

PHSSR Research-In-Progress Series:

Quality, Cost and Value of Public Health Services

Thursday, May 21, 2015

1:00 - 2:00 pm ET

**Exploring Cost and Delivery of STI Services by
Health Departments in Georgia:
A Mixed Methods Approach**

You may download today's presentation and speaker bios from the 'Files 2' box at the top right corner of your screen.

PHSSR NATIONAL COORDINATING CENTER AT THE UNIVERSITY OF KENTUCKY COLLEGE OF PUBLIC HEALTH

Agenda

Welcome: C.B. Mamaril, PhD, Research Assistant Professor, Health Management & Policy, University of Kentucky College of Public Health

“Exploring Cost and Delivery of STI Services by Health Departments in Georgia: A Mixed Methods Approach”

Presenters: Gulzar H. Shah, PhD, MStat, MS gshah@georgiasouthern.edu and **Angie Peden, MPH** apeden@georgiasouthern.edu

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Questions and Discussion

Presenters



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Georgia Public Health PBRN

Jiann-Ping Hsu College of Public Health,
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Cost of STI Services in Georgia: A Mixed Methods Approach



Georgia's large-scale, small-feel research university

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Jiann-Ping Hsu College of Public Health*

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Outline

- Background
- Purpose
- Methodology
- Findings
- Q&A

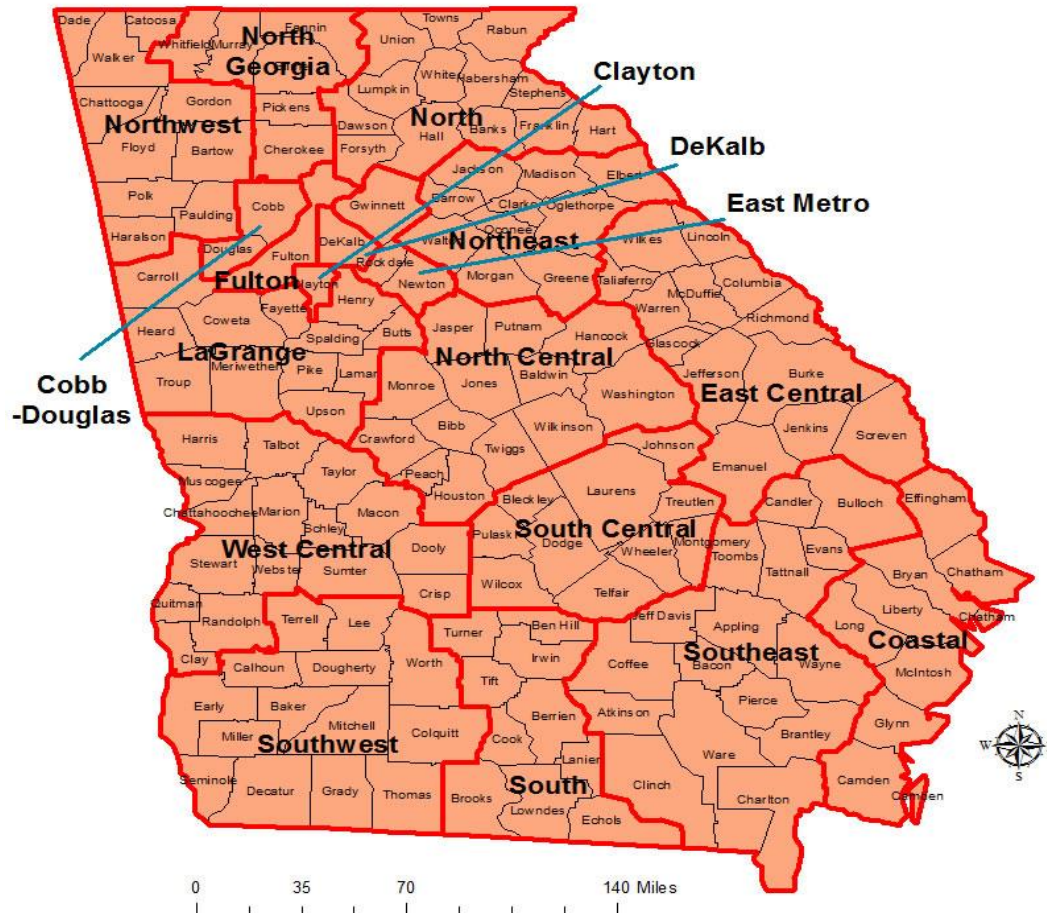
Background

- Georgia has some of the highest national rates of Gonorrhea, Chlamydia and Syphilis.
 - Georgia ranks 6th in gonorrheal infections
 - 13th in chlamydial infections
 - 3rd in primary and secondary syphilis infections (CDC, 2010)
 - Georgia's overall STD rate was 703.9 (per 100,000) (OASIS, 2011)

Background

- STIs continue to be a major local public health delivery issue.
- Variation in cost of STIs across the country.
- Research elsewhere shows that there might be ways to reduce the cost.

Georgia Public Health Districts, 2014



Map: Jeff Jones, PhD, September 2014, Georgia Southern University
 Data Source: Georgia Division of Public Health, June 2006

Purpose

- To explore ways to estimate the costs of delivering public health services based on qualitative information from each of the eight counties in a GA Health District's (HD) jurisdiction, comprising both urban and rural counties.
 - A sub-aim is to identify and validate appropriate cost components for the STI program, and sources of data for cost component.

Purpose (2)

- Examine variation in delivery system characteristics including:
 - centralization of IT and HR systems,
 - responsiveness to local community governance.

