



**South Sudan
Ministry of Health**

**Integrated Disease surveillance
and response (IDSR)**



**World Health
Organization**
South Sudan

**Epidemiological Bulletin Week 42, 2023
(October 16– 22 October)**

Major epidemiological highlights in week 42 of 2023

- In week 42, 2023, the IDSR reporting timeliness and completeness were at **80%** and **90%**, while EWARN sites were at **94%** and **100%** respectively
- Percentage of reporting for IDSR at private Health facilities in Juba stands at 100%
- A total of 218 alerts were triggered in week 42, 2023, and the majority were for AWD 18% (41/221), measles 16% (37/221), and Guinea 12%(28/221)
- Update on Tungaisis outbreak in Lobone, Magwi county Eastern Equatoria state with 78-line listed cases as of October 2023
- Hepatitis E Virus outbreak in Old Fangak, Jonglei State, with 93 cases with 14 deaths line listed giving a CFR of 15%
- Measles cases continue to be reported in South Sudan with **218** suspected cases reported in the last 4 weeks (40-43) and **14** out of **25** samples confirmed measles with a **56%** positivity rate



SURVEILLANCE PERFORMANCE



For the Integrated Disease Surveillance
(IDSR) network and Early warning alert
and response network (EWARN)



Timeliness of IDSR health facility reporting for week 42 & 41 by states and Admin Areas

Admin area	# of implementing partners	# of reporting health facilities	% of Timeliness in week 42	% of Timeliness in week 41
CES	12	124	100%	90%
RAA	1	16	100%	44%
NBGZ	5	89	99%	94%
Lakes	4	112	92%	90%
WES	6	183	87%	87%
Jonglei	16	114	83%	88%
WBGZ	6	83	78%	78%
Warrap	9	111	74%	80%
Unity	12	88	69%	60%
Upper Nile	14	135	67%	58%
EES	6	107	62%	71%
GPAA	2	15	53%	53%
AAA	2	17	6%	6%
National	95	1195	80%	78%

Reporting timeliness at health facility level is Monday 10:00am of every week



Completeness of IDSR health facility reporting for weeks 42 & 41 by States and Admin areas

Admin area	# of implementing partners	# of reporting health facilities	% of Timeliness in Week 42	% of Timeliness in Week 41
Lakes	4	112	100%	98%
NBGZ	5	89	100%	94%
RAA	1	16	100%	94%
WES	6	183	100%	87%
CES	12	124	98%	99%
EES	6	107	96%	83%
Jonglei	16	114	90%	88%
Upper Nile	14	136	85%	77%
Warrap	9	111	82%	89%
Unity	12	88	81%	80%
WBGZ	6	83	78%	83%
GPAA	2	15	53%	53%
AAA	2	17	6%	6%
National	95	1195	90%	86%



Timeliness of IDSR mobile clinic reporting for week 42 & 41

Health Partner	# of Reporting Mobile Sites	% of Timeliness in week 42	% of Timeliness in week 41
SP	4	100%	100%
HFO	3	100%	100%
WVI	1	100%	100%
IMC	4	100%	100%
SCI	2	100%	100%
TRI-SS	2	100%	50%
SSHCO	1	100%	0%
SMC	1	0%	100%
TOTAL	18	94%	89%

Reporting timeliness at health facility level is Monday 10:00am of every week



Completeness of IDSR mobile clinic reporting for week 42 & 41

Health Partner	# of Reporting Mobile Sites	% of Completeness in week 42	% of Completeness in week 41
SP	4	100%	100%
HFO	3	100%	100%
IMC	4	100%	100%
SCI	2	100%	100%
SMC	1	100%	100%
WVI	1	100%	100%
TRI-SS	2	100%	50%
SSHCO	1	100%	0%
TOTAL	21	100%	89%

