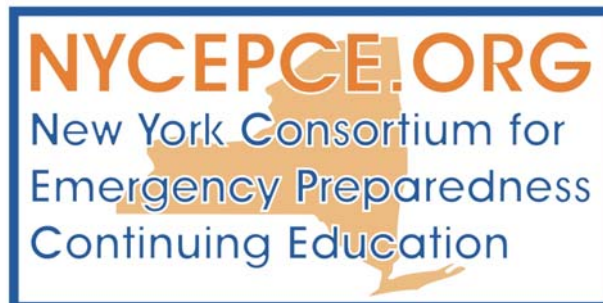# Drawing on University Resources for Emergency Response

Student Surge Capacity Teams

Presentation Objectives

- Describe the development and protocols needed for a student surge capacity team
- Describe the benefits to students and public health agencies
- Describe the use of students by local and state public health for surge capacity during outbreaks and other public health emergencies

Presentation Outline

- Centers for Public Health Preparedness Background

- History of collaboration

- Overview of Requirements for Team Epi-Aid or similar program

- Team Epi-Aid Activities

- Conclusions

Volunteers in Emergencies

- NYC DOHMH received volunteers
  - Not used in part because lacked skills & training
- Volunteers in major emergency extremely likely
  - Pre-event organization extremely helpful
  - Or without training are unusable (& frustrated)
  - Greater supervisory cost than operational benefit

NYC DOHMH Bureau Communicable Disease

High profile outbreaks:

- Anthrax attacks, 2001
- Initial introduction of West Nile virus in US, 1999
- Cyclosporiasis outbreak, 1996, contaminated raspberries

Majority:

- Foodborne disease & viral hepatitis

Bioterrorism

- Special responsibility for public health agencies
- Require same surge in resources:
  - Public information
  - Risk communication
  - Surveillance
  - Contact tracing
  - Data analysis
- Occur rarely

Disease Outbreaks

- Occur often
  - NYC DOHMH responsible for investigation 60 named infectious diseases & outbreaks of unknown etiology if appear infections

- Require surge in resources
  - Public information
  - Risk communication
  - Surveillance
  - Contact tracing
  - Data analysis

Need for Local Surge Capacity Resources

- Infectious disease outbreaks are resource intensive
  - Often need staff reassigned from other duties
  - Disrupt other essential operations
- Federal resources
  - Days and hours away (EIS, SNS, DMAT)
  - Use limited to major events

Recent Outbreaks

- XDR TB (May 2007)

This is an official
CDC HEALTH ADVISORY

Distributed via Health Alert Network
Tuesday, May 29, 2007, 0:40 EDT (12:40 PM EDT)
CDCHAN-00261-2007-05-29-ADV-N

Investigation of U.S. Traveler with Extensively Drug Resistant Tuberculosis (XDR TB)

- Mumps: Iowa 2006: 1,958 cases
- Cryptosporidium:
  - Milwaukee, 1993: 403,000 cases

