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A Budget Impact Analysis of a Tobacco Control Program in a Community Mental Health Clinic

Thuy-Nhi Nguyen
Grand Valley State University

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Thuy-Nhi Nguyen

Kirkhof College of Nursing

Grand Valley State University

Advisor: Dianne Slager, DNP, FNP-BC

Advisory Team: Karen Burritt, PhD, RN, FNP-BC & Kathryn Speeter, AGNP, DNP, RN

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Title Page

Title: A Budget Impact Analysis of a Tobacco Control Program in a Community Mental Health Clinic

Precis: A budget impact analysis assessed the costs of a tobacco cessation program in a community mental health organization, resulting in a financially sustainable health service.

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Abstract

Objectives

This project evaluation aimed to determine if the tobacco cessation program, American Lung Association's Freedom From Smoking (ALAFFS), within the designated community mental health organization (CMHO) is affordable and sustainable through a budget impact analysis.

Methods

The study modeled the impacts on the costs of facilitator training, staff salaries/time, program workbooks, program supplies, bus passes, and other supplies and materials. The Medicaid reimbursement rate used for tobacco cessation group therapy was included. The budget impact analysis projected financial consequences of the presence of training costs and number of smokers with severe mental illness who attended the program.

Results

The results of the budget impact analysis showed a total cost of $1,169 to implement. Medicaid reimbursement rates for the organization allowed up to $412.80 per person who finishes the program. A three-year projected impact showed the organization making a profit of up to $311.60 if at least two participants finish the program or break even at $47 if at least 10 sessions were attended.

Conclusions

The budget impact analysis assessed the cost and affordability of the tobacco cessation program, ALAFFS, in a CMHO. The budget included both direct and indirect costs of the program and Medicaid reimbursement rates of group therapy. This project's BIA show that the

ALAFFS programming could be a financially profitable and sustainable service at the designated CMHO.

Highlights

i. Despite evidence that tobacco cessation programs are cost-effective, some of the primary reasons for discontinuation of such programs include lack of funding. The costs associated with implementing evidence-based programs for tobacco cessation contribute to a lack of widespread adoption.

ii. Budget impact analyses are simpler concepts that can provide some basic information such as costs and resource allocation. This project shows that these analyses can provide information on potential profits for an organization when implementing a group tobacco cessation therapy reimbursed by Medicaid.

iii. Budget impact analysis are used to estimate the cost of preparing a newly adopted intervention, providing decision makers with short-term information about expected costs and affordability.

Introduction

In the United States (U.S.), the use of tobacco products is the leading cause of preventable and premature death and the leading cause of disability, accounting for 1 in 5 deaths every year [1]. An estimated 34.2 million adults currently smoke tobacco in the U.S. [2]. People with severe mental illness (SMI) are disproportionately affected with high smoking prevalence. They account for more than 200,00 of the 520,000 tobacco-attributable deaths in the U.S. annually and die on average 25 years prematurely [3]. In a large cohort of more than 600,000 patients, tobacco-related conditions comprised 53% of total deaths in schizophrenia, 48% in bipolar disorder, and 50% in major depressive disorder patients [4]. Furthermore, smokers with SMI are more nicotine dependent and less likely to receive help in quitting than the general population [5].

The negative impact of smoking on health is well documented. Tobacco cessation (TC) results in mortality/morbidity reduction in cardiovascular disease, lung cancer, and stroke [6, 7]. There are barriers that propagate the use of smoking among those with SMI. These barriers include providers who are less likely to address the issue of smoking with patients with SMI due to factors such as: expectancies that smoking will improve withdrawal symptoms; lack of TC education; and the belief that smokers with SMI are disinterested in quitting [8]. Furthermore, providers usually provide support to those that request help rather than provide proactive support [8]. Other factors that affect smokers with SMI include poverty, unemployment, and living in neighborhoods with a high density of tobacco retailers [9].

Available Knowledge

As stated above, there is a perception that patients with SMI are not interested in quitting [10]. Recent data show that smokers with SMI are similarly motivated to quit smoking as the

general population [11, 12]. Smokers with SMI are also more likely to have stressful living conditions, have low annual household income, and lack access to health insurance [13]. These factors contribute to the reasons why smokers with SMI have trouble quitting. Many individuals with SMI want to quit smoking but face these extra challenges in successfully quitting. One option that may benefit them are TC programs that are integrated into their mental health treatment. Since smoking is the largest modifiable risk factor for this population, TC programs can not only teach effective skills and techniques for self-efficacy but may result in lower medical costs [14, 15]. There is a need to engage more CMHOs to incorporate TC treatments and programs.

Fewer than half of the mental health and substance use disorder treatment facilities in the U.S. offer evidence-based TC treatments. Only 39% of mental health treatment facilities in the U.S. provide cessation counseling and 25% of those facilities offer nicotine replacement therapy and/or other TC medications [16]. Providing smokers with counseling and pharmacotherapy significantly increases their odds of quitting, especially when they are provided together [17, 18]. Unfortunately, one of the primary reasons for discontinuation of such programs include lack of funding and insufficient enrollment [19]. Evidence has shown that there is a higher quit rate among newly insured smokers than the uninsured and that combined Medicaid coverage of cessation counseling and pharmacotherapy were also associated with increased quitting rates in enrollees [20, 21]. TC programs are also highly cost-effective. Limited studies have found that smokers with SMI that participated in TC programs did not result in higher mental health care costs short-term and was cost-effective with a low-average cost per quit [22]. Even though TC is cost-effective and a good investment for health, many community-based settings face challenges such as lack of funding, making coverage for these programs vital for sustainability. Given the

higher prevalence of smoking among those with less education and lower income, the unemployed, and those with SMI, coverage and the cost-effectiveness is an integral part of sustaining a TC program.

Organizational Assessment

The project site is an urban Midwestern, private non-profit CMHO dedicated to the collaborative delivery of evidence-supported mental health and substance abuse treatments to populations with SMI. By offering a variety of services such as assertive community treatment (ACT), Navigate, and supportive employment, the CMHO aims to provide support to adults and adolescents who have difficulty managing their serious mental illness or substance abuse. The organization primarily receives funding from Medicaid, Medicare, a variety of commercial insurances and grants/donations. The clients served at this organization are primarily of low socioeconomic status and mostly insured under Medicaid—having as little as $40 per month to spend on food and other essential items. While the CMHO did not offer any previous structured TC program, prescribers provide FDA-approved cessation agents to aid patients with smoking cessation. Recently, the CMHO began offering the ALAFFS program to clients who want to quit smoking. Upon assessment, there is a supportive interdisciplinary collaboration towards improving the financial sustainability of the newly implemented TC program as members of the leadership team actively participate in planning and budgeting.

