

One Health Collaboration across Epidemiology Academic and Practice Boundaries

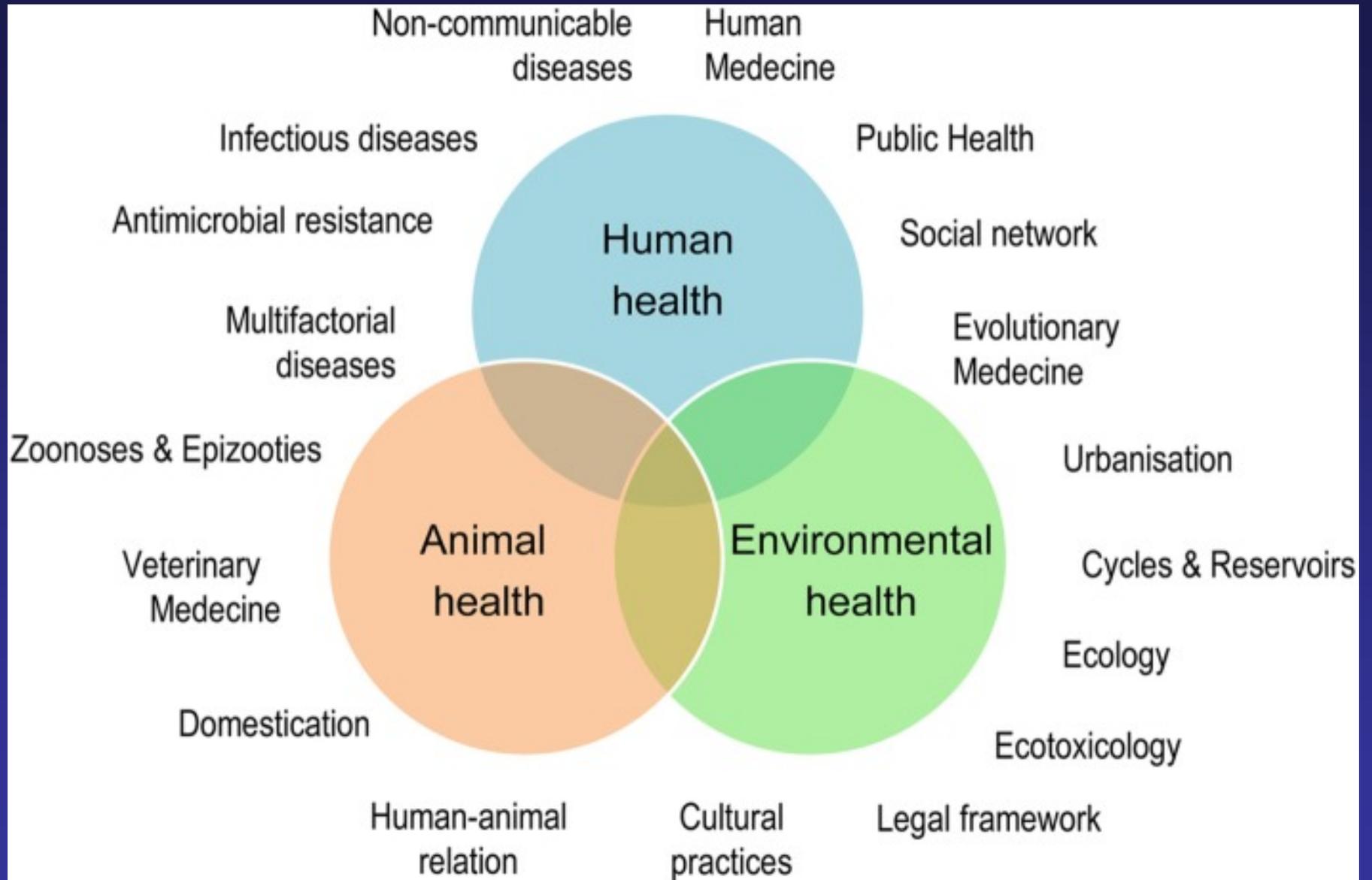
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UAlbany School of Public Health**

Vermont Dept. of Health Grand Rounds, 3/28/19

One Health



New York from a Vermont Perspective



Academic-Practice Linkages

- Efforts in recent years have focused on **'academic health departments'** and academic-practice linkages
- Public Health Foundation's Council on Linkages Between Academic and Public Health Practice
<http://www.phf.org/programs/council/Pages/default.aspx>

Institute of Medicine (IOM), iom.edu

- **The Future of Public Health (1988)**
http://books.nap.edu/openbook.php?record_id=1091
- **The Future of the Public's Health in the 21st Century (2002)**
http://books.nap.edu/openbook.php?record_id=10548
- **Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century (2003)**
http://books.nap.edu/openbook.php?record_id=10542

Association of Schools of Public Health (ASPH) Reports, asph.org

- **Strong Schools, Strong Partners: A Report on Practice Activities of Schools of Public Health**
- **Demonstrating Excellence in Academic Public Health Practice, June 1999**
- **Demonstrating Excellence in Practice-Based Teaching for Public Health, October 2004**
- **Demonstrating Excellence in Practice-Based Research for Public Health, Fall 2006**
- **Demonstrating Excellence in the Scholarship of Practice-Based Service for Public Health, Spring 2009**

Journal of Public Health Management and Practice

- **DiMaggio C, et al. Partnership for Preparedness: A Model of Academic Public Health. JPHMP, 2006, 12(1):22-7.**
- **Conte C, et al. Academic Health Departments: From Theory to Practice. JPHMP, 2006, 12(1):6-14.**
- **Livingood WC, et al. A Community-Centered Model of the Academic Health Department and Implications for Assessment. JPHMP, 2007, 13(6): 662-9.**

Public Health Reports, 2005, v. 120(Supp.1)

- **Thielen L, et al. Academic Centers for Public Health Preparedness: A Giant Step for Practice in Schools of Public Health, pp. 4-8.**
- **MacDonald PDM. Team Epi-Aid: Graduate Student Assistance with Urgent Public Health Response, pp. 35-41.**
- **Covich JR, et al. The Practice Community Meets the Ivory Tower: A Health Department/Academic Partnership to Improve Public Health Preparedness., pp. 84-90.**
- **Clements-Nolle K, et al. Nevada's Academic-Practice Collaboration: Public Health Preparedness Possibilities Outside an Academic Center, pp. 100-8.**

History of Collaboration, NYSDOH and SPH

- School of Public Health (SPH) created in 1985 by a Memorandum of Understanding (MOU) between NYSDOH and UAlbany
- Faculty initially primarily NYSDOH staff
- NYSDOH continues as an academic health department with an emphasis on science and public health

Eidson M, Pradhan E, Morse D. Public Health Rep. 2014;129(3):296-302. *2009 summary of collaboration.*

Birkhead GS, Eidson M, et al. J Pub Hlth Mgmt Pract. 2014;20(3): 278–284. *2012 survey of perceptions.*

Science and SPH Initiatives to Promote Scholarship and Research

- Office of Science and Public Health (OSPH) created in 2001 to foster integration of science with applied public health needs
- Dr. Dale Morse, Assistant Commissioner and Director, Office of Science, developed Initiatives concepts and convened meetings in 2007 to gauge staff interest
- Committees focused on mentoring (staff, students), data sharing, research, grants, publications, infrastructure/support, recognition
- Summary of SPH partnership began in 2009