Salmonella Peanut Butter

- Interviews: 65 patients + 124 controls
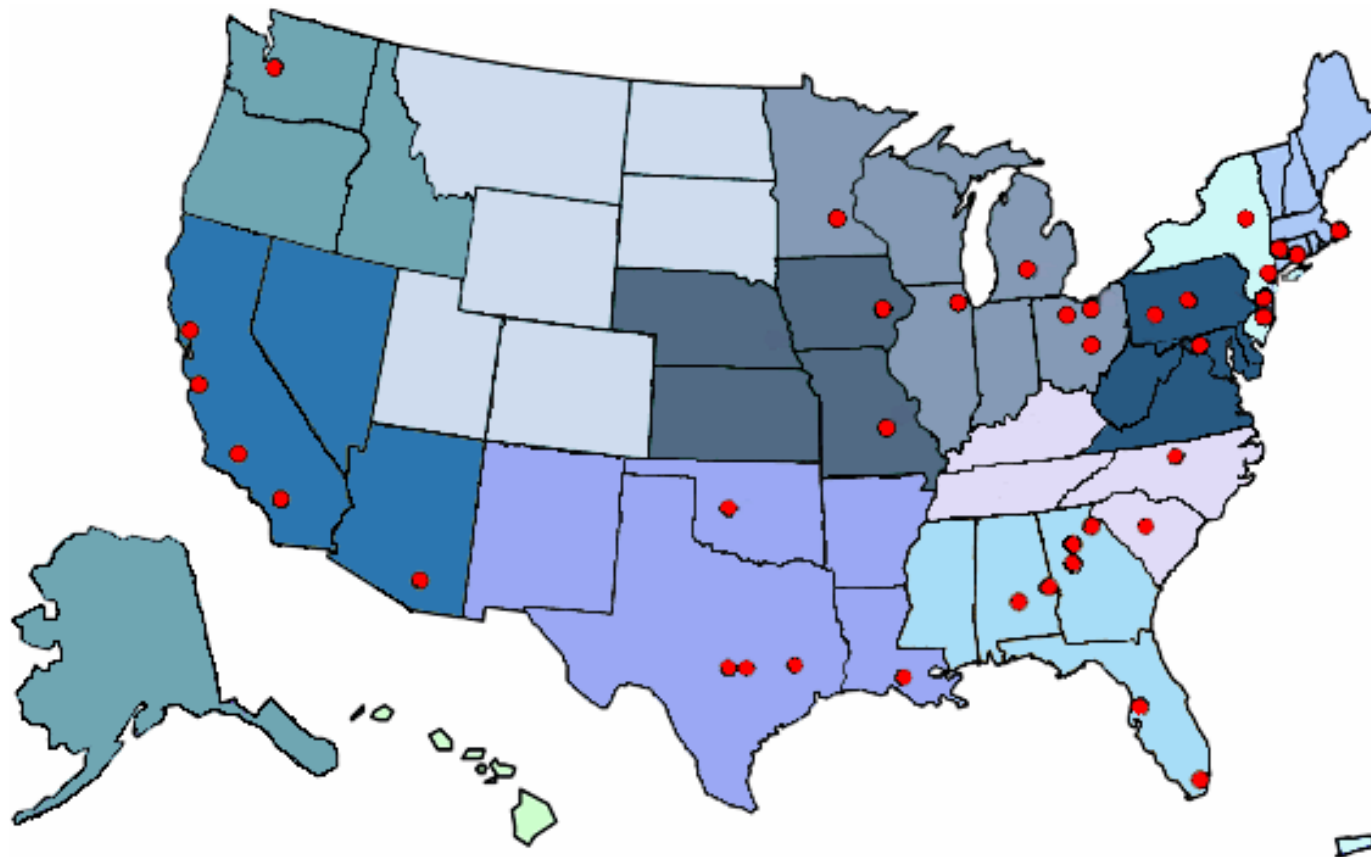

- Source: CDC. MMWR, June 1, 2007

2005 Foodborne Disease Outbreaks in the US

Etiology	*No. Outbreaks*	*No. Cases*
Bacterial	**188**	**4,348**
Chemical	**40**	**151**
Parasitic	**6**	**739**
Viral	**170**	**5,018**
Multiple	**6**	**525**
Total Confirmed Etiology	**410**	**10,781**
Unknown Etiology	**572**	**9,398**
Total	**982**	**20,179**

