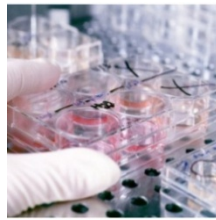




**NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES**

Division of the National Health Laboratory Service



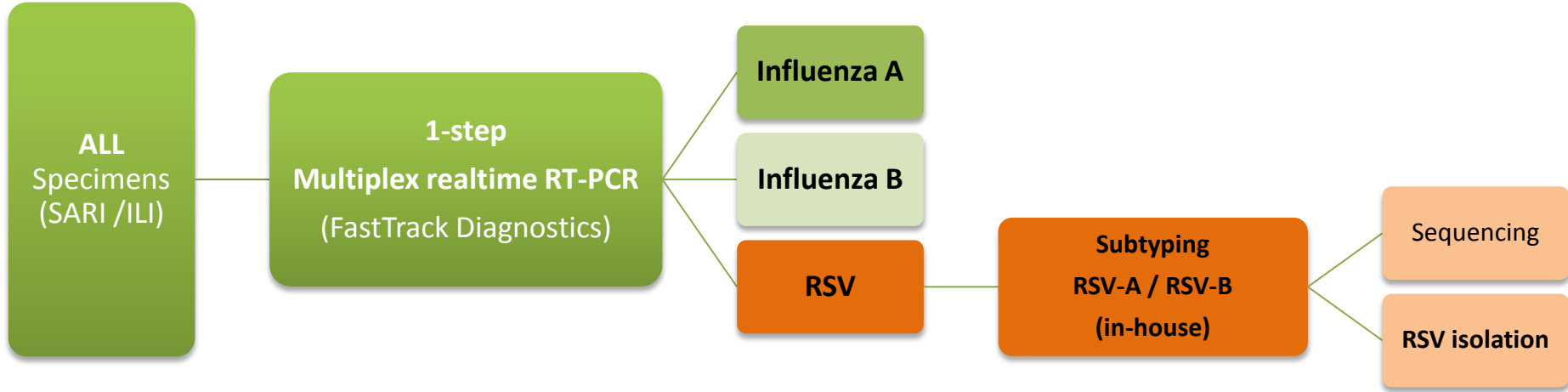
National Institute for Communicable Diseases

(i) Capabilities for Reference Laboratory function.

