

BRIEF REPORT

Nurse Standing Orders for Buprenorphine Follow-Up Care in a Community Health Center Network

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Background: Less than 20% of individuals with opioid use disorder (OUD) are receiving a medication treatment for OUD in the United States. Though nurses can assume critical roles in outpatient models of OUD care, there are no published reports of buprenorphine standing orders for nurses that guide a nuanced response for patients returning as expected versus those re-engaging after a treatment lapse, without requiring real-time prescriber consultation.

Methods: Standing orders for buprenorphine were created with multiple stakeholders within an urban community health center that includes traditional clinics as well as non-traditional homeless care sites. After more than two years of use, an anonymous survey assessed staff perception of usability and safety of the standing orders using the validated system usability scale (SUS) and a 5-item Likert scale. Patient retention rates at 12 and 18 months were compared for sites that were early- and late-adopters of the standing orders.

Results: Of 24 clinicians and 7 nurses who responded to the survey, 46% had used the standing orders. More than 85% reported a perception that the standing orders improved team-based care and increased access to buprenorphine refills. None reported any safety concerns. The median SUS score was 75.0 (SD 15.4), rated as “excellent”. There was no statistically significant difference in 12- or 18-month retention rates between early- and late-adopter sites of the standing orders.

Conclusions: Nurse standing orders for buprenorphine follow-up and re-engagement care are feasible, usable and perceived as safe in varied community health center settings. (J Am Board Fam Med 2023;36:723–730.)

Keywords: Buprenorphine, Community Medicine, Nurses, Opioid-Related Disorders, Opioids, Patient Care Team, Program Evaluation, Standing Orders, Substance Use Disorders

Background

Among the more than 2 million individuals with opioid use disorder (OUD) in the United States, only an estimated 20% receive any formalized addiction treatment, which can include services

ranging from counseling and group therapy to residential treatment programs and long-term medication treatment. Of the 20% who are able to access care, less than half are prescribed an evidence-based medication, one of which is buprenorphine, as part of their treatment.¹ Although section 1262 of the recent Consolidated Appropriations Act reduced buprenorphine prescribing barriers, nurses can further expand access to buprenorphine treatment in primary care settings, either as care managers or within a broader primary care role, particularly by performing follow-up visits.^{2–4} In published reports, a registered nurse

This article was externally peer reviewed.

Submitted 20 December 2022; revised 2 May 2023; accepted 8 May 2023.

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Funding: None.

Conflicts of interest: None.

Prior presentations of the work: Protocols have been shared locally with other community health centers in western Washington upon request, but not published previously.

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(RN)-led buprenorphine follow-up visit relies on having a pre-signed prescription or having a prescriber sign or send a prescription after consultation with the nurse.^{5,6} There are no published guidance or implementation reports on buprenorphine-specific standing orders for RNs which guide a nuanced response for patients returning as-expected versus those re-engaging after a treatment lapse, without the requirement to consult a prescriber in real-time. Such standing orders may expand capacity for care, reduce reliance on prescribers, and empower RNs in OUD care.

In compliance with state and federal laws, we developed RN standing orders in January 2018 that guide planned buprenorphine follow-up visits as well as unplanned visits for those re-engaging after treatment lapses.^{7,8} During the first years of use, the organization's experience with these standing orders was positive, anecdotally. Thus, in 2021, with the intent to assess if these standing orders may be worth disseminating and worthy of future, more rigorous, study, we collected a limited observational data set. Here, we present an evaluation of these standing orders through assessment of the staff experience, the perceived usability and safety, and the association with patient retention rates.

Methods

Standing Order Structure

The buprenorphine standing orders (see Appendix) were designed within an urban community health center network, composed of clinics and varied homeless care settings. The orders apply only after a buprenorphine prescriber has diagnosed OUD, initiated buprenorphine treatment, and authorized the orders in the patient's medical record. The standing orders apply to in-person RN visits (though we have recently adapted these to telemedicine) and cannot be used more than a specified number of times in a row without prescriber consultation.

