ORIGINAL ARTICLE

Improving use of narcotics for nonmalignant chronic pain: A lesson from Community Care of North Carolina

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ABSTRACT

Objective: *To describe the development, implementation, and effects of collaborative effort to reduce diversion of prescription drugs in Caldwell County, NC.*
Design: *Development and implementation of practice guideline, statewide opioid registry, and survey of all primary care providers.*
Setting: *Rural Caldwell County, NC, has a population of 83,029, of which 89 percent are non-Hispanic White; 2009 median household income of $35,489.*
Patients, participants: *All primary care clinicians in the county (N = 35).*
Interventions: *A taskforce developed and implemented a practice guideline that encouraged the following: 1) signing of pain contracts; 2) requiring patients to undergo random urine drug testing; and 3) requiring random pill counts. North Carolina implemented a statewide registry in 2007 that contained information on virtually all opioid prescriptions filled by pharmacies.*
Main outcome measure(s): *Opioid pill confiscations by the Caldwell County Narcotics Division 24 months prior to implementation of the guidelines, the first 12 months during guideline implementation, and 12 months after the guideline was fully implemented.*
Results: *From 2005 to 2007, opioid pill confiscations decreased by 300 percent. Of the 35 physicians who were sent surveys, 27 responded (77 percent response rate). Ninety percent of respondents who prescribe opioids use the chronic pain guidelines. Sixty percent report an improvement in the overall management of patients with chronic pain; 65 percent reported having more confidence in treating patients with chronic pain; and 60 percent reported using the opioid registry.*
Conclusions: *This countywide medical initiative appears to have resulted in a significant improvement in the abuse and diversion of medically derived opioids.*

BACKGROUND

In 2011, at least 116 million adult Americans have common chronic pain conditions.[1] Chronic, nonmalignant pain, such as musculoskeletal pain and headache, is associated with reduced quality of life and increased use of healthcare services.[2] People complaining of chronic, nonmalignant pain are a major part of the primary care patient population, and clinicians indicate these patients' care is challenging.[3] Available treatments include physical, electrical, emotional, electrical physical modalities, and pharmacological options.[4] Despite this plethora of treatment options, most studies indicate that chronic, nonmalignant pain is often suboptimally treated.[1] Over the last decade, many physicians are increasingly turning to opioids to treat chronic, nonmalignant pain patients. The marked increase in the number of opioid prescriptions leads many physicians to be concerned about legal and regulatory scrutiny related to prescribing controlled substances.[5,6] Nevertheless, opioid analgesics remain essential as an effective therapy for pain management.[2,6,7]

According to the 2007 National Survey on Drug Use and Health, an estimated 5.2 million had used prescription pain relievers nonmedically in the month

prior to being surveyed.[8] The number of deaths related to medically derived opioids appears to have increased by 300 percent between 1999 and 2006.[9] Although diagnosing opioid abuse and dependence can be challenging, behaviors such as losing, stealing, or altering prescriptions, using multiple sources for prescriptions, and requesting early refills can alert a physician to potential misuse.[10] Current literature suggests that more needs to be done at the legal, provider, and patient level to improve the treatment of chronic pain while reducing the prevalence of opioid abuse and dependence.[6] Currently, scant literature describes these types of initiatives and their effect at the community level.

Chronic pain is logically managed in primary care offices. Not only is it a common problem, but the treatment of chronic, nonmalignant pain is also often confounded by other chronic medical problems with the potential for interactions between a patients' pain management regimens and the medications they may be taking for these chronic conditions, potentially necessitating adjustments in either the pain or chronic disease regimens.[2] Therefore, the primary care office is an ideal setting to deploy a clinical guideline for chronic, nonmalignant pain, patterned after guidelines used in clinics specializing in pain throughout the United States.

METHODS: TASK FORCE/OPIOIDS REGISTRY DEVELOPMENT

Rural Caldwell County, NC, has a population of 83,029, of which 89 percent are non-Hispanic White, and the 2009 median household income was $35,489.[11]

In 2006, a conversation between a North Carolina family physician and the sheriff of Caldwell County, NC, identified the need for a new paradigm in treating nonmalignant pain. The sheriff was concerned about misuse of prescription pain relievers, which was occurring widely in the county and which had affected children as young as 12 years old. The sheriff believed that prescription pain relievers confiscated by his office had been prescribed by physicians, some of whom had a reputation for freely prescribing pain medications. Thus, the conundrum of how to improve prescribing habits while improving care for chronic pain in the United States was clearly delineated. These two issues led to the development of clinical guidelines for the management of chronic, nonmalignant pain in primary care for the county.

