Improving Health Through Rural Healthcare Linkages: Results of a Three Year Study

http://floridashealth.com/Workforce/RuralHealth/ruralhealthhome.html

Presenters

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Evaluation Team

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Community Partners

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Purpose
Services

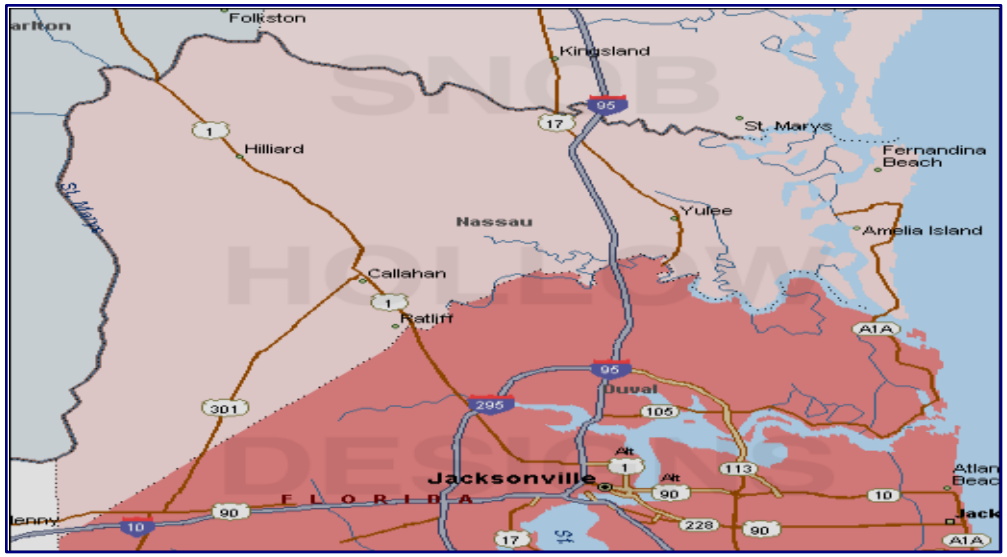
To improve health of chronically ill, uninsured adults in rural Nassau County through

- Expanded Access to Mobile Van
- Primary Care Services
- Case Management
- Drug Assistance Program
- Specialty Care

Purpose
Services (Continued)

- Mental Health Services
- Health Education
- Disease Self-Management Classes
- Telehealth Clinical Services and Educational Sessions

Background



Health Needs and Barriers to Care

- Nassau County mortality rates exceed state averages in chronic disease conditions
- No public transportation
- Limited Providers – Health Professional Shortage Area designation for West Nassau

Background

- To address unmet needs, a partnership was formed between the health department, two hospitals, community mental health agency and social service organization.

- Building upon an existing mobile health collaborative program, the partnership applied for and was awarded a HRSA-Office of Rural Health Policy Outreach Grant in 2003.

- With this funding, the Health NOW Project expanded primary care services using a mobile health van and brought new disease self-management classes and telehealth services to a target population of undiagnosed and underserved chronic disease patients in western Nassau County.

Target Population

130 uninsured, low income adults with chronic diseases such as

- Diabetes
- Hypertension
- Cardio-vascular disease
- Arthritis
- COPD
- Hypothyroid
- GI conditions

Target Population

Demographics:

- Age Range: 18-64 years
- Race: White 91.5% Black 8.5%
- Gender: Female 67% Male 33%
- Income Level: 71% at or below 100% Federal Poverty Level (FPL)
  - 23% 101-150% FPL
  - 6% 151-199% FPL

Resources

HealthNOW Network Partners

- Nassau County Health Department (local public health agency)
- St. Vincent's Mobile Health Outreach Ministry (charitable program of tertiary care, private, not-for-profit hospital)
- Baptist Medical Center-Nassau (in-county private, not-for-profit hospital)
- Sutton Place Behavioral Health (community mental health & substance abuse agency)
- Barnabas Center, Inc (social service agency)
- Three year HRSA Rural Health Policy Outreach Grant
- In-kind contribution by Network Partners and Providers

