

---

# REVIEW OF OUTBREAK THRESHOLDS OF INFECTIOUS DISEASES FROM THE SYNDROMIC SURVEILLANCE DATABASE IN VANUATU FROM 2018-2021

JOANNE MARIASUA, PUBLIC HEALTH SURVEILLANCE OFFICER

VANUATU 2ND HEALTH RESEARCH SYMPOSIUM

National Convention Center, Port Vila

23 – 24 September 2021



# INTRODUCTION

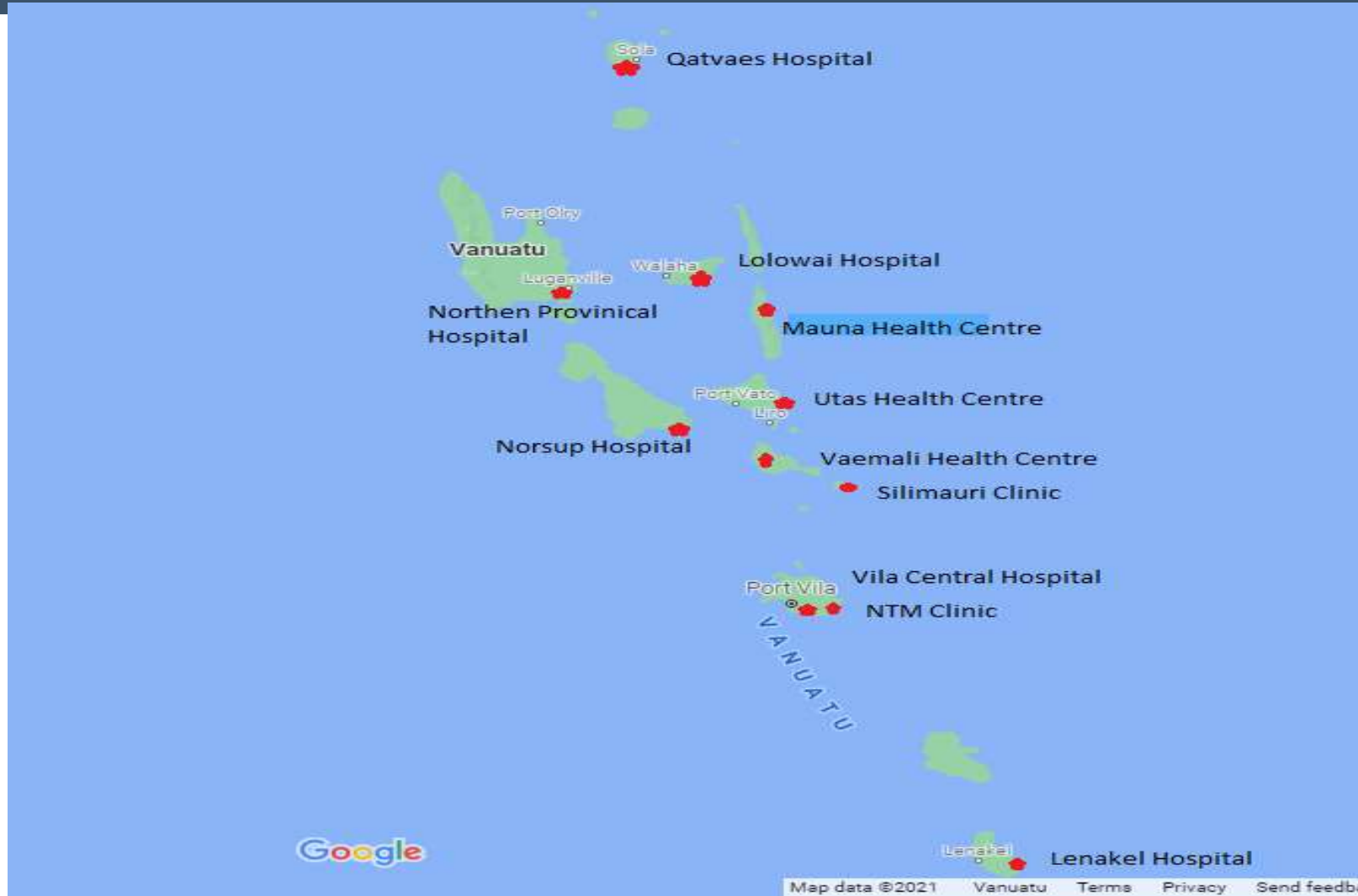
- Vanuatu has participated in the Pacific syndromic surveillance system (PSSS) since 2015.
- The four core syndromes reported to PSSS are: Acute fever and Rash, Influenza like illness, Watery Diarrhoea and Prolonged Fever.
- Outbreaks are detected when cases exceed the determined threshold
- The objective of this research is to see whether the outbreak thresholds need to be reviewed.



