

Surveillance Approaches

- Sentinel
 - Identify sentinel sites (e.g., hospitals)
 - Measure counts, percent positive
 - Simple, cheap but catchment unknown
- Population-based
 - Define catchment area (population) and capture all disease in the area
 - Measure counts, incidence
 - Resource intensive

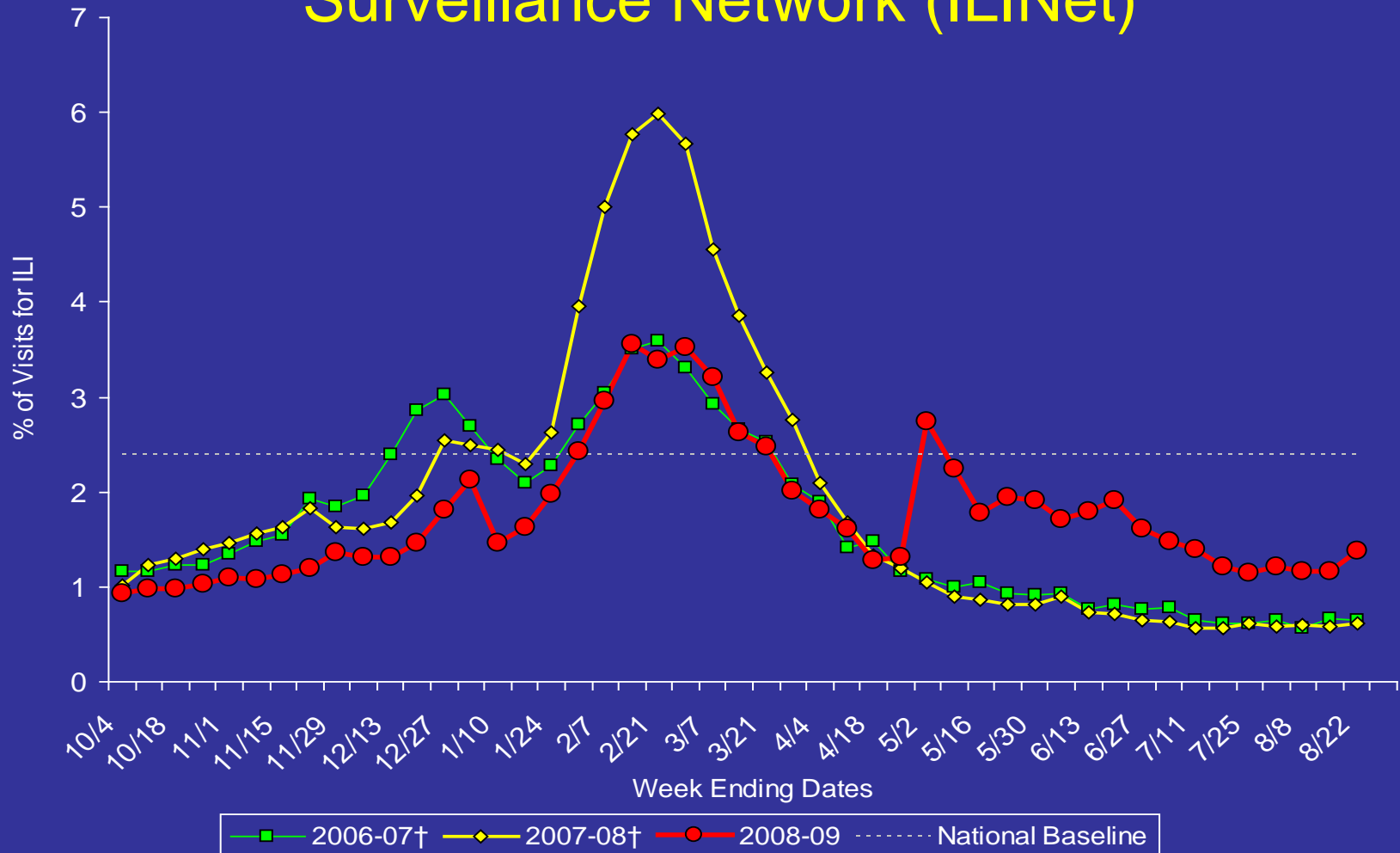
Making the Most of Sentinel Data

- Outpatient (ILI) or inpatient (SARI)
 - Numerator
 - ILI/SARI patients enrolled and tested (e.g., first 3 patients/day)
 - Patients positive for influenza
 - Denominators
 - Total ILI/SARI
 - Total outpatient visits, total hospital admissions
 - Report
 - Number enrolled by site by week (helps monitor system)
 - Number of influenza positive by site by month
 - Percent of all visits that are ILI/SARI
 - Percent of all ILI/SARI that are influenza
 - Adjust data (sample) to project total influenza in hospital