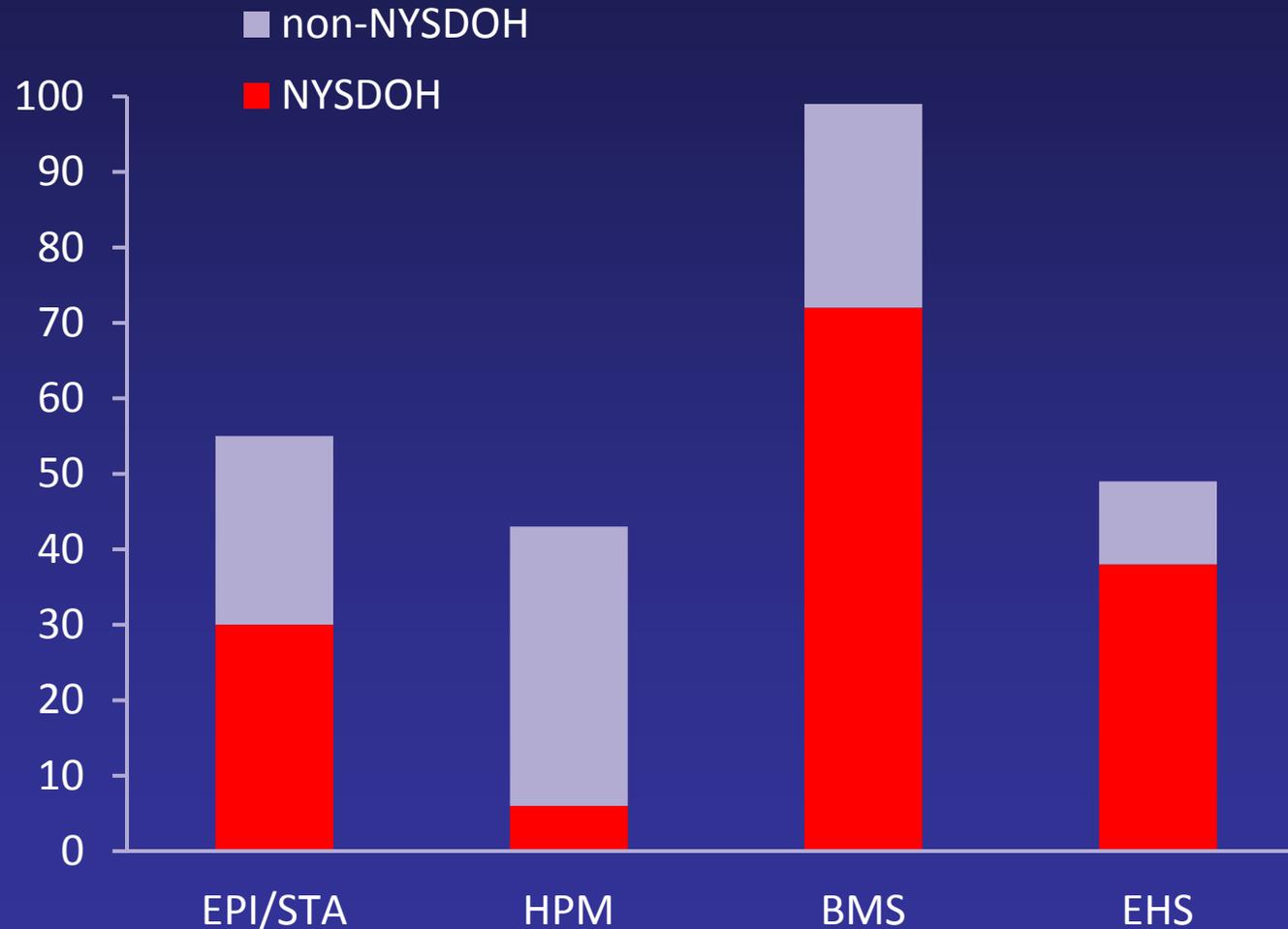
2009 Study Objective

- Summarize collaborative activities of NYSDOH staff with the SPH, as an example of an academic health department and unique model of a DOH/SPH partnership
- Primary focus:
 - Teaching
 - Student advising/mentoring
 - Service through committee work
 - Research publications
- Include activities of NYSDOH staff who are SPH faculty and those who are not SPH faculty

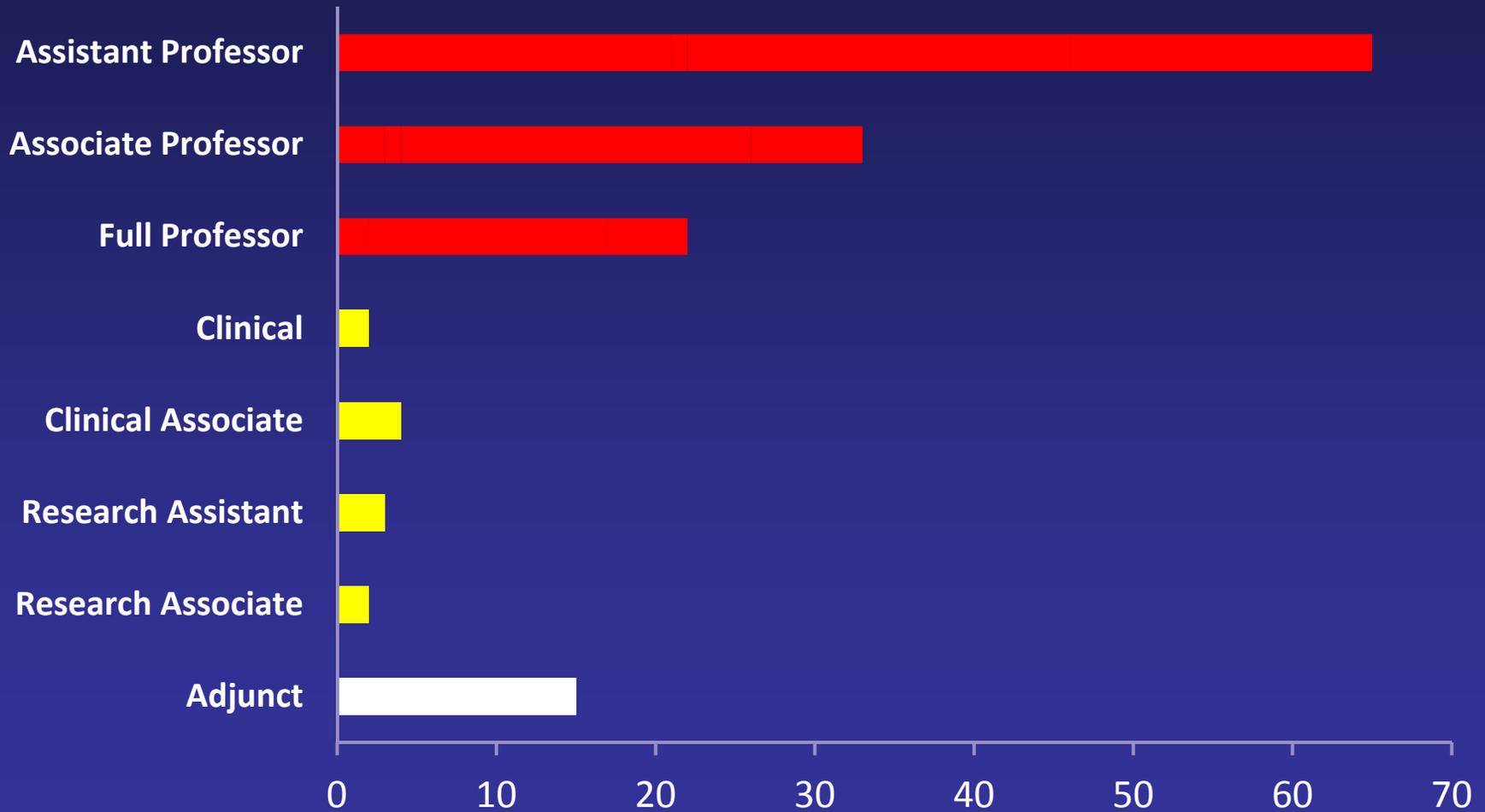
Methods

- Study began summer, 2009
- Determined 2009 NYSDOH faculty members
- Notified NYSDOH staff by emails and Lotus Notes News
- UAlbany staff provided trainings on Faculty Activity Report (FAR) system in 2009 and 2010
- NYSDOH faculty members given option of completing survey form or entering data into their FAR reports
 - If completed survey form, that data was used
- Non-faculty NYSDOH staff completed survey form
- Data review began summer, 2010 when UAlbany closed FAR database for 2009
- Student internships collected from MPH coordinator
- Publications collected through OVID search of Medline and Current Contents

Proportion of Academic Department Faculty Who are NYSDOH Staff Members, 2009



NYSDOH Faculty by Academic Rank, 2009



Student Advising/Mentoring



Public Health Leaders of Tomorrow (PHLOT)