The orders guide the RN in checking the prescription drug monitoring program, performing a point-of-care urine pregnancy test and toxicology screen when applicable, and history taking. "Stop-points" are circumstances requiring prescriber consultation, designed to be consistent with a "low threshold" approach to buprenorphine treatment.^{9,10} If no stop-points are encountered, the RN is guided to transmit an order via phone to a pharmacy for a buprenorphine refill on behalf of

the prescriber who authorized the orders (feasible in our context before September 2021), or pend an e-prescription tasked to a prescriber, noting that criteria were met. Prescription length is based on whether the Continuation or Re-Engage protocol is utilized (see Appendix). The prescriber signs off on the prescription and use of the standing orders that day.

Evaluation of Staff Experience

An online anonymous survey to assess usability of the standing orders and perceived safety concerns was sent in April 2021 to all RNs and buprenorphine-waivered prescribers in primary care or homeless care sites in the organization. Eligible participants were sent three separate email prompts to increase participation.. Respondents (prescribers or RNs) who had used the protocols assessed their agreement with the following statements using a 5-item Likert scale: "*The protocols are effective in promoting team-based care; The protocols have increased access to buprenorphine refills; The protocols have increased my satisfaction with providing care to patients with OUD.*" Usability was assessed using the validated 10-item system usability scale (SUS), which can differentiate between usable and unusable tools.¹¹ The system usability scale is a Likert-based tool originally developed for use in industry for the purpose of determining whether a particular system, such as computer software, was comparably more functional than previous versions. Having now been utilized in a wide range of research and professional settings, the validated questions are designed to quickly elicit strong responses from participants to identify areas of general agreement on the functionality of the system being studied. We interpreted the SUS scores based on the scale proposed by Bangor, *et al.*: 0–25: worst; 26–39: poor; 40–52: OK; 53–73: good; 74–85: excellent; 86–100: best.^{12,13}

Retention-in-Care Evaluation

Sites were categorized as early- or late-adopters, with the intention of assessing if earlier adoption of the standing orders was associated with different retention rates. Early-adopter sites, including the network's homeless care programs, had used the standing orders for more than a year by March 2020, whereas late-adopter sites had adopted the standing orders to varying degrees by April 2021. Retention rates were defined as the percentage of patients who received a buprenorphine prescription between 3/3/2020–4/2/2020 at early- and late-adopter sites who

also received a prescription between 3/3/2021-4/2/2021 (12-month retention rate) or between 9/3/2021-10/2/2021 (18-month retention rate). Retention rates were differentiated by whether follow-up occurred at the same cohort of sites (eg, percent of early-adopter patients following up at early-adopter sites; “same-cohort” retention rate) or regardless of follow-up location (eg, percent of early-adopter patients following up at any site; “any-cohort” retention rate). A chi-squared test compared rates between the early- and late-adopter groups.

Results

Twenty-four prescribers (physicians, physician assistants, nurse practitioners) and 7 RNs responded

to the survey (see Table 1), representing 59% and 19% of eligible respondents, respectively. Fifteen (46%) had used the standing orders. None perceived any safety concerns. Of those who had used the standing orders, 100%, 93%, and 85% reported that they completely or somewhat agreed that the protocols promoted team-based care, increased access to buprenorphine refills, and increased their satisfaction with providing OUD care, respectively. The average system usability score (SUS) attributed to the orders was 73.0 (median, 75; range 35-97.5; standard deviation 15.4). Based on the scale proposed by Bangor, *et al.*, all but one SUS score were rated as “good” or “excellent.”^{12,13}

Between 3/3/2020-4/2/2020, 169 patients received a buprenorphine prescription at an early-adopter

Table 1. Survey of FQHC Nurses and Clinicians, April 2021, on the Buprenorphine Standing Order Protocols (BSP)