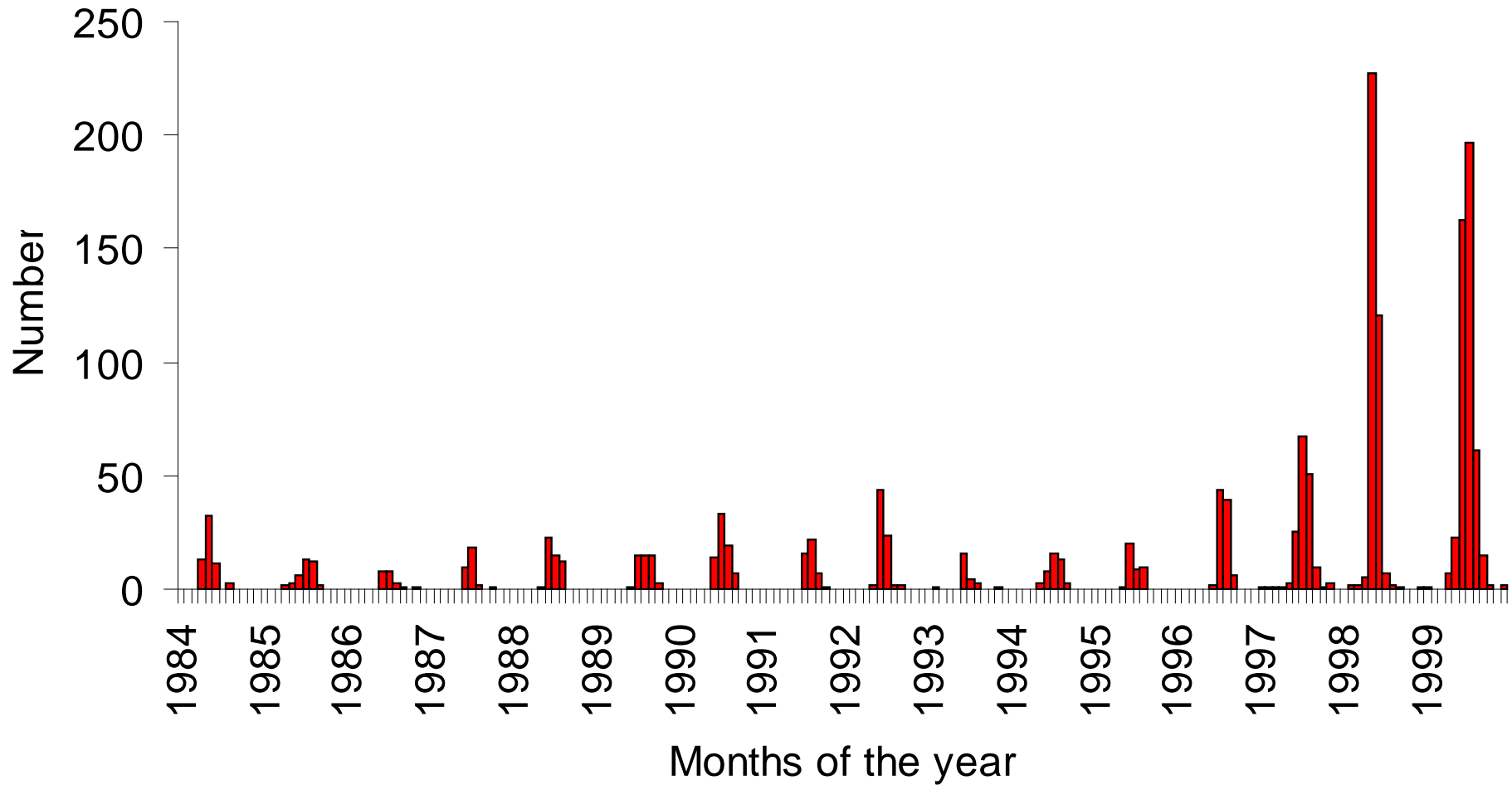
Types of data and their utility

- Sample specimens, no standard case definition, population sampled unclear
 - Seasonality, circulating virus types
- Sample systematically, strict case definition (SARI/ILI), collect denominators (total consultation numbers, total meeting case definition)
 - Proportionate contribution to syndrome
- Sample systematically and population denominators
 - Incidence (by age group, syndrome etc.)

