South Sudan COVID-19 Weekly Epidemiologic Bulletin

Issue #: 16

19– 25 April 2021

Epidemiologic Week 16

Summary statistics for Epidemiologic Week 16

63	10538	0	114	1403	148188
New Confirmed Cases	Total Confirmed Cases	New Deaths	Total Deaths	Contacts Under Follow-up	Cumulative Samples Tested

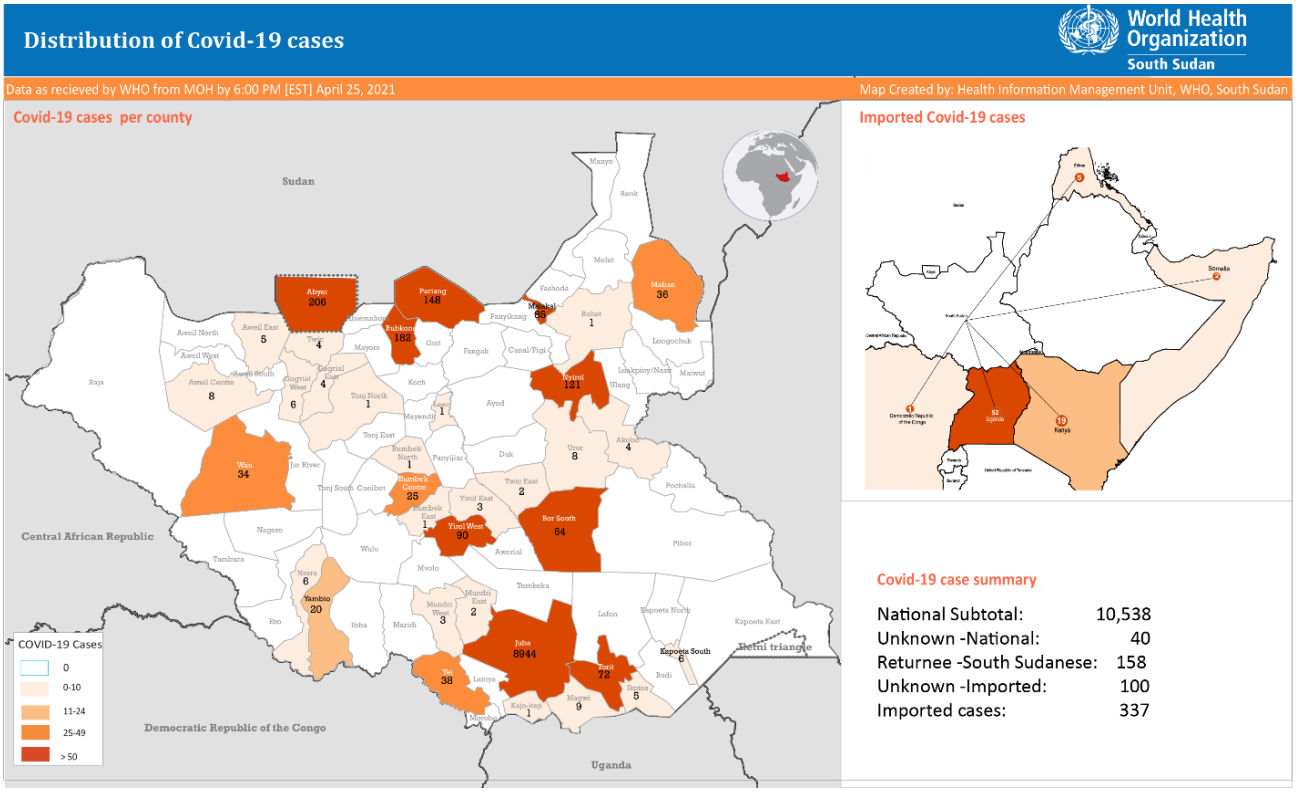

Figure 1. Map of cumulative reported COVID-19 cases, by county

Map source: WHO Weekly Bulletin

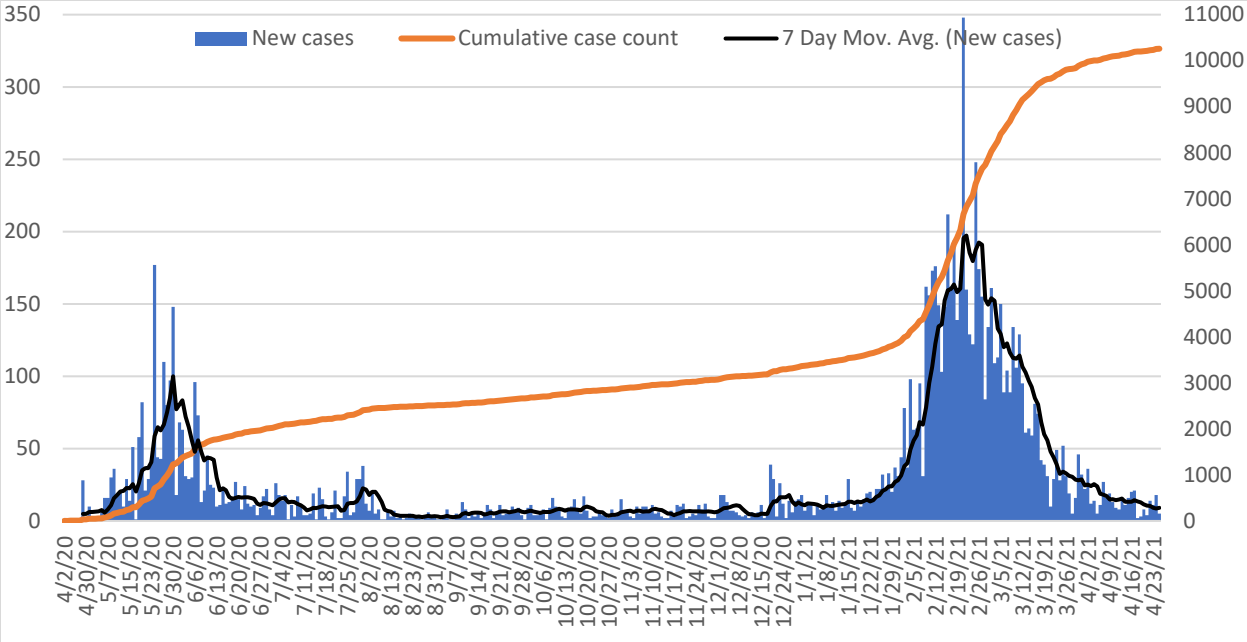

Figure 2. Epidemiological curve of reported cases through Week 16, showing new cases (blue bars), rolling 7-day average of reported cases (black line), and total cumulative reported cases (yellow line)