Questions	Responses				
What is your role?	MD/DO/PA/NP: 24 (out of 41 possible respondents) RN: 7 (out of 36 possible respondents) Declined to specify: 1 [†]				
Are you aware of the BSP?	Yes: 23, No: 9				
(Of those who are aware of the BSP): Have you used the BSP, either authorizing them as a prescriber, or employing them to help a patient with a refill as a RN?	Yes: 15, No: 8				
Do you have any safety concerns with the BSP? If so, please describe.	No: 100%				
Respondents who have used the BSP (n=15) rated the following statements on a 5-item Likert scale:	Completely Agree	Somewhat Agree	Neutral	Somewhat Disagree	Completely Disagree
The BSP is effective at promoting a team-based care approach	66.7%	33.3%	0%	0%	0%
The BSP has increased patient access to buprenorphine refills	80%	13.3%	6.7%	0%	0%
The BSP increased my satisfaction providing care for patients with opioid use disorder*	64.3%	21.4%	14.3%	0%	0%
Statements derived from the System Usability Scale:	Completely Agree	Somewhat Agree	Neutral	Somewhat Disagree	Completely Disagree
I would like to use the BSP frequently in my practice	53.3%	46.7%	0%	0%	0%
I find the BSP unnecessarily complex	6.7%	6.7%	13.3%	60%	13.3%
I find the BSP easy to use*	35.7%	50%	7.1%	7.1%	0%
I think I need more support to use the BSP well*	7.1%	21.4%	0%	21.4%	50%
I find the BSP to be clear, and algorithmic*	35.7%	35.7%	28.6%	0%	0%
I think there is too much inconsistency with use of the BSP*	7.1%	7.1%	35.7%	35.7%	14.3%
I imagine most people could learn to quickly use the BSP*	21.4%	57.1%	21.4%	0%	0%
I find the BSP cumbersome to use*	7.1%	0%	0%	21.4%	71.4%
I feel confident using the BSP*	35.7%	42.9%	7.1%	14.3%	0%
I needed to learn a lot of things before I could use the BSP*	7.1%	7.1%	14.3%	57.1%	14.3%

*Only 14 of 15 eligible respondents provided an answer.

[†]This respondent reported being unaware of the protocols.

Abbreviations: FQHC, Federally qualified health centers; MD, Medical doctors; DO, Doctors of osteopathic medicine; PA, Physician assistants; NP, Nurse practitioners.

site. At 12 months, 93 followed up at an early-adopter site whereas 4 followed up only at a late-adopter site, for a 55% same-cohort and 57% any-cohort 12-month retention rate. At 18 months, 76 followed up at an early-adopter site whereas 4 followed up only at a late-adopter site, for a 45% same-cohort and 47% any-cohort 18-month retention rate.

Between 3/3/2020–4/2/2020, 163 patients received a buprenorphine prescription at a late-adopter site. At 12 months, 98 followed up at a late-adopter site whereas 2 followed up only at an early-adopter site, for a 60% same-cohort and 61% any-cohort 12-month retention rate. At 18 months, 89 followed up at a late-adopter site whereas 1 followed up only at an early-adopter site, for a 55% same-cohort and 55% any-cohort 18-month retention rate.

There was no significant difference between the early- and late-adopter 12 month same-cohort ($p=0.35$) or any-cohort ($p=0.46$) retention rates, nor the 18-month same-cohort ($p=0.08$) or any-cohort ($p=0.15$) retention rates.

Discussion

RN standing orders that guide follow-up buprenorphine care for patients with OUD were perceived as safe, useful and usable by the vast majority of respondents within a community health center network. These results are consistent with the experience and data from varied other nurse standing orders, which have been used successfully for conditions ranging from sexually transmitted infection testing and treatment to management of warfarin and insulin.^{14,15}

Though sites that had early adoption of the RN standing orders had non-significantly lower retention rates at 12- and 18-months compared with late-adopter sites, most of the early-adopter sites comprised the homeless care programs of the health center network, caring for a population with greater instability in multiple domains of life, which may affect retention rates.^{16–18}

Anecdotally, RNs expressed that the algorithmic nature of the protocols lowered the barriers to entry into OUD care participation. The added layer of clinical support afforded by the protocols also encouraged some late-adopter prescribers to begin treating OUD, consistent with barriers to providing OUD care noted in the literature.¹⁹ We have found particular value

for these protocols in non-traditional settings in which some RNs practice, such as at community day spaces.

