Evaluation of the “Tea Team surveillance system”, Somali region, Ethiopia, 2019-2021

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Setting and Background

Wikipedia.org

Doolo zone

- (2007) 300,000 pop
  - 37% pastoralist
  - Almost 100% Somali

MSF presence

- 2007-2017- primary and secondary care
- 2017 Emergency and shift in strategy
- Detect and respond in a timely manner to disease outbreaks and other emergencies

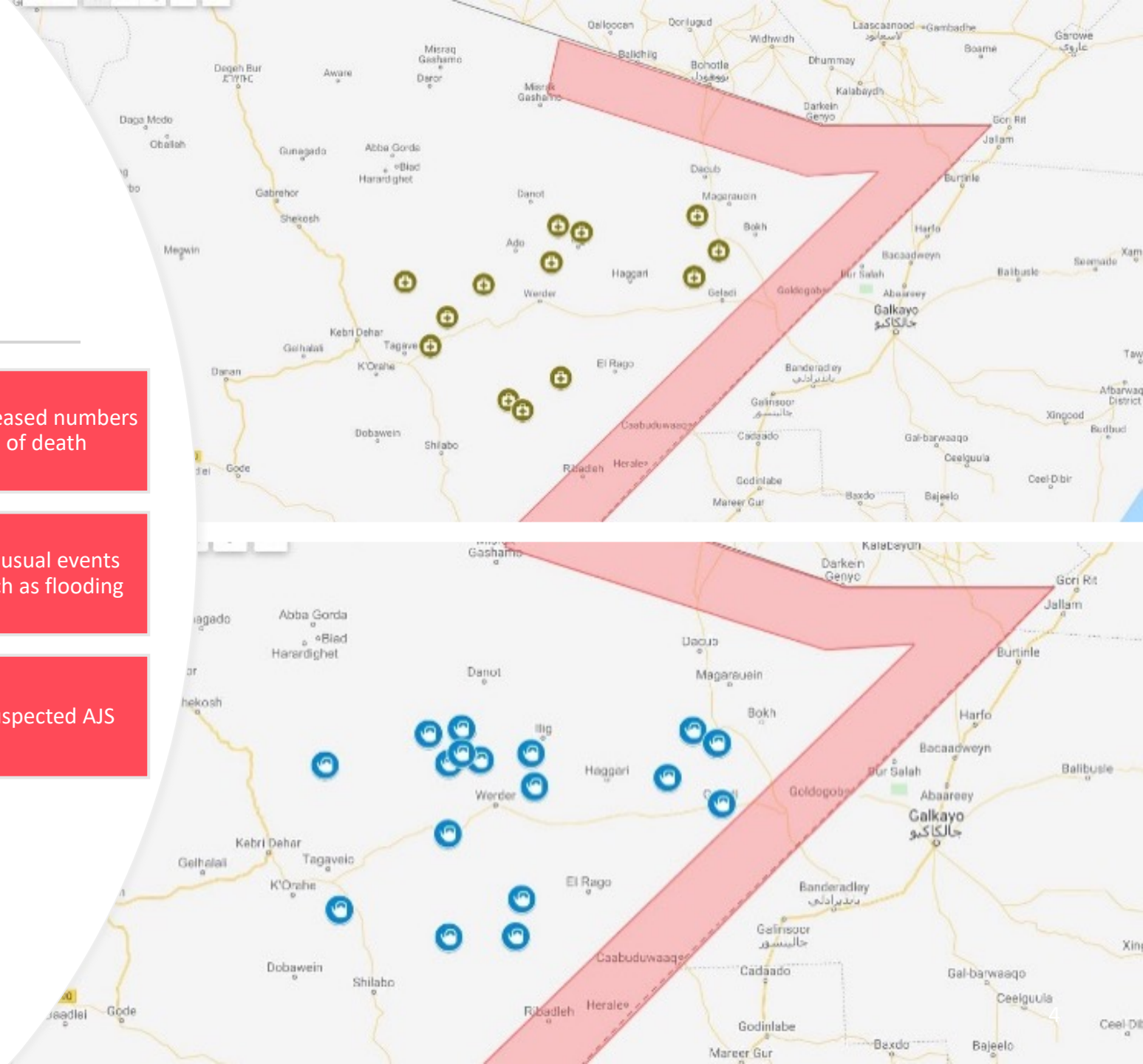
Wikipedia.org

Tea Team surveillance system

- Local volunteers who hold interactive regular dialogues (‘tea drinking’ sessions) with community elders
- to gather information disease surveillance and population needs.
- Components
  - Community IBS
  - Community EBS
  - Health Facility IBS
  - Other EBS

