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Brief Report

SCREENING TOOLS VALIDATED IN THE OUTPATIENT PAIN MANAGEMENT SETTING POORLY PREDICT OPIOID MISUSE IN THE EMERGENCY DEPARTMENT: A PILOT STUDY

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☐ **Abstract—Background: Currently, no universally accepted methods exist to assess drug-related aberrant behaviors in emergency department (ED) patients. There are several screening tools to identify opioid misuse in patients with chronic pain, however, the validity of these screening tools to assess for misuse within the ED remains unclear. Objectives: This study investigated the effectiveness of three commonly used screening tools, previously validated in outpatient pain management settings, to assess risk of opioid misuse in ED patients. Methods: This was a prospective observational study of 154 participants (median age 50 years; 49.6% female) presenting to an academic ED for a chief complaint of pain ≥ 6 months or an opioid refill request. Participants completed the Opioid Risk Tool, the Screener and Opioid Assessment for Patients with Pain–Revised, and the Current Opioid Misuse Measure. Scores for each were compared with electronic medical record (EMR) data alone or a reference standard comprising EMR + statewide prescription drug monitoring program (PDMP) + medical examiner database. Results: Using the combined reference standard, 55.8% of participants displayed at least one aberrant behavior. Regardless of the reference standard, the test characteristics of these screening tools were modest at best, with likelihood ratios close to 1. Conclusion: Three screening tools previously validated in outpatient pain management settings poorly categorized risk among ED patients with chronic noncancer pain or requests for opioid refills, and should not be used to assess drug-aberrant behaviors in the ED. Review of the EMR alone or together with the PDMP may be more useful methods to assess drug-aberrant behaviors in the ED setting.** © 2019 Elsevier Inc.

☐ **Keywords—opioids; emergency department; chronic pain; opioid misuse screening tools; prescription drug monitoring program**

INTRODUCTION

The opioid epidemic has claimed a record number of American lives, with deaths from overdose in the United States increasing approximately 137% from 2000 to 2014 (1). As emergency departments (EDs) now deliver half of all hospital-associated medical care in the United States, the opioid epidemic represents a large problem for emergency physicians (2). Unfortunately, relying on physician gestalt is not a particularly sensitive method of detecting aberrant drug-related behaviors, and there are currently no universally accepted methods to identify patients who are most at risk for misusing opioids in the ED (3,4).

Although traditional screening tools have long been used in pain clinics and outpatient settings nationwide,

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many regulatory authorities are instead promoting the use of statewide prescription drug monitoring programs (PDMPs) to minimize abuse of opioid pain medication. As of January 2, 2018, 37 states require prescribers to access the PDMP prior to writing a prescription in at least some circumstances (5). Proponents believe that use of PDMPs alters prescriber behavior, and typically results in fewer opioids being prescribed (3,6).

Given that risk factors for drug abuse typically include many variables not assessed by PDMPs, it is plausible that screening tools developed to identify drug-aberrant behaviors may be a more useful way to identify patients for whom it might be risky to provide opioid prescriptions. For this reason, guidelines such as the Washington State "Interagency Guideline on Prescribing Opioids for Pain" have recommended the use of bedside tools in addition to the PDMP prior to providing opioid prescriptions (7). However, there have been few investigations of validity of these screening tools in the ED despite an American College of Emergency Physicians clinical policy that specifically noted "significant research gaps" on aberrant drug-related behaviors in the ED (8–10).

Thus, the objective of this study was to calculate the sensitivity and specificity in the ED setting of three commonly used, previously validated screening tools to predict aberrant behavior or opioid misuse in patients that reported long-term pain or who were requesting prescription refills (11–13). The accuracy of these tools was compared with two different reference standards: the electronic medical record (EMR) alone; and the institution EMR + statewide PDMP + medical examiner (ME) database.