Contact Tracing

Healthcare Contacts

Household Contacts

Incidental Contacts
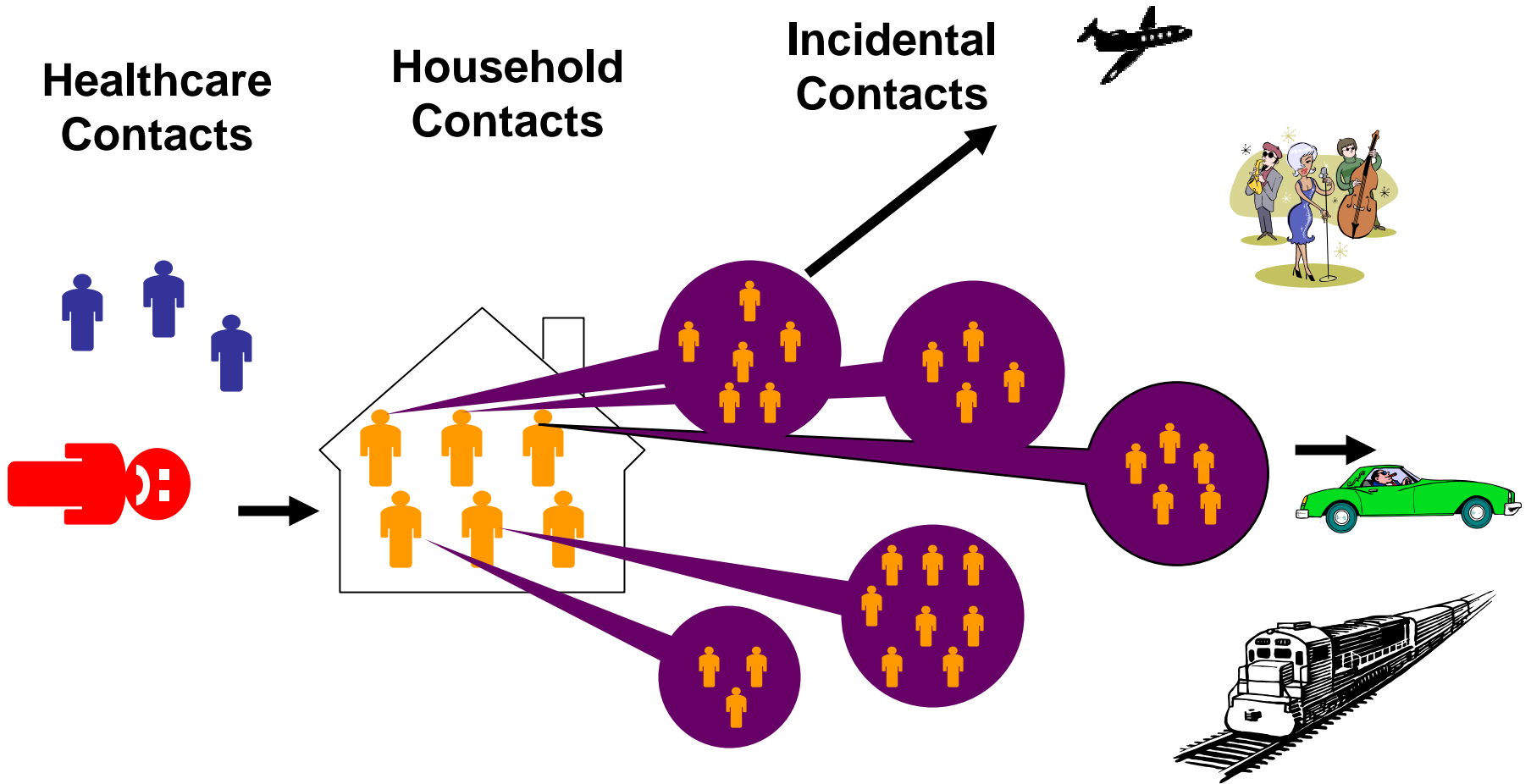
Your Neighborhood Center for Public Health Preparedness

- http://www.asph.org/cphp/home.cfm

History of UNC Collaboration

- UNC SPH and NC DPH: Long history of partnership around school's mission of community serve and public responsibility
- 1999: Hurricane Floyd
  - Led to the need for the coordination of SPH response efforts
  - NC Institute for Public Health was founded
  - NCCPHP was funded by CDC in 2000 as part of NCIPH

History of UNC Collaboration

- SPH was involved in a number of ways
  - Water sampling and testing
  - Emergency room surveillance
  - Health education
  - Needs assessments
  - General clean-up
- BUT, not directly involved in the NC Division of Public Health response to Hurricane Floyd

UNC Team Epi-Aid Profile

- 187 students on Team
  - School of Public Health
    - Epidemiology
    - Environmental Sciences and Engineering
    - Health Behavior and Health Education
    - Maternal and Child Health
    - Health Policy and Administration
    - Nutrition
    - Biostatistics
  - Schools of Medicine, Nursing and Pharmacy

UNC Team Epi-Aid Activities

- Disasters and Emergencies
  - Pre-Hurricane Assessment of coastal NC county with new flood zones
  - Public health response to Hurricane Isabel (2003), Charley (2004), Katrina (2005), Wilma (2005)

UNC Team Epi-Aid Activities

- Outbreak Investigations:
    - Hepatitis A in multiple restaurants
    - Legionnaire's disease in western North Carolina
    - E. Coli at North Carolina State Fair
    - Hepatitis B in a Nursing Home
    - Recreational water outbreak

UNC Team Epi-Aid Activities

- Bioterrorism and Emerging Diseases
  - SARS investigation and response of confirmed case on the UNC campus
  - Smallpox vaccine adverse events surveillance