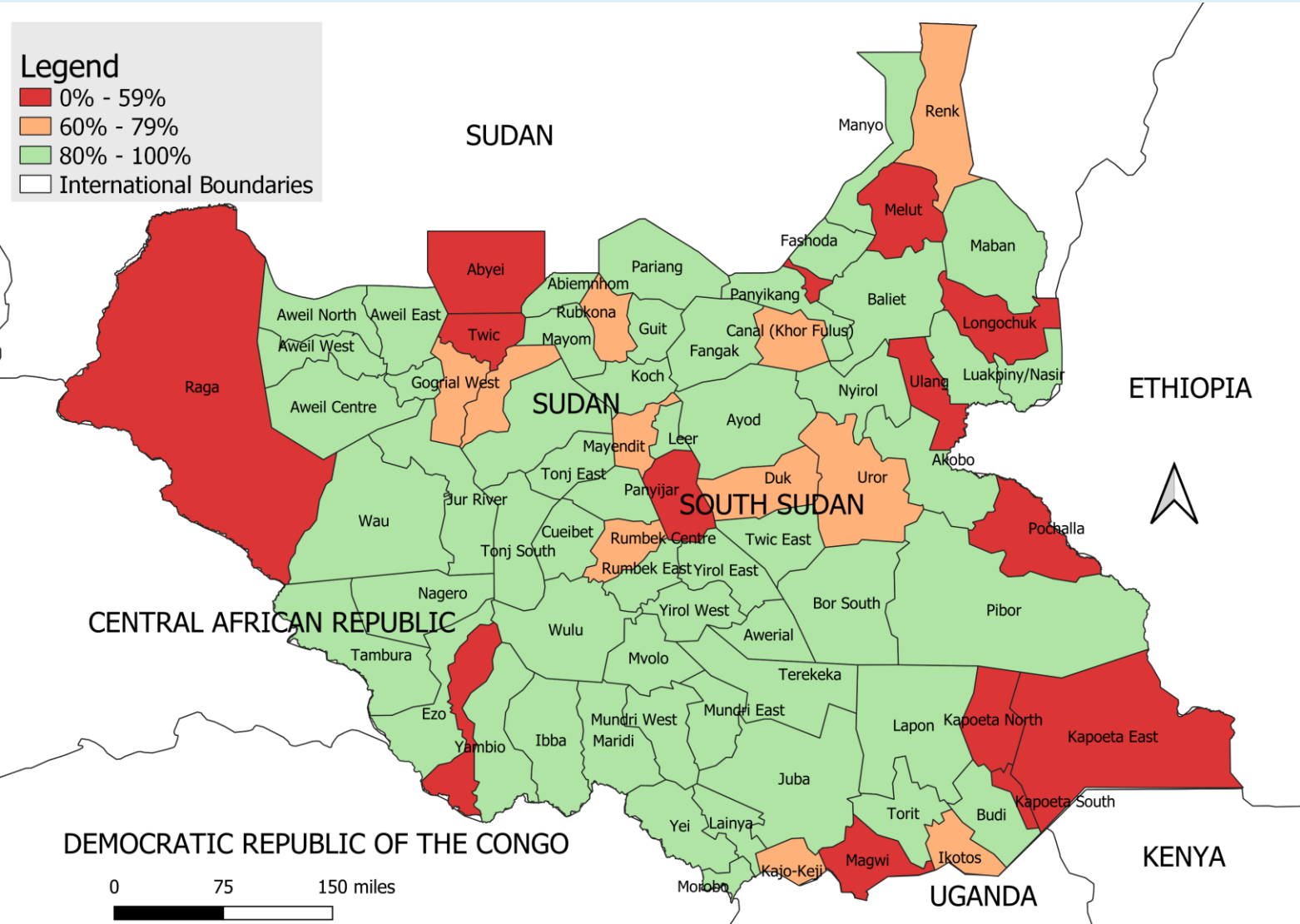


Percentage of IDSR Private Facilities reporting for week 42 & 41

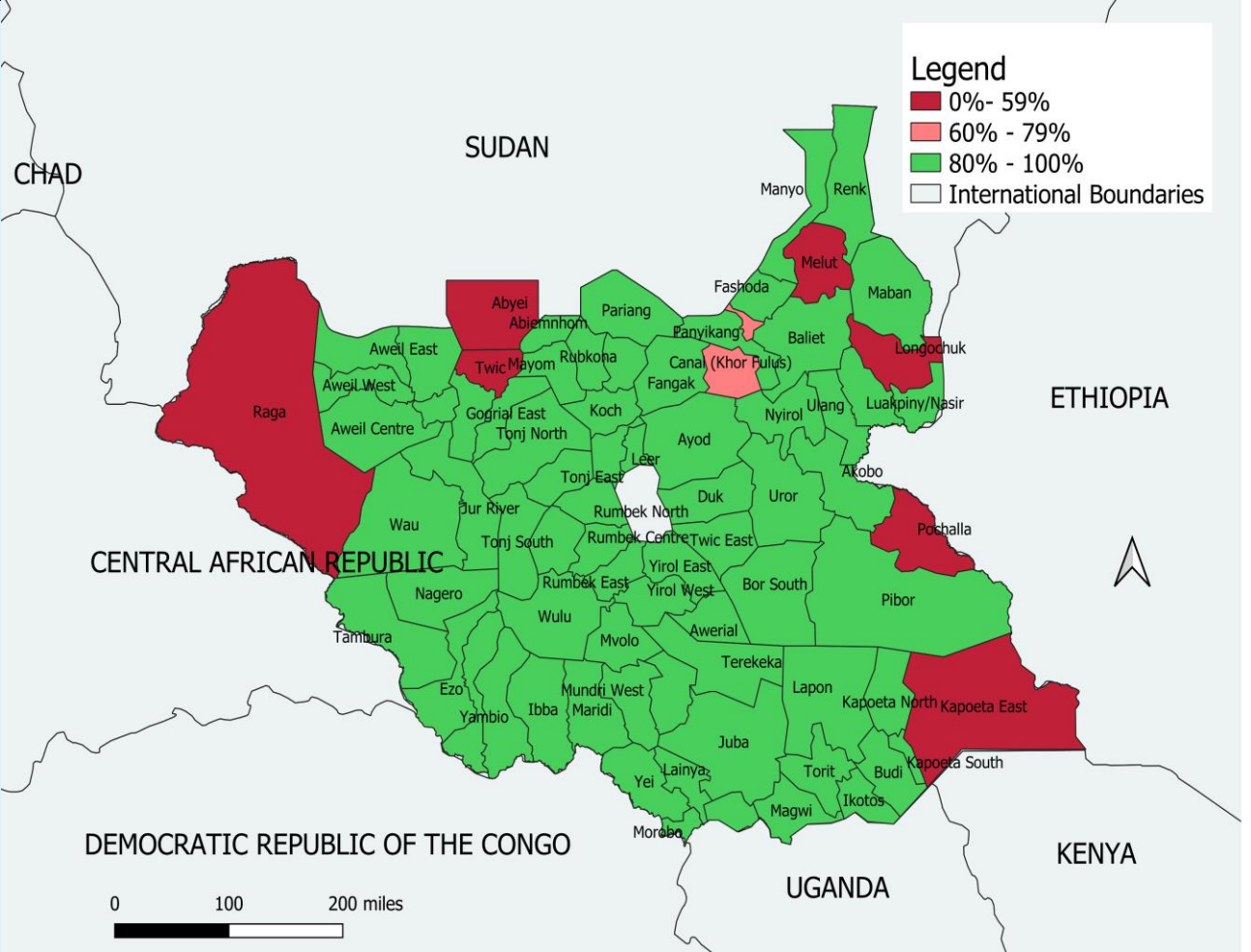
Payams	# of reporting private health facilities	% of Timeliness in week 42	% of Timeliness in week 41
Muniki	12	100%	100%
Rajaf	4	100%	100%
Juba	10	100%	100%
Kator	3	100%	100%
Northern Bari	1	100%	0%
TOTAL	30	100%	97%



Timeliness of IDSR reporting for week 42 by county



Completeness of IDSR reporting for week 42 by county



INDICATOR-BASED SURVEILLANCE



Alert management including detection; reporting; verification; risk assessment; & risk characterization