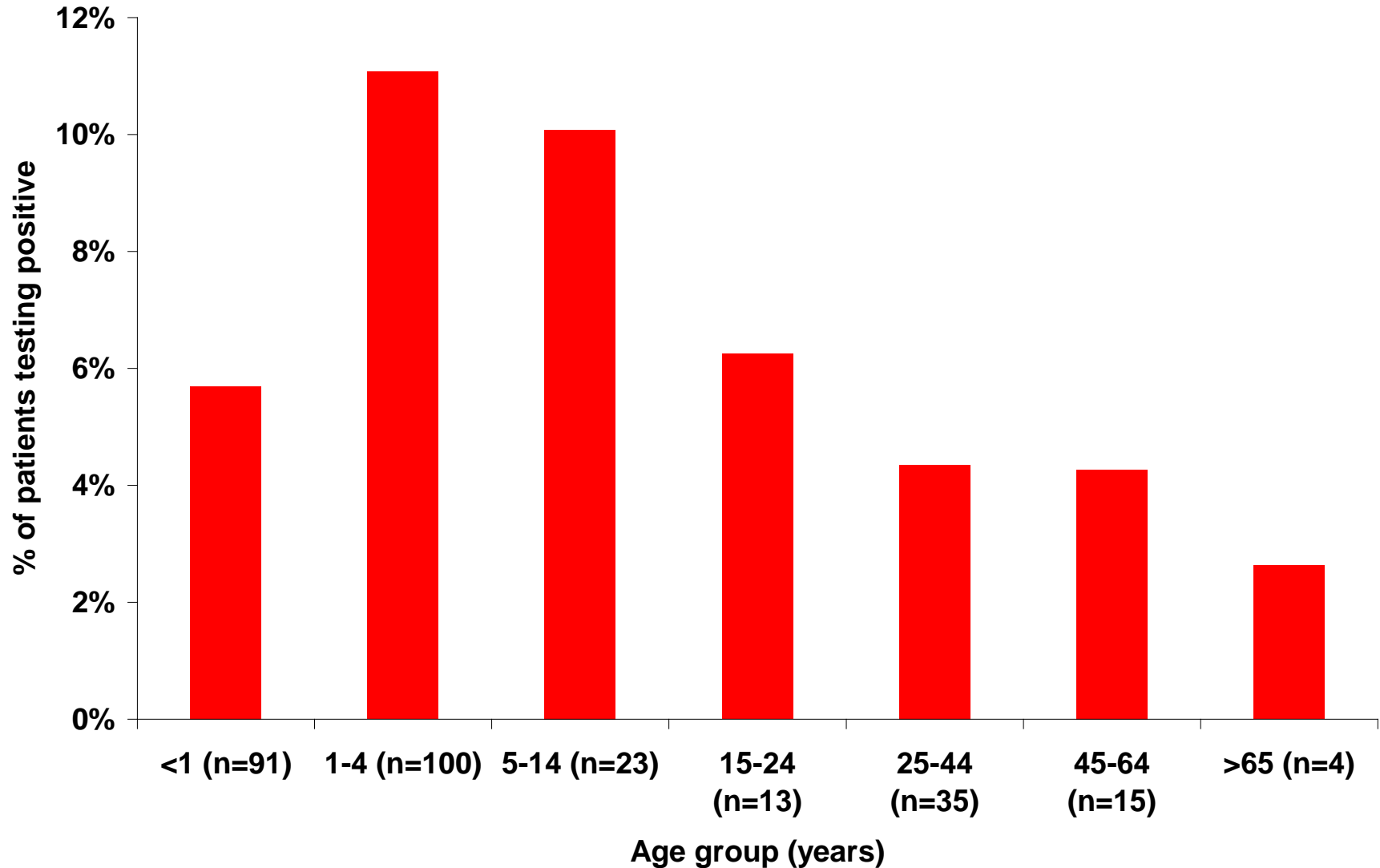
Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet)