Epidemiology and Surveillance Update

Sixty-three new cases were identified in Week 16, bringing the cumulative number of confirmed cases to 10538[1], including 337 imported cases mainly from South Sudanese returnees (166), Uganda (52), and Kenya (19). There were no new imported cases in Week 16. Similar to trends observed in the last several epi weeks, the case count and average positivity yield continued to decline in Week 16. This week's tally is the lowest since epi week 51 when the country confirmed 25 cases. It also shows a decrease of 33.0% in reported cases compared to Week 15, which also showed a 6.0% decrease compared to Week 14. Moving averages for yield, case count, and proportional daily case change continued downward trends in Week 16. There were no reported deaths in Week 16, but mortality surveillance and reporting in the community needs to be active (i.e., the mortality surveillance team needs to respond to all community death alerts and visit mortuaries every day to look for suspect deaths and swab them). Although cases had surged in the country in the first two months of 2021, the case count has been decreasing for the past nine epi weeks based on the 7-day moving average [Figure 2]. The case tally for Week 16 represents only 0.6% of the cumulative case total (compared to a high of 19.8% in Week 07). While it is more likely that the recent surge in the number of cases meant the country was 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 may have contributed to the increased case tally.

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

At the end of Week 16, 35 (43.8%) of the 80 counties in the country have a confirmed case [Figure 1]. There was no county with a first confirmed case 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 nationality as South Sudanese, with a significant proportion (21.5%) 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. However, certainty about the case profiles is affected by increased lack of individual-level data and line lists especially from private testing facilities and GeneXpert (GXP) testing sites. This affects our ability to properly detect any changes in profiles.

About 32% of the cases in Week 16 were reported through traveler screening but a significant proportion (65.1%) of cases having unknown source. This is mainly due to a lack of individual-level data for data reported by GXP sites. Cumulatively, pre-travel screening account for the greatest proportion of cases (63.2%), followed by contact tracing (11.7%), and alerts (7.7%) [Figure 5B]. Most of the reported cases (33.3%) in Week 16 came from Central Equatoria. Upper Nile (28.6%), Ruweng Administrative Area (12.7%), Lakes (7.9%), Jonglei and Abyei Administrative Area (6.3%), and Unity (4.8%) contributed the remaining cases to the weekly case tally. Eastern Equatoria, Western Bahr el Ghazal, Northern Bahr el Ghazal, Western Equatoria, and Warrap did not report any cases in Week 16 [Figure 6]. In Week 16, no healthcare worker was confirmed as a case, so the cumulative case tally among healthcare workers remained at 256. Most of the cases among healthcare workers came from Central Equatoria (218), followed by Abyei (13), Jonglei (10), and Eastern Equatoria (9). Three states (Upper Nile, Western Bahr el Ghazal, and Northern Bahr el Ghazal) have not reported any cases among healthcare workers [Figure 7].

We are starting to see more testing reported from the states, mostly driven by further decentralization of GXP machines throughout the country (at least 27 sites). However, it is still difficult to know if there is community transmission in the states because there is still not enough testing being done. Nevertheless, notable clustered outbreaks have been reported in past epi weeks in Nzara, Yirol, Bentiu, Bor, Lakien, Pariang, Ruweng, and Mapourdit, although 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.

