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Participatory Research Approaches to Identify Actionable Cost Saving Opportunities in Public Health

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Objectives

Participants will be able to:

- Discuss the emerging need and concepts for use of Participatory Research within public health practice;
- Recognize how Participatory Research enhances both practice and research;
- Describe limitations of analyzing administrative data to clarify cost variations in delivering public health services;
- Discuss applications of Participatory Research for developing and implementing intervention designed to reduce cost and improve quality of public health services;
- Draw conclusions for application of participatory research to enhance health services research.

Purpose & Roles of PBRNs

- PBRNs are a group of public health agencies providing public health services;
- PBRNs draw on the experience and insight of practitioners to identify and frame research questions whose answers can improve the practice of public health;
- PBRNs can produce research findings that are immediately relevant to the practice community and, in theory, more easily assimilated into everyday practice;
- PBRNs support quality improvement activities within public health practices and the adoption of an evidence-based culture in public health practice;
- PBRNs are uniquely positioned for dissemination and implementation research:
- PBRNs provide a natural laboratory for a wide variety of public health studies and can be a rich source of public health service data;
- PBRNs may be the best setting for studying the processes of delivering public health services.

Adapted from Agency for Healthcare Quality & Research description of Primary Care PBRNs retrieved from <http://pbrn.ahrq.gov/about>

Florida Public Health PBRN

- Registered with National Coordinating Center for Public Health PBRNs since 2009.
- UFHealth's Center for Health Equity and Quality Research (CHEQR) became state coordinating center in 2013.
- PBRN members include county health department directors, State DOH staff, and academic researchers.
- Research Focus
 - T4 – Translational Research (research to translate evidence into population health)
 - issues of concern to public health practice community;
 - Public health systems and services research;
 - Use of QI to translate evidence into practice.

Background

- PBRN Lead Investigators from Academia and Practice Communities
 - William Livingood (UF-J), Lori Bilello (UF-J), Ulyee Choe (DOH & CHD),
- Funding crisis for Florida County Health Departments (CHD) for STI services – reductions in federal, state and local funding.
- STI rates continue to be one of the highest in the country, especially for gonorrhea, chlamydia and HIV.
- Need to identify cost effective approaches to manage STIs.
- Received funding by the Robert Wood Johnson Foundation Delivery and Costs Project (DACCS) in 2013 and PHSSR in 2015.

Building on Delivery and Cost Study (DACCS)

Goal: To identify the unit costs of delivering STI prevention and control services and examine the effects of variations in delivery system characteristics.

Key findings of Florida DACCS study showed:

- Wide variability in discretionary or local tax funding for county health departments which impacted services and costs.
- Cross jurisdiction sharing of disease intervention 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.
- Some services redundant to what is provided by the private sector.
- Variation in screening and testing procedures – some more labor intensive than others.

Range of Florida county health departments' STI costs

	Cost per service	Cost per visit	Total cost per client
State average	\$47.59	\$157.56	\$259.07
County median	\$47.10	\$119.40	\$181.15
Lowest level	\$0.84	\$1.43	\$1.81
Highest level	\$121.72	\$293.69	\$462.12
20th percentile	\$29.62	\$71.65	\$122.27
80th percentile	\$72.30	\$179.59	\$294.08

Aims of Implementation Research Study

Aim 1: to identify opportunities for reducing the cost of STI services by reducing or replacing inefficient and wasteful practices.

