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Implementing a Brief Intervention for Smoking Cessation in an Inpatient Psychiatric Facility

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Abstract

Problem: Smoking is a leading cause of various preventable diseases, and those who experience mental illness smoke cigarettes at a higher rate than the general population. Brief intervention is a type counseling that has proven successful in encouraging smokers to quit. The "5 A's" is a type of brief intervention which stands for: Ask, Advise, Assess, Assist, Arrange. Addressing the smoking epidemic among individuals with mental illness is not only essential for improving their overall well-being, but also for reducing health disparities and enhancing the effectiveness of existing mental health interventions.

Methods: The approach to this project was a quality improvement initiative. Specifically, the design of this study was descriptive and survey based. Participants were selected from a convenience sample of adult patients hospitalized on an inpatient psychiatric unit. The flowsheet collected information regarding participants' interest in quitting smoking, self-reported rating of their readiness to quit, interest in receiving pharmacologic and non-pharmacologic cessation tools, and receipt of follow-up information.

Results: The number of self-identified smokers that received the full 5 A's brief counseling intervention was 15 ($n = 15$), comprising 44.1% of all patients who reported smoking cigarettes ($n = 34$). Mean readiness to quit ratings were similar for each psychiatric diagnosis. Furthermore, findings suggest that diagnosis and 5 A's receipt could be independent of one another.

Implications for Practice: Patients on the inpatient psychiatric unit should be offered opportunities to receive education and support regarding smoking cessation. Smoking cessation initiatives may be equally beneficial to psychiatric patients regardless of diagnosis.

Implementing A Brief Intervention for Smoking Cessation in an Inpatient

Psychiatric Facility

Smoking is a leading cause of preventable diseases such as lung cancer, heart disease, and respiratory disorders. Up to 85% of people with mental illness currently smoke cigarettes, which is 4 times greater than the general population (Kagabo et al., 2020). Most people with mental illness who smoke do not receive tobacco cessation counseling or treatment (McFall et al., 2010). The United States Preventive Services Task Force (USPSTF) (2021) recommends that providers ask all adults about tobacco use and advise them to stop using tobacco. Brief intervention is a type of cessation counseling that has proven successful in encouraging smokers to quit. Addressing the smoking epidemic among individuals with mental illness is not only essential for improving their overall mental and physical well-being, but also for reducing health disparities and enhancing the effectiveness of existing mental health interventions.

Overall, those with mental illness experience lower cessation rates than the general population, and they also face unique challenges when attempting cessation. Firstly, smokers with mental illness smoke, on average, more cigarettes than smokers without mental illness; thus, they experience more intense nicotine withdrawal when attempting to quit smoking (National Institute on Drug Abuse, 2023). They also face cultural barriers, as many healthcare providers perceive patients with mental illness as being unmotivated or uninterested in quitting. However, research has found that those with mental illness experience similar motivation to quit smoking as smokers in the general population (Kalkhoran et al., 2019). The USPSTF (2021), which provides evidence-based recommendations about the effectiveness of preventive services,

recommends asking all adults about tobacco use and providing brief behavioral

interventions for cessation to those who use tobacco. Brief intervention is a structured,

non-judgmental type of counseling that is short in duration, often lasting as few as 5

minutes (Mattoo et al., 2018). One brief intervention for smoking cessation counseling

that is recommended by the USPSTF (2021) is the "5 A's," which stands for: Ask,

Advise, Assess, Assist, Arrange. In the context of smoking cessation, the provider

specifically: asks about smoking, advises cessation, assesses the patient's level of

readiness to quit, assists with a plan to quit, and arranges follow-up care. Despite the

USPSTF recommendation that this form of brief intervention be considered for all

smokers, multiple studies have shown that, while providers do frequently ask and advise

patients about smoking, most providers often fail to assess, assist, and arrange (Satterfield

et al., 2018).

Smoking is believed to be more prevalent amongst people with mental illness

because nicotine itself may temporarily relieve some of the symptoms of these illnesses,

such as decreased concentration, low mood, and anxiety (National Institute on Drug

Abuse, 2023). However, smoking cessation is associated with improved mental health in

the long-term, including enhanced mood, improved quality of life, and decreased

depression (National Institute on Drug Abuse, 2023). Those with mental illness have a

mortality rate over twice as high as the general population, and the high rate of tobacco

use among those with mental illness is a contributing factor to this doubled mortality rate.