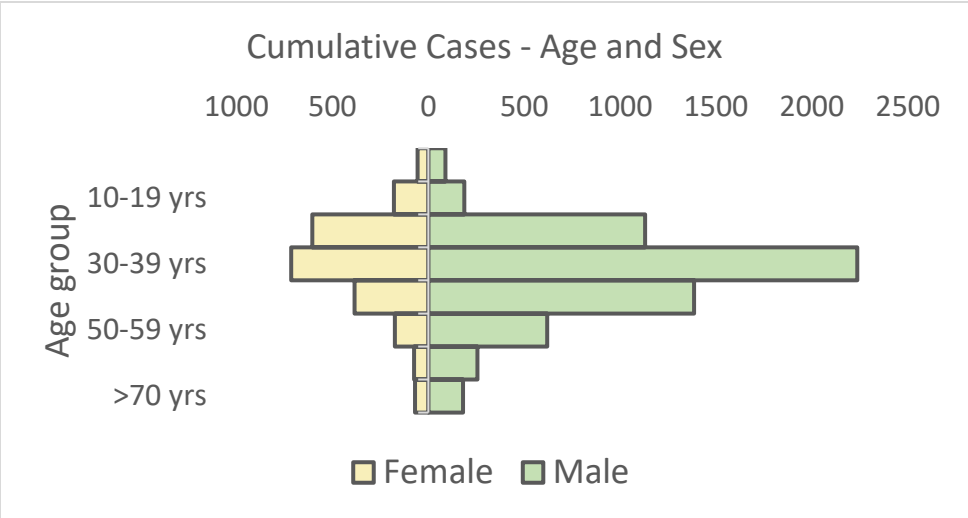

Figure 3. Distribution of cumulative reported cases by age and sex

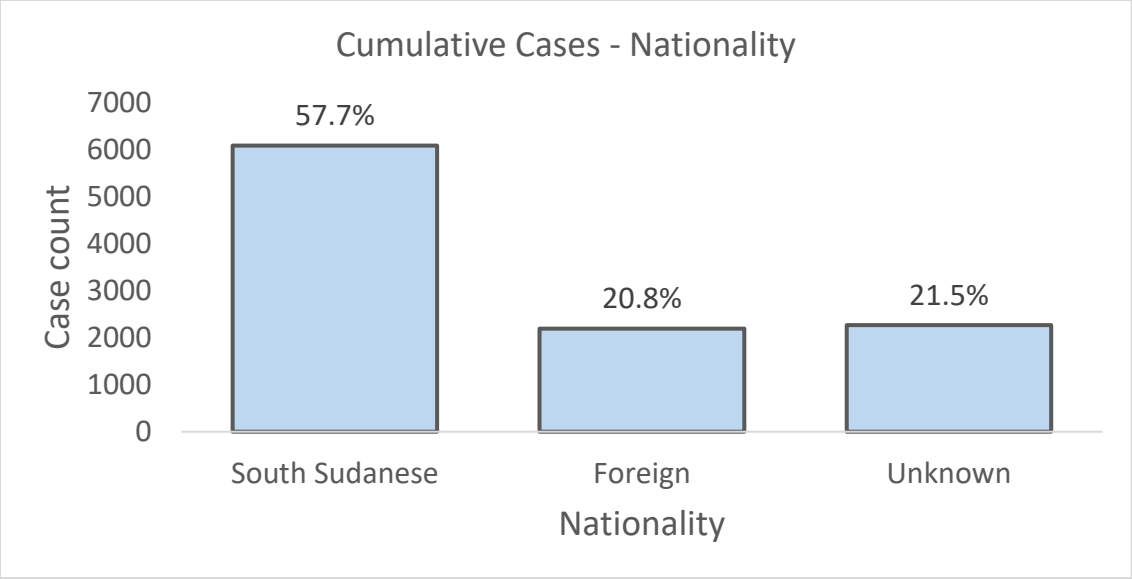

Figure 4. Distribution of cumulative reported cases by nationality

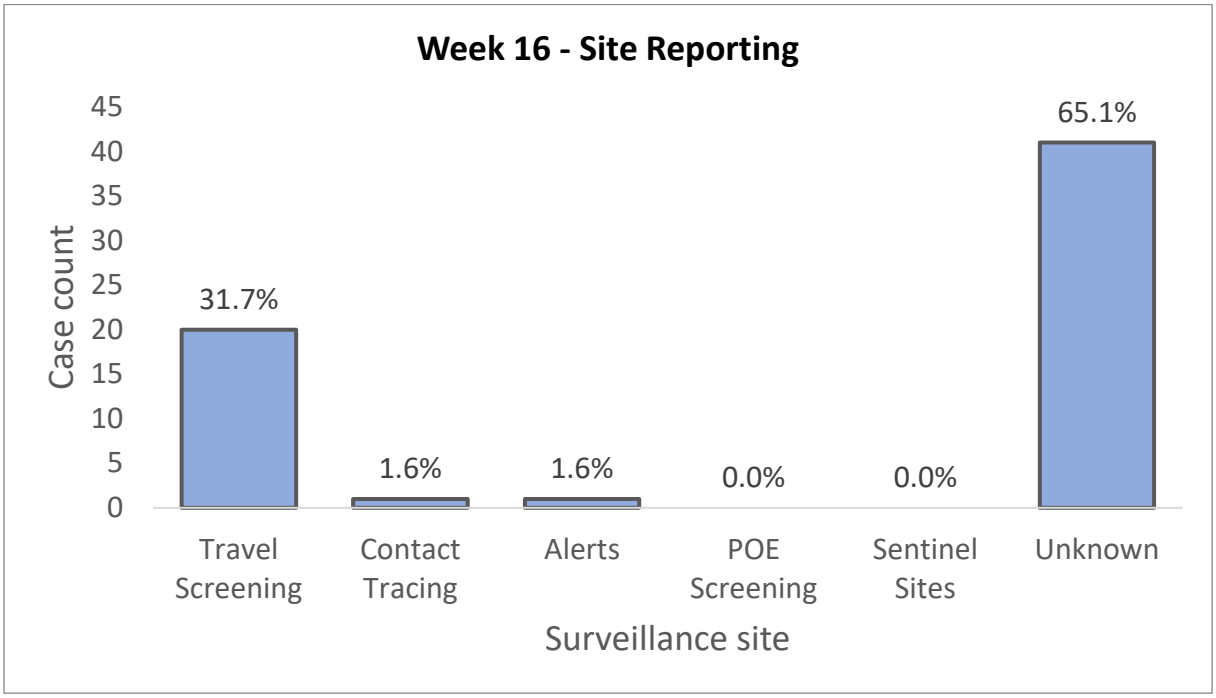

Figure 5A. Case by surveillance site (Week 16)

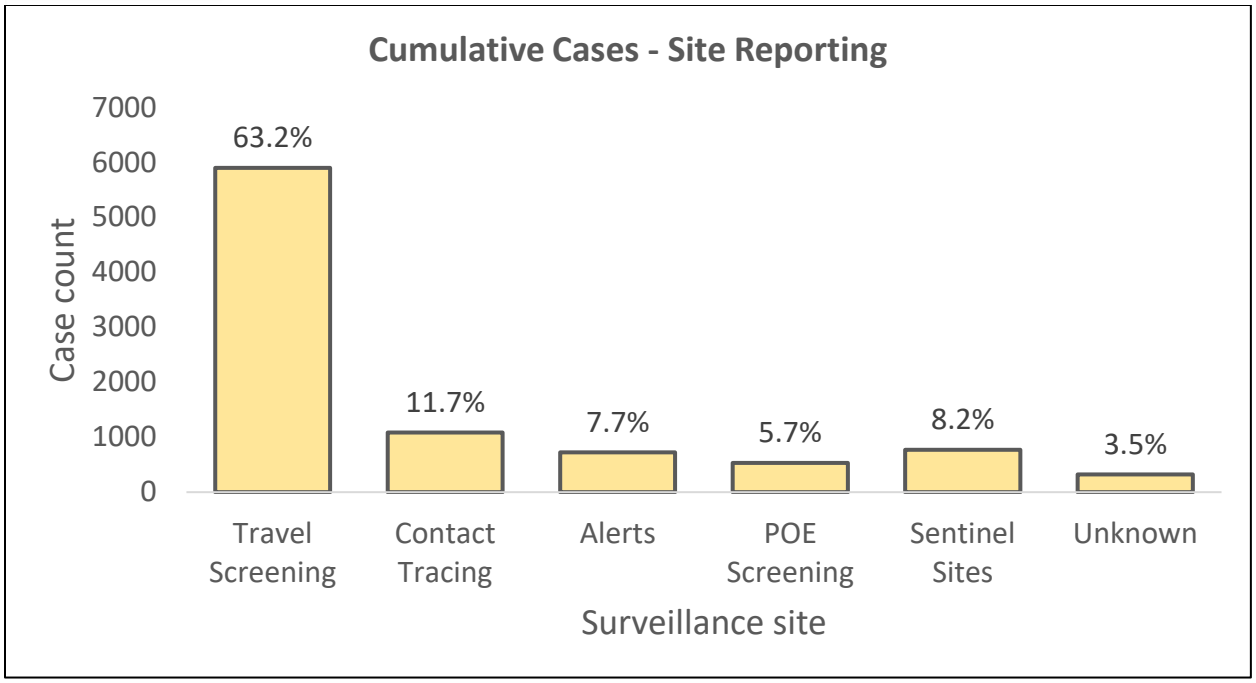

Figure 5B. Cases by surveillance site (cumulative)

