



A Department of Defense Global Influenza Surveillance Program

Linda C Canas
Brooks Air Force Base
San Antonio, TX





PRIMARY GOAL

PREVENT OUTBREAKS.....healthy troops



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Isolate and identify
circulating influenza
virus



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Detect newly
emerging
subtypes



PRIMARY GOAL

PREVENT OUTBREAKS.....healthy troops



Isolate and identify circulating influenza virus

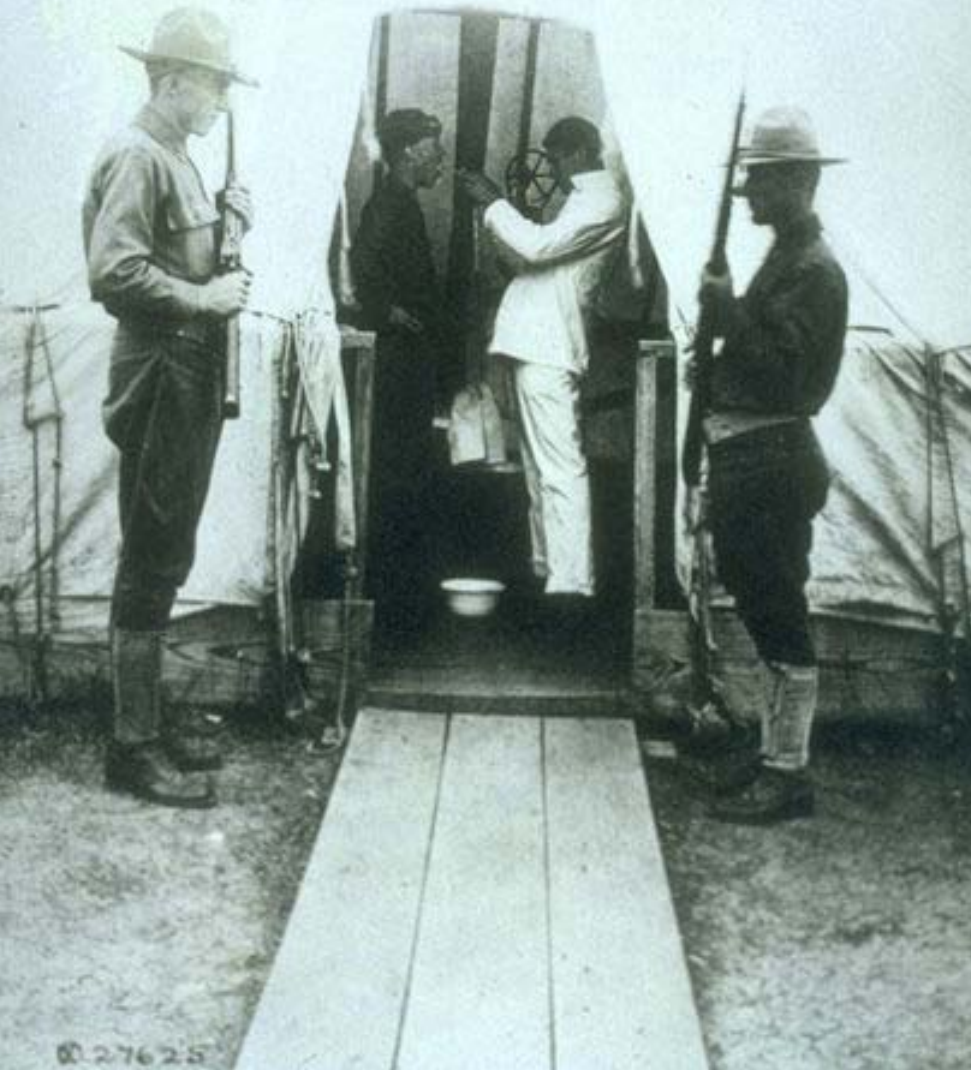


Detect newly emerging subtypes



Evaluate vaccine effectiveness

SENTINEL SITE SURVEILLANCE



- Throat swabs collected from those presenting with ILI:

- Fever $\geq 100.5^{\circ}$ F (37.8° C) oral of <72 hr duration

- *Either* Cough or sore throat

SENTINEL SITE SURVEILLANCE

- Training bases



Individual from
may different
locations brought
together to live in
close proximity.