Alerts reported and verified by state for week 42

State/Ad min Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		Bloody Diarrhoea		Cholera		Covid-19		EBS		Guinea Worm		Malaria (Confirmed)		Measles		Relapsing Fever		Yellow Fever		Grand Total	
	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V
CES	0	0	0	0	4	2	1	0	0	0	0	0	2	0	0	0	1	0	2		0	0	0	0	10	2
EES	0	0	1	1	1	1	5	5	0	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	10	10
GPAA	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	
Jonglei	0	0	6	0	2		5	1	7	0	5	0	2	1			1		10		1		4		43	2
Lakes	0	0	4	4	6	6	1	1	1	1	1	1	8	8	20	20	3	3	0	0	0	0	0	0	44	44
NBGZ	0	0	7	7	7	7	4	4	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	21	21
RAA	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	1		0	0	0	4	0	
Unity	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7	1	1		0	0	11	4
Upper Nile	0	0	4	1	2		4	1	0	0	0	0	0	0	0	0	3	0	6	2	0	0	0	0	19	4
Warrap	0	0	0	0	2		0	0	0	0	0	0	1	1	3	3	0	0	4	0	0	0	0	10	4	
WBGZ	0	0	0	0	4	1	1	0	0	0	0	0	0	0	5	2	5	0	2	2	0	0	0	0	17	5
WES	1	1	1	1	11	11	9	8	1	1	0	0	0	0	0	0	6	6	1	1	0	0	0	0	30	29
Grand Total	3	3	23	14	41	29	31	20	9	2	6	1	15	10	28	25	22	12	37	9	2	0	4	0	221	125

- A total of 221 alerts reported
- Only (125) 56% verified in the system
- AWD, measles, and Guinea worm were among the highest number of alerts reported

#R= Reported #V= Verified

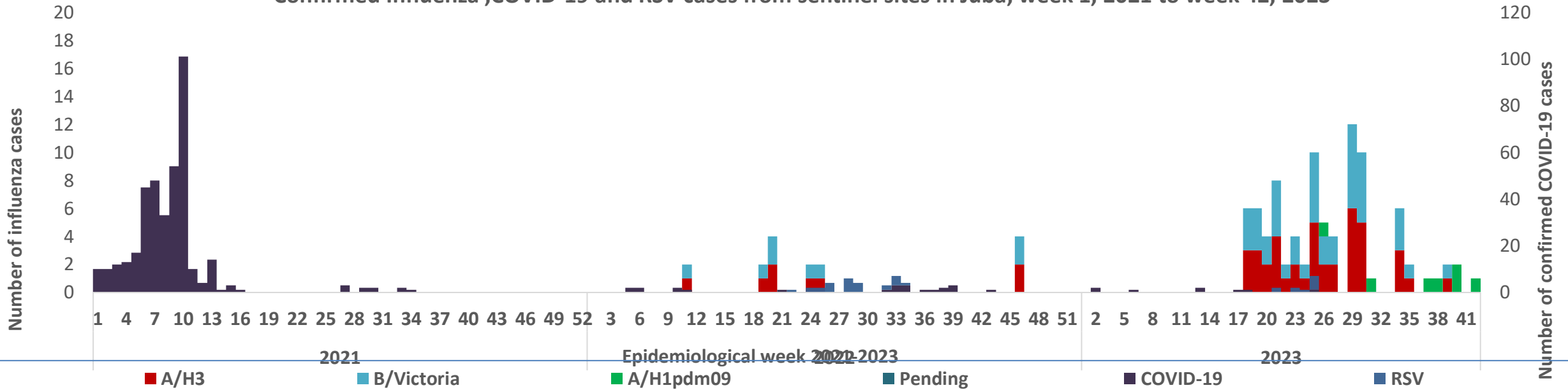


Influenza sentinel Surveillance updates



Routine Sentinel Surveillance | Human Influenza & other Respiratory Pathogens

Confirmed Influenza ,COVID-19 and RSV cases from sentinel sites in Juba, week 1, 2021 to week 42, 2023



- There are currently Four designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital and Al Sabah Children’s Hospital Rumbek State Hospital & Juba Military Hospital) that are collecting epidemiological data and samples from ILI/SARI cases.
- By the end of week 52,2022; a total of 594 ILI/SARI samples were collected,529 samples tested negative, and Cumulatively, 21 tested positive for covid-19,8 positive for Influenza B (Victoria), and 6 were positive for influenza A(H3).26 RSV was confirmed in Week 52
- From weeks 1-42 2023, a total of 754 ILI/SARI were collected all 676 tested negative,7 positives for Covid-19, (38)Influenza types A (H3), (10) B (Victoria), (7) for A/H1pdm09 and 13 for RSV in weeks 42,2023





ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

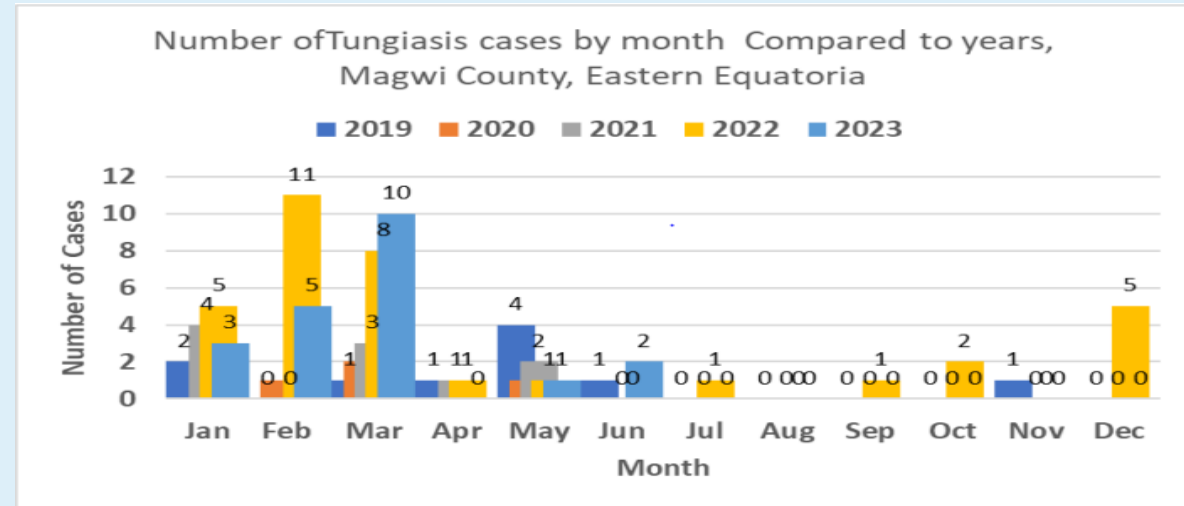


Tungaisis in Magwi County



Tungaisis outbreak in Lobone, Magwi county.