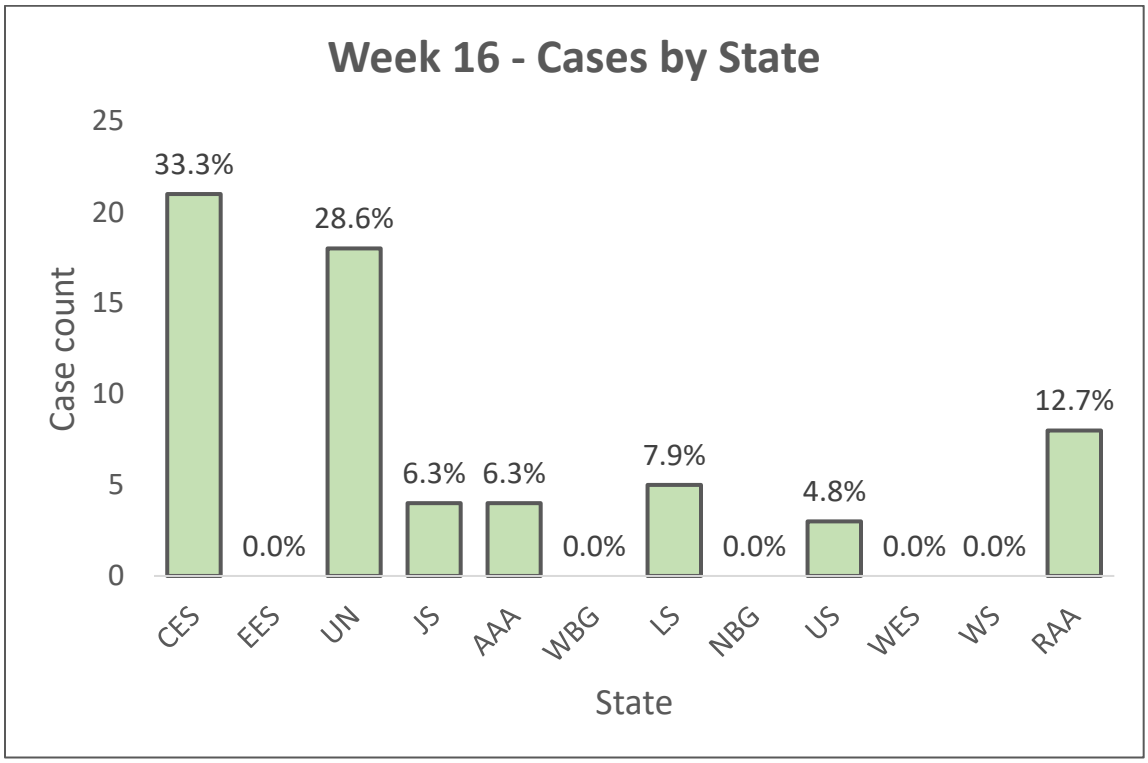

Figure 6. Case distribution by state (Week 16)

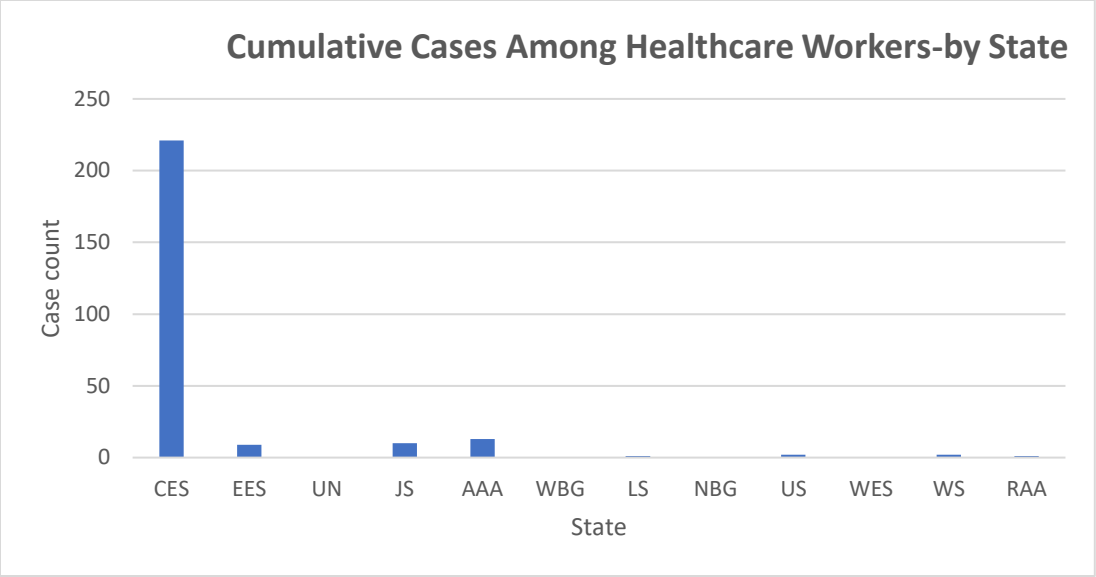

Figure 7. Cases among healthcare workers by state (cumulative)

Interpretation and recommendations

- **This week showed a 33.0% decrease in the number of reported cases compared to Week 15, a ninth consecutive week of a decreasing trend in case count. There were no new reported deaths since Week 14.** However, there is a need for a more active mortality surveillance to identify COVID-19 deaths in the community. **While trends in moving averages for proportional daily case change, case count and positivity yield have declined or stabilized in recent epi weeks, it is important to conduct genomic sequencing to know which variants of SARS-CoV-2 are in circulation since they might change the transmissibility, clinical presentation, and severity of the disease among the population**
- Identification of duplicated cases is an ongoing activity by the EOC data management unit with support from partners. Several duplicated cases have already been identified using a combination of core variables (e.g., name, age, and phone number). The EOC will develop SOPs to standardize the process of removing duplicates and replacing them with new cases. In addition, the EOC has mandated all private testing facilities to use the MOH approved CIF**, although this is currently only happening at Queens Medical Complex and Nojum and still pending at Med Blue.** 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. The lack of complete individual-level data from some private testing sites as well as from most facilities using GXP testing continues to affect our ability to fully describe the outbreak in South Sudan
- **Unknown surveillance source accounted for 65.1% of this week's case tally. This is likely due to the absence of individual-level data from GXP sites. However, most of the people tested in these sites are alerts, suspected cases, and contacts of confirmed cases. Contact tracing and**

alerts each accounted for 1.6% of this week's case tally. Cumulatively, cases originating from contact tracing (11.7%) and alerts (7.7%) 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 GXP testing sites at sub-national level and the addition of backlogged data, only 10.0% of all confirmed cases have been detected in states other than Central Equatoria and Eastern Equatoria. In addition, about 85.4% of all cases have been detected in Juba compared to 14.6% outside of Juba, indicating that surveillance, testing, and reporting need to be improved and expanded in locations outside Central Equatoria
- Although there is improved reporting of data from GXP testing sites (they have had the greatest positivity yields over the past seven epi weeks), the data are currently provided in aggregate versus at the individual level format. **Partners supporting the GXP testing sites need to provide to the EOC Data Management Unit individual-level data for both positive and negative results in order to better characterize the outbreak in these locations**