Our data has limitations. The survey had a limited response rate, particularly by RNs. We were unable to evaluate consistency of buprenorphine adherence, and the assessment of rates of retention-in-care presents only a snapshot at different points in time. Patient-centered metrics, such as the experience of care and mortality data, are also not captured in this observational study.

Despite these limitations, the data suggest that implementing such standing orders in a community health center setting is feasible and perceived as safe, useful, and usable by care teams. The current regulatory milieu in Washington State, where these standing orders were implemented and still used, will be similar, if not more strict, than other states, as buprenorphine prescriptions now must be sent electronically, by a prescriber. Thus, our standing orders can likely be readily adopted by teams in any state. Future research could assess the effect of such standing orders on patient access to and their experience of buprenorphine care. We view these protocols as one way that outpatient clinics can enhance team-based care, strive to increase buprenorphine capacity and aim to reduce barriers for patients in following-up for buprenorphine treatment.²⁰

To see this article online, please go to: <http://jabfm.org/content/36/5/723.full>.

References

1. Williams AR, Nunes EV, Bisaga A, Levin FR, Olfson M. Development of a cascade of care for responding to the opioid epidemic. *Am J Drug Alcohol Abuse* 2019;45(1):1–10.
2. United States, Congress, House. *Consolidated Appropriations Act, Section, 1262*. Government Printing Office, 2023. 117th Congress, 2nd Session, House Report 2617. Available at: <https://www.congress.gov/bill/117th-congress/house-bill/2617>. Accessed 21 Apr. 2023.
3. Alford DP, LaBelle CT, Kretsch N, et al. Collaborative care of opioid-addicted patients in primary care using buprenorphine: five-year experience. *Arch Intern Med* 2011;171(5):425–31.
4. LaBelle CT, Han SC, Bergeron A, Samet JH. Office-based opioid treatment with buprenorphine (OBOT-B): statewide implementation of the Massachusetts Collaborative Care Model in Community Health Centers. *J Subst Abuse Treat* 2016;60: 6–13.

5. LaBelle CT, Bergeron LP, Wason KW, Ventura AS. Clinical guidelines for the office based addiction treatment program for the use of buprenorphine and naltrexone formulations in the treatment of substance use disorders [Internet]. Boston Medical Center; 2018. Available from: <https://www.bmcobat.org/resources/>.
6. Hernandez Y, Meyers-Ohki S, Farkas S, et al. How Massachusetts, Vermont, and New York are taking action to address the opioid epidemic. *Am J Public Health* 2018;108(12):1621–2.
7. Opioid use disorder—medication assisted treatment: nurse care managers and scope of practice [Internet]. Washington state Department of Health, Nursing Care Quality Assurance Commission; 2019. Available from: <https://www.doh.wa.gov/Portals/1/Documents/6000/NCAO16.pdf>.
8. CFR - Code of Federal Regulations Title 21. [Accessed 2021 Jan 24]; Available from: <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=1306&showFR=1>.
9. Winograd RP, Presnall N, Stringfellow E, et al. The case for a medication first approach to the treatment of opioid use disorder. *Am J Drug Alcohol Abuse* 2019;45(4):333–40.
10. Jakubowski A, Fox A. Defining low-threshold buprenorphine treatment. *J Addict Med* 2020;14(2):95–8.
11. Brooke J, Others. SUS-A quick and dirty usability scale. *Usability evaluation in industry* 1996; 189(194):4–7.
12. Bangor A, Kortum PT, Miller JT. An empirical evaluation of the system usability scale. *International Journal of Human–Computer Interaction* 2008;24(6):574–94.
13. Bangor A, Kortum P, Miller J. Determining what individual SUS scores mean: adding an adjective rating scale. *J Usability Studies* 2009;4(3):114–23.
14. Flinter M, Hsu C, Crompt D, Ladden MD, Wagner EH. Registered nurses in primary care: emerging new roles and contributions to team-based care in high-performing practices. *J Ambul Care Manage* 2017;40(4):287–96.
15. Wagner EH, Flinter M, Hsu C, et al. Effective team-based primary care: observations from innovative practices. *BMC Fam Pract* 2017;18(1):13.
16. McLaughlin MF, Li R, Carrero ND, Bain PA, Chatterjee A. Opioid use disorder treatment for people experiencing homelessness: A scoping review. *Drug Alcohol Depend* 2021;224:108717.
17. Weinstein LC, Iqbal Q, Cunningham A, et al. Retention of patients with multiple vulnerabilities in a federally qualified health center buprenorphine program: Pennsylvania, 2017–2018. *Am J Public Health* 2020;110(4):580–6.
18. Biondi BE, Vander Wyk B, Schlossberg EF, Shaw A, Springer SA. Factors associated with retention on medications for opioid use disorder among a cohort of adults seeking treatment in the community. *Addict Sci Clin Pract* 2022;17(1):15.
19. DeFlavio JR, Rolin SA, Nordstrom BR, Kazal LA, Jr. Analysis of barriers to adoption of buprenorphine maintenance therapy by family physicians. *Rural Remote Health* 2015;15:3019.
20. Dupouy J, Palmaro A, Fatséas M, et al. Mortality associated with time in and out of buprenorphine treatment in French office-based general practice: a 7-year cohort study. *Ann Fam Med* 2017;15(4):355–8.