Recent evidence shows that conditions arising from tobacco use account for

approximately half of all deaths among individuals with mental illnesses such as

depression, schizophrenia, and bipolar disorder (Kalkhoran et al., 2019). Smokers with

mental illness experience not only a detriment to their physical and mental health, but also to their economic well-being. A study of smokers with schizophrenia estimated that 27% of the individuals' monthly incomes were spent on cigarettes (Prochaska et al., 2017). Members of this already vulnerable population may face economic burden due to spending excessive amounts of money on cigarettes. More importantly, disproportionately high rates of tobacco use among those with mental illness costs hundreds of thousands of lives each year. Smokers with mental illness comprise more than 200,000 of the 520,000 tobacco-attributable deaths annually in the United States, and die, on average, 25 years prematurely from tobacco-related causes (Prochaska et al., 2017). In a majority of psychiatric hospitals, patients are not permitted to smoke, allowing for hospitalization to be an opportune time for smokers to achieve cessation. By providing patients with an opportunity to quit, they are given an opportunity to ensure improvement of their physical and mental health in the long-term.

The purpose of this project is to implement a brief smoking cessation intervention in an acute inpatient psychiatric unit in a midwestern, suburban hospital. The aim is to determine the rate of patients who received the counseling, and patients' self-reported readiness to quit smoking at the time of receiving the counseling. The primary outcome measure will be the rate of patients who received the brief smoking intervention. The secondary outcome measure will be the patients' self-reported readiness to quit smoking. The question for this study is: In adult patients admitted to an inpatient psychiatric unit who smoke cigarettes:

1. What is the rate of patients who identify as smokers, and received the entire brief smoking intervention?

2. What is the rate of patients who identify as smokers, but refused the brief smoking intervention?

3. Of those who received the intervention, what is the rate of self-reported readiness to quit smoking?

Review of Literature

A literature was conducted using the following search engines: CINAHL, CINAHL Plus with Full Text, MEDLINE, and PsycInfo. Key search terms and phrases included (psych* or mental* ill*) AND (inpatient OR hospital OR ward OR unit) AND (smoke* OR tobacco OR cigarette) AND (cessation OR stop* OR quit* OR ceasing) AND (brief intervention* OR SBIRT OR 5 A's OR brief advice). This initial search generated 377 publications. Subsequently, a refined search was conducted after applying inclusion and exclusion criteria. Inclusion criteria included peer-reviewed journal articles published in English between 2018 and 2023. The use of this narrow time frame ensured that only the most up-to-date evidence was included in the literature review. Articles were excluded if any participants were under 18 years of age in order to match the age demographics of participants in this clinical scholarship project. After application of the inclusion and exclusion criteria, 71 publications were generated. From this search, a final number of 9 publications was selected for this literature review. An additional article, meeting all inclusion and exclusion criteria except for publication year, was included. Although published in 2017, this study, conducted by Metse et al., is the most recent randomized controlled trial (and one of only four in existence) that has assessed the efficacy of integrating inpatient smoking cessation with post-discharge support in adults with mental illness.

Methods to Reduce Smoking in Psychiatric Units

On inpatient psychiatric units, there is an unmet need for increased screening and treatment for tobacco use. Lappin et al. (2020) conducted a pre-post intervention quantitative study with 214 adults receiving treatment in an acute inpatient mental health setting. Pre-intervention recording of smoking status was found to be shockingly low, at 1.9%. Five practice changes were implemented, which included an initiative to increase identification of smokers, staff education on nicotine replacement therapy, appointment of a smoking cessation champion staff, banning smoking on the unit, and provision of nicotine replacement therapy. Post-intervention, assessment of smoking status by unit staff increased significantly ($p \leq 0.001$) to 11.2%. One major drawback of this study is that it was conducted in a single hospital, so the low screening rate may not be representative of screening rates for smoking in general. A systematic review by Kagabo et al. (2020) examined 8 randomized controlled trials of smoking cessation programs started in inpatient psychiatry settings. Settings were diverse geographically and included 2,701 total subjects. Kagabo et al. (2020) found that smokers with mental illness in psychiatric hospitals rarely receive smoking cessation treatment, and that people with psychiatric illness are typically excluded from studies of smoking cessation. However, one major limitation of this study is that, due to being a narrative review, it is mainly descriptive in nature and lacks quantitative results or statistical meta-analysis. However, the findings support Lappin et al.'s conclusion (2020) regarding overall low smoking screening rates for patients in the psychiatric setting.

Marynak et al. (2018) surveyed 91% of mental health and substance abuse facilities in the United States regarding whether their facility screens for tobacco use and/or provides

smoking cessation counseling. The study found that in 2016, among mental health

facilities in the United States, only 49% screened patients for tobacco use, and only 38%

offered tobacco cessation counseling. While the screening rate in this study was much

higher than the pre-intervention rate of 1.9% reported by Lappin et al. (2020), this

number continues to illustrate opportunities for improvement in regularly screening

psychiatric patients for tobacco use.

