Reducing Stigma toward People with Opioid Use Disorder among Primary Care Clinicians (Secondary ID: 3UG1DA040316-06S4)

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Reducing Stigma toward People with Opioid Use Disorder among Primary Care Clinicians

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A. Summary

The prevalence of opioid use disorder (OUD) and opioid-related deaths have risen dramatically in recent years. Effective treatments, including medications for opioid use disorder (MOUDs; e.g., buprenorphine-naloxone and methadone) are under-utilized. Primary care offers an ideal setting in which to treat OUD; however, few clinicians are waivered to prescribe buprenorphine and of those who are waivered, less than one-third do prescribe. One potential barrier to increasing access to MOUDs is primary care clinician (PCC) stigma towards people with OUD. This study will use a randomized controlled trial design to examine a novel intervention to reduce stigma towards people with OUD among PCCs. PCCs in clinics randomized in COMPUTE 2.0 to the intervention (in 15 of the 30 clinics randomized in the parent study) will be randomized 1:1 to the stigma reduction or comparison training, stratified by clinic and waiver status. Training will be conducted via MyLearning, an online learning software. PCCs will be asked to complete a brief training on the clinical decision support (CDS) tool, Opioid Wizard. PCCs in the stigma reduction intervention will hear patient narratives designed to reduce stigma about patients with OUD. PCCs in the comparison training will not get any stigma content, but will have training on using the clinical decision support tool. Immediately following the training, the PCCs will complete a survey of stigma beliefs and intentions to get waivered to prescribe buprenorphine. Use of the CDS will be monitored in both groups for 6 months.

B. Background and Rationale

Two-thirds of the more than 70,000 drug overdose deaths in the United States in 2017 involved an opioid, representing a 12% increase in opioid-related deaths from 2016.[1] Given the rise in opioid-related deaths, increasing the availability and uptake of efficacious treatments for OUD is critical. However, only 20% of patients diagnosed with OUD seek treatment, and only 25% of those receive MOUDs.[2] MOUDs, including buprenorphine and naltrexone, can be used to treat OUD in primary care settings, which could widely increase the availability of treatment.[3] In response to guidelines published in 2016 by the Centers for Disease Control and Prevention (CDC) on prescribing opioids,[4] health systems are encouraging PCCs to reduce opioid prescribing and identify and treat OUD. However, there is a shortage of clinicians waivered to prescribe buprenorphine; in April 2020, there were 85,875 waivered clinicians in the United States, representing less than 10% of US licensed physicians.[5] Further, less than one-third of the clinicians waivered to prescribe buprenorphine do.[6] Clinicians cite time, poor access to clinical guidelines, and lack of confidence as barriers to prescribing buprenorphine.[7-9]

An additional potential barrier to scaling up MOUD treatment in primary care is stigma about people with OUD. Health-related stigmas are social processes by which people are labeled, stereotyped, devalued, and rejected because they have a health condition.[10] Stigmas about a health condition occur when a person perceives a difference between themselves and the person with the health condition, which leads to disdain for that person.[11,12] People with substance use disorders (SUDs) are more stigmatized than people with other conditions, including mental illness and physical disabilities.[13,14] Common stereotypes about people with SUDs include that they are to blame for their condition (and have personal control over their substance use), dangerous, unpredictable, have no job potential, and are criminals.[15-17] Indeed, substance use is often viewed as a moral and criminal issue, rather than a chronic illness.[16] Despite the clear implications of the impact of stigma on patients with SUDs, there is relatively little empirical literature on stigma for SUDs in general[15] and OUD in particular.[18]

Stigma is considered a “major driver” behind the lack of access to MOUDs, because of (1) the misconception that addiction is a volitional choice, not a disease; (2) the separation of addiction treatment from the rest of the medical system; (3) the language used for addiction (e.g., calling urine drug screens “clean” or “dirty” or patients “addicts” or “junkies”); and (4) the criminal justice system not including medical judgment in the

treatment of people with OUD (e.g., not allowing incarcerated patients to take MOUDs).[19,20] Further, patients may avoid seeking treatment because they fear being labeled as an "addict."[15] Even within the SUD treatment community, taking a MOUD is stigmatized as a "crutch" or "trading one addiction for another."[21(p.328)] Offering MOUDs in primary care has the potential to reduce stigma and to increase the likelihood that patients will seek treatment for OUD.[22,23] Although there is a dearth of research on PCC stigma toward people with OUD, one nationally representative study of over 1000 physicians found physicians hold many of the same stigma beliefs as the general public.[24] In particular, the majority of physicians endorsed the belief that patients were individually responsible for their OUD (89%), desired social distance from people with OUD (not wanting a person with OUD to marry into the family [79%] or work with them on the job [77%]), and viewed patients with OUD as more dangerous (69%) than the general population.[24] Preliminary evidence suggests that clinician stigma leads to withholding of primary care[25,26] and pharmacy services[27,28] to patients with SUDs, especially among those who inject opioids.[29] Further, clinician beliefs that buprenorphine may attract an undesirable patient population may limit the number of clinicians who get waivered and offer buprenorphine in primary care.[26]

There are few evidence-based interventions for reducing OUD stigma in the general public and especially among healthcare clinicians. Common approaches to reducing health-related stigma in the public are to provide education, facilitate contact between persons affected by the condition and members of the general public, and target popular opinion leaders or change agents.[30,31] Two systematic reviews of stigma interventions, one for SUDs specifically[32] and one for health-related conditions in healthcare settings,[33] found a total of 16 interventions to reduce stigma of SUDs. Only two of these interventions were specifically for practicing healthcare clinicians,[34,35] an additional four were for medical students,[32] and one was for psychiatry residents.[36] Intervention content and mode of delivery varied significantly, but they generally used a combination of education and direct contact with people with SUDs. The authors conclude that improving attitudes about people with SUDs may be best achieved through communication strategies that promote positive stories and demonstrate that stigmatized characteristics are not representative of all people in a stereotyped group.[32] Others have suggested that combining personal narratives from individuals being treated with MOUDs with science-based education about OUD and the benefit of MOUDs could be particularly impactful.[19] Additionally, clinicians can learn to "disentangle behavior from identity" by using language that frames addiction as a treatable health condition and not a personal failing.[37]