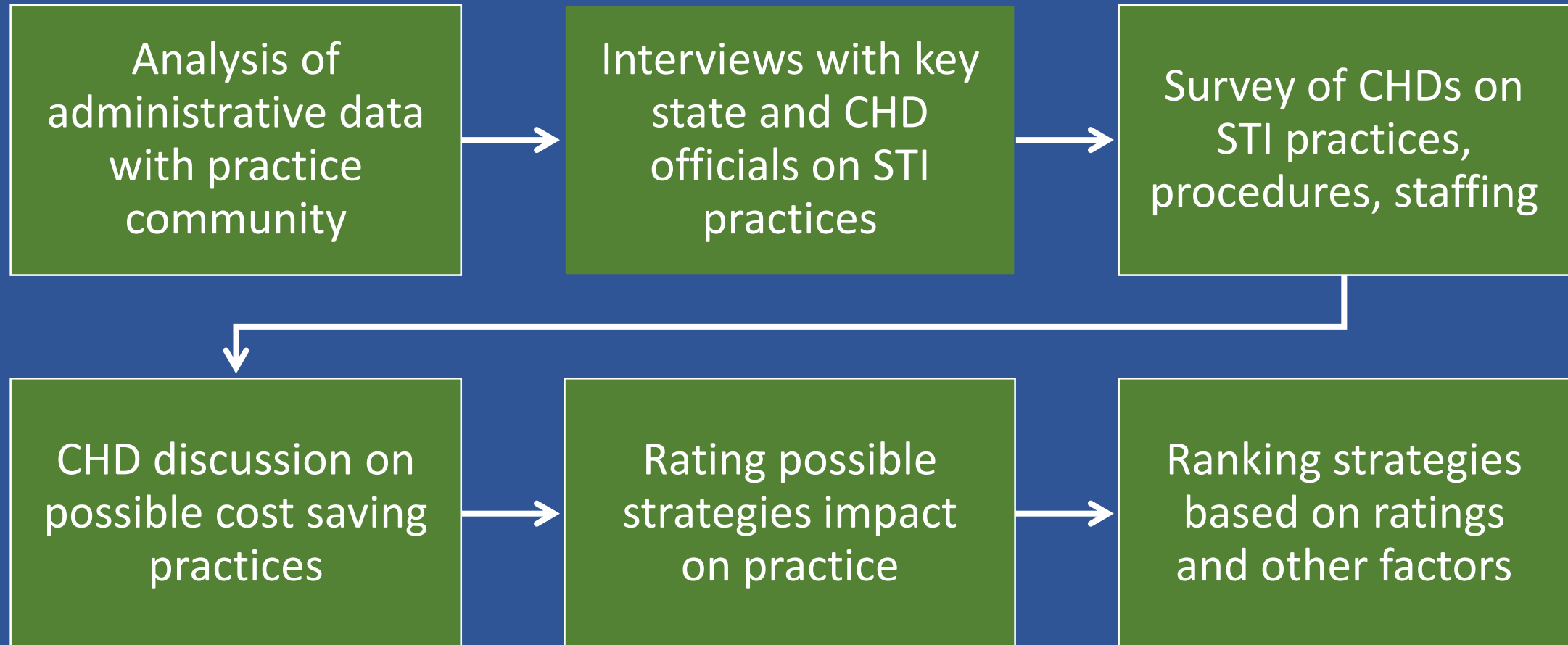
- Review DACS results with the practice community and use Nominal Group and Delphi techniques to select the focus of the QI studies. This process attempted to identify “universal” cost saving measures that would be used for Aim 2.

Aim 2: To use QI evaluation and comparative effectiveness methods to determine impact of dissemination using QI methods and impact of cost saving measures based on identified cost saving strategies in Aim 1.

QI Interventions to Improve Costs

- Purpose is to study implementation effectiveness and the effects of program changes designed to improve cost effectiveness of delivering STI services at county health departments.
- Utilizes a Participatory Research process with engagement of the health department practice community through all phases of the research.
- Partners with the Florida Dept. of Health's STD Subcommittee of the Statewide Disease Control Program Council.

Multi-step Participatory Process for Identifying Cost Saving Practices



Possible Cost Saving Strategies

- Eliminate partner notification for Gonorrhea (GC) and Chlamydia (CT)
 - for all non-pregnant (both public and private).
 - for private (non-ED) clients (except pregnant & <15 child).
- Eliminate private provider (non-ED) verification for
 - all GC & CT
 - GC & CT for all non-pregnant
 - GC & CT (except for pregnant & <15 child)
- Provide presumptive treatment for partners of GC and CT w/o added tests.
- Text GC and CT results instead of calling/clinic return visit.
- Consolidate disease intervention staff across service lines (STD, HIV, TB)

Rating of Strategies

Health Department Directors and STI managers were asked to rate the strategies through a electronic survey based on the following criteria:

- Have a negative impact (disease would increase if implemented) on the current system?
- Save time, money and resources within the current system?
- Be easily implemented within the current system?