There is ample research suggesting that brief intervention is an effective method for

counseling patients in tobacco cessation. Bani-Yaghoub et al. (2018) examined the

effectiveness of brief advice, motivational interviewing, and health education on inducing

quit attempts in a population of Midwestern smokers who were not ready to quit. Over

the study period, the prevalence of former smokers in the brief advice category exceeded

45%, which was higher than the motivational interviewing or health education groups.

Furthermore, the prevalence of smokers motivated to quit in the brief advice group

increased from 0% to 20% over 25 weeks. The authors concluded that brief intervention

may offer patients a higher chance to increase motivation to quit smoking in the long-

term than other forms of nonpharmacologic intervention. However, this study was not

specific to psychiatric patients, who may experience unique challenges in quitting

smoking.

Okoli et al. (2018) reached similar conclusions regarding the effectiveness of brief

intervention for smoking cessation when studying a group of hospitalized psychiatric

patients. 119 adult patients answered questionnaires regarding experiences with brief-

intervention and attitudes towards treatment. The authors found that prior experiences

with brief intervention were strongly associated with patients experiencing a sense of

control in taking part in tobacco treatment. However, one major limitation of this study

was that the internal consistency for the perceived behavioral control measure was low,

suggesting that the measure may not have properly captured the concept of perceived

behavioral control. Similarly, a randomized controlled trial by Metse et al. (2017) also

studied the efficacy of a brief intervention for smoking cessation that specifically applied

to hospitalized psychiatric patients. In this study, Metse et al. provided 754 patients with

a brief motivational interview and self-help material while admitted to the hospital.

Smokers who received higher amounts of the brief intervention (>80%) were 23–28%

more likely to achieve abstinence at 6 months post-discharge when compared to control

subjects. This finding demonstrates a dose-response relationship between intervention

receipt and likelihood of smoking abstinence. However, a major weakness of this study

was the attrition rate, as 300 participants were lost to follow-up. Regardless of this

limitation, the results of this randomized controlled trial provide statistical evidence

illustrating the effectiveness of brief intervention in reducing smoking prevalence and

increasing quitting behaviors, especially within the context of an acute psychiatric

inpatient setting.

The 5 A's Model

The 5 A's (Ask, Advise, Assess, Assist, and Arrange) is a specific form of brief

intervention that allows for the provision of smoking cessation counseling. Affentranger

& Mulkey (2022) implemented a 5 A's counseling program in the outpatient clinic in

order to increase the number of tobacco cessation counseling sessions offered by staff. At

baseline, the provision of tobacco cessation counseling services was 0.65%. At the end of

the 5-month study, using the 5 A's as a structured and consistent intervention

significantly improved the smoking cessation rate to 36% (p=.001). The authors also

commented on the effect of this 5 A's program on patient-reported tobacco cessation.

Compared to the 3.1% baseline cessation rate, the cessation rate reached 7% by the end

of the study, indicating that the 5 A's may be clinically significant in increasing tobacco

cessation rates (Affentranger & Mulkey, 2022). However, the results were not

statistically significant (p = .33), indicating that additional interventions may be

necessary to further increase quitting rates for patients that use tobacco (Affentranger &

Mullkey, 2022).

Mbata et al. (2019) also studied how a brief intervention based on the 5 A's

impacted attitudes of smokers. Unlike the Affentranger & Mullkey study, Mbata et al.

(2019) did not specifically examine patients' intentions to fully quit smoking, but rather

their willingness to accept nicotine replacement therapy (NRT). Nurses on an inpatient

psychiatric unit completed an education program on 4 out of 5 A's (arrange was

excluded). Patient readiness to accept NRT increased significantly from 56% pre-

intervention to 74% post-intervention (p=0.27), (Mbata et al., 2019). While statistically

significant research does not yet exist regarding how the 5 A's may directly influence

tobacco cessation rates, there is clear evidence that training healthcare professionals in

use of the 5 A's for brief intervention is an effective method for addressing the problem

of smoking, especially in psychiatric patients.

Nursing Role in Smoking Cessation

It is necessary to implement nurse-led brief smoking cessation counseling

programs on inpatient mental health units. Mak et al. (2018) surveyed 4,723 nurses

regarding their involvement in using the 5 A's framework to counsel patients in smoking

cessation. Of the nurses surveyed, 59% disagreed with the statement that they possess the knowledge and skills necessary to help smokers to quit smoking, 58% reported not being confident about being able to help smokers to quit, and 56% reported not being familiar with the smoking-cessation services and resources available in the community (Mak et al., 2018). The results of this study indicate that there is a wide gap in knowledge that must be addressed in order for nurses to best aid their patients in smoking cessation.