This study is ***innovative*** in that in proposes to examine a ***new intervention*** to reduce PCC stigma of persons with OUD. To our knowledge, only two interventions have been studied to reduce stigma of patients with SUDs among practicing healthcare clinicians,[34,35] and both targeted SUD in general, not OUD specifically. Further, both used quasi-experimental designs without a control group. The current study will use a randomized controlled trial (RCT) design embedded in a larger, multisite trial of a clinical decision support (CDS) tool to help PCCs identify, diagnose, and treat patients with OUD. The intervention will be ***time and cost efficient*** by integrating the training into an existing training for the Opioid Wizard tool and delivering the additional content through an e-Learning platform, a commonly used mode of delivery for delivering training to practicing clinicians. However, we are unaware of any stigma reduction interventions that have used this mode to deliver training to PCCs. Further, the intervention will incorporate ***patient narratives to combat commonly held stereotypes about people with OUD***, provide evidence-based education about the effectiveness of MOUDs, and use person-first language (people who have OUD versus "addicts") to reduce PCC stigma of patients with OUD. Previous stigma reduction interventions in PCCs have emphasized educational approaches, which have been shown to be less effective than patient contact and narratives.[38] Finally, in addition to assessing stigma beliefs and intention to get waivered, the study will examine ***objective assessments of PCC behavior***, including

use of the Opioid Wizard tool and secondary outcomes of change in waiver status and, among waivered clinicians, buprenorphine prescribing behavior.

C. Objectives, Aims, & Hypotheses

In response to NOT-OD-101: HEAL Initiative: Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements to Support Strategies to Reduce Stigma in Pain Management and OUD and Treatment, this project will evaluate an intervention to reduce stigma in PCCs by integrating stigma reduction training into the Opioid Wizard training. PCCs will be randomized to this novel stigma reduction training, grounded in stigma science, or an attention-control training. The *overall goal* of this project is to determine whether stigma reduction training reduces PCC stigma, increases intention to get waivered to prescribe buprenorphine or to prescribe buprenorphine if a waiver were no longer required, and ultimately increases the likelihood that PCCs use Opioid Wizard.

Aim 1: To examine whether a PCC training to reduce stigma toward people with OUD, compared to an attention-control training, reduces stigma, increases intention to get waivered, increases intention to prescribe buprenorphine if a waiver were no longer required, and increases the likelihood of using Opioid Wizard.

H1a: PCCs who are randomized to stigma reduction training will report less stigma towards patients with OUD compared to PCCs who are randomized to control training.
H1b: Among non-waivered PCCs, PCCs who are randomized to stigma reduction training will report greater intention to get waivered to prescribe buprenorphine than PCCs who are randomized to control training.
H1c: Among non-waivered PCCs, PCCs who are randomized to stigma reduction training will report greater intention to prescribe buprenorphine for OUD in the next year if a waiver were no longer required than PCCs who are randomized to control training.

H1d: PCCs who are randomized to stigma reduction training will use Opioid Wizard at a greater proportion of visits where the PCC is alerted to high risk than PCCs who are randomized to control training.

Aim 2: Examine the relationship between PCC stigma and intention to get waivered, and likelihood of using Opioid Wizard.

H2a: Among non-waivered PCCs, PCCs who report lower stigma will report greater intention to get waivered to prescribe buprenorphine.
H2b: PCCs who report lower stigma will be more likely to use Opioid Wizard at flagged visits.

As secondary outcomes, we will gather additional objective measures of PCC behavior, including PCC prescribing and referral behavior and new waivers among previously non-waivered PCCs. In secondary analyses, we will examine if waiver status at the time of the intervention moderates the impact of the intervention on stigma attitudes and use of Opioid Wizard. Additionally, in exploratory analysis, we will examine whether stigma mediates the effect of the intervention on Opioid Wizard use and if receiving the stigma and/or control intervention increases the number of PCCs getting waivered or the number of patients receiving treatment (prescriptions or referrals for treatment). Results of this work will inform future interventions aimed at reducing stigma among PCCs for OUD and a variety of other stigmatized health conditions, including other SUDs.

D. Study Parent Trial, Setting, and Design

a. **Parent Trial.** COMPUTE 2.0 is funded by the NIDA National Drug Abuse Treatment Clinical Trials Network (CTN-0095) to implement and test a web-based CDS tool ("Opioid Wizard") that guides PCCs in the diagnosis and treatment of OUD.

Outcomes include rates of OUD diagnosis, naloxone rescue kit orders, MOUD orders, and emergency department visits and hospitalizations. The CDS for Opioid Wizard alerts PCCs to (a) patients at elevated risk for OUD or opioid overdose using an EHR-based risk calculator, (b) patients with recent opioid overdose, and (c) patients with previously diagnosed OUD or MOUD orders. Opioid Wizard then guides PCCs through the screening and diagnosis of patients with OUD and starting patients with OUD on MOUDs. Opioid Wizard identifies and flags for specialty referral patients with relative contraindications to treatment of OUD in primary care, including pregnancy or severe liver disease. It provides a one-page patient handout that summarizes treatment options for OUD, including key differences in MOUDs (buprenorphine, extended-release intramuscular naltrexone, methadone). For buprenorphine waivered PCCs, It provides step-by-step guidance on starting buprenorphine at-home or in-clinic, supported by interactive patient handouts that guide at-home dose escalation of buprenorphine for three different starting doses (see Figure 1 for Opioid Wizard screenshot). For all PCCs, it facilitates referrals to buprenorphine-waivered PCCs or specialty care colleagues. It also guides screening for common comorbid conditions, including depression, anxiety and infectious diseases, counseling for safer use of intravenous drugs, and guidance for use of HIV pre-exposure prophylaxis (PrEP). The goal of Opioid Wizard is to improve rates of diagnosis and treatment for patients with OUD by addressing PCC barriers of lack of time, access to clinical guidelines, and confidence in diagnosing OUD. With this supplement, we will be able to address the additional barrier of stigma. See CTN-0095 Protocol for specific details about the main study's protocol.

b. Study Setting. This administrative supplement will be implemented at HealthPartners. HealthPartners is the largest consumer-governed nonprofit healthcare organization in the country. HealthPartners has 55 primary care clinics and cares for more than 1.2 million patients in Minnesota and western Wisconsin. Patients are insured by a mix of insurance types, including Medicaid (12%), Medicare (12%), commercial insurance (60%) and others. At HealthPartners, approximately 7% of PCCs are currently waivered to prescribe buprenorphine. This study will be conducted in the 30 HealthPartners primary care clinics randomized in COMPUTE 2.0. Each randomized clinic has at least 3 eligible PCCs and 50 adult patients who are aged 18-75 years and have an OUD diagnosis, are prescribed a MOUD, or are identified by the opioid risk calculator as being at high risk of OUD. The proposed supplement fits well within the scope of the parent award.

c. Study Design. This study will use a randomized controlled trial design, in which PCCs will be randomized to receive one of two trainings delivered via MyLearning: a stigma reduction training or an attention control training. Outcome assessments will occur immediately following the training delivery (PCC initial survey), at 3 months following training completion (PCC follow-up survey), and in the 6 months following the training (objective indicators of PCC Opioid Wizard use, waivered clinician prescribing behavior, and waiver status). See **Figure 1** for a schematic of the study flow.

