Novel Approaches to Measuring and Addressing the Common Challenges of Implementation and Long-Term Sustainability in SBIRT: ***Alcohol as a Vital Sign***

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International Network on Brief Interventions for Alcohol and Other Drugs – 2018

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Overview

Research to Practice to Research…

The ADVISe RCT → the Alcohol as a Vital Sign "AVS" SBIRT Initiative → studying AVS Outcomes and Sustainability

Our approach for measuring implementation and long-term sustainability

Setting

KP Northern California

- 4 million members, 46% of commercial market share in region
- Diverse membership: race/ethnicity, cultural/linguistic, geographic, SES
- 21 hospitals, 233 medical office buildings
- 67,975 employees, 7,447 active physicians, 700 pediatricians
- Mature EHR
- Integrated system (medical, psychiatry, alcohol and drug treatment services)
- Capitated payment system
- Embedded research

More real-world data on ASBI implementation and sustainability, especially for evaluating long-term sustainability, is critically needed.

Some research on ASBI implementation (Bobb, 2017;Mertens, 2015;Rose, 2016;van Beurden, 2012;Williams, 2011);

Organizational factors identified as critical to successful ASBI implementation include:

- leadership support, flexibility and adaptability, and infrastructure to support monitoring and reporting (Fitzgerald, 2015; Keurhorst, 2015),
- inter-professional practice teams, use of technology to aid implementation, and strong management advocacy (Nunes, 2017),

Other studies have examined obstacles, in particular provider attitudes about ASBI effectiveness and clinical burden (Fitzgerald, 2015)

Most implementation studies are based on small numbers of provider practices and relatively short time-frames (Nilsen, 2006)

Few have examined these factos in conjunction with patient outcomes over time, or factors associated with sustainability.

Few studies of interventions for other kinds of health conditions have examined long-term sustainability (Whitford, 2004;Gundim, 2011) most have only focused on initial implementation and short-term sustainability (Francis, 2016)

How quality and fidelity of alcohol BIs are maintained long-term in real-world clinical practice, and their clinical effectiveness, are critical questions for the alcohol field.

Ideally, ASBI includes: systematic screening with E-B instruments, Brief Intervention, and a referral-to-treatment protocol;

Core elements of brief interventions include:

- open-ended questions, affirmations to build patient's self-efficacy and motivation about goals,
- discussion of drinking amount norms,
- reflective listening using patients' own language,
- practical tips for cutting back or quitting,
- drinking reduction goal setting, and
- a summary of how the patient's overall health goals may benefit from cutting back.

Several of these components have been shown, in controlled trials, to be associated with better patient outcomes. (Kaner, 2018;Whitlock, 2004)

- It is unclear whether the components are sustained in clinical practice, however, as other clinical activities compete with BIs, and training effects may diminish.

Moreover, the extent to which fidelity to these core components is essential for optimal clinical effectiveness remains unexplored (Hall, 2016)

ADVISe Alcohol SBIRT Trial
(Mertens R01AA018660)

- Cluster-randomized implementation trial
- 54 Primary Care Clinics
- 11 Medical Centers
- 639,613 patients with visits
- 556 primary care providers

Alcohol as a Vital Sign (AVS) Alcohol SBIRT Initiative

- Region-wide implementation of alcohol SBIRT in Kaiser Permanente Northern California adult primary care
- 21 Medical Centers
- ~4 million members
- ~9,000 active physicians