MATERIALS AND METHODS

Participants

All patients presenting to the [UC San Diego Health System] ED when a research associate (RA) was available (typically, daytime Monday–Friday 8 AM–8 PM) from January 1, 2014 to March 31, 2015, were approached consecutively to participate in the study. This research did not receive any funding from the public, commercial, or not-for-profit sectors. Given the limited funding available for this project, RAs were available only during these hours, as approximately 83% of weekday arrivals with pain complaints were present in the studied ED during at least part of this time.

To participate, patients had to report chronic pain persisting for more than 6 months, even if unrelated to the current visit, or present with a refill request for a prescription opioid medication. We used this chronic pain criterion to match the validation study for one of the screening tools (11). Patients were excluded if they were younger than 18 years of age, were incarcerated, were unable to read or understand the consent forms, or had a historical or current cancer diagnosis. This study was approved by the [UC San Diego Health System] institutional review board prior to data collection.

Design and Procedure

This was a prospective observational study of patients presenting to the ED of an urban, academic medical center with an annual census of approximately 60,000 patients per year. Patients were informed that the purpose of the study was to evaluate opioid use in the ED, that the study was completely separate from their care, and that their physicians would not be informed if they enrolled in the study. After informed consent was obtained, each participant completed three surveys: the Current Opioid Misuse Measure (COMM), the Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP-R), and the Opioid Risk Tool (ORT) (11–13). The surveys were administered with the RA out of the room unless the participant requested the RA to read the questions to them. The RA did not give further instruction regarding the questions or content of the surveys. The order of the survey forms was not varied, and responses were not further verified for veracity, as the study methodology was not designed to assess intentional deceit while answering the surveys.

Development of the reference standard. As no universal gold standard of drug abuse exists, and as the criteria from the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition are difficult to assess without a structured interview, which is unfeasible in typical ED practice, the reference standard was constructed after review of available literature and conversations with pain researchers (3,4,11–15). For the purposes of this study, any of 10 behaviors were considered to be aberrant (see Table 1 for list). The criteria included objective aberrant behaviors as noted in the EMR, the statewide prescription drug-monitoring database, or the local medical examiner database. Although use of such criteria does not permit a formal diagnosis of opioid use disorder, criteria such as overdose, death, forgery, or selling of prescriptions have been proposed as predictive of substance use disorder (16). Other criteria such as "frequent unscheduled visits to the ED" or "frequent solicitation or receipt of narcotic prescriptions" were also included so as to more closely match criteria used in some screening studies (11,12). As physicians are increasingly being asked to note and document opioid-treatment history prior to prescribing opioids, such objective criteria are likely more clinically relevant than self-report criteria (17).

Screening tools were compared against two reference standards: the EMR alone and the EMR + PDMP + ME databases. The EMR alone as a reference standard was

Table 1. Behaviors deemed to be drug aberrant.

	Data from the Electronic Medical Record (EMR)	Data from the Prescription Drug Monitoring Program (PDMP)	Data from the Local Medical Examiner (ME)
1. Documentation of forging a prescription within the preceding 3 months or subsequent 3 months of enrollment emergency department (ED) visit.	X	X	
2. Documentation of selling a prescription within the preceding 3 months or subsequent 3 months of enrollment ED visit.	X	X	
3. Overdosed from illegal or prescription drug use in the subsequent 3 months of the enrollment ED visit.	X		
4. Died from illegal or prescription drug use in the subsequent 3 months of the enrollment ED visit.	X		X
5. Positive urine drug screen for illegal substances including amphetamines, barbiturates, cocaine, or phencyclidine, within the preceding 3 months or subsequent 3 months of enrollment ED visit.	X		
6. Solicited or received a schedule II or III opioid prescription from 3 or more separate physicians in the preceding 3 months or subsequent 3 months of enrollment ED visit.	X	X	
7. Participant had 3 or more visits to the study institution's ED with a chief complaint of any painful condition within the preceding 3 months or subsequent 3 months of enrollment ED visit.	X		
8. Solicitation or receipt of a schedule II or III opioid prescription refill at the ED after missing a clinic visit within 7 days prior to enrollment ED visit.	X		
9. Discharged from a medical practice due to any drug-related aberrant behavior within the preceding 3 months or subsequent 3 months of enrollment ED visit.	X		
10. Documentation of self-administration of a schedule II or III opioid medication not in the intended manner, including route or dose, based on the formulation within the preceding 3 months or subsequent 3 months of enrollment ED visit.	X		