Centers for Public Health Preparedness Student Disease Outbreak Teams

- U. of North Carolina – Team Epi Aid
- Columbia U. – Student Surge Capacity for Outbreak Investigation
- U. of Minnesota – Team Diarrhea
- Emory U. – Student Outreach Response Team
- U. of Texas – Student Epidemic Intelligence Society
- Ohio State U. – Student Volunteer Corps
- U. of Michigan – Public Health Action Support Team
- U. of Illinois-Chicago – Student Epi Care
- Johns Hopkins – P.H. Applications for Student Experience

Types of Activities

Activities	# Programs	Activities	# Programs
Collecting data (interviews)	4	Performing administrative work	1
Analyzing data	4	Designing studies	1
Entering data	4	Evaluating exercises	1
Cleaning data	4	Assisting with clinics	1
Designing questionnaires	3	Providing health education	1
Designing databases	3	Translating materials into Spanish	1
Preparing documents	3	Recruiting for studies	1
Fielding telephone calls	3		
Conducting surveillance	2		

Student interests in field response

- Community service
- Practical training
  - E.g., responding to immediate disease outbreak, disaster
- Marketable experience
- Connections with mentors and potential employers

University Administration Interest

- Community service
- Accreditation requirement
- Promotion of graduates to prospective employers
- Promotion of school to prospective students
- Increased visibility & prestige

Accreditation Requirements

- **Criteria 2.4 Practical Skills**
- "A planned, supervised and evaluated practice experience is an essential component of a public health professional degree program. These opportunities can take place in a variety of agencies or organizations but should include especially local and state public health agencies to the extent possible and appropriate."