Purpose (3)

- Allow comparative analyses and contrast findings from Georgia and Florida studies:
 - Compare each state's local public health delivery system characteristics.
- The Georgia-Florida comparison for centralization versus decentralization of service provision and information systems will have much broader policy and practice implications.

Methodology: Qualitative

- Interview Guide Developed by Research Team
 - Guide included 9 open-ended interview questions with specific probes
- Key Informants identified by District Leadership.
 - Included: County Nurse Managers (8), Site Nurse Supervisors (2), District Administrators (2), and the District Nursing Director, STI Director, Women's Health Coordinator, and Ryan White Director.

Methodology: Qualitative

- Research Team conducted 16 interviews ranging from 30 – 60 minutes.
 - Semi-structured interviews were recorded, transcribed, verified.
 - Data were coded and analyzed using NVivo.
 - Interviews were iteratively coded and recoded to maximize inter-coder consistency

Methodology: Quantitative

- Study population: all 159 counties served as the study population.
- Used census design
 - All counties were contacted to identify the county staff with specialized knowledge regarding administrative and clinical protocols.
- A structured survey instrument was developed
 - adapted questions from Florida PBRN cost study.
- The modified survey was pilot tested by select District STD/CDS Managers.
- The final survey was distributed to:
 - District STD/CDS Manager
 - District CDSs
 - County Nurse Managers

Methodology: Quantitative

- Qualtrics survey software was used to distribute the survey.
- 2 follow-ups via emails were sent.
- 195 surveys were distributed.
 - 177 were partially or completely answered
 - Response rate of 90.8%
 - Responses represented 157 of Georgia's 159 counties.
 - 134 complete responses included in the analysis

Methodology: Quantitative

- Used SPSS 22 for data cleaning and analyses
- Descriptive analyses performed for the main report

Results of the qualitative component (interviews)

Qualitative Findings

- Ten major themes emerged from the key informant interviews:
 - STI Services
 - STI Services by County and District Staff
 - Individuals Who Provides STI Screening
 - Referral of STI Services by Non-Public Health Agency and Health Care System
 - Monitor and Report of STI Services
 - Costs Related to STI Services
 - Data Collection and Report for Delivering STI Services
 - Data Quality and Completeness
 - Administrative Differences in Providing STI Services
 - Future Study Approaches for Cost Estimation of STI Services

STI Services

- Organization of STI services both in urban and rural areas in the health district and counties.
 - Most common STI services:
 - Screening and testing
 - Outreach and education
 - Treatment
 - Partner notification
 - Least common STI services:
 - Patient counseling
 - Physical exam
 - Providing information and education at health fairs
 - Lab testing



STI Services by County and District Staff

- STI services for syphilis, chlamydia, and gonorrhea were provided by the county health departments utilizing local Board of Health staff.
- STI services such as outreach, screening, education, and partner notification were provided by both county and district staff, and in-house screening and treatment were done by the county staff.

“...if we're doing an educational service, we may have county staff and district staff working hand in hand”

Individuals Who Provides STI Screening

- **STI screening** was most commonly provided by county health department nurses.
- Communicable Disease Specialists (CDSs) at some county health departments provided other STI services such as **outreach and community education**, pre- and post-test **counseling**, and **partner notification**.



Referral of STI Services by Non-Public Health Agency and Health Care System

- STI services provided to people who were referred by non-public health care systems:
 - emergency rooms,
 - primary care provider, and
 - Federally Qualified Health Centers (FQHCs)
- An estimated 10 percent of all services resulted from referrals by non-public health care systems.

“...we do have a good working relationship with all of our...partners...if it’s something that they do not provide...like so many people may not have a job and they may not have insurance and it’s something we can do within the Board of Health...”

Process/Systems for Monitoring/Reporting STIs

- STI services were monitored and reported electronically by the county health department.
 - Used Mitchell & McCormick Visual Health Net (VHN) systems and State Electronic Notifiable Disease Surveillance System (SendSS).

“We monitor – the positives...to be reported to our district communicable disease specialist and...to the state of – he enters into Sendss... and – because the tracking of Gonorrhoea and Chlamydia is very important and Syphilis. He enters that into the Sendss system for the state...”

- In many cases, STI records are maintained and reported both at the county level by nurses and district level by CDSs or a collaboration of the two.

Costs Related to STI Services

- Fixed Cost Components

1. Staff (i.e., nurses and clerical)

2. Labs for testing chlamydia, gonorrhea, and rapid plasma reagin (RPR)

“labs are usually fixed for one year at a time and then we...either continue with the same lab company that we used or that can change”

3. Examination

“the actual STD examination where patient comes in...to be seen by a nurse or practitioner to get a physical exam and history, we charge 40 dollars”

Costs Related to STI Services

- Variable Cost Components

- Staff (i.e., salaries and fringes)
- Medical supplies (i.e., speculums, needles, exam paper, gowns, and gloves)
- Postage to mail notifications

“our highest [variable] cost is postage, because we have to mail out three letters and one has to be certified...”

- Travel to patients’ residence
- Phone calls to contact patients
- Printing for outreach
- Partner notifications

“If he has one partner that’s a 15 minute interview probably. But if he comes in and...got 10 partners that may be [a] 30 to 45 minute interview.”