Stressful
conditions

May bring a virus
with them-
Important to
detect outbreaks
ASAP

SENTINEL SITE SURVEILLANCE

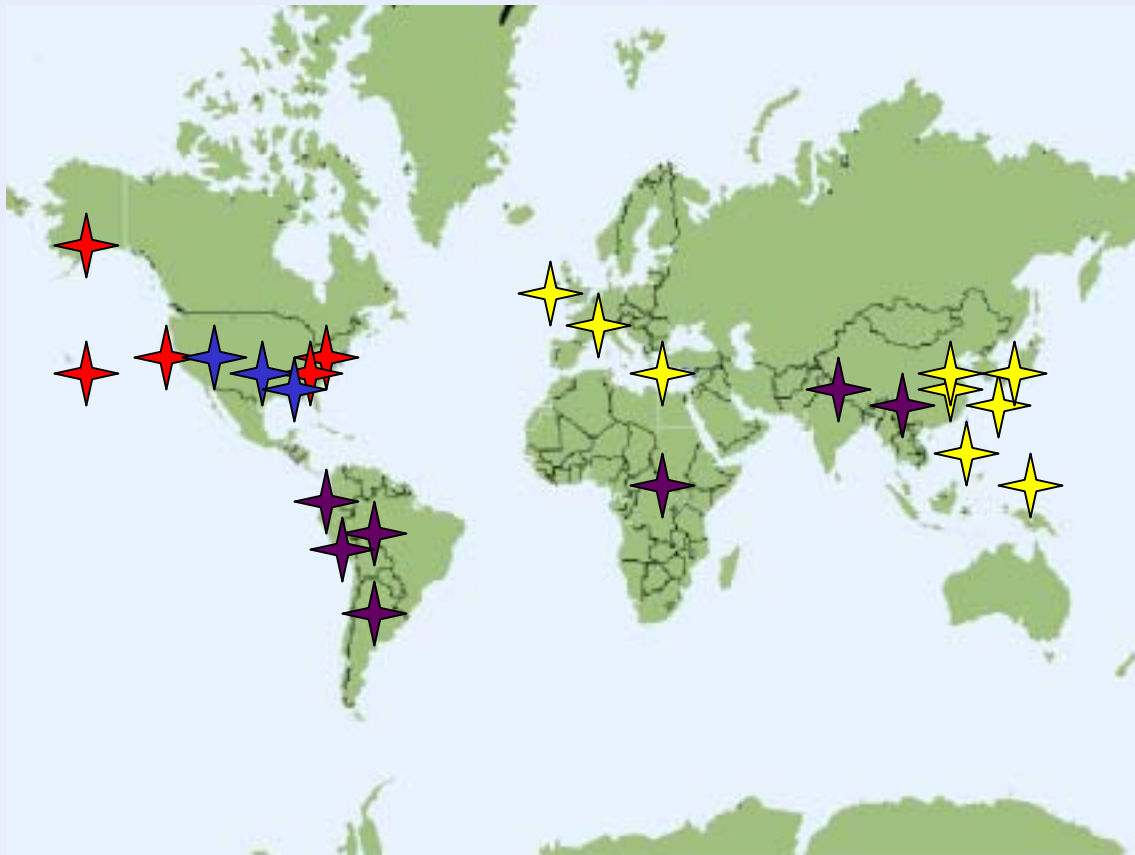
- DoD Overseas Installations



Military personnel and their dependents living and traveling in areas where they make contact / spread an emerging strain