Goals

- Goal 1: Identify a primary medical home for a minimum of 120 undiagnosed or underserved chronic disease patients.
- Goal 2: Improve the health status of a minimum of 120 identified at-risk undiagnosed or underserved chronic disease patients.
- Goal 3: Improve/provide health care education and disease self-management resources for a minimum of 120 identified undiagnosed or underserved chronic disease patients.
- Goal 4: Increase access to specialty care for a minimum of 120 identified undiagnosed or underserved chronic disease patients.

Objectives

- Provide access to mental health, medical specialty care, dental and vision care.
- Provide access to telehealth technology to increase frequency/types of care.
- Provide transportation assistance to rural disadvantaged patients.

Activities

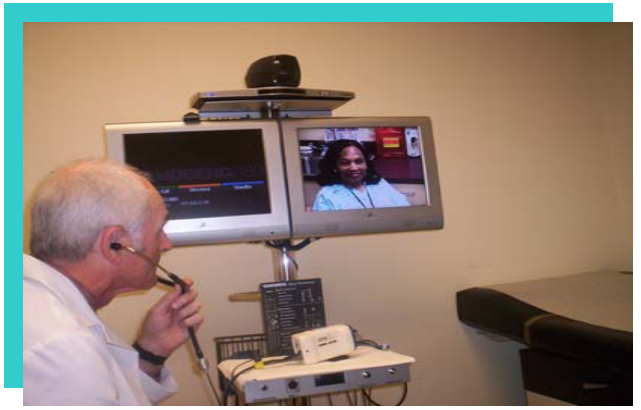
Service Components

- Health screenings & Community Education & Outreach
- Nursing Case Management
- Specialty Care
- Mobile Health Van Primary Care Services

Activities (continued)

Health Education

- Tobacco Cessation, Nutrition, Physical Activity
- 4-part Diabetes Disease Self-Management Classes
- Telehealth



Evaluation Questions

- Did the project provide primary medical services to the target population at the identified service level?
- Is there a statistically significant improvement in the health status of patients served by the project?
- Do patients who receive health care education and disease self- management information assess these services as being of high quality and value?

