



South Sudan Ministry of Health

Integrated Disease surveillance
and response (IDSR)



World Health
Organization
South Sudan

Epidemiological Bulletin Week 41, 2023 (October 09– 15 October)

Major epidemiological highlights in week 41 of 2023

- In week 41, 2023, the IDSR reporting timeliness and completeness were at 78% and 85% respectively, while EWARN sites were both at 84%
- Percentage of reporting for IDSR at private Health facilities in Juba stands at 97%
- A total of 203 alerts were triggered in week 41, 2023, and the majority were for measles 15% (32/203), malaria, 9% (19/203), AWD 18% (38/203) Guinea 12%(26/203)
- Update on Tungasis outbreak in Lobone, Magwi county Eastern Equatoria state with 78-line listed cases
- 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 **288** suspected cases reported in the last 4 weeks (38-42) and 32 out of 51 samples confirmed measles with a 63% 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 41 & 40 by admin area

Admin area	# of implementing partners	# of reporting health facilities	% of Timeliness in week 41	% of Timeliness in week 40
NBGZ	5	89	94%	93%
Lakes	4	112	90%	96%
CES	12	125	90%	91%
Jonglei	16	114	88%	62%
WES	6	183	87%	100%
Warrap	9	113	79%	78%
WBGZ	6	83	78%	84%
EES	6	107	71%	90%
Unity	12	88	60%	66%
Upper Nile	14	135	58%	53%
GPAA	2	15	53%	47%
RAA	1	16	44%	100%
AAA	2	17	6%	35%
National	95	1197	78%	81%

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



Completeness of IDSR health facility reporting for weeks 41 & 40 by admin

Admin area	# of implementing partners	# of reporting health facilities	% of Completeness in week 41	% of Completeness in week 40
Lakes	4	183	98%	100%
NBGZ	5	16	94%	100%
RAA	1	125	94%	100%
CES	12	112	90%	99%
Warrap	9	89	89%	88%
Jonglei	16	15	88%	80%
WES	6	107	87%	100%
EES	6	113	83%	95%
WBGZ	6	83	83%	86%
Unity	12	114	80%	77%
Upper Nile	14	88	78%	76%
GPAA	2	135	53%	100%
AAA	2	17	6%	35%
National	89	1197	85%	90%



Timeliness of IDSR mobile clinic reporting for week 41 & 40

Admin area	# of Reporting Mobile Sites	% of Timeliness in week 41	% of Timeliness in week 40
SP	4	100%	100%
SMC	1	100%	100%
HFO	3	100%	100%
WVI	1	100%	100%
IMC	4	100%	75%
SCI	2	100%	0%
TRI-SS	2	50%	50%
SSHCO	1	0%	100%
IOM	1	0%	0%
TOTAL	19	84%	74%

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



Completeness of IDSR mobile clinic reporting for week 41 & 40

Admin area	# of Reporting Mobile Sites	% of Completeness in week 41	% of Completeness in week 40
SP	4	100%	100%
SCI	2	100%	100%
SMC	1	100%	100%
IMC	4	100%	100%
HFO	3	100%	100%
WVI	1	100%	100%
TRI-SS	2	50%	100%
SSHCO	1	0%	100%
IOM	1	0%	0%
TOTAL	21	84%	95%