ACCREDITATION

CRITERIA

SCHOOLS OF PUBLIC HEALTH

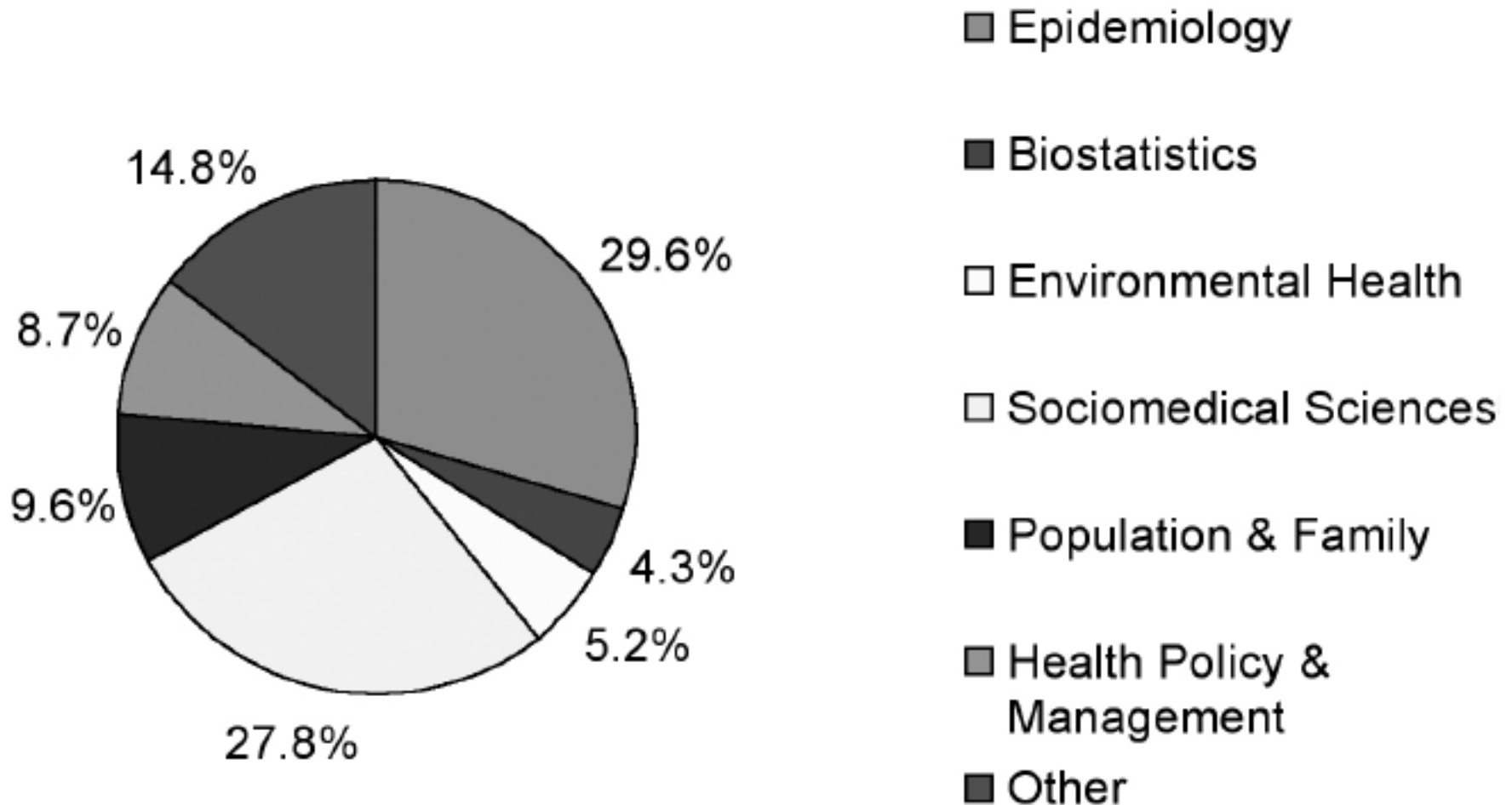AMENDED JUNE 2005

CePH

COUNCIL on EDUCATION
for PUBLIC HEALTH

Agency Benefits (1)

- Increase paid staff's effectiveness
- Provide resources for accomplishing back-burner tasks
- Provide access to a broader range of experience and expertise for improved/new programs
- Gender, ethnic, linguistic diversity may be more aligned with community