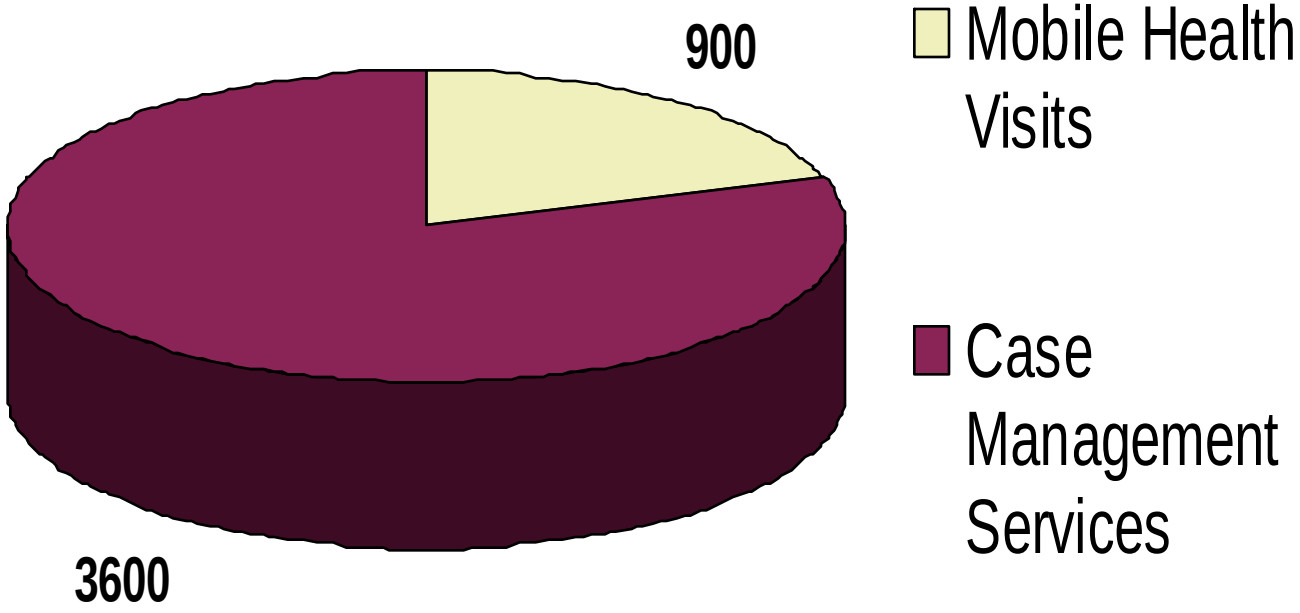
Evaluation Results

Did the project provide primary medical services to the target population at the identified service level?

- During 2003-2006, the project served 130 low income, uninsured adult rural residents
- Services provided
  - 900 mobile health visits
  - >3600 case management services
  - 818 medical subspecialty care services