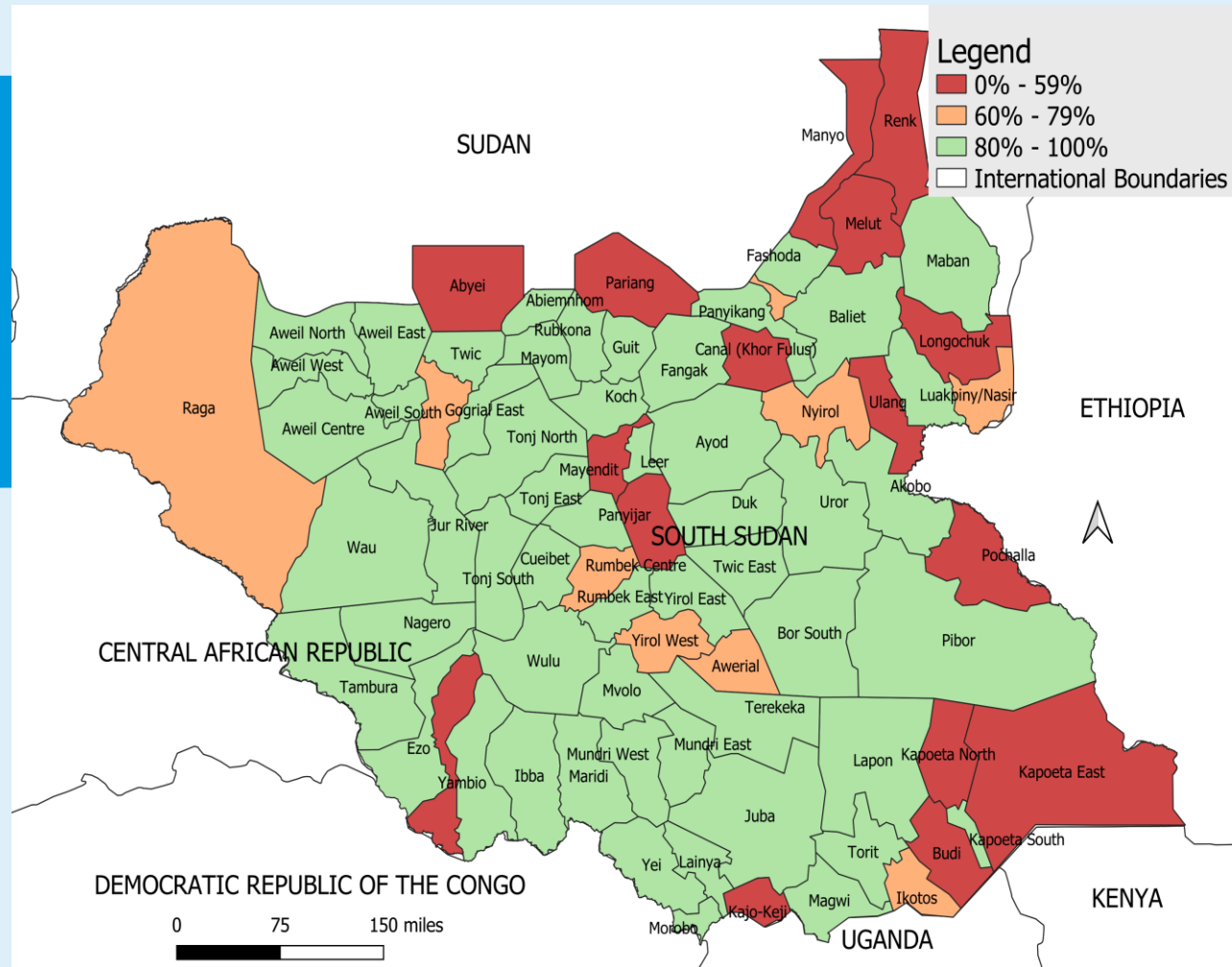


Percentage of IDSR Private Facilities reporting for week 41 & 40

Payams	# of reporting private health facilities	% of Completeness in week 41	% of Completeness in week 40
Muniki	12	100%	100%
Rajaf	4	100%	100%
Juba	10	100%	100%
Kator	3	100%	67%
Northern Bari	1	0%	100%
TOTAL	30	97%	97%



Timeliness of IDSR reporting for week 41 by county



INDICATOR-BASED SURVEILLANCE



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

Alerts reported and verified by state for week 41

Admin 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	
	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified	# reported	# verified
CES	0	0	0	0	4	0	1	0	0	0	0	0	2	0	0	0	1	0	2	0	0	0	0	0	10	0
EES	0	0	1	1	1	1	3	3	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	7	7
GPAA	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0
Jonglei	0	0	6	0	2	0	5	1	7	0	5	0	2	1	0	0	1	0	9	0	1	0	4	0	42	2
Lakes	0	0	4	2	5	4	1	0	1	1	1	1	8	7	18	2	3	2	0	0	0	0	0	0	41	19
NBGZ	0	0	7	5	7	5	4	4	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	21	15
RAA	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	4	0
Unity	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	1	0	0	0	11	3
Upper Nile	0	0	2	0	2	0	3	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	11	0
Warrap	0	0	0	0	2	0	0	0	0	0	0	0	1	1	3	3	0	0	4	0	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	0	1	0	9	0	9	0	1	0	0	0	0	0	0	0	5	0	1	0	0	0	0	0	27	0
Grand Total	3	2	21	8	38	11	28	8	9	1	6	1	15	9	26	7	19	4	32	4	2	0	4	0	203	55