Columbia University Program

Student participation by department

- 29.6% Epidemiology
- 4.3% Biostatistics
- 5.2% Environmental Health
- 27.8% Sociomedical Sciences
- 9.6% Population & Family
- 8.7% Health Policy & Management
- 14.8% Other

Agency Benefits (2)

- Screen and improve your future:
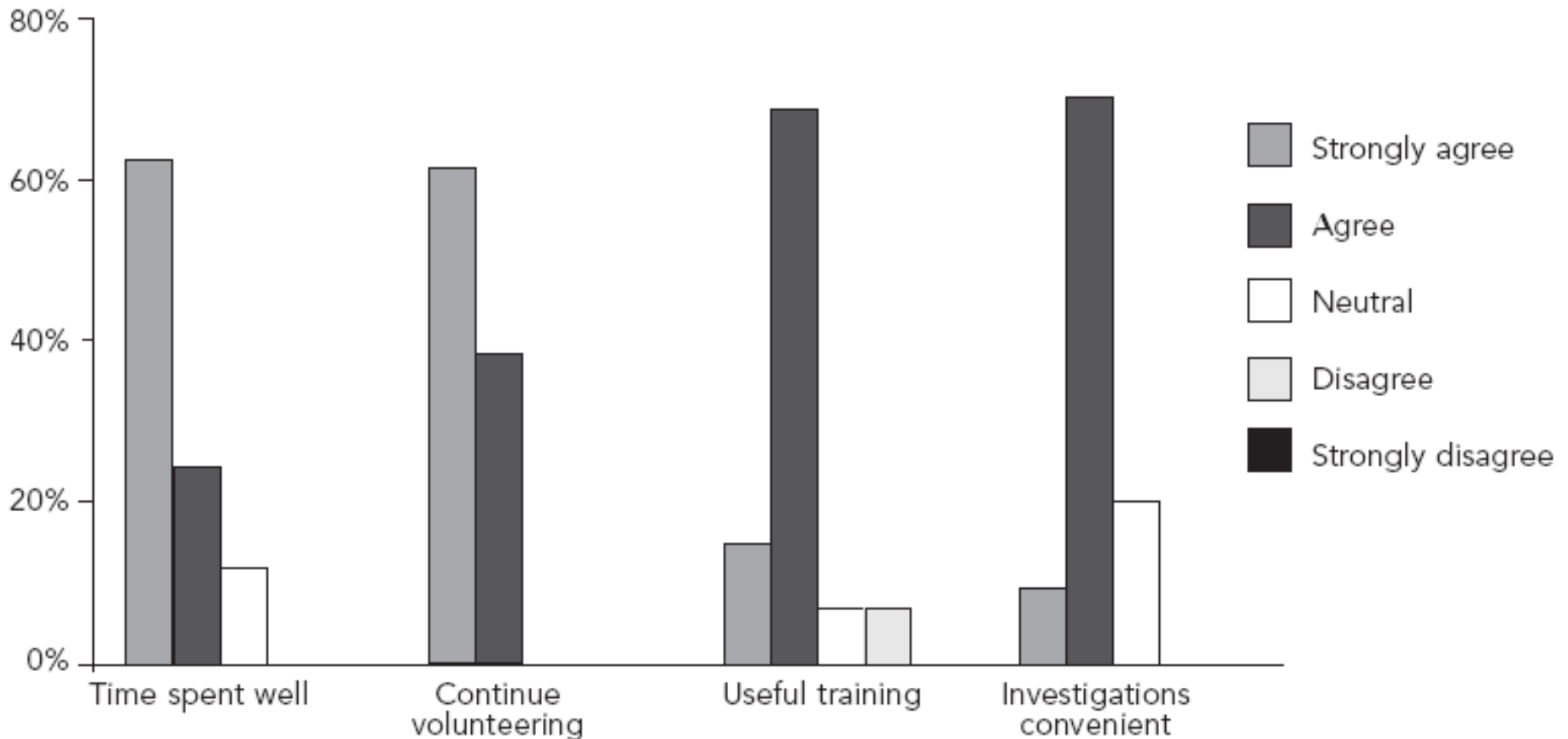 - Employees
  - Bosses
  - Stakeholders/supporters

