Association of a Multimodal Intervention With Decreased Opioid Prescribing After Neck Dissection for Malignant Thyroid Disease With Short Hospital Stay

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**IMPORTANCE** Prescribing practices for opioid medication after thyroid surgery have been well-studied and established; however, the need for pain management with opioid medication following lateral neck dissection for malignant thyroid disease with a short hospital stay has not been established.

**OBJECTIVE** To evaluate a multimodal opioid reduction intervention and its association with a decrease in prescribing of opioid medication at hospital discharge for patients after a lateral neck dissection for thyroid cancer.

**DESIGN, SETTING, AND PARTICIPANTS** This was a retrospective cohort study of patients treated from 2011 to 2021 by a tertiary academic institution that performs a high volume of thyroid cancer surgeries annually. We evaluated the electronic health records of 417 patients who had undergone lateral neck dissection for malignant thyroid disease from June 1, 2011, to June 30, 2021, and had a short hospital stay (≤3 days). Patients with longer stays (>3 days) or additional surgical procedures were excluded. Group 1 comprised patients who underwent a neck dissection before the intervention; and group 2, those who underwent the procedure after implementation of the intervention.

**INTERVENTION** A multimodal intervention composed of 3 components to reduce opioid prescribing at hospital discharge home after neck dissection for malignant thyroid disease with a short hospital stay.

**MAIN OUTCOMES AND MEASURES** The primary outcome was the quantity of opioid medication prescribed in the postoperative period, measured as oral morphine milliequivalents (MME). The eta-squared effect size (η²ES) metric was used to determine the association of the intervention with a reduction in the MME quantities of opioid medication administered to inpatients and prescribed at discharge. An estimated need for opioids was established for the average patient undergoing lateral neck dissection for thyroid cancer based on the upper range of prescribing after intervention. The data were analyzed from January to March 2022.

**RESULTS** The total study population was 417 patients: group 1 with 171 patients (mean [SD] age, 47.1 [15.6] years; 104 [61%] women; 144 [84%] non-Hispanic White) and group 2 with 246 patients (mean [SD] age, 46.2 [17.4] years; 146 [60%] women; 206 [83.7%] non-Hispanic White). The median MME prescribed at discharge for group 1 per patient was 225 MME compared with 0 MME for group 2, a large effect-size difference. There was a moderate association between the dose amount administered to an inpatient and the prescription dose they received at discharge (r, 0.33). Multiple linear regression analysis of sex, age, race and ethnicity, extent of surgery, and opioid reduction intervention showed that the intervention had a large clinically meaningful association with decreasing opioid prescriptions and dosage amounts at discharge (η²ES, 0.26; 95% CI, 0.19-0.33).

**CONCLUSIONS AND RELEVANCE** The findings of this retrospective cohort study suggest that patients undergoing lateral neck dissections for thyroid cancer with short hospitalization needed very small amounts, if any, postoperative opioid medication for pain management. Adequate postoperative pain control was achieved using nonopioid interventions. Implementing an intervention to decrease the quantity of unnecessarily prescribed opioid medications during hospital discharge may help to reduce the risk of opioid addiction and overdose in patients after surgery.
The opioid prescribing practices of physicians are a well-established contribution to the ongoing opioid epidemic. Patient satisfaction with pain control has been thought to be determined by the amount of opioid medication prescribed, a belief that has contributed to generous prescribing habits. However, recent studies in the head and neck surgical literature have demonstrated that patient satisfaction with care and postoperative pain control is not associated with the amount of opioids prescribed.

Numerous studies have examined current practices in otolaryngology with respect to different subsets of procedures to provide an evidence-based approach to decreasing the number of opioid prescriptions. The clinical practice guideline published in April 2021 by the American Academy of Otolaryngology–Head and Neck Surgery provides detailed recommendations for safely prescribing opioids for common otolaryngologic procedures. Several studies have examined the prescribing practices of surgeons after standard thyroidectomy and parathyroidectomy procedures to identify the postoperative opioid needs of patients; very little, if any, opioid medication is required after these procedures. The American Head and Neck Society Endocrine Surgery Section released a consensus statement in 2021 detailing recommendations for standard thyroidectomy and parathyroidectomy procedures.

