South Sudan COVID-19 Weekly Epidemiologic Bulletin

Issue #: 07

15 – 21 Feb 2021

Epidemiologic Week 07

Summary statistics for Epidemiologic Week 07

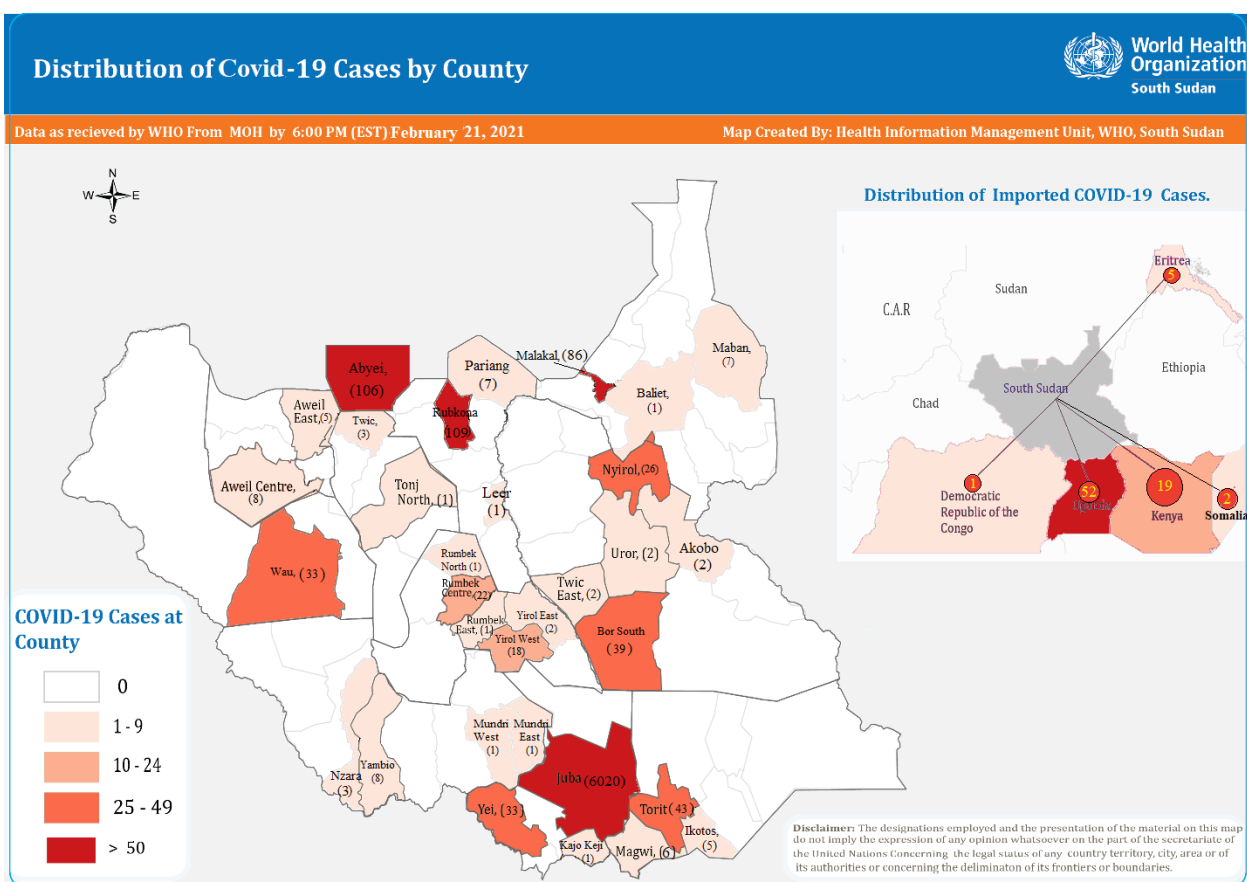| **1369**	**6931**	**10**	**87**	**730**	**104468**
New Confirmed Cases	Total Confirmed Cases	New Deaths	Total Deaths	Contacts Under Follow-up	Cumulative Samples Tested

Figure 1. Map of cumulative reported COVID-19 cases, by county
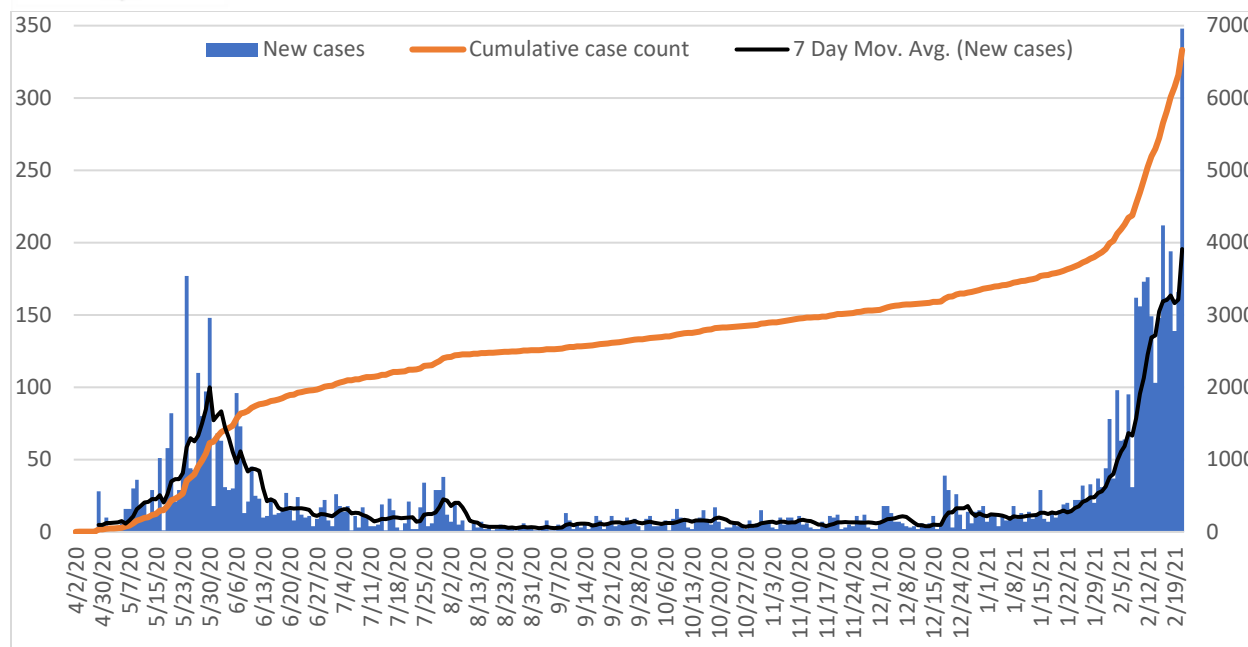
Map source: WHO Weekly Bulletin

