Acute Febrile Ilness

Brazil - 2019

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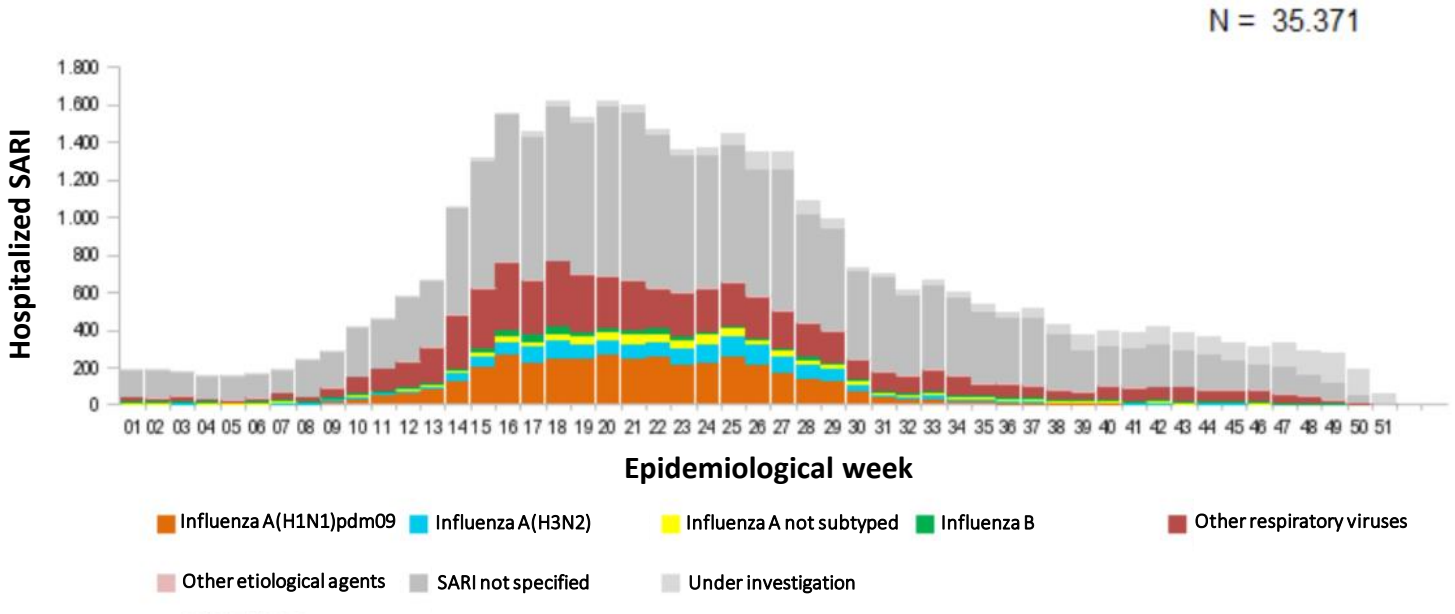
Introduction

- Aetiology of fever in Brazil- range of viruses and bacteria as elsewhere.
- Access to clinical assessment and treatment services through public health clinics Nationally. Variable capacity in regions of the country.
- No fever program at MoH
- Strong immunization services.
- Specific issues for Brazil:
- -Malaria in North.
- - Arboviruses across country: Dengue , Chikungunya, Zika , Mayaro, West nile?
- This presentation : ARI and rash fever and some ongoing studies of potential interest for future collaborations.