Despite these successful efforts in the field of head and neck surgery, the data on postoperative opioid needs for more extensive thyroid cancer procedures remain sparse, particularly for lateral neck dissection, which is commonly performed in conjunction with thyroidectomy. A recent study using a large prescription database showed that the highest risk factor for persistent opioid use after an endocrine surgery was a lateral neck dissection. While lateral neck interventions may be a risk factor for increased opioid requirements, Cheng and colleagues found low opioid needs, even with the addition of a limited lateral neck procedure in conjunction with thyroid surgery. Unlike many head and neck oncologic procedures that include neck dissection, most lateral neck dissections for thyroid cancer require only an overnight stay in the medical facility; therefore, it is important to determine the average opioid needs of this specific population at discharge to ensure adequate pain management, while avoiding unnecessary prescribing.

In 2016, as a quality improvement initiative, the surgeons in our endocrine surgery center developed a defined set of measures for opioid reduction for patients undergoing thyroid and parathyroid surgery. This initiative was developed in a multidisciplinary manner and included preoperative patient counseling, and multimodal pain control using acetaminophen, nonsteroidal anti-inflammatory drugs (NSAIDs), ice and heat packs, and throat lozenges. The initiative also included education for all health care team members involved in postoperative care for inpatient pain management and discharge opioid requirements.

Implementation of this intervention was associated with a substantial decrease in opioid prescribing. Subsequently, we implemented the same measures for neck dissection procedures for malignant thyroid disease. With encouraging preliminary results, we began implementing these measures for patients undergoing lateral neck dissection for management of malignant head and neck disease (oral cavity, thyroid, parotid, oropharyngeal subsites) with an associated decrease in the amount of opioids prescribed for all procedures evaluated.

This retrospective large cohort study evaluates the association of this programmatic opioid intervention with a reduction of postoperative opioid prescribing for patients undergoing lateral neck dissection for thyroid cancer at this academic endocrine surgery center. The primary outcome was the quantity of opioid prescribed in the postoperative period with the goal of establishing an estimated need for the average patient undergoing lateral neck dissection for thyroid cancer.

**Methods**

This retrospective cohort study was reviewed and approved by the institutional review board of Oregon Health & Science University. Informed consent was waived according to institutional policy for minimal risk studies. The study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines.

**Study Population and Interventions**

Patients were included if they had undergone lateral neck dissection, unilateral or bilateral, with or without surgery in the central neck (thyroidectomy and/or central neck dissection), for the management of malignant thyroid disease from June 1, 2011, to June 30, 2021, at the Oregon Health & Science University. The electronic medical record system (Epic Systems) was queried for Current Procedural Terminology codes 38720 and 38724 for cervical lymphadenectomy (complete and modified radical neck dissection, respectively).

Patient medical records were reviewed to determine the indication of the procedure and the length of hospitalization. Those with a short stay (≤3 days) were included; 377 patients had stays of 23 hours or fewer; an additional 40 patients had stays of 3 days or fewer. Patients with longer hospital stays...
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(-3 days) and/or with additional surgical procedures (eg, laryngectomy, tracheal resection, tracheostomy, sternotomy) were excluded. Demographic information, including self-reported race and ethnicity data, was also collected from the electronic medical records.

Beginning in February 2017, after having successfully curtailed opioid prescribing for patients who had undergone thyroidectomy and parathyroidectomy procedures, the surgeons at Oregon Health & Science University’s Thyroid and Parathyroid Center began to also decrease opioid prescribing among patients undergoing lateral neck dissection for management of malignant thyroid disease.7 The principal changes implemented by the intervention were preoperative patient counseling on postoperative pain expectations and appropriate pain management with multimodal nonopioid control strategies. These strategies included use of acetylsalicylic acid (ASA), NSAIDs, and throat lozenges in addition to ice and heat packs. Finally, educational seminars were held with the perioperative nursing team to promote adoption of these nonopioid pain control strategies.

The included patients were divided into 2 treatment groups. Group 1 comprised 171 patients treated before the opioid prescribing intervention was implemented (June 1, 2011-January 31, 2017); and group 2 comprised 246 patients treated after its implementation (February 1, 2017-June 30, 2021).