The aforementioned Mbata et al. study (2019) illustrated the efficacy of a nurse education program on nurses' documentation of provision of tobacco cessation counseling. After the 45-minute education program on the 5 A's, nurses' provision of tobacco cessation counseling on admission increased significantly from 51% to 74%. Mak et al. (2018) also discussed the importance of educating nurses on the 5 A's, concluding that nurses who had received training or wanted to receive training in smoking-cessation interventions were more likely to participate in all of the 5 A's.

Martinez et al. (2020) obtained a convenience sample of 1,047 adult patients admitted to an acute care hospital and found that patients admitted to psychiatric units were more likely to receive the 5 A's intervention (11.8%) than patients admitted to other units (4.6%). While psychiatric patients were more likely than other hospitalized patients to receive the 5 A's tobacco cessation counseling, the results are far from impressive (Martinez et al., 2020). Ultimately, the results illustrate the continued need for implementation of 5 A's smoking cessation programs, as well as staff education regarding the provision of these interventions.

Evidence-Based Framework

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) Model offers numerous advantages for this nurse-led, hospital-based initiative. Firstly, the model is designed to guide bedside nurses in translating the soundest evidence into practice (Melnyk & Fineout-Overholt, 2019). Secondly, the systematic approach of the JHNEBP Model is especially applicable to a clinical scholarship project, as the model provides a structured framework and toolkit that guides nurses through each step of the evidence-based practice process. Through the guided process, the nurse identifies areas for improvement, critically appraises evidence, and implements evidence-based interventions. Components of the JHNEBP Model include the Practice Question, Evidence, and Translation (PET) (Melnyk & Fineout-Overholt, 2019). The PET process is continuous and dynamic, allowing for new questions to arise at any point and for new EBP cycles to be initiated. Lastly, the JHNEBP Model promotes interdisciplinary collaboration, which is of relevance to this clinical scholarship project, as expertise from a wide variety of specialists, including social workers, physicians, and nurses, is often required to facilitate the best outcomes for psychiatrically hospitalized patients.

In conclusion, psychiatric hospitalization offers smokers with mental illness a unique opportunity for cessation, yet nonpharmacological smoking cessation methods such as brief intervention are underutilized. The 5 A's is a framework for brief intervention that can be performed by nurses, yet many nurses are not fully aware of this framework. Undoubtedly, a gap in the research exists regarding whether the 5 A's as a brief intervention has a significant effect on reduction of smoking rates, especially within the population of psychiatrically hospitalized patients. The JHNEBP Model will provide

a framework for this clinical scholarship project that will introduce a nurse-led brief

intervention for smoking cessation based on the 5 A's in an inpatient psychiatric setting.

Methods

Design

The approach to this project was a quality improvement initiative. Specifically,

the design of this study was descriptive and survey based. Surveys were reviewed to

obtain data related to the outcome measures (rate of patients who received the brief

smoking intervention and patients' self-reported readiness to quit smoking). The project

spanned from January 16, 2024 through March 29, 2024.

Setting

The setting for this project was a 46-bed inpatient psychiatric department at a

mid-sized suburban hospital located in the Midwest. The hospital is part of a large

healthcare system with facilities located throughout the Midwest, including eight

hospitals in the same greater metropolitan area. The hospital's behavioral health

department is part of a larger behavioral health service that serves five hospitals within

the same metropolitan area. The department where this project was conducted is divided

into two units. Both units primarily serve the geriatric population (ages 60 and over), but

the units do accept some patients under the age of 60.

Sample

Eligible participants for this project were any individuals aged 18 to 91 who were

admitted to the inpatient psychiatric department and reported smoking cigarettes. The

participants were selected by convenience sampling. Inclusion criteria were any patients

admitted to one of the two inpatient behavioral health units who reported smoking

cigarettes, were willing to participate in brief smoking cessation counseling, and were

oriented to person, place, and time at the time of assessment. Exclusion criteria included

patients who did not report smoking cigarettes, those who were not oriented to person,

place, and time, and patients who refused all aspects of the brief intervention. The desired

sample size was at least 50 patients.

