

# Getting Connected

Linking NARMS and PulseNet



2005 PulseNet Update Meeting May 9-11, 2005 • Seattle, Washington

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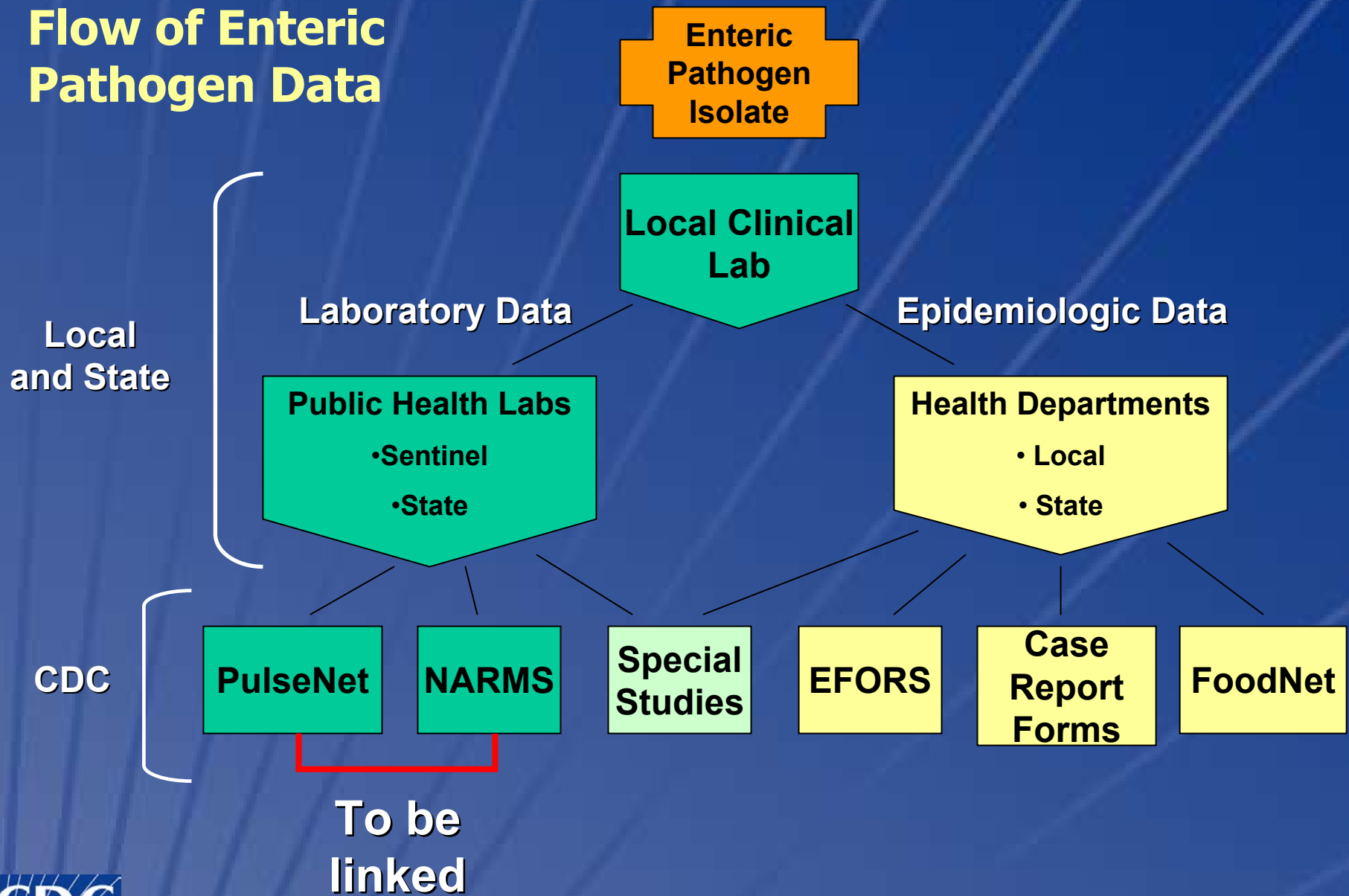


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# The Future of Surveillance

- Efficiently exchange case and isolate information across CDC surveillance systems, in *real time*.