- In September 2023, the state ministry of health reported the increase of Tunga penetrants in Magwi Payam
- State team conducted a verification mission in Magwi County and line listed a total of 78 cases from way back to 2019
- Of the total number of Confirmed cases 48 males (62%) and 31 females (40%) have been registered all from the community.
- The rate of infestation is high among children aged 1-10yrs about 41% followed by the age group 50-59 years, 12.8% and it is very low among the teenager's group 3.8%.
- The rates of infestation is high among children age 1-10yrs about 41% then 50-59yrs, 12.8% and it is very low among the teenage group 3.8%
- On 18 October, the Ministry of Health declared the outbreak on Tungaisis in Magwi to pave the way for the national response
- Coordination by the ministry and multisectoral team to be deployed on 7 November to Magwi to initiate response and conduct further investigation



Age Group	# of Cases
> 1	0
1 ---10	32
11 -- 19	7
20 -- 29	3
30 -- 39	10
40 -- 49	6
50-- 59	10
60 -- 69	3
70 <	7
Total Cases	78





ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

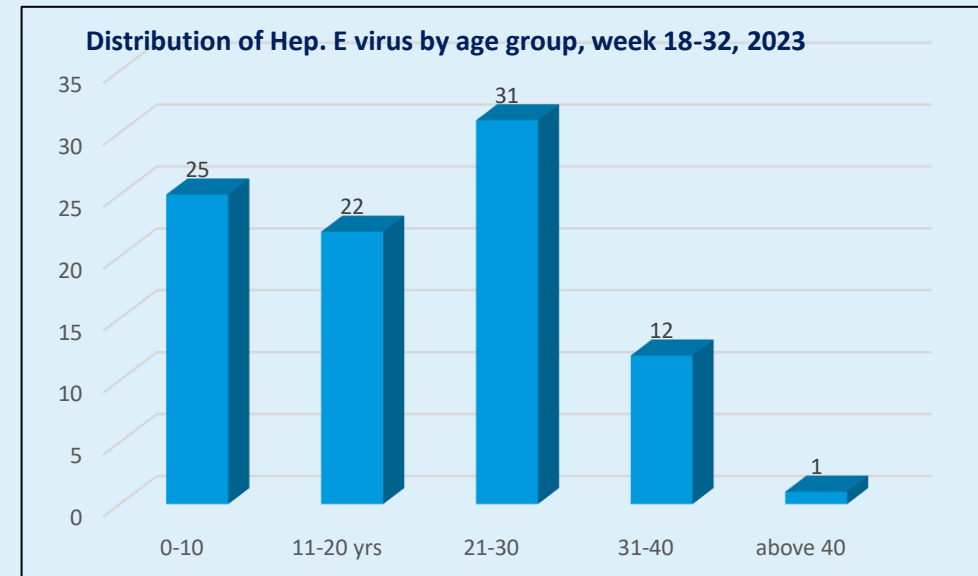
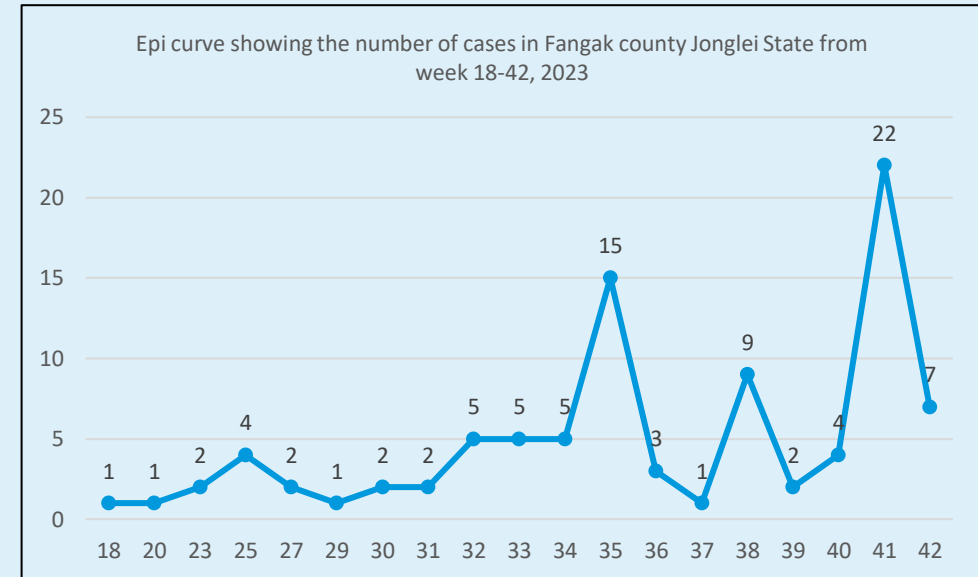