Data Collection and Analysis

For the purposes of tracking patients' readiness to quit smoking as well as receipt

of the 5 A's counseling, a paper flowsheet was utilized (Appendix A). This was the main

method of data collection. All data was de-identified. The de-identified data was then

stored on a password-protected computer owned by the primary investigator. The data

collection flowsheet collected information regarding whether participants were interested

in quitting smoking (Ask and Advise), participants' self-reported rating of their readiness

to quit (Assess), participants' interest in receiving pharmacologic and non-pharmacologic

cessation tools (Assist), and participants' receipt of an educational handout and/or

national Quitline information (Arrange). The percentage of patients that received all of

the 5 A's was calculated. The participants' average self-reported readiness to quit

smoking and the standard deviation of this score were also calculated. Descriptive

statistics regarding the participants' demographics, such as distributions of age, race,

diagnosis, and payor status were determined.

Approval Processes

Approval to conduct the project on the two behavioral health units was granted by

both the nursing manager and manager of social services, who are key stakeholders

within the department. The hospital system's institutional review board (IRB) director

determined that IRB approval is not required due to the nature of the project being quality

improvement and not scientific research. The project was submitted to the university IRB

for review and approval and was determined to be a quality improvement activity not

requiring IRB review.

Procedures

In week 1, during a staff meeting, all nurses in the department were provided with

education on the importance of providing patients with smoking cessation counseling.

The nurses' role in implementing the quality improvement project was discussed. After

all staff were educated on the process, upon a patient's admission to the unit, nurses

began to complete the associated data collection flowsheet. If patients did not smoke or

are unable or unwilling to state that they smoke, this was indicated on the flowsheet. If

patients identify as smokers, continuing to steps 2-5 of the flowsheet allowed the nurses

to provide patients with the 5 A's smoking cessation and document the patient's receipt

of such. As part of the intervention, nurses offered participants pharmacologic methods

for decreasing nicotine cravings (nicotine patches, gum, or lozenges) to utilize during

their hospitalization. Nurses also provided participants with personalized education,

encouragement, and motivational support. An educational handout and information for

the National Quitline was also offered to participants. A patient label with the patient's

name and medical record number was attached to the completed flowsheet for the

purpose of obtaining participants' demographic information. The flowsheets were then

turned in to a designated area within the nurse's station, and they were collected weekly

by the primary investigator. These flowsheets served as the main source of data for the

project.

Results

The total number of patients who identified as smoking cigarettes was 34 (n =

34). The average age was 64.4 (SD = 7.3). Ages ranged from 48 to 91. Among

participants, 55.9% were male (n = 19), while 44.1% (n = 15), of participants were

female. The most frequent payor status observed was Medicare (n = 20, 58.8%), followed

by Medicaid (n = 7, 20.6%), private insurance (n = 6, 17.6%), and self-pay/uninsured (n

= 1, 2.9%). The most common race among participants was Caucasian (n = 18, 52.9%),

while African American participants comprised the remaining amount *(n =* 16, 47.1%).

The most common diagnosis was major depressive disorder (n = 9, 26.5%). A table of

demographic information is provided in Appendix B.

Among all patients admitted to the psychiatric unit during this time (n = 100),

34% identified as smokers. The number of self-identified smokers who received the full 5

A's brief counseling intervention was 15 (n = 15), comprising 44.1% of all patients who

reported smoking cigarettes (n = 34). In total, the largest group of smokers participated in

the full 5 A's smoking cessation intervention, while 10 (n = 10, 29.4%) refused some, but

not all of the 5 A's. Six (n = 6, 17.6%) refused all of the 5 A's, and three (n = 3, 8.8%)

were unable to participate in some of the 5 A's. The most commonly refused step of the 5

A's was step five, Arrange (n = 14), followed by Assess (n = 11). The average self-

reported readiness to quit smoking was 4.1 (SD = 3.7) on a one to 10 scale, with one

being "not at all ready" and 10 being "most ready." See Appendix C.

The non-parametric Kruskal-Wallis test was conducted to assess if there were

significant differences in self-reported rates of readiness to quit smoking. Between the

various primary diagnoses of participants. The results of the Kruskal-Wallis test were not

significant based on an alpha value of .05, ($\chi^2[7] = 6.14$, $p = .523$), indicating that the

mean ratings of readiness to quit smoking were similar for each diagnosis. See Appendix

D.

A Fisher's exact test was conducted to examine whether diagnosis and receipt of

the 5 A's were independent. There were three categories of 5 A's receipt: refused, unable,

and received. The results of the Fisher's exact test were not significant based on an alpha

value of .05,($p = .161$), suggesting that diagnosis and 5 A's receipt could be independent

of one another. This implies that the observed frequencies were not significantly different

than the expected frequencies. See Appendix D.

