



# The expected impact of vaccination for *H influenzae* and *Streptococcus pneumoniae*

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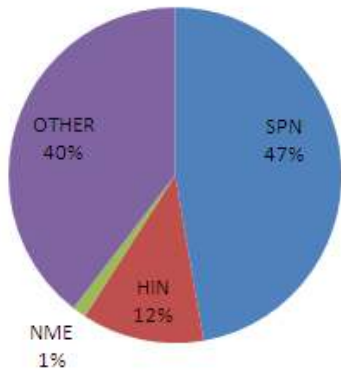
*Mike English, Caroline Mate, Anthony Scott*

**Global Antibiotic Resistance Partnership**  
**GARP-Kenya 6-7 August 2009**

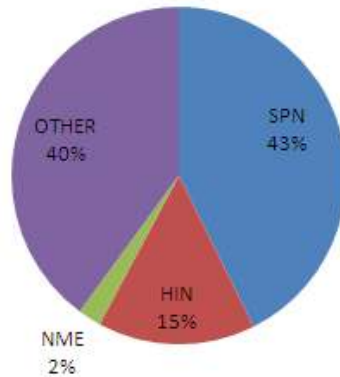
# Bacteria isolated from CSF



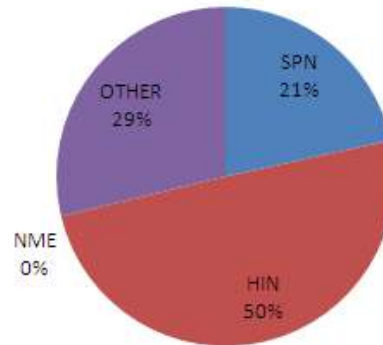
Kenya



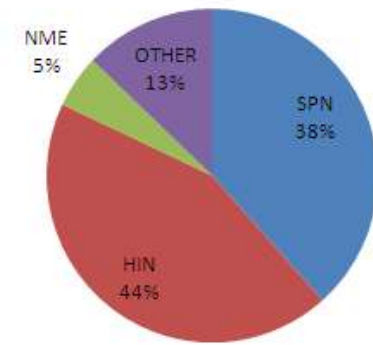
Uganda



Tanzania



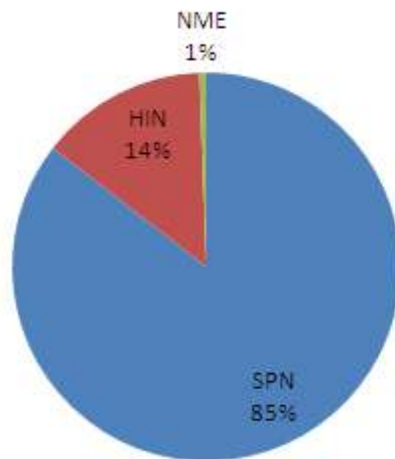
Ethiopia



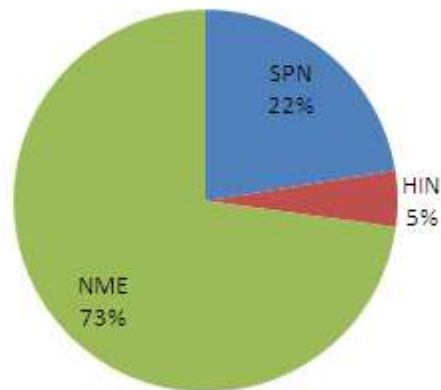