Figure 2. Epidemiological curve of reported cases through Week 07, showing new cases (blue bars), rolling 7-day average of reported cases (black line), and total cumulative reported cases (yellow line)

Epidemiology and Surveillance Update

One thousand and three hundred sixty-nine new cases were identified in Week 07, bringing the cumulative number of confirmed cases to 6931[1], including 313 imported cases mainly from South Sudanese returnees (144), Uganda (52), and Kenya (19). There were two imported cases in Week 07. In addition, 28 healthcare workers were confirmed as cases in Week 07, bringing the cumulative case tally among healthcare workers to 206. This week showed records for highest number of cases reported in a day (348) and in an epi week (1369). However, the rate of change in cases has been flattening. For example, this week's tally shows an increase of 44.1% compared to Week 06, which showed almost a doubling (98.7% increase) in the number of cases compared to Week 05, which also recorded a 142.6% increase compared to Week 04. Although the rate of change in deaths in declining, the country recorded 10 new deaths in Week 07 compared to 11 in Week 06. Cases have surged in the country since the beginning of 2021 [Figure 2]. The case tally for Week 07 represents one fifth (19.8%) of the cumulative case total. While it is more likely that the country is detecting more of cases from widespread community transmission due to increased testing, other factors including non-adherence to COVID-19 testing standard operating procedures by private testing facilities and double counting due to testing at multiple locations during the 14-day follow-up period also need to be taken in consideration.

At the end of Week 07, 32 (40.0%) of the 80 counties in the country have a confirmed case [Figure 1]. Two counties reported their first confirmed cases this week. Cumulatively, the age distribution of cases reported is skewed towards people under 50 years old, with most cases occurring in the 20-49 age group and skewed heavily towards males [Figure 3]. Fifty-eight percent of cases reported their

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[1] This number is likely an underestimate with backlogged data from GeneXpert testing sites still to be added to the cumulative case tally

nationality as South Sudanese, with a significant proportion (16.6%) with unknown nationality [Figure 4]. Despite expanded testing and increases in cases, the demographic breakdown profiles of the cases have not changed since the beginning of the outbreak.

Similar to trends in the last several epi weeks, most cases (1173) in Week 07 were reported through traveler screening mainly at Med-Blue (797). However, the weekly proportion of cases identified through contact tracing has steadily increased in recent epi weeks (5.4% in Week 05, 8.8% in Week 06, and 7.2% in Week 07). Cumulatively, pre-travel screening account for the greatest proportion of cases (56.2%), followed by contact tracing (16.6%), and alerts (11.3%) [Figure 5B]. Almost all reported cases (98.1%) in Week 07 came from Central Equatoria. Unity (0.9%), Western Equatoria (0.4%), Eastern Equatoria (0.3%), and Jonglei (0.2%) contributed the remaining cases to the weekly case tally [Figure 6]. Despite Juba having community-wide transmission, notable cluster outbreaks in various states have been reported recently (e.g., in Nzara, Yirol, and Bentiu), however epidemiological data usually lag in communication to the national authorities once the outbreaks are in the flourishing stages. Overall, COVID-19 surveillance and testing at sub-national levels continue to be weak and are in need of scaling up.
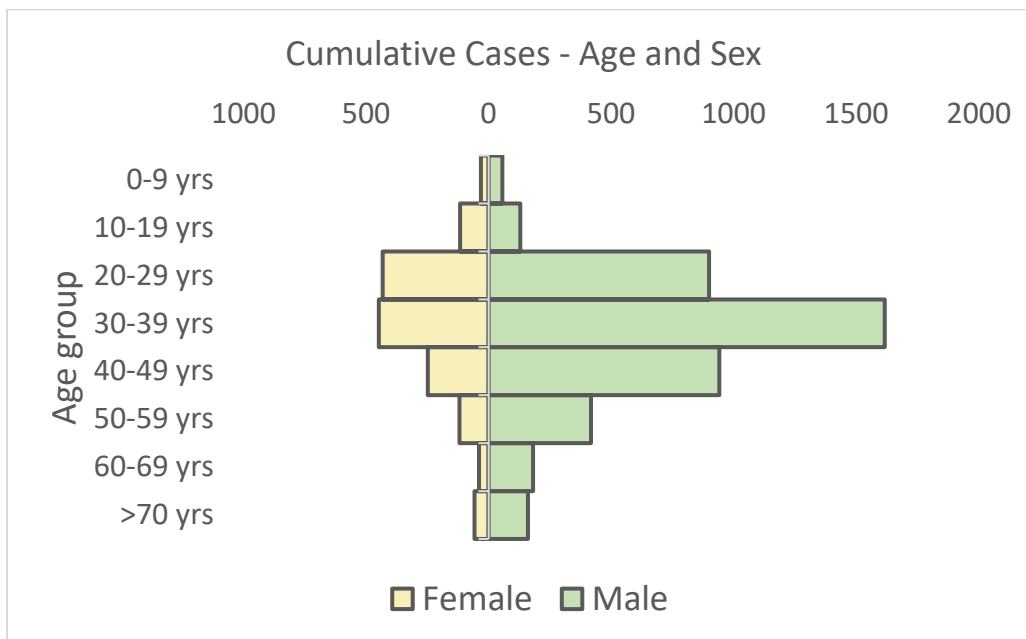