This study's primary outcome was the quantity of opioid medication prescribed during the patient's hospital stay and at hospital discharge, measured in oral morphine milli-equivalents (MME). Standard conversion factors were used to calculate the MME dosage of the prescribed opioid medications, which included oral oxycodeone (1.5 MME/mg), intravenous hydromorphone (6.7 MME/mg), and oral hydrocodone (1 MME/mg); 125 MME is equal to approximately 15 oxycodeone or 25 hydrocodeone 5-mg tablets. Prescribing practices over time were evaluated by comparing the MME administered during the hospital stay and prescribed at discharge for patients in group 1 with the respective amounts for group 2. The influence of the extent of surgery (eg, lateral neck dissection alone vs lateral neck dissection plus central neck surgery or bilateral neck dissection with or without central neck surgery) on the postoperative opioid requirements was also evaluated. In addition, we compared opioid medication prescribing data among 3 different surgery teams that are responsible for both inpatient and postdischarge care at our institution: the head and neck endocrine surgery service (Endo) with 255 patients; the head and neck oncologic surgery service (HN) with 128 patients; and the surgical oncology endocrine surgery service (SRO) with 34 patients.

**Statistical Analysis**

Because the data demonstrated a strongly skewed distribution, the median was used as the measure of central tendency for MME prescribed. The eta-squared effect-size ($\eta^2_{ES}$) metric was used to determine the association of the opioid intervention with a reduction in the quantities of the opioid medication administered to inpatients and prescribed at discharge. Additionally, the $\eta^2_{ES}$ metric was used to determine the effect size by each of the 3 surgical services, as well as by the extent of the surgery (ie, invasiveness or severity) on the opioid MME prescribed at discharge.

Statistical tests were 2-tailed and $P$ values < .05 were considered statistically significant. Data analyses were performed from January to March 2022, using RStudio, version 4.1.2 (RStudio, PBC).

**Results**

The study population totaled 417 patients who had undergone neck dissection for malignant thyroid disease, 171 patients (mean [SD] age, 47.1 [15.6] years; 104 [61%] women; 9 [5.3] Asian/Pacific Islander; 14 [8.2%] Hispanic; 144 [84%] non-Hispanic White) were treated before the opioid intervention (group 1), and 246 patients (mean [SD] age, 46.2 [17.4] years; 146 [60%] women; 6 [2.4%] Asian/Pacific Islander; 26 [10.6%] Hispanic White; 206 [83.7%] non-Hispanic White) after the intervention (group 2). In all, 410 patients were opioid naïve and 7 were long-term opioid users. Patient characteristics for both groups are described in Table 1, and data on the extent of the surgery are shown in Table 2.

The median MME prescribed at discharge annually is shown in Figure 1; it demonstrates the substantial reduction associated with the intervention on opioid prescribing practices. The median MME prescribed at discharge for group 1 was 225 MME (IQR, 150; 95% CI, 225-240); and for group 2, it was 0 (IQR, 75; 95% CI, 0-0). The magnitude of the difference in MME prescribed at discharge between the 2 groups was large ($\eta^2_{ES}$, 0.26; 95% CI, 0.19-0.33). The median (IQR) inpatient total dosage administered for group 1 was 22.5 (67.5) MME; for group 2, it was 0 (15) MME. The magnitude of reduction was small to moderate as represented by $\eta^2_{ES}$ of 0.03 (95% CI, 0.01-0.07). In group 2, 152 patients (61%) did not require opioid medication at discharge, whereas in group 1, 19 (11%) did not (difference, 50%; 95% CI, 42%-58%).

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**Table 1. Characteristics of Patients in the Before (Group 1) and After (Group 2) Intervention Groups**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients, No.</td>
<td>171</td>
<td>246</td>
</tr>
<tr>
<td>Age, mean (SD), y</td>
<td>47.1 (15.6)</td>
<td>46.2 (17.4)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>67 (39)</td>
<td>100 (40)</td>
</tr>
<tr>
<td>Women</td>
<td>104 (61)</td>
<td>146 (60)</td>
</tr>
<tr>
<td>Race and ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>9 (5.3)</td>
<td>6 (2.4)</td>
</tr>
<tr>
<td>White, Hispanic</td>
<td>14 (8.2)</td>
<td>26 (10.6)</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>144 (84.2)</td>
<td>206 (83.7)</td>
</tr>
<tr>
<td>Othera</td>
<td>4 (2.3)</td>
<td>8 (3.3)</td>
</tr>
<tr>
<td>Pathologic findings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papillary</td>
<td>157 (91.8)</td>
<td>206 (83.7)</td>
</tr>
<tr>
<td>Medullary</td>
<td>10 (5.8)</td>
<td>12 (4.9)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (2.3)</td>
<td>12 (4.9)</td>
</tr>
</tbody>
</table>

*a Includes American Indian, Black, multiracial individuals, and those who declined to respond.