# Bacteria isolated from Blood Culture



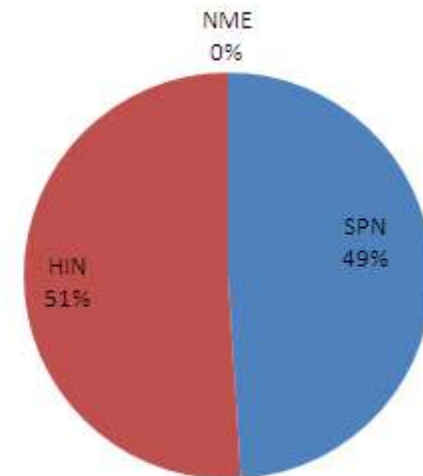
Kenya



Uganda



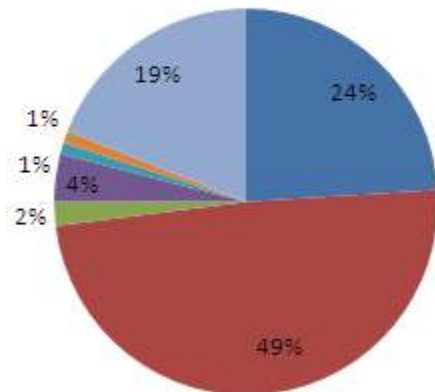
Tanzania



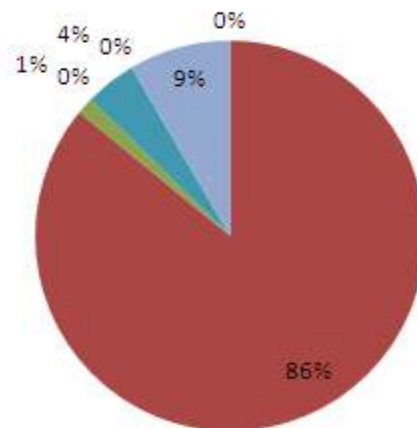
# Serotypes isolated



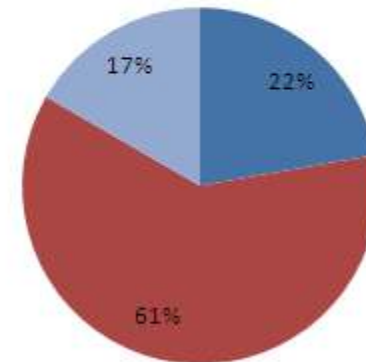
Kenya n=100



Tanzania n=71



Uganda n=36



- a
- b
- c
- d
- e
- f
- non typable

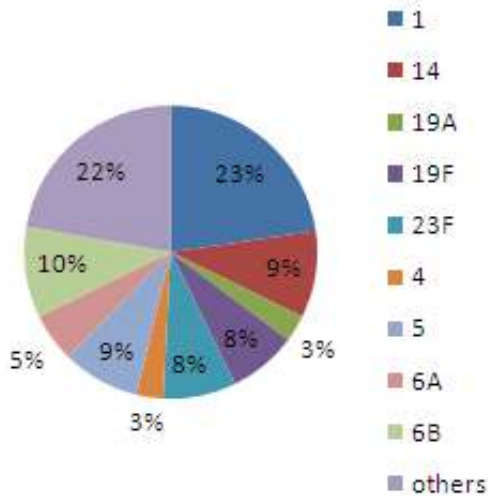
- The proportion of meningitis cases caused by H1N1 is low in Uganda and Kenya where the vaccine was introduced in 2001 and high in Tanzania and Ethiopia.



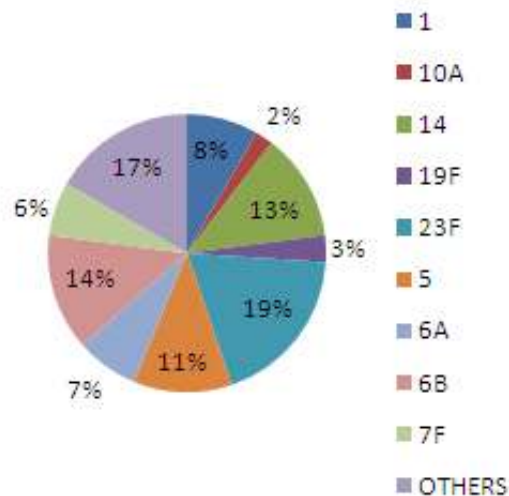
# Pneumococci serotype distribution by country