Hepatitis E outbreak in Fangak

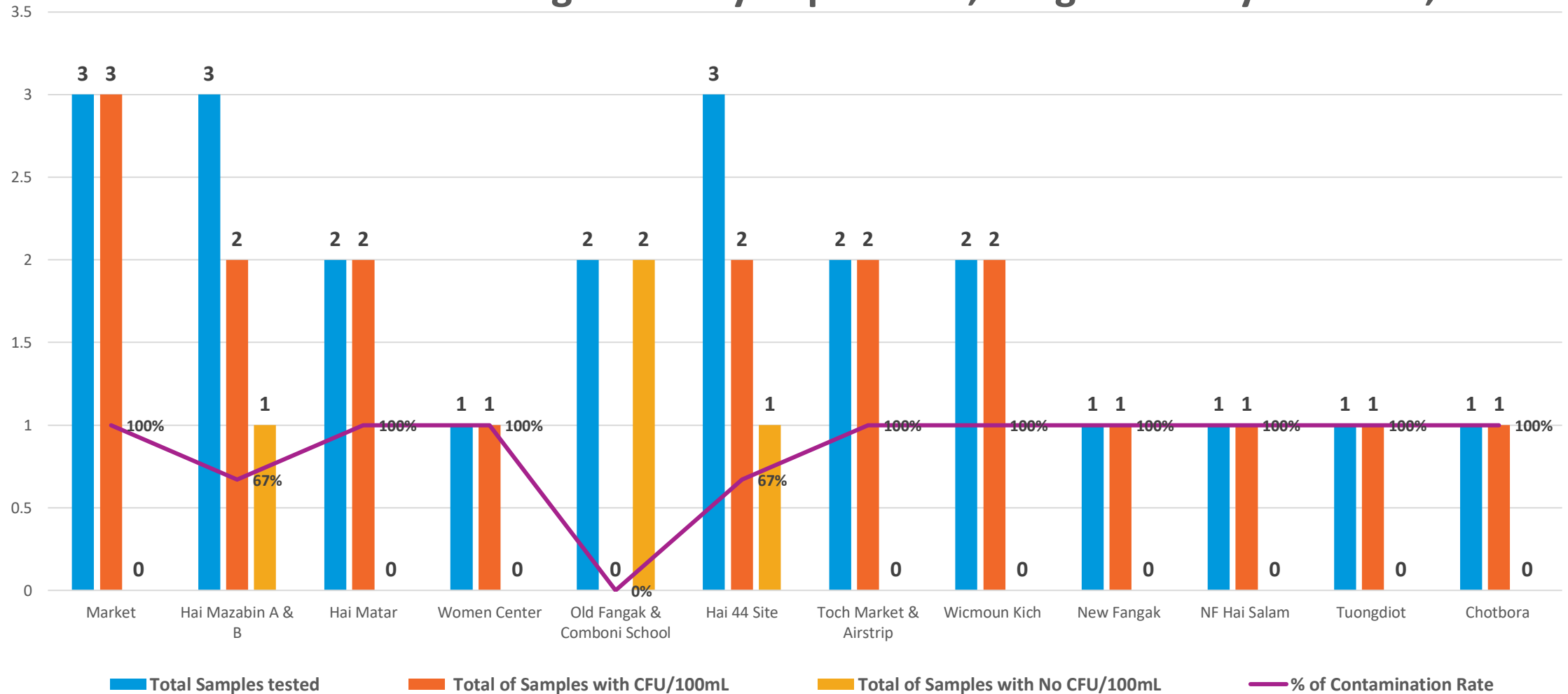


Hepatitis E updates in Fangak

- On Sep 25, 2023, World Relief notified the Ministry of Health of the increase in HEV cases.
- Out of the 13 samples collected 3 samples tested positive by PCR giving a positivity rate of 23.1%
- MSF is conducting case management and WHO supported MSF with More than 500 RDT for case detection
- Multisectoral and disciplinary RRT was deployed on 11 October 2023 to conduct in-depth epidemiological investigation
- A total of 93 cases with 14 deaths line listed CFR 15%. Of all the 14 deaths only one was male and 3 were in pregnant women
- All cases are in ages below 40 years of age except for one with mean age of 20yrs
- Water quality testing was conducted and out of 28 samples, 82% (23) contamination rate, meaning only 18% showing no fecal coliform (CFU/100ml)
- Ongoing coordination of response through the CHD office and the RRC



Microbiological Analysis per Sites, Fangak county. October, 2023



Hepatitis E Outbreak Updates in Fangak County

Conclusion

- Hepatitis E is a serious public health problem in Fangak county
- Old Fangak Payam is the most affected area
- Adults are the most affected group
- Drinking water is the source and the mode of transmission of HEV infection
- Open defecation and presence of another sick person at home remain as risk factors
- Malaria remain a leading cause of morbidity in Fangak

Challenges

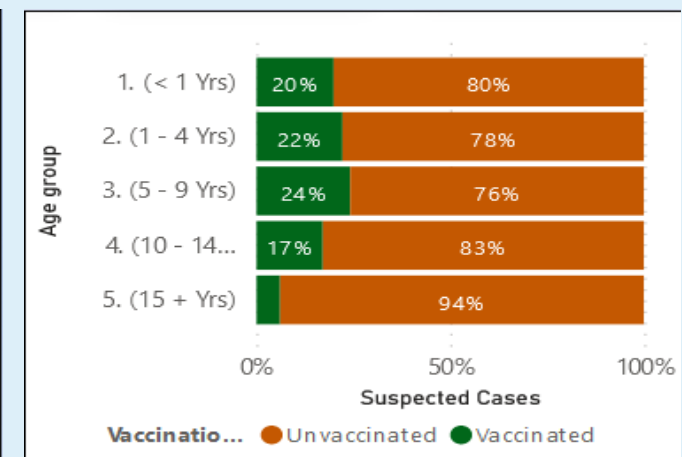
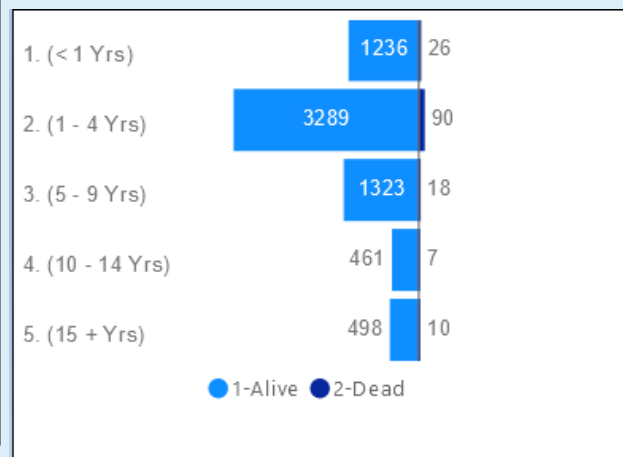
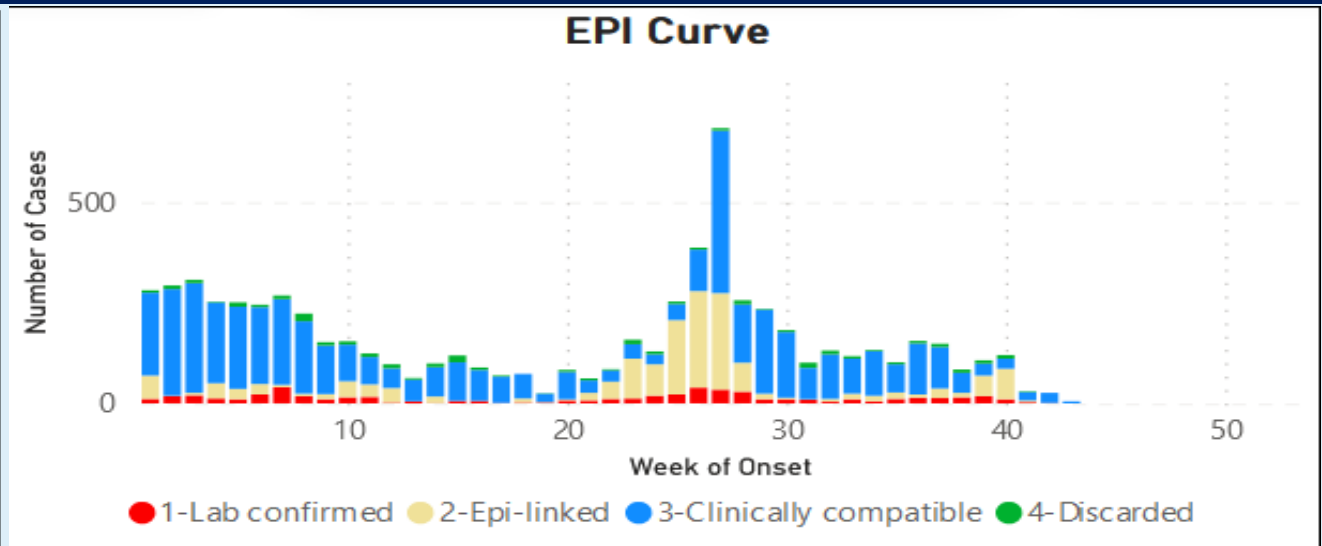
- Insufficient capacity of the isolation unit
- Inaccessibility of most of the areas due to floods
- Most of health care workers haven't been trained on detection and management of HEV cases
- Poor personal hygiene practice
- Lack of Handwashing facilities , Case definition and IEC materials
- Insufficient number of latrines