Tobacco Cessation Programming

In 1975, clinical experts at the American Lung Association (ALA), American Thoracic Society, and Congress of Lung Association Staff developed the Freedom from Smoking (FFS) program. The FFS program has helped over one million smokers quit since its nationwide introduction in 1981, emphasizing improved lifestyle habits while providing participants with

strategies to positively change their behaviors [23]. This programming was implemented at the designated non-profit CMHO. Non-profit organizations are at high risk of discontinuation of such a program due to lack of substantial funding. Budget impact analyses (BIA) are useful for budget planning and forecasting. They can provide decision makers with short-term information about expected costs that are incurred immediately after choosing to adopt an evidence-based program. Therefore, this project used a BIA to determine the financial sustainability of a TC program at a non-profit CMHO. A BIA will determine the affordability and financial sustainability of the ALAFFS program at the CMHO.

Specific Aims

The aim of this project is to determine if the ALAFFS program within the designated CMHO is affordable and sustainable through a budget impact analysis. The purpose of this paper is to report on a project evaluation that addressed the following objectives.

Objectives

1. Gather net costs and Medicaid reimbursement rates for the ALAFFS program at the designated CMHO.
2. Complete a comprehensive budget impact analysis in preparation for the second implementation of the ALAFFS program.

Methods

Model Approach: Critical Success Factors

To assess the impact of the BIA on the program, critical success factors were identified. Critical success factors are "key areas in which satisfactory results would ensure successful competitive performance for the organization" or areas of a project necessary to achieve a certain goal [24]. This model was used because identifying critical success factors can enable one to

measure progress towards achieving the goals of an organization [24]. The critical success factors, budgeting and finances are important to achieving the designated CMHO mission and goal of "increasing financial stability and sustainability" and more specifically, financially sustaining the ALAFFS program. These critical success factors are continuously monitored and measured to keep progress towards this project's goal.

Implementation Framework

The logic model was used as the project implementation framework because it illustrates the expected inputs, outputs, and impacts that influence program decisions or achievement of outcomes, similar to BIA objectives for this project. The logic model helps an organization identify resources utilized to implement a program and determine if programming helps achieve financial security. By identifying the inputs, activities, and outputs of integrating the program, the logic model can predict short- and long-term clinical and economic outcomes [25].

Target Population

This project targeted smokers with SMI at an urban, Midwestern, private non-profit CMHO. The ACT teams provide treatment for people who have difficulty managing their SMI symptoms. Only the ACT clients are being offered the ALAFFS program in order to avoid mixing different patient populations from different services in the program.

Intervention

The TC programming implemented at the CMHO is the American Lung Association's Freedom from Smoking, a program that is medically and ethnically sound, cost-effective, and easily replicable [26]. The group therapy program is led by two ALAFFS trained facilitators and uses techniques based on pharmacological and psychological principles and methods. The program offers a systematic, evidenced-based approach designed to help tobacco users gain

control behavior and break their addiction. This program is flexible in its design as it can be facilitated in both open (community enrollment) and closed (organization enrollment) formats as the ALA provides the trained facilitator with life-long access to recruitment materials at no cost [26].

Time Horizon

The basic time horizon of the analysis was three years as this is the duration of the program's facilitators' training certificate cycle. Given the short-term budgetary focus, the initial program's training costs of $700 were covered by a grant. The ALAFFS program offers 1.5-hour classes once a week for eight weeks, thus potentially permitting five to seven cycles annually.

Perspective

The primary decision making comes from the board of directors, made up of community leaders who meet monthly to review activities of the organization, monitor outputs, and assure financial solvency. There is a significant amount of decision making that is shared across the agency within teams, supervisors, leadership groups, and chief officers.

Analysis

A cost calculator is the preferred computing framework for BIAs because it is more easily understood by budget holders [27]. For this project, a cost calculator was programmed in Excel and used to generate costs and time estimates of various program costs and activities. It is designed for stakeholders to easily input any costs changes if needed.

Input Data

The input data is relevant to the budget holder. To determine financial affordability and sustainability, the BIA included the following measures: program costs and Medicaid

reimbursement rates. Direct and indirect costs of ALAFFS program were estimated based on organization reports from the initial program implementation. The Medicaid reimbursement rate for this programming is used to determine if the organization has potential for profiting.

Ethical Considerations

The Institutional Review Board determined the project to be a program evaluation. Participants' health information was safeguarded in alignment with HIPPA guidelines and collected data were de-identified prior to analysis and dissemination.

Results

The main results of the BIA are presented in Table 1. This BIA is based off the first clinic that was implemented. Unfortunately, due to the COVID pandemic, the second clinic was not implemented. Therefore, there was not an accurate representation of how many participants attended the sessions. To implement the second ALAFFS program, costs were assigned to facilitator training, facilitators' (RN and social worker) salaries and time, program supplies, workbooks, bus passes, and other miscellaneous costs such as printing flyers for advertisements. The total cost of $1,169 is for initial implementation of the ALAFFS program. Training is re-issued every three years at no additional cost, thereby, saving the organization $700 from the overall implementation costs. Therefore, if the organization keeps the same two facilitators, it will cost $469 to implement. Medicaid reimburses the organization $51.60 per 1.5 hour session per person for group TC therapy. The organization can gain up to $412.80 per person who attends all eight sessions of the program. Also, at least 23 sessions would need to be attended in order to break even and make a profit (see Table 3). Assuming the organization keeps the same two facilitators for the next three years, the organization would only need 10 sessions to be attended per cycle to break even and profit. Table 2 shows how much the organization can profit

or lose based on how many individuals finish the program, assuming the same two facilitators continue to teach the program. Based on the first clinic, there were two participants that started the program and only one of them finished all eight sessions of the program. The organization would need at least two participants to finish the program to make a profit of $311.60 from overall program costs.

Discussion

The first objective of this project was to gather net costs and Medicaid reimbursement rates for the ALAFFS program at the designated CMHO. This objective was accomplished through data collection from receipts of the first clinic and interviews with key stakeholders such as the finance department. The costs, in dollars, allows the organization to visualize how much the program would cost to initiate. Medicaid reimbursement rates of billing tobacco cessation was specific to the designated CMHO. These costs were collected from documents and records provided by the billing department. While Medicare and many private insurances did not cover group sessions, over 90% of the CMHO's patient population were on Medicaid insurance. The profits produced from the program could be utilized towards paying for patients who may not be covered by insurance.