AVS Implementation, Sustainability and Patient Outcomes

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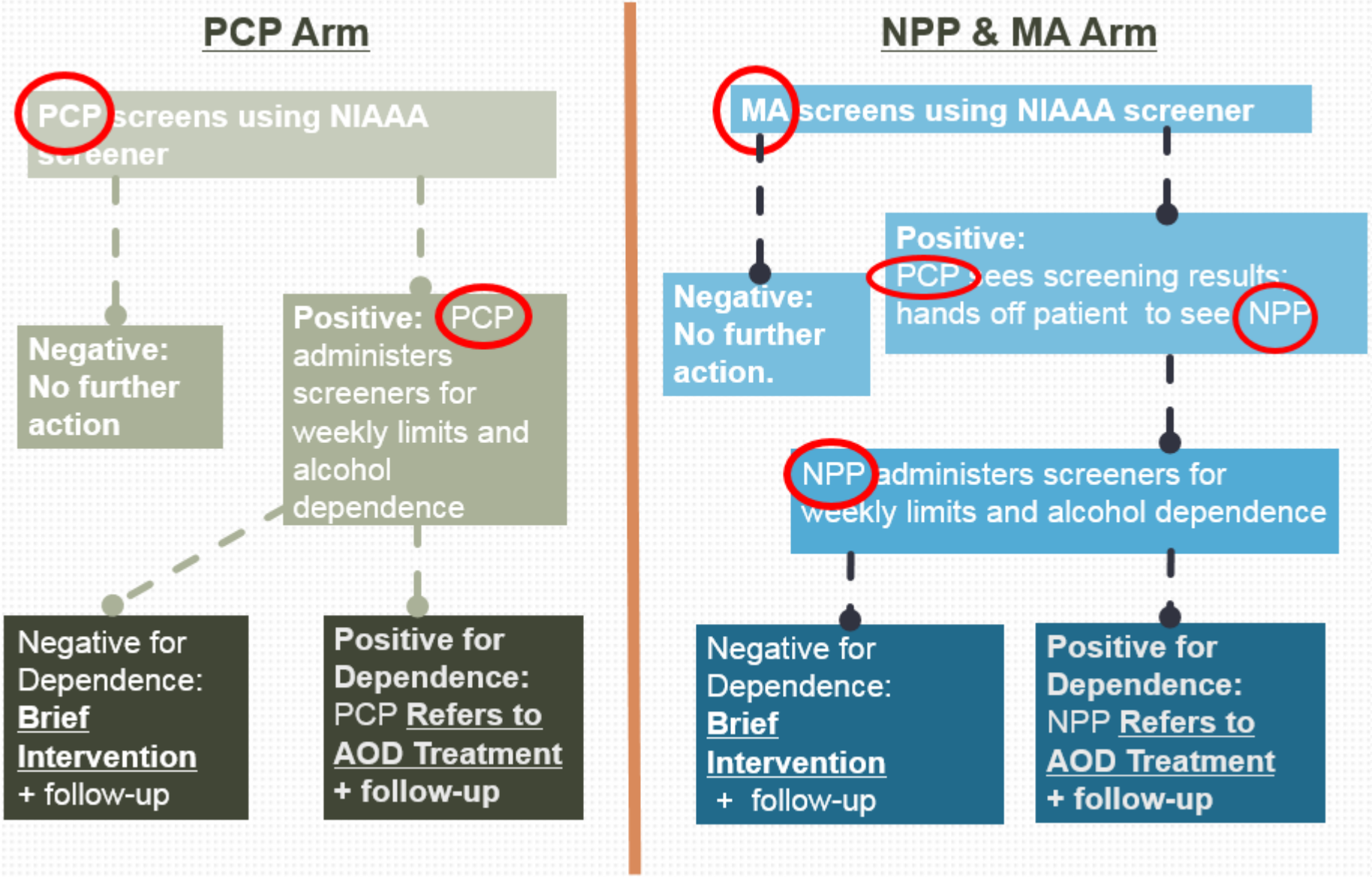
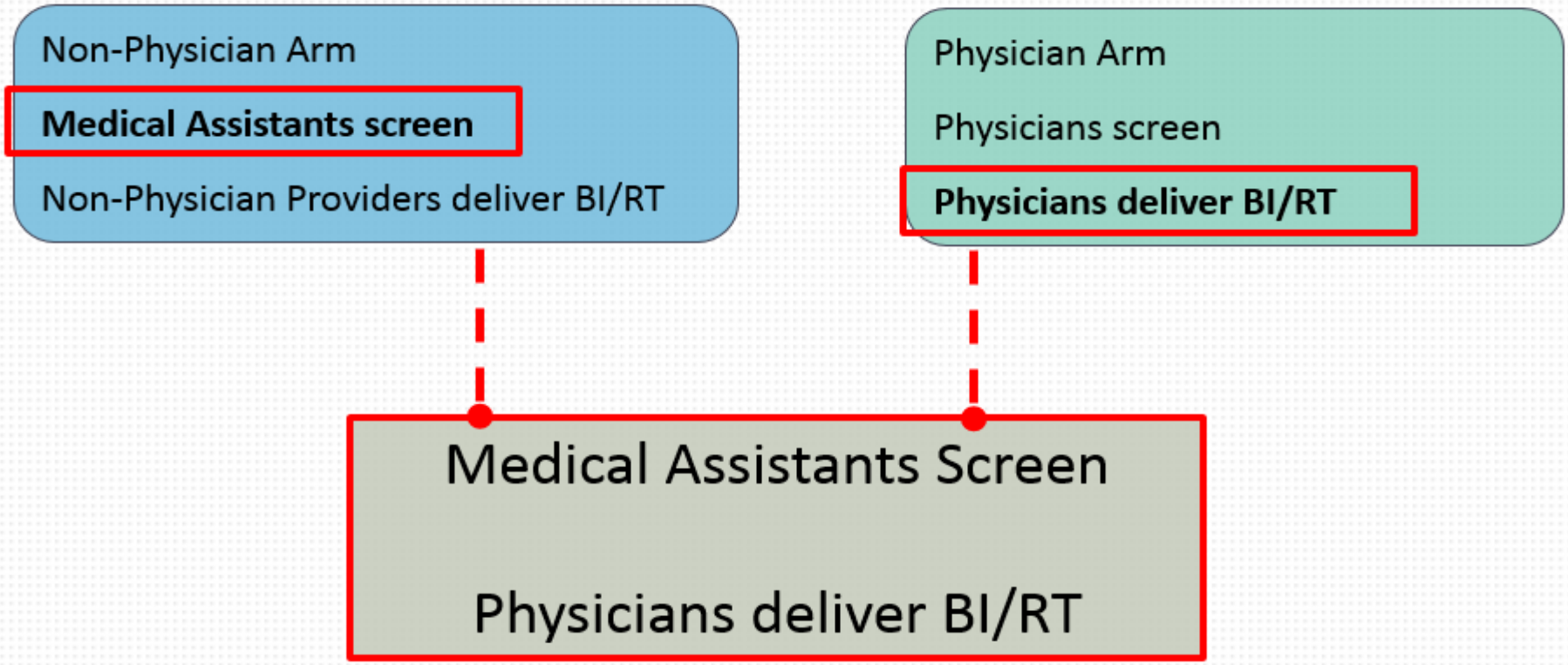
Workflows of the original ADVISe Trial