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Receiving opioid medication as an inpatient was somewhat associated with receiving a prescription for opioid medication at discharge (0.33; 95% CI, 0.25-0.42). Nevertheless, patients who were not administered an opioid medication as inpatients, were still discharged with an opioid prescription. In group 1, of 50 patients (29%) who had not received an opioid medication as an inpatient, 40 (80%) were prescribed an opioid at discharge. However, in group 2, of 136 patients (55%) who had not received an opioid medication as an inpatient, 25 (18%) were prescribed an opioid at discharge.

The median MME of opioid medications prescribed at discharge by the 3 surgical services is shown in Figure 2. The HN service had a median dosage prescription of 165 MME, while Endo (15 MME) and SRO (0 MME) were lower by a small to moderate effect size (η²ES, 0.0013; 95% CI, 0.00-0.02).

Multiple linear regression analysis of sex, age, race and ethnicity, extent of surgery, and opioid reduction intervention confirmed the independent effect of the intervention. That is, patients discharged before the intervention would likely receive an opioid prescription of 220 MME higher than would be prescribed after the intervention.

When evaluating the association of surgery extent with discharge prescribing (Table 3), bilateral neck dissection had a median dosage prescription of 160 MME, while unilateral neck dissection (90 MME), unilateral neck dissection with central neck dissection (75 MME), and unilateral neck dissection with thyroidectomy and central neck dissection (75 MME) were lower. The effect size was small (η²ES, 0.0013; 95% CI, 0.00-0.02).

The percentage of patients who contacted their surgeon’s office or clinic on call after discharge to request a new opioid prescription or a refill was 7% in group 1 and 8% in group 2 (difference, 1.1%; 95% CI, -6.74% to 4.51%). The median refill dosage between the 2 groups was also similar (median difference, 0; 95% CI, -0.00026 to 0.00019).

Discussion

In this study, we evaluated opioid requirements and prescribing practices among a uniform population of patients who underwent neck dissection, specifically for thyroid cancer, and who had a short postoperative hospital stay. The demographic characteristics of the patient population were consistent with the known distribution of differentiated thyroid cancer among the general population (female predominance, middle age, increased incidence of papillary thyroid carcinoma vs other subtypes). Therefore, we expect these findings to be generalizable and applicable to other institutions. However, the study has limited generalizability to patients of underserved racial and ethnic groups because the sample did not adequately represent these groups.

Because neck dissection generally requires less than a 48-hour hospital stay, it is important to determine the optimal opioid medication needs of the patient at discharge to ensure that pain is adequately managed but to avoid unnecessary unused opioids at home. Therefore, this study focused specifically on patients with short hospital stays.

The Thyroid and Parathyroid Center’s reduction in opioid prescribing practices was achieved by combining preoperative counseling, addition of nonopioid adjuncts, and multidisciplinary collaboration to accurately assess and manage pain. The details of this concerted effort are outlined in a prior publication. Preoperative counseling was conducted by our team and focused on postoperative pain expectations. A typical conversation with patients would be:

You will have some soreness around the surgical site and discomfort when you swallow or move your neck. We typically treat that with ice packs, Tylenol, and ibuprofen. Most patients need very little, if any, opioid. We will see how you do post-op and make sure that your pain is adequately controlled with this regimen.

Nonopioid pain modalities were tailored to individual patients depending on comorbidities and the extent of surgery. Our data demonstrate that with the above-described approach, the postoperative opioid quantity prescribed for neck dissection for thyroid cancer can be substantially reduced, if not eliminated, with no substantial increase in telephone calls concerning unmanageable pain or opioid prescription refills.

Previous studies have reported a wide range of pain levels and medication requirements associated with head and neck oncologic surgical procedures. More than 70% of postoperative opioid prescriptions are unused and are subsequently stored in unlocked locations in as many as 77% of cases. These excess opioids are at high risk for diversion to nonmedical opioid use. Further, as many as 33% of patients undergoing head and neck procedures have been found to continue using opioid medication more than 90 days after surgery.