Recommendations

- MoH and partners should conduct HEV vaccination campaign using lessons learnt from Bentiu
- WASH interventions through increasing latrines
- Continue RCCE on the risk of open defecation and personal hygiene
- Encourage boiling drinking water and chlorination
- IEC materials to be translated into local languages
- There is a need for further systematic epidemiological study (case-control) to determine the actual risk factors

Measles outbreak situation update

- In 2023, A total of 6,957 with 150 related deaths have been reported with a CFR of 2.1%
- 65% of cases are in children less than 5 years of age with 76.6% of all related deaths
- In the last four weeks;
 - 288 suspected cases and 32 out of 51 samples confirmed measles with a 63% positivity rate
 - Epidemiological data for weeks 39-42 indicate that five counties had ongoing outbreaks in September/October, while an additional 11 counties reported suspected or confirmed cases that require further investigation and laboratory validation.
- Conducted IAR on 25 and 26 Oct. to improve response to the current ongoing outbreaks



Measles Reactive/Mop Up vaccination Data from 12 counties

- In Phase I of the measles vaccination campaign, over 65,000 children under 15 years were vaccinated in five counties (Renk, Aweil East, Aweil North, Aweil West and Rubkona)
- Phase II targeted 15 counties for reactive vaccination and 14 counties for post-vaccination surveillance.
- Seven counties received support from various partners, while WHO and UNICEF supported the other counties and supplied the required vaccines.
- As of week 42, 12 counties had implemented the campaign, vaccinating over 86% of children.
- Fangak County started the campaign on October 17th after receiving a third of the vaccine supply and will continue once the remaining supply drops are delivered.
- Maban and Maiwut counties are pending implementation due to vaccine stockouts, while Akobo county was prioritized for outbreak response with the available vaccine supply.



Vaccination Response Following Sudan Crisis

County	Measles					Polio				
	Target (6mth – 15 Yrs)	Host	Returnee	Total	Coverage	Target (0 – 15 Yrs)	Host	Returnee	Total	Coverage
Aweil East	2,504	0	2,378	2,378	95%	2,615	0	478	478	18%
Aweil North	700	0	599	599	86%	731	0	786	786	108%
Aweil West ¹	3,497	0	3,179	3,179	91%	3,652	0	2743	2743	75%
Rubkona	9000	6,494	2,684	9,178	102%	9,400	3814	1461	5275	56%
Renk	53,000	40,518	9,753	50,271	95%	55,356	44,163	10625	54788	99%
Total	68,701	47,012	18,593	65,605	96%	71,754	47,977	16,093	64,070	89%



Phase II Measles Reactive/Mop-Up Vaccination Activities

Counties included for Mop up/Reactive campaign based on

- Low performance of last MFUP campaign both admin and PCE coverage taken as a reference
- Active Measles transmission from Epi week 25 forward (4 weeks after the MFUP campaign)
- Border with Sudan and have registered point of entry (reference IOM population tracking dashboard)
- Counties with temporary transit camps



Measles Reactive/Mop Up Vaccination (Sept to date)

#	County	Target age group	Type of vaccination	Supporting Partner	Status of Implementation
1	Leer	6 to 59 months	Reactive	HFO, /Unicef	<ul style="list-style-type: none"> Completed <ul style="list-style-type: none"> Final data submitted
2	Rubkona	6 months to 15 years	Reactive	WHO/MSF/ Unicef	<ul style="list-style-type: none"> Completed <ul style="list-style-type: none"> Final data submitted
3	Malakal	6 months to 15 years	Reactive	MSF-Spain/Unicef	<ul style="list-style-type: none"> Completed <ul style="list-style-type: none"> Final data shared
4	Juba	6 months to 15 years	Mop up/ Reactive	WHO/Unicef	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data shared
5	Melut	6 months to 15 years	Reactive	WHO/Unicef	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data submitted
6	Abyei	6 to 59 months	Mop Up	Save the children/ Unicef	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data submitted but waiting to be uploaded on ODK
7	Gogrial West	6 to 59 months	Reactive	IHO, /Unicef	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data submitted
8	Twic	6 to 59 months	Reactive	WHO	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data yet to be submitted
9	Yirol East	6 to 59 months	Reactive	WHO	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data submitted
10	Awerial	6 to 59 months	Reactive	WHO	<ul style="list-style-type: none"> Complete <ul style="list-style-type: none"> Final data yet to be submitted