- A total of 203 alerts reported
- Only (55) 27% verified in the system
- AWD, measles and Guinea worm were among the highest number of alerts reported

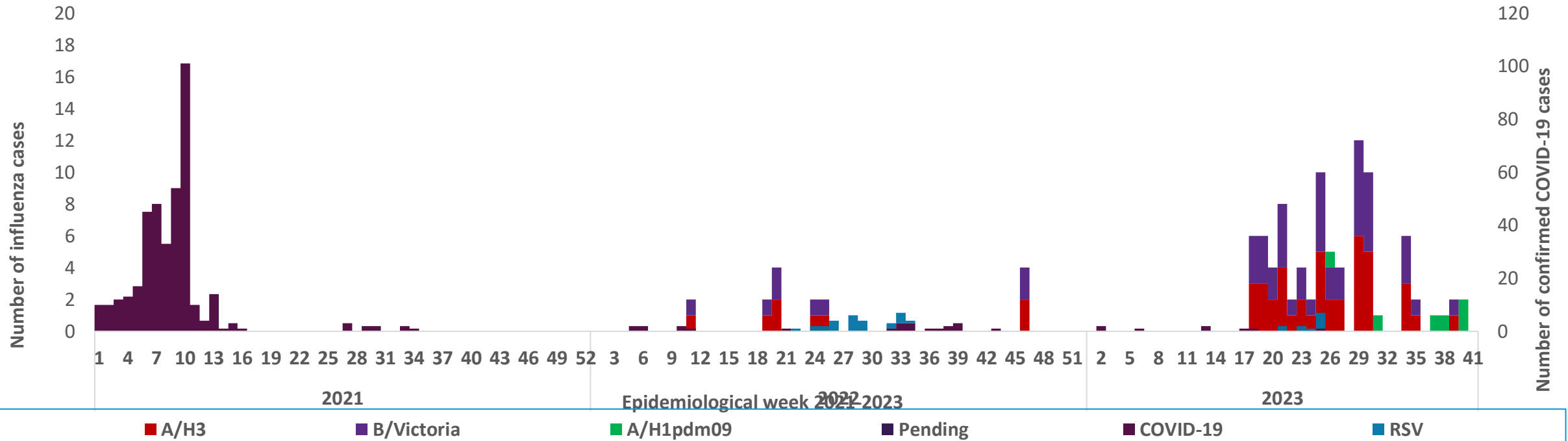


Influenza sentinel Surveillance updates



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 41, 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 1-41 2023, a total of 728 ILI/SARI were collected all 653 tested negative,7 positives for Covid-19, (38)Influenza types A (H3), (8) B (Victoria), (6) for A/H1pdm09 and 13 for RSV in weeks 41,2023





ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

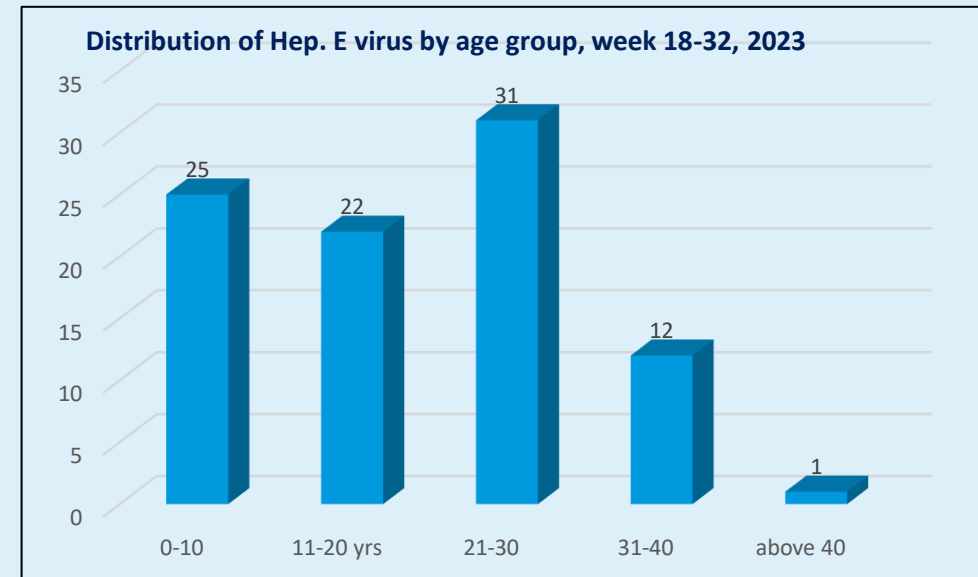
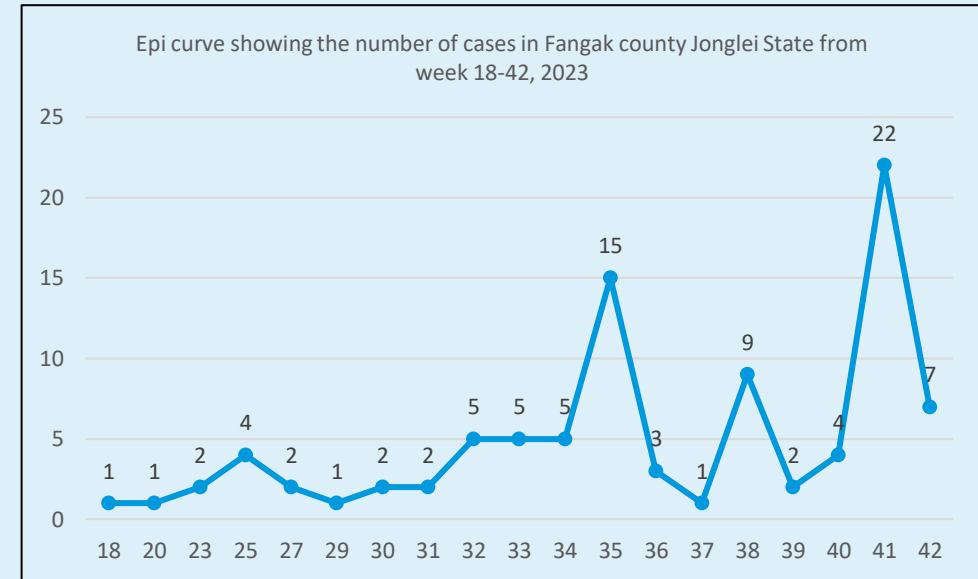


Hepatitis E outbreak in Fangak



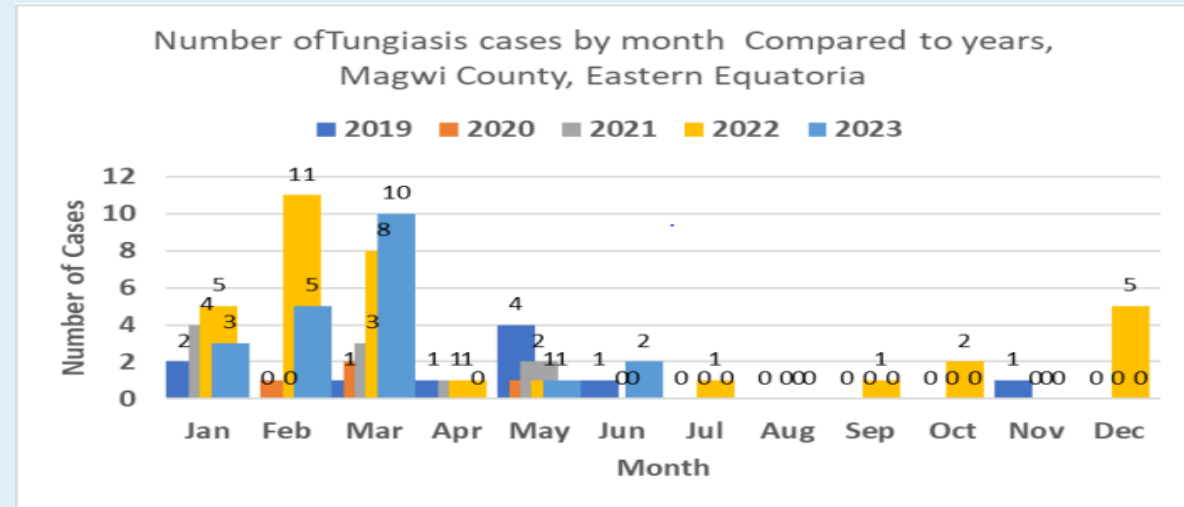
Hepatitis E updates in Fangak

- 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



Tungaisis outbreak in Lobone, Magwi county.