Results of Ratings

Proposed Change in STD Service Delivery <i>(55 of 67 counties reporting)</i>	Adverse Impact High/Very High	Savings High/Very High	Implementation Easy/Min difficulty
Eliminate partner notification for GC and CT for all non-pregnant (both public and private).	50%	53.8%	65.4%
Eliminate partner notification for GC and CT for private (non-ED) clients (except pregnant & < 15 child).	50%	53.8%	65.4%
Eliminate private provider (non-ED) verification for all GC & CT	44.1%	67.6%	70.6%
Eliminate private provider (non-ED) verification for GC & CT for all non-pregnant	46.2%	57.7%	65.4%
Eliminate private provider (non-ED) verification for GC & CT (except for pregnant & <15 child).	42.3%	50.0%	61.5%
Provide presumptive treatment for partners of GC and CT who come to the clinic w/o added tests.	17.6%	64.7%	70.6%
Text GC and CT results instead of calling/clinic return visit.	14.7%	52.9%	58.8%
Consolidate DIS across service lines (STD, HIV, TB).	23.5%	24.2%	30.3%
Red = Undesirable/negative assessment Yellow = concern Green = Substantial/positive assessment			

Ranking

- Even though other strategies were rated higher, texting test results was ranked #1 by practitioners for implementation.
- Other options were rated well but received less support due to concerns about:
 - Presumptive treatment - may reduce STI funding due to decrease in testing.
 - Eliminating private provider treatment verification - may send the wrong message to providers.

Phase 2 – Dissemination of Intervention

Intervention: Use of QI methods to implement texting of chlamydia and gonorrhea positive and negative results, and negative syphilis results of consenting clients tested at CHDs.

- 30 potential CHDs will implement texting intervention (reduced to 10 at least partially due to emphasis on Zika and other emergencies)
- Practice partner (Dr. Choe) leading the charge.
- Baseline and follow-up data collection underway to assess cost savings
- Formed QI Teams within each participating CHD

Texting Performance Measures

Process measures:

- Client Uptake: percent of clients who opt to receive texts
- Percent who called back for an appointment after receiving a positive test result text
- Text transmission failure rate

Outcome measures:

- Rate of positive clients who received a text and received treatment compared to the rate of positive clients who were notified in person or by phone and received treatment.
- Treatment timeframe: compare time of treatment from initial lab date to treatment date for texters and non-texters.
- Reduction in staff time in notifying patients of their results (average number of minutes to contact patient by phone/in person).

Key Elements of QI

- **Functioning QI Team that:**

- Sets goals/targets for texting,
- Monitors data in achieving texting targets and shares/reports any problems encountered,
- Analyzes causes of barriers and problems,
- Actively resolves problems based on texting data and team member concerns.

- **QI Team Leader who:**

- Encourages participation of all team members,
- Ensures QI Team completes required tasks,
- Regularly reports on behalf of QI Team
 - Texting progress ,and
 - QI activities.

QI Process & Reporting

- Identify QI Team to include key personnel in the testing/ consent process, PRISM and notification processes.
- Set targets for texting performance measures per county.
- Meet regularly (at least monthly) to review performance metrics and discuss progress in achieving objectives.
- Meet regularly (at least monthly) to resolve problems through root-cause analysis or other problem solving in achieving objectives.
- Maintain records of activities and report monthly to QI Collaborative and Research Team.*

*PBRN processes by their nature can be very complimentary to QI Collaborative in both process and outcomes