Laboratory Update

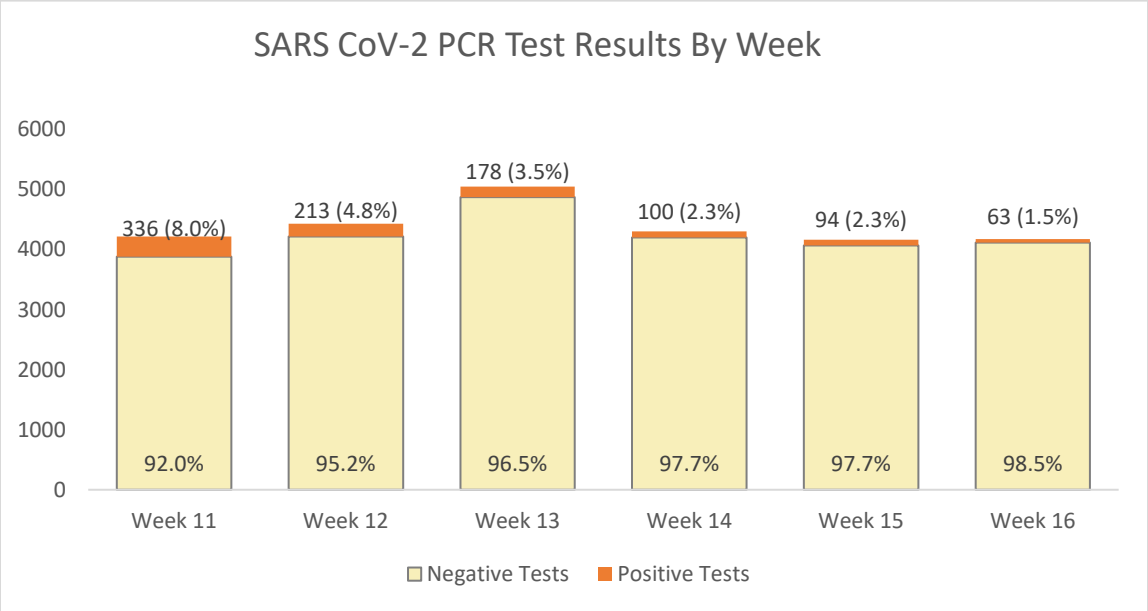

Figure 8. SARS-COV-2 PCR test results by week

Interpretation and recommendations

- **Average positivity peaked at 22.4% in Week 07. However, average positivity yields have been declining for the last nine epi weeks, reaching a low of 1.5% this week, likely indicating that the second wave has ended [Figure 8]**. While the recent surge in cases was likely due to the country 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 have led to double counting of follow up cases. The EOC identified 178 such duplicated cases, and these will be removed from the cumulative case tally once SOPs to standardize the removal process have

been finalized. 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 must 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

- **Positivity yields have declined significantly in recent epi weeks. However, positivity is still high in GXP testing sites due to the targeted testing (i.e., alerts, suspected cases, and contacts of cases) done at these locations.** Positivity yields were as follows in Week 16: Med Blue (0.6%), NPHL (0.6%), Nimule (0.0%), Queens Medical Complex (0.5%), Nojum (0.0%) [Figure 9A], Kapoeta (0.0%), Torit (0.0%), Lakien (13.3%), Aweil (0.0%), Bor (0.0%), Pariang (24.0%), Pamir (18.2%), Bentiu (2.0%), Makpandu (0.0%), Rumbek (0.0%), Agok (6.2%), Gordhim (0.0%), Gentil PHCC (36.7%), Mapourdit (21.7%), and UN/UNMISS (11.1%) [Figure 9B]. Approximately 148188 SARS-COV-2 PCR tests have been performed throughout the outbreak with 7.1% crude positivity
- **Currently, there is limited quality assurance (QA) oversight of private testing facilities by the NPHL. As discussed above, the NPHL must implement a QA system for all COVID-19 testing laboratories in South Sudan. A multi-pillar supervisory visit to the private labs was completed in Week 15. The recommendations from this visit are still pending presentation at the National Steering Committee meeting for discussion**
- Reluctance to use MOH data capture tools, late and aggregate reporting (i.e., no individual-level data), and refusal to facilitate the work of the contact tracing and case management teams, have been major challenges from working with the private testing facilities. It is important that the private testing labs fully cooperate with the country COVID-19 SOPs including on testing protocols and data collection and reporting requirements
- Lastly, 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