# INTRODUCTION - SYNDROME, CAUSATIVE AGENT, DISEASE

Acute Fever & Rash	Influenza like Illness	Watery Diarrhoea	Prolonged Fever
Measles	Influenza viruses	Salmonella	Typhoid
Dengue Virus	Respiratory syncytial virus	Rotavirus	Dengue virus
Zika Virus	Streptococcus Pneumonia	Adenovirus	Zika virus
Leptospirosis	Other bacterial pneumonias	Norovirus	Chikungunya virus
Chikungunya virus	COVID19	Clostridium Perfringes toxin	Leptospirosis
Rubella		Bacillus cereus toxin	Malaria
Coxsackie		Staphylococcus aureus toxin	Pneumonia
			Secondary bacterial infections
VANUATU 2ND HEALTH RESEARCH SYMPOSIUM			

# METHODS - LOCATION OF SENTINEL SITES



# METHODS

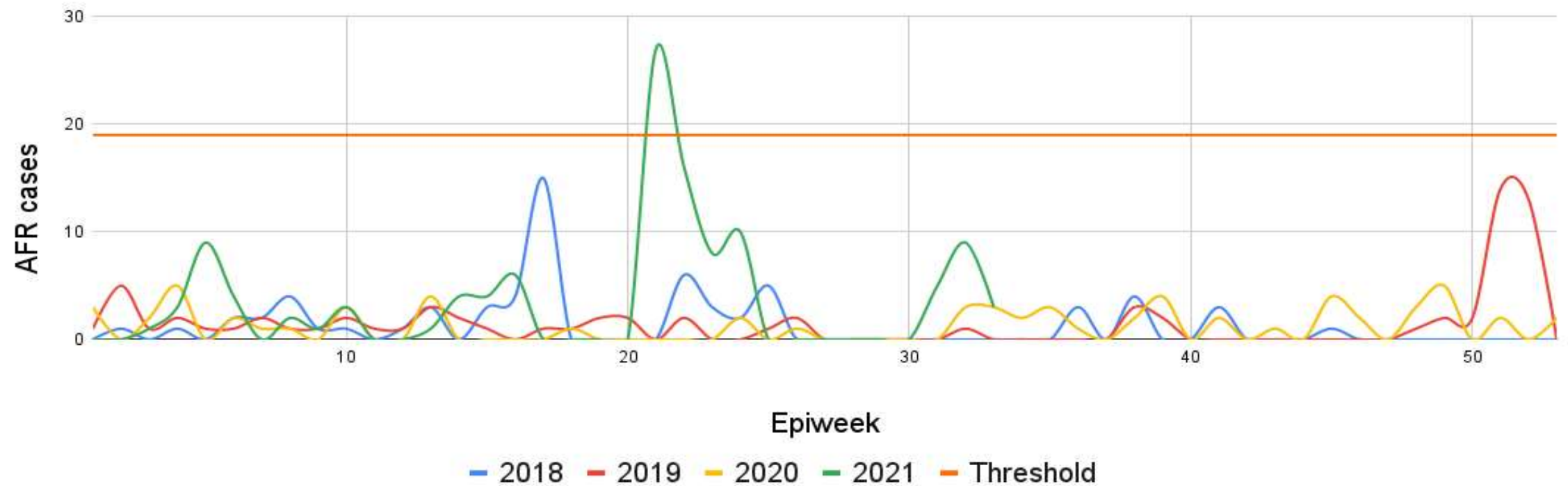
- Eleven sites report weekly and data is sent to PSSS.
- Data from 2018-2021 were extracted from the syndromic surveillance database.
- Visual inspection.

