Oregon's Excellent Outbreak Investigation Tools

Filemaker Databases

1. Outbreaks:

Used to assign outbreak and PFGE-cluster IDs, compile outbreak data, and submit outbreak investigation summary reports to CDC through a programmed data export (that can be uploaded to NORS-Direct or sent directly to CDC through PHIN-MS).

2. Case Log:

Initial data collection tool for gastroenteritis and respiratory outbreaks; users enter cases that are automatically summarized and tabulated into a linelist and epi curve.

These summary data can then be pushed to a related record in the Outbreaks database. Also embedded in the Case Log is the Control Measures database, where investigators capture whether institutions have complied with recommended gastroenteritis control measures (as applicable).

3. Napoli:

Data entry and analysis tool for event-centered outbreaks (e.g., restaurants, weddings, camps).

Calculates symptom profiles, incubation periods, 2x2 tables, and demographic summaries.

Allows user to run a case- control or cohort study in addition a simple linelist tool.

Designed to be used with the Event- or Venue-Centric Outbreak Questionnaire.

4. Shotgun:

Used to create hypothesis-generating questionnaires (AKA Shotgun Questionnaires) and analyze food and animal exposure frequencies.

Houses a standardized food exposure library and can be programmed to aggregate data from case interviews to calculate background rates of food consumption.

These background rates can be used as estimates when calculating cumulative binomial probability scores for food exposures; these scores can generate hypotheses to be further explored by epidemiologists.

5. Orpheus:

Information on individual cases of reportable diseases; specialized disease modules for foodborne diseases with demographic, laboratory, clinical, and targeted questions for high-risk food, animal, water, and environmental exposures.

6. Call Tracker:

A database to organize the process of a bunch of people making simultaneous calls to a list of cases or controls.

Upcoming/Continuing Projects

1. After Action Review toolkit for foodborne outbreak investigations.
2. PFGE cluster investigation guidelines
3. Food specimen collection guidelines (and kit)
4. International Outbreak Museum website

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Forms

1. Shotgun:

A hypothesis-generating questionnaire designed to determine a large number of exposures that cases in a subtyping cluster might share. Corresponding database available for analysis.

2. Event- or Venue-Centric Outbreak Questionnaire template:

Designed for "local event" outbreaks of gastroenteritis (e.g. restaurants, weddings) to assess food and environmental exposures. This is a stand-alone Word file that is formatted for use with the Napoli database.

3. Binomial Probability Worksheet:

Excel worksheet that allows you to calculate the binomial probability of getting X or more yes answers to any given exposure question if you know or can guesstimate the background rate.

4. Questionnaire templates:

Individual questionnaire templates for outbreaks suspected to be associated with raw milk, Mexican-style restaurants, or sub/sandwich shops.

Templates include questions commonly asked in these investigations. Philosophy is to have everything possible and then allow users to quickly remove what they don't need.

5. Restaurant Inspection Checklist:

List of important information to collect from restaurants during outbreak investigations (still piloting).

Other Tools

It-Kits™

(AKA Enteric Specimen Collection Kits):

A revolutionary packet of materials (in English and Spanish) that makes collecting a stool specimen simple and fun.

Patient instruction and Health Department Staff instruction forms are available; patient instruction video is in production as of January 2014.

Citizen It-Kit instruction video (English): www.youtube.com/watch?v=LstIIyTlT3k

Citizen It-Kit instruction video (Spanish): www.youtube.com/watch?v=YUV9oSbsyas

Training video: Outbreak Interviewing Strategies:

This video, starring many members of the Oregon Public Health Division, explains the 10 cardinal rules of effective interviewing.

The longer version explains background and is very helpful for understanding outbreak investigation interviewing.

The shorter 9-minute version is useful as a quick introduction to volunteer interviewers, for times when it is important to get on the phones as quickly as possible.

1. Do a practice run until you're comfortable with the questionnaire.

31 minute (full version): www.youtube.com/watch?v=HNZm7z_JELw

9 minute (quick version): www.youtube.com/watch?v=O6gKLQpEkfY