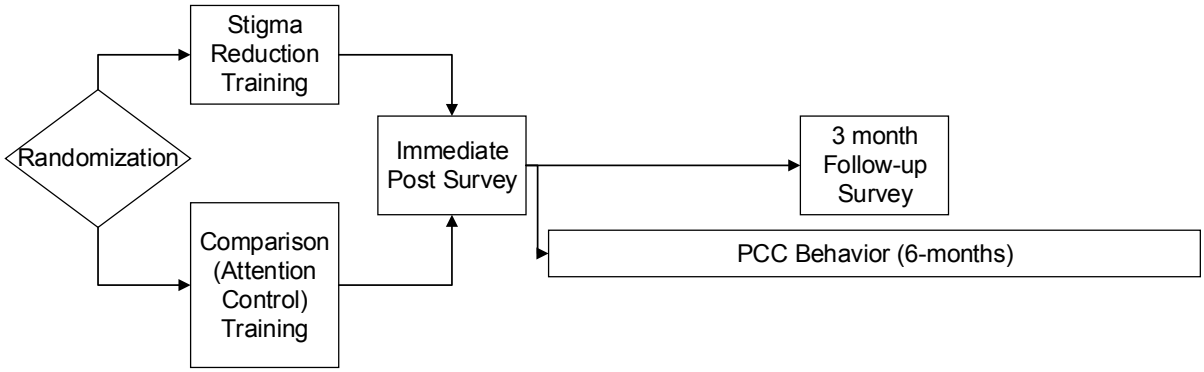

Figure 1. *Study flow diagram.*

E. Study Population

a. Participants. Participants will be PCCs who practice at HealthPartners Clinics that have been previously randomized to the intervention arm of the parent study, Opioid Wizard. There will be 15 clinics randomized to receive the Opioid Wizard intervention. There are 225 eligible PCCs in the clinics randomized to the OUD-CDS. All randomized clinicians will be included in the analysis of Wizard use and prescribing and/or referral behavior (in event referrals are made to waivered clinicians).

b. Inclusion and exclusion criteria. To be eligible for inclusion in this study, a PCC must practice at a study-eligible primary care clinic and be a family physician, general internist or adult-care non-obstetric nurse practitioner or physician assistant. PCCs are study-eligible regardless of whether they are waivered to prescribe buprenorphine.

Sources or methods of recruitment. For the parent study, PCCs will have the opportunity to participate in a webinar about general training of the Opioid Wizard tool. This webinar will include information about CDS alerts, printing the PCC and patient priorities, and using the tool within Epic's (EHR) active guidelines. At the end of the webinar, all eligible PCCs in intervention clinics will be notified about the opportunity to participate in additional case-based training on using Opioid Wizard, which they will receive an invitation to complete in their email. Up to three emails will be sent to PCCs from the MyLearning platform inviting them to participate in the training. The email will provide an introduction to the study and the elements of consent. We may also use additional strategies to encourage study participation, including asking clinic leaders to remind their PCCs to complete the training and directly emailing a final reminder before the initial survey closes. See **Appendix A** for recruitment email and **Appendix B** for the consent document. (Subsequent communications have been submitted separately as amendments.)

PCCs who complete the initial training via MyLearning (either the stigma reduction training or the comparison [attention control]) will be emailed a follow-up survey 3 months after they completed the initial training. PCCs will receive up to 4 emails to remind them to complete the follow-up survey. The recruitment email for the follow-up survey is available in **Appendix C**.

c. Incentives. PCCs will be offered a $100 gift card for completing the initial training and survey and a $25 gift card for completing the follow-up survey.

F. Allocation of interventions

a. **Methods for randomisation and stratification.** PCCs in clinics randomized to Opioid Wizard (in 15 of the 30 clinics randomized in the parent study) will be randomized 1:1 to the stigma reduction or comparison training, stratified by clinic and waiver status. Randomization will be generated using SAS software.

b. **Methods for concealment of allocation.** PCCs will be blind to their randomized MyLearning training assignment. The study statistician (Dr. Crain) will generate the randomization assignment, and a study team member will submit that list to HP MyLearning staff. Study team members capturing outcome data from surveys, Opioid Wizard, and Epic (including use rates, buprenorphine prescriptions) will also be blind to treatment assignment.

G. The Interventions

a. **Intervention delivery.** Both the stigma reduction intervention and the comparison intervention will be delivered via MyLearning, an online learning platform that is available at HealthPartners. This training will be interactive, as PCCs will have the opportunity to participate in a case-based training on how to use the Opioid Wizard and will be able to click and interact with the training to demonstrate learning.

b. **Common intervention components in both trainings.** General additional training in both groups will include science-based education about OUD and MOUDs and how to use Opioid Wizard, including where to review relevant chart history, making a diagnosis, choosing a treatment option, conducting follow-up, and caring for comorbid conditions. Medical record details relevant for providing care to four prototype patients at risk for or with OUD, such as age, gender, race/ethnicity, and comorbid conditions, will be presented to demonstrate aspects of the CDS.

c. **Stigma Reduction Training.** Contact with a person sharing personal narratives (including a story of "on the way down" and "on the way up") are the most powerful interventions to reduce public stigma of health conditions.[38,39] For this study we have modified this approach for an online learning format. In addition to the training for Opioid Wizard described above, the stigma reduction intervention group will include patient narratives and recommendations for non-stigmatizing language. For example, one narrative is the story of a patient who developed OUD after taking opioids for an injury. PCCs will hear this patient story (e.g., a video of the "patient" (actor) telling their story embedded in the training), and the trainer will walk through how to use the CDS, including how to review relevant chart history, make a diagnosis, discuss treatment options, and conduct follow-up and care for comorbid conditions. The short narratives provide de-stigmatizing context and demonstrate CDS applicability to diverse populations, in addition to demonstrating aspects of the CDS.

d. **Comparison (Control) Training** will include the general components as above but omits a stigma reduction component.[40] This comparison training controls for attention, contact time and extra training on using Opioid Wizard. Participants will see the same cases that are presented in the Stigma Reduction Training, but they will not see the patient videos or hear the narratives. Instead, they will just see the EHR and the trainer will talk about the cases in generalities (e.g., "This is a patient who is coming in to the clinic who is at high risk for opioid use disorder.").