Percentage Screened and Given BI by Study Arm in Year 1 in ADVISe Trial

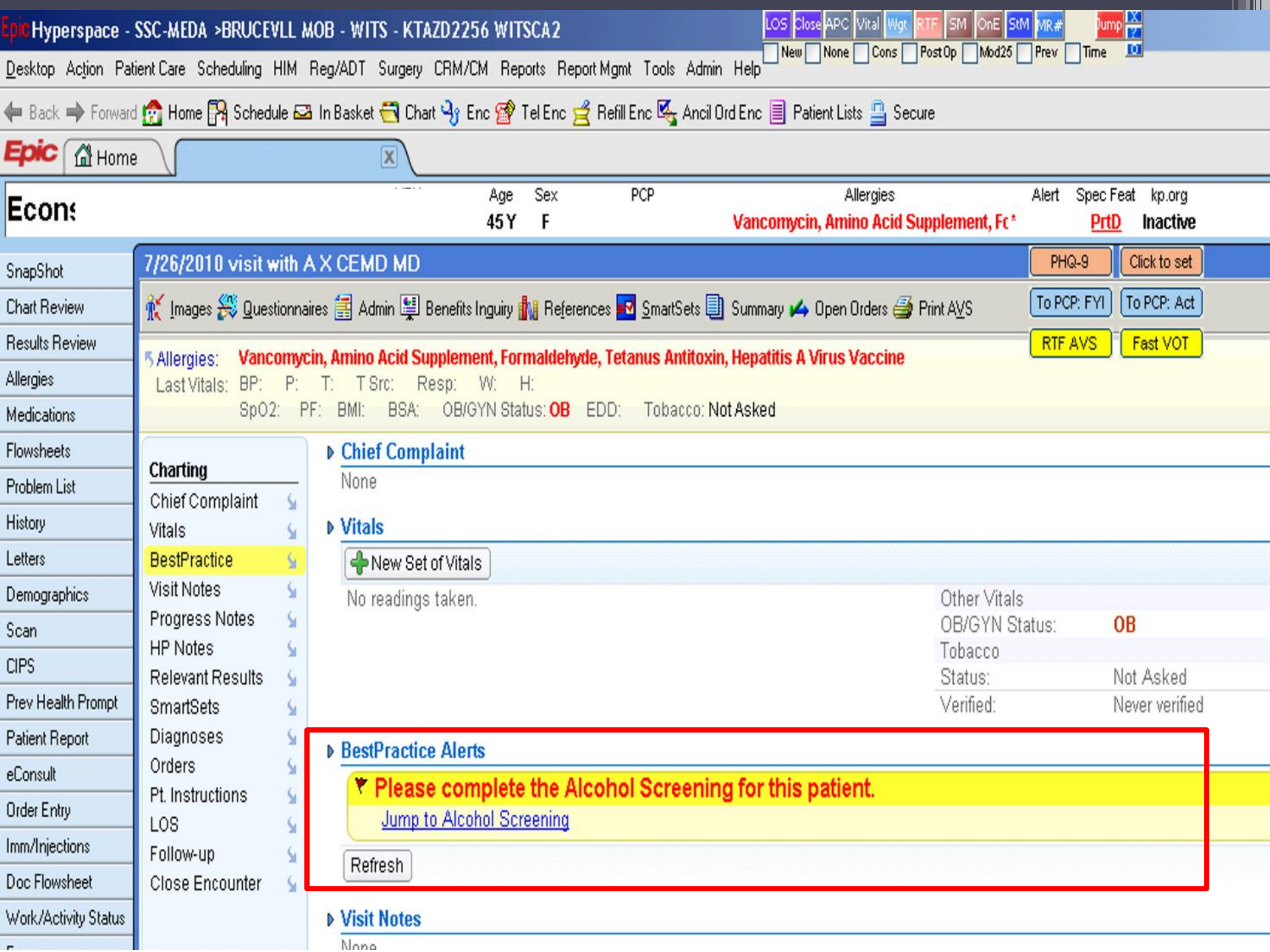
	PCP Arm	NPP Arm	Control
% Screened	14.7%	64.6%	5.9%
% Given Brief Intervention / Referral (among positive screens)	44.4%	3.4%	2.7%