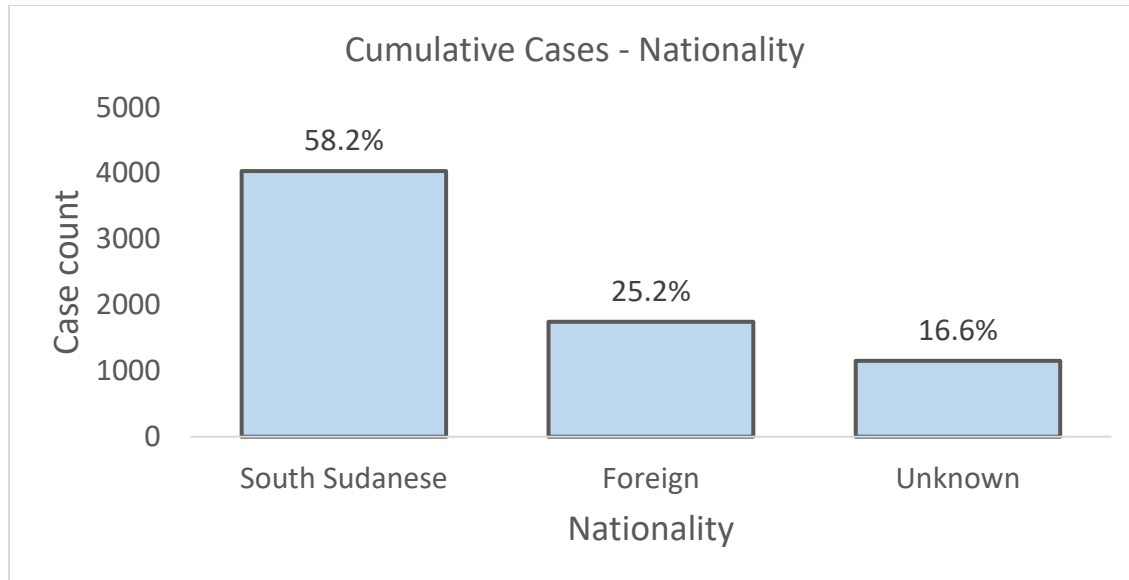Figure 3. Distribution of cumulative reported cases by age and sex

Figure 4. Distribution of cumulative reported cases by nationality
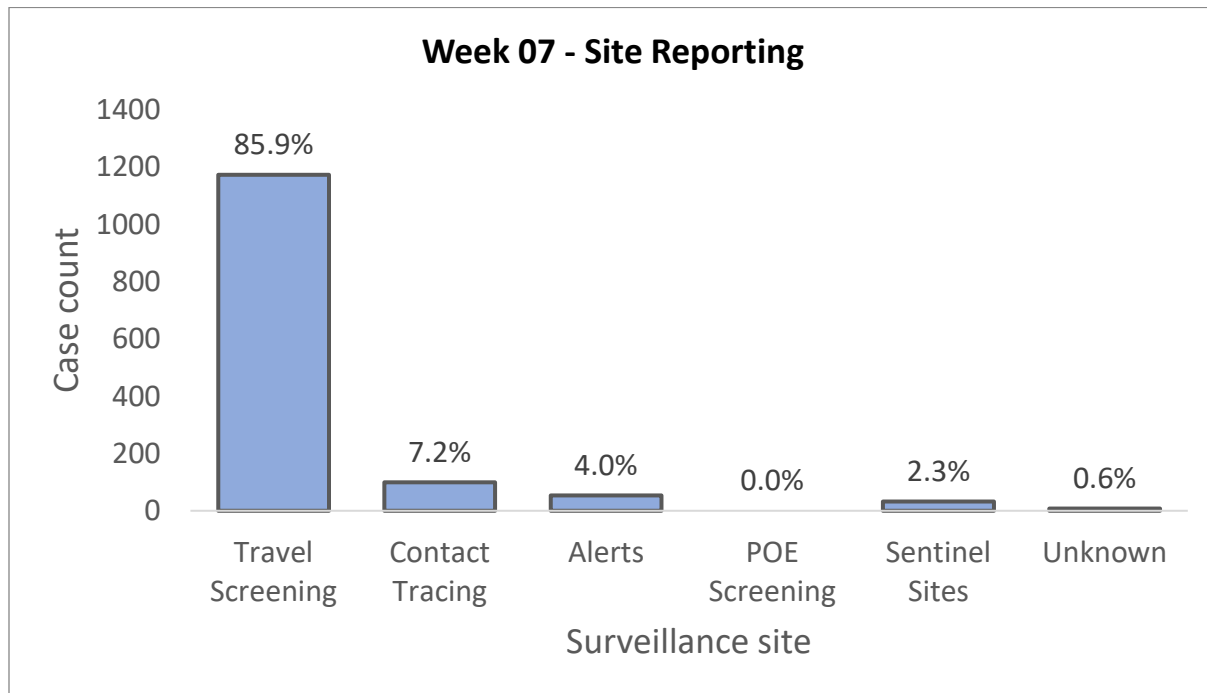
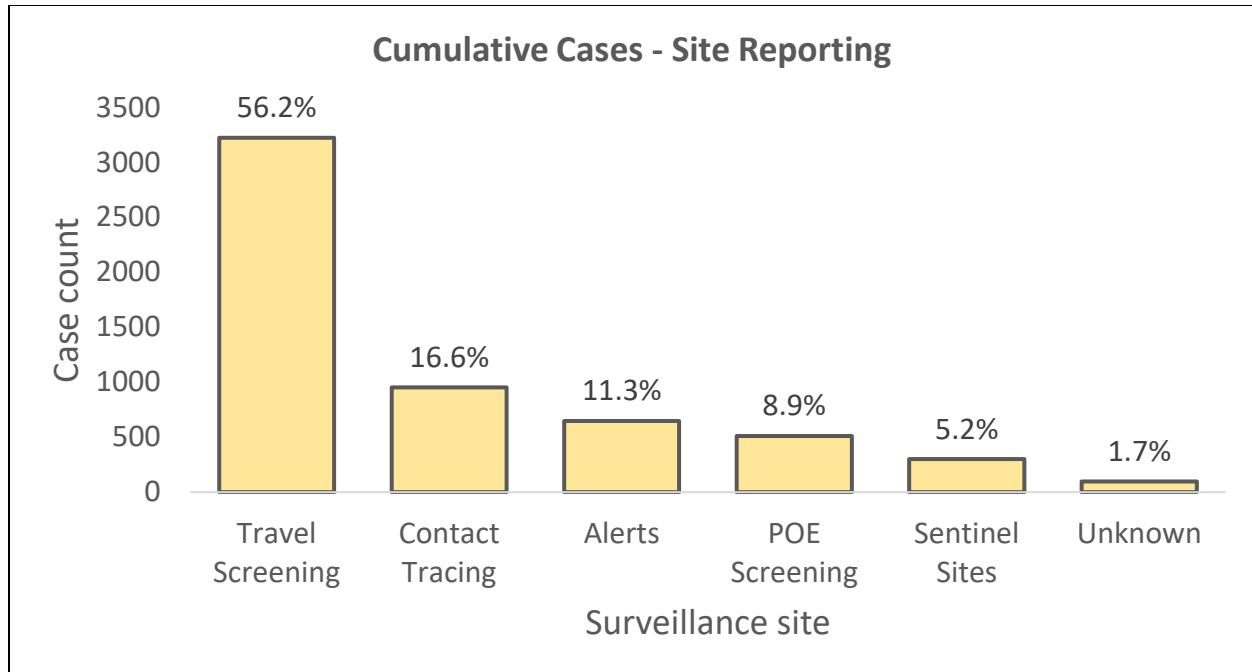

