

Patient Readiness and Confidence to Change Substance Use in Primary and Emergency Care Settings

A BRIEF REPORT PREPARED BY OMNI INSTITUTE FOR SBIRT COLORADO, SEPTEMBER 2016

Substance abuse is a public health concern that poses considerable economic and social burden. As one method to intervene early and reduce problematic use before it escalates, the US Preventive Services Task Force recommends alcohol screening and brief counseling interventions in primary care.ⁱ During brief counseling, patients' motivation to change is a key consideration that clinicians use to provide effective interventions. Understanding where patients are in the change process can help clinicians tailor interventions to set realistic goals.ⁱⁱ Increased readiness in and of itself is considered a positive outcome in the change process,ⁱⁱⁱ and it is hypothesized to lead to behavioral changes. However, literature on the readiness to change (RTC) of patients who screened positive for substance use in healthcare settings is limited.

UNDERSTANDING PATIENTS' MOTIVATION TO CHANGE CAN HELP CLINICIANS TAILOR INTERVENTIONS TO SET REALISTIC GOALS

Thus, the current study sought to answer the following evaluation questions:

1. How ready and how confident are patients to change substance use after screening positive for unhealthy use in healthcare settings? How do levels of readiness and confidence differ by substance?
2. What factors predict higher readiness and higher confidence (i.e., gender, age, location of screening, and severity of use)? Do predictors of readiness and confidence differ by substance?

METHODS

Colorado implements screening, brief intervention, and referral to treatment (SBIRT). Through the SBIRT initiative, patients are screened for unhealthy patterns of substance use in primary and emergency care settings. Grant-funded sites use a brief screen to identify patients who may be engaging in unhealthy substance use, and when a brief screen is positive, health educators administer the ASSIST^{iv} tool to identify the degree to which patients are engaging in risky use across 10 substance categories. When the process yields a positive screen,^v health educators provide brief interventions and/or referrals to additional services as needed. Screening data are entered into an online, centralized data system.

In February of 2014, health educators began tracking patient readiness and confidence to change using a readiness ruler. When patients screened positive for unhealthy use, health educators asked patients to indicate how ready and how confident they were to make a change on a scale from 0 (not at all) to 10 (extremely). Responses were used to help guide the brief intervention (e.g., "why did you choose that number rather than a higher/lower number?").

When patients screened positive for a single substance (excluding tobacco^{vi}), health educators administered the readiness and confidence rules about the substance for which they screened positive. When patients screened positive for multiple substances, health educators asked patients to choose one substance and administered the readiness and confidence rulers for the selected substance. Below is a screen shot of the alcohol readiness and confidence rulers.

3. Right now, how ready are you to make a change in your use of Alcohol ?

Not at all Extremely

0 1 2 3 4 5 6 7 8 9 10

Refused
 Don't know

4. Right now, how confident are you that you can make a change in your use of Alcohol ?

Not at all Extremely

0 1 2 3 4 5 6 7 8 9 10

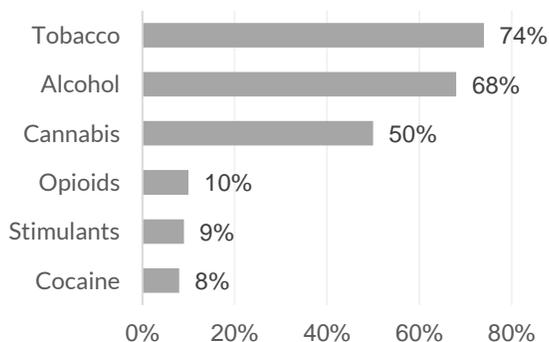
Refused
 Don't know

STUDY SAMPLE

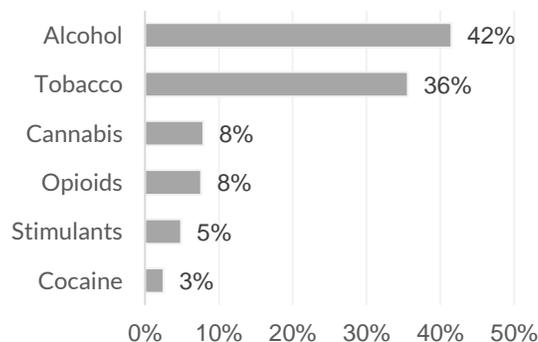
During the two-year, four-month study window (February 1, 2014 to August 1, 2016), 38,589 patients were screened and 14,009 (36.3%) screened positive for unhealthy use of alcohol, cannabis or an illegal drug. The readiness and confidence rulers were administered to 5,143 individuals (36.7% of positive screens). Of the 5,143 individuals screened:

- 62% were male; 38% were female. The average age was 40 and ranged from 18-92.
- 61% were screened in emergency care; 39% were screened in primary care.
- 47% identified as White, 33% identified as Hispanic/Latino; 14% identified as Black.^{vii}
- Excluding tobacco, 64% screened positive for one substance, 28% for two, and 9% for three or more.^{viii}

PATIENTS SCREENED POSITIVE FOR:



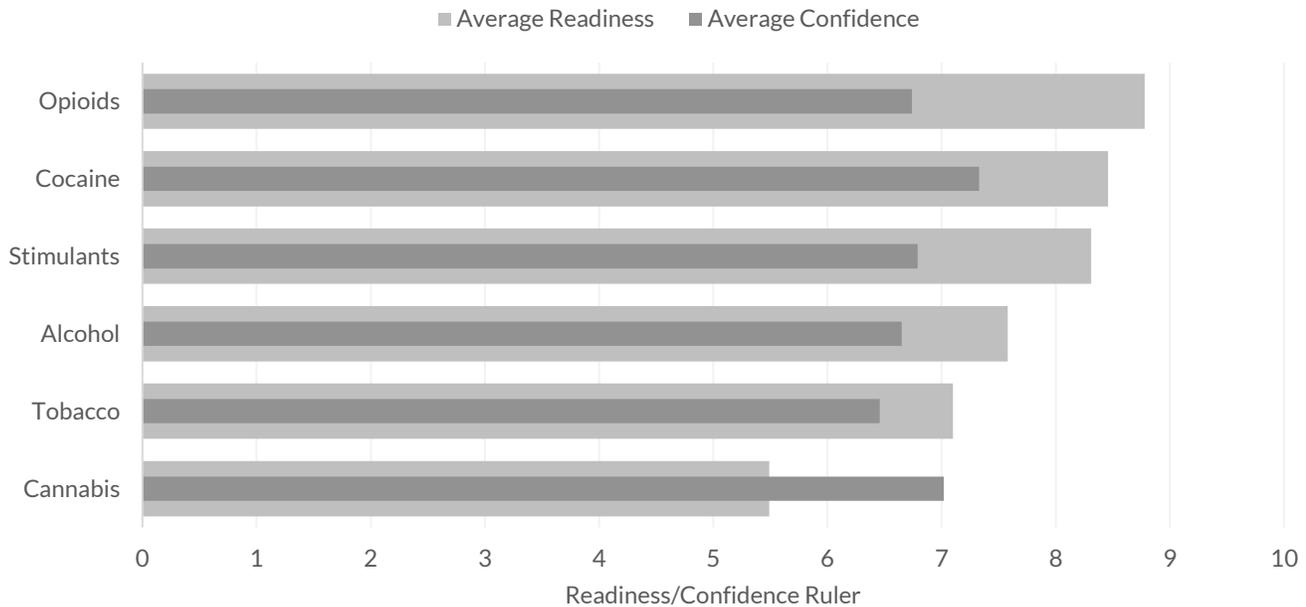
PATIENTS FOCUSED ON:



FINDINGS

On a scale from 0 to 10, patient readiness averaged from 8.78 (for opioids) to 5.49 (for cannabis) and patient confidence averaged from 7.33 (for cocaine) to 6.46 (for tobacco). In general, individuals who focused on opioids, cocaine and stimulants had higher readiness to change than individuals who focused on alcohol or tobacco. Patient readiness to change was lowest for cannabis use. Except for cannabis, patients were more ready than confident that they could make a change. For cannabis, patients were more confident than ready to change.

EXCEPT FOR CANNABIS, INDIVIDUALS ARE MORE READY THAN CONFIDENT TO MAKE A CHANGE.