Presence of 1+ of the above criteria was considered to be a positive outcome.

selected as this more closely matches the standard used in prior validation studies for the studied screening tools, which did not use PDMP or ME data (11–13). As we expected the EMR to provide information only about aberrant behaviors occurring at the studied institution, a second reference standard comprised of EMR, PDMP, and ME data would be expected to inform clinicians of aberrant behaviors statewide, theoretically capturing more aberrant behaviors than the EMR alone. Therefore, although use of the first reference standard (EMR alone) more closely matched the validation studies, we hypothesized that use of the second reference standard (EMR + PDMP + ME data) would improve the test characteristics of the studied screeners by potentially eliminating a number of false negatives.

Data processing. Missing data on surveys were replaced by multiple imputation. Multiple imputation, although reliable, is controversial. Therefore, we aimed to use this method as little as possible. In any case where > 10% of the questions on either the SOAPP-R or COMM were left blank, this individual was excluded from further data analyses. Sensitivity analyses were planned a priori for each participant's data undergoing imputation, using the average of the subject's mean and median scores to determine its potential effect on the results. With the exception of the ORT, any questions left blank were replaced in this manner (18).

Extraction of all data post enrollment visit was performed with adherence to methodological standards recommended for retrospective reviews (19–21). A trained RA blinded to the hypothesis and outcome measures used a prespecified protocol to conduct data extraction of the three survey forms: the EMR, the PDMP, and the ME database. A second RA subsequently performed an additional extraction of all four data sources. All disagreements were resolved by consensus. Data were then entered using a double data-entry procedure, with discrepancies resolved by checking the source (22).

EMR. Using a combination of the patient's medical record number and date of birth collected during the enrollment

visit, each patient's EMR was assessed retrospectively for the presence of the variables listed in Table 1 during 3 months prior to and after the enrollment visit. In addition to these variables, the chief complaint and receipt of Schedule II or III opioid prescription at the enrollment visit were also extracted from the EMR. Subjective impression of drug-seeking behavior was not included as a criterion for opioid abuse, as such behavior is typically provider dependent and may not be a reliable measure of opioid misuse (4).

PDMP. Using a combination of the patient's legal name and birthdate, a legally authorized user queried the PDMP report for each patient, which included data about all Schedule II or III opioid prescriptions filled within 3 months prior to and after the enrollment ED visit. In the studied ED, patients are asked to present photo ID to prove their identity prior to being registered in triage. Therefore, all PDMP matches using exact name and birthdate were assumed to be correct.

ME database. If an inspection of a patient's EMR failed to confirm that they were alive within 3 months after the study period, the ME's database was queried using a combination of their birthdate and first and last name to determine if they had fatally overdosed on illicit or prescription opioid drugs. If the patient was not present in the ME's database, it was assumed they had not died.

Measures

Self-report assessments. The COMM is a 17-item questionnaire for chronic pain patients currently undergoing treatment with prescription opioid medications and asks about how patients are currently using their opioid medications (11). The COMM is designed to identify whether or not a particular patient is currently misusing opioids, not a prediction of future risk (23). However, given that the 90-day test-rest reliability for this measure is high, inclusion of an expanded timeframe for assessing this measure is appropriate for ED validation (11). The inclusion of patients not on opioid therapy does not match the initial validation studies for this measure, but is thought to be reflective of the way this measure would actually be used for pain patients in ED practice (24).

The SOAPP-R is a 24-item questionnaire, which asks about substance abuse and psychiatric history, medication-related behaviors, doctor–patient relationship factors, lifestyle issues, and emotional attachment to pain medications (12). The ORT is a 5-item questionnaire asking about risk factors, such as personal or familial history of substance use, associated in scientific literature with opioid use disorder (13). All three measures have been independently validated in outpatient pain settings (11–13).