SENTINEL SITE SURVEILLANCE

- Overseas Research Activities



Unique
opportunities

Thailand
Nepal
Peru
Ecuador
Bolivia
Argentina
Uganda



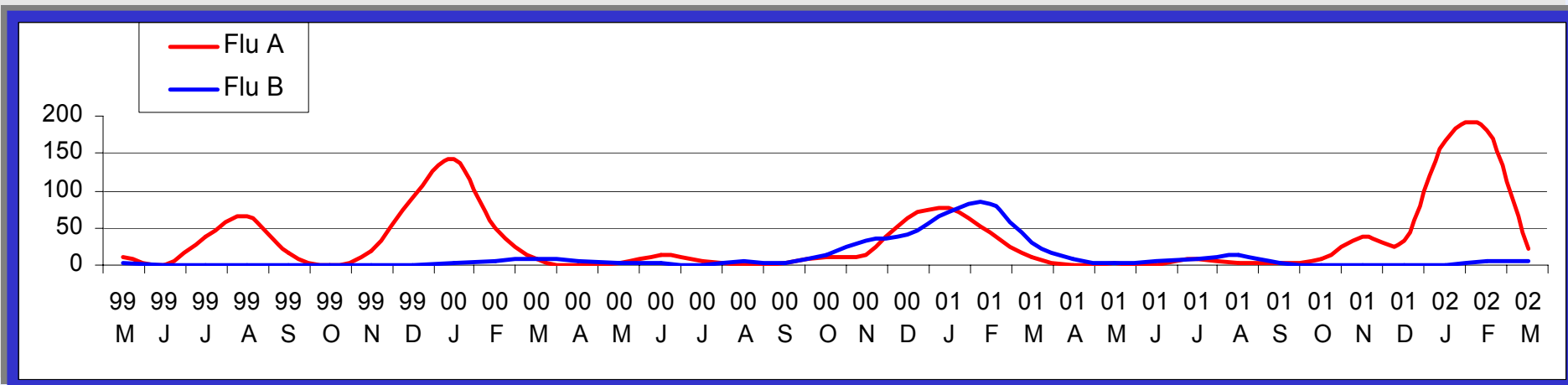
May 1999-present

15,402 specimens processed

880 antigenic characterizations

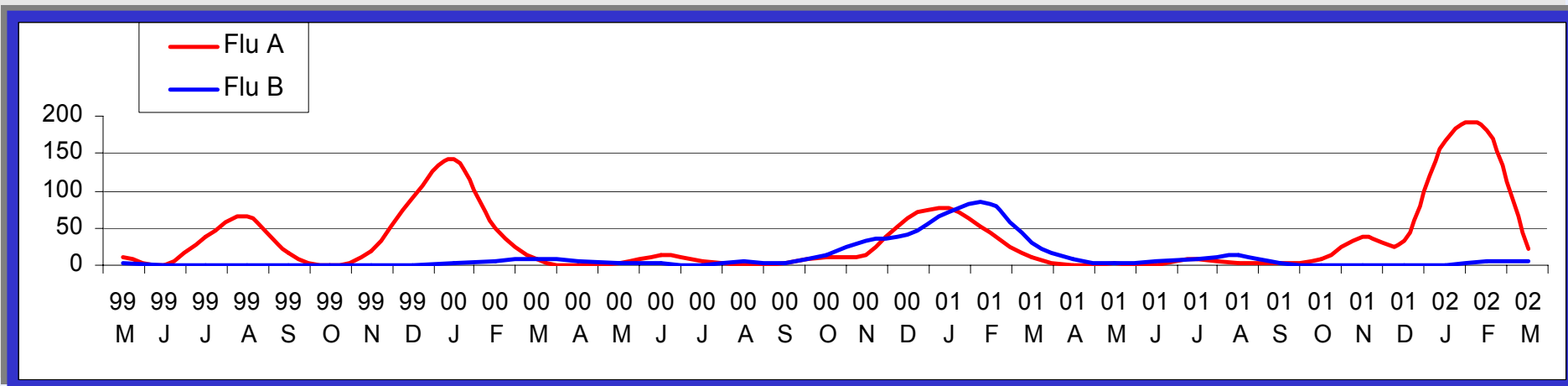
Resulting in

Seasonality profiling... Outbreak detection... variant strains identified...



Everyday...

