Description of a pharmacist-led clinical video telehealth group clinic for opioid overdose prevention and naloxone education

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How to cite: Jensen AN, Beam CM, Douglass AR, Brabson JE, Colvard M, Bean J. Description of a pharmacist-led clinical video telehealth group clinic for opioid overdose prevention and naloxone education. Ment Health Clin [Internet]. 2019;9(4):294-7. DOI: 10.9740/mhc.2019.07.294.

Abstract
To achieve the nationwide goal of reducing opioid-related deaths, a clinical pharmacy specialist–led clinical video telehealth (CVT) clinic was created at a Veterans Affairs medical center (VAMC) to deliver opioid overdose prevention and naloxone education to at-risk patients. The purpose of this innovative practice was to improve access to this potentially life-saving intervention to patients across urban and rural areas. This study is a single-center, descriptive analysis of adult patients across 2 VAMC campuses and 4 community-based outpatient clinics from July 11, 2016, through December 31, 2016. The purpose of this innovative practice was to increase access to overdose education and naloxone distribution (OEND) to at-risk patients across urban and rural areas. Patient-specific factors were also examined among those receiving naloxone through the CVT clinic compared to other prescribers. During the first 6 months from the initiation of the clinic, 1 pharmacist prescribed 21% of the health care system’s naloxone. These patients identified by the pharmacist-led CVT clinic were more likely to be considered high-risk due to concomitant use of opioids and benzodiazepines. In conclusion, the pharmacist-led CVT group clinic has been an efficient strategy to extend OEND services to high-risk patients beyond central, urban areas.

Keywords: naloxone, opioid, overdose, CVT, telehealth

Background
Drug overdose is the leading cause of accidental death in the United States, and veterans are almost twice as likely to have accidental overdose compared to the general population.1,2 In response to the increasing number of overdose deaths, opioid overdose education and naloxone distribution (OEND) programs were established in 1996.3 Naloxone has been responsible for more than 10 000 overdose reversals since it was first implemented in the United States in the public health setting more than 20 years ago. Efforts are underway at health care facilities across the nation to find the most efficient and effective way to identify and provide this service to patients at risk for opioid overdose.4,5

This Veterans Affairs medical center (VAMC) greatly relies on community-based outpatient clinics, which are often
located in rural areas, to meet patient-care needs with more than 63,000 patients classified as highly rural or rural and bring care closer to home. However, these clinics may not have all the specialty services and staff found at the primary medical centers. Clinical video telehealth (CVT) offers increased access to patients in rural areas. Patients and providers at separate locations are able to see and hear each other by participating in CVT simultaneously. Currently, no published literature has evaluated opioid overdose prevention programs in the setting of a telehealth clinic. A reoccurring barrier to OEND is that there is not always enough time for the prescriber to provide effective education given multiple conditions that must be addressed during a patient care appointment. Although the Department of Veterans Affairs is working to educate all prescribers on the importance of OEND, clinical pharmacy specialists (CPSs) are uniquely trained and positioned to identify patients who may benefit from OEND, provide patient education, and prescribe naloxone.* For these reasons, a pharmacist-led OEND CVT clinic was created at a VAMC. The purpose of this innovative practice was to increase access to OEND to at-risk patients across urban and rural areas.

Clinic Description

The OEND CVT clinic began offering weekly group naloxone training to patients at 2 main campuses and 4 community-based outpatient clinics on July 11, 2016. Patients present at the pharmacist’s location received face-to-face training, and those joining from up to 5 other remote locations participated simultaneously through CVT technology. The pharmacist could see up to 4 patients at each of the 6 locations for a potential capacity of 24 patients per 1-hour session. Patients were most commonly referred to this service by their opioid prescriber or identified by the clinic CPS. The CPS coordinating the service identified patients using VAMC risk-stratification tools, such as the Stratification Tool for Opioid Risk Mitigation (STORM) dashboard.

Participants were encouraged to bring family, friends, or others closely involved in their care to participate in training. To start, the pharmacist ensured all patients understood the purpose of the group and how CVT audiovisual equipment would be used to allow for interaction across all locations. Importance was placed on establishing the primary objectives of the education session: opioid overdose–prevention strategies, recognizing overdose, and responding to overdose. The pharmacist developed and utilized a PowerPoint (Microsoft, Redmond, WA) presentation as a visual aid and asked questions throughout the education session to assess patient knowledge and encourage discussion and engagement. Following completion of the CVT education group, the pharmacist prescribed naloxone under the scope of practice for all patients in attendance.