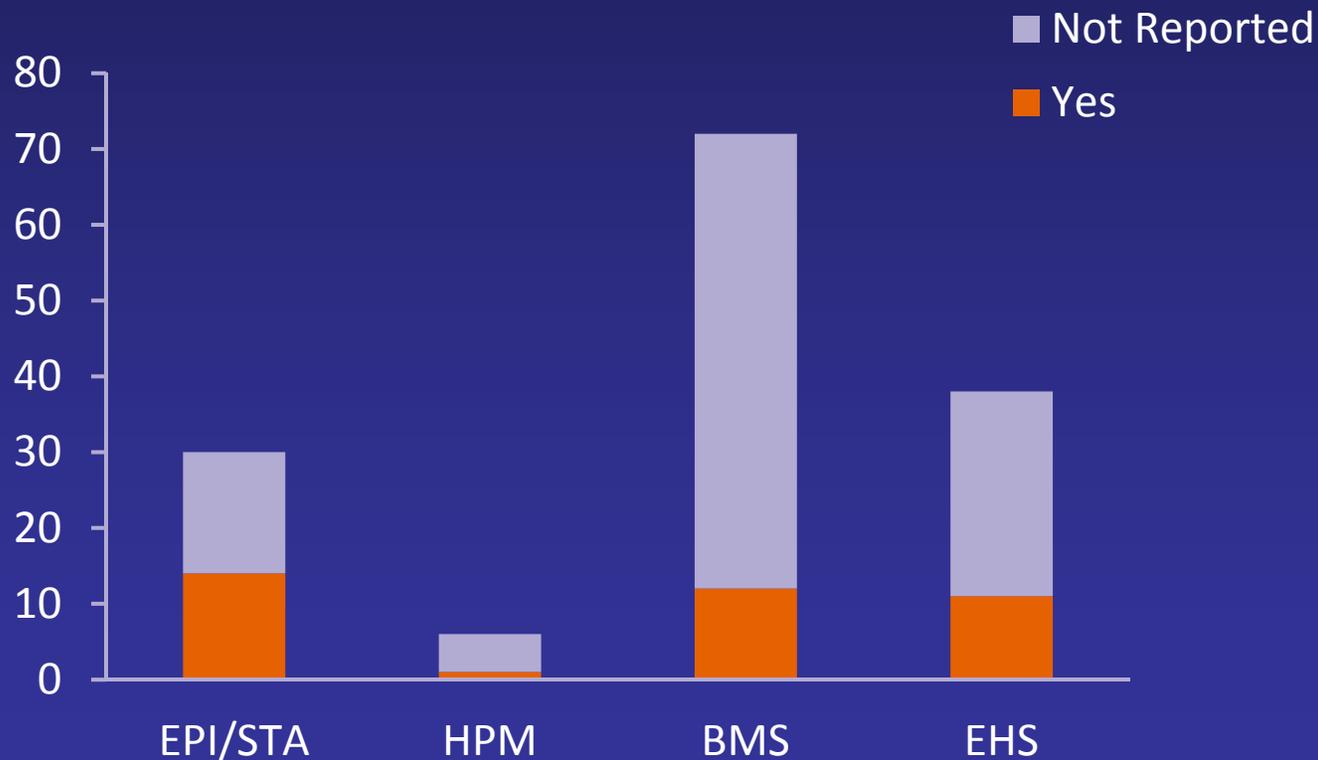
- Began in 2006, with funding from NYSDOH to SPH
- Strengthen current public health infrastructure in NYS and train the next generation of public health leaders
 - Tuition awards for state and local health department staff
 - Internship awards for current students to intern in state or local health departments
 - Scholar award for LHD employees to complete degrees in public health
 - Post-graduate Fellowship Program for recent graduates to work in state or local health departments
- NYS Grant: \$554,000 in 2009-2010

NYSDOH Sources of Student Project Funding

- **Maternal and Child Health: 15 students each of 3 semesters/year**
- **Special short-term funding:**
 - **H1N1 funding: 15 students, fall 2009**
- **Funding through individual grants**
- **Hiring may be either done directly by NYSDOH through HRI, or in partnership with the SPH and Research Foundation for recruiting and hiring**

Number of NYSDOH Faculty Advising/Mentoring Students in 2009 by Academic Department

Academic Advising

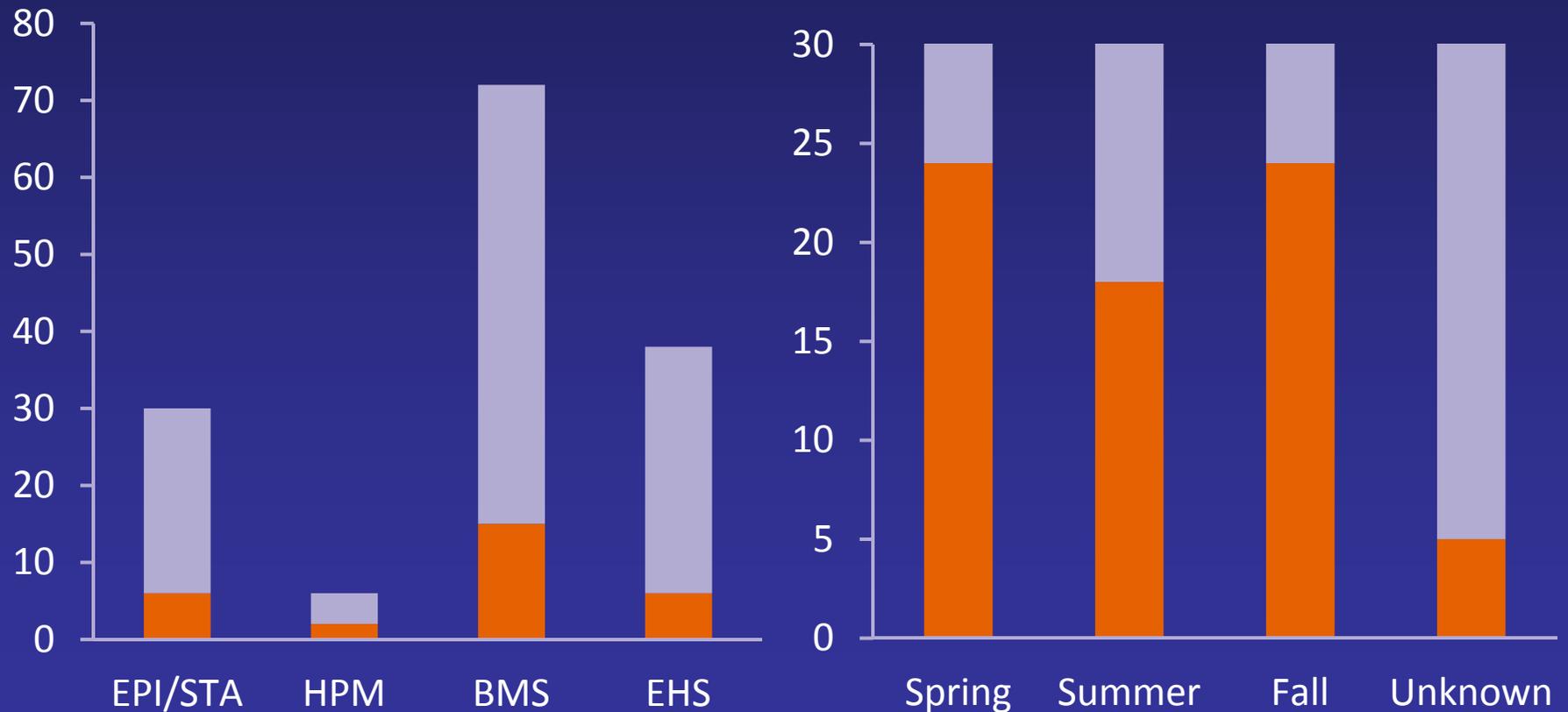


Number of NYSDOH Staff Members Offering Mentoring in 2009

By Academic Department

■ Not Reported
■ Yes

By Semester

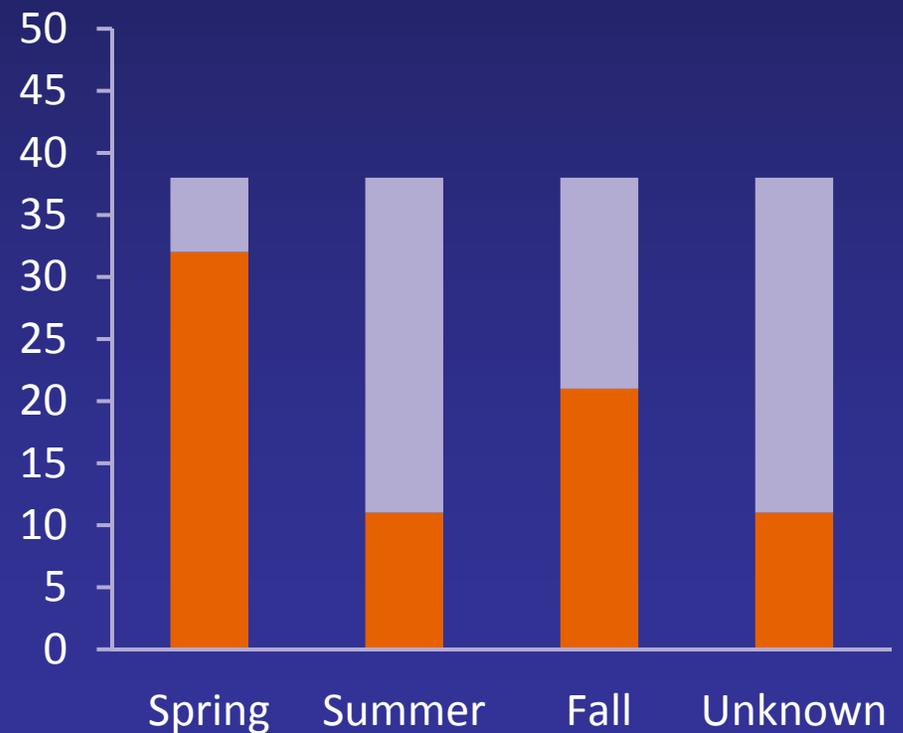
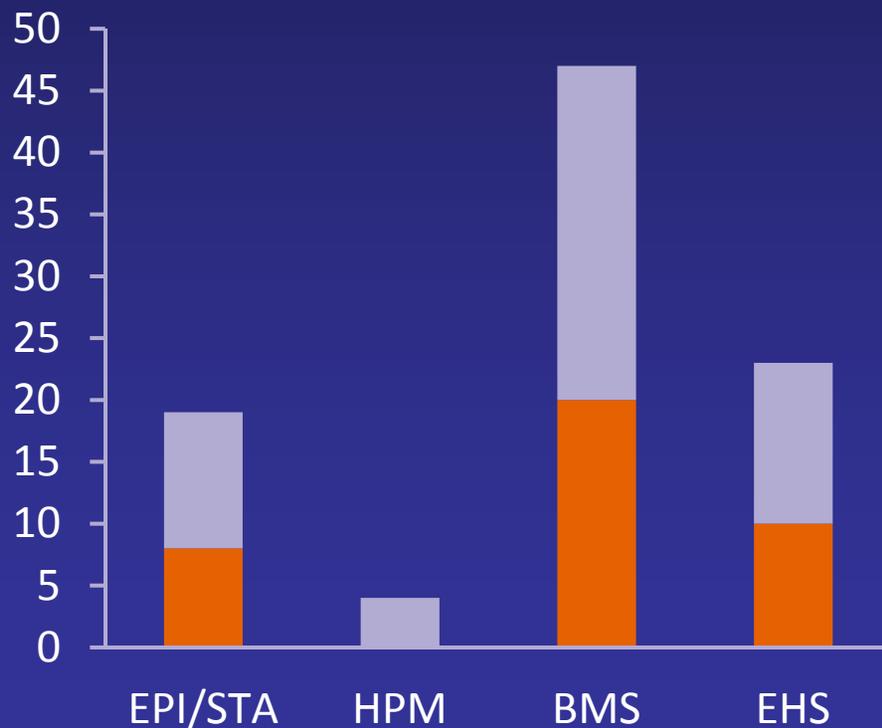