Syndrome	Outbreak Threshold
Acute Fever and Rash	19
Prolonged Fever	38
Influenza like illness	426
Watery Diarrhoea	371



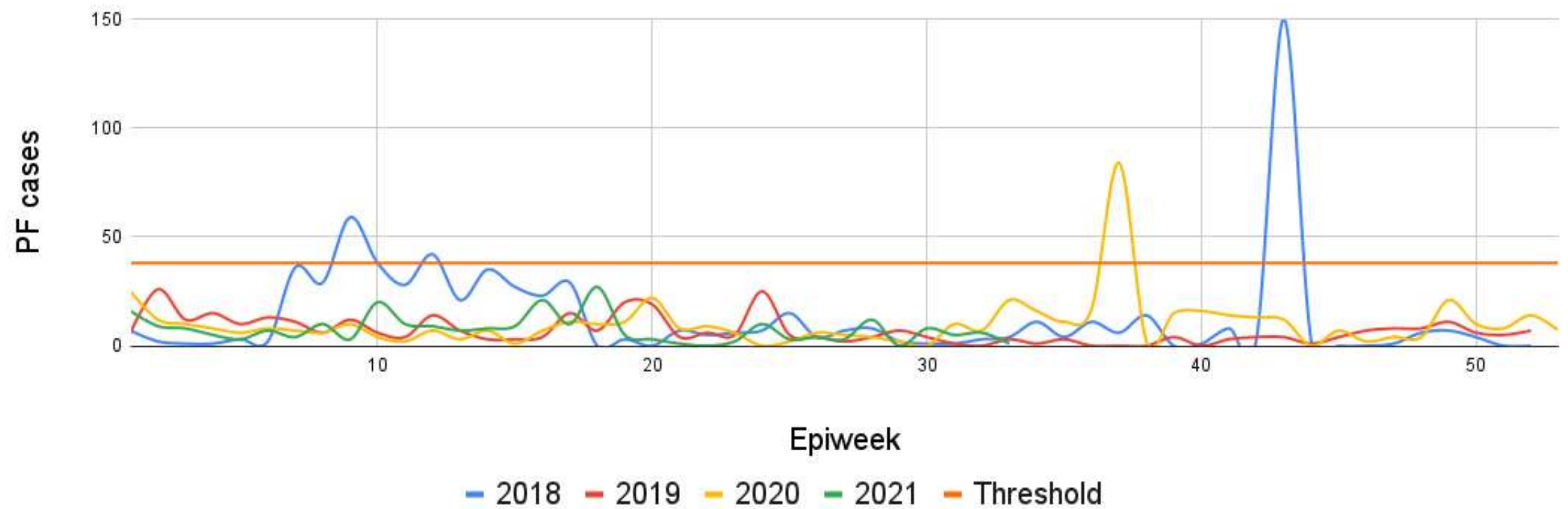
# RESULTS

## ■ Acute Fever and Rash vs Epiweek



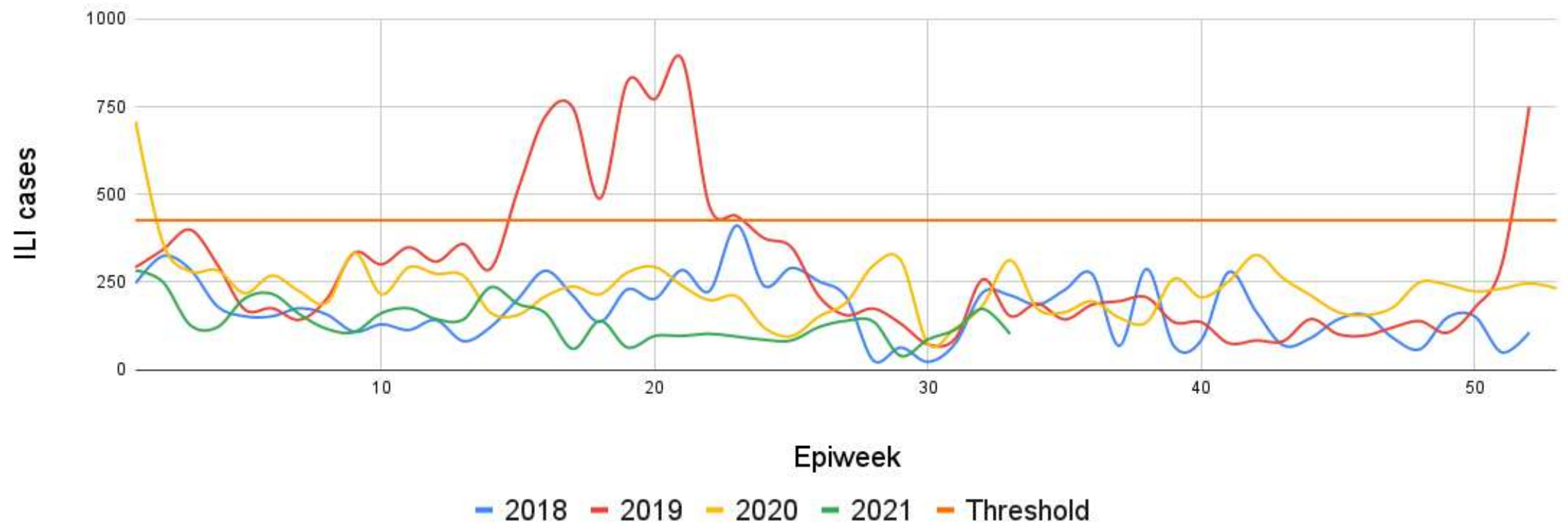
# RESULTS

## ■ Prolonged Fever cases vs Epiweek



# RESULTS

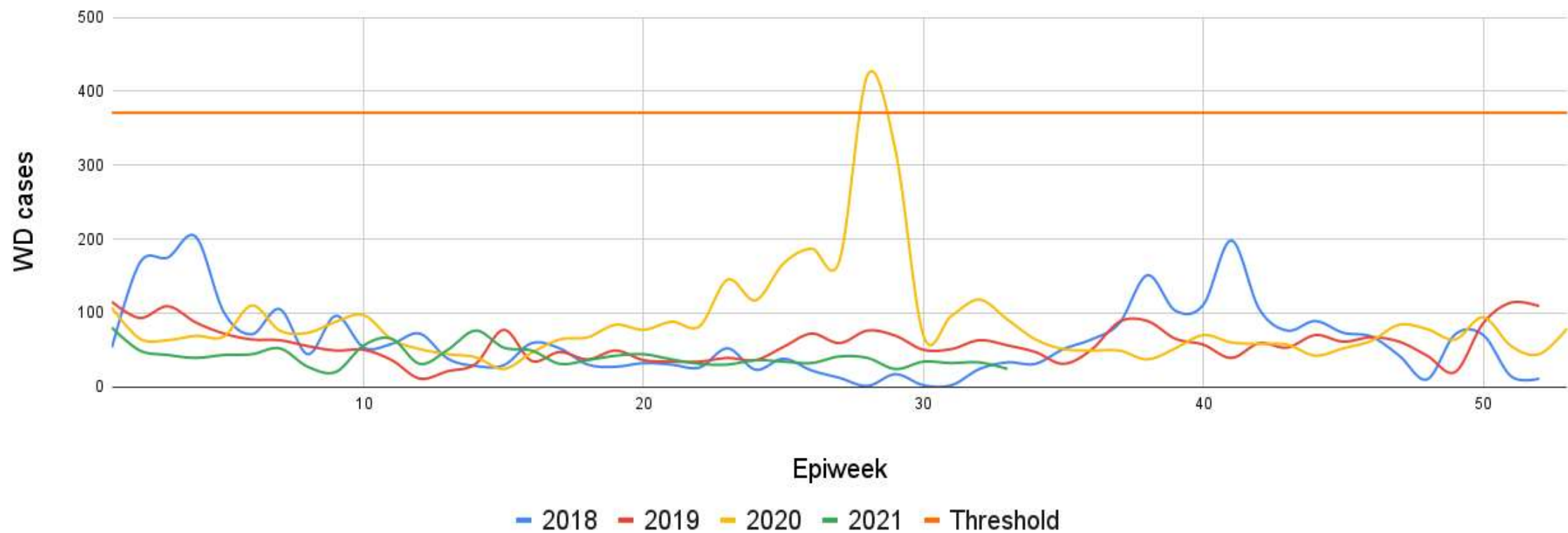
## ■ Influenza like Illness cases vs Epiweek





# RESULTS

## ■ Watery Diarrhoea cases vs Epiweek



## DISCUSSION

- Outbreaks were identified for all syndromes.
- Potential outbreaks were also identified but were below the threshold.
- Most of the outbreaks that were seen were well responded to thus the decrease in cases.
- Thus, these results shows the need to review and recalculate thresholds to better capture potential outbreaks.



## RECOMMENDATIONS / IMPLICATIONS

- To increase number of sentinel sites.
- Pre-determined thresholds should be reviewed as we identified several potential outbreaks that were not detected according to existing thresholds.
- There are existing steps to calculate thresholds and this will be conducted in 2021.



# ACKNOWLEDGEMENTS

- SPC
- WHO
- Sentinel site focal nurses
- Vanuatu Health Program
- National Surveillance unit, MoH



Pacific  
Community  
Communauté  
du Pacifique



World Health  
Organization



Ministry of Health