Appendix.

The Registered Nurse Buprenorphine Protocols: A Template for Other Primary Care Centers

These protocols were first implemented at a network of community health centers in Seattle, WA in 2018. Other clinics can customize or adapt this framework to their own needs and regulatory setting. The goal of these protocols is to improve team capacity for opioid use disorder (OUD) treatment, reduce barriers to treatment maintenance for patients, and enhance team-based care by empowering the role of Registered Nurses (RNs). These protocols can be implemented regardless of whether the RNs are working as dedicated OUD treatment care managers or in a broader primary care role.

Clinics implementing these protocols need to provide training for prescribers, registered nurses, and the clinic scheduling team on this work and how it can affect changes in scheduling and work-flows. Important reminders to buprenorphine prescribers include:

- Familiarize oneself with the protocols for RNs on the next pages
- If wishing to authorize the protocols, include this authorization in every chart note. In our suggested framework here, if written authorization by the buprenorphine prescriber is not present, the protocols cannot be used. However, some clinics may choose to remove this requirement depending on the goals and consensus of their primary care teams.
- In our framework, authorization to use these protocols (either Continuation Protocol, Re-Engage Protocol or both) can be revoked, in writing, in the medical record by any buprenorphine prescriber.

STOP points signal that a RN cannot proceed with the prescription standing orders of the protocols without consulting with a buprenorphine prescriber.

VARIABLES indicate elements of the protocol that can easily be adjusted based on the consensus of the primary care teams/organization. For reference, we list the variables that we have chosen at our institution.

PROTOCOL & CHECKLIST: RN Buprenorphine Protocols

AUTHORIZATION CRITERIA to proceed with these protocols:

- Verify that a buprenorphine prescriber has documented permission, not since revoked, for these protocols to be used for either or both of the following:
 - CONTINUATION protocol: For patients presenting for a planned visit for buprenorphine continuation, or no more than 3 days (VARIABLE) after missing a planned visit
 - RE-ENGAGE protocol: For patients re-engaging after a lapse in care of more than 3 days (VARIABLE) after missing a planned visit but no more than 60 days (VARIABLE) since last visit with buprenorphine prescriber
- The patient must be in person (eg not applicable over the phone)
- Review most recent prescriber note for any specific instructions
- **STOP point:** These protocols cannot not be used more than 2 times in a row (VARIABLE) since the last buprenorphine prescriber visit without specific authorization by the prescriber to do so.

ASSESSMENT SECTION:

- **Assess medication adherence, barriers to care, goals, progress towards goals, recovery supports**
 - STOP point: If major concerns re: diversion or adherence, consult a buprenorphine prescriber
- **Perform point-of-care urine toxicology screen & chart results**
 - For CONTINUATION protocol: Urine toxicology should be POSITIVE for buprenorphine and NEGATIVE for methadone. Other substances acceptable (VARIABLE)
 - **STOP point:** Consult a prescriber if urine toxicology is negative for buprenorphine or positive for methadone.
 - For RE-ENGAGE protocol: Urine tox should be NEGATIVE for methadone. Other substances acceptable, including buprenorphine (VARIABLE)
 - **STOP point:** Consult a prescriber if urine toxicology is positive for methadone.