H. Outcome assessment

a. **Timing of outcome assessment.** Immediately following training, PCCs will be asked to complete a brief (15-minute) follow-up survey via REDCap, a secure data

management software, to assess self-reported outcomes: stigma, waiver status, and, among non-waivered PCPs, intention to get waivered[41] and intention to prescribe buprenorphine should a waiver no longer be required (see **Appendix D**). In addition, at 3 months following the training, PCCs will be asked to complete a follow-up survey via REDCap, to assess endurance of the stigma training on PCC stigma and intentions (see **Appendix E**). Opioid Wizard use will be pulled from CDS meta-data for each randomized clinician for encounters that are eligible for the Opioid Wizard intervention. PCC prescribing (number of MOUD, naloxone, and opioid prescriptions and the number of unique patients receiving prescriptions) and referral behavior will be extracted from the EHR. We will pull patient demographic information from the EHR to assess the extent to which provider behaviors differ across patient sub-groups, such as racial/ethnic groups, sex, and reason for intervention eligibility.

b. Primary Outcome Measures

i. ***OUD Stigma.*** Stigma of people with OUD will be measured using the *Difference* and *Disdain* scales, which measure stigma of people with mental illness and SUDs.[11,12,42] This measure was chosen because people are more willing to state that people with a health condition are different from them than to endorse general stigmatizing beliefs, therefore reducing social desirability in stigma measurement.[11] Three items measure difference (the extent to which a person with OUD is similar, like, or comparable to others) and three items measure disdain (people with OUD are not good, not respected, or not favorable compared to others). Items are scored on a 9-point agreement scale; some items are reverse-scored so that higher scores reflect greater difference and disdain. Evidence suggests that the scales demonstrate good internal consistency[12] and are positively associated.[18] In addition, three items will assess *blame* as a secondary outcome (e.g., *How responsible do you think a person with opioid use disorder is for his or her condition?*).[43,44]

ii. ***Intentions to get waivered to prescribe buprenorphine.*** Non-waivered PCCs will be asked to rate one question on their intentions to get waivered to prescribe buprenorphine: "How likely are you to get waivered to prescribe buprenorphine in the next year?" PCCs will rate their response on a five-point Likert-type scale ranging from 1 (*I definitely will not*) to 5 (*I definitely will*). Behavioral intentions are commonly used proxies for behavior in behavioral science research and were chosen as the primary outcome for H1b and H2a because of the time it may take for a PCC to complete the waiver training, which may not occur during the study observation period (6-months post training). Across a wide range of behaviors, moderate-large changes in behavioral intentions are associated with small-moderate changes in behavior.[45]

iii. ***Intentions to prescribe buprenorphine should a waiver no longer be required.*** Non-waivered PCCs will be asked to rate one question on their intentions to get waivered to prescribe buprenorphine: "If your patient with OUD requested buprenorphine in the next year and a waiver were no longer required, would you prescribe buprenorphine?" PCCs will rate their response on a five-point Likert-type scale ranging from 1 (*I definitely would not*) to 5 (*I definitely would*). We have added this question given recent press reports that the federal government is considering no longer requiring a waiver to prescribe buprenorphine for physicians. Even if this potential rule change does not go into effect during this study, press coverage of this potential change could influence clinicians' intent to complete the waiver change (i.e., anticipating that soon it may no longer be required). The addition of this question provides a measure of intent to treat OUD with buprenorphine regardless of the waiver requirements at the time the question is answered. As noted above, moderate-to-large changes in

behavioral intentions are associated with small-to-moderate changes in behavior.[45]

iv. ***Opioid Wizard Use.*** High use rates of Opioid Wizard are an important measure of PCC engagement. PCC Opioid Wizard use will be defined as taking action within the CDS tool, such as reviewing relevant chart history, screening for OUD, making a diagnosis, providing a referral or prescribing a medication, printing patient education materials, or prescribing naloxone. The use rates for each PCC for the follow-up period (6 months) will be calculated as the proportion of eligible visits in which Opioid Wizard was used. This provides an objective measure of PCC behavior with little social desirability bias.

c. Secondary Outcome Measures

i. ***Waivered PCC prescribing and referral behavior.*** As an exploratory outcome, we will gather the rate of MOUD, naloxone, and opioid prescriptions and referrals to waivered clinicians (primary care and specialty addiction medicine) among eligible patients in the 12 months prior to the study and during the 6-month follow-up period to determine whether the stigma reduction and/or control training affected change in prescribing behavior.

ii. ***PCC waiver status.*** In addition to intentions to get waivered, change in waiver status will be collected as an exploratory outcome. A list of waivered PCCs will be pulled from HP administrative data to determine if additional PCCs became waivered during the follow-up period.

iii. ***PCC willingness to work with people with OUD.*** PCCs will report on their willingness to work with people with OUD using 3 items adapted from the Drug Problems Perceptions Questionnaire.[46] PCCs will respond to each item using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). One item is reverse scored ("I would enjoy my job more if I could stop working with patients with opioid use disorder") and the items will be averaged for a total score, with higher scores corresponding to greater willingness to work with people with OUD.

iv. ***PCC opioid treatment outcome expectancies.*** Treatment outcome expectancies will be assessed using two items developed for this study. First, PCCs will rate the extent to which they believe available treatments are effective for treating OUD on a 4-point Likert-type scale ranging from 1 (*not at all effective*) to 4 (*very effective*). The second item will ask PCCs to rate the extent they believe patients will comply with those treatments on a 4-point Likert-type scale ranging from 1 (*not at all likely*) to 4 (*very likely*). Items will be analysed separately.

v. ***PCC perceptions of the training and the Opioid Wizard tool.*** In the initial survey, PCCs will provide feedback on the training in four questions, including their perception of the usefulness and ease of use of the training and their intentions to use the Opioid Wizard tool. At the 3-month follow-up survey, these questions will be replaced with items specifically about Opioid Wizard, not the training, to assess likelihood of recommending Opioid Wizard to colleagues, frequency of using Opioid Wizard, Opioid Wizard ease of use, and intention to use Opioid Wizard in the future.

d. Covariates

i. ***Demographics.*** PCCs will report on their demographic characteristics, including gender, age, race, ethnicity, and days per week in clinic in the survey. HealthPartners administrative data will be used to determine clinician type (MD/DO, nurse practitioner, or physician assistant).

ii. ***Frequency in addressing OUD.*** PCCs will report on the frequency with which they typically address OUD in their practice using one item: How often do you treat patients with opioid use disorder? Response options will be on a 5-point Likert-type scale ranging from 1 (*never*) to 5 (*daily*).

iii. ***PCC perceived vulnerability to OUD.*** PCC perceived vulnerability to developing OUD will be assessed using 3 items. PCCs will rate the extent they agree with each statement on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). One item will be reverse-scored ("If I were prescribed opioids, there is a real risk I would become addicted"). Items will be averaged for a total score, with higher scores corresponding to lower perceived vulnerability to OUD.