Number of NYSDOH Faculty Providing Dissertation/Thesis/Research Practicum Supervision in 2009

By Academic Department

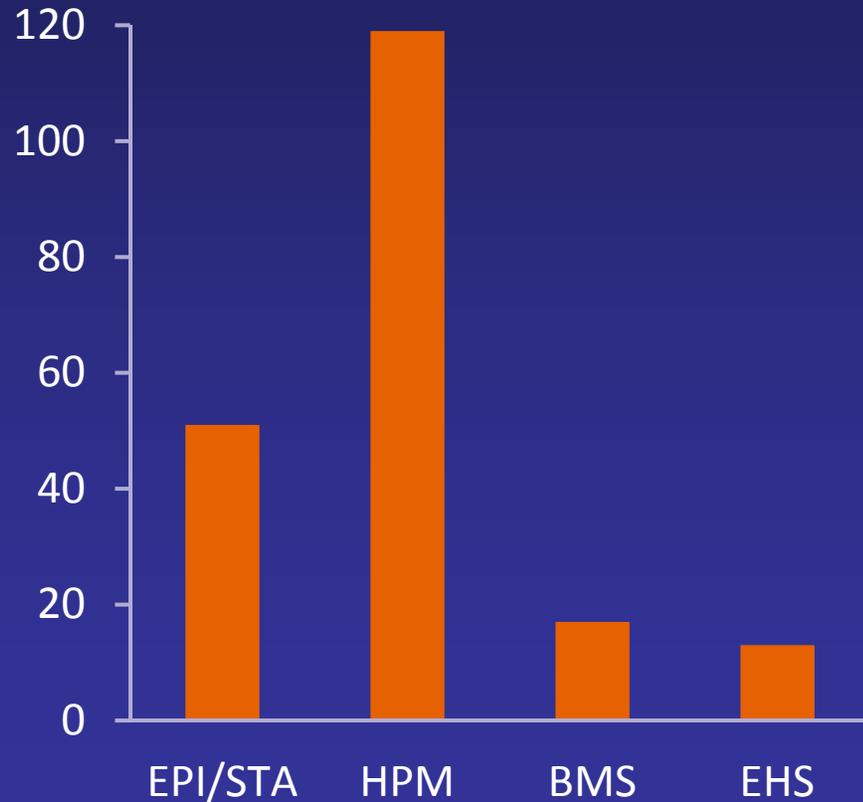
■ Not Reported
■ Yes

By Semester

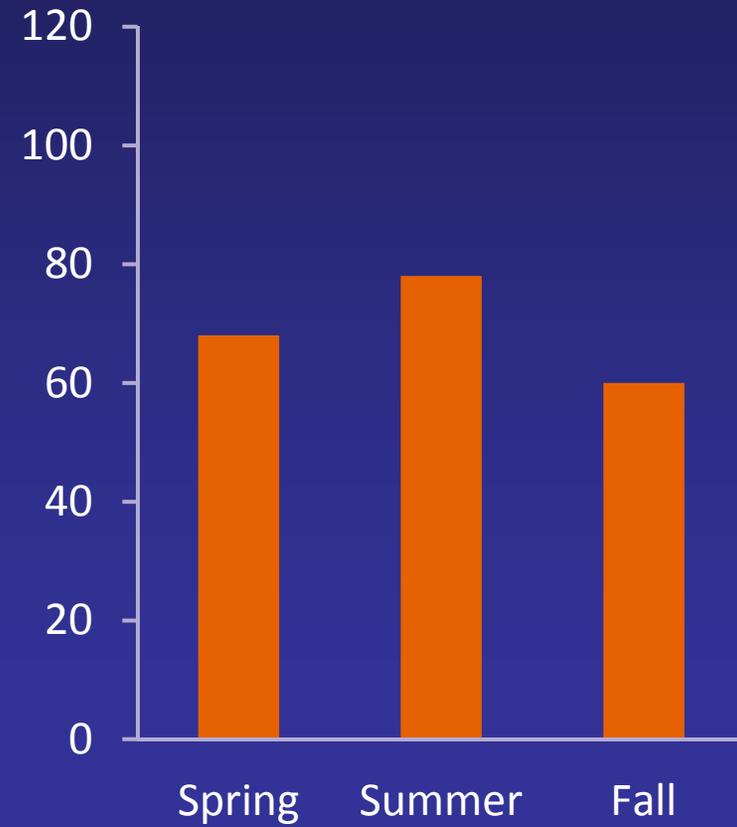


Number of NYSDOH Student Projects in 2009 by Academic Department and Semester

By Academic Department



By Semester

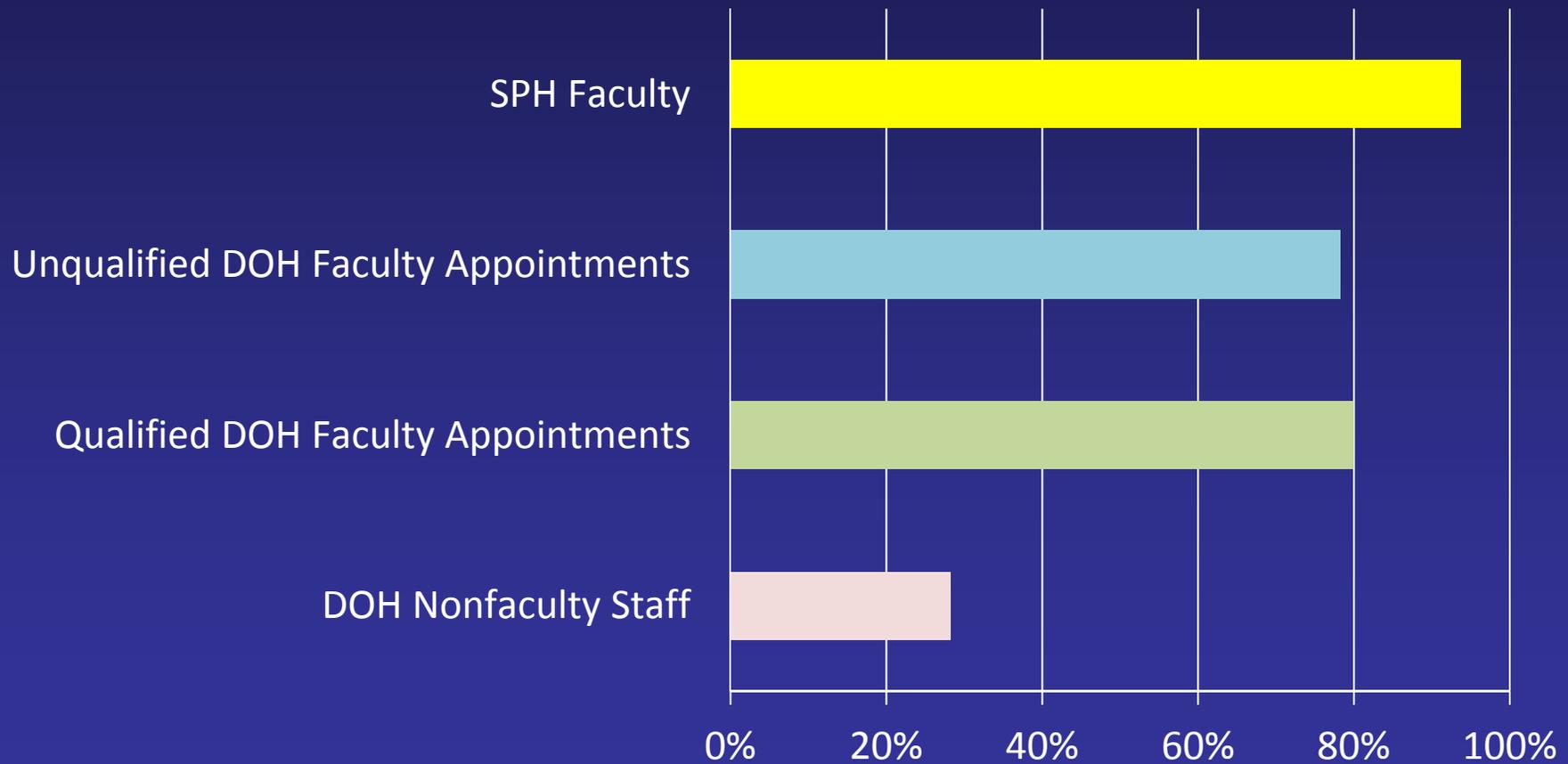