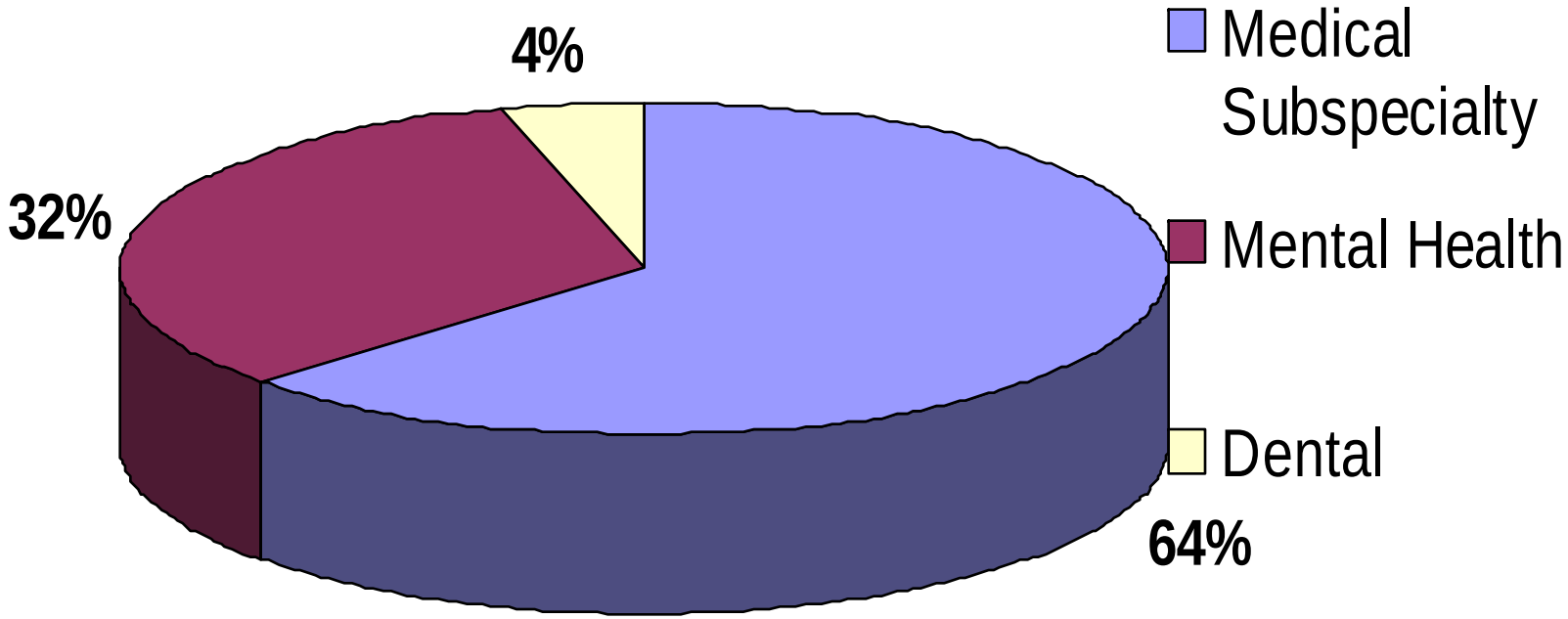
PRIMARY CARE

Did the project provide primary medical services to the target population at the identified service level?



SPECIALTY CARE

Did the project increase access to specialty care to the target population at the identified service level?

