Measuring Implementation to Impact: Evaluation of a Chronic Pain Integrative Medical Group Visit Program

Paula Tomczak, DNP, RN, LMT, CPH, CNE; Mercedes Echevarria, DNP, ACN, CNE; Willard Hunter, MD

Background

Chronic pain, opioid misuse, and social isolation are public health crises. Current clinical practice guidelines recommend non-invasive mind-body therapies as a first-line treatment for chronic pain, and studies indicate these therapies can be successfully delivered in group settings using an Integrative Medical Group Visit model.

A Federally Qualified Health Center in rural California piloted a nurse-led Integrative Chronic Pain Group (ICPG) program for a portion of their patients experiencing chronic pain and receiving medication for opioid use disorder.

Objectives

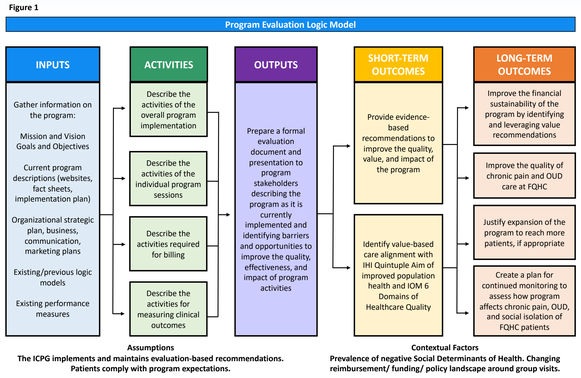
The purpose of evaluating the ICPG program was to provide actionable, evidence-based information to inform stakeholder decision-making and improve program effectiveness.

Formal evaluation also allowed the program to be reviewed against the standards of the Institute for Healthcare Improvement's (IHI) Quintuple Aim for Healthcare Improvement, and the Institute of Medicine's (IOM) Six Domains of Healthcare Quality to determine alignment with the core principles of value-based care.

Several process, effectiveness, efficiency, cost, and outcomes measures were analyzed and interpreted through the lens of program stakeholders to evaluate the ICPG program's:

1) **quality (execution)**
2) **value (cost-effectiveness)**
3) **significance (impact)**

Figure 1



Methods

The Centers for Disease Control and Prevention (CDC) Framework for Program Evaluation in Public Health was chosen to guide this scholarly project.

Centers for Disease Control and Prevention. Framework for program evaluation in public health. MMWR 1999;48 (No. RR-11)

Step 1: Stakeholders were identified via a SWOT analysis and engaged in the evaluation plan.

Step 2: A comprehensive program description was created from stakeholder interviews and program documents, culminating in the creation of global and detailed logic models and a driver diagram.

Step 3: The models were used to focus the evaluation and assign objectives and indicators to each evaluation aim: quality (execution), value (cost-effectiveness), and significance (outcomes/impact).

Step 4: Quantitative and qualitative data were gathered via de-identified clinical and financial data, program and organizational documents, stakeholder interviews, and patient and provider satisfaction surveys.

Step 5*:* Data were analyzed and synthesized. Descriptive statistics and paired and independent *t*-tests were completed, program attendance and compliance were calculated, revenue values were estimated, program fidelity was analyzed, and best practice alignment was determined by comparing the ICPG program to two successful chronic pain Integrative Medical Group Visit models. Conclusions were drawn by interpreting the evidence through the lens of stakeholder values and benchmarking it against the Quintuple Aim of Healthcare Improvement and the Six Domains of Healthcare Quality.

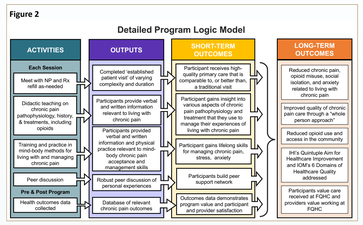
Step 6: A formal report and presentation were created and presented to key program stakeholders.