I. Post-recruitment retention strategies

a. **Participant retention.** To encourage PCCs to complete the training, they will receive up to 4 reminders and will be offered a $100 incentive. We may also ask clinic leaders to remind PCCs to complete training. Further, PCCs will be offered an additional $25 incentive for completing the follow-up assessment at 3 months. Direct email communications will be sent to request and remind them about the survey. There may be volunteer bias in those who complete the training; however, this should not compromise internal validity as factors that predict participation should be random across intervention assignment. We will describe differences between completers and non-completers (e.g., gender, PCC type, waiver status, clinic).

b. **Participant withdrawal.** Participants may withdraw from the study at any time. It is possible that they will not complete the training or the surveys. However, the training and surveys are designed to be short so they do not overburden participants.

J. Risks, benefits, safety monitoring and adverse events

a. **Risks to participants.** This study involves minimal risk. The primary risk to PCCs is the risk of loss of confidentiality. However, the study team will take multiple steps to reduce those risks. First, each PCC will be assigned a unique study identification number. Their identifying information will be stored separately from their study data, and only the study team will have access to any linkage files. Those files will be stored on a secure, HealthPartners server only accessible by the study team, and will primarily be used to provide incentives to participants. Analytic data sets will not include any identifying information.

b. **Benefits.** There are no direct benefits to participants in this study. However, the PCCs may find the training useful in helping them navigate Opioid Wizard, which could reduce frustration in learning a new EHR platform. One potential benefit is the knowledge of whether a training delivered via an online platform can incorporate patient narratives and ultimately reduce stigma among PCCs toward people with opioid use disorder, which has the potential to increase the availability of treatment in this population.

c. **Data and safety monitoring.** Given the minimal risk involved in this study, a data and safety monitoring board (DSMB) is not indicated for this study. The parent trial has an independent DSMB appointed by the NIDA CTN that oversees that study.

d. **Adverse event reporting requirements.** This is a minimal risk study. Adverse events and Serious Adverse events will not be collected in the context of this trial.

K. Data collection and management

a. Data collection and management. Recruitment data will be stored in a protected project folder on a secure network drive. Surveys will be collected using REDCap, a secure data management software that stores data on internal HealthPartners servers. PCCs will get a link to the survey immediately after completing the training and will be instructed to fill out the survey in order to receive compensation for their time. PCCs will directly answer survey questions within the REDCap platform. For the follow-up survey, PCCs will receive an email and reminders at the time they are due for their follow-up. The email will have a link to the survey and PCCs will be able to directly answer the questions in the REDCap platform. Survey data will be accessed by study staff to determine which PCCs are eligible for incentives.

Opioid Wizard use will be captured passively through the Opioid Wizard system, and prescriptions, referrals, and patient characteristics will be captured through the EHR. PCC Waiver status will be extracted from HealthPartners administrative data at the end of the study follow-up period. Data will be extracted by the study team and stored securely on the HealthPartners secure internal server. Patient data will be identified with a random unique identifier generated by the Wizard platform. The study programmer will use that information to pull data from the EHR. No MRNs or patient IDs will be retained in an analytic dataset.

b. Quality control. Survey responses will be directly entered by participants into REDCap survey software. We will program REDCap to minimize non-viable or non-allowable responses (e.g., limiting age to integers between 18 and 100). Participants will only be allowed to choose one Likert-type response on scale items. In addition, participants will be prompted to complete items that do not have a response, but will be allowed to leave them blank if they choose to do so.

c. Progress reports. During study recruitment phases (initial training and follow-up survey), we will use REDCap reports to generate study completion rates and to prompt reminders to complete the training and surveys. The team will review the reports to determine if other strategies (e.g., reaching out to clinic leadership) are needed to boost recruitment and retention.

L. Sample size

There are 449 PCCs in the 30 clinics being considered for randomization to the parent study, COMPUTE 2.0, with an average of 15 per clinic (range 4-36). To the extent that the parent study will seek balance between treatment arms in clinic size, and by extension number of PCCs, we estimate that 225 PCCs will be in intervention clinics and eligible for this study. We have estimated power for PCC participation rates of 50%, 65%, and 80% with equal numbers of PCCs per arm. Approximately 93% of PCCs at HP are not waivered, which would reduce available sample sizes for H1b and H1c to 208 PCCs. The power analysis was calculated using G*Power 3.1[47] and determined the minimal detectable standardized effect between groups for each outcome given available sample size, $\alpha_2 = .05$, and desired power (see Table 1). Given these assumptions, we will have the ability to detect moderate differences (80% power: d = 0.42-0.55; RR=1.28-1.58) between the groups.

For Aim 2, the regression models will include PCCs in both arms and up to 4 covariates. Given sample size, $\alpha_2 = .05$, and desired power, we will have adequate power to detect small effects for H2a (80% power: $f^2 = 0.05$-0.08) and moderate effects for H2b (80% power: RR=1.29-1.60).

Table 1. Minimal detectable standardized effects based on PCC participation rate and desired power.

PCC participation=	50%	65%	80%

		112 PCCs		146 PCCs		180 PCCs	
power =		0.80	0.90	0.80	0.90	0.80	0.90
H1a: OUD Stigma	d	0.49	0.57	0.47	0.54	0.42	0.49
H1b, H1c: Intentions	d	0.55	0.64	0.48	0.56	0.44	0.51
H1d: CDS Use: 30%	RR	1.58	1.69	1.50	1.59	1.44	1.52
50%	RR	1.44	1.51	1.38	1.44	1.34	1.39
70%	RR	1.36	1.43	1.31	1.37	1.28	1.33
H2a: Intentions	f^2	0.08	0.10	0.06	0.08	0.05	0.06
H2b: CDS Use: 30%	RR	1.60	1.71	1.52	1.61	1.46	1.54
50%	RR	1.45	1.53	1.39	1.46	1.35	1.41
70%	RR	1.37	1.44	1.32	1.38	1.29	1.34
Note. Cohen's d = d; Cohen's $f^2 = f^2$; Rate ratio = RR.							