Figure 5A. Case by surveillance site (Week 07)

Cumulative Cases - Site Reporting

Figure 5B. Cases by surveillance site (cumulative)
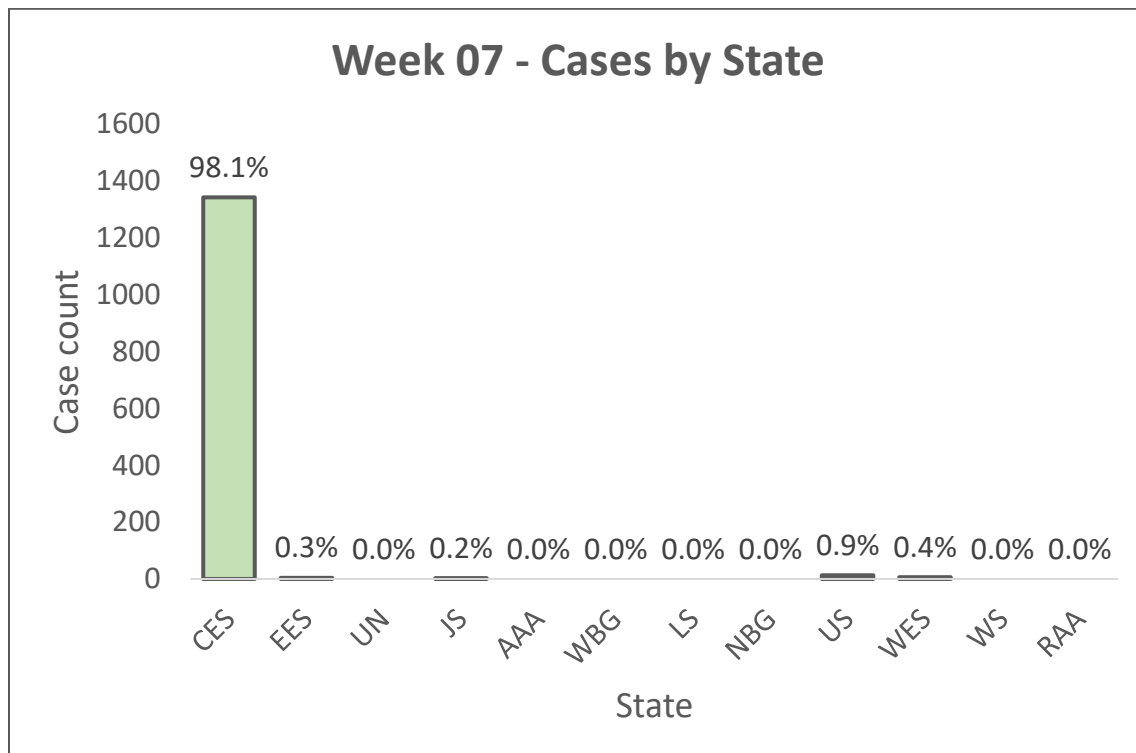
Week 07 - Cases by State

Figure 6. Case distribution by state (Week 07)

Interpretation and recommendations

- **This week showed a slightly lower increase (44.1%) in the number of reported cases compared to Week 06, which had a big jump (98.7%) in reported cases compared to Week 05, which also observed a 142.6% increase in case tally. There was a 9.9% decrease in case deaths in Week 07 compared to Week 06.** While it is more likely that the country is detecting more cases from widespread community transmission due to increased testing, other factors including non-adherence to COVID-19 testing standard operating procedures by private testing facilities and double counting due to testing at multiple locations during the 14-day follow-up period need to be taken in consideration. However, epidemiological trends in surrounding countries do not show a big jump in cases, so it is unlikely that new disease is being introduced in South Sudan, unless it is one of the new variants of COVID-19 that was introduced

- The possibility of duplicated cases has been investigated by the EOC data management unit with support from partners. Several duplicated cases have been identified using a combination of core variables (e.g., name, age, and phone number). While this list is not exhaustive, the EOC will take steps to revise the case tally accordingly. In addition, the EOC with support of a letter from the COVID-19 Incident Manager has mandated all testing facilities to use the MOH approved CIF. Use of this form will allow for duplicate cases to be easily identified using a core group of variables including name, age, phone number, sex, and having had a previous COVID-19 test

- Improved quality of data collection on individuals tested with key variables including surveillance site, nationality, age, sex, previous test history, clinical profile/symptomology remains critical to understand and characterize cases. This is even more critical now with the transfer of traveler testing to private health clinics. All three private testing facilities have been asked by the MOH leadership to use the MOH approved CIF at sample collection. The lack of individual-level testing data from these sites as well as from some facilities using GeneXpert testing continues to affect our ability to fully describe the outbreak in South Sudan