Results

Quality (Execution)

Program implementation and execution demonstrated fidelity to the original plan and aligned with best practices established by previous IMGV programs, except that complementary healthcare practitioners were not employed *(Figure 2)*

Figure 2



Value (Cost-Effectiveness)

Value and sustainability indicators revealed the program generated slightly more annual revenue than individualized care, and scalability may be possible given the demographic alignment of program participants with the larger organizational population (*Table 1*)

Table 1

Population Demographics: Group, Clinic, Organization

			Group N = 5	Clinic N = 162	Organization N = 966
Age	Mean (SD)		63 (4.85)	62 (12.54)	60 (12.52)
	Range		55 - 67	20 - 92	20 - 93
Sex	Female	#	5	103	562
		%	100	64	58
	Male	#	0	59	404
		%	0	36	42
Race	White	#	5	151	890
		%	100	93	92
	American Indian	#	0	4	32
		%	0	2	3
	Black/African American	#	0	2	12
		%	0	1	1
	Asian/Pacific Islander	#	0	0	4
		%	0	0	0
	Unknown	#	0	5	28
		%	0	3	3
Ethnicity	Non-Hispanic White	#	5	152	899
		%	100	94	93
	Hispanic/ LatinX	#	0	4	29
		%	0	2	3
	Unknown	#	0	6	38
		%	0	4	4
Preferred Language	English	#	5	162	961
		%	100	100	99
	Spanish	#	0	0	2
		%	0	0	0
	American Sign Language	#	0	0	2
		%	0	0	0
	Other	#	0	0	1
		%	0	0	0
Insurance Coverage	Medicare - CA North	#	5	91	497
		%	100	56	51
	Partnership Health Plan	#	0	32	279
		%	0	20	29
	Other	#	0	37	174
		%	0	23	18
	Uninsured	#	0	2	16
		%	0	1	2

Significance (Outcomes)

Clinical outcomes detected a significant decrease in PHQ-9 depression scores and a marginally significant decrease in SBP *(Table 2)*

Satisfaction survey scores indicated considerable satisfaction with execution and impact *(Table 3)*

Qualitatively, peer support and group involvement were commonly cited as benefits

Table 2

Pre/Post Paired t-test: Significance (Impact/Outcome) Indicators

	N	Pre Mean (SD)	Post Mean (SD)	p value
PHQ-9 Score	3	17.3 (1.5)	11.3 (4.5)	0.037
Systolic Blood Pressure	5	137.6 (6.4)	119.6 (17.9)	0.059

Table 3

Participant Satisfaction Survey Items (n = 8)

Question	Mean	Mode	SD
Overall I am satisfied with the program, education, and skills training that I received	5	5	0
I would recommend this program to a friend, family member, or colleague	5	5	0
The program leaders respected group members' needs and differences	5	5	0
The time it takes me to commute is reasonable for what I get out of them	4.9	5	0.35
This program helped me feel more control over my health in general	4.8	5	0.46
I am motivated to make lifestyle changes because I attended this program	4.8	5	0.46
I have gained a support network from the other members of the program	4.6	5	0.52
This program helped me build personal strategies for managing my pain	4.6	5	0.52

Provider Satisfaction Survey Items (n = 2)

Question	Mean	Mode	SD
I believe there are intangible benefits to integrative group programs	5	5	0
Group participants seem to benefit from hearing other people's stories	5	5	0
Gaining a support group is a key participant benefit of the ICPG program	5	5	0

Acknowledgments

Dr. Mercedes Echevarria, primary project advisor
Dr. Bill Hunter, secondary project advisor

A special thank you to all the program stakeholders who donated their time and effort to provide evaluation data

Contact: pscher@gwu.edu

Conclusions

The organization exhibited inherent strengths necessary to ensure that the quality, value, and significance of the program are maintained and enhanced, including dedicated providers, executive level buy-in, appropriate physical facilities, a large target patient population, electronic health records for data gathering, and a desire to provide value-based care. Application of the CDC evaluation framework created a progress report toward established goals and revealed quality improvement opportunities.

Though strong conclusions about significant program-related effects could not be drawn because of the lack of program compliance data and low statistical power, the ICPG did demonstrate alignment with the core principles of value-based care outlined by the IHI and the IOM; it increased access to integrative chronic pain and opioid use disorder management in a social setting, it was feasible and sustainable to implement, and it positively impacted patients and providers. Therefore, ***the ICPG program has the potential to positively impact local public health by addressing chronic pain, opioid use disorder, and social isolation for vulnerable patients of a rural, safety-net clinic.***

Recommendations

Quality (Execution)

- Offer drop-in groups
- Provide group facilitator training to providers
- Include complementary healthcare providers
- Offer dedicated program improvement time

Value (Cost-Effectiveness)

- Bill for Medicare General Care Management
- Understand and address attrition
- Clarify the business case

Significance (Outcomes/Impact)

- Strengthen monitoring and evaluation
- Offer mobile groups
- Leverage environmental assets