Electronic Databases

EMR. EPIC (Verona, WI), the EMR utilized at the [UC San Diego Health System], provides the participant's records from all visits only within the [UC San Diego Health System].

PDMP. The PDMP database provides authorized users information about Schedule II, III, and IV controlled substance prescriptions filled within the state of [UC San Diego Health System]. The PDMP additionally has a reporting mechanism for prescriptions that are forged or stolen (25).

ME database. The ME database includes all deaths reported to the ME in [UC San Diego Health System] county within the study period. The ME is a licensed physician and by [UC San Diego Health System] state law, is required to determine the cause and manner of deaths of sudden and unexpected nature, deaths related to any type of injury, or deaths related to drug or alcohol intoxication (26). As drug overdose can sometimes be misclassified as suicide, the investigators a priori planned to include both suicide and overdose as an indicator of aberrant use (27,28).

Data Analyses

The primary outcome measure was the sensitivity and specificity of opioid misuse categorization by the three assessment tools as measured by either EMR data alone or EMR + PDMP + ME data. For each of these tools, the following published scores defining positive on the test were used: COMM $\geq$ 9; SOAPP-R $\geq$ 18; ORT $\geq$ 8 (high risk). On the ORT, low as well as moderate risk were categorized as "negative," as high-risk individuals have been shown to display the highest rate of aberrant behaviors (13). Scores on each of the screening tools were compared first with the reference standard consisting of only information gathered from a search of the participant's EMR, then to a composite reference standard comprised of a review of the EMR, PDMP, and ME database.

For descriptive purposes, categorical data were described as frequency (%). To determine the effectiveness of these screening tools, the risk classification of each screening tool was compared with the presence of any aberrant behaviors defined by the criteria. The sensitivity, specificity, likelihood ratios, diagnostic odds ratio, and 95% confidence intervals for all screening performance characteristics were calculated for each of the screening tools. The C-statistic was calculated as the area under the receiver operating characteristic curve (29). The sensitivity and specificity of the PDMP alone was not presented, as this was a component of the extended reference standard. Statistical analyses were performed with RStudio running R version 3.4.1 and Microsoft Excel 2016 (30,31).

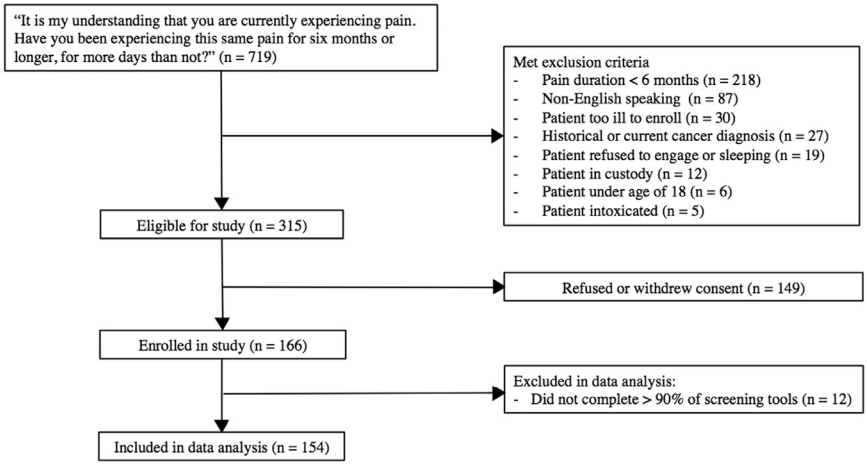

Figure 1. Patient enrollment.

Sample Size

As the purpose of this study was not to estimate the prevalence of drug abuse in the ED, the lack of 24-h enrollment was not thought to be a barrier to the study, especially given adequate coverage of patients with pain-related complaints (see above). However, the study crucially depended on a large prevalence of drug-aberrant behaviors to ensure the proper determination of sensitivity and specificity. In previous clinic studies, the reported sensitivities of the COMM and SOAPP-R was approximately .8 (11,12). As a pilot study, this project was not designed to detect the difference between physician gestalt and performance of the individual screeners. However, a study with 80% power to find at least a 20% difference between these measures and physician gestalt would require a sample size of approximately 75 patients if prevalence of the drug-aberrant behaviors in this study were to equal 60%, or 150 patients if prevalence of drug-aberrant behaviors were to equal 30% (32). Consequently, the study reported below targeted at least 150 patients for enrollment. Of note, a sample size of 150 is somewhat smaller than the validation studies of these screening tools, but is similar to or larger than two ED-based studies on this topic (8,9).