- **During Week 07, 99 contacts (mostly asymptomatic, only 15 symptomatic) tested positive for COVID-19, 7.2% of the week's case tally. This represents a 12.5% increase in the number of contacts who tested positive compared to Week 06, which also observed a 238.5% increase in the number of contacts who tested positive compared to Week 05.** Cumulatively cases originating from contact tracing (16.6%) and alerts (11.3%) remain important to improve case surveillance in these populations with timely screening/testing of suspects and all listed contacts

- Despite recent improvement in reporting of results from the states and the addition of backlogged data, only 6.6% of all confirmed cases have been detected in states other than Central Equatoria and Eastern Equatoria. In addition, about 87.5% of all cases have been detected in Juba compared to 12.5% outside of Juba, indicating that surveillance, testing, and reporting need to be improved and expanded in locations outside Central Equatoria

- There seem to be a confusion about where GeneXpert testing sites should report their data. Currently these data are reported to the laboratory data team, with delayed submission to the EOC data management unit. There is a need for better coordination between the laboratory and EOC data units regarding flow of information from GeneXpert testing sites
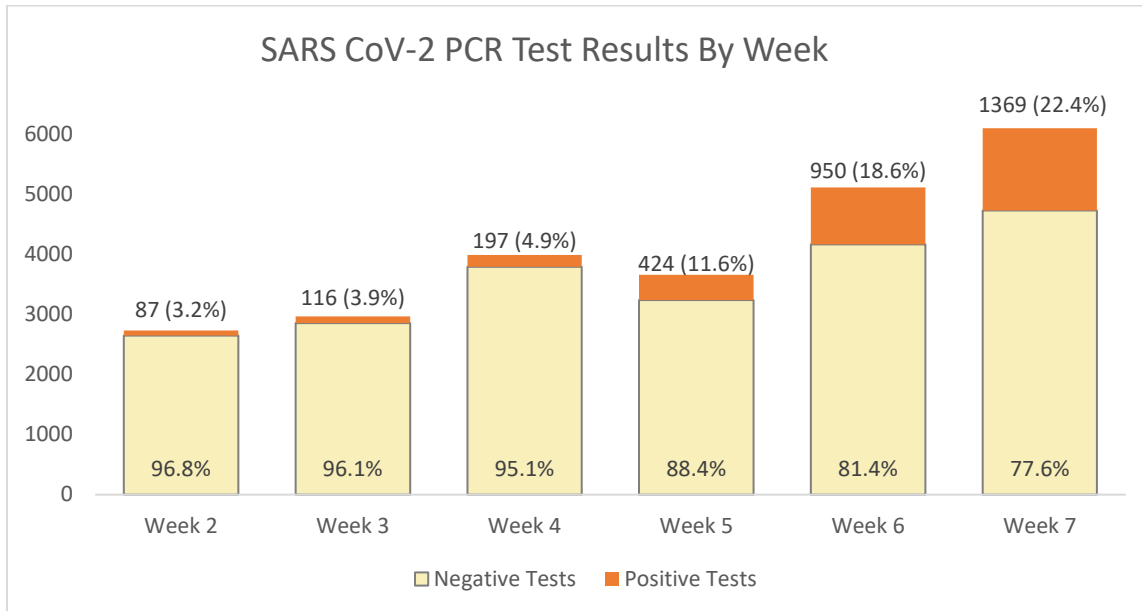
Laboratory Update

Figure 7. SARS-COV-2 PCR test results by week

Interpretation and recommendations

- **There was a 19.2% increase in overall reported testing in Week 07 compared to Week 06, which also showed a 39.7% increase in tests run. However, with data on number of tests run missing for some state-level testing sites, there remains uncertainty about the true number of tests run in the country**

- Positivity has been more than 5% for the last three epi weeks. While it is likely that the country is simply detecting more of what has always been there – widespread community transmission, non-adherence to COVID-19 testing protocols in some testing facilities, with people being retested before they complete 14 days of follow-up could lead to double counting of follow up cases. The EOC has already identified several such duplicated cases. There are also anecdotal reports of quality control challenges at the private testing clinics (e.g., positive result at a facility turning negative in another). The NPHL and EOC need to implement a system of quality assurance for all COVID-19 testing laboratories in South Sudan. This can be adapted from the quality assurance system already in use for HIV and TB in the country

- **Except for Nimule (2.5%), Rumbek (0%), Maban (0%), Kapoeta (0%), and Yambio (0%), positivity yield was more than 5% for all other testing facilities that provided data in Week 07 [Figure 8]. This was only consistently observed at Med Blue in previous epi weeks, with the NPHL and Queens Medical Complex first reporting double-digit yields in Week 06. Moreover, it is unclear why positivity yields at Nojum have been consistently below 10% although it draws its testing population from the same population as Med Blue and Queens Medical Complex. Positivity yields were as follows in Week 07, NPHL (22.0%), Med Blue (23.2%), Queens Medical Complex (24.2%), Nojum (8.3%), Torit (15%), Nzara (20%), Bor Hospital (25%), and UNMISS/UN Clinic (47.8%).** The private laboratories are supposed to be testing individuals

for the purposes of travel which theoretically indicates that positivity yields should not be very high or at least lower than NPHL which conducts testing primarily for epidemiologically prioritized groups (alerts, contacts, sentinel sites). The positivity yield for the different laboratories is an indicator to continue monitoring closely as it speaks to either a wider community progression of transmission, potential data quality, and/or technical/operational errors

- In Week 07, 3438 (56.4%) of the tests were run at Med-Blue, 1646 (27.0%) at the NPHL, 755 (12.4%) at Queens Medical Complex, 72 (1.2%) at Nojum, 120 (2.0%) in Nimule, 23 (0.4%) in UNMISS/UN Clinic, 20 (0.3%) in Torit, 15 (0.2%) in Nzara, 4 (0.1%) in Bor Hospital, 4 (0.1%) in Rumbek, 2 (<0.1%) in Kapoeta, and 1 (<0.1%) in Maban and Yambio. Approximately 104468 SARS-COV-2 PCR tests have been performed with 6.6% positivity (up from 5.7% in Week 06)