Additionally, a telehealth clinical technician was present at each location to schedule appointments, escort patients into the group room, provide educational materials, operate audiovisual equipment, and triage any technical difficulties. Telehealth clinical technicians are commonly registered nurses and licensed practical nurses.

Impact on Patient Care

A descriptive analysis of the first 6 months of this service was conducted from July 11, 2016, through December 31, 2016. All patients prescribed naloxone during this time frame were included for analysis. Hospice, palliative care, and community living center patients were excluded along with patients who received naloxone prescriptions from non-VAMC providers or from other VAMC facilities. Naloxone refills and renewals were not included in data analysis. As a quality-improvement project, this review was submitted to the institutional review board and deemed exempt.

The total number of naloxone prescriptions distributed through the CVT clinic was compared to prescriptions from all other clinics during the first 6 months of clinic initiation. Risk Index for Overdose or Serious Opioid-Induced Respiratory Depression (RIOSORD) scores, number of patients prescribed concomitant benzodiazepines and opioids, and morphine equivalent daily dose (MEDD) >100 were described for this cohort to provide an objective risk assessment. The RIOSORD scores were utilized given their ability to provide real-time, evidence-based information regarding risk by incorporating high-risk disease states (chronic pulmonary disease, chronic kidney disease, heart failure), opioid formulation, MEDD, and psychotropic medications.6 Extracted data from the STORM dashboard included demographics, past medical history, and RIOSORD scores. Demographics included age, sex, race, MEDD, and comorbid conditions associated with opioid-induced respiratory depression. All prescription data was extracted from pharmacy claims data. Statistical analysis was completed using Excel (Microsoft) and GraphPad (GraphPad Software Inc, San Diego, CA). All demographics and data points were analyzed using descriptive statistics and chi square analysis with Yates correction. Significance tests were 2-sided. P values <.05 were defined as statistically significant.

Of patients who received a naloxone kit during this time period, the mean age was 57 years, 94.2% were men, and 84.4% were white (Table 1). The RIOSORD scores were assessed for all patients who filled a naloxone kit during the specified time frame irrespective of whether

| Table 1: RIOSORD Scores |
|-------------------------|
| Age                      | 57 years |
| Sex                      | 94.2% men |
| Race                     | 84.4% white |

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naloxone was filled in a CVT clinic versus other clinic locations. Of all patients who received a naloxone kit during this time period, 63.7% (n = 144) of patients had a RIOSORD score ≥25, correlating with at least a 14% risk of experiencing opioid-induced respiratory depression. Depression was the most common comorbid disease state in both groups.

Discussion

Previous studies7–10 have demonstrated that opioid overdose prevention programs are associated with a reduction in opioid overdose deaths. However, there is currently no published literature describing opioid overdose prevention programs in the setting of telehealth.
clinics. Clinical video telehealth was chosen as a means to increase access to OEND services for rural patients.

The increased likelihood of patients served by the CVT clinic to be receiving concomitant benzodiazepines and opioids was not surprising. As part of the CVT clinic initiative, a priority target population was patients who were prescribed both benzodiazepines and opioids due to increased overdose risk. It is also not alarming to see patients with substance use disorders were more likely to be prescribed naloxone via non-CVT providers as many of these patients receive naloxone through specialty addiction clinics.

One limitation is that our sample size is smaller than expected because we were unable to assess cancellations and no-shows. We were unable to assess naloxone utilization or patients’ understanding of education objectively. All patients were encouraged to bring a guest to the CVT clinic, but we did not assess guest attendance. Another limitation is that MEDD was calculated using max daily dose allotment rather than actual daily use, and only prescriptions that were filled at this VAMC were included. The controlled substance-monitoring database was not utilized. Last, comorbid disease states were only included if they were active within the year prior to clinic implementation and had been appropriately coded in the electronic health record.

Conclusion

In conclusion, the pharmacist-led CVT group clinic has been an efficient strategy to extend OEND services to high-risk patients beyond central, urban areas. The clinic was effective at reaching patients who were deemed high risk based upon concomitant use of benzodiazepines and opioid medications using population-management tools. Providing OEND services to high-risk populations remains a priority throughout the county. We feel that use of CVT to provide OEND services is an innovative solution to help better serve those at risk for overdose regardless of geographical location. In the future, population-management data tools could be used to better target other high-risk populations, such as those with substance use disorder.

Acknowledgments

We acknowledge the members of the Residency Research Advisory Board at the Tennessee Valley Healthcare System for its assistance in preparing this article for submission: Jennifer Baker, PharmD, BCACP, BCPS; M. Shawn McFarland, PharmD, BCPS, BCACP, BC-ADM; Brent Salvig, PharmD, BCPS; and Jessica Wallace, PharmD, BCPS.

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