Number of 2009 NYSDOH Student Interns Employed at NYSDOH/HRI, 2011



Teaching/Guest Lectures

“DOH Teaching Benefits Students”, 2012

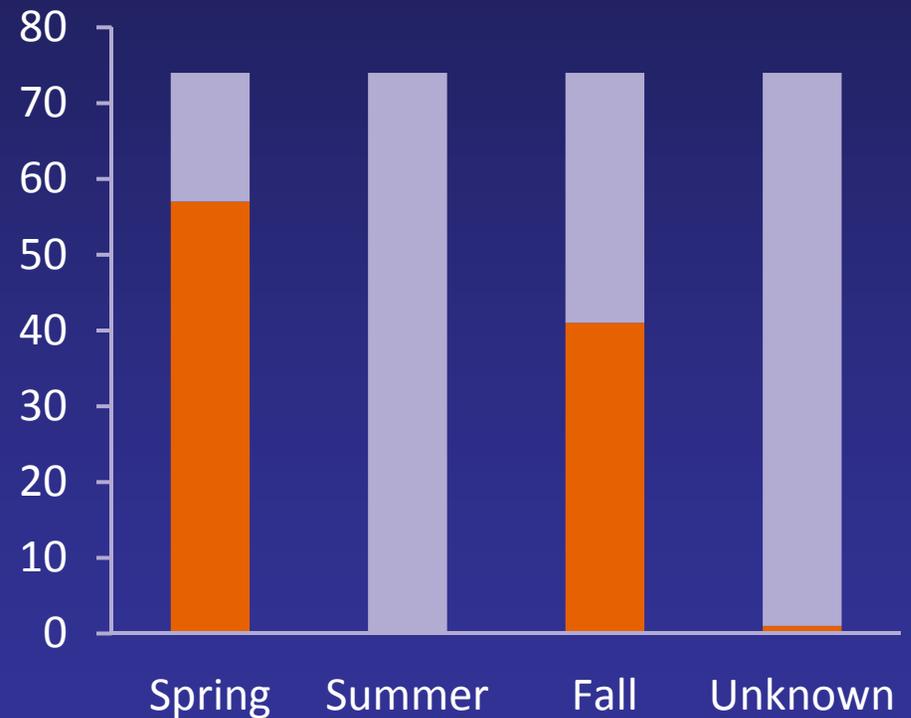
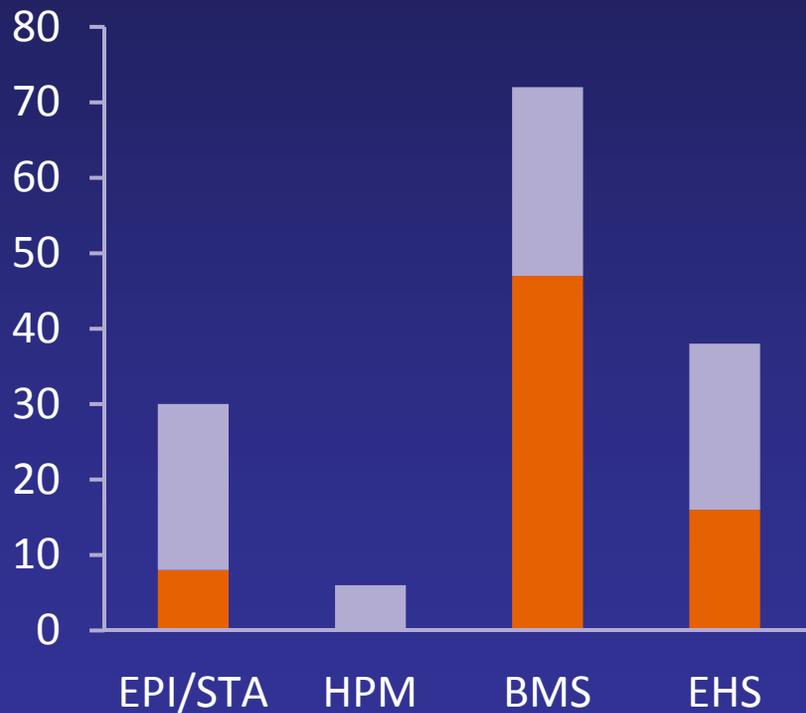


Number of NYSDOH Members Teaching in 2009 by Academic Department and semester

By Academic Department

■ Not Reported
■ Yes

By Semester

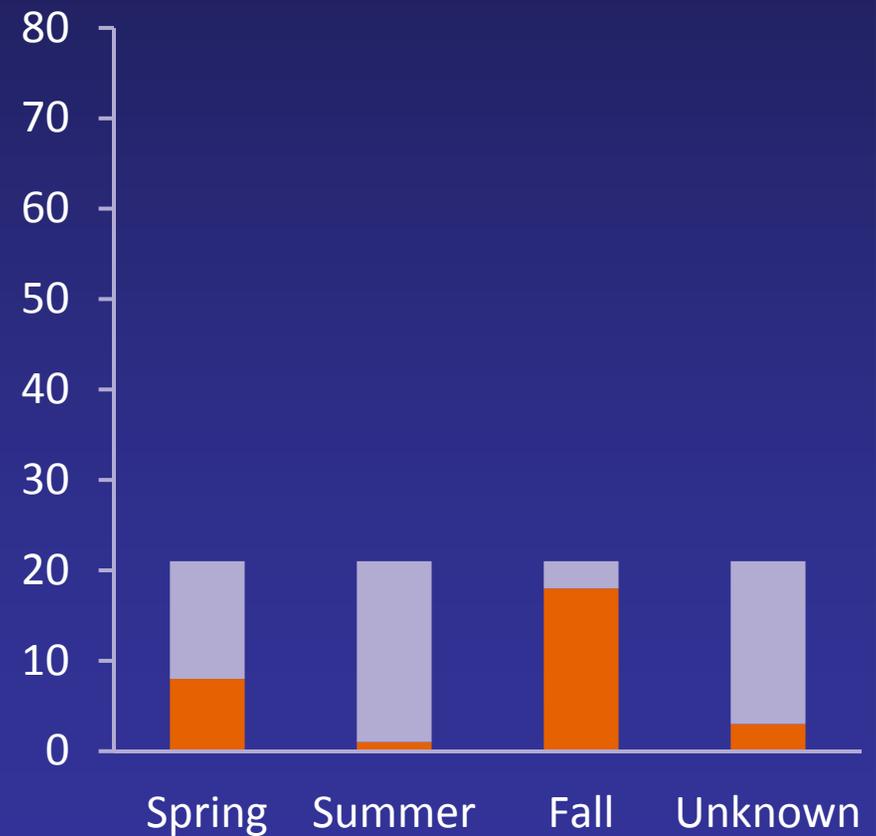
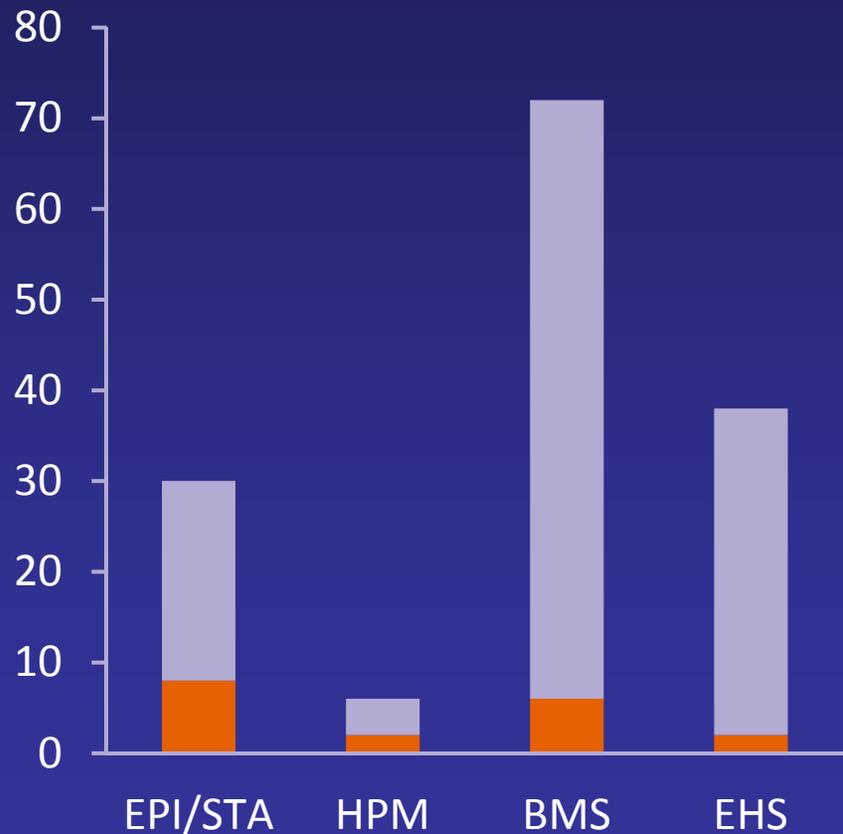