Hybrid model adopted for region-wide implementation



Consistent with system workflow for other screening initiatives

Took advantage of Medical Assistant Rooming Tool overhaul


Epic Hyperspace - SSC-MEDA >BRUCEVLL MOB - WITS - KTAZD2256 WITSCA2
LOS Close APC Vital Wgt RTF SM OnE StM MR# Jump
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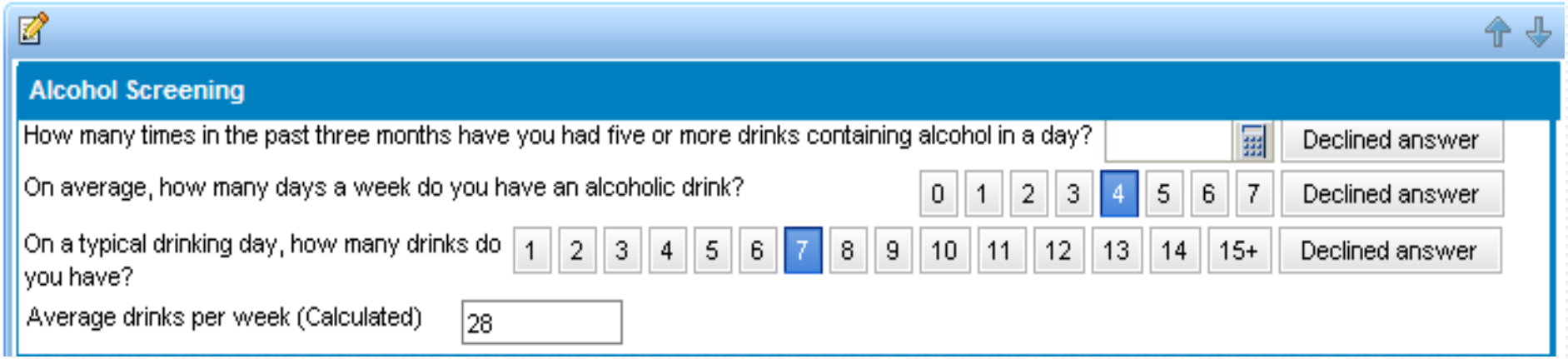
Last Vitals: BP: P: T: T Src: Resp: W: H:
SpO2: PF: BMI: BSA: OB/GYN Status: OB EDD: Tobacco: Not Asked
Charting
Chief Complaint
Vitals
BestPractice
Visit Notes
Progress Notes
HP Notes
Relevant Results
SmartSets
Diagnoses
Orders
Pt. Instructions
LOS
Follow-up
Close Encounter
Chief Complaint
None
Vitals
New Set of Vitals
No readings taken.
Other Vitals
OB/GYN Status: OB
Tobacco
Status: Not Asked
Verified: Never verified
BestPractice Alerts
Please complete the Alcohol Screening for this patient.
Jump to Alcohol Screening
Refresh
Visit Notes
None

Alcohol as a Vital Sign Questions in KPHC "MA Rooming Tool"



NIAAA Single-item screening item
(4+/5+ drinks per day, tailored to age and gender)

+ daily and weekly quantity/frequency

Best Practice Alert

Screening results

Decision support

Assessment tools

Patient had 4+ drinks/day 7 time in past 3 months, which exceeds the daily low-risk limit: no more than 3 drinks on any one day (women/older adults or men aged 18-65).

Patient typically has 20 drinks a week which exceeds weekly low-risk limits: no more than 7 per week.

Patient has screened positive for Unhealthy Alcohol Use. Provide Brief Advice to "Cut Back." and code "Counseling, Alcohol prevention".

Ask questions to screen for Alcohol Dependence (see more info below).

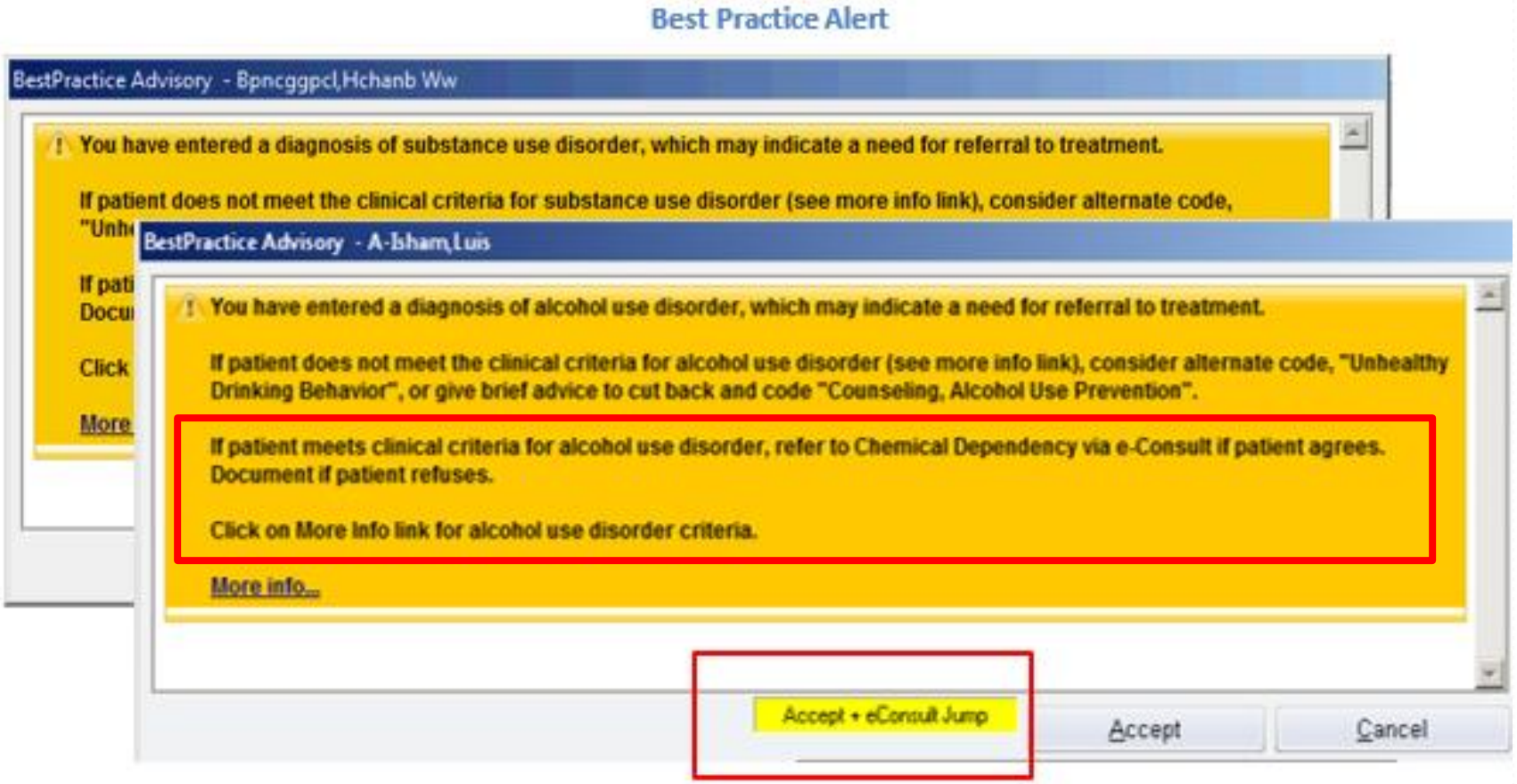
>>If positive to either question, refer to CD services if patient agrees and code "Monitoring, Alcohol Use and Abuse"; document if referral refused.

