PHSSR Grantee Number 72454

Product Type: Meeting Presentation

Presenter Name: Lori Bilello

Title of Presentation: **Using cost analysis to identify cost saving strategies in delivering STI services**

Meeting: AcademyHealth PHSR conference

Sponsor Organization: AcademyHealth

Date: June 17, 2015

Location: Minneapolis, MN

Using cost analysis to identify cost saving strategies in delivering STI services

Florida Public Health PBRN

Florida HEALTH

UFHealth
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Center for Health Equity & Quality Research

Acknowledgements

Would like to thank Robert Wood Johnson Foundation for providing funding through the Delivery and Costs Project (DACS) Initiative in 2013 and PHSSR in 2015.

Research Team

- Bill Livingood Ph.D. (University of Florida)- Co-PI
- Bonnie Sorensen, M.D. (Florida Department of Health - Volusia) – Co-PI (DACS)
- Ulyee Choe, D.O. (Florida Department of Health - Polk) – Co-PI (PHSSR)
- Lori Bilello, Ph.D. (University of Florida)- Director of the FL Public Health PBRN

Why Study Cost of STI Services?

- STI prevention and control programs are among the most highly reported local public health services
- Surveillance data is well established and standardized (CDC methodology)
- Strong finance and service data systems in FL to support service delivery
- Funding has drastically decreased for STI services but service requirements/expectations have remained the same
- Florida has high AND increasing rates of STIs – major public health issue!

Primary Aim of Initial Study (DACS)

- To identify the unit costs of delivering STI prevention and control services and examine the effects of variations in delivery system characteristics on costs including:
  - standardization/centralization of programs
  - centralization of IT and HR systems
  - economies of scale related to population size of CHD jurisdiction
  - local tax and other revenue support for CHD services

- Macro cost analysis approach – using HR, finance and patient data systems to drill down to unit costs (dependent on valid established data reporting systems)

Detailed costs per case (state average)

Category	Average cost per case	% of Total
Personnel (salaries/fringe)*	$244	81.2%
Supplies	$9	3.2%
Travel	$3	0.9%
Building rental/maintenance	$9	2.8%
Lab services	$16	5.3%
Contractual services	$11	3.7%
Other costs	$9	2.9%

*Average salary/fringe per DIS is $45,670

Range of county reported costs for STI (FY11/12)

	Cost per case	Cost per visit
State rate	$300.90	$157.56
County Median	$283.44	$119.40
Lowest level	$1.81	$1.43
Highest level	$893.89	$293.69

Variation Explored

1. Interviews with key informants to discuss and clarify cost variations identified during 2^0 data analysis

2. Surveyed all 67 CHDs
   - Cross-jurisdiction sharing of STI staff
   - Other staff involved in STI investigations
   - Detailed information on level of service delivery by priority populations
   - Community collaborations for testing and outreach

Findings

Funding:

- Different sources of funding impacted the level of services provided
- Wide variability in discretionary or local tax funding for county health departments
- Those CHDs that received county funding had higher unit costs

Service delivery variations:

- Cross jurisdiction sharing of DIS and surveillance staff for some counties, especially small rural counties
- Variation in the extent of STI investigations of certain populations due to funding and staffing constraints
- Over-qualified staff performing DIS services in some counties

Inefficiencies identified include:

- Some services redundant to what is provided by the private sector
- Variation in screening and testing procedures – some more labor intensive than others

Implications

- Even with Florida's comprehensive data systems and statewide policies and procedures for the delivery of STI services, large variations exist in the cost and delivery of these services by county.
- Those counties that have local funding also have higher costs but also provide more comprehensive services.
- Next Step - This data is being used by the practice community to redefine what types of STI services should be delivered by health departments by identifying and prioritizing cost saving strategies.