# Flow of Enteric Pathogen Data



# Why Link NARMS with PulseNet?

- Ability to simultaneously analyze
  - Susceptibility data
  - PFGE patterns
- Track the same isolate in different systems
- Attribute PFGE patterns to susceptibility patterns, thereby identifying resistant strains more rapidly during outbreaks
- Stimulate research questions

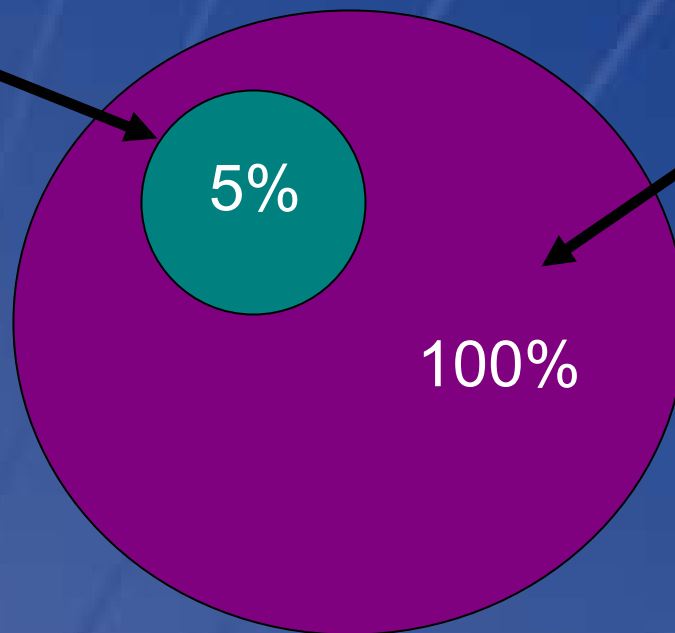
# Linking *E. coli* O157 PulseNet and NARMS isolates