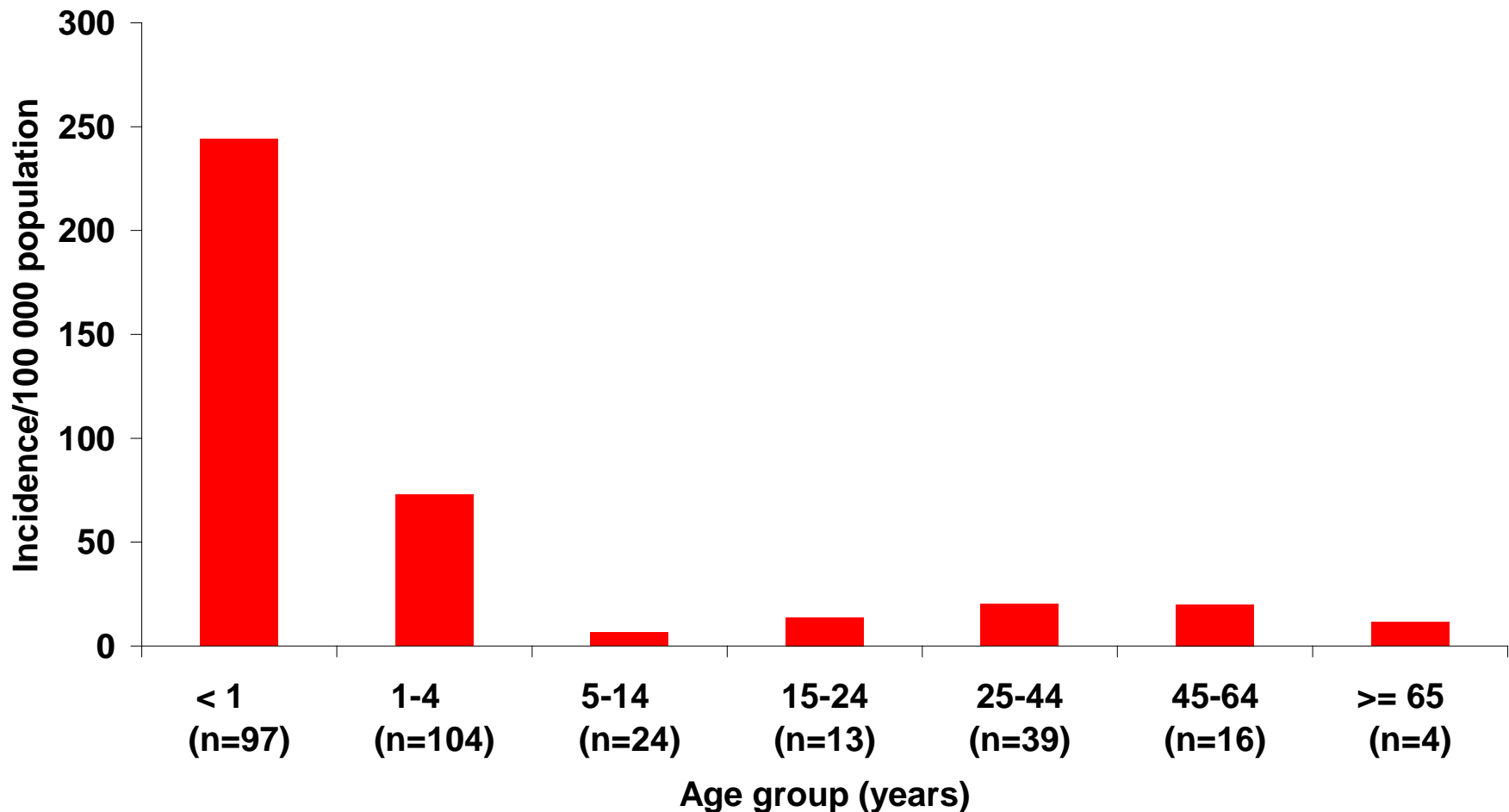
Viral Watch South Africa: Influenza detections per week 1984 - 2009



Detection rate for influenza A (H3N2) by age group, SARI surveillance, South Africa, 2009



Incidence of hospitalisation of SARI patients infected with influenza A (H3N2) by age group, South Africa, 2009



What are the key public health questions related to influenza in your country?

What could be done to improve the utility of data collected at sentinel surveillance sites to address the questions?

- Decisions as to what data to collect must balance resources needed vs utility of data
- Different strategies appropriate to different settings