Student Strengths

- No such thing as "off hours"
- Even the mundane are new experiences
- Labor cost is free or inexpensive
  - Health insurance already covered
- Pre-screened for ability and interest
- Data analysis and software skills
- Foreign language skills

Columbia University Program
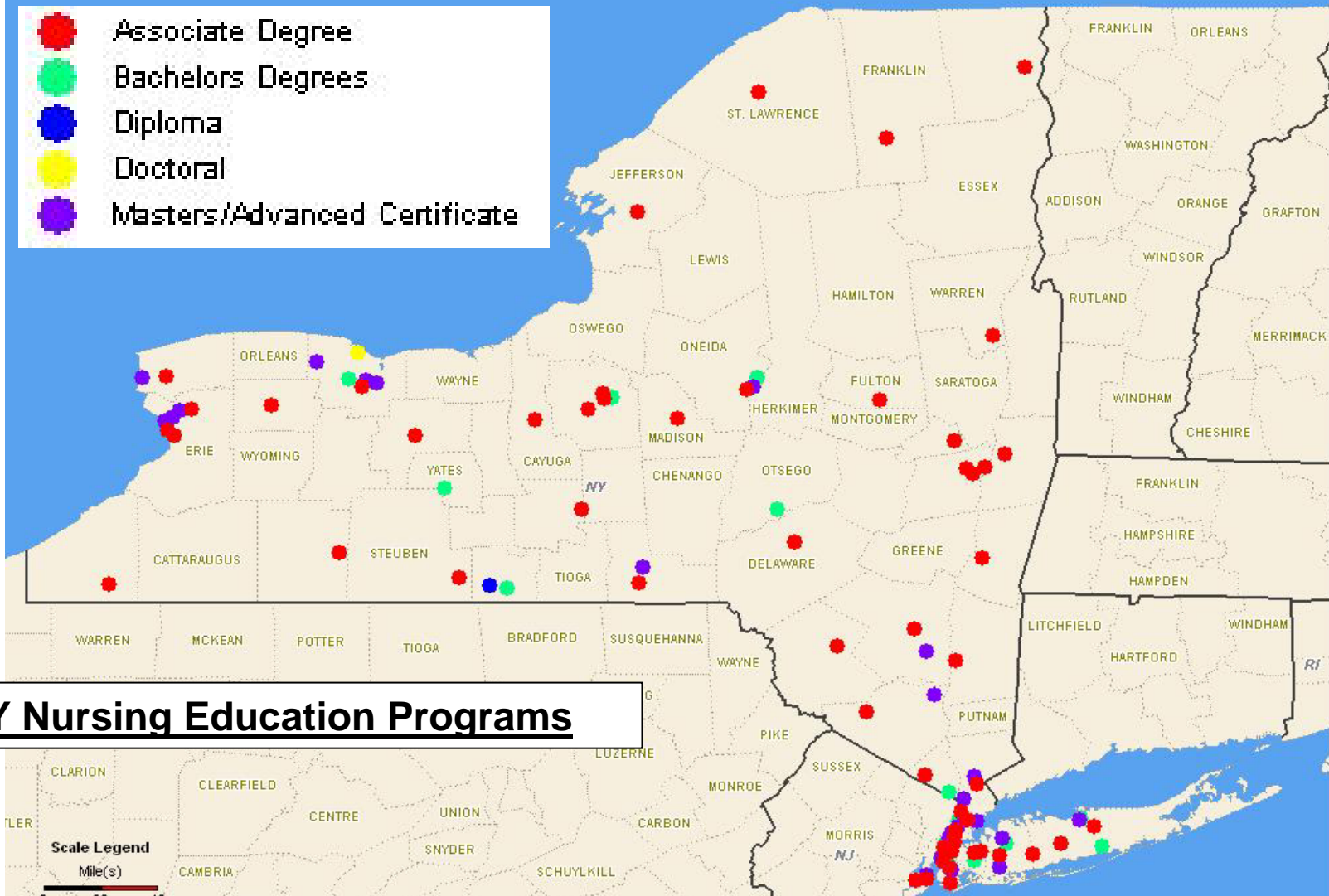

End of semester survey

Potential Resources

SUNY Campuses

Potential Resources

NY Nursing Education Programs

Legend:
- Associate Degree
- Bachelors Degrees
- Diploma
- Doctoral
- Masters/Advanced Certificate

Columbia U. Program Cycle

Close semester & Evaluate

Recruit & Renew

Activate / Drill

Train & Register
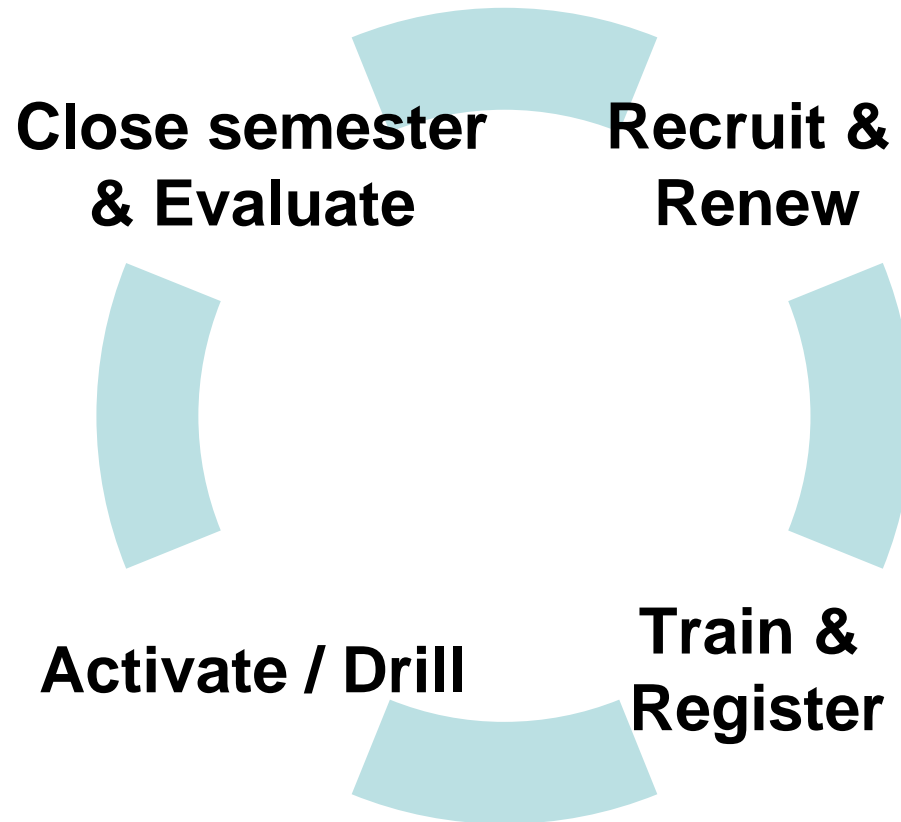
Recruitment

- Personal contact
- Faculty
- Class announcements
- Flyers
- School-wide email lists
- Previous participants

Essential Training

- Orientation each semester: Agency/Program mission & values
- Activity Specific Skills
  - E.g., interviewing, surveying, outbreak investigation
- Require
  - Certificate for Training in Human Subjects Protection
  - Confidentiality agreements
- Activation procedures
- Personal & family preparedness

Program Design

- Identify functional <u>role</u> filled
  - *Not specialty area ("epi", "nursing")*
- Specify competencies required to perform that role
  - Knowledge, skills, attitude
  - From standard competency set *or* new ones
- Design training and evaluation

Training Design

COMPETENCY-TO-CURRICULUM TOOLKIT:

Developing Curricula For Public Health Workers

Center for Health Policy
Columbia University School of Nursing
and
Association of Teachers of Preventive Medicine

- Specify audience
- Develop learning objectives
- Assess time availability of learner
- Determine how learning measured, expected outcomes
- Determine content & availability
- Match teaching methods to audience
- Develop curriculum
- Evaluate learner after materials presented

Source: Columbia U Sch of Nursing, *Competencies-to-Curriculum Toolkit*

Common Requirements

- Confidentiality agreements
- Identification cards
- IT Hardware or Software
- Contact information
- Driver's License, Funds, Ability to work unsupervised
- Liability waivers
  - Liability can be a major issue and can limit your team only to enrolled students; talk with your university counsel and be aware of your responsibilities

Identify Job Risk Factors

- Amount of time spent unsupervised.

- Work with vulnerable populations.

- Requirement to handle funds.

- Requirement to operate a vehicle.

- Physical risk to the volunteer.

CAUTION

Source: FEMA, Developing & Managing Volunteers
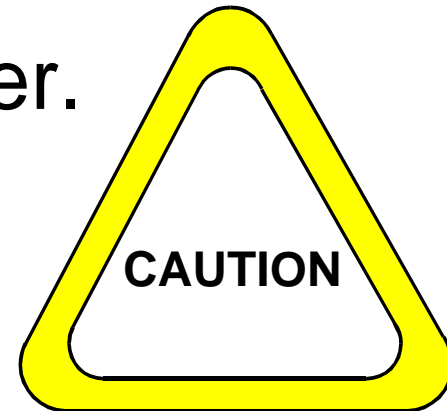
Liability Issues

- Student injures person or damages property
  - Requesting agency liable
  - University liable
  - Student liable
- Student injury
  - Personal health, auto, home insurance often covers
  - Workers compensation
  - Occupational exposure

Obligations to Students

- Need for mentorship
- Formal paperwork
  - Initial approval
  - End of semester documentation, evaluation, reporting

How Requests are Made

- Assess commitment & span of control issues

Activation Information

- Event
- Duties to be performed
- Minimum & maximum persons needed
- Preferred arrival time & location
- Expected time frame for activities
- RSVP

Making Requests for Personnel

- One staff person is main point of contact for state and local health departments interested in assistance

  - Decision to respond is based on student availability, supervision, scope of involvement, expectation of deliverables

- Email announcement is sent to listserv with details of the request

- Team Leader coordinates response, schedules training, determines supervision, etc.

Activation Information

- Define the situation or event
- Duties to be performed
- Minimum & maximum persons needed
- Preferred arrival time & location
- Expected time frame for activities
- RSVP

Evaluation

- From both requestors and participants for each activity:
  - Identify:
    - Problems
    - Unexpected strengths
    - New opportunities for the program or participants
  - Document even basic validity of program
    - Justify time & resource commitment
    - Are students more interested in career in applied public health?
    - Did this augment their classroom training?

Evaluation

- Program evaluation (end of each school year)
  - Relevance of training to duties
  - Barriers to serving[**]
  - Continued participation
  - Recommend to others

Conclusion

- Need for surge capacity – unique need different from typical practicums or internships

- Benefit to agencies, students, university, community

- Partnership, training, and organization are essential *prior to* the need for response

Questions?

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919-843-5566

More Information

Extra materials

(Not used in presentation but may be of interest.)

Types of Surge Personnel

- Professional: Those with licenses or professional skills.

- Unskilled: Offer their time and can be trained.

- Spontaneous: Turn out in the immediate aftermath of a disaster.

- Affiliated: Are attached to recognized agencies.

Source: FEMA, Developing & Managing Volunteers

Recruitment Message

- An attention-grabbing opening.
- The need: What is the problem?
- The solution: How this job meets the need.
- An answer to the listener's question: Can I do this job?
- Benefits: What is in it for the volunteer?
- Contact point: Who to contact to get involved.

52

Source: FEMA, Developing & Managing Volunteers

Incentives

- Pizza
- Extra credit in a class
- Course credit
- Internship/practicum credit
- Field experience with minimal commitment
- *Ask them*

Recruitment & Training Location

- At the school
  - Convenience for students

- At the agency
  - Begin familiarization with where they'll work
  - Travel demonstrates at least minimal commitment

Student FAQs

- Will I be paid?
- Will I be reimbursed for expenses?
- What if I'm injured?
- How often will I need/get to participate?
- Will I get out of classes or exams?