Note. Sample sizes for each substance for readiness and confidence, respectively, are as follows: opioids, n=388, 365; cocaine, n=127, 120; stimulants, n=251, 245; alcohol, n=2117, 2040; tobacco, n=1818, 1681; and cannabis, n=401, 379.

PREDICTORS OF READINESS AND CONFIDENCE VARIED BY SUBSTANCE

Multiple regression analyses were conducted to identify significant predictors of readiness and confidence. Separate models were run for each substance for each outcome (i.e., readiness and confidence). The table on the next page presents the significant predictors of readiness and confidence by substance. In general, findings highlight the following:

- Younger individuals were more ready and confident to change tobacco, alcohol, and cannabis use.
- Individuals with more severe use were more ready to change tobacco, alcohol, cannabis, and cocaine use.
- Individuals with more severe use were less confident to change alcohol, opioid, and stimulant use.
- Individuals screened in primary care were more confident to change tobacco, alcohol, opioid and stimulants than individuals screened in emergency care.

Readiness	Confidence
Tobacco (n=1681 to 1816)	
<ul style="list-style-type: none"> • Females were more ready than males • Individuals screened in primary care were less ready than those screened in emergency care • Individuals with more severe tobacco use were more ready than individuals with less severe use 	<ul style="list-style-type: none"> • Individuals screened in primary care were more confident than those screened in emergency care
Alcohol (n=2040 to 2116)	
<ul style="list-style-type: none"> • Females were more ready than males • Younger individuals were more ready than older individuals • Individuals with more severe alcohol use were more ready than those with less severe use 	<ul style="list-style-type: none"> • Younger individuals were more confident than older individuals • Individuals screened in primary care were more confident than those screened in emergency care • Individuals with more severe alcohol use were less confident than those with less severe use
Cannabis (n=379 to 401)	
<ul style="list-style-type: none"> • Younger individuals were more ready than older individuals • Individuals with more severe cannabis use were more ready than individuals with less severe use 	<ul style="list-style-type: none"> • Younger individuals were more confident than older individuals • Individuals screened in primary care were less confident than those screened in emergency care
Cocaine (n=120 to 127)	
<ul style="list-style-type: none"> • Younger individuals were more ready than older individuals • Individuals with more severe cocaine use were more ready than patients with less severe use (trend, p=.059) 	<ul style="list-style-type: none"> • Younger individuals were more confident than older individuals
Opioids (n=365 to 388)	
<ul style="list-style-type: none"> • No significant predictors of readiness 	<ul style="list-style-type: none"> • Individuals screened in primary care were more confident than those screened in emergency care • Individuals with more severe opioid use were less confident than those with less severe use
Stimulants (n=245 to 251)	
<ul style="list-style-type: none"> • No significant predictors of readiness 	<ul style="list-style-type: none"> • Males were more confident than females • Individuals screened in primary care were more confident than those screened in emergency care • Individuals with more severe stimulant use were less confident than those with less severe use

CONCLUSIONS

Health educators screened patients for unhealthy substance use in primary and emergency care settings. When patients screened positive, health educators administered a readiness and confidence ruler to identify where patients were in the change process and to use that information to engage patients in a motivational conversation about their use. An examination of the readiness and confidence data yielded the following learnings:

- Overall, patients indicated readiness to change substance use when screened positive in primary and emergency care settings. Readiness was highest for opioids, cocaine, and stimulants, slightly lower for alcohol and tobacco, and lowest for cannabis.
- Readiness to change cannabis use differed notably from other substances.
 - First, whereas 50% of patients screened positive for cannabis use, only 8% were administered the cannabis readiness and confidence rulers, suggesting that polysubstance users tended to choose other substances to change rather than focus on their cannabis use.
 - Second, average readiness to change cannabis use was significantly lower than readiness to change all other substances.
 - Third, patients were more confident that they could change their cannabis use than ready to change it, whereas for other substances, patients were more ready than confident.
 - These findings suggest that many cannabis users may be in earlier stages of the change process when screened in healthcare settings than users of other substances. Healthcare professionals may want to tailor cannabis brief interventions to increase patient readiness to change. Other research shows that personalized feedback can help dependent marijuana users who are ambivalent about their use increase motivation to change.^{ix}
- For several substances, younger individuals were more ready and confident to change use than older individuals suggesting younger populations may be especially receptive to brief interventions.
- For several substances, individuals with more severe use were more ready but less confident in their ability to change.
- Findings support other research showing that primary care patients who screen positive for problematic alcohol use demonstrate readiness to change rather than denial;^x that non-treatment-seeking young adults receiving care in community settings with high levels of distress and drug use have high readiness to change;^{xi} and that veterans with high levels of alcohol severity have high readiness to change.^{xii}
- Compared to patients screened in emergency care, patients screened in primary care were more confident to change tobacco, alcohol, opioid and stimulant use; however, the reverse was true for cannabis – patients screened in primary care were less confident than patients screened in emergency care.
- Finally, just over one-third of patients who screened positive were administered the readiness/confidence rulers, suggesting that administering the rulers may be challenging in some situations. Rulers were used for this study rather than longer RTC questionnaires to improve the likelihood of them being implemented in clinical settings.^{xiii} Follow-up with health educators may help shed light on benefits and barriers to administering the readiness and confidence rulers.

SBIRT Colorado funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) and is an initiative of the State of Colorado, Office of the Governor. It is implemented and managed by Peer Assistance Services, Inc., and administered by the Colorado Department of Human Services, Office of Behavioral Health. For more information, see www.improvinghealthcolorado.org.

END NOTES

ⁱ <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/alcohol-misuse-screening-and-behavioral-counseling-interventions-in-primary-care>

ⁱⁱ Zimmerman GL, Olson CG, Bosworth MF. A 'Stages of Change' approach to helping patients change behavior. *Am Fam Physician*. 2000 Mar; 61(5):1409-1416.

ⁱⁱⁱ Bertholet N, Horton NJ, Saitz R. Improvements in readiness to change and drinking in primary care patients with unhealthy alcohol use: a prospective study. *BMC Public Health*. 2009; 9:101. doi:10.1186/1471-2458-9-101. <http://www.biomedcentral.com/1471-458/9/101>.

^{iv} Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) developed for the World Health Organization (WHO) - http://www.who.int/substance_abuse/activities/assist/en/

^v Based on WHO guidelines, ASSIST scores were used to determine positive screens. Patients who were under 21 and indicated any alcohol use and patients who indicated binge drinking in the past 3 months on the brief screen were also considered positive screens.

^{vi} Patients screened positive for tobacco and no other substance were not included in the study. However, many patients who screened positive for tobacco and another substance chose to focus on tobacco use when asked which substance they wanted to discuss.

^{vii} Race and ethnicity were assessed using criteria provided by SAMHSA. Individuals could identify with more than one race.

^{viii} Less than 2% of patients screened positive for other substances such as sedatives, hallucinogens, or inhalants. Less than .5% selected one of these substances for the readiness/confidence rulers – thus, these cases are not included in the results.

^{ix} Stephens RS, Roffman RA, Fearer SA, Williams C, Burke RS. The marijuana check-up: promoting change in ambivalent marijuana users. *Addiction*. 2007;102:947-957. doi:10.1111/j.1360-0443.2007.01821.x

^x Williams EC et al. Readiness to change in primary care patients who screened positive for alcohol misuse. *Ann Fam Med* 2006;4:213-220. doi:10.1370/afm.542.

^{xi} Alley ES, Ryan T, von Sternberg K. Predictors of readiness to change young adult drug use in community health settings. *Substance Use & Misuse* 2013; early online:1-9. doi: 10.3109/10826084.2013.825920.

^{xii} Krenek M, Maisto SA, Funderburk JS, Drayer R. Severity of alcohol problems and readiness to change alcohol use in primary care. *Addictive Behaviors* 2011;36:512-515. doi: 10.1016/j.addbeh.2010.12.023.

^{xiii} Heather N, Smailes D, Cassidy P. Development of a Readiness Ruler for use with alcohol brief interventions. *Drug and Alcohol Dependence* 2008;98:235-240. doi:10.1016/j.drugalcdep.2008.06.005.