Data Collection and Report for Delivering STI Services

- A common method to track financial reporting mechanisms for the cost components was **staff completing a task survey** every quarter to capture their duties and time in an eight-hour period in 15 minutes increments.
- Type of Data Collected
 - Cost of STI services and testing
 - Number of patients with a specific STI
 - Demographics and location of patients with STIs
 - Number of STIs seen per month in the health department
 - Number of STI patients seen by the nurse
 - Cost paid or not paid by each patient



Data Collection and Report for Delivering STI Services

- **Individuals responsible for collecting and recording data** included county nurse managers, CDSs, district staff, accounting department, clerks, and program directors.
- **Time period** these data are available is daily, weekly, monthly, and quarterly.

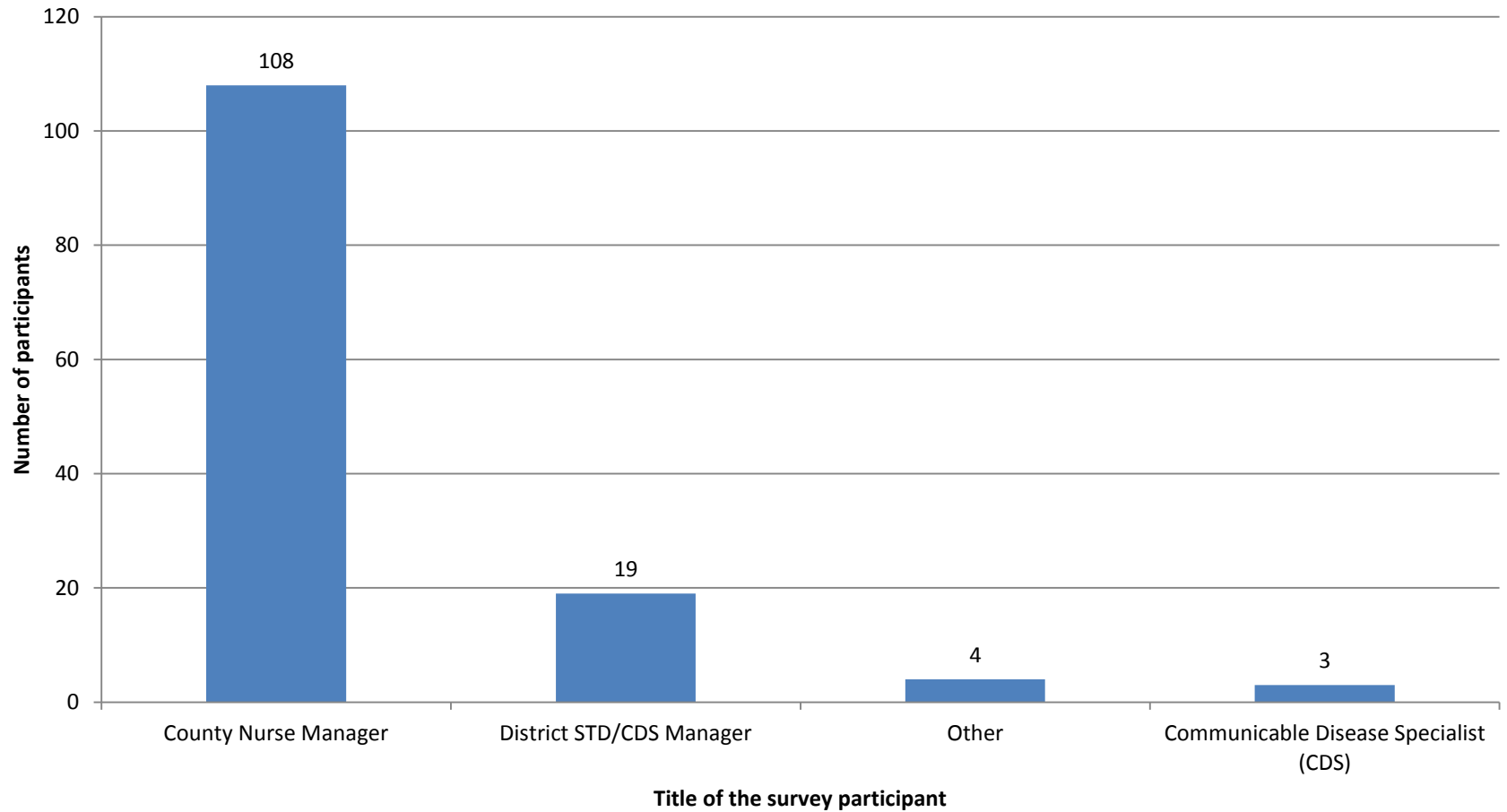
Administrative Differences in Providing STI Services

- Few county and district staff were aware of administrative differences in providing STI services across health districts and counties in Georgia.
 - Rural counties
 - Not accepting walk-ins due to lack of staff