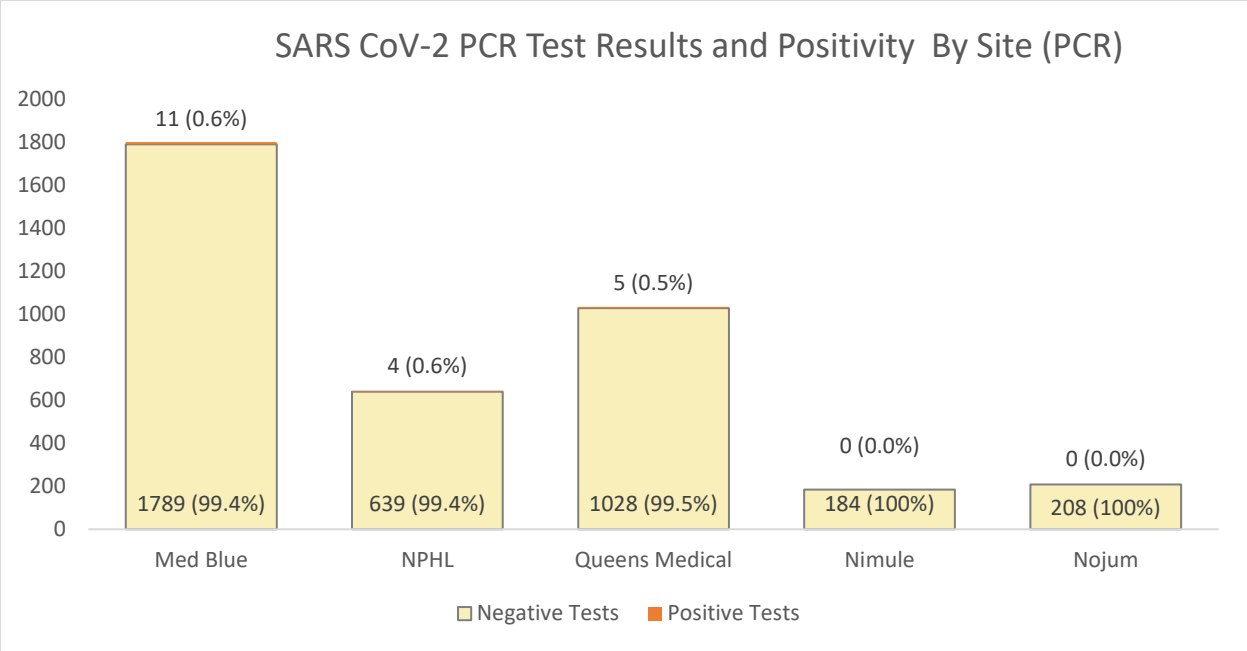

Figure 9A. SARS-COV-2 PCR test results and positivity by testing site [PCR] (Week 16)

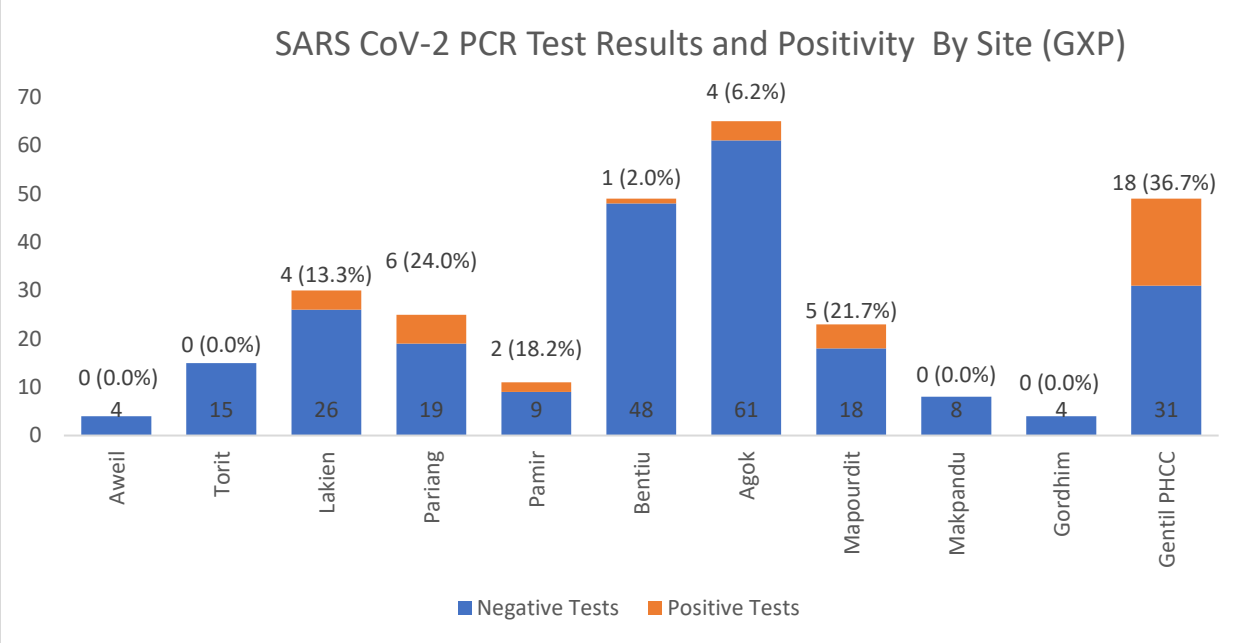

Figure 9B. SARS-COV-2 PCR test results and positivity by testing site [GXP] (Week 16)

Hotline/Alert System Update

There were 28 potential COVID-19 alerts (27 through the call center/hotline and 1 self-reported) in Week 16, a decrease of 20% from the number of alerts in Week 15. The trend in reported alerts has been downward in the last several epi weeks since a high of 145 alerts was recorded in Week 06. Between Weeks 06 and 16, there has been an 80.7% decrease in the number of alerts, mirroring the observed decreases in case count and positivity yield in recent weeks. Twenty-seven of the 28 alerts (96%) were verified and investigated by the rapid response team (RRT). Samples were collected from all 27 (100%) of investigated alerts [Figure 10]. About 71.4% of the potential alerts were from Central Equatoria followed by Lakes (10.7%) and Eastern Equatoria, Northern Bahr el Ghazal, Unity, Western Equatoria, and Jonglei (3.6%). Western Bahr el Ghazal, Warrap, and Upper Nile did not report any alerts in Week 16 [Figure 11]. One alert tested positive for COVID-19 this week. Cumulatively, 2576[2] alerts have been reported, of which 2453 (95.2%) have been verified, and 2372 (96.7%) of the verified alerts were sampled.

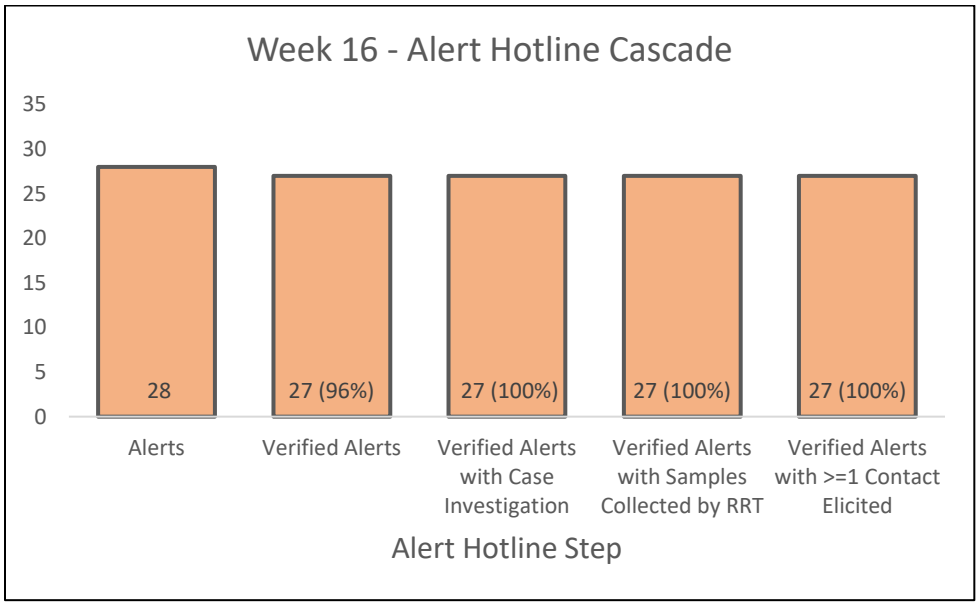

Figure 10: COVID-19 related alerts cascade (Week 16)