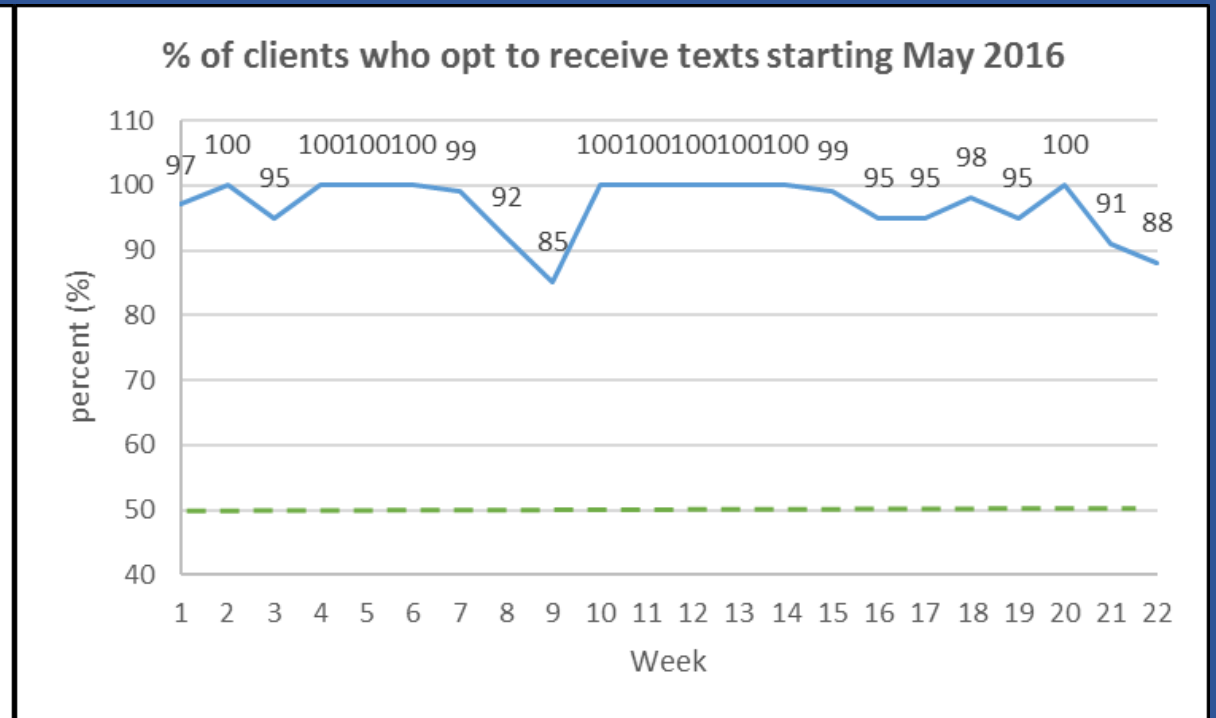
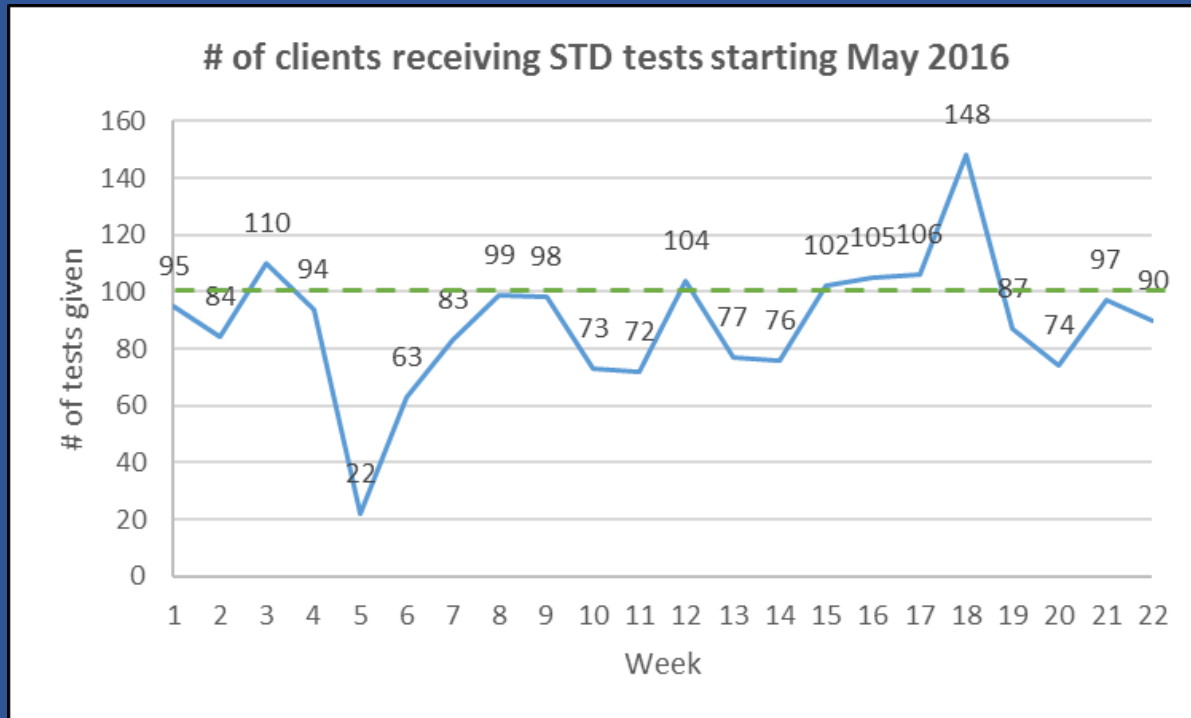
Current Status of Implementation