- **The EOC needs to produce a comprehensive testing dataset (combining positive and negative results with the CIF variables). This is important to calculate yields of sub-groups presenting for testing to see whether the epidemiology is changing for any of them (e.g., age groups, sex, clinical profile, testing category, etc.). For example, despite expanded testing and increases in cases, the demographic breakdown profiles of the cases have remained unchanged. A comprehensive testing dataset could tell us if the profile of those presenting for testing is the same as it was during the first six months of the outbreak**
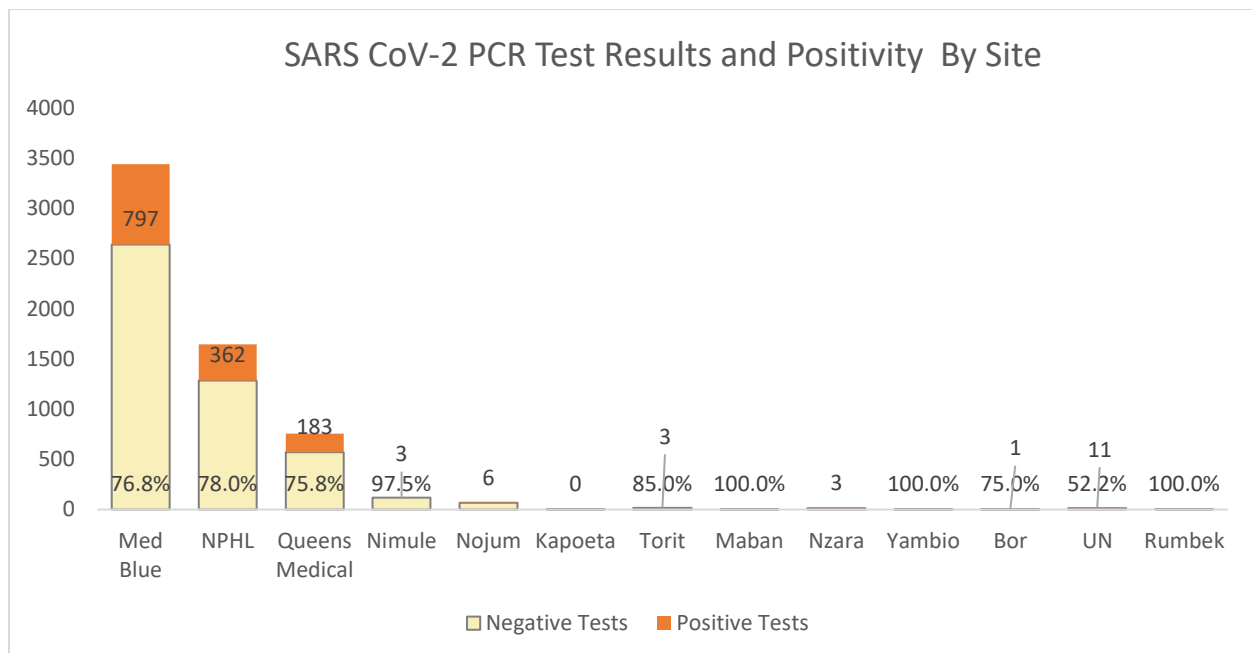

Figure 8. SARS-COV-2 PCR test results and positivity by testing site (Week 07)

Hotline/Alert System Update

During Week 07, the call center received 3629 calls (2255 male callers; 1374 female callers), an increase of 2.5% from Week 06. Most calls came from callers living in Central Equatoria (34.1%). Of the calls received, 334 (9.2%) inquired about the cause of COVID-19 (down from 16.7% in Week 06), 571 (15.7%)

sought information on signs and symptoms of COVID-19 (down from 19.6% in Week 06), and 580 (16.0%) asked about prevention of COVID-19 (down from 20.1% in Week 06). Overall, 2493 (68.7%) of the calls in Week 07 were COVID-19 related.

Consistent with the surge in the number of cases in recent epi weeks, there was a large number of alerts in Week 07 as in Week 06. There were 135 potential COVID-19 alerts (133 through the hotline; 2 self-reported) [Figure 9] in Week 07, a decrease of 6.9% compared to Week 06, ending an increasing trend since Week 04. All the 135 alerts were verified, and all (100%) were investigated by the rapid response team (RRT). Samples were collected from all 135 (100%) of investigated alerts [Figure 9]. About 83.0% of the potential alerts were from Central Equatoria followed by Upper Nile (4.4%), Western Bahr el Ghazal (3.7%), Lakes (3.0%), Northern Bahr el Ghazal and Warrap (2.2%), and Western Equatoria and Eastern Equatoria (0.7%). Only Unity and Jonglei did not report any alerts in Week 07 [Figure 10]. Fifty-four alerts tested positive for COVID-19, which represents 40% of the alerts sampled this week. Cumulatively, 2081[2] alerts have been reported, of which 1973 (94.8%) have been verified, and 1892 (95.9%) of the verified alerts were sampled.
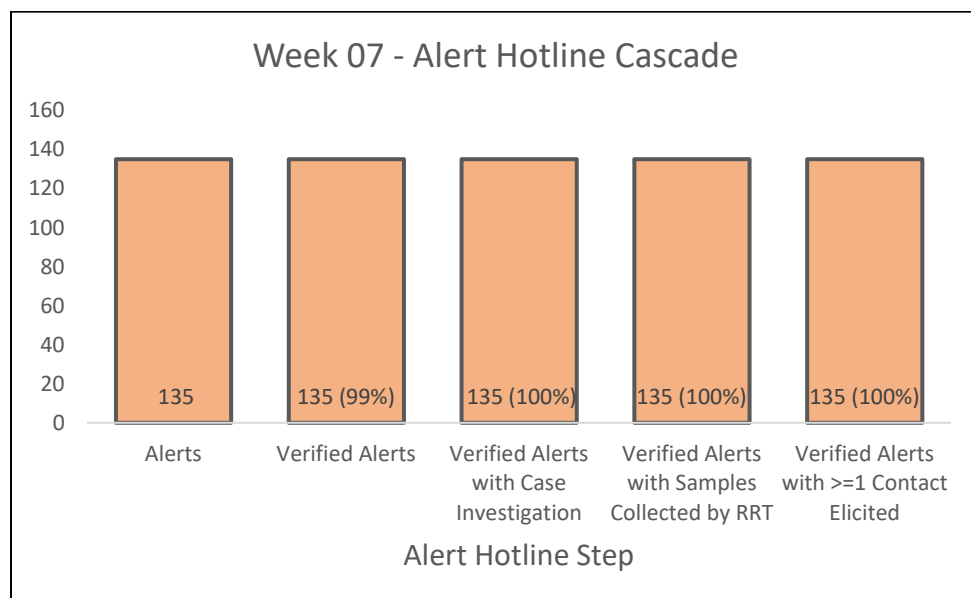