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

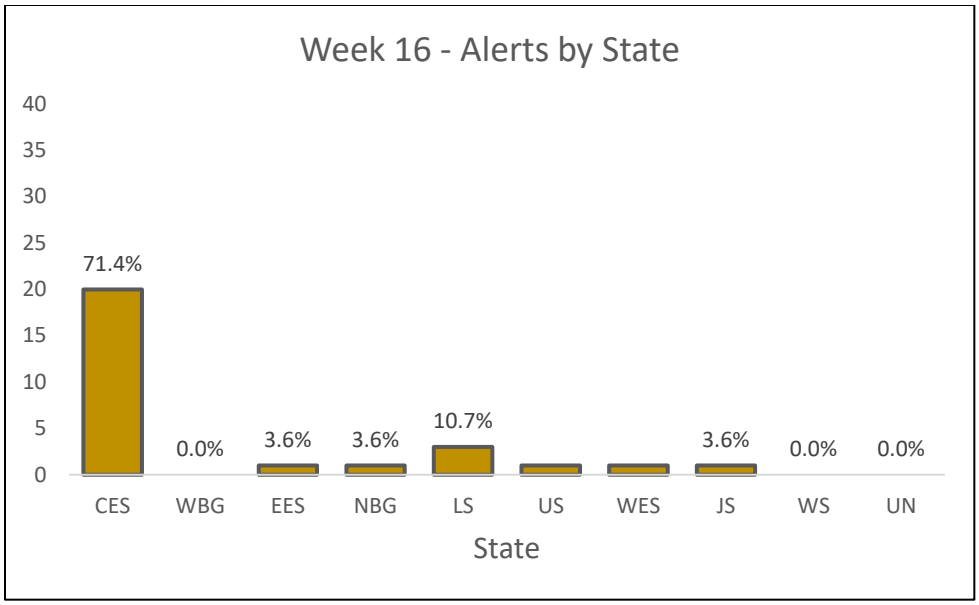

Figure 11: COVID-19 related alerts by state (Week 16)

Interpretation and recommendations

- All verified alerts (27) screened to meet case definition for COVID-19 were investigated and sampled
- **One of the 27 sampled alerts in Week 16 tested positive**
- Alerts represent a small number of total tests run in South Sudan (1.6%). 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 16, there were 21 cases in Juba County, of which 11 (52.4%) were distributed to ICAP by the EOC for contact listing and tracing. Alima, the other partner supporting the EOC with contact tracing, did not report any data on their activities in Week 16 to the EOC Data Management Unit. The data reported here are therefore for the ICAP-supported program. All 11 (100%) of the cases distributed to ICAP had valid phone numbers, of whom 5 (45.5%) provided contacts (down from 55.2% in Week 15). Six cases (54.5%) either did not pick up after their phone (4) or the phone number was not going through (2). From the five cases that provided contacts, a total of 14 contacts were listed, providing a case to contact ratio of 1:2.8 (down from 1:4.6 in Week 15). Since community-based contact tracing started in early October 2020, a total of 4724 contacts have been elicited from 591 cases (a ratio of 1:8.0), of which 1403 (29.7%) are still under active follow-up. Eighty-four contacts have completed their follow-up period this week, with a cumulative total of 2950 (62.4%) thus far. None of the 1403 contacts followed up in Week 16 reported COVID-19 related symptoms. Samples were collected from 74 contacts

this week. One (1.4%) of the 74 contacts sampled this week tested positive for COVID-19. Cumulatively, 15721 contacts have been listed and followed up since the first confirmed case was reported in April 2020, of which 14400 (91.6%) have completed follow-up.

Interpretation and recommendations

- The contact tracing team started applying the new 7 and 10-day (Q7/Q10) quarantine guidelines in Week 12
- Solicitation of contacts from cases continues to be a challenge for the contact tracing team. In Week 16, 54.5% of the cases distributed to ICAP did not have contacts listed due to various reasons including not picking their phone and phone numbers not going through. The contact tracing team has embedded data clerks in two of the three private testing facilities to facilitate contact listing and checking of listed phone numbers for active status when the contact tracer is still engaged with the case
- **Alima needs to start reporting their contact tracing data to the EOC Data Management Unit in Week 17**
- 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

Case Management Update

Most cases that record the type of case management are managed at home (40.9%), with very few admitted to a health facility or hospital. A significant proportion of cases continues to have “unknown” (58.7%) case management type at first contact. Ninety-seven percent (10250) of all cases were discharged as of Week 16, with 174 cases (1.7%) under active follow-up. One hundred and fourteen cases have died, yielding a case fatality rate of 1.08% [Fig 12].

Case management at first detection	Count	Percent of total cases
Home management	4276	40.9%
Hospital	19	0.2%
Isolation center	4	<0.1%
UN health facility	2	<0.1%
UN home management	3	<0.1%
Died	10	0.1%
Unknown	6138	58.7%