Number of NYSDOH Members Guest Lecturing in 2009 by Academic Department and Semester

By Academic Department

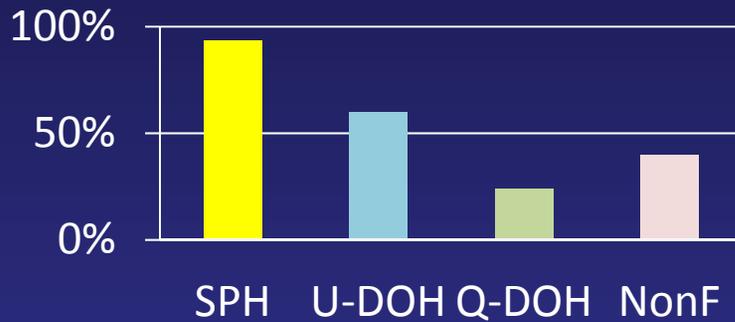
■ Not Reported
■ Yes

By Semester

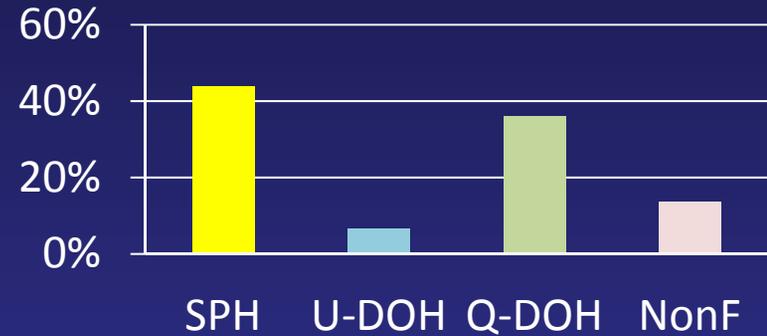


Collaborative Research Benefits, 2012

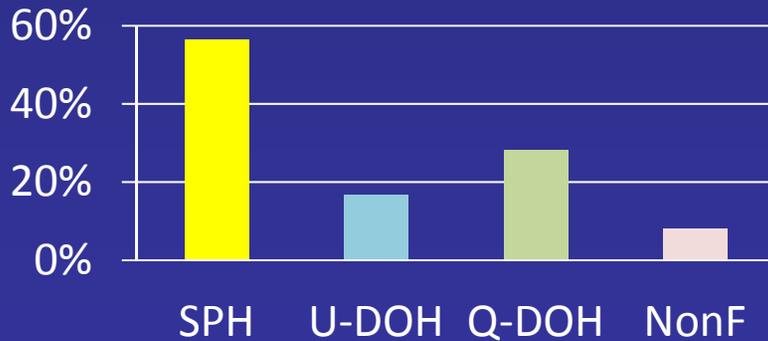
Student projects benefit DOH



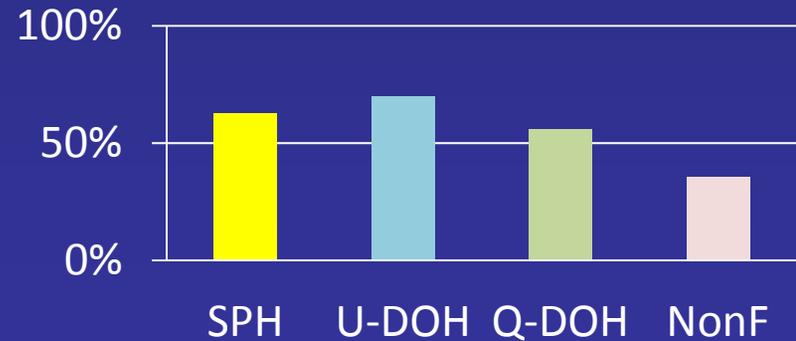
Partnership projects supported by DOH funds



Published with DOH/SPH nonstudent partners



Partnerships outside DOH/SPH provide benefits



232 peer-reviewed pubs by 95 DOH faculty in 2009

Publish Outbreak Reports!



Seneca Lake State Park Sprayground, New York

425 confirmed and 1,374 probable *Cryptosporidium* cases
Aug.-Sept., 2005 according to 2006 EIS Conference abstract

External Funding for NYSDOH Faculty, July, 2009 – June 2010

Academic Dept.	Number of Federal Awards	Number of Non-Federal Awards	Direct Expenditures	Indirect Expenditures
EPI/STA	124	13	\$65,109,509	\$8,901,843
HPM	9	1	\$1,732,919	\$174,077
BMS	109	26	\$11,687,032	\$4,275,097
EHS	61	18	\$4,963,449	\$1,685,608
Total	303	58	\$83,492,899	\$15,036,624

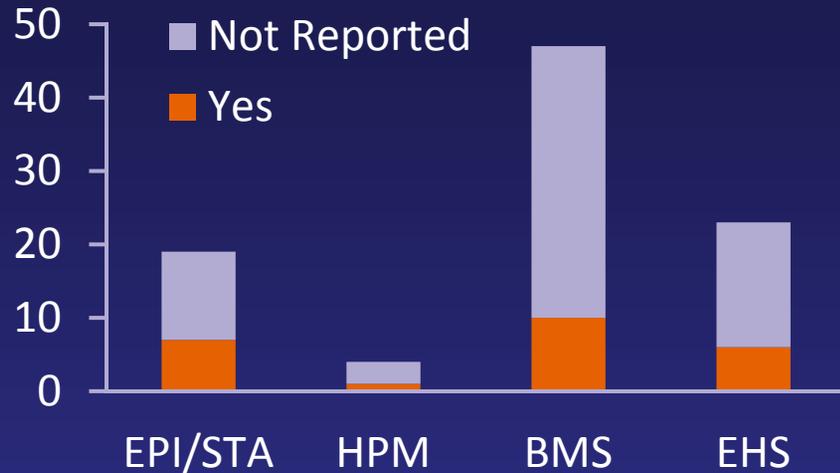
Funding for SPH from HRI/NYSDOH, 2009

(not including funding for NYSDOH/SPH faculty on previous slide)

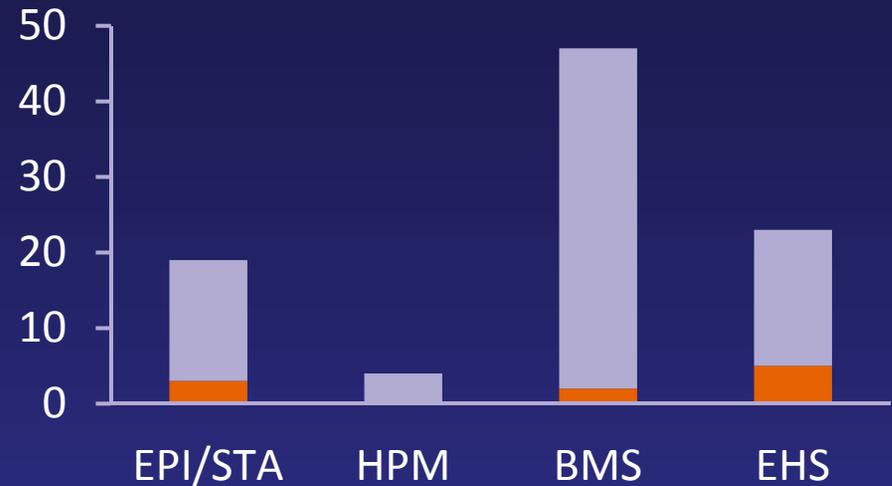
Acad Dept.	HRI			NYSDOH		
	No. of Awards	Direct Expenditure	Indirect Expenditure	No. of Awards	Direct Expenditure	Indirect Expenditure
HPM	5	\$327,488	\$80,920	8	\$3,109,259	\$600,034
EPI	2	\$176,217	\$90,609	0	0	0
Other	1	\$51,075	\$5,108	33	\$585,714	\$117,232
Total	8	\$554,780	\$176,637	41	\$3,694,973	\$717,266

