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Analyzing the Costs of Integrated Care for Adults with Serious Mental Illness

SAMHSA PBHCI Grantee Meeting
August, 2014

Grantee Presenters:

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Alameda County Behavioral Health

Freddie Smith has worked over 30 years in public health clinics and community health centers that provide primary and behavioral health care services to uninsured and underinsured residents. His administrative work experiences have covered such areas as personnel, policies and procedures, preparation and monitoring of program budgets, health center operations, and compliance with state and federal government licensing regulations. Currently, he is a Program Manager for Alameda County, Behavioral Health Care Services, in the Office of the Medical Director. He is the Project Director for the Substance Abuse Mental Health Services Administration (SAMHSA), Primary Behavioral Health Care Integration (PBHCI), funded grant “Promoting Access to Health (PATH) Project”.

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Grantee Presenters:

Faith Elizabeth Fuller, M.B.A., President of Financial, Analytic, and Strategic Services for Nonprofit and Government Agencies (FAS Services), Berkeley CA, is the Evaluation and Grant Writing consultant to the Alameda County PATH Project (2009 to date). Her clients include community based Substance Abuse Treatment providers and Adult and Family Drug Courts in Oakland, Berkeley, Fairfield, Vallejo, Hayward, and Fremont California. She currently serves on the executive committee of the National Prevention Science Coalition, on the audit committee of Hesperian Health Guides, and is the treasurer of the Scout Fuller Fund for Social Justice.

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Grantee Presenters:

Downtown Emergency Services Center (DESC)

Imara West has been a member of the Center for Healthcare Improvement for Addictions, Mental Illness and Medically Vulnerable Populations (CHAMMP) evaluation team since 2008. She also holds the position of Research Scientist in the Department of Psychiatry and Behavioral Sciences at the University of Washington. She currently provides statistical analytic support to Various research projects and evaluations focused on the safety net population, including the evaluation of the Primary and Behavioral Health Care integration grant awarded to Downtown Emergency Service Center (DESC).

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Presentation Overview

1. Description of the Project
2. Defining the Types of Cost Analysis
3. Steps to Conducting a Cost Analysis
4. Reports from the Field: Downtown Emergency Service Center and Alameda County Behavioral Health Care Services
5. Next Steps/Questions/Discussion

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Overview of the Project

- The cost analysis small group TA was requested by grantees working on sustainability plans
- DESC, Alameda County, Tarzana, Heritage, CHCS participated from July-September, 2013
- Lessons Learned
  1. Craft your analysis to fit organizational needs
  2. Some analysis is better than no analysis
  3. Don't bite off more than you can chew

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Defining Our Terms/Types of Cost Analysis

A **cost estimation/assessment** tells you that the average hospitalization cost of one BH consumer at your integrated clinic is $500/year.

A **cost-effectiveness analysis** tells you that the $500/year hospitalization cost at your integrated clinic is less than a control clinic that has lower prevention costs but higher back-end hospitalization costs and poorer consumer physical and behavioral health outcomes.

A **cost-benefit analysis** projects the total costs to the clinic (or a payer) associated with two alternate approaches to providing integrated care.

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Cost Analysis Steps:

1. Choose the Cost Analysis Team
2. Identify the Audience
3. Define the Scope
4. Structure the Cost Estimate
5. Develop a Cost Analysis Design
6. Gather Data and Conduct the Data Analysis
7. Effectively Present Findings

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Sustainability Strategies

Alameda County Behavioral Health Care Services
Freddie Louis Smith, Project Director
Faith Elizabeth Fuller, Evaluator

Primary Care Partners

LifeLong Medical Care
Health Services For All Ages

Oakland, California

TRI-CITY HealthCenter
Our Community. Your Health.