The second objective of this project was to complete a comprehensive budget impact analysis in preparation for the second implementation of the ALAFFS program. The results of the BIA (see table 2) showed that this program has potential for making a profit of up to $311.60 per cycle if at least two participants attend all eight weeks of the program. Using this information can accelerate and facilitate the process of implementation based on how many participants are interested in quitting. While the organization will not make a significant profit from this program, these profits made from the program can be utilized towards covering future

program costs to ensure financial sustainability. Program decision makers can use this cost information in budgeting and allocating funds to get the most out of their resources. Understanding the short- and long-term impact of a TC program for this organization on budget constraints is vital for ensuring program sustainability.

Smokers with SMI are disproportionately affected with higher smoking prevalence compared to smokers with no mental illness. Despite addressing barriers like lack of transportation with bus passes, there are many other factors that contribute to reasons why smokers with SMI have trouble quitting. Having a mental disorder at the time of cessation is a risk factor for relapse to smoking, even for those who have sustained abstinence for more than a. year [29]. Many smokers with mental illness want to quit for the same reasons cited by others (such as health and family), but they may be more vulnerable to relapse related to stress and negative feelings. As a result, it can be difficult for participants to finish the program. However, despite the known limited attendance of SMI smokers in general, the ALAFFS program is still practical without the CMHO losing money.

Limitations

This study had several limitations to acknowledge. First, all the costs assigned to the program were estimated. These costs are subject to change when it comes to training costs and facilitator salaries. Second, this BIA does not incorporate pharmacological costs, which can vary widely depending which tobacco cessation medications patients use. Furthermore, smokers with SMI is a complex phenomenon, and navigating the healthcare system can be challenging for this population. The patient population at this CMHO has frequent no-shows despite addressing issues like lack of transportation. This BIA also did not consider the recidivism by patients as smokers with SMI have higher rates of tobacco addiction. Finally, the ALAFFS program

emphasizes tobacco cessation as part of a group. Currently, there has only been one implementation of the program at the designated CMHO. The COVID-19 pandemic resulted in no group meetings on-site, preventing future clinics.

Conclusion

The importance of high-quality budget impact analyses for accurate budgeting and resource allocation is needed, especially for resource-constrained environments like non-profit CMHOs. This program's BIA provided a simple forecast of future expenses of a newly implemented ALAFFS program for smokers with SMI. Key stakeholders and decision makers can utilize this analysis to decide whether they can afford the program and how to allocate their resources. This project's BIA show that the ALAFFS programming could be a financially sustainable service at the designated CMHO and has the potential to release resources which could be used to cover other program needs.

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Tables

Table 1 Budget Impact Analysis – Freedom From Smoking Program Costs

Service	# Participants	Cost Per-Person	Total Cost
Training for Program	2	$350	$700
RN Salary	1	$26/hr	$156
Social Worker Salary	1	$23/hr	$138
Program Supplies: Snacks & Beverages	-	$80	$80
Workbooks	1	$25	$25
Bus Passes	1	$1.25 (one-way)	$20
Misc. Costs (advertisements, flyers)	-	-	$50
Total			$1,169

Table 2 Costs and Profits of ALAFFS program

Number of Individuals	1	2	3
Implementation Cost	$469	$514	$559
Medicaid Reimbursement	$412.80	$825.60	$1,238.40
Profit	-$56.20	+$311.60	+$679.40

Potential profit gained per cycle depending on how many individuals finishes the program. This table assumes that the program utilizes the same facilitators for the next three years, saving $700.

Table 3 Sessions Needed to Profit

Implementation Costs	Medicaid Reimbursement	Number of Sessions	Profit
$1,169 (initial)	$1,186.80	23	+17.80
$469 (training renewal)	$516	10	+47

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DNP Project Defense

4/20/2021

Grand Valley State University
Kirkhof College of Nursing

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- Advisor: Dianne Slager, DNP, FNP-BC
- Project Team Members:
  - Kathryn Speeter, AGNP, DNP, RN
  - Karen Burritt, PhD, RN, FNP-BC
- Special thanks: Melissa Barnes

Objectives for Presentation

1. To review the clinical practice problem
2. To review the organizational assessment performed
3. To review evidence supporting project
4. To explain project design and methods
5. To discuss project results

Introduction

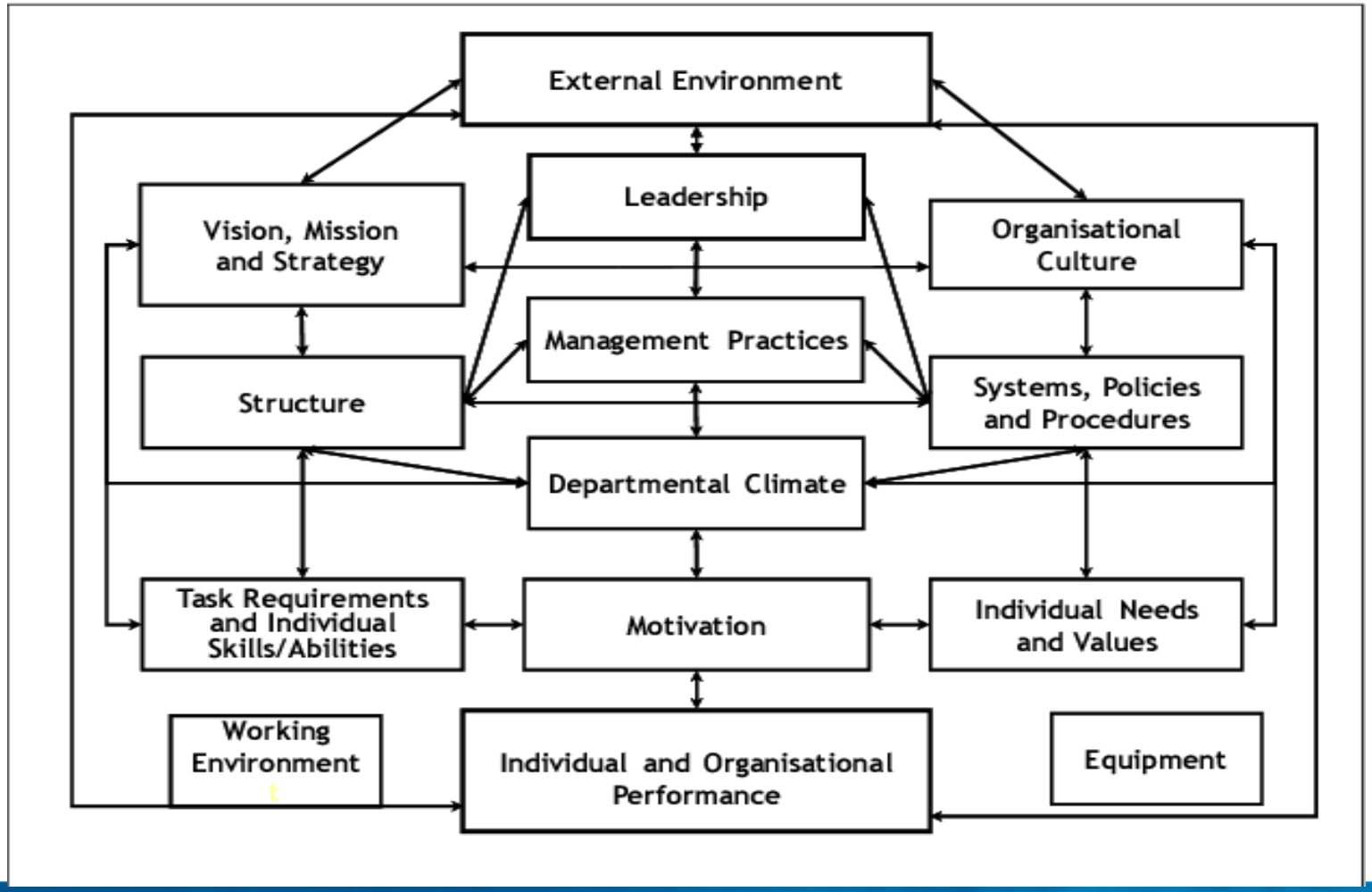
- In the U.S. 34.2 million adults currently smoke tobacco (CDC, 2020)
- Smokers with SMI are disproportionately affected with high smoking prevalence (Prochaska, Das, & Young-Wolff, 2017)
- Barriers include (CDC, 2020; Gilbody et al., 2019; Tidey & Miller, 2015)
  - Providers less likely to address issue of smoking
  - Poverty
  - Unemployment/low income
  - Perception that smokers with SMI are not interested in quitting