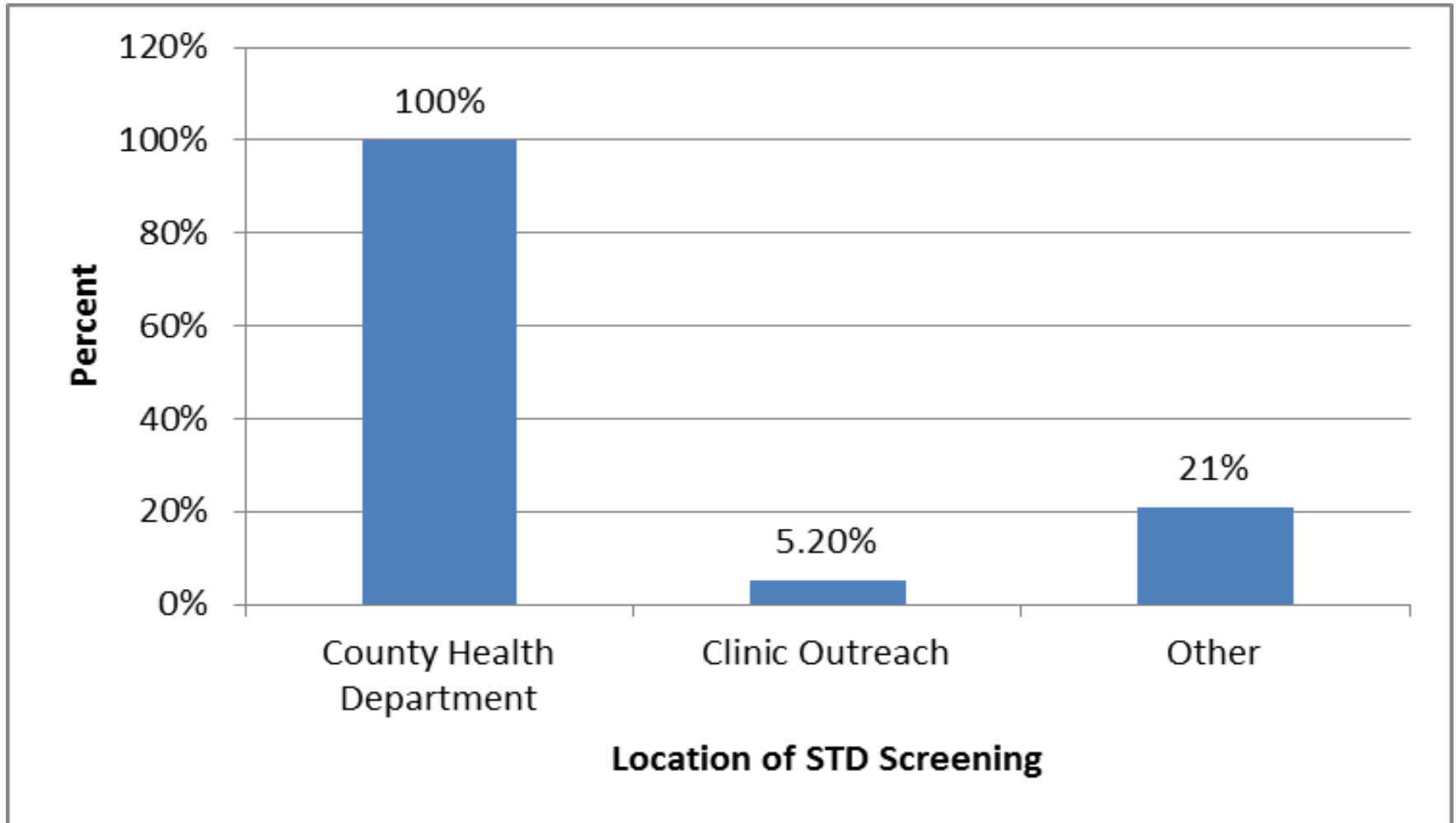
“These smaller counties,...might only have one nurse because another nurse is out at a meeting or,...on a conference call.” So if someone walked in our door right now they either have to wait a ...good while or be scheduled to come back the next day. Because...we don’t have the volume of nurses or CDS workers that the larger counties have.”
 - Urban counties
 - Fee schedules (i.e., \$50 walk-in fee)
 - More grants/funding and CDSs

Results of the quantitative component (survey)

Percent Distribution of Responses by Title (n=134)

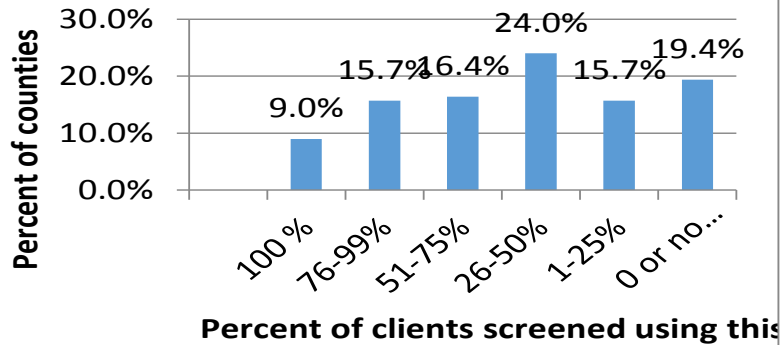


Percent Distribution of Location of STD Screening

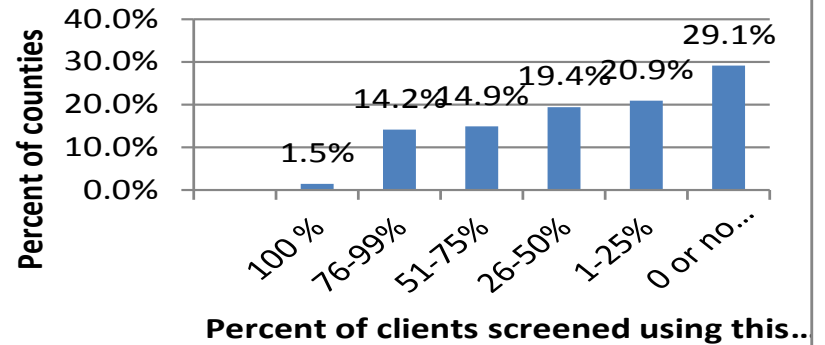


Percent of clients screened for diagnosis of Gonorrhea/Chlamydia in health departments' clinics