Signals

CEBS signals	Community suspected cases of measles, AWD and AJS	Clusters of cases of the same illness	Increased numbers of death
Concerns about malnutrition	Animal sickness or die off	Population movements	Unusual events such as flooding
CIBS signals	Suspected AWD	Suspected measles	Suspected AJS
	Malnutrition	Suspected COVID-19	



Evaluation methodology

Mixed methods

- Descriptive analysis of all surveillance data sources (2019-2021)
- Focus group discussions and in depth interviews
  - Community members (key informants and community leaders)
  - Surveillance staff
- Assessed the following attributes
  - Usefulness, simplicity, flexibility, timeliness, completeness, acceptability, positive predictive value, stability, representativeness

Ethics

- Ethics approval was obtained from MSF ERB
- Local ERB exempted their ethics approval
- State Minster of Health provided support letter

Results

Usefulness

Surveillance type	Total signals received	Signals	Events	Alerts	Responses
CEBS	916	199	129	46	22
CIBS	32	4	2	1	1
HFIBS	196	6	4	2	2
OEBS	62	62	37	11	6
Total	1206	271	172	60	31

Responses included:

- Vaccination campaigns
- Advocacy (e.g. animal health needs)
- Opening new mobile clinics
- Treating measles cases
- Providing NFI support after flooding

Acceptability

"It is important for us when there is a benefit, or there is a risk of harm to us, so it is important for the community to pass on what is available to those who are concerned so that they can respond to any benefit and there is nothing important for the community if they do not get any response for the grievances they presented, what the community is interested in is what they gain and lose." ***Community member***

"The process of signal reporting, verification, assessment and response] is a long process. Now it's possible, because we have the time for it. In an emergency we would be pushed to do things quickly and the situation would be complex – no one cares if we do everything, all these steps. The time of emergency is to respond" ***MSF Staff interviewee***

"The unhealthy issues of the camels have been reported and it was not responded to. The expectation we had from the unhealthy issues of the camels is not yet met. I think you expected that these are inspected and responded to immediately but this has not happened. Mostly the issues are not responded to on time" ***Community member***

Timeliness

Signal verification

Signal class	Surveillance type	Total signals verified	Signals verified within 24 hours of report	Percent of signals verified within 24 hours of report	Median days from report to verification (IQR)
Total	CEBS	183	148	80.9%	0 (0, 1)
	CIBS	4	3	75%	0.5 (0, 2.5)
	HFIBS	6	6	100%	0 (0, 0)
	OEBS	59	47	79.7%	0 (0, 1)

Timeliness

Risk assessment

Signal class	Surveillance type	Total events assessed	Events risk assessed within 48 hours of report	Percent of events risk assessed within 48 hours of report	Median days from report to risk assessment (IQR)
Total	CEBS	95	36	37.9%	5 (1.5, 13)
	CIBS	1	1	100%	1 (1, 1)
	HFIBS	2	2	100%	0 (0, 0)
	OEBS	26	12	46.2%	3 (1, 6)

Positive predictive value

Positive predictive value

Signal Class	Surveillance Type	Total Signals Reported	Total Responses	Response PPV of a Reported Signal
Total	CEBS	916	22	2.4%
	CIBS	32	1	3.1%
	HFIBS	196	2	1%
	OEBS	62	6	9.7%
Suspected measles	CEBS	54	5	9.3%
	CIBS	7	0	0%
	HFIBS	13	2	15.4%
	OEBS	20	2	10%
Suspected AWD	CEBS	75	6	8%
	CIBS	21	1	4.8%
	HFIBS	178	0	0%
	OEBS	9	0	0%
Suspected AJS	CEBS	17	0	0%
	CIBS	4	0	0%
	HFIBS	5	0	0%
	OEBS	2	0	0%
Deaths	CEBS	150	0	0%
	OEBS	1	0	0%
Malnutrition	CEBS	137	0	0%
	OEBS	4	0	0%
Other concern	CEBS	483	11	2.3%
	OEBS	26	4	15.4%

Limitations

No input from other stakeholders, so we were unable to evaluate full acceptability of the system

Unable to calculate sensitivity of the surveillance system due to lack of surveillance data from MoH

We were unable to estimate the cost of running the system therefore cannot make recommendations on any cost efficiencies that could be implemented.

Conclusions

Tea Team surveillance system is useful

Challenges with

- acceptability + simplicity
  - complexity of data systems
  - collaborations with animal health actors for response
- positive predictive value of signals
- timeliness of risk assessments

Simplify the surveillance system

- Data collection procedures/digitise (KoBo)/automate reporting (R)
- Remove CIBS and focus on CEBS in all locations

Strengthen collaboration with external actors (OEBS) including animal health actors

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