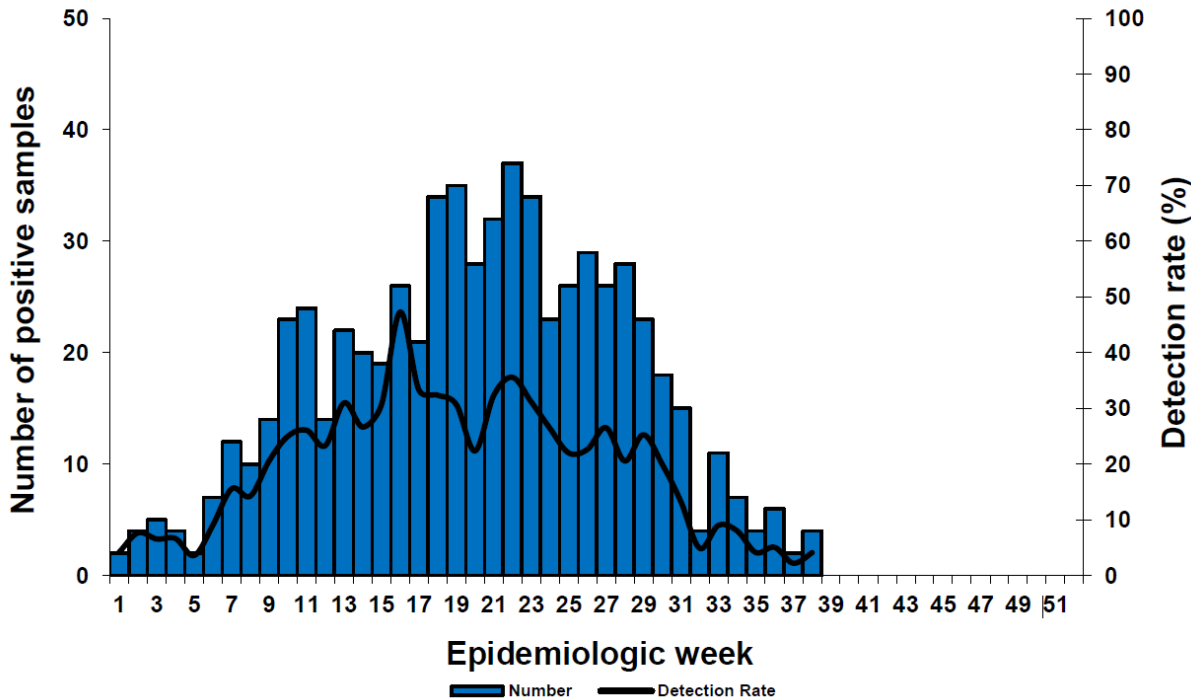
Florette K. Treurnicht

For the National Influenza Center, South Africa
Centre for Respiratory Diseases and Meningitis
National Institute for Communicable Diseases