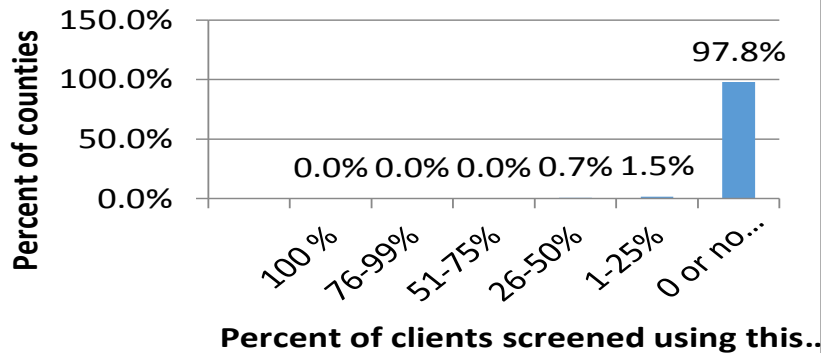
Urine Aptima



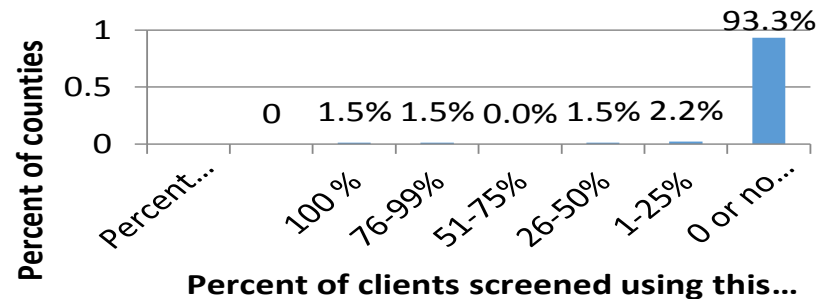
Provider collected swab (Aptima)



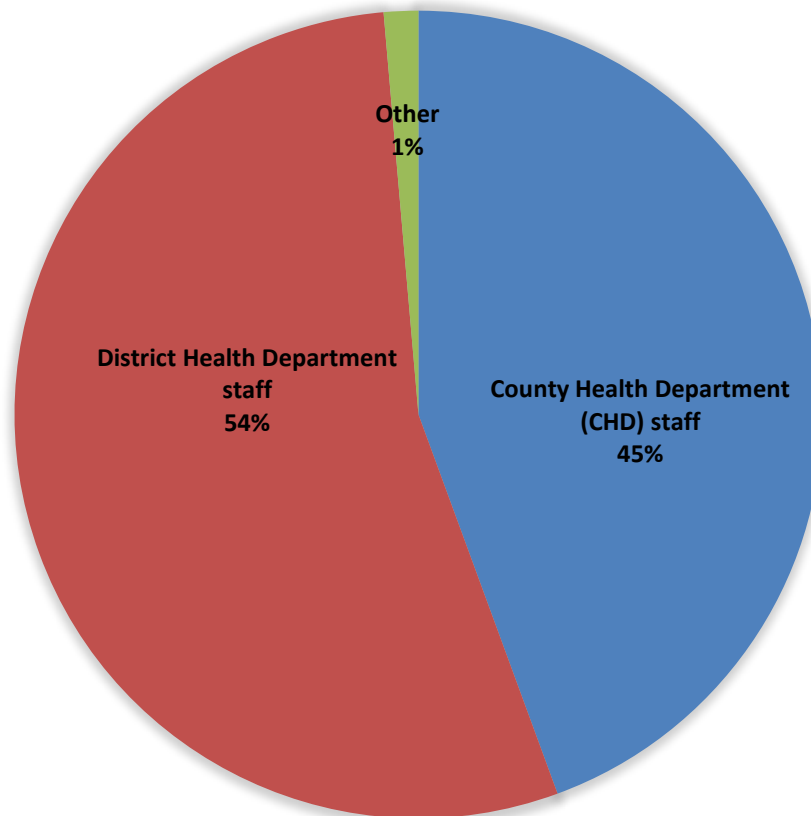
Self-collected swab (Aptima)