Fremont, California

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Goals of PATH Project

1. Improve Access to primary care services for SMI clients

2. Become the "Medical Home" for SMI clients served in County Mental Health Centers

3. Develop a "Sustainable Financial Model" to help expand PATH Clinics to additional Centers

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Psychiatric Diagnosis Fiscal Year 13-14

2814 Adult Clients (18-65 years old) assigned to Service Teams

Diagnosis Breakdown	# Clients Served	Percentage
Schizophrenia Disorders	1824	65%
Bipolar Disorders	372	13%
Depressive Disorders	289	10%
Psychotic Disorders	243	9%
Anxiety Disorders	63	2%
Adjustment Disorders	5	1%

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PATH Sustainability Workgroup Focus

1. Documentation of health outcomes for charts, graphs, presentations, and grant applications and proposals

2. Preparing a Financial Plan and Service Model where implementation and operating costs are covered

3. Developing strong collaborative Partnerships with our primary care partners

4. Building Support from BH Executive Staff, elected officials, and community and consumer groups

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Improved Access to Primary Care

LifeLong Medical Patients Pre-Post Study	Low Users 0-1 visits in the year prior to integration	Moderate Users 2-6 visits in the year prior to integration	Heavy Users 7 – 45 visits in the year prior to integration	Total Patients or Visits
Number in Study Sample	N=24	N=23	N=18	N=65
Average # visits 1 Year Prior to Integration	0.5	4.1	12.9	**N=340**
Average # Visits 1 Year Post Integration	5.1	4.8	6.3	**N=347**

Comparison Group Outcomes

		HgbA1c			Blood Pressure			BMI		
		Clients with Abnormal HgbA1c	Number Improved	% Improved	Clients with Abnormal BP	Number Improved	% Improved	Clients with any Baseline BMI	Number Improved	% Improved
Non-PATH	720	192	77	**40%**	484	271	**56%**	720	158	**22%**

PATH Outcomes

BHCS Service Team Clients with PATH Integrated Care

	Study Size	HgbA1c			Blood Pressure			BMI		
		Clients with Abnormal HgbA1c	Number Improved	% Improved	Clients with Abnormal BP	Number Improved	% Improved	Clients with any Baseline BMI	Number Improved	% Improved
PATH	159	93	48	**52%**	126	81	**64%**	159	86	**54%**

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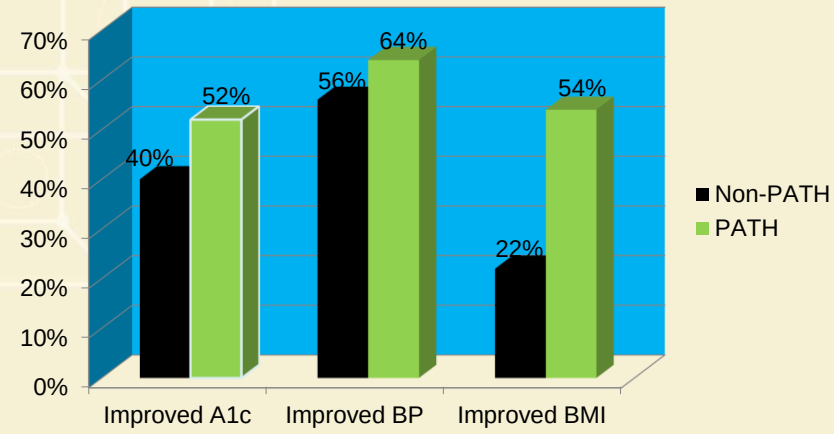
Health Outcomes Compared



What are the costs of a PATH clinic?

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Exam Room Set up and Computers	
Equipment	**Units**
Office Computers	3
Printers/Fax Machines	2
Exam Table	1
Weighing Scale	1
Blood Pressure Monitor	1
Thermometer	1
Pulse Oximeter	1
Otoscope	1
Ophthalmoscope	1
Halogen Exam Light	1
Medical refrigerator	1
Hazard Container	1
File Cabinets with locks	2
Cost: $ 15,000	

Note: Sinks, Rent, IT Services in-kind

Ongoing Operations		
Primary Care / CBO	**FTE**	
Primary Care Physician	0.4	
Clinic Coordinator	1.0	
Medical Assistant	0.5	
Admin Asst.	1.0	
Salaries		$ 187,000
Medical Supplies		$ 55,000
Other costs		$ 28,000
		$ 270,000
BH / County	**FTE**	
Nurse Care Coordinator	1	
Peer Support Counselor	1	
Salaries		$ 220,000
Supplies		$ 18,000
Other costs		$ 20,000
		$ 258,000
Annual Direct Costs:		**$ 528,000**

Breakeven Analysis (Primary Care, FQHC)

Primary Care Clinic: Annual Operating Expenses	$270,000
Medi-cal reimbursement rate per visit	$206
# Annual visits required for break even (95% insured)	1376
# visits per 4 hour shift (about 30 min. each)	7
Breakeven # of shifts required a year	197
Available weeks per year [net of holidays, vacation, sick]	49
Breakeven # of half-day clinics/week	4.0

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Can we cover costs with revenue?