M. Analysis Strategies

All variables will be examined using descriptive statistics and graphical methods to examine distributions, potential outliers, and analysis assumptions across and within study arms. The hypotheses predict that PCCs in the stigma reduction intervention will report less stigma of people with OUD and greater intentions to get waivered and prescribe buprenorphine (among non-waivered PCCs), and will use Opioid Wizard at a greater proportion of eligible encounters. A generalized linear model framework will be used to test the Aim 1 hypotheses, using appropriate error distributions and link functions to normalize outcomes. For H1a through H1c, the primary outcomes will be stigma (H1a) and intentions to get waivered (H1b) and to prescribe buprenorphine (H1c), assessed immediately following the training; as a secondary outcome, we will examine whether the intervention has enduring effects on stigma and intentions by examining differences assessed at the 3-month follow-up survey. Secondary analyses will include an interaction term between intervention arm and waiver status to assess treatment heterogeneity.

In Aim 2, multiple linear regression models, controlling for PCC characteristics (i.e., age, gender, PCC type [physician, nurse practitioner, physician assistant], and waiver status [H2b only]) will be used to examine whether self-reported OUD stigma is related to (1) intention to get waivered to prescribe buprenorphine and (2) Opioid Wizard use. Secondary analyses will include an interaction term between stigma and waiver status to examine whether waiver status moderates the association between stigma and Opioid Wizard use.

In secondary analysis, we will examine whether self-reported stigma mediates the effect of the intervention on Opioid Wizard use. If the intervention affects Opioid Wizard use (H1d), and stigma is related to Opioid Wizard use (H2b), we will use a product of coefficients approach to quantify how much of the intervention effect is mediated by stigma. In other exploratory analyses, we will examine whether PCCs in the stigma reduction arm prescribe MOUD and /or naloxone to eligible patients at a higher rate than PCCs in the comparison arm, controlling for pre-Opioid Wizard prescribing behavior. We will also examine whether PCCs in the stigma reduction arm prescribe opioids to eligible patients at a lower rate than PCCs in the comparison arm, controlling for pre-Opioid Wizard prescribing behavior. Further, as a follow-up to H1b, we will examine whether PCCs in the stigma reduction arm are more likely to get waivered than control PCCs using a logistic regression framework. To understand how PCC experience with patients at high risk for problems with opioids may have influenced their decision to participate in this study, we will compare PCC prescribing and referral behaviors among PCCs who completed the training to those who did not among all randomized PCCs.

N. Ethical Aspects of RCTs

a. Participant consent. At the beginning of the training module in MyLearning, PCCs will be given the consent form outlining the project, potential risks and benefits, and privacy and confidentiality protections. Participants will have the opportunity to review

the consent form and provide consent by clicking a button: “I have read the above consent form and I agree to participate.” If participants have questions about consent or the project, they will be directed to contact the study principal investigator or project manager by email or phone.

O. RCT Management

a. **Registering the trial.** This study will comply with the NIH Data Sharing Policy and Policy on the Dissemination of NIH-Funded Clinical Trial Information and the Clinical Trials Registration and Results Information Submission rule. As such, this trial will be registered at ClinicalTrials.gov, and results information from this trial will be submitted to ClinicalTrials.gov. In addition, every attempt will be made to publish results in peer-reviewed journals.

b. **Research governance and good clinical practice.** Study staff are required to complete institutionally required training per their research site, IRB(s), and authorities with regulatory oversight. Training will include Human Subject Protection (HSP) and Good Clinical Practice (GCP), as well as protocol-specific training.

P. Reporting, Dissemination and Notification of results

a. **Trial Registration.** In keeping with NIH policy, this trial will be registered at ClinicalTrials.gov, and results information from this trial will be submitted to ClinicalTrials.gov.

b. **Publication policy.** We will publish results in peer-reviewed journals. The planning, preparation and submission of publications will follow the policies of the Publications Committee of the CTN.

c. **Disseminating results to the public.** As a result of our previous and ongoing OUD and mental health research, we have established communication channels with key stakeholders in our health system, as well as with external stakeholders, including the NIDA CTN, the Mental Health Research Network, the Midwest Research Network, and the Health Care Systems Research Network. We anticipate that our findings will be of significant interest to these groups, and we will disseminate our findings, methods and resources. We will share our findings immediately through presentations at local and national meetings. We will publish our findings in peer-reviewed journals and communicate our findings to public media outlets.

d. **Data Sharing.** The study investigators will share a limited de-identified data set used for primary outcome analysis with NIDA for NIDA’s Data Share website. The CTN DSC can assist the study investigators with providing the data set to the designated party to ensure de-identification, and for posting, storing, and archiving on NIDA’s Data Share website. Data Share is an online repository of data from studies funded by the NIDA and is located at: https://datashare.nida.nih.gov/. In addition, we have partnered with Konadu Fokuo, PhD, an assistant professor in psychiatry at the University of Illinois at Chicago (UIC), who is interested in stigma of people with substance use disorders. We are finalizing a data transfer agreement with UIC, and Dr. Fokuo will be conducting secondary analyses on our data based on her interest in understanding how race/ethnicity interacts with stigma to affect willingness to treat people with OUD.

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Appendix A: PCC Initial Recruitment Email

Invitation letter to participate in a research study to be sent as an email from the MyLearning software.

[date]

Dear [Clinician Name],

We are writing to you because we have received funding to implement a new clinical decision support system, Opioid Wizard, across several primary care clinics in the HealthPartners/Park Nicollet system. In addition, we have received additional support to examine how two different versions of an online training, delivered via MyLearning, impact clinicians' use of the tool and attitudes towards opioid use disorder.

We invite you to participate in this study by completing one version of this online training and completing a survey immediately after completion. The training will take about 25-35 minutes to complete, and will walk you through 4 different patient scenarios in which you might use the Opioid Wizard. The training will demonstrate different features of the tool and help clinicians learn how to efficiently navigate Opioid Wizard.

Immediately after the training, you will be given a link to complete a brief survey about your experience with the training and with working with patients with opioid use disorder. This survey should take 15 minutes or less to complete. You will receive a $100 gift card to Amazon for completing the training and the survey.

Prior to completing the training in MyLearning, we will provide you with a complete explanation of the study and things you need to know before consenting to participate. You can click the link below to login to MyLearning and complete this training at any time.

For more information, or to decline this invitation, you can email the study project manager, Amy LaFrance, MPH at amy.b.lafrance@healthpartners.com.

Thank you for your consideration.