RESULTS

Participant Characteristics

During the study period, a total of 719 patients were approached for the study, 315 of which were eligible to enroll. Of these patients, 166 were enrolled in the study and 154 participants (median age 50 years, 49.6% females) were included in data analyses. Please see Figure 1 for patient enrollment. Of these 154 participants, 16 did not complete 100% of the screening tools and no more than two items were missing for any one subject for any one survey. For each of these individuals, on a case-by-case basis, it was determined that imputation of the missing value ultimately did not significantly alter their eventual categorization, as each of these patients had scored either far enough below or above the cut-off score.

Table 2. Participant Demographic and Descriptive Characteristics (N = 154)

Female	76 (49.6%)
Median Age	50 years (IQR: 38–57.75)
Chief Complaint	
Abdominal pain	40 (26.0%)
Other pain*	37 (24.0%)
Back pain	33 (21.4%)
Chest pain	18 (11.7%)
Leg pain	9 (5.8%)
Knee pain	9 (5.8 %)
Refill request	8 8 (5.2%)
Received Schedule II or III opioid prescription at discharge†	64 (41.6%)
Hydrocodone	37 (24.0%)
Oxycodone	26 (16.9%)
Morphine	2 (1.3%)
Hydromorphone	1 1 (0.6%)
Number of ED encounters (not including enrollment, within 3 months prior to and after enrollment visit)	
0	54 (35.1%)
1	25 (16.2%)
2	19 (12.3%)
3	15 (9.7%)
4+	41 (26.6%)

IQR = interquartile range; ED = emergency department.
* Other pain included: ankle, flank, foot, general, hand, head, hip, neck, pelvic, shoulder, and testicular pain.
† Numbers may add up to more than total because some patients received more than one prescription.

Table 3. Opioid Misuse Screening Tools Performance Against EMR

Screening Tool	Median Score	Probability Category		Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95% CI)	LR− (95% CI)	DOR (95% CI)	C-Statistic (AUC) (95% CI)
		Low Risk	High Risk						
Opioid Risk Tool (ORT) Low or moderate (0–7) High (≥8)	6	93 (60.4%)	61 (39.6%)	0.39 (0.27–0.51)	0.60 (0.50–0.70)	0.99 (0.66–1.47)	1.01 (0.78–1.31)	0.98 (0.51–1.90)	0.50 (0.42–0.58)
Screener and Opioid Assessment for Patients with Pain - Revised (SOAPP-R) Low risk (0–17) High risk (≥18)	19	68 (44.2%)	86 (55.8%)	0.57 (0.45–0.70)	0.45 (0.35–0.55)	1.05 (0.79–1.39)	0.94 (0.65–1.36)	1.11 (0.58–2.13)	0.51 (0.43–0.59)
Current Opioid Misuse Measure (COMM) Low risk (0–8) High risk (≥9)	8	78 (50.6%)	76 (49.4%)	0.49 (0.37–0.62)	0.51 (0.40–0.61)	0.99 (0.72–1.38)	1.01 (0.73–1.38)	0.99 (0.52–1.89)	0.50 (0.42–0.58)

Using EMR alone as a reference standard would have identified 61 patients (39.6%) as having drug-related aberrant behavior.
EMR = electronic medical record; LR+ = positive likelihood ratio; LR− = negative likelihood ratio; DOR = diagnostic odds ratio; AUC = area under the curve; CI = confidence interval.