Actual	Year 1	Year 2	Year 3	Year 4
Third Party Revenue (Medi-Cal, Medi-Care, Self-Pay)	**0**	**$ 62,219**	**$ 165,918**	**$ 244,849**
Foundation Grant	**-**	**-**	**$ 15,000**	**$ 15,000**

Behavioral Health Service Team Revenue

Projected	Year 1	Year 2	Year 3	Year 4
MAA (Medi-Cal Administrative Activities)	**0**	**$ 76,000**	**$ 112,000**	**$ 136,000**
Mental Health Services Act dollars or other Grants	**$ 258,000**	**$ 182,000**	**$ 146,000**	**$ 122,000**

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Can we find other ways to cover costs?

- Mental Health Services Act Funding (CA)
- Foundation Grants
- In-Kind goods and services
- Collaborative Partnerships with more CBOs
- Partnerships with local Colleges and Universities for Research
- Interns from local schools
- Billing Revenue

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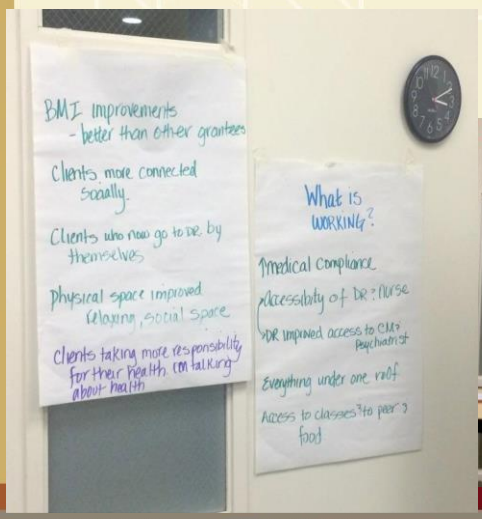
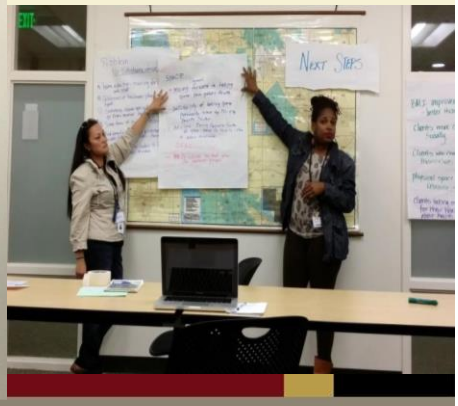
PATH Annual

Visioning Retreat





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Goals for the Future

- Open clinics at additional sites
- Integrate Substance Abuse Treatment
- Continue to collect and analyze data on access, health, and on effects of the wellness program
- Access to data on:
  - Emergency Room visits
  - Hospitalizations (psychiatric and medical)
  - Criminal Justice System Contacts

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Are We Reducing Costs by Integrating Care?

Imara I. West, MPH

DESC
opening doors to end homelessness

UW Medicine
HARBORVIEW MEDICAL CENTER

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Overview

PBHCI funding allowed primary care services to be integrated into two mental health centers serving SMI safety-net population

- DESC - New to integrated primary care
- HMHAS - History of integrated primary care
- Population
  - 38% with schizophrenia
  - Average age of 48 years
  - 67 % male
  - 42% non-white
  - 34 % homeless

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Cost Analysis Phases

Phase I:

- Program Costs
- Pre-Post change comparison of HMHAS PBHCI clients to a propensity score matched comparison group

Phase II:

- Pre-Post change comparison for DESC and HMHAS PBHCI clients

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Cost Analysis Data

- Harborview Medical Center (HMC) billing records
  - Outpatient (OP) medical utilization and costs
  - Emergency department (ED) utilization and costs
  - Inpatient hospital utilization and costs
- Visits and costs were presented as per member per month (PMPM) in the pre and post periods
  - One year pre/post period
- Clients must have had at least 1 month of post period data to have been included