- For patients with a uterus, age 50 or younger, who are not already known to be pregnant, a urine pregnancy test is needed if:
 - There is no contraception plan in place, AND...
 - The last menstrual period was > 1 month ago (VARIABLE), AND...
 - There is no urine pregnancy test documented in the last 4 weeks (VARIABLE).
 - STOP point: Consult a prescriber if the patient is newly pregnant.
- Check the state Prescription Drug Monitoring Program (PDMP) if there is no documentation that this has been checked in the last 30 days (VARIABLE). Document when it was checked (today vs prior).
 - PDMP should show prescriptions for buprenorphine by the primary care team (ok if most recent Rx doesn't show yet, given data reporting lags)
 - PDMP should not show any unexpected controlled medications (controlled medications from another setting that are not expected based on known hospitalizations or other care)
 - STOP point: Consult a prescriber if PDMP is checked and above 2 criteria aren't met.
- Review the need to take buprenorphine sublingually, to keep safe and away from children
- If all above are done, and no STOP points are encountered, proceed to the prescription section.

PRESCRIPTION STANDING ORDERS, if no STOP points have been encountered:

- For the CONTINUATION protocol:
- Phone-in prescriptions: Call in to a pharmacy (ask to speak with the pharmacist directly) to transmit an order for buprenorphine-naloxone on behalf of the buprenorphine prescriber who authorized the protocols for the amount per instructions below:
 - Films vs tablets? Per patient preference, typically what was prescribed prior
 - Daily dose (sig/directions):
 - **CONTINUATION** protocol: Same daily dose as has been prescribed, UNLESS the patient reports already taking a lower dose felt to be adequate; if so, document, & prescribe the lower dose.
 - **RE-ENGAGE** protocol:
 - Prescribe the dose that the patient was previously prescribed, up to 24 mg daily (VARIABLE). If the patient was only taking a lower dose prior and felt it to be adequate, ok to prescribe the lower dose.
 - Quantity (how much total in the Rx?):
 - **CONTINUATION** protocol: As specified by the prescriber's last note, OR, if not specified:
 - Maximum of 1 week (VARIABLE) if patient's urine drug screen still has non-prescribed opioids
 - Same interval as the patient had been getting, up to 2 weeks supply (VARIABLE), if the urine drug screen shows no non-prescribed opioids
 - **RE-ENGAGE** protocol: Use as needed to last until the next prescriber or RN visit, with maximum of a 7 day supply (VARIABLE).
 - If a greater quantity or dose is desired (for either protocol), consult a buprenorphine prescriber.
 - **Refills:** none
- **Pending electronic prescriptions (required after September 2021 in Washington State).** It is also reasonable to pend an electronic prescription for buprenorphine-naloxone based on the instructions above and task or message the buprenorphine prescriber (if available), noting that the RN buprenorphine protocols were used to determine prescription length and amount.
- **When to advise buprenorphine re-induction process:**
 - If a patient has not had buprenorphine for 48 hours AND has used other non-buprenorphine opioids (e.g. heroin, oxycodone, fentanyl) since the last buprenorphine dose, advise that the patient go through the restarting process. Use available clinic handouts on the induction process to guide the discussion. Consult other team members if needed. Most patients will know when they need to "re-induce".

FOLLOW-UP PLAN

- Before the prescription runs out, ideally with a buprenorphine prescriber
- Prescribers may have specified further follow-ups with RNs for those coming back for planned visits using the CONTINUATION protocol

DOCUMENTATION by the RN

- Use “opioid use disorder” for diagnosis.
- Document the phoned-in transmittal of the buprenorphine-naloxone prescription in the medication list. This will generate an automatic “sign-off” prompt to the medical prescriber . However, a medical prescriber’s signing off on the prescription is not needed for the medication to be filled by the pharmacy when it was already phoned-in.
- Copy the buprenorphine prescriber on the RN chart note, notifying the prescriber that the RN buprenorphine protocol was utilized.