ACUTE RESPIRATORY INFECTIONS

Source:MoH Brazil

Severe Acute Respiratory Infections



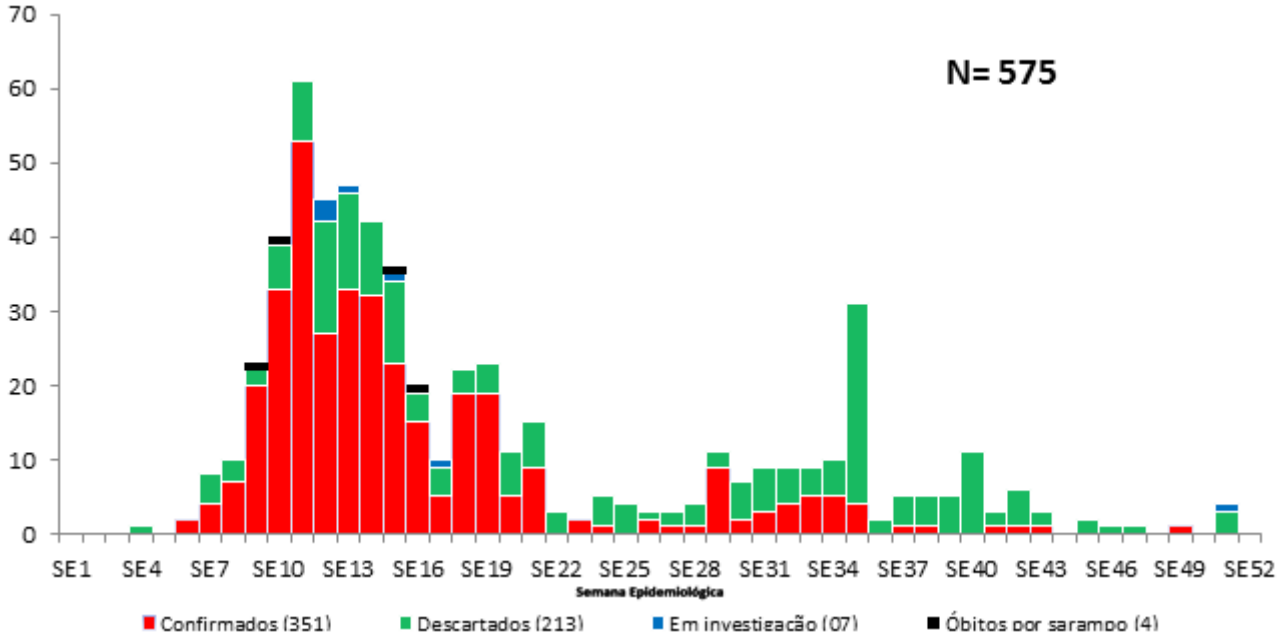
28.892 (81,7%) collected cases

- 23,3% (6.737/28.892) SARI caused by Influenza
- 22,0% (6.354/28.892) SARI caused by other respiratory viruses