Culture



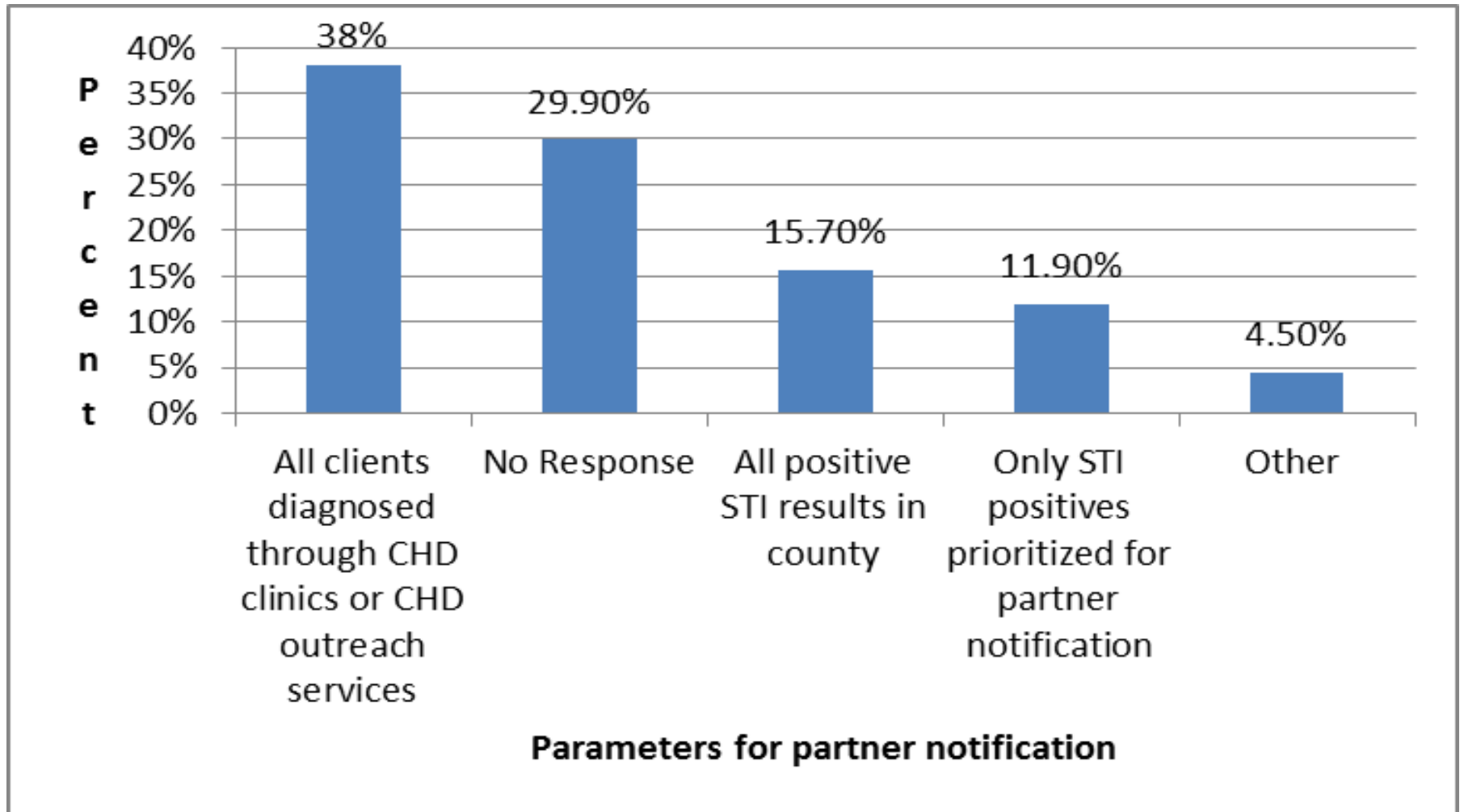
Average percent of type of staff that usually performs STD investigations



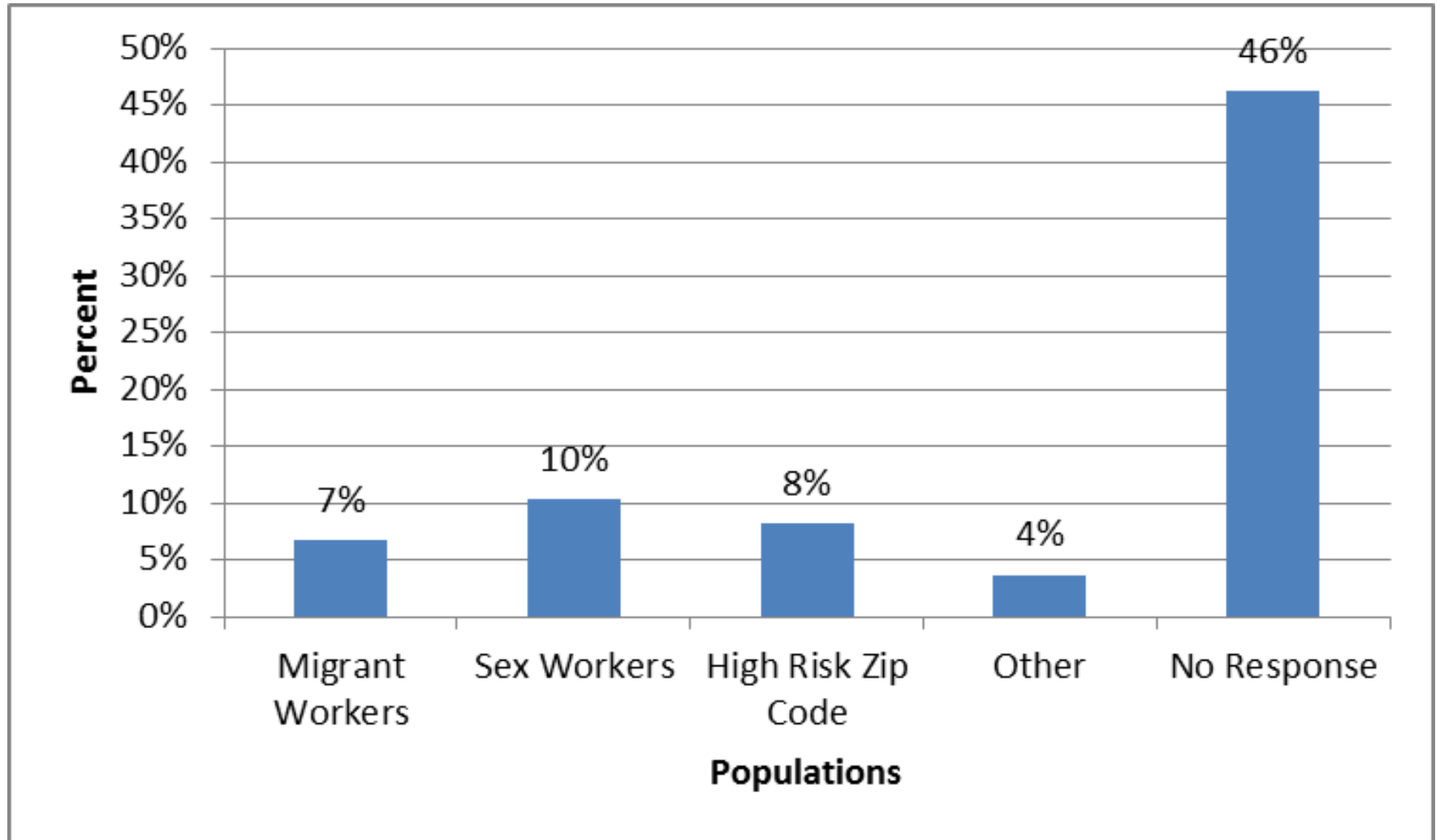
Mean and Median Estimate of the Time it Takes to do Treatment Verification