Number of NYSDOH Faculty Reporting Service on FAR, 2009

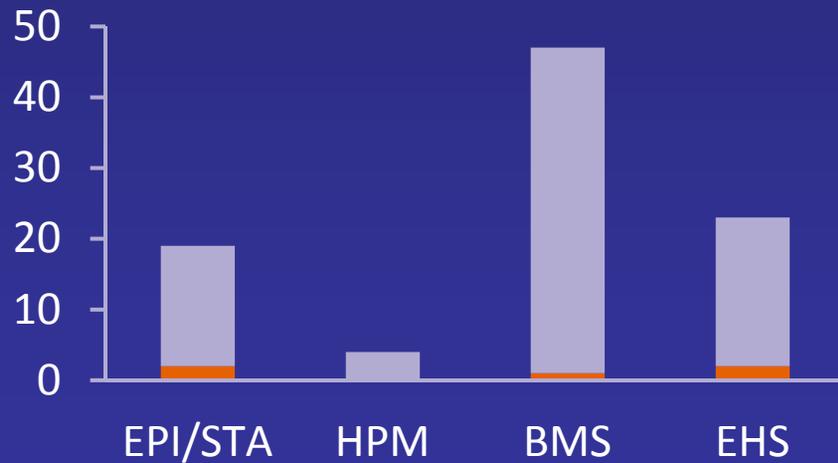
Academic department services



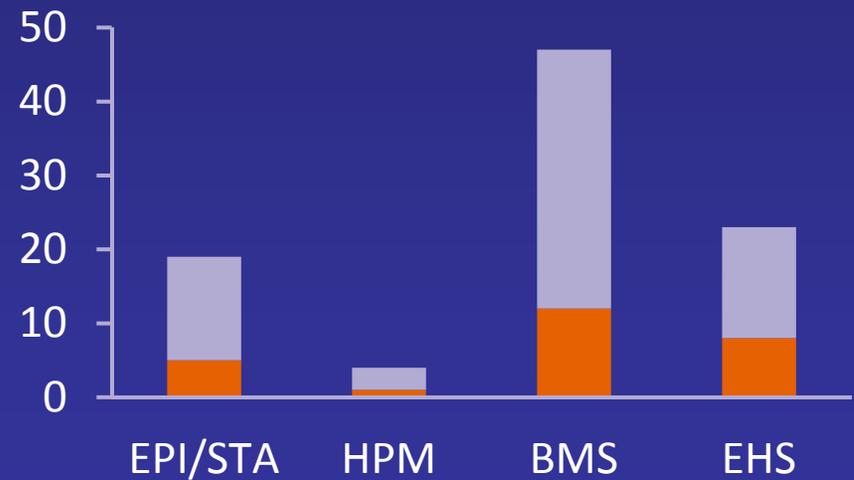
School/college services



University, SUNY, or statewide services

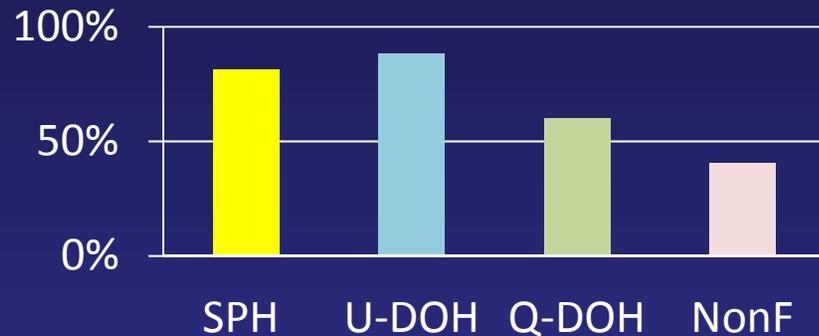


Professional services

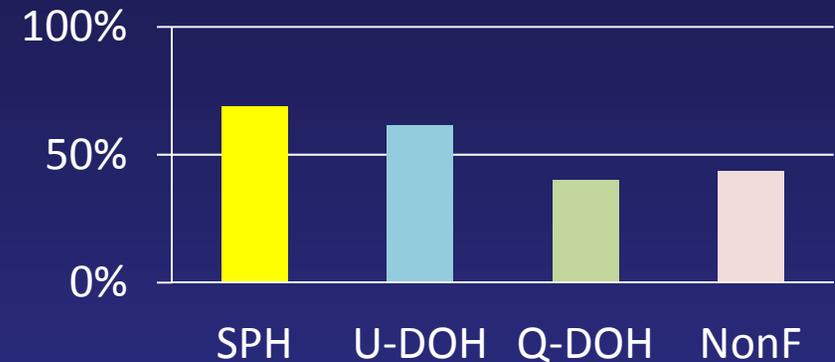


Service, 2012 Perceptions

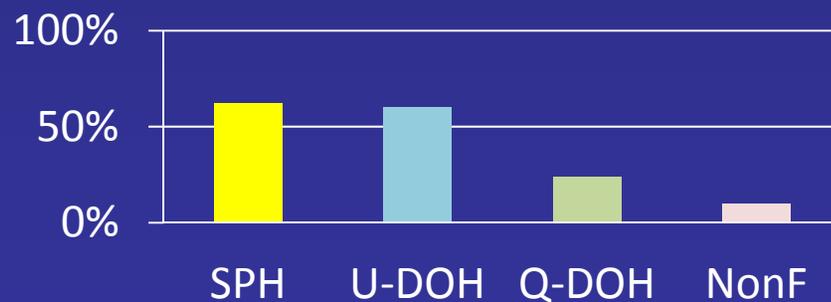
DOH mentoring/advising benefits students



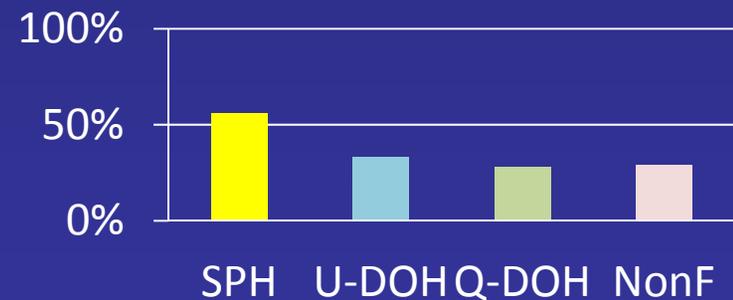
Worked with students on DOH funding



Included students as co-authors



Worked with non-SPH students



Summary Comparison of NYSDOH Faculty Participation by Academic Department, 2009

Significant differences between lab-based academic departments with 3/4 of faculty being NYSDOH employees and non-lab-based academic departments with fewer NYSDOH faculty

Activity	Non-lab-based depts., fewer NYSDOH	Lab-based depts., most NYSDOH	P value
Advising	42%	21%	0.0137
Teaching	22%	57%	0.0002
Guest Lectures	28%	7%	0.0026

Faculty Activity Report Limitations

- **Completing FARs is a challenge for faculty**
- **No penalties/incentives for NYSDOH faculty completion**
 - **Form is complex and confusing, information can be entered in multiple fields, which are not well-defined**
- **Absence of information in FAR fields may indicate no activity OR not completing those fields**