Table 4. Opioid Misuse Screening Tools Performance Against EMR + PDMP + Medical Examiner Data

Screening Tool	Median Score	Probability Category		Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95% CI)	LR− (95% CI)	DOR (95% CI)	C-Statistic (AUC) (95% CI)
		Low Risk	High Risk						
Opioid Risk Tool (ORT) Low or moderate (0–7) High (≥8)	6	93 (60.4%)	61 (39.6%)	0.38 (0.28–0.49)	0.59 (0.47–0.70)	0.93 (0.63–1.38)	1.05 (0.81–1.36)	0.89 (0.46–1.70)	0.51 (0.42–0.60)
Screener and Opioid Assessment for Patients with Pain - Revised (SOAPP-R) Low risk (0–17) High risk (≥18)	19	68 (44.2%)	86 (55.8%)	0.60 (0.50–0.71)	0.50 (0.38–0.62)	1.21 (0.90–1.62)	0.79 (0.56–1.13)	1.53 (0.80–2.91)	0.58 (0.49–0.67)
Current Opioid Misuse Measure (COMM) Low risk (0–8) High risk (≥9)	8	78 (50.6%)	76 (49.4%)	0.50 (0.39–0.61)	0.51 (0.40–0.63)	1.03 (0.75–1.42)	0.97 (0.71–1.33)	1.06 (0.56–2.00)	0.57 (0.48–0.67)

Using the combined reference standard would have identified 79 (51.3%) of patients as having drug-related aberrant behaviors.
EMR = electronic medical record; PDMP = prescription drug monitoring program; CI = confidence interval; LR+ = positive likelihood ratio; LR− = negative likelihood ratio; DOR = diagnostic odds ratio; AUC = area under the curve.

Characteristics of the sample are shown in Table 2. At the enrollment visit, 26.0% reported a chief complaint of abdominal pain and 41.6% received at least one Schedule II or III opioid prescription at discharge, with hydrocodone being most commonly prescribed.

Main Results

Eighty-six participants (55.8%) displayed at least one aberrant behavior in their EMR + PDMP + ME data. One (0.6%) participant was noted in the EMR to have nonfatally overdosed on an opioid medication. No participants were found to have overdosed or died from opioid misuse or suicide based on the ME database.

Results comparing the effectiveness of the screening tools against the EMR data and the reference standard of the EMR + PDMP + ME data, respectively, are shown in Tables 3 and 4. The sensitivity and specificity of the screening tools against the EMR alone were modest, ranging from 0.39 to 0.60, with likelihood ratios and diagnostic odds ratios close to 1. Similarly, the sensitivity and specificity of the screening tools against the EMR + PDMP + ME data were also modest, ranging from 0.38 to 0.60, with likelihood ratios and diagnostic odds ratios close to 1.

DISCUSSION

A 2012 clinical policy from the American College of Emergency Physicians noted that screening tools for opioid misuse have "yet to be fully validated" in the ED setting, and this study is among the first to systematically evaluate the effectiveness of these three screening tools for ED patients with chronic noncancer pain against an objective reference standard (10). In this study, these tools, previously validated in outpatient pain management settings, had only poor likelihood ratios, and their performance was not improved by increasing the number of aberrant behaviors required for the reference standards (data not shown).

These findings echo concerns by Chou et al., which concluded that the effectiveness of the SOAPP-R, COMM, and ORT outside of pain clinic settings is questionable (33). In this review, Chou et al. determined the validation studies for these screening tools produced fair-to-poor evidence of each of the screening tools' abilities to predict aberrant drug-related behavior (33). Additionally, as the screening tools have only been validated for use within pain clinics, the threshold values for positive or negative classification by the screening tools are selected for maximum sensitivity and specificity within the population found at such pain clinics, which may not accurately reflect the population within a typical ED.

Limitations

There are several limitations to this study. For instance, although the sample size obtained in the present study is similar to or larger than previous studies in the ED, the sensitivity of these screening tools were unexpectedly poorer than anticipated. Thus, it is possible that a larger sample size may be required in a future study to show significant differences in the ED. However, this may not be especially likely because at least one screening tool (ORT) exceeded a 20% difference, although in the reverse direction (i.e., the ORT was > 20% worse than the rate of physician gestalt reported in a previous study (3)). Given that participants were recruited from a single academic ED during only certain time periods, the sample may not be representative of all opioid-treated patients or those seeking prescription opioids in all ED settings. Although defining the exact prevalence rate of aberrant behaviors was not the purpose of this study, it is possible that these screening tools are more useful for patients with severe or multiple drug-aberrant behaviors.