Introduction

- Counseling and pharmacotherapy significantly increases their odds of quitting (Prochaska et al., 2017; SAMSHA, 2018)
- Only 39% of mental health treatment facilities in the U.S. provide cessation counseling (SAMHSA , 2018)
- Reasons for discontinuation include lack of funding, reimbursement challenges, enrollment issues (Metse et al., 2019; Prochaska et al., 2017)
- Budget impact analysis can help with financial sustainability of tobacco cessation programs

Organizational Assessment

Burke-Litwin Model



Burke & Litwin (1992)

Current State of the Organization

- External Environment
  - Primary source of funding – Medicare/Medicaid
  - Tobacco tax revenue (Truth initiative, 2019)
  - Affordable Care Act – coverage of tobacco cessation (Hockenberry et al., 2012)
- Financial Structure
  - Fee-for-service model
  - Tobacco cessation services - Medicaid

IRB Approval

- Obtained through GVSU
  - Letter available upon request
- Quality Improvement Project
  - Program Evaluation
- Patient information was protected and student compliant with HIPAA
  - CITI training
  - Organization laptop
- De-identified data collected and stored on organization's drive


Participants of FFS program
Program Team
Billing Department
Site Director and Board of Directors
Key Stakeholders

SWOT Analysis

Strengths

- Medicaid/Medicare funding
- Clearly defined vision, mission, and strategic plan for 2018-2021
- Provider availability to prescribe cessation medications
- Leadership staff is supportive
- Committed and motivated employees
- Functional space of organization
- Staff and client buy-in

Weaknesses

- Limited resources affecting sustainability of program (staffing, finances)
- Recidivism of patients – severity of symptoms

Opportunities

- Grants and incentives
- Partnerships/linkages with other agencies specialized in tobacco cessation
- Patient interest in smoking cessation program
- Billable opportunities

Threats

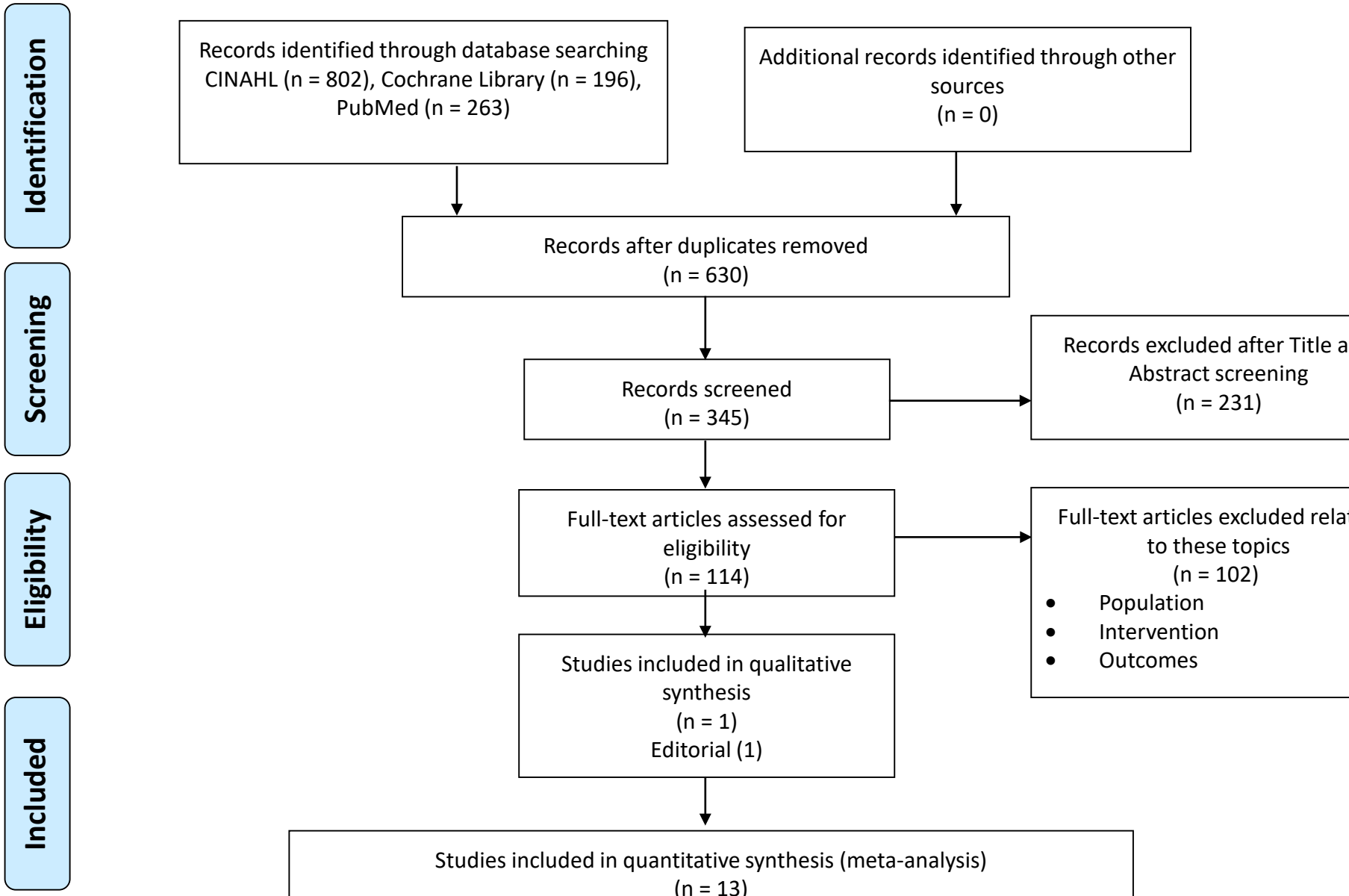
- Recidivism by patients
- Budget and funding constraints
- COVID-19 pandemic – limits groups from meeting onsite