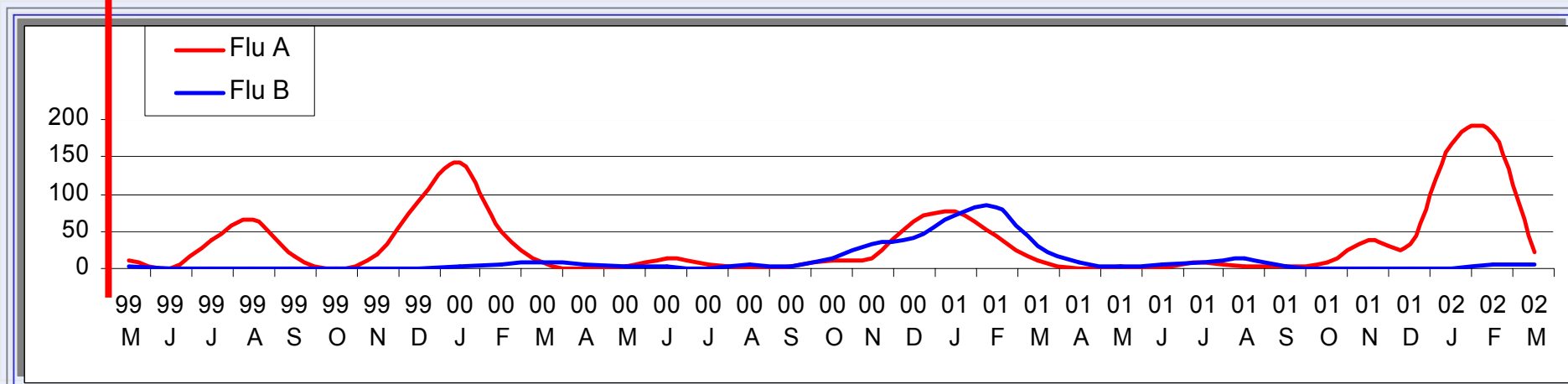
- Base Public Health Officers receive timely information about local and global flu spread
 - Interventions may be instituted
 - Aids compliance with vaccination program