Discussion

The rate of patients who identified as smokers that received the brief smoking

intervention was 44.1% ($n = 15$). The rate of patients who identified as smokers, but

refused all of the brief smoking intervention was 17.6% ($n = 6$). There were 10 ($n = 10$,

29.4% smokers that refused some but not all steps of brief intervention. Of those who

received the intervention, the average rate of self-reported readiness to quit smoking was

4.1, indicating moderate readiness.

Due to a relatively small sample size, non-parametric statistical tests were

conducted. These tests concluded that there was no significant relationship between

diagnosis and self-reported readiness to quit smoking. Additionally, no significant

relationship was found between a smoker's diagnosis and whether they refused the full

brief intervention, received the full brief intervention, or were unable to participate in

some aspects of the brief intervention. However, it should be noted that 100% ($n = 3$) of

smokers who were unable to participate in the full intervention had a primary diagnosis of dementia.

One major limitation to this project was the relatively homogenous age distribution of participants, with the majority patient age indicating geriatric status. Older patients who have smoked for long periods of time may be less likely to want to quit smoking. Additionally, the brief intervention process occurred during the admission process, which takes place when the patient arrives to the unit from the emergency room, which could potentially be in the middle of the night or after a patient has received sedating medications. Therefore, these factors may have limited some patients' ability to fully participate in certain aspects of the intervention. Of the two most commonly refused steps, three (Assess) required more mental capacity than answering a simple yes/no question, while step five required the individual to think about follow-up, which may also necessitate additional cognitive ability. Providing patients with opportunities to discuss smoking cessation throughout the length of their hospital stay may offer them additional benefit by reinforcing the brief counseling that was provided during the admission process.

Prior to initiation of this quality improvement project, the behavioral health unit did not have a specific process in place that allowed nurses to quickly and accurately screen patients for tobacco use and provide them with evidence-based brief cessation counseling. Findings were supportive of current research which suggests that smokers with mental illness are generally motivated to quit, despite smoking at a higher rate than the general population (Kalkhoran et al., 2019). Smoking cessation initiatives may be equally beneficial to psychiatric patients regardless of diagnosis. Patients on the inpatient

psychiatric unit should be offered opportunities to receive education and support regarding smoking cessation, and the 5 A's are a brief, evidence-based method to help patients explore their interest in quitting. Delivery of the 5 A's through a guided flowsheet is efficient, sustainable, and allows for all nurses to carry out all steps of the 5 A's accurately regardless of prior experience.

Conclusion

Psychiatric hospitalization provides patients with mental illness an opportunity to quit smoking. Prior to implementation of this 5 A's brief intervention for smoking cessation, the behavioral health unit did not have any specific process to provide smokers with evidence-based cessation education, counseling, and resources for follow-up. By implementing this process, the unit is equipped to help decrease the high rate of smoking among patients with mental illness, which in turn can decrease the amount of medical and financial hardship that comes with smoking cigarettes. Recommendations support the continued use of 5 A's brief intervention for psychiatric patients regardless of diagnosis. Future actions should include expanding the initiative to include patients of other age groups, as well as following up with patients throughout their hospital stay and upon discharge to ensure continued motivation to quit.

References

Affentranger, A., & Mulkey, D. (2022). Standardizing tobacco cessation counseling using

the 5 A's intervention. *Journal of Nursing Care Quality*, *38*(2), 146–151.

https://doi.org/10.1097/ncq.0000000000000671

Bani-Yaghoub, M., Elhomani, A., & Catley, D. (2018). Effectiveness of motivational

interviewing, health education and brief advice in a population of smokers who

are not ready to quit. *BMC Medical Research Methodology*, *18*(1).

https://doi.org/10.1186/s12874-018-0511-0

Kagabo, R., Gordon, A. J., & Okuyemi, K. (2020). Smoking cessation in inpatient

psychiatry treatment facilities: A Review. *Addictive Behaviors Reports*, *11*,

100255. https://doi.org/10.1016/j.abrep.2020.100255

Kalkhoran, S., Thorndike, A. N., Rigotti, N. A., Fung, V., & Baggett, T. P. (2019).

Cigarette smoking and quitting-related factors among US adult health center

patients with serious mental illness. *Journal of General Internal Medicine*, *34*(6),

986–991. https://doi.org/10.1007/s11606-019-04857-3

Lappin, J. M., Thomas, D., Curtis, J., Blowfield, S., Gatsi, M., Marr, G., & Courtney, R.