Clinical Practice Question

- Regarding adult smokers with severe mental illness in an urban, Midwestern non-profit CMHO, is the eight-week tobacco cessation program, American Lung Association's Freedom From Smoking (ALAFFS), financially efficacious as evidenced by the budget impact analysis?

Purpose of Review

- Aim:
  - The purpose of this literature review is to examine:
    - Medicare and Medicaid reimbursement issues regarding tobacco cessation
    - Payment models typically used by clinicians
    - Cost-effectiveness of TC programs among smokers with SMI
    - Budget Impact Analyses
  - The literature synthesis could help guide the long-term financial sustainability of the Freedom From Smoking TC program within a community mental health organization.


Identification
Screening
Eligibility
Included
Records identified through database searching CINAHL (n = 802), Cochrane Library (n = 196), PubMed (n = 263)
Additional records identified through other sources (n = 0)
Records after duplicates removed (n = 630)
Records screened (n = 345)
Records excluded after Title and Abstract screening (n = 231)
Full-text articles assessed for eligibility (n = 114)
Full-text articles excluded related to these topics (n = 102)
Population
Intervention
Outcomes
Studies included in qualitative synthesis (n = 1)
Editorial (1)
Studies included in quantitative synthesis (meta-analysis) (n = 13)
Systematic Reviews (2)
Randomized Controlled Trials/Quasi-experimental/cohort studies (6)
Evaluation Study (1)
Case Study (1)
Budget Impact Analysis (3)

Literature Review

Literature Review

- Medicare and Medicaid Reimbursement
  - Improved coverage increases Medicaid enrollees' access to cessation treatment
    - Coverage varies across and within states and plans (Ku et al., 2016)
  - Increase in successful quitters when pharmacotherapy and counseling was covered by Medicaid, Medicare, and commercial plans (Ku et al., 2016)
  - A higher quit rate among newly insured smokers than uninsured (Bailey et al., 2016; DiGuilio et al., 2020)
  - Limited research on effects of coverage expansion

Literature Review

- Payment Models (Mendelson et al., 2017)
  - Fee-for-service
  - Capitation
  - Bundled Payments
  - Pay for Performance
- Limited research on which payment model generates long-term financial sustainability

Literature Review

- Cost-effectiveness of TC programs
  - Overall, TC programs are highly cost-effective (Barnett et al., 2015)
  - Community-based programs can improve TC as well as have low-average cost per quit rate (Reisinger et al., 2019)
  - Few economic evaluations on high-risk groups like SMI

Evidence for Project

- Budget Impact Analyses
  - Provide data (costs) to inform an assessment of affordability
  - Acts as budget tool

- Two recent studies
  - Training program in community mental health facility (Smith et al., 2019)
  - Behavioral program in primary care (Jordan et al., 2019)

Model to Examine Phenomenon: Critical Success Factors

(Critical success factors, 2019)

Critical Success Factors

- Finance
  - Affordable
  - Aligned with strategic map 2018-2021
- Resources
  - Employees
  - Equipment
- Operations
  - Leadership
  - Communication

PROJECT PLAN

Purpose and Project Type

- Purpose:
  - To determine if the ALAFFS program within the designated community mental health organization is affordable and sustainable through a budget impact analysis.
- Project Type:
  - Program Evaluation
- Project Design:
  - Budget Impact Analysis