**NARMS Isolates**

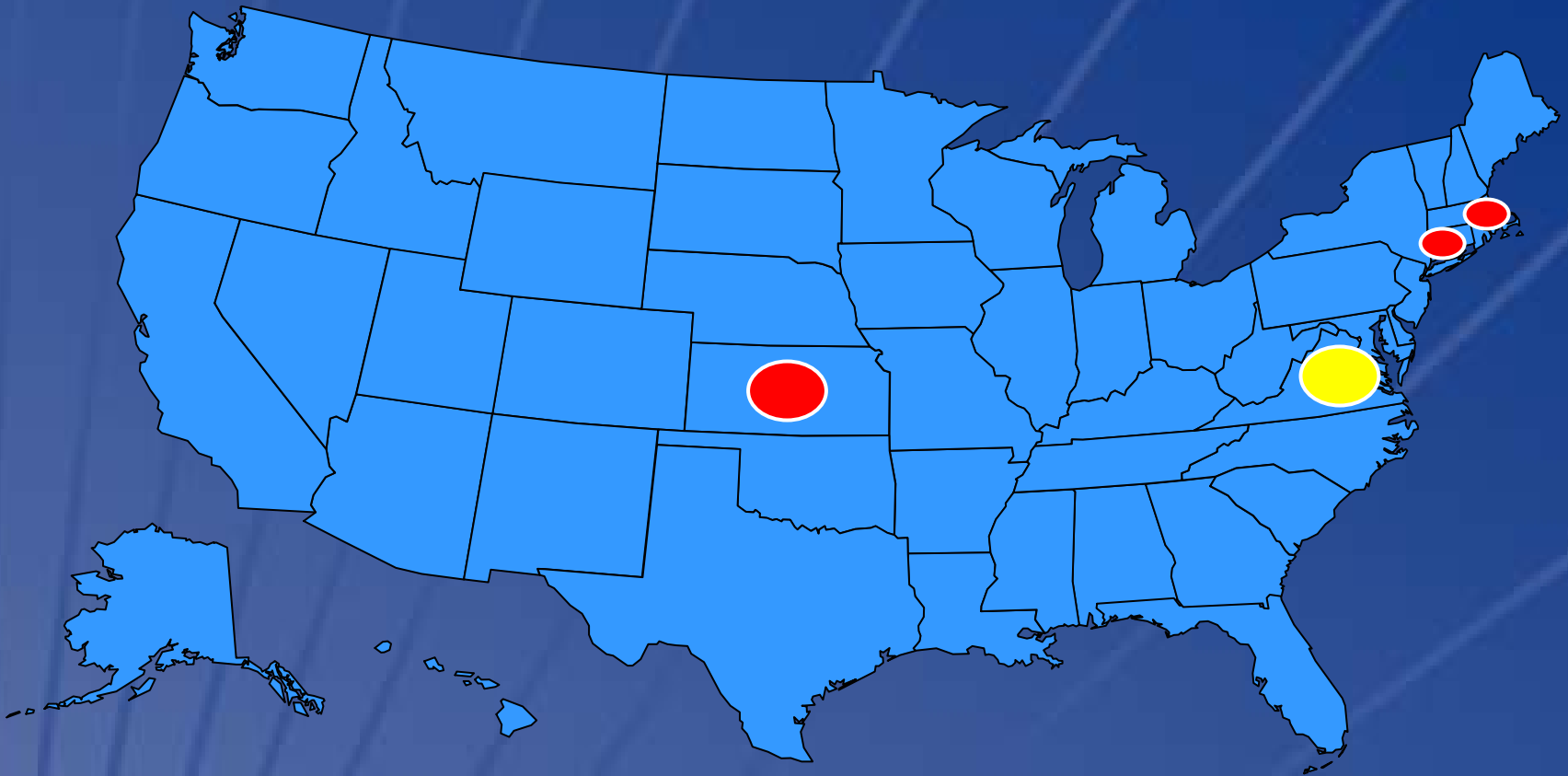
Every 20<sup>th</sup> *E. coli* isolate is sampled for NARMS testing