Multiplex real-time RT-PCR Testing Algorithm



2017 RSV season (Pneumonia surveillance)

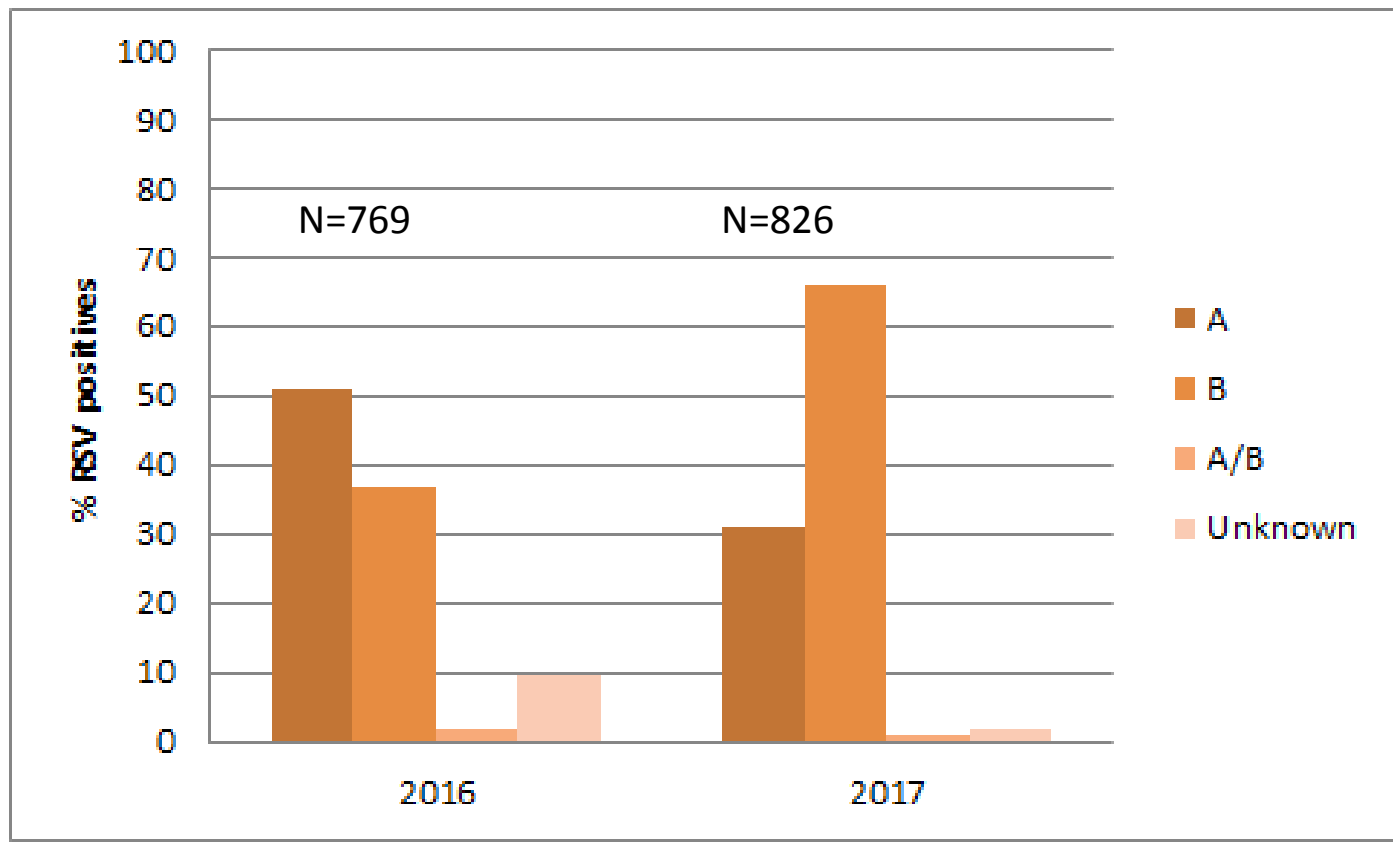


Hospital (Province)	RSV Positive	Total samples
Edendale (KZ)	35	509
Helen Joseph-Rahima Moosa (GP)	123	844
Klerksdorp-Tshepong (NW)	43	484
Mapulaneng-Matikwana (MP)	34	216
Mitchell's Plain (WC)	88	322
Red Cross (WC)	332	984
Total:	655	3359



RSV serotypes

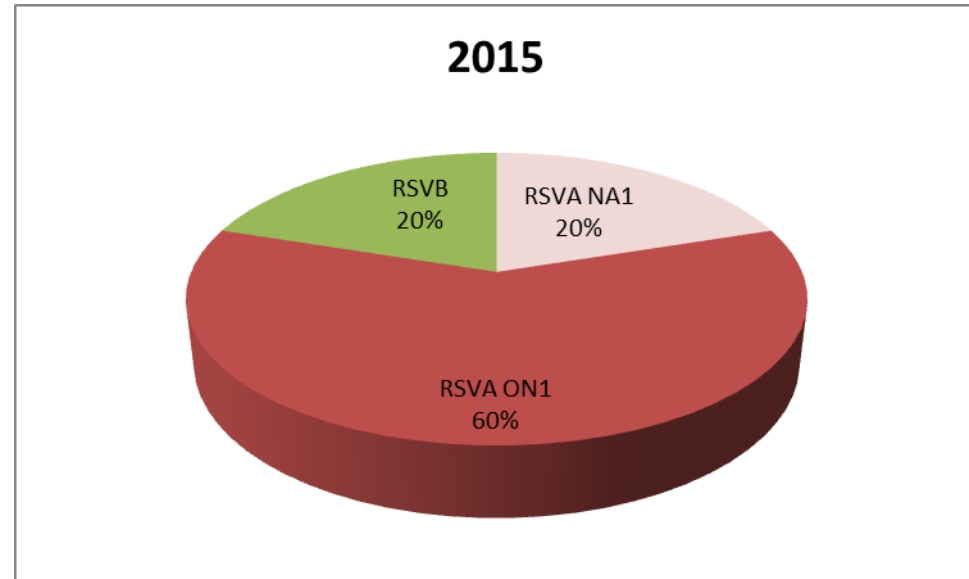
- RSV subtyping assay
 - 1-step multiplex rtRT-PCR
 - SOP approved- Dec 2017



RSV genotypes

NICD sequencing core facility

- Sanger sequencing
 - Conventional nested PCR
 - 1st rnd A/B
 - 2nd rnd type specific primers for A and B
- Next generation sequencing
 - 3 Illumina MiSeq's
 - 2018 focus to establish NGS sequencing protocols





RSV isolation

- Established isolation and preservation of isolates
- Share viruses through MTA for research on RSV

Challenges

- Temperature sensitivity of RSV- freeze-thaw





Proficiency testing

- **For Real-time RT-PCR assays**
 - QCMD programme
 - Influenza, RSV and other respiratory viruses
 - MERS-CoV
 - WHO-EQAP- Flu
 - CDC-EQAP- Flu
 - CDC-EQAP-RSV for WHO pilot
- **Virus isolation**
 - UKNEQAS