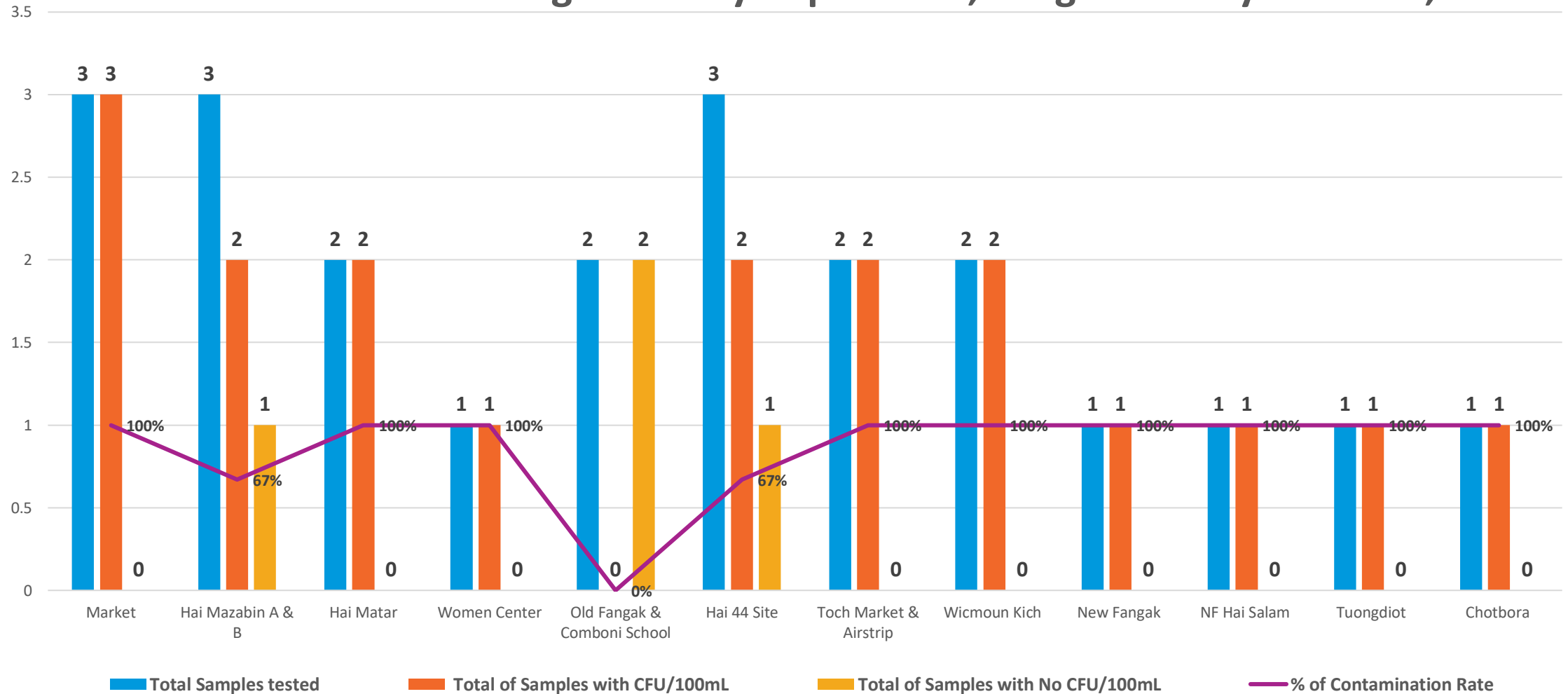
- In September 2023, the state ministry of health reported the increase of Tunga penetrants in Magwi Payam
- State team conducted a verification mission in Magwi County and line listed a total of 78 cases from way back to 2019
- Of the total number of Confirmed cases 48 males (62%) and 31 females (40%) 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



