ASHLINE

Arizona Smokers' Helpline

Mode of Entry and Quit Outcomes among Tobacco Users Utilizing Quitline Services

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Improving the Health of Arizonans

THE UNIVERSITY OF ARIZONA
MEL AND ENID ZUCKERMAN COLLEGE OF PUBLIC HEALTH

Arizona Smokers' Helpline (ASHLine)

Vision and Mission

MISSION

Breathing vitality into the lives of Arizonans through Inquiry. Innovation. Inspiration

VISION

An Arizona where everyone achieves a healthy lifestyle.

Introduction

- Clinical and real-world effectiveness of quitlines have been well established
- Smokers utilizing quitline services are more likely to make quit attempts and quit than smokers who do not avail of quitlines (Fiore et al., 2008)
- Healthcare provider referral systems can expand quitline reach beyond traditional self-referral models
- Limited data investigating self-referral vs provider referral and quit outcomes are available

Referrals: Mode of Entry

- Proactive Referral - Provider
  - Fax or electronic referral submitted
  - Aligns with brief intervention models (e.g., 5As, AAR)
  - Quitlines reach out to referred clients
- Passive Referral - Provider
  - Less intensive than proactive referrals
  - Providers 'passively' refer clients by sharing quitline brochures or information and encouraging clients to call
  - Clients initiate the contact with the quitline
- Self-referral
  - Clients call the quitline independent of providers
  - Media ads, billboards, online, print, friends, family…

Evidence: Referrals and Quit Outcomes

- Vidrine et al. (2013): Among provider-referred clients, proactively referred clients were more likely to enroll in quitline services than passively referred clients
- Guy et al (2012): Provider-referred clients (both proactively and passively referred) were significantly more likely to quit than self-referred clients
- Long-term quit outcomes not influenced by mode of entry (i.e., self-referred vs. provider-referred) (Song et al., 2014)

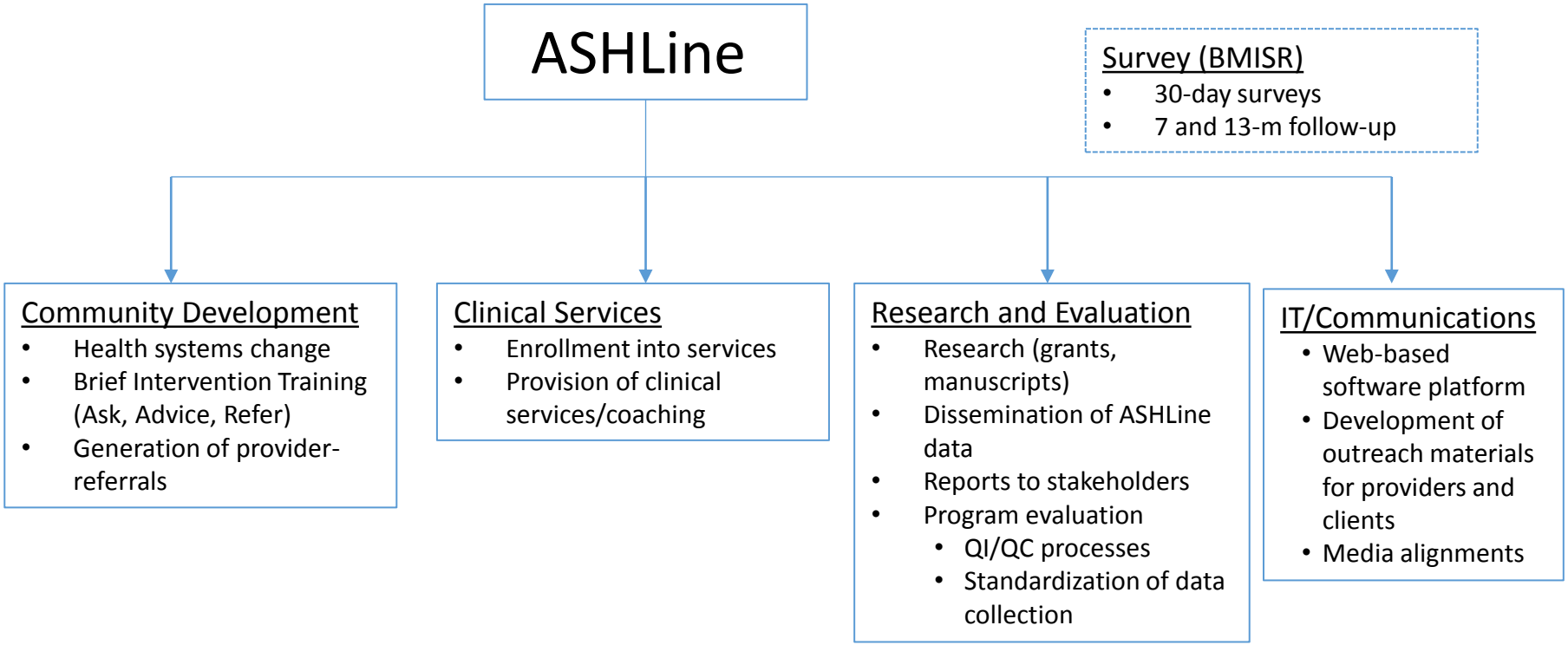
Purpose

- Evidence pertaining to long-term quit outcomes based on mode of quitline entry requires further investigation
- Purpose: to compare quit outcomes among clients enrolled in a quitline across service modes of entry:
    - Provider proactively-referred
    - Provider passively-referred, and
    - Self-referred clients