- Launched QI based dissemination of texting in April with participating CHDs.
- Tracking data for at least 6 months and QI Collaborative meet monthly share experiences and to make adjustments if needed.
- Analyzing preliminary results and engage practice community in interpreting the results.
- If DOH determines success, implement texting protocol in remaining health departments.
- Examples of tracking follow:

High Performing County from Start

Target # of clients receiving STD tests per week: 100

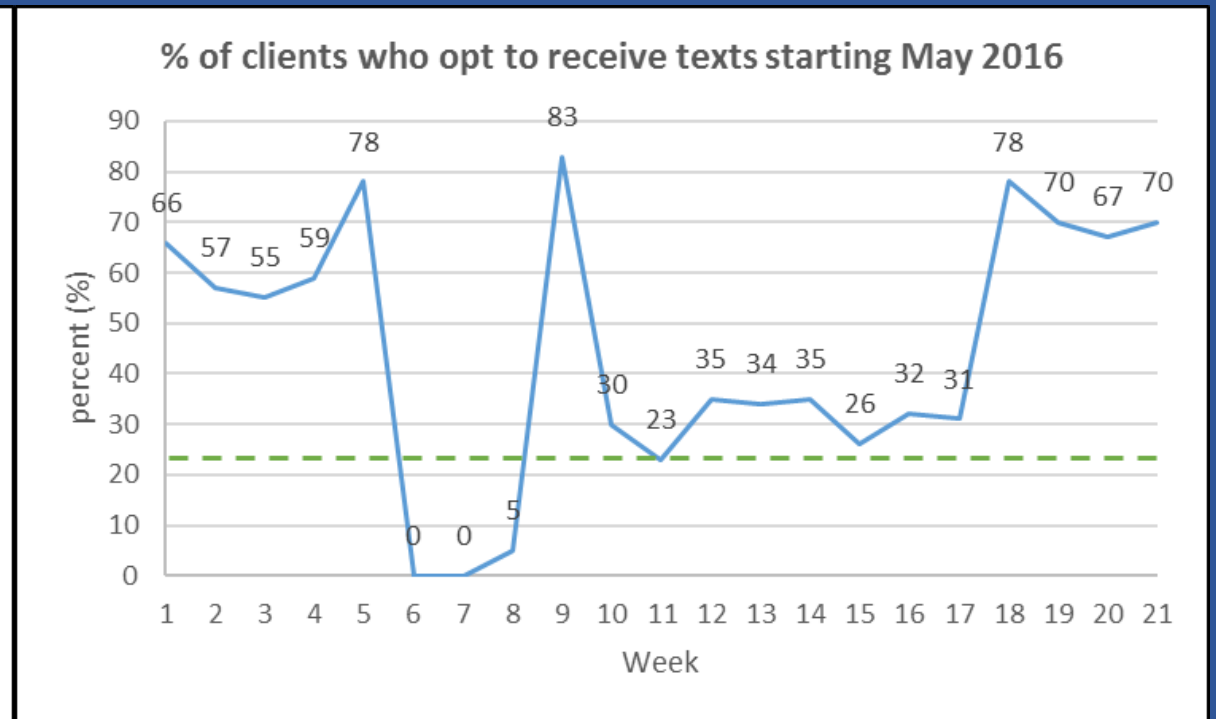
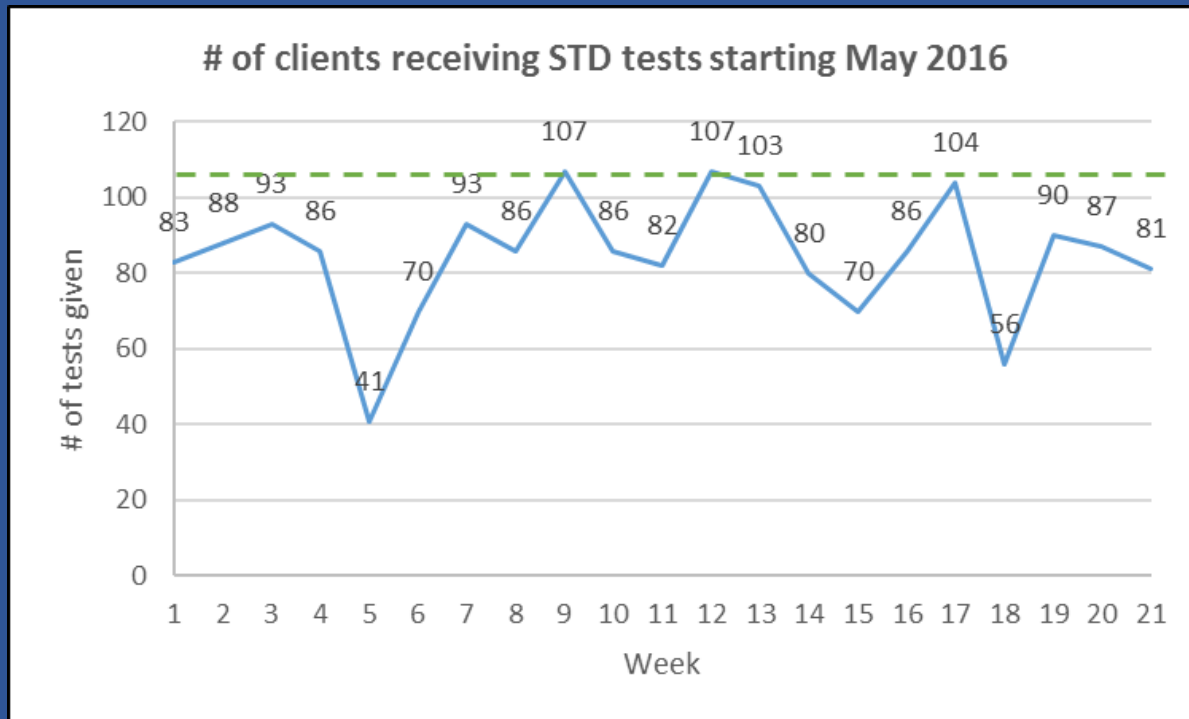
Target % of clients who opt to receive texts: 50%