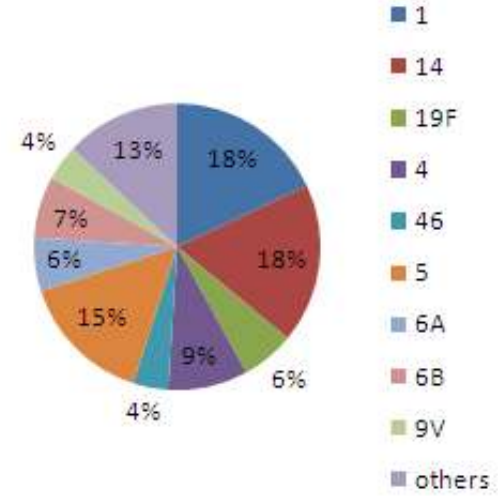
Kenya



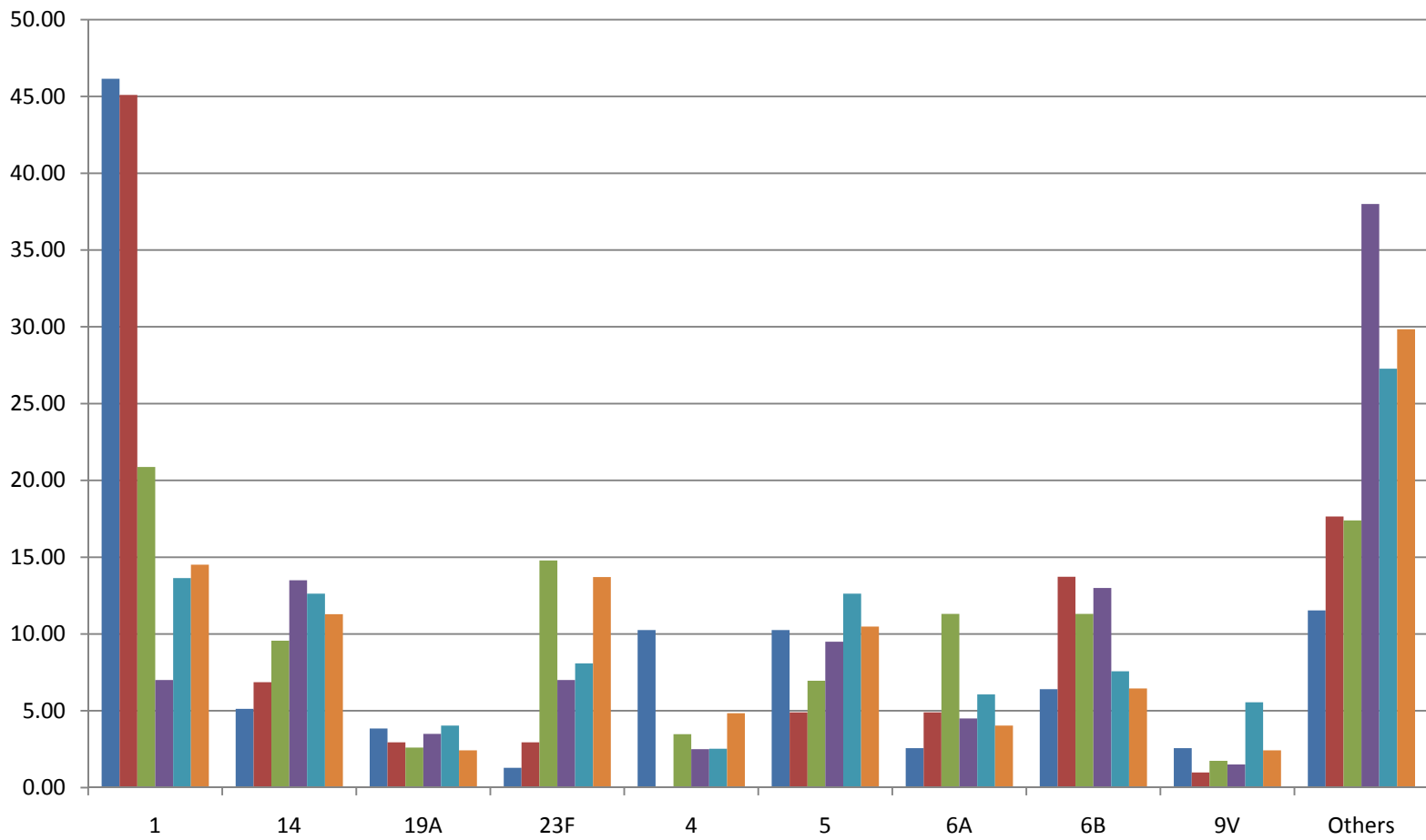
Uganda



TZ



# Pneumococci serotype distribution over time



	<b>7 valent</b>	<b>6A</b>	<b>10 valent</b>	<b>13 valent</b>
<b>Kenya (n=608)</b>	42.93	5.43	74.67	85.20
<b>Uganda (n=107)</b>	45.79	6.54	69.16	81.31
<b>Tanzania (n=100)</b>	47.00	6.00	80.00	90.00
<b>Blood (n=457)</b>	38.95	5.91	75.05	85.78
<b>CSF (n=316)</b>	45.89	5.70	69.62	79.43





# Discussion

- Differences in the coverage of vaccine serotypes may be largely attributable to
  1. a low prevalence of disease due to serotype 1 in Uganda
  2. Differences between the participating sites e.g. younger age of patients contributing in Kenya and predominance of blood samples over CSF samples in Tanzania



# Discussion

- In SSA antibiotic resistance levels are relatively low and serotype coverage of PCV7 is also relatively low. Because PCV7 includes most of the strains that exhibit antibiotic resistance, this may reflect low selection pressure for these strains in this region.



# Discussion

- Although we have a wide geographical base and tried to collect data that is representative of the region ~70% of the data comes from 4 sites located in Kenya and Uganda.



THANKYOU