Objectives

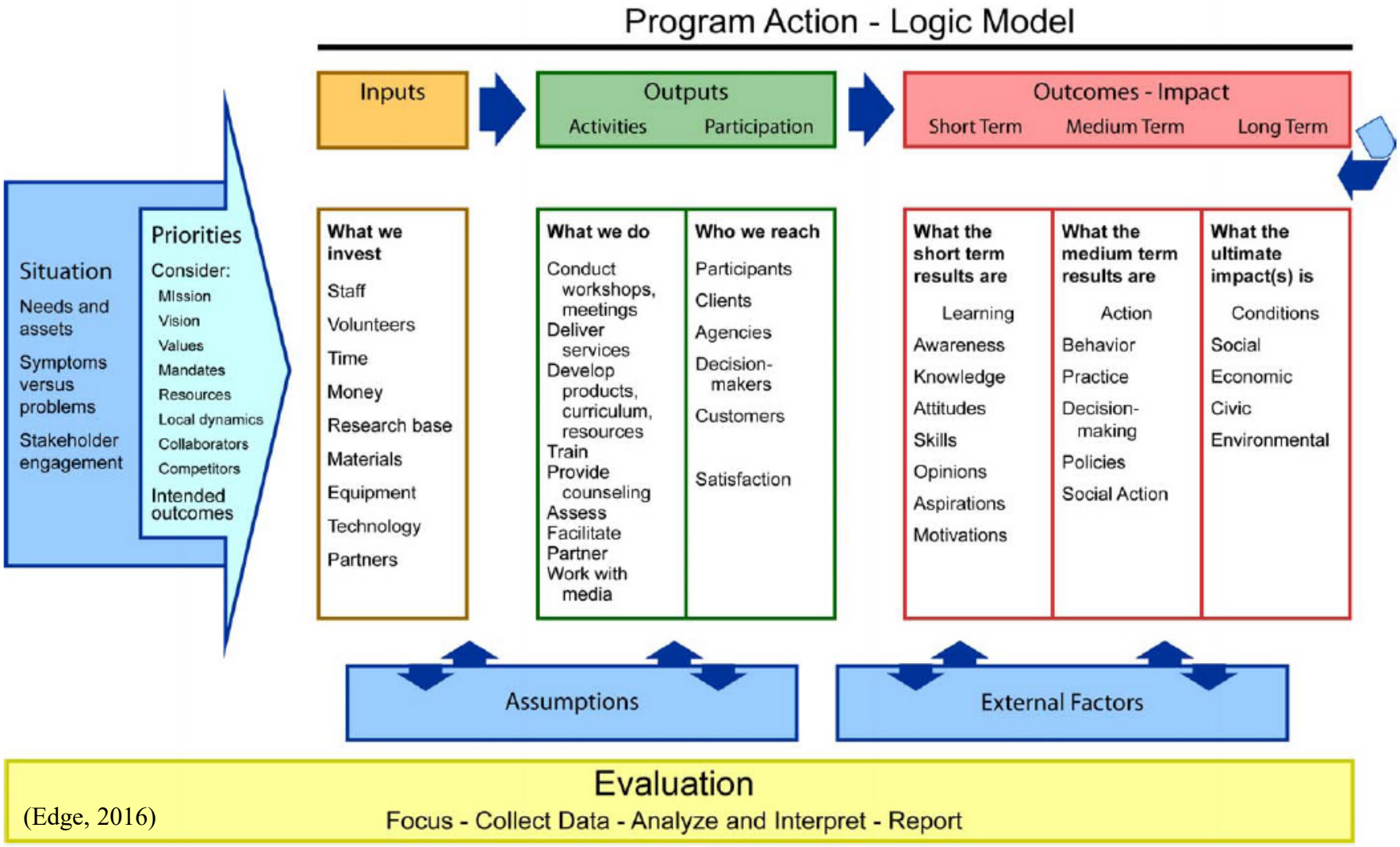
1. To implement and facilitate the second FFS clinic by January 15, 2021.
2. Gather net costs and Medicaid reimbursement rates for the program by November 15, 2020.
3. To complete a comprehensive budget impact analysis for the first and second clinics offered by January 15, 2021.

Methods

- Setting
  - Urban Midwestern, private non-profit community mental health organization

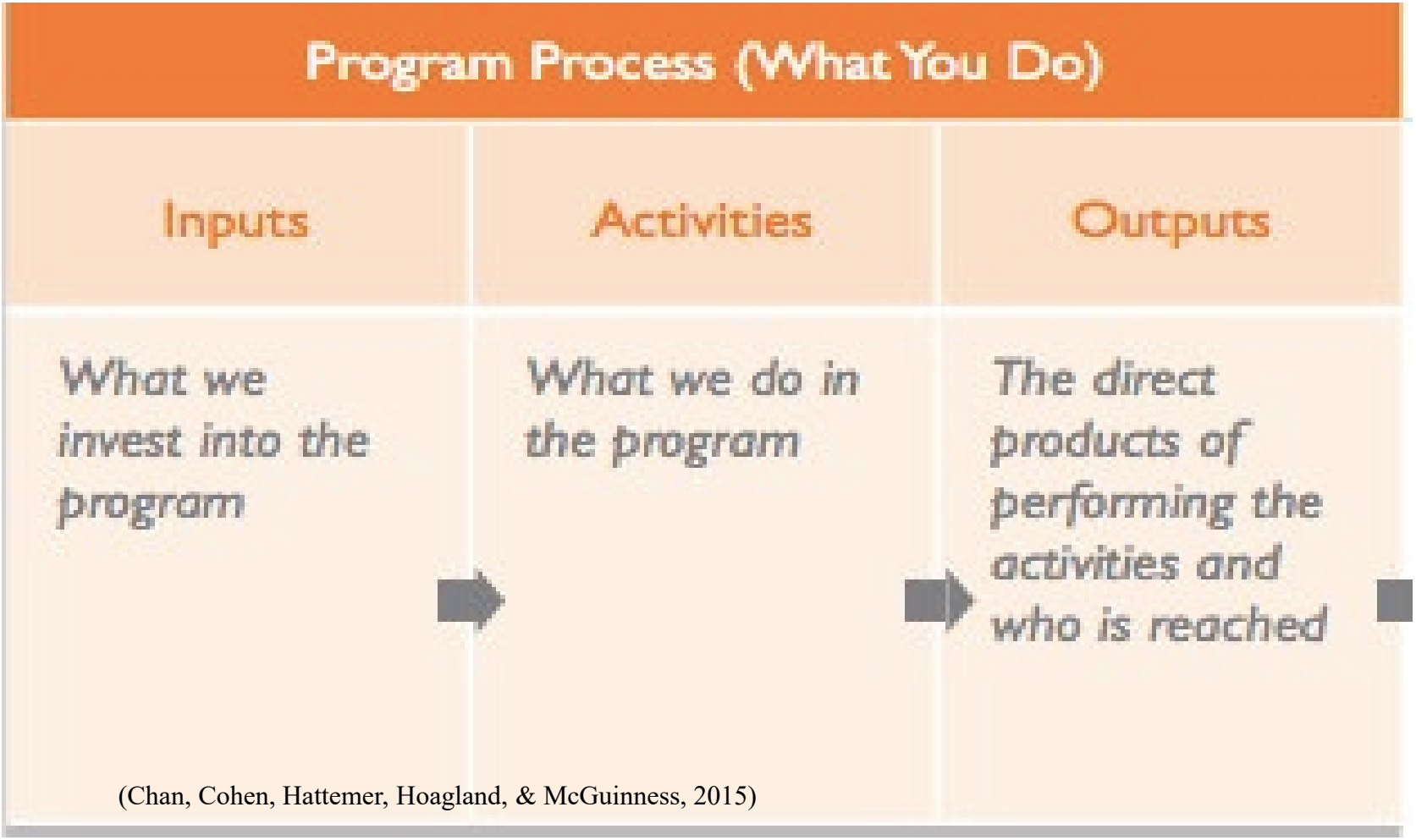
- Project Design (Sullivan et al., 2014)
  - Patient Population
  - Intervention Mix
  - Time Horizon
  - Perspective
  - Analytic Framework
  - Input Data