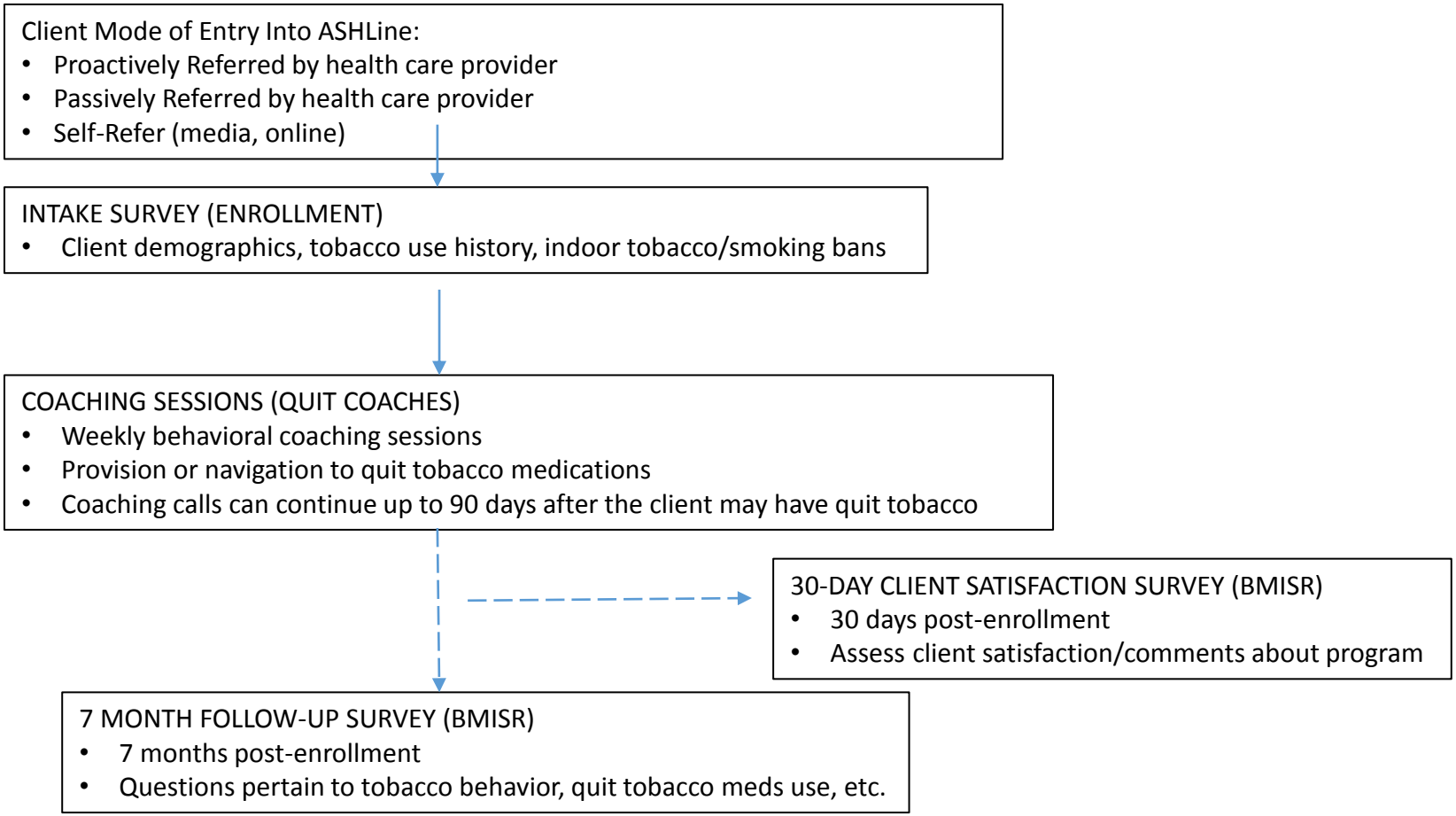
Hypothesis

- Clients proactively referred through their healthcare provider will report greater quit rates at 7-month follow-up as compared to those passively referred or self-referred to the quitline

ASHLine's Organization



ASHLine Client Flow



Analysis Plan

- Descriptives to examine baseline differences across groups
- Direct entry logistic regression to compare quit outcomes across groups (as treated analysis)
- Controlling variables:
    - Age, race, insurance, nicotine dependence, chronic health condition, presence of mental health condition, other smokers in the home, support for quitting

Baseline Characteristics Across Groups (N=18,650)