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PHASE I

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Comparison

- PBHCI Group vs Comparison Group
  - Comparison enrolled in similar services at HMHAS, but not in PBHCI

Propensity score matched on age, gender, race/ethnicity, primary language, homeless status, type of insurance, and pre-period health care costs and utilization

Difference in Difference Model

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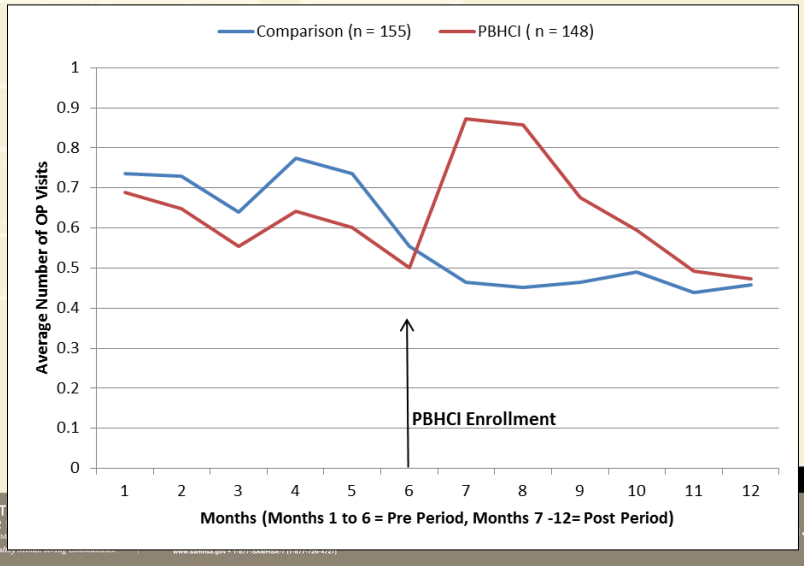
OP Medical Visits Increased After PBHCI Enrollment



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No Group Differences in Medical Utilization or Costs

Decreases in utilization and costs in both groups, but no significant differences

- Relatively small n (192), lots of variability
- Comparison group may have differed from PBHCI in ways not measured
- Sample drawn exclusively from HMHAS
  - Clients may not have been impacted by PBHCI due to long-standing integration of PC & MH treatment

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PHASE II

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Phase II Primary Question

Did PBHCI have a differential impact on the two sites?

- DESC: No prior PC-BH integration
- HMHAS: More than a decade of PC-BH integration

Pre-Post comparison of utilization and costs for both sites

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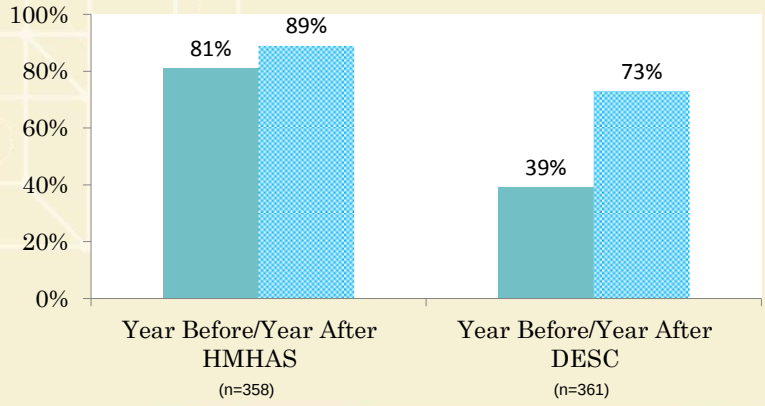
Percent of Clients with One or More OP Medical Visits Increased at Both Sites



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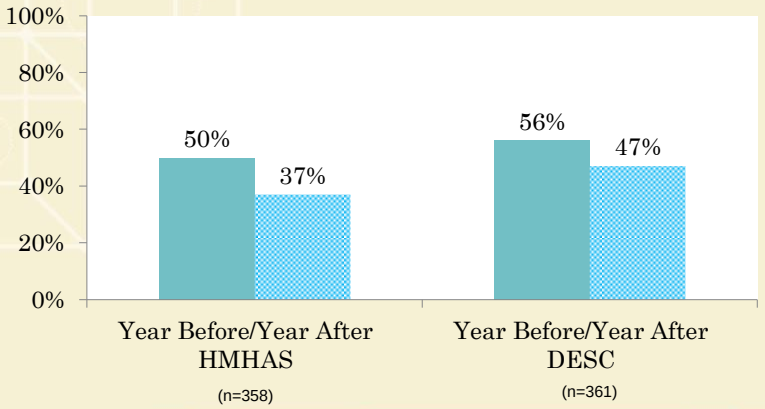
Percent of Clients with One or More ED Visits Decreased at Both Sites