Figure 9: COVID-19 related alerts cascade (Week 07)

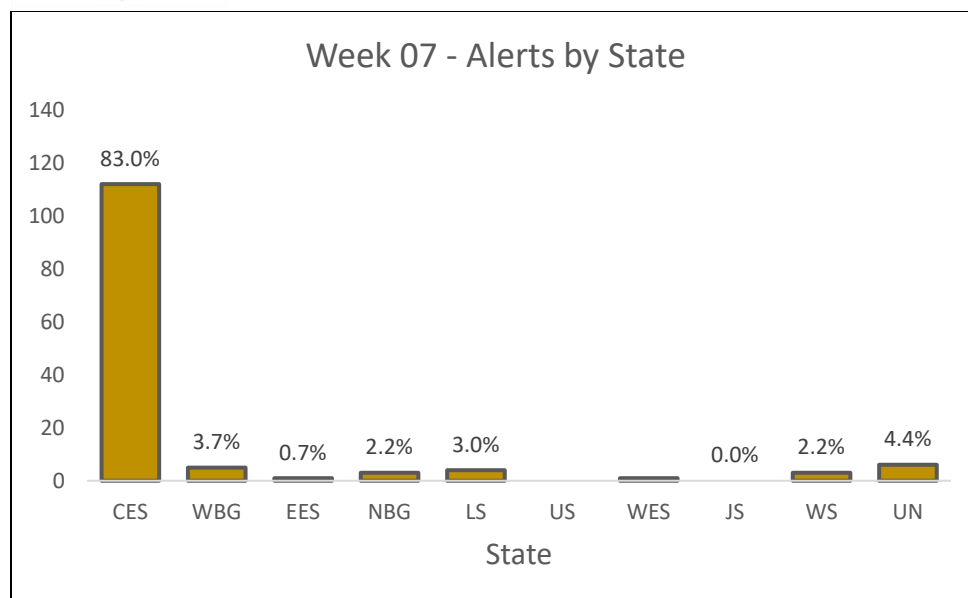[2] Excludes any alerts not reported by the Watch Desk

Figure 10: COVID-19 related alerts by state (Week 07)

Interpretation and recommendations

- **This week shows a slight decrease in the number of alerts (6.9% compared to Week 06), ending an increase in alerts since Week 04**
- All verified alerts (135) screened to meet case definition for COVID-19 were investigated and sampled
- **Fifty-four (40.0%) of the 135 investigated alerts tested positive in Week 07 unlike in the last few epidemiological weeks where few alerts (<10%) had tested positive**
- In addition, alerts represent a small number of total tests run in South Sudan (1.8%). Understanding the reasons behind the low number of alerts via the call center/hotline should be investigated to identify root causes and potential drivers to remediate. Moreover, alerts outside of Central Equatoria are generally limited. Ongoing discussions to strengthen the hotline system and RRT, case investigation, contact tracing, sentinel sites, and mortality surveillance teams continue to be needed

Contact Tracing System Update

During Week 07, there were 1329 cases in Juba County, of which 832 (62.6%) were assigned to ICAP by the EOC. Alima, the other contact tracing partner supporting the EOC (initially in listing of contacts of cases identified through sentinel surveillance) has not provided any data since Week 04. The data provided in this report are from the ICAP-led program. Of the 832 cases assigned to ICAP, 7 (0.8%) provided contacts (down from 16.8% in Week 06) and 825 (99.2%) either refused to provide contacts/denial (212), did not pick up after their phone (321), had no phone number (83), phone number was wrong (63), or phone number was not going through (146). From the seven cases that provided contacts, a total of 107 contacts were listed, providing a case to contact ratio of 1:15.3, a ratio slightly higher than the 1:12.9 from Week 06. Since community-based contact tracing started in early

October, a total of 2300 contacts have been elicited from 230 cases (a ratio of 1:10), of which 730 (31.7%) are still under active follow-up. Forty-five contacts have completed 14 days of follow up this week, with a cumulative total of 1325 (57.6%) thus far. Fifteen of the contacts followed up in Week 07 reported COVID-19 related symptoms. Samples were collected from 251 contacts this week, with 99 contacts (39.4%) testing positive for COVID-19[3]. Cumulatively, 12537[4] contacts have been listed and followed up since the first confirmed case was reported in April 2020, of which 10229 (81.6%) have completed 14 days of follow-up.