Highlights

May 1999: A/New Caledonia/H1N1
Isolated from Peruvian Military Cadets

- First time seen in Americas
- Proved virus spreading
- Vaccine Component

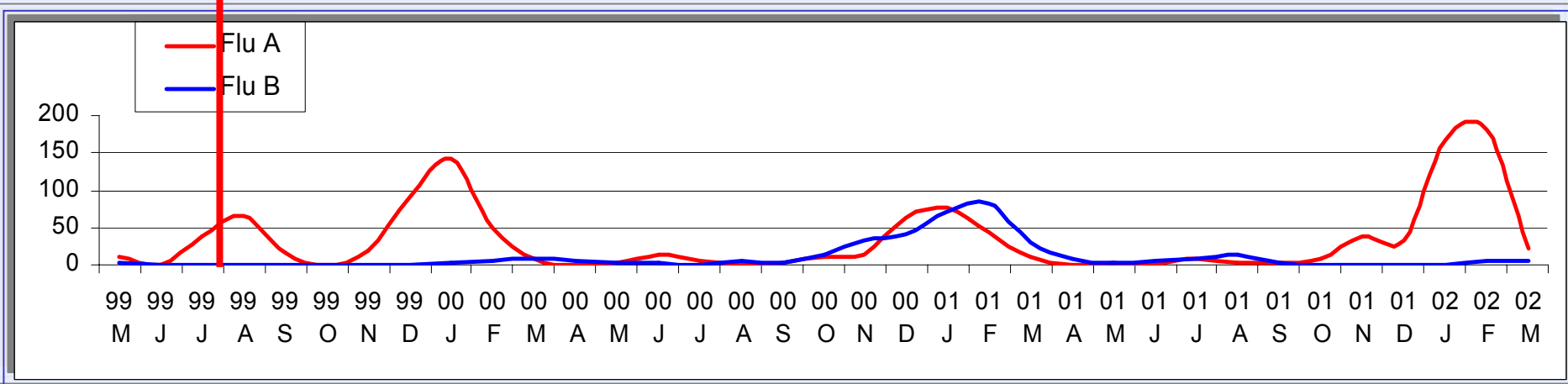


Highlights

July 1999

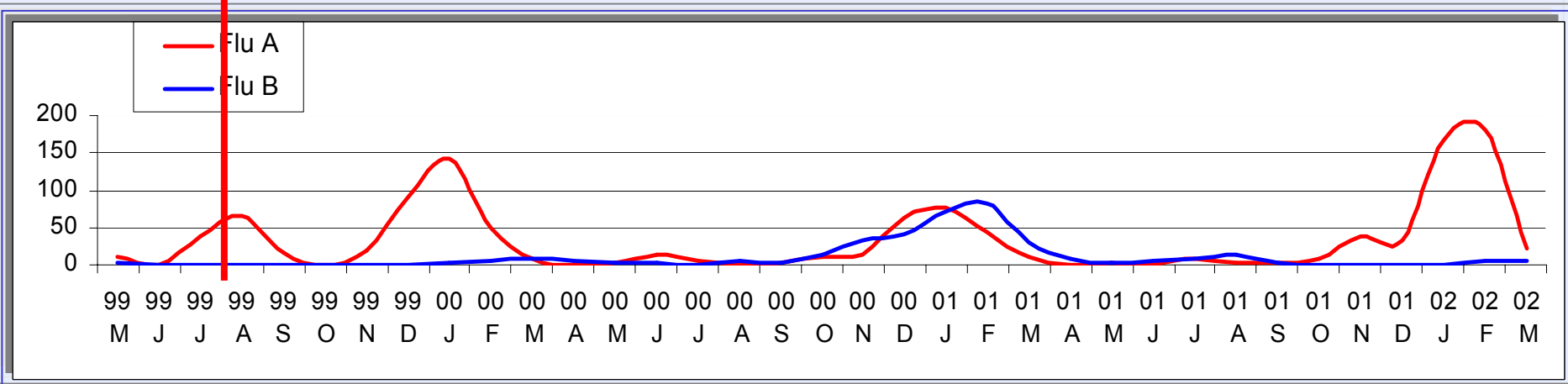
Flu A confirmed at Lackland AFB in training unit... 1100 at risk

Amantadine prophylaxis administered to prevent a serious outbreak



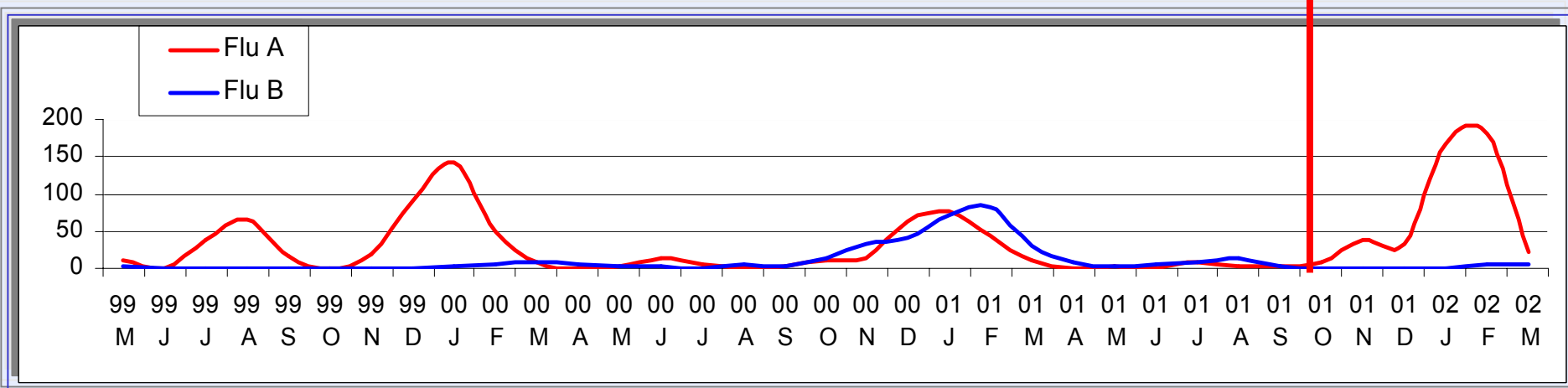
Highlights

- Collected samples from reported ILI outbreak in Panama
- Isolates identified as H3N2 variant
- A/Panama/2007/H3N2 became the seed virus for the H3N2 vaccine component:
2000-2001
2001-2002
2002-2003