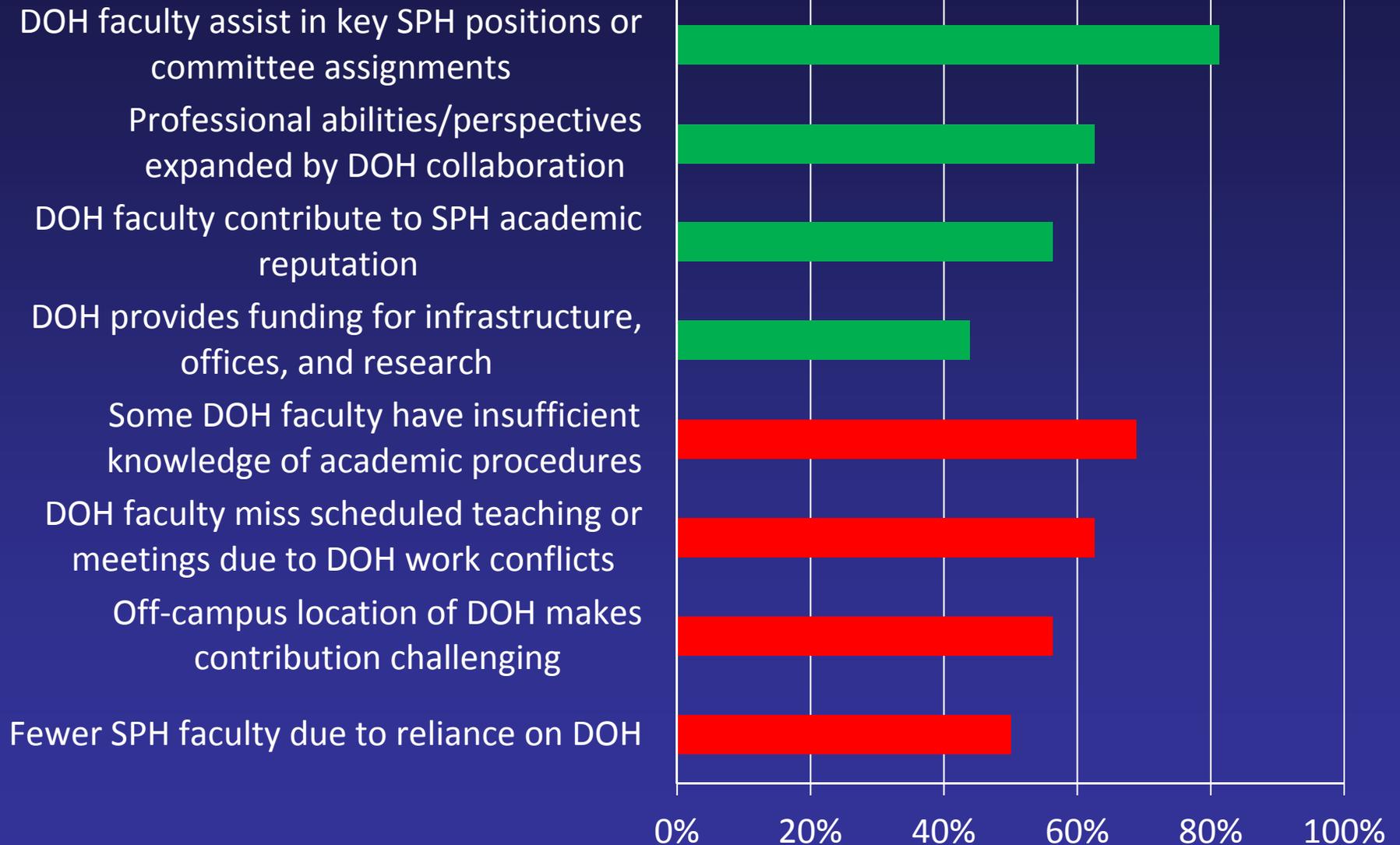
Student Database Limitations

- **The MPH program has excel file of student projects**
 - Fields are not structured to facilitate easy analysis
 - MPH students supply project information through required internship forms
 - Other students are unlikely to provide information
- **NYSDOH established a database of student projects by asking students to give their presentations at Friday Student Seminars**
 - Low level of student participation in the Friday Seminars
- **No easily implementable system for comparing information on NYSDOH students with eventual employment by NYSDOH, HRI, or LHDs**

Research Publication Limitations

- No database has complete information, so multiple databases (Medline and Current Contents) need to be searched
- Each database has advantages and disadvantages in information collected
 - All institutions of authors listed (Current Contents)
 - Complete names of all authors (Medline)
- Several search terms need to be utilized
 - New York State Department of Health
 - Various spellings/abbreviations
- Deduplication decisions need to be made
- Database from search needs to be compared to list of NYSDOH staff and/or faculty members

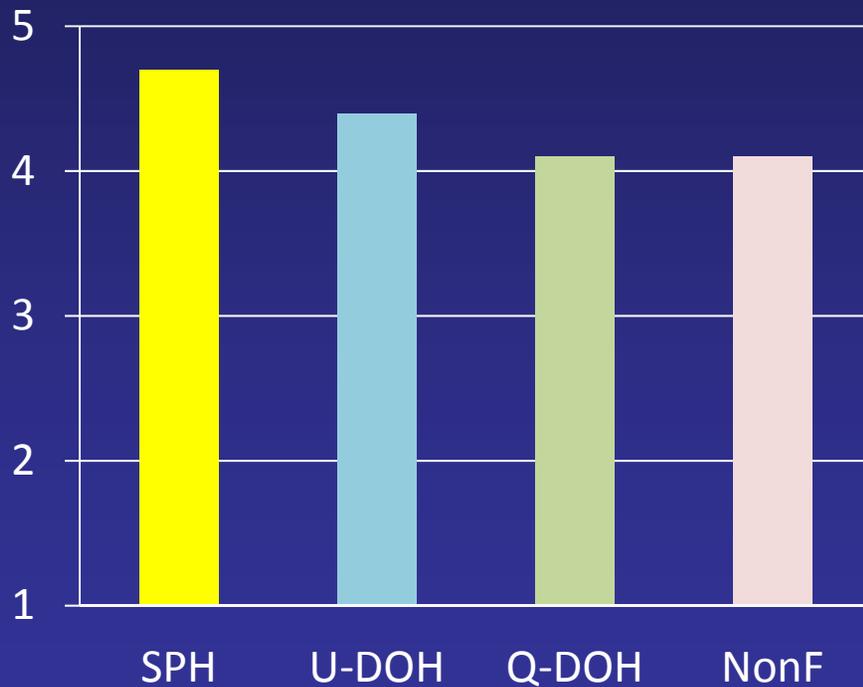
AHD Partnership Contributions and Drawbacks



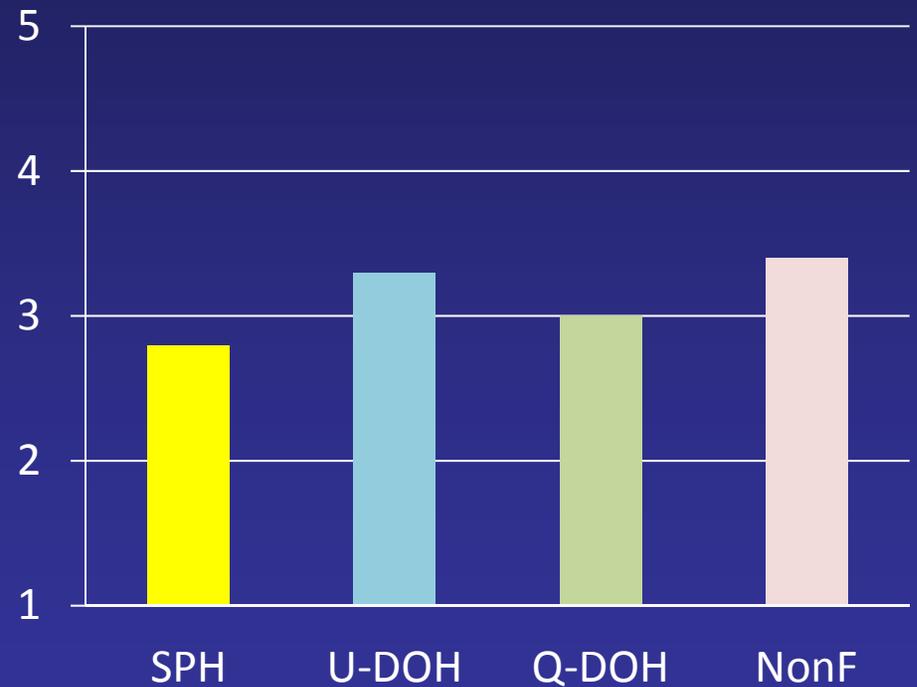
Partnership Summary, 2012 Perceptions

Mean rating (5=strongly agree to 1=strongly disagree)

Partnership benefits state
public health mission



DOH provides sufficient
support



**“You can’t use up creativity.
The more you use, the more you have.”
Maya Angelou**



Labor Day Gastrointestinal Disease Outbreak

- People staying at a camp in separate cabins
- Camp owners not ill, but high attack rate in customers
- No common food source: **would you use a standard food history questionnaire?**
- Water system: from 'underground spring'
 - Inspected, just a pipe with mesh in a stream
 - Big storm at beginning of weekend
- Goes into central tank with chlorine
 - Having disinfectant is not enough, need contact time
 - Camp full, lots of people drawing lots of water
- Questionnaire focused on amount of water drunk
 - Found dose-response relationship

Hotel Public Health Meeting Outbreak

- Statewide meeting held over 2 days at hotel
- Most stayed at hotel but a few were local
- Initial investigation indicated that all attendees did all the same things together
 - All meals in common at hotel, limited choices
- G.I. illness started as meeting attendees drove home: vomiting, diarrhea severe enough to pull over
 - Incredibly high attack rate among meeting attendees
 - No illnesses reported in hotel staff or guests
- **Where to go next in investigation?**
 - Usually, look for commonalities among ill people
 - Here, we focused on finding the “outliers”

Choosing Controls

- **Why do some cats get plague and others don't?**
 - Use household and neighbor controls
 - Assess length of time outside, flea control, catching and eating rodents
- **Why do some people get injured or die in tornadoes and others don't?**
 - Use household and neighbor controls, matching on amount of home damage (# of walls/roof remaining)
- **Call from medical resident about 3 cases with ↑ eos and severe myalgia**
 - Noted L-tryptophan in medical records
 - How to determine if this is unusual?

Public Health Surveillance

- **One Health includes animals!**
 - **Livestock: agriculture agencies**
 - **Wildlife: wildlife/environmental agencies**
 - **Pets?**
 - **Vectors: mosquito control districts**
- **West Nile Virus crosses boundaries**
 - **First NYS, and then CDC, incorporated animal and vector surveillance as a core component of the human surveillance system**
 - **https://wwwnc.cdc.gov/eid/article/7/4/01-7402_article**



Keep Sense of Humor/ Awe

Chamatrain.rec