Rash Diseases

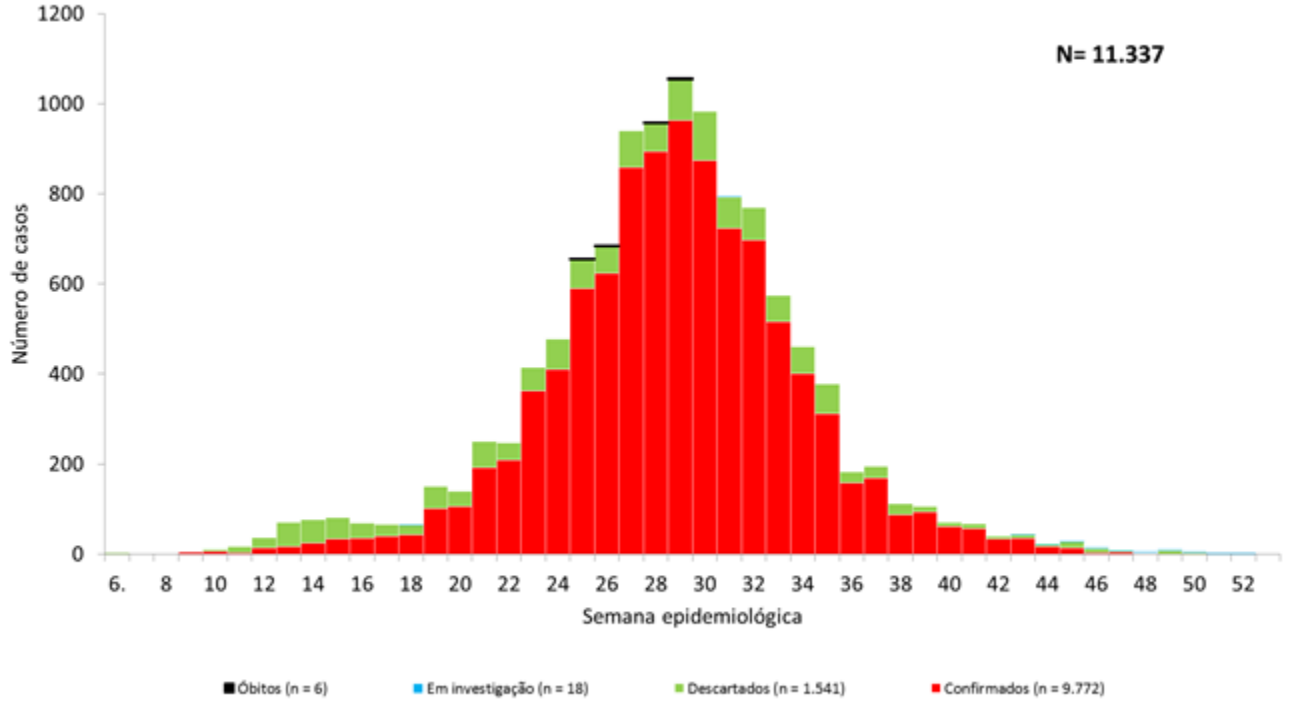
Measles in Roraima State, Brazil 2018

Source: RR state secretary of healty, Dec 2018



Measles in Amazonas State, Brazil 2018

Source: AM state Secretary of Health, Dec 2018



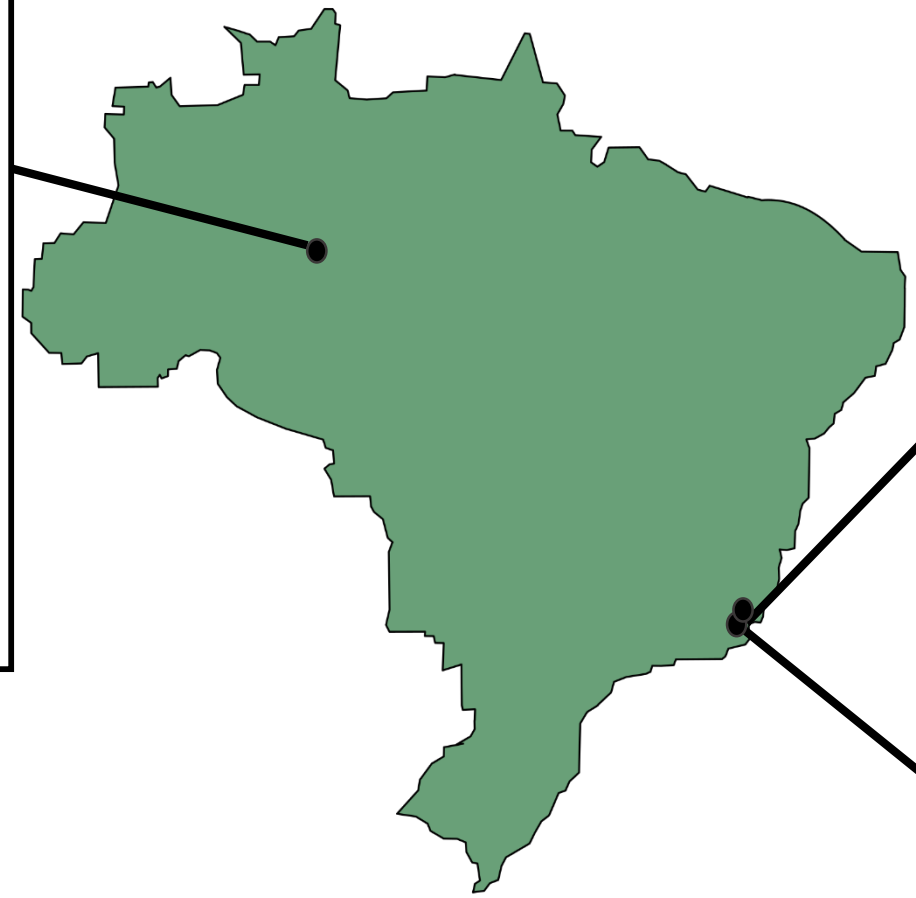
ACUTE FEBRILLE ILLNESS

Recruitment sites in Brazil
PI: Dr Andre M Siqueira

Hospital of Tropical Diseases

City of Manaus, State of Amazonas (North region)