Highlights

Surveillance site established at Kalisizo, Uganda in association with existing Public Health surveillance Project





UGANDA
VIRUS RESEARCH INSTITUTE

RAKAI PROJECT



“Improved Health Through Research”

COLLABORATION:- MAKERERE UNIVERSITY
MIN. OF HEALTH THROUGH UVRI
COLUMBIA UNIVERSITY(USA)
JOHNS HOPKINS UNIVERSITY(USA)
WRAIR/ HMJF (USA)

P.O. BOX 279 KALISIZO

TEL: 017405861. FAX 0481-22006. e-mail rpklsz@infcom.co.ug

This season

~2500 samples processed

19% positive for Influenza

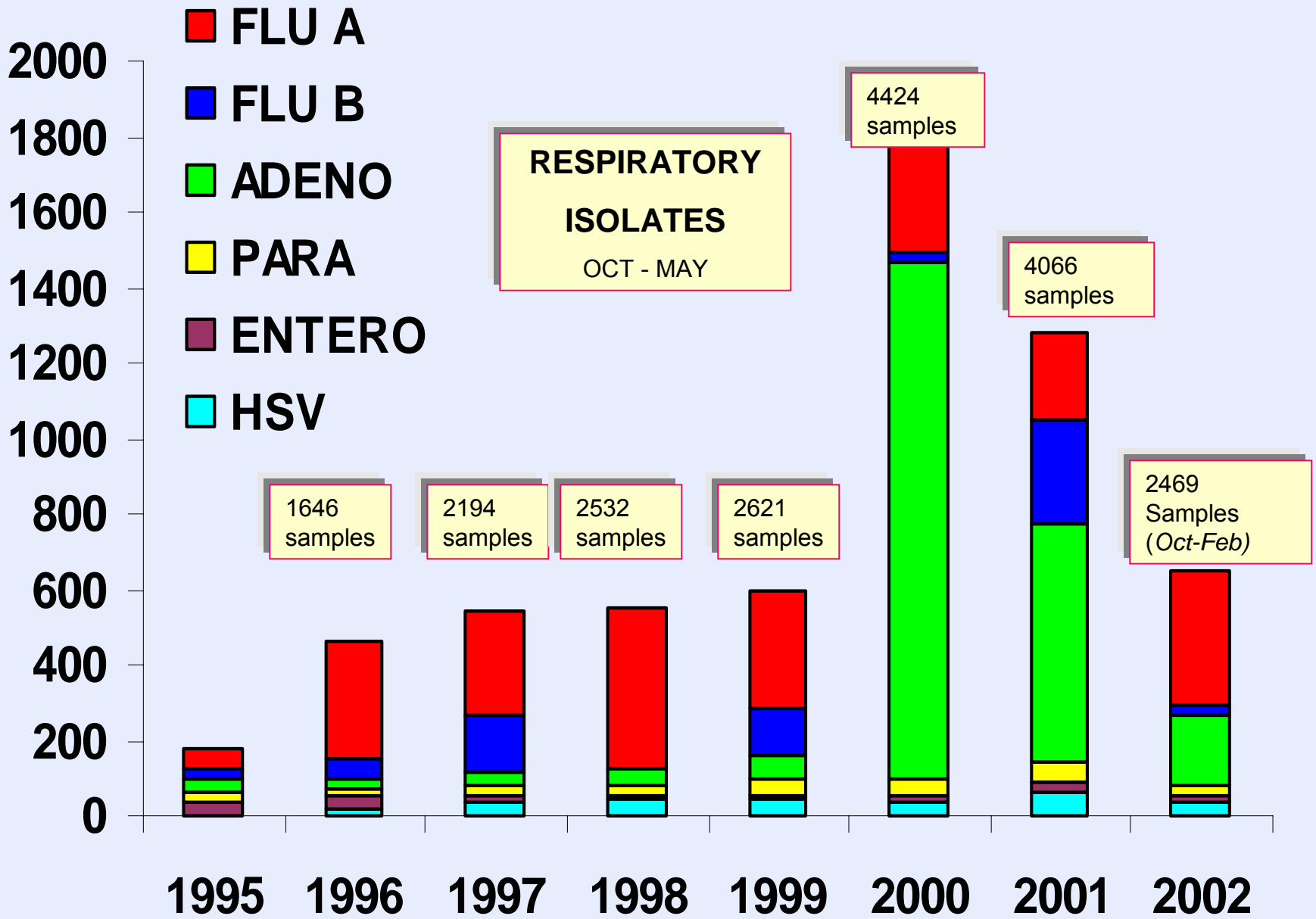
97% Influenza A

94% H3N2

6% H1N1

3% Influenza B

and...





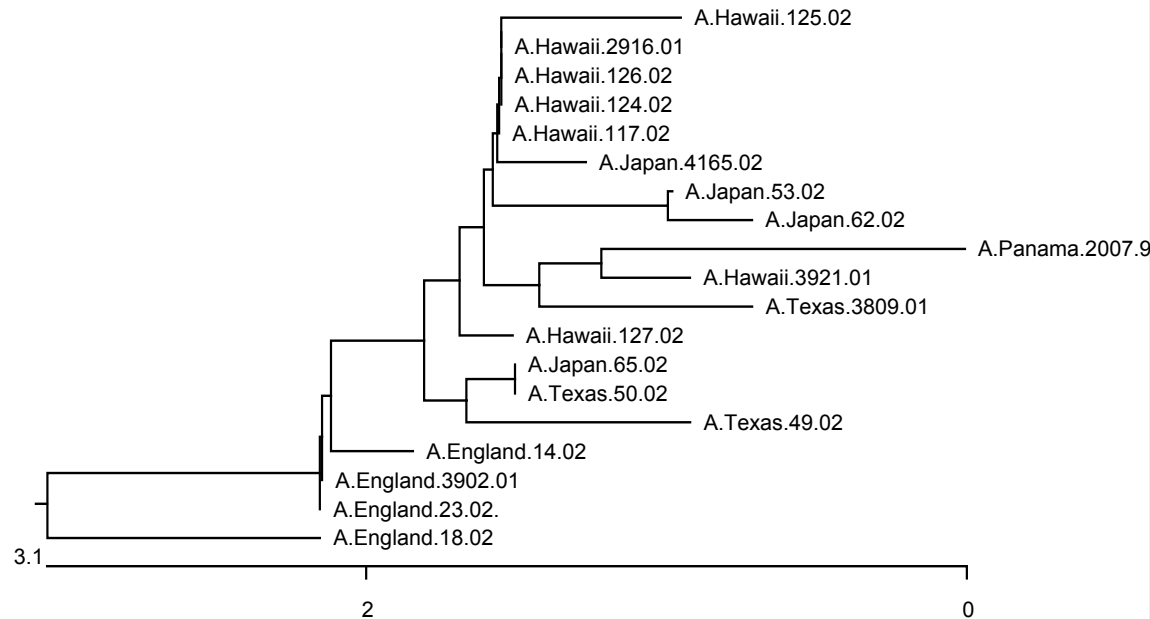
Molecular Studies

Influenza A H3N2 Hemagglutinin Gene (HA1), 2001-2002

60 H3 viruses have been sequenced

Neuraminidase primers now available...

reassortant ID possible



Future plans...

- Surveillance site expansion
- Expand collaborative efforts
 - Molecular ID studies
 - Avian / animal surveillance



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