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

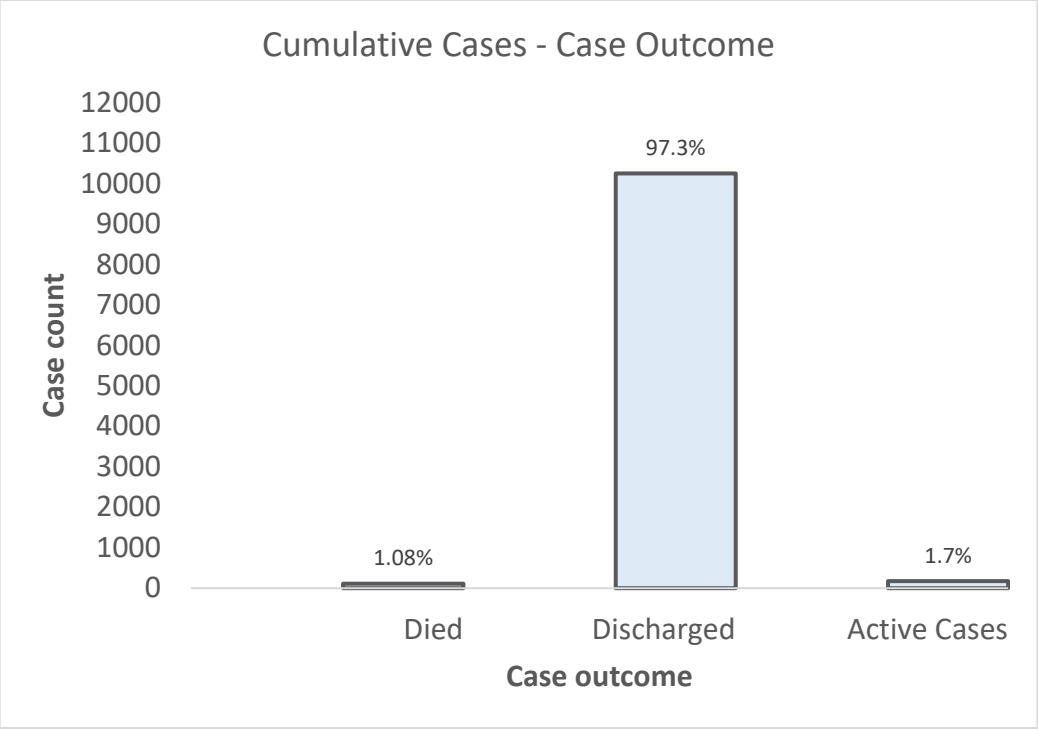

Figure 12. Distribution of case outcome for cumulative cases

Interpretation and recommendations

- Most cases with a case management type are managed at home. About 58.7% 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 1.08%**

Risk Communication and Community Engagement Update

The following achievements were registered during Week 16 under the risk communication and community engagement (RCCE) pillar:

- Community-based contact tracers supported by ICAP, provided information about COVID-19 to 2462 persons
- Main challenges for the RCCE pillar include:
    1) Community non-compliance with COVID-19 preventive measures
    2) Stigmatization of COVID-19 prevents people from reporting suspected cases to the hotline

Points of Entry Update

During the epidemiological week, IOM screened 4395 (3266 male; 1129 female) travelers from Nimule land crossing. Nimule PoE screens only arriving travelers. No traveler underwent secondary screening. The cumulative number of travelers screened for COVID-19 from Feb 15, 2020 to April 25, 2021 is 598906.

Most of the travelers screened at Nimule PoE this week were truck drivers and returnees. Of the 4395 inbound travelers, 1635 were returnees from refugee camps in Uganda, 778 were other nationals other than truck drivers, and 1982 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 taskforce meetings in Nimule.

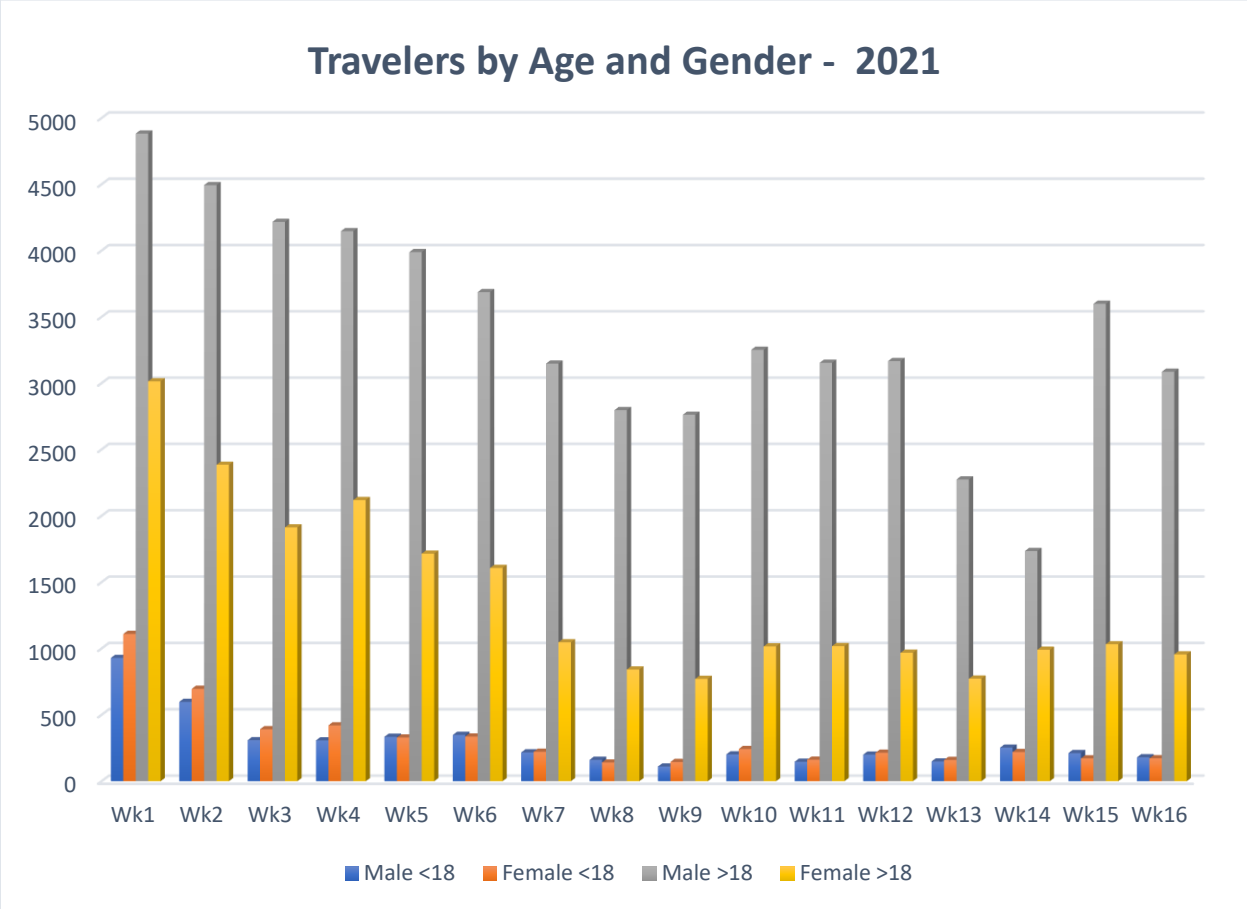

Figure 13. Number of travelers screened by sex and age

Vaccination Update

No update provided this week.

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