#	County	Target age group	Type of vaccination	Supporting Partner	Status of Implementation
11	Ayod	6 to 59 months	Mop up	MEDAIR/IMA/ Unicef	<ul style="list-style-type: none"> Ongoing <ul style="list-style-type: none"> Waiting for vaccine and supply delivery in the remaining Payams
12	Longechuk	6 months to 15 years	Reactive	WHO/Unicef	<ul style="list-style-type: none"> Ongoing <ul style="list-style-type: none"> Jangok, Udier and Chotbora Payams completed Dajo area yet to receive vaccine and supply
13	Fangak	6 to 59 months	Mop Up/Reactive	HFO	<ul style="list-style-type: none"> Ongoing <ul style="list-style-type: none"> Vaccination started in Payams accessed from Keew Old Fangak, Manajang yet to receive vaccine
14	Maban	6 months to 15 years	Reactive	WHO	<ul style="list-style-type: none"> Preparatory activity is ongoing <ul style="list-style-type: none"> Vaccine stockout to supply the two counties
15	Maiwut	6 months to 15 years	Mop up	WHO	
	Akobo	6 to 59 months	Reactive	WHO	<ul style="list-style-type: none"> MP developed and submitted Vaccine is prioritized to Akobo due to the ongoing outbreak and influx of returnees from Ethiopia
	6 counties with confirmed OBR in the last 2 weeks (Kapoeta East, Kapoeta South, Cuiebet, Guit, Abiemnom and Tonj North)				<ul style="list-style-type: none"> Response not yet planned <ul style="list-style-type: none"> Vaccine shortage Discussion on going between targeted Vs county wide campaign



County	Measles					OPV					Status
	Target	Host	Returnee	Total	Coverage	Target	Host	Returnee	Total	Coverage	
Rubkona	158,970	80,862	15,141	96,003	60%	166,035	88,989	16,505	105,494	64%	Complete
Leer	22,515	20,231	4,837	25,068	111%	24,885	21,012	4,860	25,872	104%	Complete
Abeyi	22,761	19,276	2,242	21,518	95%	-	-	-	-	-	Complete
Juba	96,015	75,756	22,312	98,068	102%	104,851	68,742	10,471	79,213	76%	Complete
Gogrial West	81,376	105,198	1,401	106,599	131%	89,942	112,685	1,216	113,901	127%	Complete
Twic	66,070	51,765	3,702	55,467	84%	73,025	61,283	4,998	66,281	91%	Complete
Ayod	42,997	10,136	-	10,136	24%	-	-	-	-	-	Ongoing
Malakal	29,291	25,654	3,328	28,982	99%	30,592	25,298	3,422	28,720	94%	Complete
Melut	30,470	31,177	652	31,829	104%	31,824	27,795	1,595	29,390	92%	Complete
Longechuk	50,289	33,942	7,189	41,131	82%	52,524	30,331	7,496	37,827	72%	Ongoing
Awerial	33,410	28,230	-	28,230	84%	36,927	20,072	-	20,072	54%	Complete
Yirol East	28,049	35,423	512	35,935	128%	31,001	30,916	597	31,513	102%	Complete
Total	662,213	517,650	61,316	578,966	87%	641,607	487,123	51,160	538,283	84%	





ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS



Hepatitis E Updates in Bentiu





HUMANITARIAN RESPONSE



Sudan Crises response in South Sudan

South Sudan's Response to the Impact of the Sudan Crisis

Key Figures

Daily Arrival trends, average **2,786** per day



81,062 Households



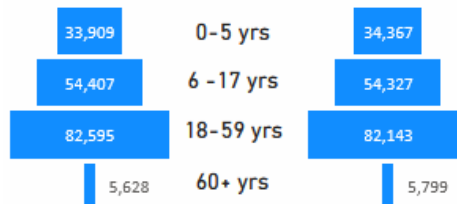
353,175 Individuals



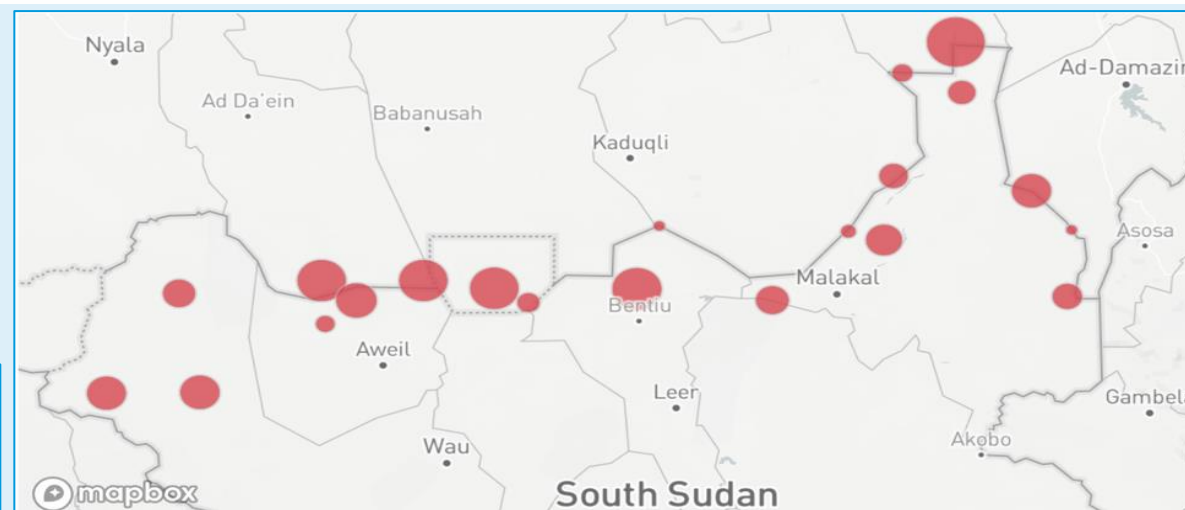
19 Nationalities



176,537



176,638



22 PoEs are currently being monitored, with Joda-Renk accounting for 83% of the reported influx figures

- as Week ending 31st Oct, 19,502 individuals crossed into South Sudan from at least 22 different PoEs,
- Cumulatively 353,175 individuals have crossed from at least 19 nationalities
- 84% (295,118) of the influx are South Sudanese returnees.