These findings underscore the importance of understanding procedure-specific opioid requirements to drive standardized, evidence-based prescribing practices.

Although sufficient studies in the literature now demonstrate that patients undergoing thyroid and parathyroid surgery need only minimal amounts of opioid medication at discharge, there is a paucity of data on postoperative opioid needs following neck dissection for thyroid cancer. Because neck dissections are more extensive operations, it seems likely that these patients would require a larger amount of opioid medication for postoperative pain management. This assumption

### Table 2. Distribution of Extent of Surgery Among the Before (Group 1) and After (Group 2) Intervention Groups

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Group 1, No. (%)</th>
<th>Group 2, No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients</td>
<td>171</td>
<td>246</td>
</tr>
<tr>
<td>Unilateral ND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only ND</td>
<td>54 (31.6)</td>
<td>74 (30.1)</td>
</tr>
<tr>
<td>+ CND</td>
<td>18 (10.5)</td>
<td>33 (13.4)</td>
</tr>
<tr>
<td>+ THY + CND</td>
<td>78 (45.6)</td>
<td>118 (48.0)</td>
</tr>
<tr>
<td>Bilateral ND with/without CND/THY</td>
<td>21 (12.3)</td>
<td>21 (8.5)</td>
</tr>
</tbody>
</table>

Abbreviations: CND, central neck dissection; ND, neck dissection; THY, total or hemithyroidectomy.
has been supported by studies showing that neck dissections performed in conjunction with resection of malignant aerodigestive disease, such as glossectomy and tonsillectomy, are associated with high postoperative pain levels and require a higher quantity of opioid medication at discharge.\textsuperscript{16-18} Neck dissections for thyroid cancer are different in that the primary thyroid cancer resection is generally not associated with high pain levels.

The intervention had 3 main components that contributed to its success and the associated reduction of opioid prescribing for the study population. The first component was assessing whether the patient needed opioid medication at discharge based on their needs in the hospital. The prevailing cultural practice was to automatically discharge patients with a standard opioid dose. This shift in prescribing practice was associated with a substantial reduction in opioid prescriptions, from 80% to 18% in patients who did not require opioids during their inpatient recovery. However, given that 18% of these patients were still discharged with an opioid prescription, there is room for additional improvement in this metric. Further education for care team members who are responsible for discharge may be necessary. A study by Lillemoe and colleagues\textsuperscript{25} showed that after education on opioid prescribing habits, more practitioners agreed that opioid prescriptions at discharge should be based on the patient’s needs during the previous 24 hours of inpatient care.

The second component of this successful initiative was multimodal pain management with standard admission orders that included nonopioid medications as the first-line intervention for pain control along with other adjuncts, such as ice packs and throat lozenges. There are extensive moderate-to-high level evidence studies, particularly in the endocrine surgery literature, to support the use of multimodal postoperative pain management with acetaminophen, NSAIDs, and nerve block anesthesia.\textsuperscript{26-28} Thus, opioid medication was not routinely ordered, and when needed, it was ordered at the lowest dose possible for “moderate to severe pain not alleviated by nonopioid measures.”
Finally, the third component was the in-depth preoperative discussion with patients on postoperative pain expectations. Patients were counseled that they should expect some discomfort and that postoperative pain could often be managed with nonopioid measures; they were also reassured that opioid medication would be prescribed if needed. This preoperative discussion to set postoperative expectations cannot be over-emphasized; it is an essential part of pain management plans as highlighted in the 2015 American Pain Society guidelines.29 Li and colleagues compared opioid prescribing patterns in the US with patterns in Hong Kong and found that the US had far higher rates that may be driven by different patient expectations.30