Stephanie Hooker, PhD, MPH
Principal Investigator
Research Associate, HealthPartners Institute

[LINK TO MYLEARNING TRAINING]

Appendix B: Consent Form

Comparing Two Training Methods for Opioid Wizard
CONSENT FORM

Why is this study being done?
The United States is in an opioid overdose crisis. Only a small percent of patients with opioid use disorder (OUD) get help. As part of a larger study funded by the National Institute for Drug Abuse, we are examining the impact of two different versions of a training for Opioid Wizard on clinicians' use of the tool and attitudes towards opioid use disorder.

We are asking you to participate because you are a clinician who practices at a primary care clinic. Up to 225 primary care clinicians will participate in this study across 15 primary care clinics at HealthPartners and Park Nicollet.

What will I be asked to do?
You will be randomly assigned to receive version 1 of the Opioid Wizard training (Group A) or version 2 of the Opioid Wizard training (Group B). You will be asked to do the following:

1. Complete a case-based training on how to use the Opioid Wizard tool in 4 different patient scenarios that should take 25 - 35 minutes
2. Complete a 15-minute (online) survey on your experience with the training and attitudes towards opioid use disorder
3. Complete a 15-minute follow-up (online) survey in 3 months asking about your experience with the Opioid Wizard tool and your attitudes toward opioid use disorder

What are the benefits?
This study is not expected to help you. We hope that your participation will help us understand how to deliver better trainings for clinical decision support tools in the future.

What are the risks?
There are no physical risks expected with this study. There is a risk that your information could be seen by someone other than the study staff. We will take steps to protect your information.

How is my information protected?
Survey responses will be maintained in a secure location limited to study staff. The following groups may inspect these records:

- National Institute on Drug Abuse and its partners
- The Institutional Review Board of record
- Applicable regulatory authorities

No clinician-specific data will be shared with medical group leaders.

Any information that can identify you will be removed before analysis. The results of the study may be published. Your name or other personal information will never be used.

Do I have to participate?
Your participation is voluntary. Your decision to participate or to stop your participation at any time will not affect your relationship with HealthPartners. If you decide to participate and later decide you want to stop participating, please email Amy LaFrance at Amy.B.Lafrance@healthpartners.com at the email address below.

Does this study cost me anything? Will I be paid?
There will be no cost to you for participating in this research study. You will be given a $100 Amazon gift card to complete the training and initial survey and a $25 Amazon gift card to complete the follow-up survey in 3 months.

Additional Information
A description of this clinical trial will be available on http://ClinicalTrials.gov, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

Data from this study will be available to researchers on another website, https://datashare.nida.nih.gov/ after the study is complete and the data analyzed. This website will not include information that can identify you.

What if I have questions or problems?

Call Stephanie Hooker, PhD, MPH at 952-967-5056 or email her at stephanie.a.hooker@healthpartners.com if you:

- Have questions, concerns, or complaints about the survey.

Call the HealthPartners Institutional Review Board (IRB) at 952-967-5025 if you:

- Have questions about your rights as a research participant.
- Have questions, concerns, or complaints about the research.

You can also contact the HealthPartners IRB by mail at 8170 33rd Avenue South, Mail Stop 21112R, Bloomington, MN 55440. Refer to study #A20-156.

Statement of Consent:
I have read the consent form and I understand:

- What I am being asked to do, and
- The risks and benefits of participating in this research

I understand that clicking the “submit” button indicates:

- I have read this consent form,
- All my questions have been answered, and
- I am agreeing to participate

Please print or retain a copy of this consent for your records and return to the training module to consent and complete the training.

Appendix C: PCC Follow-up Survey Recruitment Email

Invitation letter to participate in the follow-up survey to be sent as an email.

[date]

Dear [Clinician Name],

We are writing to you because you completed a MyLearning training and a survey on Opioid Wizard three months ago, and we are hoping to get more feedback now that the tool has been in production for a few months.

We invite you to participate in this brief, 15-minute survey about your experience with Opioid Wizard and with working with patients with opioid use disorder. You will receive a $25 gift card to Amazon for completing the survey. You can click the link below to complete the survey at any time.

For more information, or to decline this invitation, you can email the study project manager, Amy LaFrance, MPH at amy.b.lafrance@healthpartners.com.

Thank you for your consideration.

Stephanie Hooker, PhD, MPH
Principal Investigator
Research Associate, HealthPartners Institute

[LINK TO REDCap SURVEY]

Appendix D: Immediate Post Training Survey

EXPERIENCE WITH THE OPIOID WIZARD TRAINING

1. This training on Opioid Wizard will help me improve my practice.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

2. This training on Opioid Wizard helped me better understand how to use it.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

3. I found this training on Opioid Wizard easy to understand.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

4. How likely are you to use Opioid Wizard during clinic visits with patients who are thought to be at high risk for opioid use disorder or overdose?

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

WAIVERS AND INTENTIONS

5. Are you currently waivered to prescribe buprenorphine/Suboxone?
    a. YES
    b. NO

5a. [If NO] Do you intend to get waivered to prescribed buprenorphine in the next year?

I definitely will not	I likely will not	Unsure	I likely will	I definitely will
1	2	3	4	5

5b. If a patient with OUD requested buprenorphine in the next year and a waiver were no longer required, would you prescribe buprenorphine?

I definitely would not	I likely would not	Unsure	I likely would	I definitely would
1	2	3	4	5

5c. [If YES] What is your buprenorphine waiver patient limit?

- 30
- 100
- 275
- Don’t know

6. How often do you treat patients with opioid use disorder?

Never	A few times a year	Once or twice a month	Once or twice a week	Daily
1	2	3	4	5

DIFFERENCE, DISDAIN, & BLAME SCALE

7. How similar or different do you think a person with opioid use disorder is compared to everyone else in the general population?

Very similar to others								Not at all similar to others
1	2	3	4	5	6	7	8	9

8. How good or bad you think a person with opioid use disorder is compared to everyone else in the general population?

Very good								Not at all good
1	2	3	4	5	6	7	8	9

9. How responsible do you think people with opioid use disorder are for their illness?

Not at all responsible								Very responsible
1	2	3	4	5	6	7	8	9

10. How like or unlike do you think a person with opioid use disorder is compared to everyone else in the general population?

Very much like others								Not at all like others
1	2	3	4	5	6	7	8	9

11. How respected or disrespected do you think a person with opioid use disorder is compared to everyone else in the general population?

Very respected								Not at all respected
1	2	3	4	5	6	7	8	9

12. How blamed do you think are people with opioid use disorder for their illness?

Not at all blamed								Very blamed
1	2	3	4	5	6	7	8	9

13. How comparable or not comparable do you think a person with opioid use disorder is compared to everyone else in the general population?

