

# Outbreak Management Using Merlin: Florida's Disease Reporting and Analysis System

Don Ward, Acting Chief  
Bureau of Epidemiology  
Florida Department of Health

# Design Considerations

- Outbreak definition
- Existing system (Merlin)
- Current capacity
- Flexibility
- Scalability
- Mirror for practice (except---)
- Designed limitations

# Design Team

- Program managers
- Bureau epidemiologists
- Bureau systems staff
- County health department epidemiologists
- Other program epidemiologists—food and waterborne diseases

# Design Sequence

- Define—describe the project and its scope
- Design—describe the work in systems language—the elements, relationships and flow
- Develop—write the code—test—redesign, recode and test, test, test
- Deploy—Deliver to IT production and train users

# “Outbreak” Parameters

- One to many design
- Outbreak is the “one”
- Outbreak is an entity that is named, and identified by number
- May be defined by flexible parameters, e.g.
  - “hepatitis outbreak, Polk County, October 2001”
  - SARS statewide 2003”
- Outbreaks have “case definitions” that may change
- Outbreaks may be combined--merged

# Functional Elements

- Relates cases, contacts, environmental samples to the “outbreak”
- Allows for changing outbreak definition
- Adds new variables as “risk factors”
- Supports basic statistical calculations
- Provides visual summary of data
- Provides sequential notes through “log”
- Supports link to case reports

- Reporting
- Epi-Analysis
- Resources
- Task List
- Help
- Administrative
- Logout

## Outbreak Information

9.13

Outbreak ID:	1008	Outbreak Name:	PALM BEACH - GI
Outbreak Date:	05/06/2004	County:	PALM BEACH
Outbreak Type:	DISEASE	Outbreak Status:	OPEN

- Summary
- Definition
- Settings
- People
- Contacts
- Environmental
- Event Log
- Frequencies
- Risk Factor
- Closure
- Reports

**Outbreak Name:**  
PALM BEACH - GI

**Dates:**

Date First Onset:	03/15/2004	Date Last Onset:
Date Investigation Started:	04/01/2004	Date Closed:

**Locations:**

Setting: RECREATIONAL WATER	Facility Name:
-----------------------------	----------------

**Transmission:**

Mode of Transmission:

**Counts:**

Cases:	1
Total Exposures:	1
Hospitalized:	0
Number of Deaths:	0
Event Logs:	1
Positive Env. Samples:	0

**Counties:**

Initiating County: PALM BEACH

**Related Counties:** **Related States:**

**List of People / Group:**

Quantity	Name/Description	Reason/Type	Disposition	Merlin Case #	County/State
1	SMITH, CARL	COMMON SETTING	CASE		PALM BEACH

**List of Environmental Tests:**

Quantity	Sample Type	Description/Location Taken	Disposition	Disposition Date
1	WATER	POOL 1		5/1/2004

- Reporting
- Epi-Analysis
- Resources
- Task List
- Help
- Administrative
- Logout

**Outbreak Information**  
9.13

Outbreak ID: 1008	Outbreak Name: PALM BEACH - GI	Outbreak Status: OPEN
Outbreak Date: 05/06/2004	County: PALM BEACH	
Outbreak Type: DISEASE		

- [Summary](#) | 
 [Definition](#) | 
 [Settings](#) | 
 [People](#) | 
 [Contacts](#) | 
 [Environmental](#) | 
 [Event Log](#) | 
 [Frequencies](#) | 
 [Risk Factor](#) | 
 [Closure](#) | 
 [Reports](#)

**Outbreak Definition:**

Outbreak ID: 1008  
 Outbreak Name: PALM BEACH - GI  
Outbreak name will be prefixed with respective county name and a hyphen (-).

Outbreak Case Definition: DIARHEA AND VOMITTING EXPERIENCED FOLLOWING SWIMMING AT POOL A BW 3/4/04 AND 3/20/04 [Update Definition](#)

**Risk Factor:**

[Add Risk Factor](#)

- DID YOU ATTEND CLASS A IN PB HIGH SCHOOL?

**Lab Tests:**

[Add Lab Tests](#)

- DID YOU HAVE LAB TESTS?
- LIVER ENZYMES DONE?

**Dates:**

Earliest Onset Date:  Date Last Onset:

Date Investigation Started:

**Type:**

Outbreak Type:

Number of People Affected:

ICD9:

**Reporter:**

Reporter Type:

Reporter Name:  Phone:

Provider Name:  Phone:

Primary Investigator:

Entered By: MANCINIC

**Counties:**

Initiating County: PALM BEACH

Related Counties:  Related States:

[Save](#)



**Reporting**

**Epi-Analysis**

**Resources**

**Task List**

**Help**

**Administrative**

**Logout**

## Outbreak Information

9.13

Outbreak ID:	1008	Outbreak Name:	PALM BEACH - GI
Outbreak Date:	05/06/2004	County:	PALM BEACH
Outbreak Type:	DISEASE	Outbreak Status:	OPEN

Summary Definition Settings People Contacts Environmental Event Log Frequencies Risk Factor Closure **Reports**

- [Epi Curve](#)
- [Line List](#)
- [Line List By Disposition](#)
- [Outbreak Contacts Report](#)
- [Risk Factor List](#)

# What's Next for "Outbreak?"

- Statewide training and use
- Mandated use for outbreak reporting
- Link to electronic interview record?
- Improved link to Merlin core system
- "Enterprise-like" solution
- Linking data for additional automated analyses
- Evaluation