Interpretation and recommendations

- Solicitation of contacts from cases continues to be a challenge for the contact tracing team. In Week 07,825 (99.2%) of the cases assigned to ICAP did not have contacts listed due to various reasons including denial of having had any contacts and phone numbers not going through. The contact tracing team needs to come up with strategies to reduce the high refusal to provide contacts by cases. Several strategies that have been discussed in recent meetings include listing contacts at the timing of CIF completion and sample collection, embedding data clerks in the private testing facilities to facilitate contact listing, and checking listed phone numbers for active status when the contact tracer is still engaged with the case. With the current uptick in the number of cases, contact listing at completion of the CIF would greatly help the contact tracing team to list more contacts
- Currently there is poor coordination among the contact tracing stakeholders (EOC, Alima, and ICAP).
- The main barriers to enroll contacts successfully continues to be:
    1) Unwillingness of cases to list contacts
    2) Incorrect contact addresses (physical location and phone number)
    3) Contacts not answering their phones or answering their phones and saying they are outside South Sudan (these are being followed up whenever possible)

Case Management Update

Most cases that record the type of case management are managed at home (31.1%), with very few admitted to a health facility or hospital. A significant proportion of cases continues to have "unknown" (68.4%) case management type at first contact. However, this will be rectified soon because a member of the EOC data management unit is currently working with the MOH case management data clerk to enter the missing individual-level data into the EOC case database. Unfortunately, this is still pending as of Week 07. Fifty-nine percent (4014) of all cases were discharged as of Week 07, with 2830 cases (41.3%) under active follow-up. Eighty-seven cases have died, yielding a case fatality rate of 1.27% (down from 1.40% in Week 06) [Fig 11].

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[3] Most of the contacts sampled came from mini-clusters of COVID-19 infection in compounds of partners working in the COVID-19 response and business spaces

[4] Arriving passengers, who are not contacts, but being followed up for adherence to quarantine regulations may have been included in this tally in the early weeks of the response

Case management at first detection	Count	Percent of total cases
Home management	2130	31.1%
Hospital	18	0.3%
Isolation center	4	0.1%
UN health facility	2	<0.1%
UN home management	3	<0.1%
Died	10	0.1%
Unknown	4691	68.4%

Table 1. Distribution of case management types for cumulative cases, showing total count and as a percent of total cases. Data obtained for date of first contact with the patient
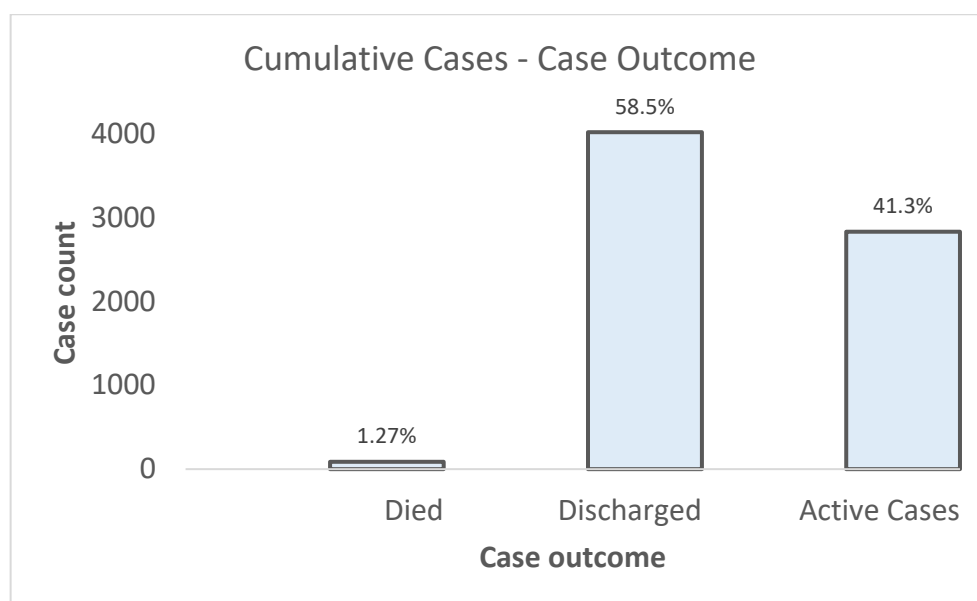

Figure 11. Distribution of case outcome for cumulative cases

Interpretation and recommendations

- Most cases with a case management type are managed at home. About 68% of all cases do not have case management type reported, with documentation entirely absent in several of the recent reporting weeks. The coordination of case management data needs to be improved between all reporting and receiving parties
- **The case fatality rate stands at about 1.27%, down from 1.40% in Week 06**

Risk Communication and Community Engagement Update

The following achievements were registered during Week 07 under the risk communication and community engagement (RCCE) pillar:

- A total of 48631 individuals were reached in their respective catchment areas with COVID-19 preventive messages and measures for the community to act and safeguard themselves against COVID-19 infection
- Twenty-three key opinion leaders including community leaders, teachers, religious leaders, and village chiefs across South Sudan, were oriented/trained on COVID-19 messaging
- Thirty community mobilizers received a refresh training on communication skills pertaining to COVID-19 messaging
- 465 radio jingles were aired in 10 local languages through different radio stations across all 10 states in the country
- Fourteen talk shows were conducted
- Community-based contact tracers supported by ICAP, provided information about COVID-19 to 2021 persons

Points of Entry Update

During the epidemiological week, IOM screened 4634 (3365 male; 1269 female) travelers from Nimule land crossing (4175) and Wau (459). Nimule PoE screened only arriving travelers while Wau PoE screened both arriving and departing travelers. One traveler underwent secondary screening (he had a temperature of 38 degrees Celsius) and got tested in Nimule. The result returned negative for COVID-19 but positive for malaria. The cumulative number of travelers screened for COVID-19 from Feb 15, 2020 to February 21, 2021 is 561467. PoE screening at Wau have been officially handed over to the state MOH on February 17, 2021.

At Nimule PoE most of the travelers were truck drivers and returnees. Out of the 4175 travelers, 1512 were returnees from refugee camps in Uganda, 919 were other nationals other than truck drivers, and 1744 were truck drivers. The returnees from the camps are allowed to proceed to their destination without undergoing quarantine or presenting COVID-19 certificates but random samples are taken from at least one traveler per household. Other nationals and truck drivers are required to present valid COVID-19 free certificate to enter South Sudan.

IOM continues to actively participate in all the established coordination mechanisms for COVID-19 including technical working groups, state task force and national task force meetings in Wau and Nimule.

For more information, please contact the South Sudan Public Health Emergency Operation Centre [PHEOC]

Email: sspheoc@gmail.com

Tel #: +211922202028

For additional information follow these links:

http://moh.gov.ss/daily_updates.php

http://moh.gov.ss/covid-19.php

Note: COVID-19 testing in South Sudan is free of charge for alerts, contacts of cases, and suspected cases