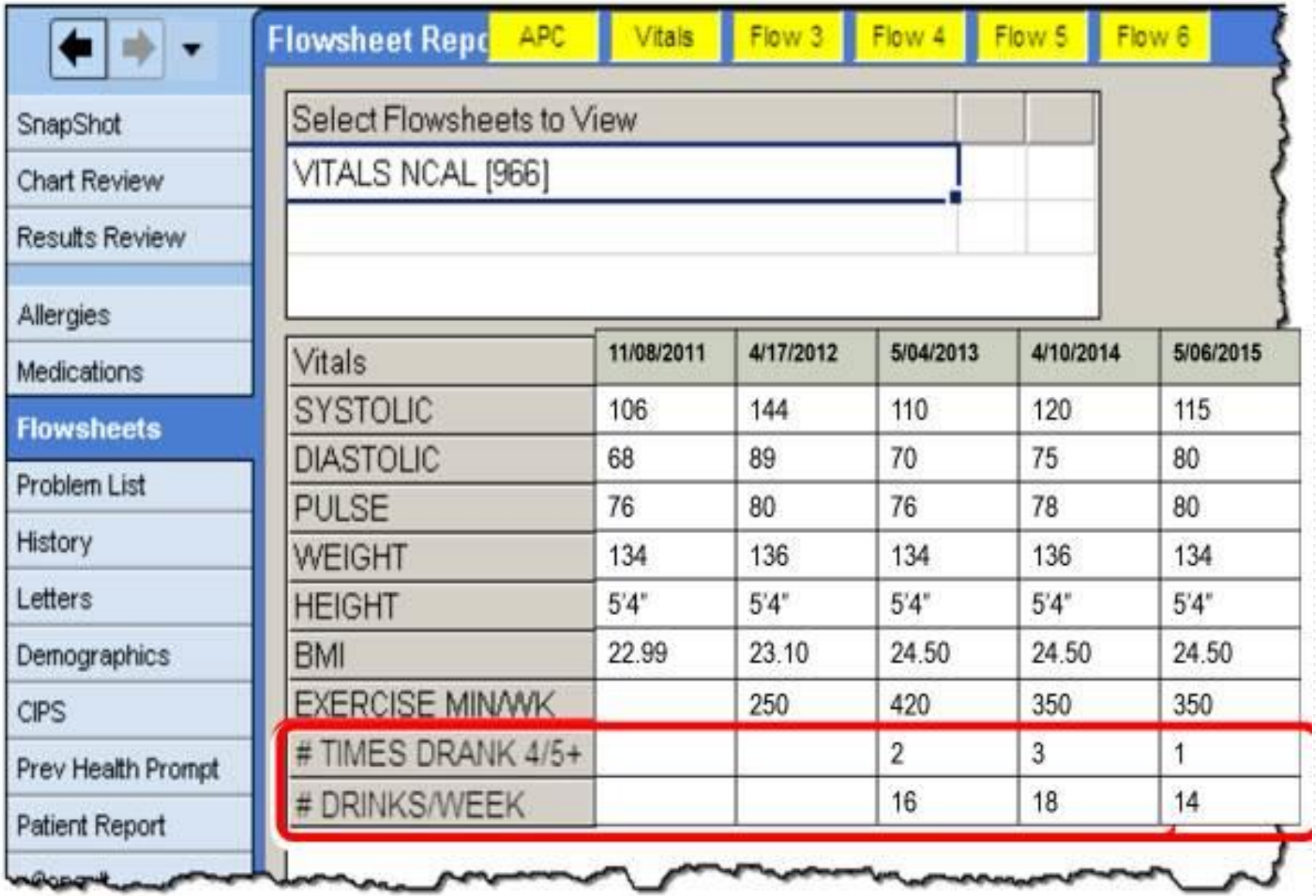
[Note: Alcohol Dependence screening indicates possible dependence but does not confer a diagnosis.]