The combination of these components of our intervention has been demonstrated previously by our center and has been shown to be highly effective in dramatically reducing opioid requirements in endocrine surgery. Prior to the intervention, our tertiary academic institution had considerable variability in the overall mean amounts of opioid medication prescribed to patients who had undergone neck dissection for thyroid cancer. In October 2016, as part of a quality improvement initiative, our group implemented the protocol described in this article to reduce opioid prescribing for thyroid and parathyroid surgery (central neck only) and succeeded in markedly reducing opioid prescribing.7 In February 2017, we began to slowly phase in similar programmatic reduction among patients undergoing neck dissection for thyroid cancers and opioid prescribing markedly decreased with the implementation of the intervention. These results suggest that the components of this intervention—educating care team members on multimodal pain management and use of nonopioids as first-line medications (unless otherwise clinically contraindicated); discussions with patients to set appropriate expectations for pain and pain management; standardizing and decreasing postoperative opioid prescribing; and changing the culture and prescribing patterns of the physicians to the minimum amount needed for neck dissection—were strongly associated with a substantial decrease in the quantity of opioid drugs being prescribed, even eliminating opioid use in 61% of this patient population.

This study also observed differences in postintervention prescribing patterns among the 3 services (Endo, HN, SRO) despite a similar distribution of the extent of surgery. We speculate that this may be because of variability among care team members who oversee the postoperative and discharge orders for the 3 services. On the HN service, residents, fellows, or physician assistants on the head and neck team are responsible, and there is considerable day-to-day variability with regards to assignments. On the SRO service, a resident on surgical oncology rotation is usually responsible for these duties for multiple weeks at a time and the attending physician provides education on opioid management and discharge procedures to the resident at the beginning of the rotation. On the Endo service, a resident is assigned generally for 2 to 3 weeks at a time, and they are similarly educated at the beginning of their rotation. It is also possible that the severity of procedures performed on a particular service may influence prescribing practices. There is no question that major head and neck oncologic resections require opioid medication for postoperative pain control, and that the practice of prescribing them is automatic on admitting orders for these patients. Similarly, patients undergoing major abdominal procedures in the SRO require opioid medication; however, the residents may be under the impression that thyroid cancer resections also require a similar quantity. Periodic education review and reinforcement for care team members may explain the greater reduction effect seen in the Endo and SRO services compared with the HN service.

Strengths and Limitations
The study’s main limitation was the lack of data on the opioid quantity being consumed by patients after discharge. Studies such as that by Agnew and colleagues11 would be beneficial in determining opioid use from patient and/or practitioner survey data. The findings of this study suggest that the quantity of opioid prescribed at discharge after a neck dissection for thyroid cancer ranged from 0 to 125 MME (approximately 15 oxycodone 5-mg tablets or 25 hydrocodone 5-mg tablets). This represents a greater than 50% reduction in opioid quantity compared with historically prescribed amounts that ranged from 200 to 400 MME. With many surgeries being shifted to outpatient and short-stay settings, practitioners have felt compelled to routinely send patients home with an opioid prescription, concerned that it may be needed at home would not be easily accessible given that controlled substances could not be electronically prescribed previously.

The importance of this study is that it demonstrates that opioid needs for neck dissections performed for thyroid cancer are minimal, unlike those for resection of other malignant head and neck diseases, and that surgeons can curtail opioid prescribing for these patients. Based these study findings and that electronic prescribing of controlled substances is now allowed in 50 US states,31 we recommend that patients who did not need any opioids during their hospitalization be discharged with minimal (<125 MME) or no opioid medication when it can be prescribed electronically if needed.

A second limitation of the study was that the sample comprised only 7 patients with long-term opioid use. For these patients, a different postoperative pain management protocol was instituted; their preoperative opioid medication was continued during their inpatient hospital stay. Also, the preoperative surgical discussion with these patients included reassurance that their long-term opioid medication would be continued and that they should work with their usual opioid-prescribing clinician to ensure that a sufficient quantity would be available after discharge. When discharging these patients, we avoided adding any different or additional opioid medications to their existing regimen because doing so may predispose an individual to overdose.32 Because of the small number of study participants with long-term opioid use, we were unable to evaluate the influence of the intervention on these patients.

Conclusions
This retrospective cohort study found that patients undergoing uncomplicated lateral neck dissections for thyroid cancer with short hospitalization needed a minimal quantity, if any,
postoperative opioid medication. The patients had mild-to-moderate pain that was generally adequately controlled with nonopioid interventions. The opioid reduction intervention and its components, such as preoperative counseling on pain and the use of nonopioid adjuncts, were effective strategies for minimizing opioid use. Ultimately, decreasing the quantity of opioid medication prescribed at discharge may help reduce the risk of potential addiction.

REFERENCES

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