Given the need to obtain consent for searching patient records, the study sample may suffer from Hawthorne effect or selection bias. The screening tools were not blinded and it is possible that study participants were able to guess the goal of the study. Every effort was made to prevent this, as patients were informed that their routine clinical care was not connected in any way to the results of the screening tools. However, to the extent that participants were disinclined to believe that results were not available to treating physicians, we would expect that such patients would simply refuse consent. If so, this should artificially improve the test characteristics of the screeners by enrolling patients who are more likely to tell the truth. If so, the poor sensitivity and specificity of these instruments may be actually poorer than the limited sensitivity and specificity reported here.

Finally, in regards to the reference standard used in this study, the appropriate definition of some prospective risk factors like "doctor-shopping" remains unclear. Although "demand for more drug" is considered by many experts to be an aberrant behavior, multiple different definitions of this exist (4). The study reported here defined doctor-shopping as requesting or obtaining a prescription for opioids from three different physicians within 6 months, as this frequency recognized the potential for patients to use multiple providers for innocuous reasons, including follow-up with a primary care physician. Of note, this requirement is less stringent than the validation studies of the three screeners investigated in this study, which generally considered any prescription from an alternate provider as an aberrant drug-related behavior. However, this definition is more stringent than studies identifying problematic patterns of utilization in administrative health claims data (15).

The present results do not imply similar poor performance of all available screening tools. There are several other validated and well-developed interview tools for opioid use disorder and drug-aberrant behaviors that were not included in this study (the Prescription Drug Use Questionnaire, Drug Abuse Screening Test, Screening Instrument for Substance Abuse Potential, and Pain Medication Questionnaire). These measures were not included as they are longer and are presented in an interview format, which makes their routine use in the ED less feasible. In particular, the Drug Abuse Screening Test-10 has shown good psychometric properties for psychiatric patients in the acute setting, although these other additional measures have not yet been validated for use within the ED (34–38).

CONCLUSIONS

In summary, three screening tools for identifying opioid misuse, previously validated in outpatient pain management settings, poorly categorized the risk for drug-related aberrant behaviors among individuals with chronic noncancer pain within the ED. Although these screening tools were validated in chronic pain management settings, they appear ineffective at predicting opioid misuse when used alone within the ED. More research is needed to determine whether these results generalize to other ED settings. In the interim, physicians should likely not rely on these screening tools to decide which patients in the ED may safely be prescribed opioids. Instead, review of the EMR alone or in combination with the PDMP may be more useful methods to identify patients with drug-related aberrant behaviors in the ED.

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ARTICLE SUMMARY

1. Why is this topic important?

In emergency departments (EDs), there are no universally accepted methods to assess patients for drug-aberrant behaviors. Although screening tools for opioid misuse have previously been validated for use in outpatient settings, the efficacy of these screening tools to detect opioid misuse within the ED is unknown.

2. What does this study attempt to show?

The Current Opioid Misuse Measure (COMM), Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP-R), Opioid Risk Tool (ORT), although validated for use in outpatient pain management settings, poorly categorized the risk of drug-related aberrant behaviors among ED patients with chronic noncancer pain or who were requesting an opioid refill.

3. What are the key findings?

Of the study participants, 55.8% displayed documentation of at least one drug-related aberrant behavior in their electronic medical record (EMR) or prescription drug monitoring program (PDMP) record. However, the test characteristics of all three screening tools were poor, with sensitivities and specificities ranging from 0.38 to 0.60.

4. How is patient care impacted?

These screening tools should not be utilized in isolation to assess ED patients for drug-aberrant behaviors or to decide which patients might safely receive opioid prescriptions in the ED. Review of the EMR alone or together with the PDMP may be more useful methods than the use of these tools.