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



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

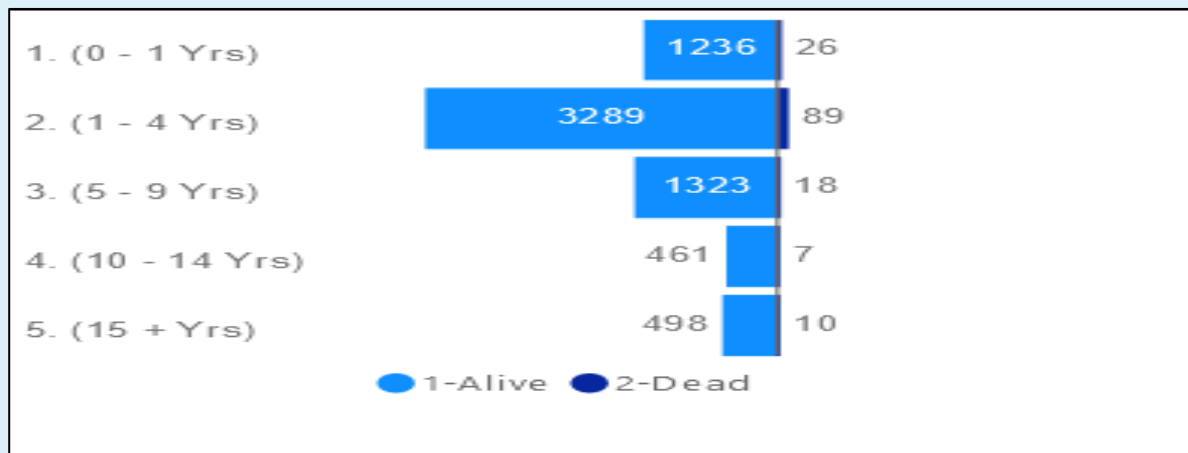
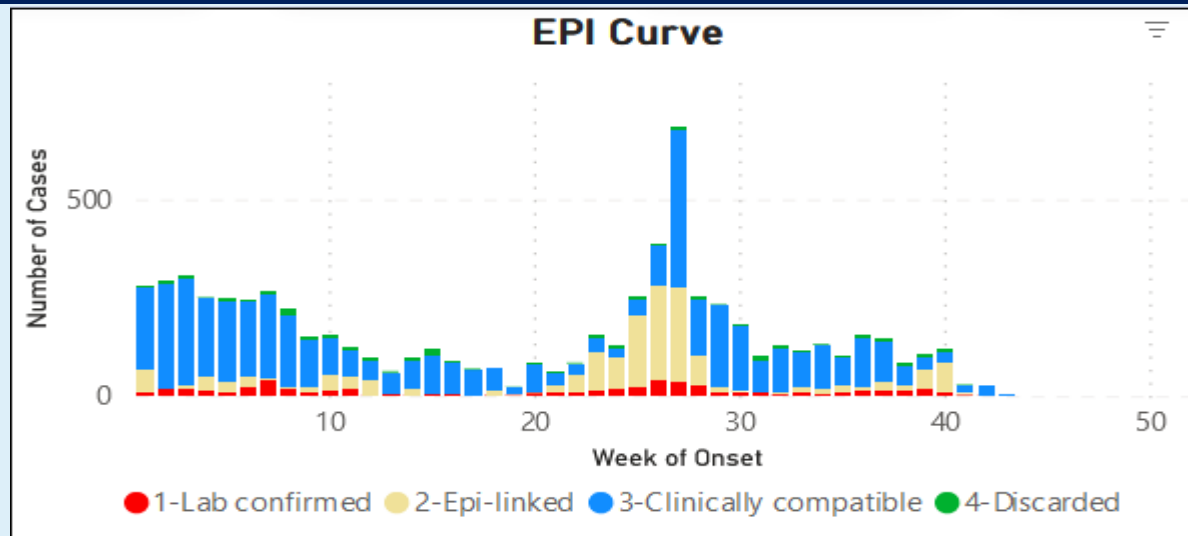
- Insufficient capacity of the isolation unit
- Inaccessibility of most of the areas due to floods
- Most of health care workers haven't been trained on detection and management of HEV cases
- Poor personal hygiene practice
- Lack of Handwashing facilities , Case definition and IEC materials
- Insufficient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



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The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

More information can be found at <http://ewars-project.org>