Implementation Framework: Logic Model



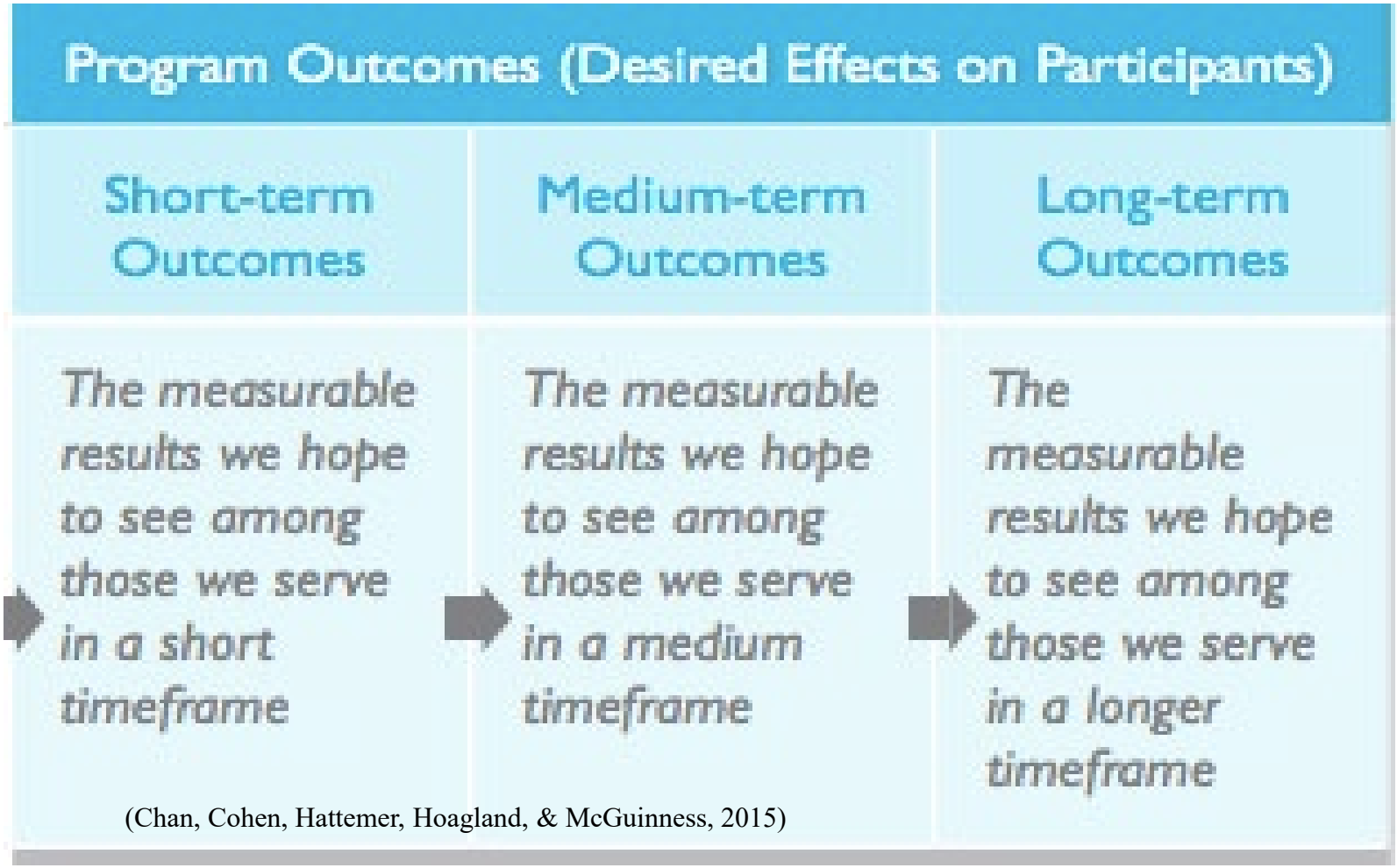
(Edge, 2016)

Logic Model: Program Process



(Chan, Cohen, Hattemer, Hoagland, & McGuinness, 2015)

Logic Model: Program Outcomes



(Chan, Cohen, Hattemer, Hoagland, & McGuinness, 2015)

Implementation Strategies & Elements

- Assess for readiness and identify barriers and facilitators
  - Organizational Assessment
  - SWOT Analysis
  - Key Stakeholder Interviews

- Conduct local needs assessment
  - Program Costs
  - Program Efficiency

(Powell et al., 2015)

Implementation Strategies & Elements

- Patient fees
  - Medicaid coverage for tobacco cessation
- Make billing easier
  - Maximize costs
- Purposely reexamine implementation effort
  - Feedback on program efficiency

Evaluation & Measures

Concept	How Measured	When Measured	Analysis	Who Measures
Program Costs	Interviews/ Receipts	Pre/post program	Cost Analysis	Student; CMHO Billing
Medicaid/ Medicare Reimbursement Rates	Documents/ records	Pre/post program	Comparison	CMHO Billing; student
Attendance	Attendance Form	Weekly	Descriptive Statistics	Student; Trained CMHO Facilitators
Nicotine Dependence	Fagerstrom Test for Nicotine Dependence	Pre/post program	Descriptive Statistics	Student; Trained CMHO Facilitators

Evaluation and Measures

- Tobacco Cessation Efficacy

# of participants attended	
# of sessions attended (out of 8)	

Fagerstrom Test for Nicotine Dependence

	PLEASE TICK (✓) ONE BOX FOR EACH QUESTION	
How soon after waking do you smoke your first cigarette?	Within 5 minutes 5-30 minutes 31-60 minutes	☐ 3 ☐ 2 ☐ 1
Do you find it difficult to refrain from smoking in places where it is forbidden? e.g. Church, Library, etc.	Yes No	☐ 1 ☐ 0
Which cigarette would you hate to give up?	The first in the morning Any other	☐ 1 ☐ 0
How many cigarettes a day do you smoke?	10 or less 11 – 20 21 – 30 31 or more	☐ 0 ☐ 1 ☐ 2 ☐ 3
Do you smoke more frequently in the morning?	Yes No	☐ 1 ☐ 0
Do you smoke even if you are sick in bed most of the day?	Yes No	☐ 1 ☐ 0
	Total Score	
SCORE	1- 2 = low dependence 3-4 = low to mod dependence	5 - 7= moderate dependence 8 + = high dependence

(Heatherton, Kozlowski, & Frecker, 1991)

Evaluation and Measures

- Program Costs

Freedom From Smoking Program Costs			
Service	# participants	Cost Per-Person	Total Cost
Training for Program			
Salary of Facilitators			
Workbooks			
Program Supplies: Snacks and beverages			
Bus Passes			
Supplies and materials (printing/advertisements)			

Evaluation and Measures

- Medicaid/Medicare Reimbursement Rates

Insurance	TC Reimbursement Rate
Medicaid	$51.60 per session
Medicare and Private Insurance	Program not covered

Analysis Plan

- Descriptive Statistics
  - Nicotine Dependence
  - Program Attendance

- Budget Analysis
  - Costs/income
  - Profit

Resources

- People
  - DNP student and advisory team
  - CMHO staff
- Space
  - Functional space of CMHO facilitative of project activities
- Materials and Advertising
  - Program supplies and materials (flyers, snacks)
  - EHR screenings

Clinic Flyer

AMERICAN LUNG ASSOCIATION. | FREEDOM FROM SMOKING®

Join the American Lung Association's eight-week quit smoking program, conveniently held at the Location. Hundreds of thousands of people have become smoke-free through a Freedom From Smoking® Group Clinic which offers a structured, systematic approach to quitting smoking.