Source	N	Mean (time in minutes)	Std. Deviation	Median (time in minutes)
Private Physicians	86	267.22	971.770	30.0
Emergency Departments	78	181.74	750.533	30.0
Hospitals	75	282.31	1144.848	30.0

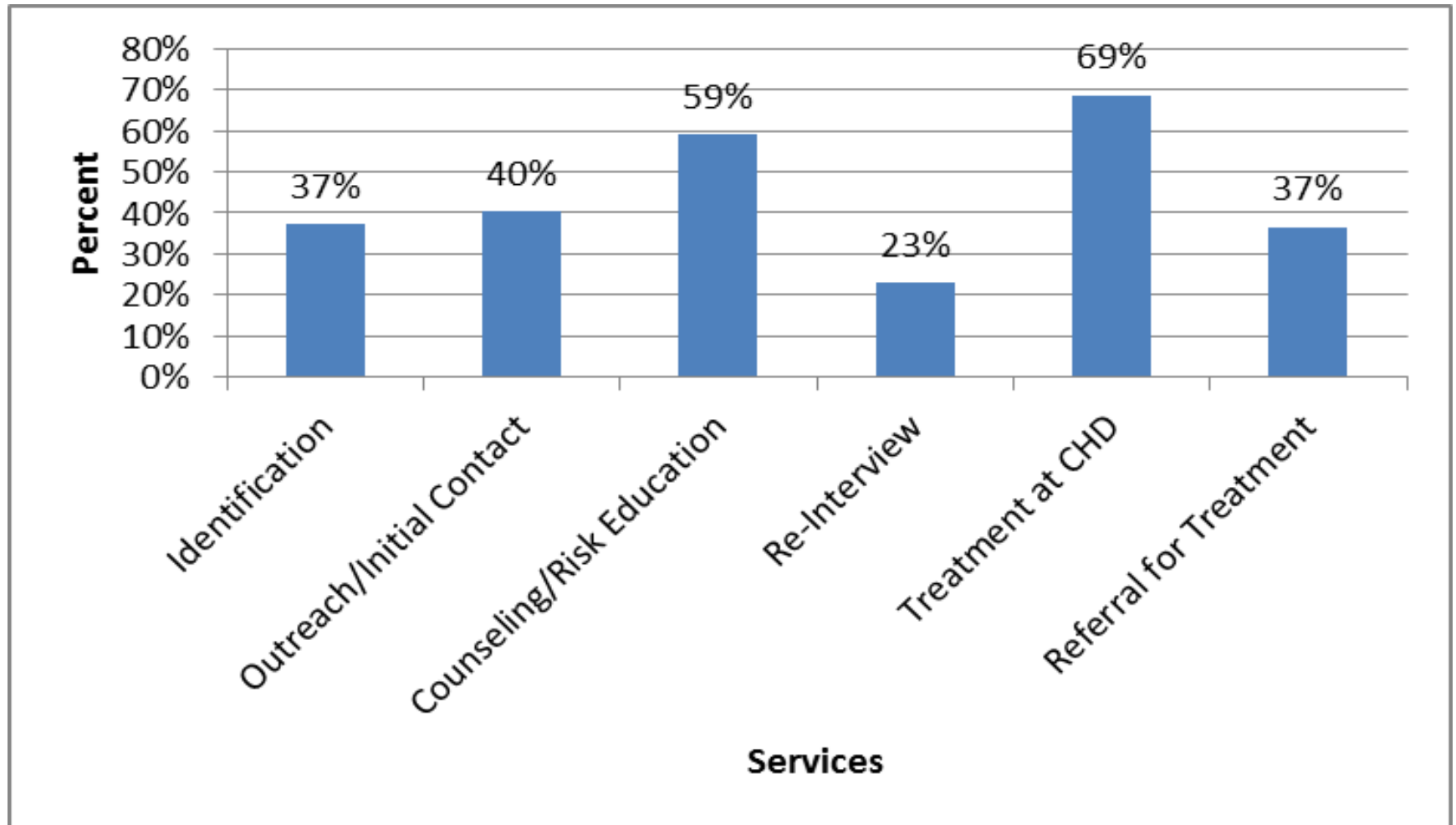
Parameters for Partner Notification



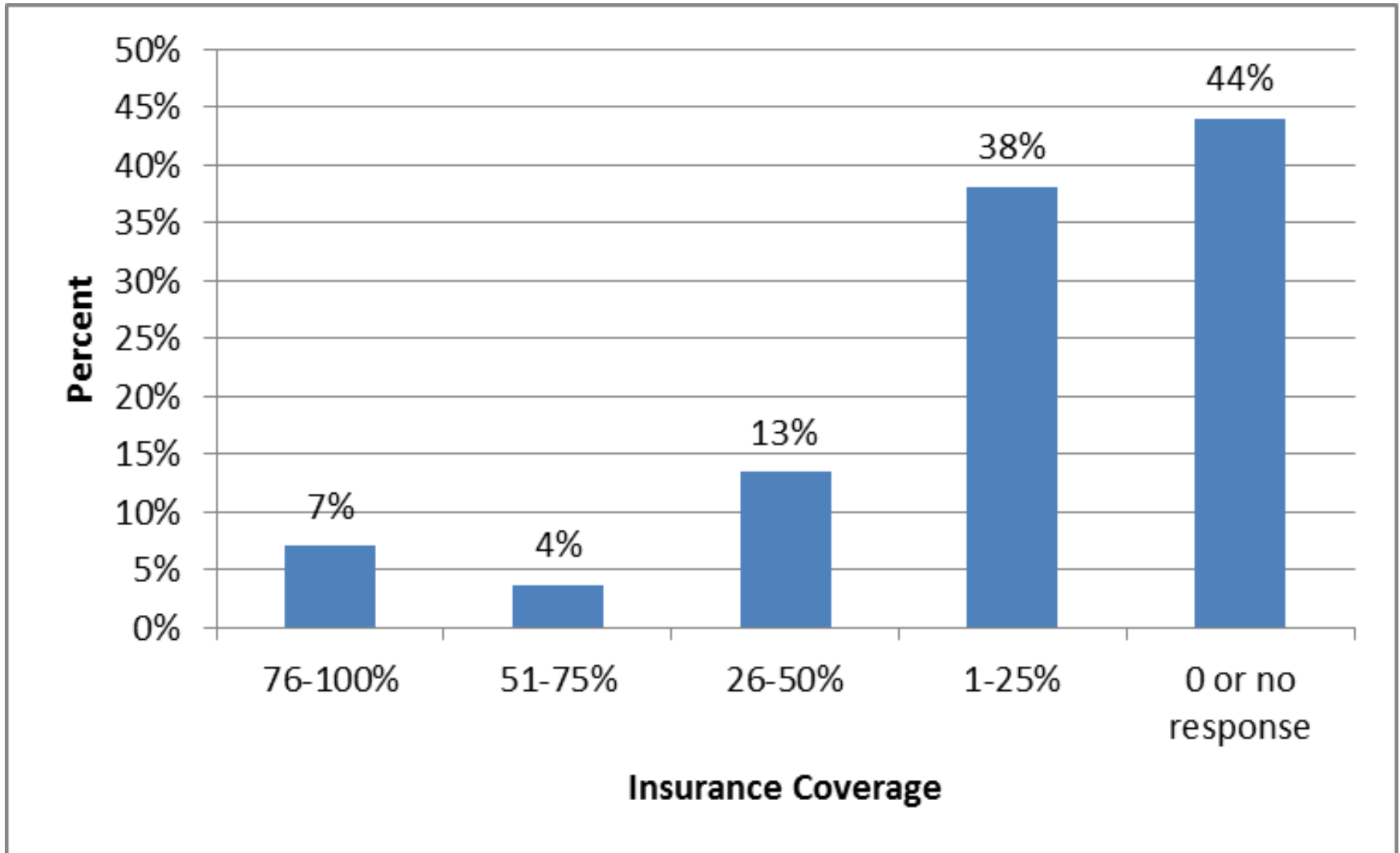
Priority Populations



Services for Partner Notification



STD Clients with Insurance Coverage (including Medicaid, Medicare, Private)





Questions
are
guaranteed in
life;
Answers
aren't.



Georgia's large-scale, small-feel research university

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Commentary



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Questions and Discussion

Archives of all Webinars available at:

<http://www.publichealthsystems.org/phssr-research-progress-webinars>

Upcoming Events and Webinars

Wednesday, June 3 (12-1pm ET)

OPTIMIZING EXPENDITURES ACROSS HIV CARE CONTINUUM: *BRIDGING PUBLIC HEALTH & CARE SYSTEMS*