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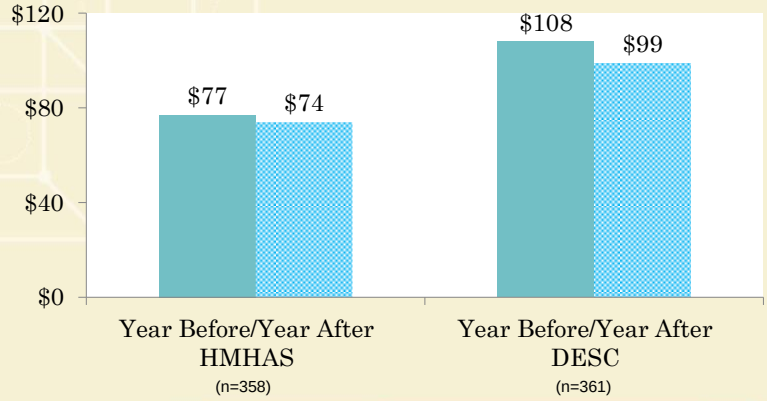
Per Member Per Month ED Costs Decreased at Both Sites



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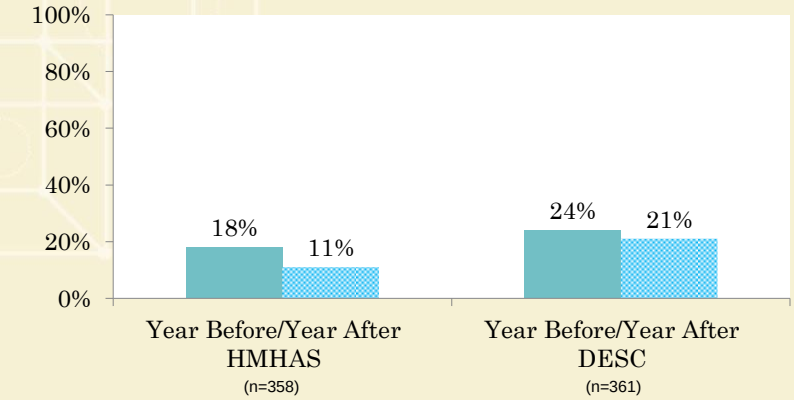
Percent of Clients with One or More Inpatient Admissions Decreased at Both Sites



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Conclusions

- PBHCI is associated with an increase in outpatient medical visits
  - Especially at DESC which did not have integration of primary and behavioral health care prior to PBHCI
- PBHCI was also associated with decreases in percent of clients using the ED, ED costs, and percent of clients admitted to inpatient hospital at both sites
- ***Overall, these findings suggest that the investment in primary care integration can have a positive impact whether the site has a history of integration or not***

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Cautions

- Because we did not have a control group in Phase II, it is possible that changes in medical utilization and costs could have been caused by something other than the PBHCI intervention
- Medical services could have been undercounted as we only had access to service records at HMC clinics while clients could have received services at non-HMC clinics and hospitals

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Tips

- May be difficult to construct a truly comparable comparison group
  - Non-PBHCI participants at a PBHCI site are likely to differ from participants in ways that may be difficult to measure
- State level data may help to identify all medical utilization
- Obtaining medical data can be facilitated by establishing relationship with medical records staff
- Strong programming skills are essential in managing large medical data sets

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Acknowledgements

Toni Krupski, PhD

Jim Hopfenbeck, MD

Christina Clayton, MSW, LICSW, CDP

Graydon Andrus

Ed Dwyer O'Connor

HMC Decision Support

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Next Steps…

- Guide is available please let us know what you think!
- Support is available from CIHS, RAND, & the grantees that took part!
- Discussion/Questions?

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