Alcohol Dependence Screening Questions:

1. In the past year, have you sometimes been under the influence of alcohol in situations where you could have caused an accident or gotten hurt?
2. Have there often been times when you had a lot more to drink than you intended to have?

Actionable BPA and electronic consult integration





Vitals	11/08/2011	4/17/2012	5/04/2013	4/10/2014	5/06/2015
SYSTOLIC	106	144	110	120	115
DIASTOLIC	68	89	70	75	80
PULSE	76	80	76	78	80
WEIGHT	134	136	134	136	134
HEIGHT	5'4"	5'4"	5'4"	5'4"	5'4"
BMI	22.99	23.10	24.50	24.50	24.50
EXERCISE MIN/WK		250	420	350	350
# TIMES DRANK 4/5+			2	3	1
# DRINKS/WEEK			16	18	14

Percentage Screened and Given BI by Study Arm in Year 1 in ADVISe Trial vs. Regional Implementation Since June of 2013

	PCP Arm	NPP Arm	Control	Regional Targets	Current Regional Performance
% Screened	14.7%	64.6%	5.8%	90%	**89%**
% Given Brief Interventions among Positive Screens	44.4%	3.4%	2.7%	80%	**65%**

Alcohol as a Vital Sign (AVS): June 2013 – July, 2018, cumulative

- Unique Patients:
  - Unique patients screened (with at least 1 office visit) = **3,660,653**
  - Unique patients screening positive = **5,571,573** (15%)
  - Unique patients receiving brief intervention = **364,927**

- Total Patients, Including Repeats:
  - Total number of screenings = **8,462,023**
  - Total patients screening positive = **843,342** (10%)
  - Total number of brief interventions = **517,648**