County Using QI to Overcome Problems

Target # of clients receiving STD tests per week: 108

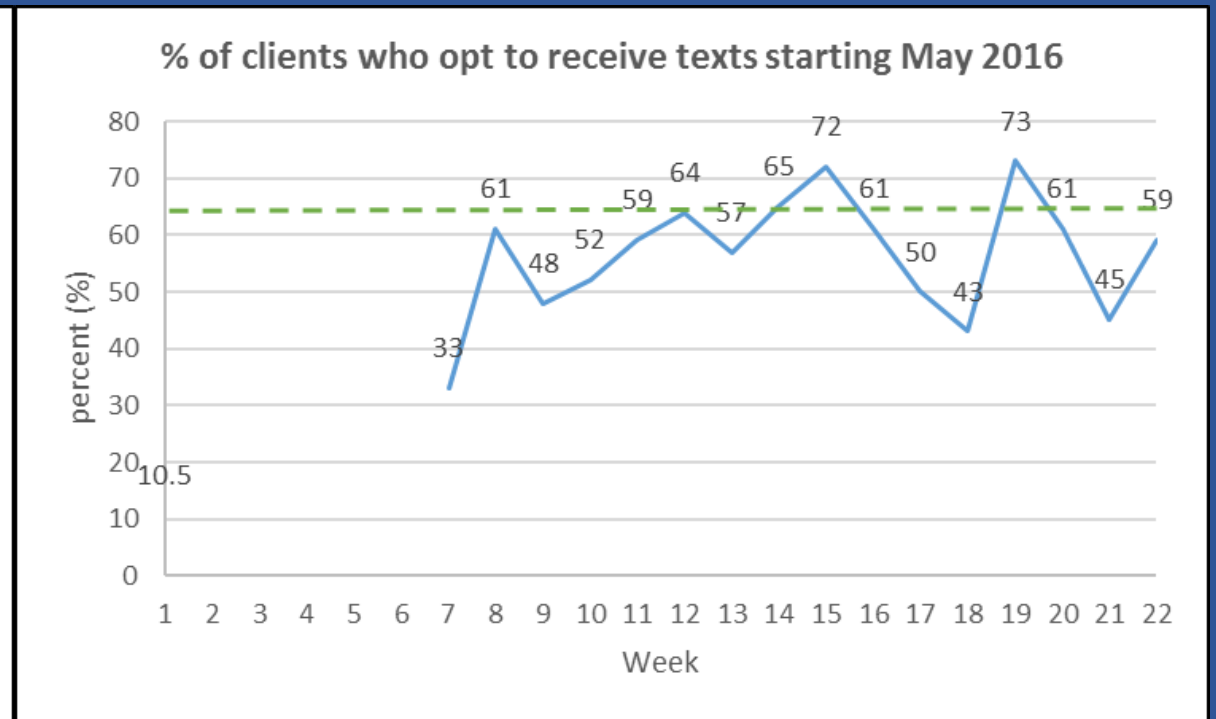
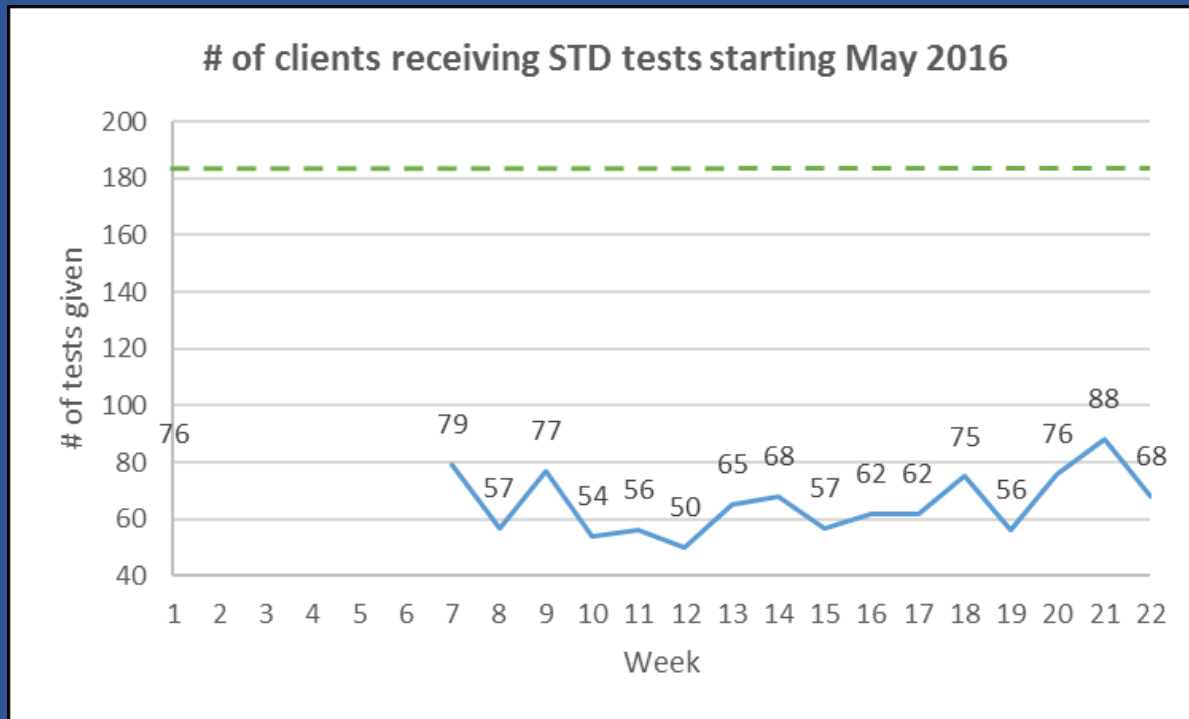
Target % of clients who opt to receive texts: 24%



County Adjusting Expectations

Target # of clients receiving STD tests per week: 185

Target % of clients who opt to receive texts: 65%



Potential Lessons Learned

- Rather than diminish or create barriers to good research, Participatory Approaches can inform and enhance research;
- Participatory research concepts are useful for good practice as well as designing effective research;
- Affected practice community members need to be engaged for participatory principles to be applied with integrity;
- May seem like common sense approaches, but may need formal processes to clarify use of principles.

Related Recent and Pending References

- Livingood WC, Bilello L, Sorensen B. Understanding cost variations in STD service delivery as state and federal agencies reduce funding. *Frontiers in Public Health Services and Systems Research*. 2014;3(4):Article 4.
- Livingood WC, Bilello L, Lukens-Bull K, Choe U. Enhancing sexually transmitted infection notification: A quality improvement collaborative case report. *Front Public Health Serv Sys Res* 2016; 5(4):21–6. DOI: 10.13023/FPHSSR.0504.04.
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