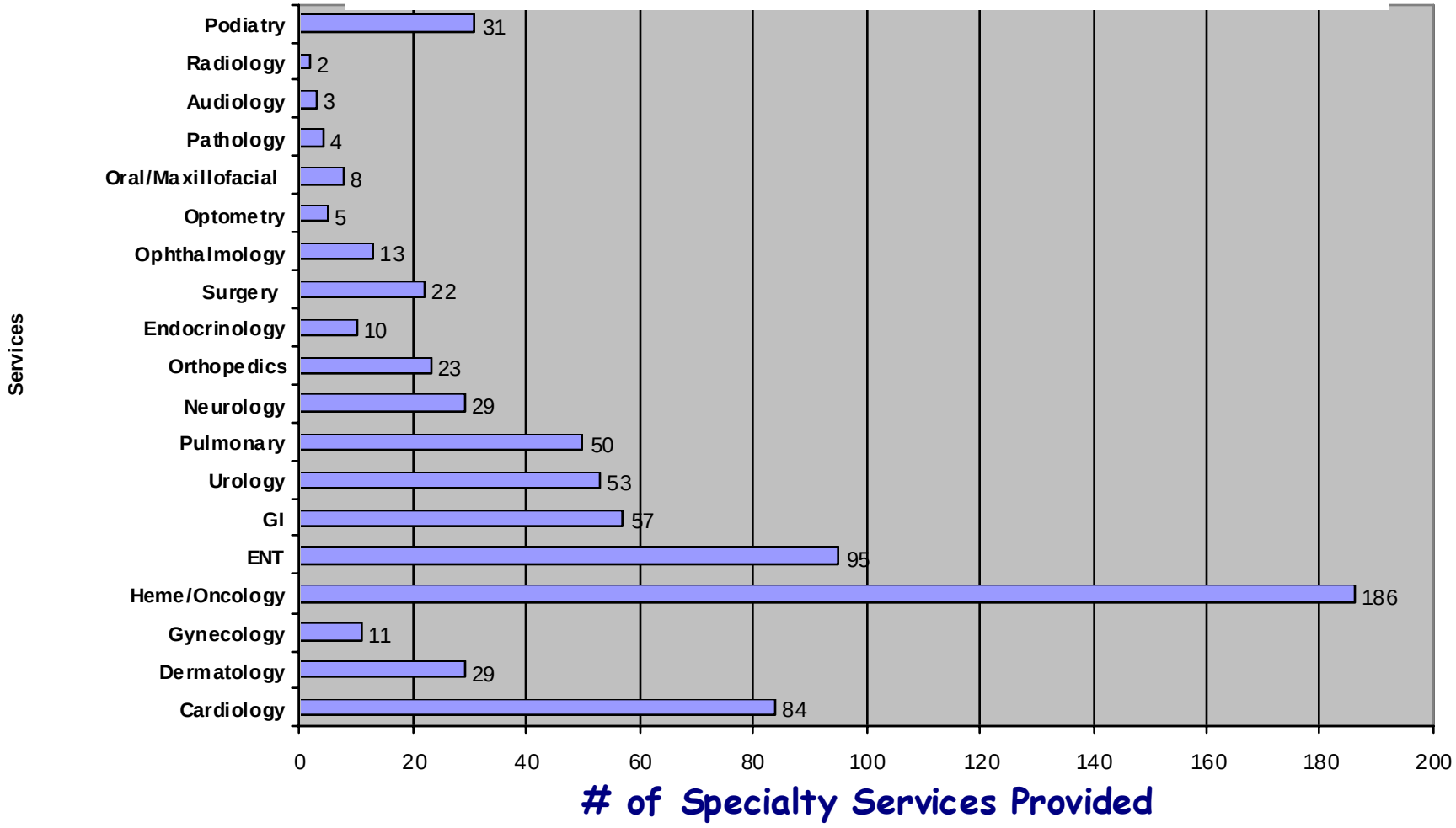


Evaluation Results

Did the project provide primary medical services to the target population at the identified service level?

- 58 individuals received the 676 medical subspecialty services provided
- 107 individuals (patients, family & community members) attended the diabetes self-management series
- 11 patients received transportation assistance
- 58 individuals received dental services
- 31 individuals were screened for mental health needs and 20 received a total of 420 servcies

Types of Specialty Care Services Provided



Evaluation Results

Is there a statistically significant improvement in the health status of patients served by the project?

Overview Session

- Two questions with statistically significant differences between pre- and post-tests
  - risk factors for diabetes (p = .010)
  - cause of hypoglycemia (p = .05)

Diet Session

- Three questions with statistically significant different between pre- to post-tests
  - food restrictions (p = .044)
  - 50% of calories from protein (p = .001)
  - alcohol limits for women (p = .002)

Evaluation Results

Is there a statistically significant improvement in the health status of patients served by the project?

Medication Session

- No statistically significant differences on any questions between pre- and post-tests
- However many questions had gains in the number of correct responses

Monitoring Session

- One question with statistically significant difference between pre and post-tests
  - American Diabetes as a local resource (p =.003)
- Positive gains were made in the majority of other survey questions

Evaluation Results

Is there a statistically significant improvement in the health status of patients served by the project?

Mean change from initial to final was statistically significant for glucose only (p = .032); with higher mean glucose values noted on the final lab*

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	A1C Initial - A1C Final	.480	1.076	.481	-.856	1.816	.998	4	.375
Pair 2	Glucose Initial - Glucose Final	-31.71	30.18	11.41	-59.63	-3.80	-2.780	6	.032
Pair 3	Total Cholesterol Initial - Total Cholesterol Final	3.67	32.12	13.11	-30.04	37.38	.280	5	.791
Pair 4	HDL Initial - HDL Final	-3.17	9.54	3.89	-13.18	6.84	-.813	5	.453

* Note: It is difficult to draw any conclusions about the biochemical measures because of the small sample sizes

Evaluation Results

Do patients who receive health care education and disease self- management information assess these services as being of high quality and value?

All participants agreed to strongly agreed they could use the information to improve their health; 97% could use it to improve other lifestyle areas