Not at all comparable to others								Very comparable to others
1	2	3	4	5	6	7	8	9

14. How favorable or unfavorable do you think a person with opioid use disorder is compared to everyone else in the general population?

Not at all favorable								Very favorable
1	2	3	4	5	6	7	8	9

15. How much do people with opioid use disorder cause their illness?

Did cause their illness								Did not cause their illness
1	2	3	4	5	6	7	8	9

PHYSICIAN VULNERABILITY

16. If I were prescribed opioids, I am confident I could take them and not become addicted.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

17. If I experienced urges to continue opioid use after being prescribed an opioid, I would not give in to them.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

18. If I were prescribed opioids, there is a real risk I would become addicted.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

WILLINGNESS TO WORK WITH PEOPLE WITH OUD

19. I would enjoy my job more if I could stop working with patients with opioid use disorder.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

20. I want to work with people with opioid use disorder.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

21. In general, it is rewarding to work with people with opioid use disorder.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

TREATMENT FUTILITY

22. In your opinion, how effective are available methods for treating opioid use disorder?

Not at all effective	Somewhat effective	Moderately effective	Very effective
1	2	3	4

23. In your opinion, how likely are patients with opioid use disorder to comply with treatment recommendations?

Not at all likely	Somewhat likely	Moderately likely	Very likely
1	2	3	4

DEMOGRAPHICS

24. With what gender do you identify?
    a. Male
    b. Female
    c. Transgender male
    d. Transgender female
    e. Non-binary
    f. Not listed
    g. Prefer not to answer

25. What is your age? _____

26. Do you consider yourself to be Hispanic/Latino?
    - o No
    - o Yes

27. If "Yes", indicate the group that represents your Hispanic origin or ancestry (check all that apply):
    - o Puerto Rican
    - o Dominican (Republic)
    - o Mexican/Mexican American
    - o Chicano
    - o Cuban/Cuban American
    - o Central or South American
    - o Other Latin American
    - o Other Hispanic or Latino
    - o Don't know
    - o Prefer not to answer

28. What race do you consider yourself to represent? (Check all that apply)
    - o American Indian or Alaska Native
    - o Asian
    - o Black or African American
    - o Native Hawaiian or Pacific Islander
    - o White
    - o Some other race (specify):
    - o Don't know
    - o Prefer not to answer

29. On average, how many days a week do you see patients in clinic?
    - o 0
    - o 1
    - o 2
    - o 3
    - o 4 or more

Appendix E: 3-month Follow-up Survey

EXPERIENCE WITH OPIOID WIZARD

1. Have you ever used Opioid Wizard?
    - No
    - Yes

If NO, SKIP to question 5.

2. How likely are you to recommend Opioid Wizard to a colleague?

Not at all likely	Not very likely	Somewhat likely	Moderately likely	Very likely
1	2	3	4	5

3. How often do you use Opioid Wizard when a patient has been identified as being at risk for OUD or overdose within the EHR by the Opioid Wizard?
    - Not applicable; I have not had patients identified as at risk for OUD or overdose
    - None of the time
    - Some of the time
    - Most of the time
    - Every time

4. Opioid Wizard makes it easier to discuss OUD treatment options with patients.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

5. When alerted to patients at increased risk of OUD or overdose, how likely are you to use Opioid Wizard during clinic visits in the future?

I definitely will not	I likely will not	Unsure	I likely will	I definitely will
1	2	3	4	5

WAIVERS AND INTENTIONS

6. Are you currently waivered to prescribe buprenorphine/Suboxone?
    - YES
    - NO

6a. [If NO] Do you intend to get waivered to prescribed buprenorphine in the next year?

I definitely will not	I likely will not	Unsure	I likely will	I definitely will
1	2	3	4	5

6b. If a patient with OUD requested buprenorphine in the next year and a waiver were no longer required, would you prescribe buprenorphine?

I definitely would not	I likely would not	Unsure	I likely would	I definitely would
1	2	3	4	5

6c. [If YES] What is your buprenorphine waiver patient limit?
    - 30

- 100
- 275
- Don't know

7. How often do you treat patients with opioid use disorder?

Never	A few times a year	Once or twice a month	Once or twice a week	Daily
1	2	3	4	5

DIFFERENCE, DISDAIN, & BLAME SCALE

8. How similar or different do you think a person with opioid use disorder is compared to everyone else in the general population?

Very similar to others								Not at all similar to others
1	2	3	4	5	6	7	8	9

9. How good or bad you think a person with opioid use disorder is compared to everyone else in the general population?

Very good								Not at all good
1	2	3	4	5	6	7	8	9

10. How responsible do you think people with opioid use disorder are for their illness?

Not at all responsible								Very responsible
1	2	3	4	5	6	7	8	9

11. How like or unlike do you think a person with opioid use disorder is compared to everyone else in the general population?

Very much like others								Not at all like others
1	2	3	4	5	6	7	8	9

12. How respected or disrespected do you think a person with opioid use disorder is compared to everyone else in the general population?

Very respected								Not at all respected
1	2	3	4	5	6	7	8	9

13. How blamed do you think are people with opioid use disorder for their illness?

Not at all blamed								Very blamed
1	2	3	4	5	6	7	8	9

14. How comparable or not comparable do you think a person with opioid use disorder is compared to everyone else in the general population?

Not at all comparable to others								Very comparable to others
1	2	3	4	5	6	7	8	9

15. How favorable or unfavorable do you think a person with opioid use disorder is compared to everyone else in the general population?

Not at all favorable								Very favorable
1	2	3	4	5	6	7	8	9

16. How much do people with opioid use disorder cause their illness?

Did cause their illness								Did not cause their illness
1	2	3	4	5	6	7	8	9

PHYSICIAN VULNERABILITY

17. If I were prescribed opioids, I am confident I could take them and not become addicted.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

18. If I experienced urges to continue opioid use after being prescribed an opioid, I would not give in to them.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

19. If I were prescribed opioids, there is a real risk I would become addicted.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

WILLINGNESS TO WORK WITH PEOPLE WITH OUD

20. I would enjoy my job more if I could stop working with patients with opioid use disorder.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

21. I want to work with people with opioid use disorder.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

22. In general, it is rewarding to work with people with opioid use disorder.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

TREATMENT FUTILITY

23. In your opinion, how effective are available methods for treating opioid use disorder?

Not at all effective	Somewhat effective	Moderately effective	Very effective
1	2	3	4

24. In your opinion, how likely are patients with opioid use disorder to comply with treatment recommendations?

Not at all likely	Somewhat likely	Moderately likely	Very likely
1	2	3	4