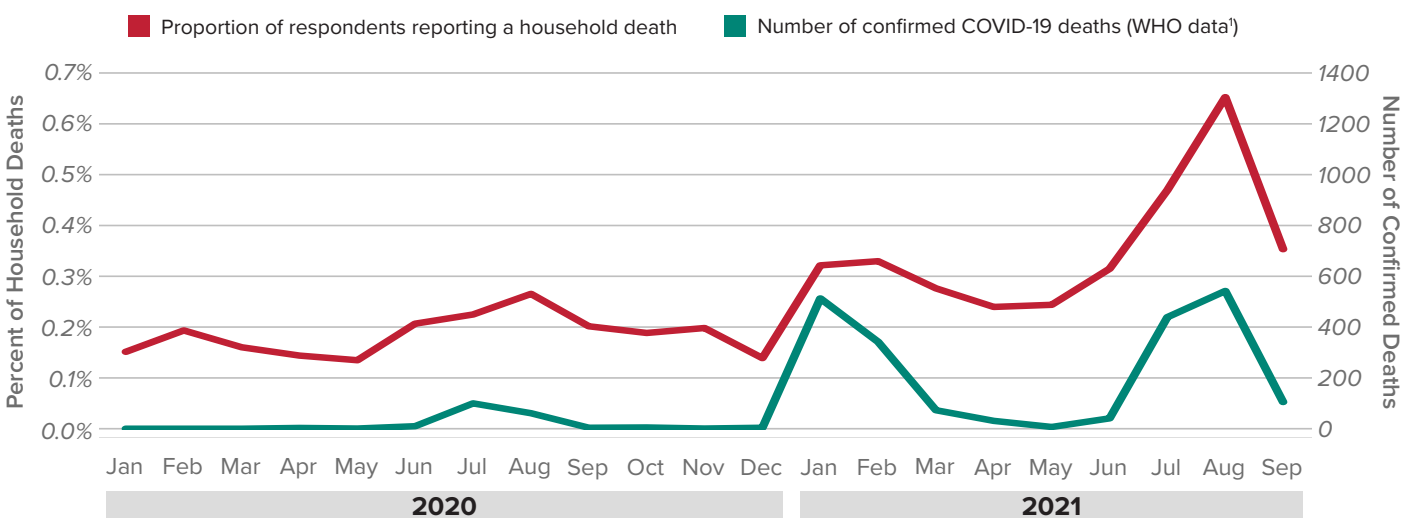
Number and Proportion of Respondents with ILI/CLI Symptoms Who Were Tested for SARS-CoV-2



Relatively few respondents with ILI/CLI symptoms were tested for SARS-CoV-2 during the survey period. The percentage of symptomatic respondents tested ranged from 0% to 27% per week with an **average of 5% in 2020 and 18% in 2021**, with increased testing during the COVID-19 peak from June - August 2021. Among symptomatic respondents tested, the proportion testing positive for SARS-CoV-2 fluctuated, with an **average positivity rate of 6% in 2020 and 10% in 2021**.

Household Deaths

Weekly Trends in the Proportion of Respondents Reporting a Household Death by Month Death Occurred and Confirmed Numbers of COVID-19 Deaths by Week

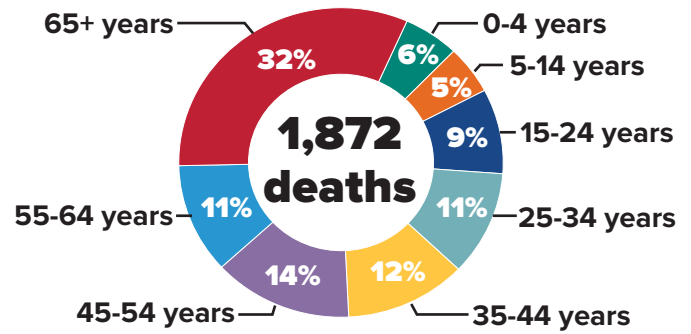


Respondents were asked about household deaths that occurred since January 2020. Overall, nearly **3% of respondents reported a death** from any cause in their household. As shown above, the monthly trend in the proportion of respondents reporting a death is **consistent with the monthly trend of confirmed COVID-19 deaths**. As seen globally, deaths peaked a few weeks after confirmed COVID-19 cases peaked during the second wave (December to January 2021) and the third wave (July to August 2021) of the epidemic in Malawi.