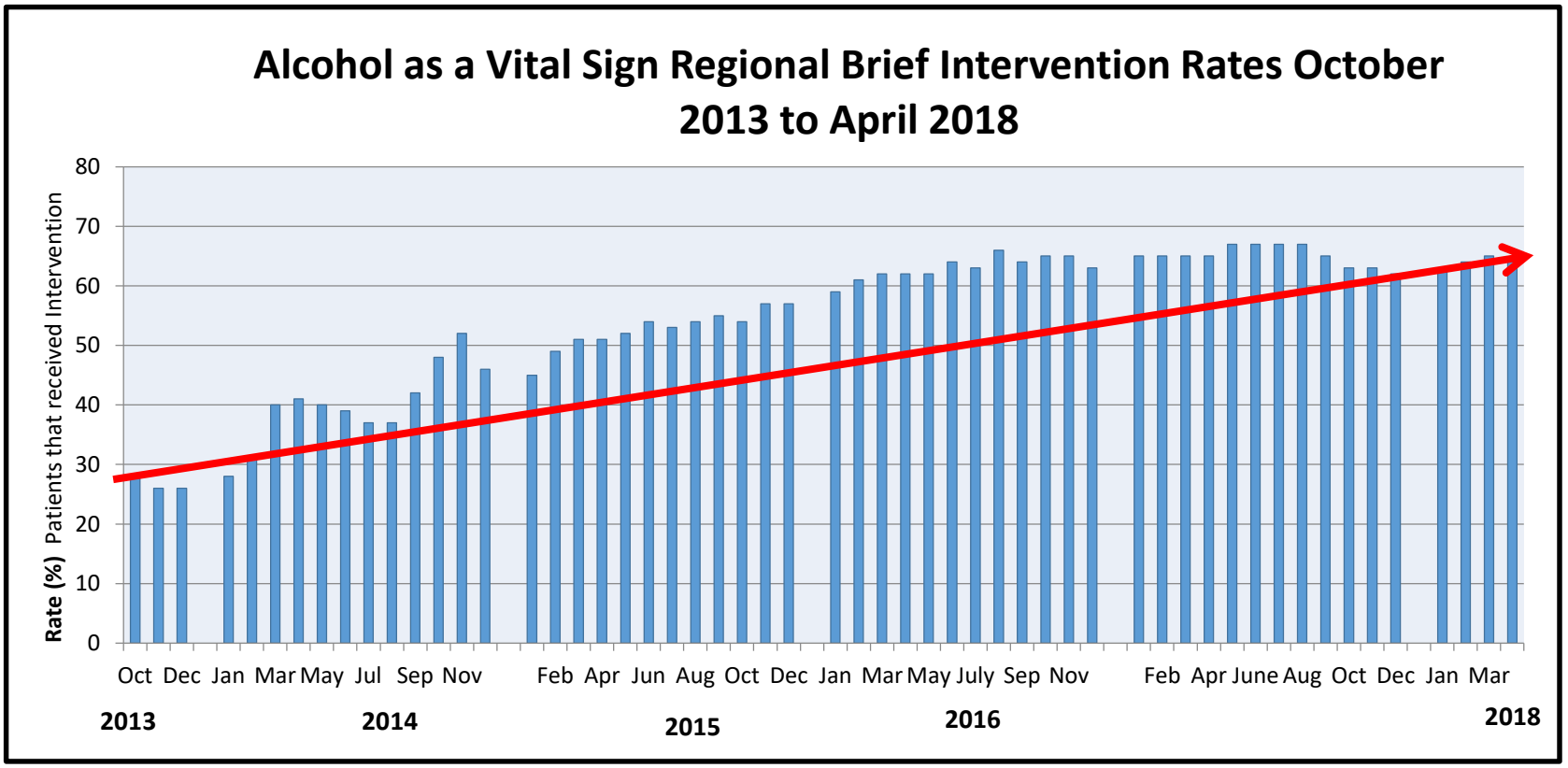
Alcohol SBIRT Implementation Framework

- **Leadership support**
- **Multi-disciplinary Stakeholder Involvement: AVS Strategy Team –** Research, Primary Care, Chemical Dependency, Regional Mental Health - Regular calls
- **Implementation Facilitator role & Technical Assistance:** troubleshooting and consultation, in-person, by phone and email
- **AVS Team – Alcohol Education Champions:** (Primary Care) & **CD Liaisons** (Alcohol and Drug Treatment) at each medical facility – Regular collaborative calls
- **Electronic Health Record**

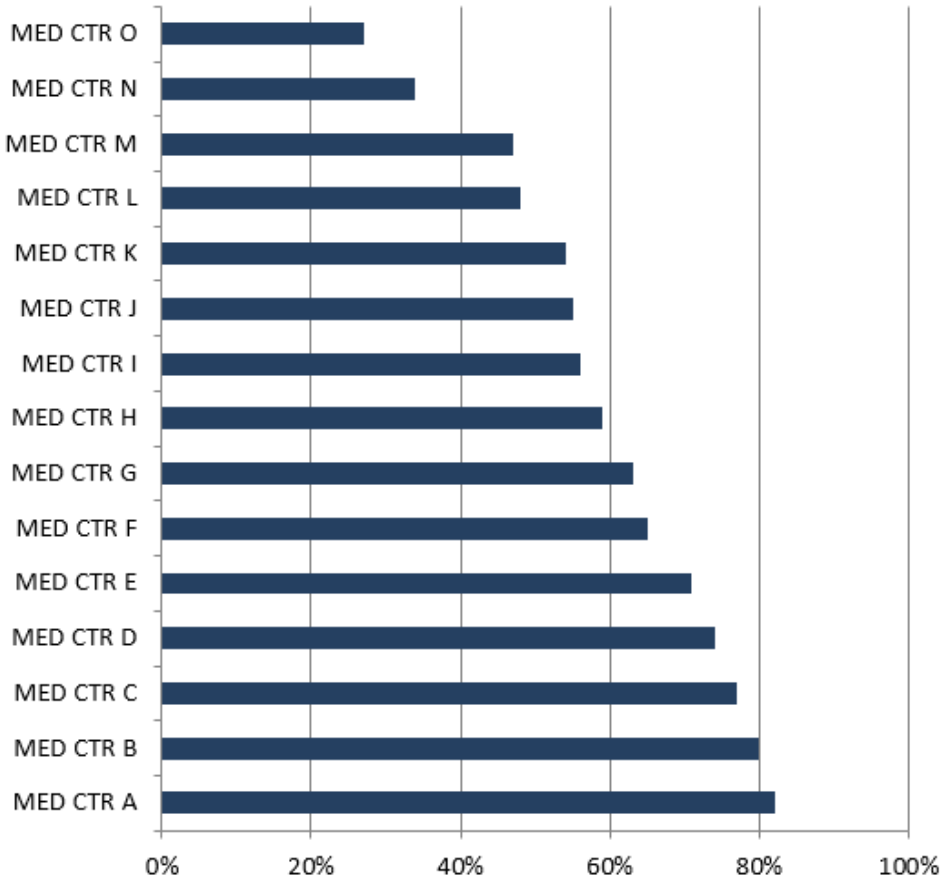
Alcohol SBIRT Implementation Framework

- **Training on evidence-based intervention:** Adapted from the "Alcohol Clinical Training" from ADVISe (*Saitz, Alford*) - skills-based role-play, case study videos
- "Train the Trainers": Local Trainers → 2-hours for PCPs, 1-hour for MAs
- Onboarding: new physicians, MAs (MAPP Univ), Champions
- **Performance Feedback:** monthly, unblinded, to Medicine Chiefs, MA Managers, Health System Leaders
- **Timely access to data:** Partnership with operational analytics (QOS)
- **Marketing & Communications:** Wiki, Training materials for PCPs and MAs, Patient-facing materials