		1. Name of session you just attended:							
		A. Overview - Wh control your diabetes		B. Diet		C. Medications, Sick days, Foot Care, Stress, & Exercise		Monitoring & Pumps, Local Resources, and Cooking Demo	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
2. I could unders what the speaker saying.	A. Strongly Agree	18	56.3%	24	64.9%	7	43.8%	20	58.8%
	B. Agree	14	43.8%	12	32.4%	9	56.3%	13	38.2%
	C. Disagree			1	2.7%				
	D. Strongly Disag							1	2.9%
Total		32	100.0%	37	100.0%	16	100.0%	34	100.0%
3. The speaker kn his/her material.	A. Strongly Agree	20	62.5%	30	83.3%	11	68.8%	29	85.3%
	B. Agree	12	37.5%	6	16.7%	5	31.3%	5	14.7%
Total		32	100.0%	36	100.0%	16	100.0%	34	100.0%
4. The speaker ke my attention mos the time.	A. Strongly Agree	17	51.5%	26	70.3%	7	43.8%	25	71.4%
	B. Agree	16	48.5%	10	27.0%	8	50.0%	10	28.6%
	C. Disagree			1	2.7%				
	D. Strongly Disag					1	6.3%		
Total		33	100.0%	37	100.0%	16	100.0%	35	100.0%
5. I have heard th information befor	A. Strongly Agree	7	21.9%	6	17.6%	3	18.8%	10	31.3%
	B. Agree	17	53.1%	15	44.1%	6	37.5%	10	31.3%
	C. Disagree	5	15.6%	8	23.5%	5	31.3%	10	31.3%
	D. Strongly Disag	3	9.4%	5	14.7%	2	12.5%	2	6.3%
Total		32	100.0%	34	100.0%	16	100.0%	32	100.0%
6. I liked the way information was presented.	A. Strongly Agree	15	48.4%	21	63.6%	6	37.5%	20	64.5%
	B. Agree	15	48.4%	12	36.4%	8	50.0%	11	35.5%
	C. Disagree	1	3.2%			1	6.3%		
	D. Strongly Disag					1	6.3%		
Total		31	100.0%	33	100.0%	16	100.0%	31	100.0%

		1. Name of session you just attended:							
		verview - V ontrol you diabetes		B. Diet		Medicatio ck days, Fo re, Stress, Exercise		onitoring umps, Loc sources, a oking Der	
		Coun	Col %	Coun	Col %	Coun	Col %	Coun	Col %
7. The informati expected.	A. Strongl	16	51.6%	17	50.0%	7	43.8%	12	38.7%
	B. Agree	14	45.2%	15	44.1%	8	50.0%	18	58.1%
	C. Disagre	1	3.2%	2	5.9%	1	6.3%	1	3.2%
Total		31	00.0%	34	00.0%	16	00.0%	31	00.0%
8. I can use this improve my heal	A. Strongl	17	54.8%	27	79.4%	11	68.8%	19	59.4%
	B. Agree	14	45.2%	7	20.6%	5	31.3%	13	40.6%
Total		31	00.0%	34	00.0%	16	00.0%	32	00.0%
9. I can use this other areas of lif	A. Strongl	15	48.4%	21	63.6%	10	62.5%	18	54.5%
	B. Agree	15	48.4%	12	36.4%	6	37.5%	15	45.5%
	C. Disagre	1	3.2%						
Total		31	00.0%	33	00.0%	16	00.0%	33	00.0%
10. I would like t speaker again.	A. Strongl	16	53.3%	19	59.4%	7	43.8%	24	75.0%
	B. Agree	14	46.7%	12	37.5%	9	56.3%	8	25.0%
	C. Disagre			1	3.1%				
Total		30	00.0%	32	00.0%	16	00.0%	32	00.0%

Evaluation Results
Mental Health and Telehealth

- Diabetes education via telehealth sessions offered only during the last year was well received. Technical components such as organization, content, equipment, picture and sound quality received very positive ratings.

- There were limited data to quantitatively assess the mental health and behavioral components. However, completed case studies supports that clients who received services fit the profile for those in need of services for co-morbid mental health issues

Evaluation-Implementation Challenges

- Establishing medical subspecialty referral network
  - Limited providers
  - Medicaid reimbursement rate
  - State wide liability concerns
  - State mandate for on-line vendor enrollment
- Underutilization of mental health and health education services by target population
- Delayed implementation of telehealth services due to connectivity issues related to communication infrastructure change to Voice-Over Internet Protocol system

Lessons Learned

Observations for Other Rural Areas' Application

Critical role of a nurse case manager serving as a "hub" to coordinate services and assure service access

- The specialty network was built upon existing collaborative relationships between community-focused hospitals, specialty providers, and public sector agencies.
- Enhancements for recruiting new providers
- Concentration on behavioral health needs and services
- Integration of Evaluation through the project

Contact Information

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