Overseen by a certified facilitator, you will learn:

- How to know if you're really ready to quit
- Medications that can increase your success
- Lifestyle changes to make quitting easier
- How to prepare for your quit day
- Coping strategies for managing stress & avoiding weight gain
- How to stay smoke-free for good

Freedom From Smoking Group Quit Program
Wednesday January 15, 2020 at 12:00 p.m.

Contact your designated ACT team to RSVP. Our first session starts on Wednesday, January 15, 2020 at 12:00 p.m. and our last session is on February 26, 2020 at 12:00 p.m.

You *can* quit smoking. We can help.

Timeline

Activity	Previously Completed	2020					2021			
		Aug	Sep	Oct	Nov	Dec	Jan.	Feb	Mar	April
Identification of project site needs	x									
Faculty Advisor approval of project	x									
Project site mentor agreement	x									
Prospectus	x									
Organizational Assessment	x									
Literature Review	x									
IRB Application				x						
Project Proposal Defense					x					
Staff meeting on project program					x					
Pre-program phase		x	x	x	x					
Implement Project						x	x			
Post-implementation Evaluation								x	x	
Final Project Defense										x
Scholar Works										x

Results

Results – Budget Impact Analysis

- Patient Population
  - Adult smokers with severe mental illness
- Intervention Mix
  - American Lung Association Freedom from Smoking program
- Time Horizon
  - 1.5 hour classes once a week for 8 weeks

Results – Budget Impact Analysis

- Perspective
  - Key stakeholders at community mental health organization
- Analytic Framework
  - Cost calculator
    - Deliverable to the CMHO
- Input Data
  - Cost allocation

Results

Freedom From Smoking Program Costs			
Service	# Participants	Cost Per-Person	Total Cost
Training for Program	2	$350	$700
RN Salary	1	$26/hr	$156
Social Worker Salary	1	$23/hr	$138
Program Supplies: Snacks and beverages	-	$80	$80
Workbooks	1	$25	$25
Bus Passes	1	$1.25 (one-way)	$20
Misc. Costs (advertisements, flyers)	-	-	$50
Total			$1,169

Results

- Medicaid/Medicare Reimbursement Rates

Insurance	TC Reimbursement Rate
Medicaid	$51.60 per 1.5 hr session
Medicare and Private Insurance	Program not covered

- Medicaid reimburses $412.80 per person who finishes program

Results

Number of individuals	1	2	3
Implementation Cost	$469	$514	$559
Medicaid Reimbursement	$412.80	$825.60	$1,238.40
Profit	-$56.20	+$311.60	+$679.40

Results

Implementation Costs	Medicaid Reimbursement	Number of Sessions	Profit
$1,169 (initial)	$1,186.80	23	+$17.80
$469 (training renewal)	$516	10	+$47

Resources & Budget

Donated Resources/Savings	
Project Manager Time (in-kind donation)	$3,000.00
Site Director ($75/hr)	$1,125.00
Doctoral-prepared Nurse Practitioner (Site Mentor) ($50/hr)	$1,000.00
Billing Department Time ($20/hr)	$200.00
Statistician	$100.00
Amount Earned Per Participant (Medicaid) (3 participants)	$1,238.40
TOTAL INCOME	**$6,663.40**

Expenses	
Project Manager Time (in-kind donation)	$3,000.00
Site Director ($75/hr)	$1,125.00
Doctoral-prepared Nurse Practitioner (Site Mentor) ($50/hr)	$1,000.00
Billing Department Time ($20/hr)	$200.00
Statistician	$100.00
Equipment (laptop)	$200.00
TOTAL EXPENSES	**$5,625.00**

Net Cost	**$1,038.40**

Discussion

- Assessed cost and affordability of program
- Identifies direct and indirect costs
- Potential for profit for 2 participants
- Future program implementation

Implications for Practice

- Improve Resource Allocation
- Facilitate Reimbursement Decision-making
- Set priorities when resources are limited
- Alternative reimbursement models

Limitations

- Costs are estimates
- Pharmacology costs
- Characteristics of participants
- Second program implementation
- COVID-19 pandemic

Sustainability Plan

- Continued incorporation of CMHO staff members into program activities
  - Training and supervision of designated staff members
- Continued partnership with ALA to ensure program's currency and quality
  - Set aside profits made from program for future programs costs
- Best reimbursement rates to ensure cost-savings
- Utilization of future DNP student or billing department to continue program

Conclusion

- BIA important for economic evaluation
- Affordable
- Simple short-term forecast
- Expensive initially but potential for profit in future

Dissemination

- Presentation with leadership team
- Manuscript will be submitted to Value in Health journal for potential publication
- Manuscript will be submitted to ScholarWorks

DNP Essentials Reflection

DNP Essential	Achieved By
I: Scientific Underpinnings for Practice	Literature review done, using knowledge to support billing practices
II: Organizational and Systems Leadership	Organizational assessment/SWOT analysis done; engaging stakeholders; budget analysis
III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice	Using EBP practices for BIA; evaluation and analysis of collected data/costs
IV: Information Systems/Technology	Use of EHR for data collection; Excel for BIA; dissemination of data on Zoom
V: Advocacy for Health Care Policy in Health Care	Billing & Medicaid/Medicare reimbursements for BIA; MICNP Advocacy Day attendance
VI: Inter-Professional Collaboration for Improving Patient and Population Health Outcomes	Continuous communication with key organization stakeholders – mentor, director, finance department, SW, RN
VII: Clinical Prevention and Population Health	Improving health of SMI population by TC program BIA
VIII: Advanced Nursing Practice	Evidence-based practice; clinical and shadow opportunities with APRNs and physicians

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