Gregg Gonsalves, PhD Candidate, Yale University (PPS-PHD Award)

Wednesday, June 10 (12-1pm ET)

EXAMINING PUBLIC HEALTH SYSTEM ROLES IN MENTAL HEALTH SERVICE DELIVERY

Jonathan Purtle, DrPH, MPH, MSc, Drexel University School of Public Health (PPS-PHD Award)

Upcoming Webinars – June to July 2015

Thursday, June 18 (1-2pm ET)

INJURY PREVENTION PARTNERSHIPS TO REDUCE INFANT MORTALITY AMONG VULNERABLE POPULATIONS

Sharla Smith, MPH, PhD

University of Kansas School of Medicine-Wichita

(PPS-PHD Award)

Wednesday, July 1 (12-1pm ET)

THE AFFORDABLE CARE ACT AND CHILDHOOD IMMUNIZATION DELIVERY IN RURAL COMMUNITIES

Van Do-Reynoso, MPH, PhD Candidate

University of California-Merced

(PPS-PHD Award)

Wednesday, July 8 (12-1pm ET)

NATIONAL EVALUATION OF LEADERSHIP STYLES AND OUTCOMES IN LOCAL HEALTH DEPARTMENTS

Laura Cassidy, MS, PhD, Medical College of Wisconsin

(RWJF PHS3 award)

Thank you for participating in today's webinar!

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