New RWJF Study
QI Interventions to Improve Costs

- Builds on the DACS results
- Utilize a Participatory Research process with engagement in the practice community
- Purpose is to study the effects of program changes designed to improve cost effectiveness of delivering STI services
- Partnered with the state Department of Health Disease Control Program Council

Aims

- The first aim of this study is to identify and prioritize QI opportunities/strategies for reducing the cost of STI services.
- Aim 2 will comprise of a cost study based on the selected strategy identified in Aim 1 where comparative effectiveness methods will be used to determine impact of cost saving measures.

Study Process

- Conduct presentations of the DACS results to the practice communities to solicit ideas and then use Nominal Group and Delphi techniques with the practitioners to select the focus of the QI study. This process will attempt to identify "universal" cost saving measures that will be used for Aim 2
- CHDs in FL who adopt this identified cost saving intervention will be compared to non-participating CHDs, potentially yielding important findings for STI service delivery that have the potential for substantial ROI.

Survey Results

An initial survey was performed for the DACS study last year and a follow-up survey was performed last month to clarify some of the findings from the first survey and to explore some cost saving strategies with regards to procedures and practices in:

- testing
- treatment
- partner notification

Questions to the CHDs

- What testing is needed to provide presumptive treatment?
- When is presumptive treatment done and on what types of patients?
- Why is there so much variation in testing/screening if everyone is using presumptive treatment?
- Why do other labor intensive testing?

Presumptive Treatment

	NO employed DIS n=24		Employs DIS n=43	
	#	%	#	%
following the presentation of clinical symptoms	24	100%	42	97.7%
For identified partners/contacts	21	87.5%	40	93.0%
Under other circumstances (self reports, walk-ins, sexual assault, high risk)	4	16.7%	7	16.3%

Vast majority do presumptive treatment but the question is how often? On all patients?

Types of test used by CHDs (n= 67)

	#	%
Solely urine test	30	44.8%
Urine mostly (>50%), some provider collected swab	22	32.8%
Provider collected swab (≥50%)	14	20.9%
Culture & provider swab <50 & urine <50	1	1.5%

All CHDs do STI screening in CHD clinics, only some do testing in the community

Routine Partner Services/Interviews

	NO employed DIS n=24		Employs DIS n=43	
	#	%	#	%
Gonorrhea	9	37.5%	31	72.1%
Chlamydia	8	33.3%	29	67.4%
Syphilis	22	91.7%	43	100%

Treatment Verification

- Most CHDs reported following the Priority Tier Action Grid for treatment verification for those tested positive from the following sources: CHD clinics, private physicians, emergency departments and hospitals.
- Approximately 60% of positives come from the private sector.
- Average time it takes to do treatment verification for positives from the private sector is 30 minutes.

Verification with Primary Care*

	NO employed DIS n=24		Employs DIS n=43	
	#	%	#	%
Gonorrhea	16	66.7%	32	74.4%
Chlamydia	16	66.7%	29	67.4%
Syphilis	16	66.7%	39	90.7%

*Verification with ED slightly higher

Is it reasonable for Public Health to use limited resources to ensure private sector accountability, when:

- Huge increases in health care financing while public sector financing is decreasing (7% of GDP in 1970 to over 17%).
- Increasing accountability of private healthcare system due to NCQA, ACA etc

Possible Cost Saving Strategies

- Eliminate treatment verification for non-CHD positives for chlamydia and GC
- Eliminate partner notification services for chlamydia and GC
- Eliminate testing of partner contacts and go straight to treatment
- Fully implement texting of test results
- Standardize and promote presumptive treatment
- Consolidate STI and HIV services (maybe even TB and Hepatitis)

Contact Information

Bill Livingood, Senior Research Scientist
Center for Health Equity and Quality Research (CHEQR)
University of Florida Health Jacksonville
William.Livingood@jax.ufl.edu
904-244-9201

Ulyee Choe, Director
Florida Dept. of Health Polk County
Ulyee.Choe@flhealth.gov
863-519-7900

Lori Bilello, Associate Director
CHEQR - University of Florida Health Jacksonville
Lori.Bilello@jax.ufl.edu
904-244-9202