(2020). Targeted intervention to reduce smoking among people with severe

mental illness: Implementation of a smoking cessation intervention in an inpatient

mental health setting. *Medicina*, *56*(4), 204.

https://doi.org/10.3390/medicina56040204

Mak, Y. W., Loke, A. Y., & Wong, F. (2018). Nursing intervention practices for

Smoking Cessation: A large survey in Hong Kong. *International Journal of*

Environmental Research and Public Health, *15*(5), 1046.

https://doi.org/10.3390/ijerph15051046

Martínez, C., Feliu, A., Castellano, Y., Fu, M., Fernández, P., Cabrera-Jaime, S., Puig-

Llobet, M., Galimany, J., Guydish, J., & Fernández, E. (2020). Factors associated

with receipt of the 5AS model of brief intervention for smoking cessation among

hospitalized patients. *Addiction*, *115*(11), 2098–2112.

https://doi.org/10.1111/add.15076

Marynak, K., VanFrank, B., Tetlow, S., Mahoney, M., Phillips, E., Jamal, MBBS, A.,

Schecter, A., Tipperman, D., & Babb, S. (2018). Tobacco cessation interventions

and smoke-free policies in mental health and Substance Abuse Treatment

Facilities. *Morbidity and Mortality Weekly Report*, *67*(18), 519–523.

https://doi.org/10.15585/mmwr.mm6718a3

Mattoo, S. K., Prasad, S., & Ghosh, A. (2018). Brief intervention in substance use

disorders. *Indian journal of psychiatry*, *60*(Suppl 4), S466–S472.

https://doi.org/10.4103/0019-5545.224352

Mbata, E. C., Haefner, J., & McFarland, M. (2019). Educating nurses to use a brief

tobacco cessation intervention with patients on a mood disorder unit in a

Midwestern U.S. Hospital. *Journal of Doctoral Nursing Practice*, *12*(1), 132–138.

https://doi.org/10.1891/2380-9418.12.1.132

McFall, M. (2010). Integrating tobacco cessation into mental health care for

posttraumatic stress disorder: A randomized controlled trial. *JAMA*, *304*(22),

2485. https://doi.org/10.1001/jama.2010.1769

Melnyk, B. M., & Fineout-Overholt, E. (2019). *Evidence-based practice in Nursing &*

  Healthcare: A guide to best practice (4th ed.). Wolters Kluwer.

Metse, A. P., Wiggers, J., Wye, P., Wolfenden, L., Freund, M., Clancy, R., Stockings, E.,

  Terry, M., Allan, J., Colyvas, K., Prochaska, J. J., & Bowman, J. A. (2017).

  Efficacy of a universal smoking cessation intervention initiated in inpatient

  psychiatry and continued post-discharge: A randomised controlled trial.

  Australian & New Zealand Journal of Psychiatry, *51*(4), 366–381.

  https://doi.org/10.1177/0004867417692424

National Institute on Drug Abuse. 2023, February 24. Do people with mental illness and

  substance use disorders use tobacco more often?. Retrieved from

  https://nida.nih.gov/publications/research-reports/tobacco-nicotine-e-

  cigarettes/do-people-mental-illness-substance-use-disorders-use-tobacco-more-

  often on 2023, July 16

Okoli, C. T., Otachi, J. K., Manuel, A., & Woods, M. (2018). A cross-sectional analysis

  of factors associated with the intention to engage in tobacco treatment among

  inpatients in a state psychiatric hospital. *Journal of Psychiatric and Mental Health*

  Nursing, *25*(1), 14–25. https://doi.org/10.1111/jpm.12435

Prochaska, J. J., Das, S., & Young-Wolff, K. C. (2017). Smoking, mental illness, and

  public health. *Annual Review of Public Health*, *38*(1), 165–185.

  https://doi.org/10.1146/annurev-publhealth-031816-044618

Satterfield, J. M., Gregorich, S. E., Kalkhoran, S., Lum, P. J., Bloome, J., Alvarado, N.,

  Muñoz, R. F., & Vijayaraghavan, M. (2018). Computer-facilitated 5A's for

  smoking cessation: A randomized trial of technology to promote provider

adherence. *American Journal of Preventive Medicine*, 55(1), 35–43.

https://doi.org/10.1016/j.amepre.2018.04.009

US Preventive Services Taskforce. (2021, January 19). *Tobacco smoking cessation in adults, including pregnant persons: Interventions*. US Preventive Services Taskforce.

https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/tobacco-use-in-adults-and-pregnant-women-counseling-and-interventions#:~:text=%E2%80%9C5%20A's%E2%80%9D%3A%20Ask%2C,%2C%20Assist%2C%20Arrange%20follow%2Dup

Appendix A

Data Collection Sheet

Date	Nurse Name:

5 A'S TOBACCO CESSATION COUNSELING FOR NEW ADMITS TO BEHAVIORAL HEALTH UNITS

Please complete this guided form during all admission assessments in order to track the amount of tobacco cessation counseling that patients receive during admission.