¹ WHO COVID-19 data are available at <https://covid19.who.int/region/afro/country/mw>

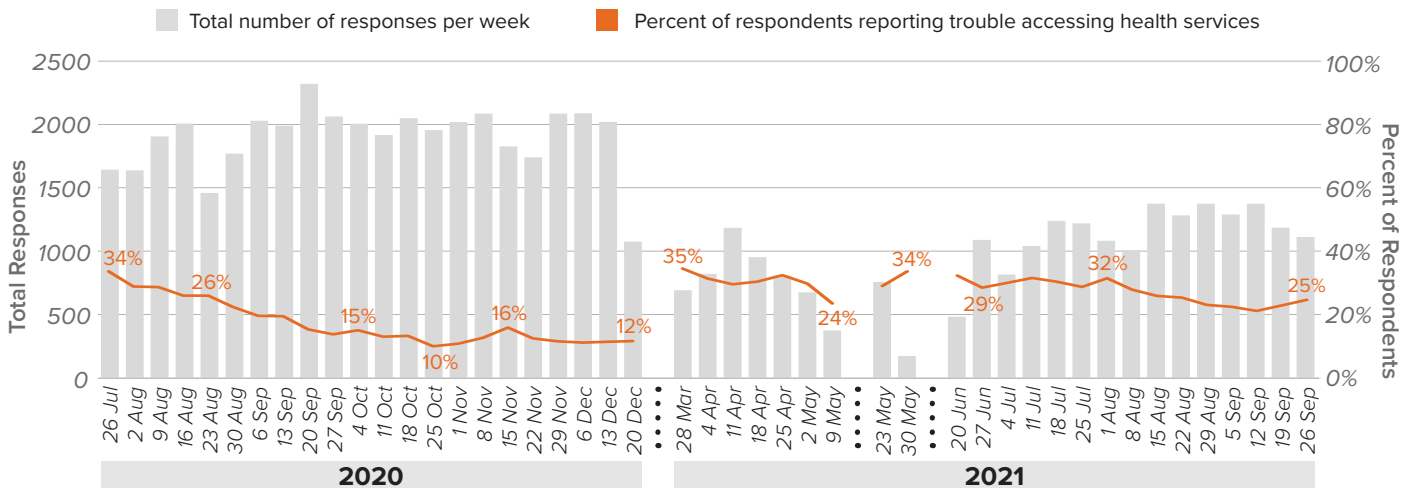
Reported Household Deaths by Age at Death

Common symptoms experienced two weeks before death among the 1,872 deceased included **runny/stuffy nose** (33%), **headache** (27%), **fever** (26%), **muscle/body aches** (26%), **shortness of breath** (24%), **lethargy/tiredness** (21%), **cough** (20%), and **sore throat** (17%). Reported deaths were highest among household members over 65 years of age.



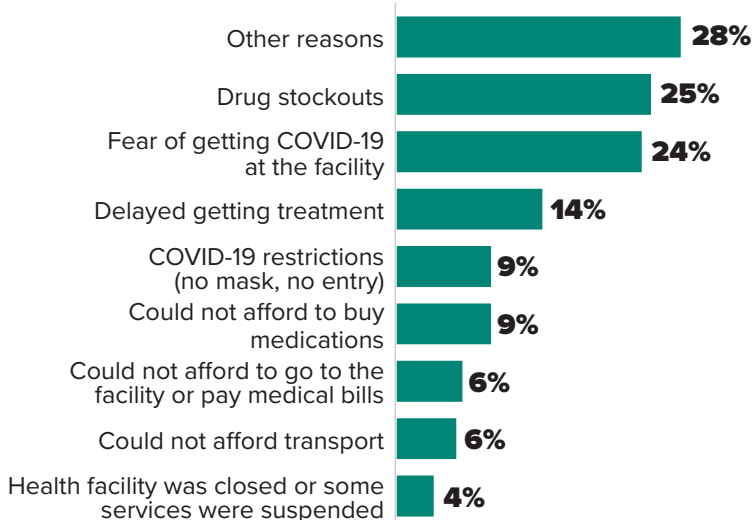
Access to and Use of Healthcare Services

Percentage of Respondents Reporting Trouble Accessing Health Services by Week



On average, **21% of respondents** per week reported having trouble accessing services, with peaks in July 2020 and April and July 2021.

Top Reasons for Not Accessing Health Services



Reasons reported for having trouble accessing health services included both supply side (e.g., drug stockouts, facility closures) and demand side factors related to the COVID-19 pandemic (e.g., fear of getting COVID-19, affordability).



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KEY TAKEAWAYS

- The Telephone-Based Syndromic Surveillance Survey of Malawi is used by public health officials to monitor trends in COVID-19 cases and other effects of the COVID-19 pandemic.
- From July 2020 to September 2021, 7% of the nearly 70,000 survey respondents reported having influenza-like or COVID-like symptoms.
- On average, less than one in ten respondents with influenza-like or COVID-like symptoms went for COVID-19 testing.
- Nearly 9% of respondents reported having a death in their household during since January 2020; the trend in household deaths mirrored trends in confirmed COVID-19 deaths.
- One in five respondents reported having challenges accessing health services.