**PulseNet Isolates**

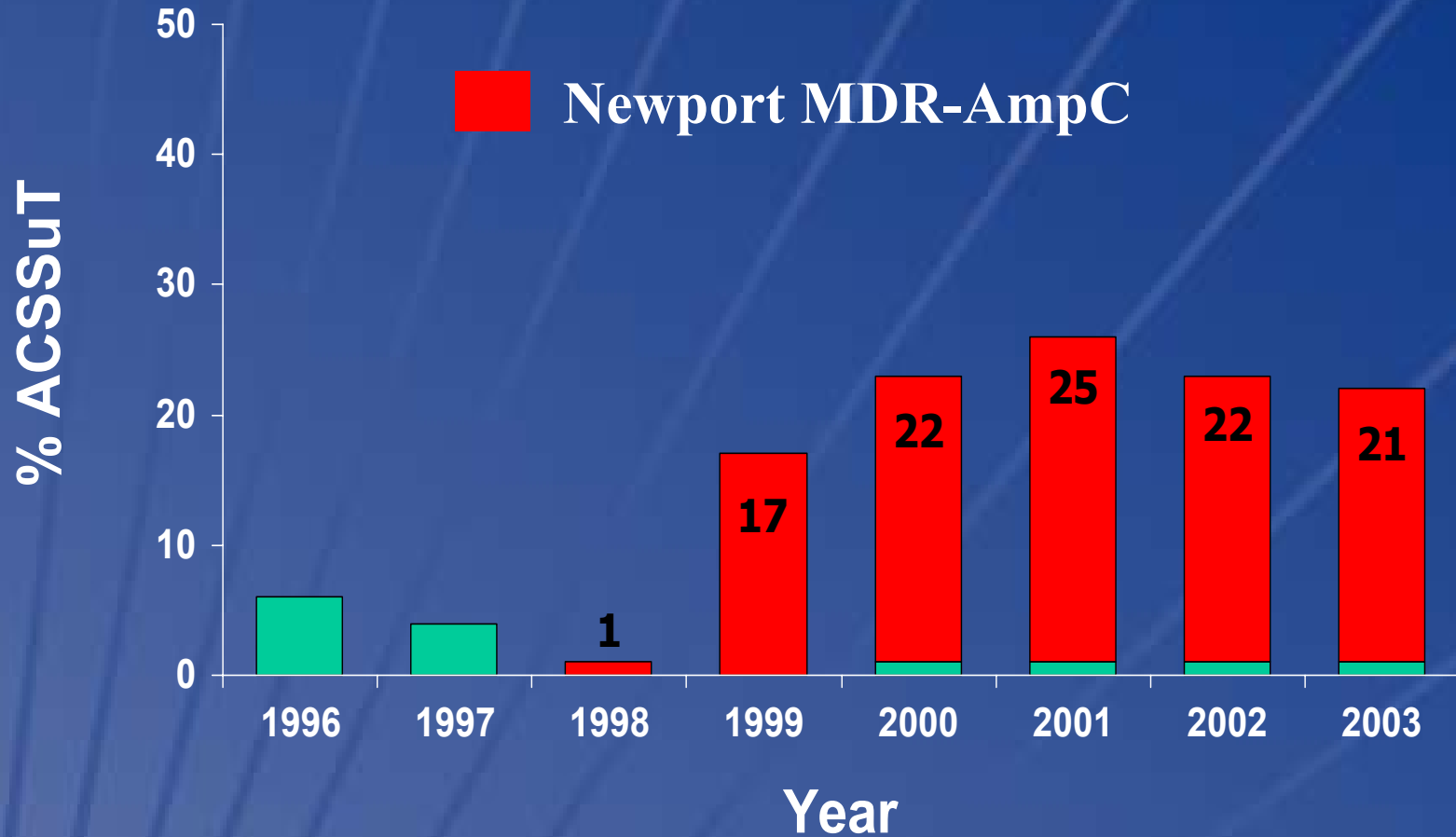
All *E. coli* should be subtyped by PFGE



# Emerging MDR *Salmonella* Newport 1999: An example of linking PulseNet and NARMS



# Emerging *S. Newport* with at least ACSSuT and MDR-AmpC resistance pattern, 1996-2003\*



\* 2003 preliminary data

# How Can We Link?

- Personal information is removed
- Combination variables of demographics- but are not consistently reported
- Laboratory identifiers are not uniformly reported across systems
- Need a single unique identifier to locate cases across reporting systems . . .

the state laboratory isolate identifier

# Linking Campaign

- Phase I (2002)- State Health Departments participating in FoodNet (active surveillance network in 9 states)
  - NARMS, PulseNet, FoodNet representative
  - Representatives from same state agree upon a standardized format for isolate/case data submitted by their state
- Phase II (2004)- Nationwide
  - Series of PulseNet regional calls with NARMS and PulseNet representatives
  - Follow-up by calls and emails

# Anatomy of a State Laboratory Isolate ID

*Example:*

**Stated format-**

State initials + 4 digit fiscal yr + 6 digit sequential #

**Correct format-**

SI2004000025

# Examples of Non-Linkage

Manual data entry errors:

02X0985

O2x0985

Truncating:

BA058836

058836

Not using leading zeroes:

T000547

T547

Inconsistent use of spaces and  
hyphens:

RE-05 632

RE05632

# Why Don't the Data Link?

- Intrinsic differences between surveillance systems
- Systematic errors and problems with data transmission
- Communication

*These problems occur at the local, state, and national levels.*

# Steps to Linking

- States agree on a standard format by which to submit isolate or case information to CDC surveillance systems
- CDC actively monitors state laboratory isolate ID format submitted to each system
- Reports exceptions to each state's format for review and problem-solving

# In Summary

- Only 44% of states are consistently submitting their state laboratory isolate identifier
- The goal is to assure the state laboratory isolate identifier is consistently submitted throughout laboratory and epidemiologic surveillance systems

**Please ensure a  
representative picks up your  
state's individual report  
about the IDs submitted.**

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