1. ASK: "DO YOU CURRENTLY SMOKE?"

CURRENTLY USE TOBACCO?	CHECK ONE
Yes (continue to items 2 through 5)	
No (No further documentation required)	
Patient refused to answer (No further documentation required)	
Patient unable to answer (No further documentation required)	

2. ADVISE: "QUITTING TOBACCO IS ONE OF THE BEST THINGS YOU CAN DO FOR YOUR HEALTH. I STRONGLY ENCOURAGE YOU TO QUIT. ARE YOU INTERESTED IN QUITTING?"

ADVISED TO QUIT?	CHECK ONE
Yes	
No	
Patient refused	
Patient unable to participate	

3. ASSESS: "ARE YOU INTERESTED IN QUITTING TOBACCO? PLEASE RATE 1 TO 10, WITH 1 BEING NOT AT ALL READY AND 10 BEING MOST READY."

READINESS TO QUIT	CHECK ONE
Patient rating 1-10	Rating:
Patient refused	
Patient unable to participate	

4. ASSIST: "I AM HERE TO HELP YOU WHEN YOU ARE READY TO QUIT. WOULD YOU BE INTERESTED IN MEDICATION TO HELP DECREASE YOUR NICOTINE CRAVINGS?" PROVIDE PATIENT WITH PERSONALIZED EDUCATION, ENCOURAGEMENT, MOTIVATIONAL SUPPORT.

METHOD OF ASSISTANCE	CHECK ALL THAT APPLY
Medication offered? Type: I.e., patch, gum, lozenge?	Medication type:
Counseling and/or education provided?	Describe:
Patient refused	
Patient unable to participate	

5. ARRANGE: PROVIDE PATIENT WITH EDUCATIONAL HANDOUT AND/OR NATIONAL QUITLINE

RESOURCES PROVIDED	CHECK ALL THAT APPLY
Educational handout	
National quitline (1-800-QUIT-NOW)	
Patient refused	
Patient unable to participate	

Appendix B

Table 1

Demographics

Variable	*n*	*%*
Sex		
Male	19	55.9
Female	15	44.1
Race		
Caucasian	18	52.9
African American	16	47.1
Primary Diagnosis		
Major Depressive Disorder	9	26.5
Bipolar Disorder	5	14.7
Schizoaffective Disorder	7	20.6
Unspecified Psychosis	4	11.8
Delirium	1	2.9
Dementia	4	11.8
Schizophrenia	1	2.9
Substance-Induced Mood Disorder	1	2.9
Generalized Anxiety Disorder	1	2.9
Adjustment Disorder	1	2.9
Payor Status		
Medicare	20	58.8
Medicaid	7	20.6
Private Insurance	6	17.6
Uninsured/self-pay	1	2.9

Note. Due to rounding errors, percentages may not equal 100%.

Appendix C

Table 2

Receipt of Brief Intervention

Smokers	*n*	*%*
Received all 5 A's	15	44.1
Refused some steps	10	29.4
Refused all steps	6	17.6
Unable to participate in some steps	3	8.8

Note. Due to rounding errors, percentages may not equal 100%.

Appendix D

Nonparametric Tests

Table 3

Kruskal-Wallis Rank Sum Test for Rating by Diagnosis

Level	Mean Rank	χ^2	df	p
Dementia	13.00	6.14	7	.523
Delirium	5.50			
Major Depressive Disorder	12.67			
Schizoaffective Disorder	13.62			
Substance Induced Mood Disorder	5.50			
Unspecified Psychosis	5.50			
Generalized Anxiety Disorder	5.50			
Bipolar Disorder	11.33			

Table 4

Fisher's Exact Test Observed and Expected Frequencies

	5 A's Receipt			
Diagnosis	Refused	Unable	Received	*p*
Unspecified Psychosis	2[1.88]	0[0.35]	2[1.76]	.161
Schizophrenia	1[0.47]	0[0.09]	0[0.44]	
Delirium	1[0.47]	0[0.09]	0[0.44]	
Dementia	0[1.88]	3[0.35]	1[1.76]	
Substance induced mood disorder	0[0.47]	0[0.09]	1[0.44]	
Bipolar Disorder	2[2.35]	0[0.44]	3[2.21]	
Major Depressive Disorder	5[4.24]	0[0.79]	4[3.97]	
Schizoaffective Disorder	3[3.29]	0[0.62]	4[3.09]	
Adjustment Disorder	1[0.47]	0[0.09]	0[0.44]	
Generalized Anxiety Disorder	1[0.47]	0[0.09]	0[0.44]	

Note. Values formatted as Observed[Expected].