Renk Situation Update

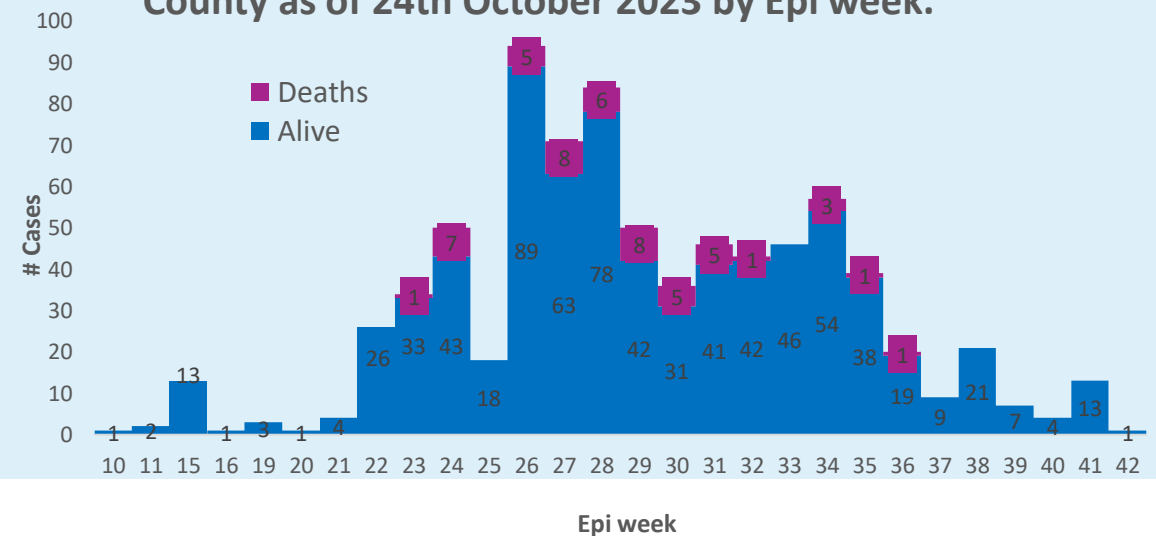
- As reported by ACTED on 1st November, 3,093 shelters in the Transit Centre, corresponding to an estimated 18,500 – 20,100 persons. This is an increase of ~5,000 individuals in the past week, the majority of whom are refugees.
- Significant increase in refugees as compared to previous weeks and months: currently there are 8,400 – 9,100 refugees – an increase of 4,000 in one week.
- Transit Center extension construction is underway. WVI will move the clinic to the TC extension site.
- Major challenge of overcrowding in the TC and at the Reception Centre with limited water supply and latrines to accommodate this growing number of refugees.

RENK UPDATES

- Children aged five years and younger accounted for 30.8% (2,497) of the total consultations.
- Gender distribution for consultations reported (Males 50.2%, Females 49.8%).
- Malaria is the leading with 40%, followed by ARTI at 21.2% , AWD at 5.4%
- A total of 794 measles cases have been reported, including 51 deaths. Most cases were reported from week 26, and most of the deaths were recorded in weeks 27 and 29.
- 57% of the cases had zero dose, 4.8% had one dose, and the vaccination status of 36.5% (281) were unknown.
- 71% of the cases occurred in the 1-4 years age group, followed by the 5 – 14 years group, which accounted for 20% of the cases. 54% of the cases are in Male, and 46% in Female.

Description	IMC TC	IOM PoE	RI TC	MSF-B	WVI TC	Total
consultat	28,544	44,826	31,374	-	7,053	111,797
Weekly new consultation	1,954	2,723	1,692	1,147	585	8,101

Epi curve for confirmed measles cases in Renk County as of 24th October 2023 by Epi week.



Key Interventions and ongoing activities for the Sudan Crises

- WHO/MoH is coordinating the overall emergency health response through the existing structures.
- Cholera Contingency Plan have been developed and cholera preparedness coordination meetings are ongoing between the Health and the WASH Cluster.
- WCO preposition a total of 269 Health Emergency Health kits to six locations that can benefit around 101,555 for three months at the cost of **\$ 142,710**.
- Kits issued were mainly IEHK, Pneumonia, Cholera Investigation & treatment Kits **(Including Cholera Investigation Test kits to strengthen Cholera Surveillance - Nine large WHO tents arrived to Renk this week including the V-Sat equipment)**. SAM/MC kits, and Field Sample Collection Kits. Others include Snake Venom antisera & SARS COV-2 Ag RDT.
- Strengthening Early Warning Alerts and Response Systems (EWARS) for timely detection and investigate priority diseases under active surveillance

A Joint WASH / Health Cluster Cholera Preparedness

- A cholera contingency plan has been developed and endorsed by WASH, Health Cluster, and local response teams. Action point of further discussions between WHO and the CHD.
- Three Cholera Preparedness Task Force meetings were held between 24 October and 2nd November with participation from WASH Cluster, WHO, MSF-B, IOM, UNICEF, OCHA, UNHCR, WVI, Solidarities International, other health and WASH agencies).
- Gaps in the provision of sufficient water for present needs in the Reception Centre and TC. A noted challenge with the water storage capacity in TC presently which requires addressing in preparing for potential cholera outbreak.
- Increased population of ~5,000 individuals in the past week, mainly refugees, in the TC which has led to increased water needs which are not being adequately met.
 - MSF-B has commenced preparing site for CTU on the grounds of Renk Hospital. Laying of marram gravel completed this week.
 - Site identified for Isolation Unit / CTU in Wunthou, pending approval from authorities. Marram gravel being sourced and WHO tents to be pre-positioned to commence CTU development.
 - WHO mapping the TC, Wunthou and Renk Town for oral rehydration points.
 - 20 L buckets sourced in local market for use at ORPs.
 - Training planned for next week of CHWs and health partner staff on ORS provision.
 - All partners confirmed to have cholera kits donated by WHO.



Challenges & Recommendations/Action taken in Renk

Challenges	Recommendation/Action taken
1) Stock-out of measles vaccine in Wunthou PoE.	1) WHO Juba RI informed and to follow up on sourcing vaccine.
2) Lack of vaccination cards and registers at Wunthou PoE to record vaccines.	2) At Health Cluster meeting, UNICEF communicated with Juba Office for supplies to be sent.
3) Cholera outbreak in four States in Sudan. Surveillance of AWD at Wunthou PoE, TC and in Renk Town.	3) Refresher training to health care providers delivered. Daily AWD surveillance in TC and host community being conducted. ORP network in TC, Wunthou and host community HFs to be set up and the CTU in Wunthou preparation to start next week.
4) Lack of 24-hour healthcare partner at the Wunthou PoE for detecting suspected cases of cholera.	4) Follow up with MEDAIR as to starting date for deployment of a team to Renk..
5) 300,000 LLINs with the CHD though not being distributed.	5) WHO raised issue with CHD in the Health Cluster meeting about draft distribution plan for the LLINs (TC and in Renk area). Malaria Consortium consultant arriving soon according to UNICEF Malakal staff.



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