- Tertiary Hospital for adults and children
- Emergency clinic (≅ 100 patients/day)
- Outpatient clinic (≅ 200 patients/day)
- 140 beds (20 ICU, adults and children)
- Current study on non-malarial fever with joint funding from SNF/CNPq



UPA Manguinhos

City of Rio de Janeiro, State of Rio de Janeiro (Southeast region)

- Emergency clinic for severe and non-severe cases
- Observation beds for admissions lasting up to 24 hours (after that, patient is referred to a hospital, frequently at Fiocruz)
- Adults (85%) and children (15%) admissions
- Aprox. 200 patients/day (50% fever cases)
- Current study on biomarkers of bacterial infection funded by FIND

Hospital Getulio Filho

City of Niteroi, State of Rio de Janeiro (Southeast region)

- Emergency clinic (180 patients/day)
- 50 beds (10 ICU)
- Children only (up to 18 yo)
- Starting in 2019 a study on causes of fever funded by CNPq

Investigations and main causes of fever

Rio de Janeiro (UPA)	Niterói (Hosp. Getúlio Filho)	Manaus (Hosp. Tropical Diseases)
Arboviral infections (dengue, zika and chikungunya)	Arboviral infections (dengue, zika and chikungunya)	Malaria
Pneumonia, urinary tract infections	Respiratory viruses (winter season)	Arboviral infections (dengue, zika) *CHIKV has not yet been
Gastrointestinal Infections	Bacterial infections: pneumonia, UTIs, skin infections; Gastrointestinal infections	Bacterial infections: Pneumonia, TB, celullitis, pyoderma

Data collection

Country: Brazil

Hospital name / Location: UPA Manguinhos and CF Vitor Vala

Catchment area: Manguinhos Rio

Age / Cases	Year 2017							
	< 1 y		1 to 5 y		5 to 15 y		> 15 y	
	No of Cases	% Male	No of Cases	% Male	No of Cases	% Male	No of Cases	% Male
Acute undifferentiated fever (acute fever without any localizing signs)	120	50	1500	45	6000	45	20000	35
Acute differentiated fever (acute fever with symtoms)								
Fever with rash	40		800		4500		12000	
Fever with ARDS: Acute onset fever with respiratory distress	20		220		1200		2500	
Febrile encephalopathy / Acute encephalitic syndrome	8		40		55		100	
Fever with multiorgan dysfunction	2		20		100		300	
Fever with Gastrointestinal symtoms								
Chronic Fever of Unknown Origin-(FOU)*							100	30
Totals								

*Fiocruz FOU outpatient clinic

Respiratory Syncytial Virus/RSV

WHO Global RSV surveillance

- Pilot study to set up a strategy for global surveillance of RSV
- RSV vaccine on the horizon (next five years?)
- Consistent information on RSV circulation, genotypes, antigenicity and disease burden is needed before choosing the vaccines and defining global policies of immunization
  - Define RSV seasonality
  - Genotyping and phylogenetic studies of viral evolution
- RSV may need a different case definition than the one used for Flu and this may have an impact on Influenza surveillance
  - Fever is absent in >50% of RSV cases in young children and in the elderly
  - Case definitions that require fever may underestimate RSV, but inclusion of cases without fever in surveillance may decrease detection of flu

Recruitment of patients with fever – RSV pilot

Table 1 – Number of respiratory cases with fever, per year (RSV pilot)

Age group	2017	2018
≤ 5 years	197	226
> 5 years	119	112
Total	316	338

Challenges

- Rapid Test
- Measles - on going study on POCT (D Brown)
- Trainning of Health professionals

- More studies are needed to generate information to guide public polices:

To whon? When? Where?