Brief Intervention Rates Among Those Screened Positive, over time



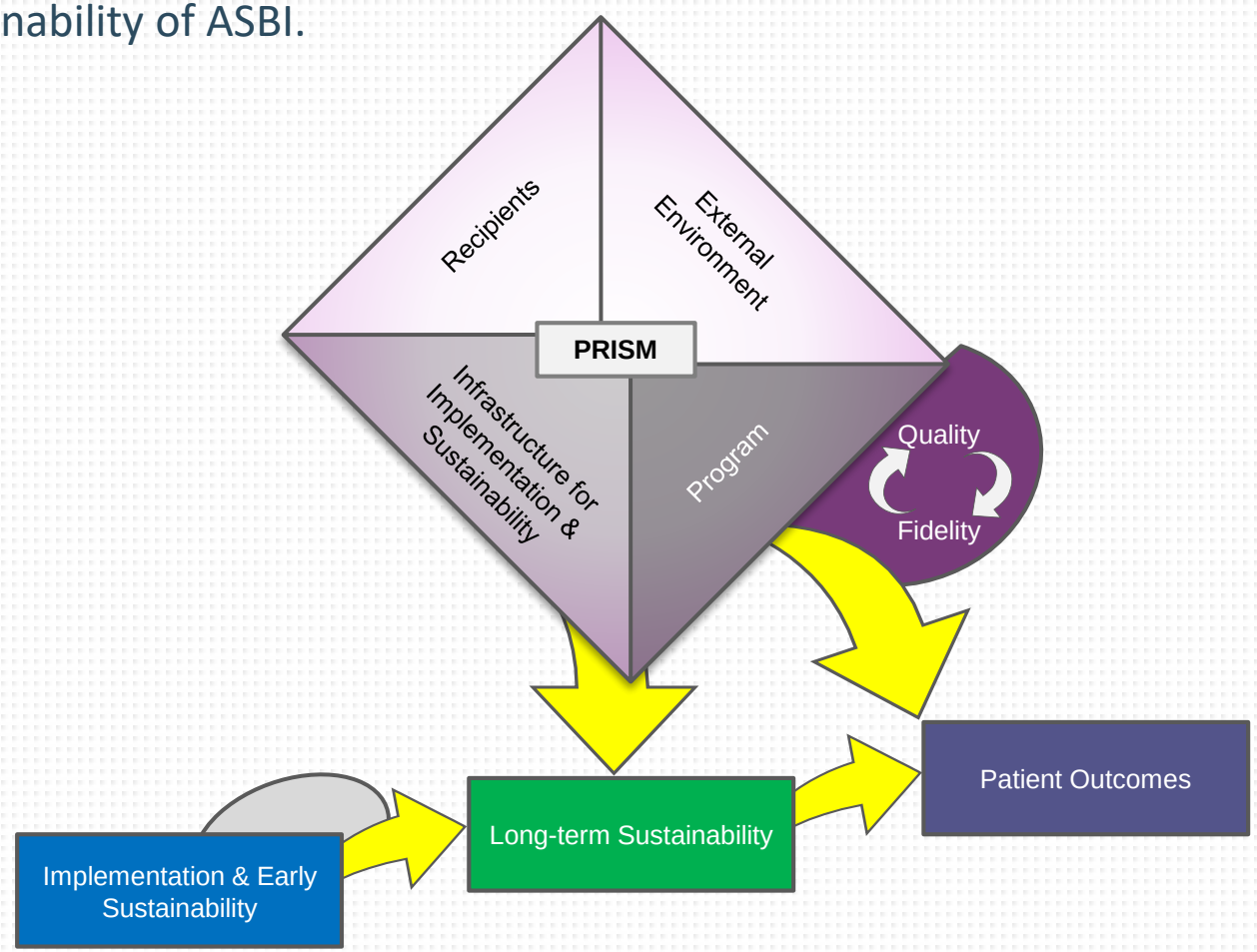
Variability in Brief Intervention Rates by Medical Center



JANUARY 2018 - VARIATION IN BRIEF INTERVENTION RATES BY MEDICAL CENTER

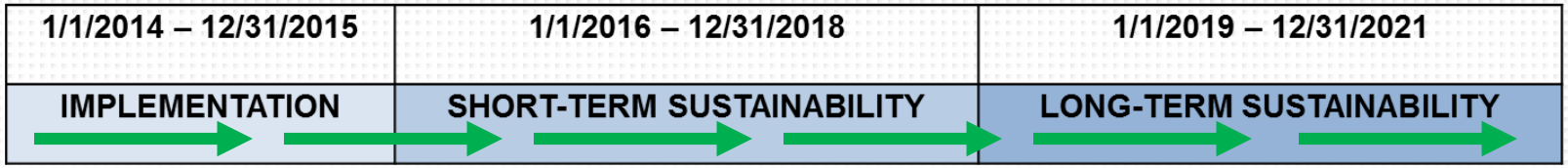
The **PRISM** (Practical, Robust Implementation and Sustainability Model) conceptual framework organizes factors influencing implementation into several domains - **Intervention**, **External Environment**, **Implementation Infrastructure**, and **Recipients**

We will use **PRISM** domain elements to enhance our understanding of implementation and long-term sustainability of ASBI.



Guided by the PRISM domains, we will examine:

- Implementation, short-term sustainability and long-term sustainability outcomes (screening and brief intervention rates);



- Patient outcomes (heavy drinking days and typical drinking quantity and frequency, health services utilization and costs); and

- Fidelity and quality of brief interventions.

Approach

- **Electronic Health Record** data from all adults w/primary care visit between 1/1/2014 and 12/31/2021, (n~3,883,446).
- **Physician Survey**. Online survey of all primary care physicians to assess perspectives on implementation process and sustainability, and to measure self-reported BI fidelity (n~1,000).
- **Qualitative Key Informant Interviews.** Semi-structured interviews with key informants at all 27 medical center exploring their AVS implementation experience and barriers and facilitators of implementation and ongoing sustainability.
- **Patient Telephone Interviews to assess BI fidelity and quality.** 30 primary care patients who received a BI in past month, from each medical center (n~450
- **Utilization and Cost Data.** Automated cost data capturing fully allocated costs by medical center, patient and service type.

Questions?

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