Characteristic	Self n = 11,934	Passive n = 1768	Proactive n = 4948
Age	51.6 ± 13.7	53.4 ± 13.6	52.1 ± 13.2
Fagerström score	4.8 ± 2.3	5.0 ± 2.3	**4.5 ± 2.3**
Male gender	45%	39.3%	43.3%
High school education or more	**86.6%**	82.5%	79.8%
Insurance type			
Medicaid	16.8%	**29.4%**	**31.5%**
Private	54%	55.7%	49.9%
Uninsured	29.2%	**14.9%**	**18.5%**
Chronic health	55.2%	**69.7%**	**65.1%**
Mental health	35.3%	**46.6%**	**41.2%**
High support for quitting	77.1%	79.9%	75.2%
Smokers at home	47.4%	49.8%	50.4%

Mode of Entry and Med Use at 7-m

Self-reported medication use during current quit attempt

- Proactively referred: 65.7%
- Passively referred: 70.6%
- Self-referred: 76.5%

Self-referred were significantly more likely to use medications to support quit

Mode of Entry and Med Use at 7-m

Mode of Entry	Model 1 OR (95% CI)	Model 2 OR (95% CI)
Self	1.00	1.00
Passive	0.74 (0.65–0.84)	0.88 (0.75–1.04)
Proactive	0.59 (0.54–0.64)	**0.79 (0.70–0.88)**

Model 1: unadjusted (crude model)
Model 2: adjusted for controlling variables

Compared to self and passively-referred clients, proactive clients report a 21% lower use of cessation medication at 7-month follow-up

Mode of Entry and # of coaching sessions

Mean number of coaching session across groups

- Proactively referred: 4.68 (*sd*=5)
- Passively referred: 5.08 (*sd*=5.6)
- Self-referred: 4.71 (*sd*=5.4)

Mode of Entry and # of Coaching Sessions

Mode of Entry	Coaching sessions	Model 1 OR (95% CI)	Model 2 OR (95% CI)
Self		1.00	1.00
Passive			
	0	1.00	1.00
	1–2	1.10 (0.90–1.35)	1.06 (0.81–1.40)
	3–4	1.07 (0.87–1.32)	1.04 (0.78–1.38)
	5+	1.22 (1.00–1.48)	1.12 (0.86–1.47)
Proactive			
	0	1.00	1.00
	1–2	0.78 (0.69–0.88)	0.95 (0.79–1.14)
	3–4	0.70 (0.61–0.79)	0.88 (0.72–1.06)
	5+	0.81 (0.72–0.91)	0.99 (0.83–1.19)

Model 1: unadjusted (crude model)
Model 2: adjusted for controlling variables

No significant differences in # of in-program coaching sessions across groups

Mode of Entry and Quit Outcomes

Quit outcomes across groups

- Proactively referred: 36.8%
- Passively referred: 41.4%
- Self-referred: 41.2%

Mode of Entry and Quit Outcomes

Mode of Entry	Model 1 OR (95% CI)	Model 2 OR (95% CI)
Self	1.00	1.00
Passive	1.01 (0.91–1.12)	1.15 (1.02–1.31)
Proactive	0.83 (0.78–0.89)	0.89 (0.82–0.98)

Model 1: unadjusted (crude model)
Model 2: adjusted for controlling variables

Compared to self-referred clients,

- ***Proactively referred clients are 11% LESS likely to quit***
- ***Passively referred clients are 15% MORE likely to quit***

Associations remain significant even after controlling for medication use

Summary of Findings

- Proactively referred clients, but not passively referred ones, were less likely to self report use of tobacco cessation medication during their quit attempt
- No differences were observed between mode of entry and number of coaching sessions
- Proactively referred clients had lower rates of quitting as compared to passively referred and self-referred clients

Discussion

- Literature suggests clients referred by healthcare providers are different from those who enroll on their own
  - Have greater comorbidities, less health insurance coverage, lower motivation to quit (Song et al., 2014; Willett et al., 2009)
  - Our data show more likely to be insured, more likely to report chronic and mental health conditions and to have smokers within the home
- Results show decreased quit rates compared to self-referred clients - *not* that proactively referred clients do not quit
  - 7m quit rate for proactively referred clients was 36.8%
- Despite lower quit rates, proactive referrals are an effective way for quitlines to enroll clients who otherwise may not have enrolled; these clients may need additional support to quit

What can be done?

- Quit lines should actively develop provider referral programs to complement self-referral
- Studies show that health care providers vary widely in implementation of tobacco treatment models (Gordon et al., 2007)
- Each year, ASHLine receives > 10,000 referrals from > 1500 providers across multiple locations
- Provider training may benefit from care setting-specific training protocols
- Need qualitatively study and evaluate the provider-client communication in relation to tobacco cessation referral process

Next Steps

- ASHLine has a team dedicated to providing AAR training to health care providers across the state
  - Tailored AAR trainings for medical, behavioral health, HIV/AIDS, and GSM-serving partners
  - Only a fraction of referring providers elect to scheduling training each year – thus, a notable percentage of referrals come from providers not directly trained by ASHLine staff
- Explore differences in client outcomes in referrals from providers who have been trained by ASHLine in AAR
- Explore differences in quit outcomes and program utilization services by health care sectors (e.g., behavioral health vs. acute care vs. in-patient facilities)

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Questions?

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