The movement began with the goal of implementing the following processes in primary care clinics: 1) the formal signing of pain contracts, which detailed acceptable behavior; 2) informing patients that they would be required to submit to random urine drug testing; and 3) informing patients they would be required to agree to random pill counts. These were selected by the task force as likely to reduce abuse and diversion. All processes coincide with the North Carolina Medical Board's "Policy for the use of controlled substances for the treatment of pain."[12]

A task force was set up in conjunction with Community Care of North Carolina (CCNC) and the North Carolina Medicaid program. CCNC is a consortium of locally controlled, not for profit organizations that agree to manage the medical care of the Medicaid population in their assigned region. The local CCNC organizations are assisted by the central organization in developing and locally disseminating quality improvement initiatives. The task force consisted of a regional CCNC director, CCNC nurse coordinator, two narcotic agents, a pharmacist, and a family physician. Over 18 months, a clinical guideline for the management of chronic, nonmalignant pain was developed and put into place by mid-2007 (Table 1).

At essentially the same time the clinical guideline came out, the state of North Carolina implemented a statewide opioid registry. The registry contained information on virtually all opioid prescriptions filled by pharmacies in North Carolina, and access to the registry was available to all providers upon request with appropriate passwords. This registry essentially closed the loop as the new guidelines developed by the task force were introduced to the Medicaid practices in Caldwell County. Even though Medicaid patients typically represent a small portion of most private primary care practices (excluding pediatrics), the North Carolina experience is that clinical guidelines implemented through the actions of CCNC are customarily implemented for the entire practice population. Third party payers and Medicare indirectly benefit from the work of CCNC through these quality initiatives.

Two years after the introduction of the new guidelines, the sheriff's office was contacted to determine if any countywide effect could be discerned by law enforcement. Also, the American Academy of Family Physicians National Research Network was contacted and agreed to assist with a

Table 1. Clinical guideline for the management of nonmalignant pain in Caldwell County, NC		
Guideline action	**Implementation**	**Frequency**
Narcotic contract	Clearly delineates physician, office, and patient responsibilities regarding narcotic use	Varies by office from once to annually
Random pill counts	Ask patient to bring in pill bottle at every visit	Several times in first year; unclear how often to continue if no other concerns are present
Random urine drug screens	Looking for presence of prescribed drug and absence of other drugs	Several times in first year; unclear how often to continue if no other concerns are present
One physician prescriber	May be difficult if many clinicians practice part-time (with limited availability in clinic). Discuss having all clinicians refuse refills if primary provider is readily available	Ongoing. Intensify other monitoring for patients who request refills from additional providers in office
One pharmacy	Easily checked through a statewide registry. Also can be checked during pill counts	Ongoing. Patient should inform office of planned changes in pharmacy
Use of state registry	Need to obtain login information. Registry is for providers—office staff access varies by state	Check prior to first prescription and several times in first year; unclear how often to continue if no other concerns are present

survey of all primary care clinicians in the county to ascertain their self-reported degree of adoption of the guidelines. The anonymous survey was developed and piloted and then distributed personally to all primary care clinicians in the county (N = 35) by the CCNC nurse coordinator. On subsequent visits, the nurse coordinator collected the completed surveys and distributed new ones to physicians who had yet to complete one. Once the survey data were entered and verified, analyses began and consisted of the calculation of frequencies for each question.

Data were collected on opioid pill confiscations by the Caldwell County Narcotics Division for periods of time that corresponded to 24 months prior to implementation of the guideline, the first 12 months during guideline implementation, and 12 months after the guideline was fully introduced countywide. The American Academy of Family Physicians Institutional Review Board approved this protocol.

RESULTS

Overall, the new clinical guidelines appeared to be well received by the county's primary care clinicians. Data collected from the Caldwell County narcotic division indicate that from 2005 to 2007, opioid pill confiscations by Caldwell County law enforcement personnel decreased by 300 percent. Of the 35 physicians who were sent surveys, 27 responded for a response rate of 77 percent. Results of the survey indicated that 20 physicians prescribe narcotics; 18 (90 percent) of those indicated they use the chronic pain guideline. Sixty percent report an improvement in the overall management of patients with chronic pain. Sixty-five percent reported having more confidence in treating patients with chronic pain. Furthermore, 60 percent of physicians surveyed in Caldwell County reported using the opioid registry. At the time the survey was done, just 7 percent of primary care physicians statewide reported using the registry.

DISCUSSION

This countywide medical initiative, which began as the result of a concern raised within the community, appears to have resulted in a significant reduction in diversion of medically derived opioids within our county. The use of the suggested tools, while not universal, was high enough to be noticed by law enforcement agents. The approach was attainable in most primary care offices and resulted in greater confidence in treating chronic pain patients. Although this initiative is fairly inexpensive to implement, it does require a certain amount of attention at the practice level, which is where the CCNC methodology was of great value, particularly the role of the CCNC nurse coordinator, who works in concert with the primary care provider and the

community to coordinate a full continuum of healthcare services considering the patient's unique social and cultural dynamics. By acting as a liaison between the primary care provider, the local Health Department, the Department of Social Services, and local hospitals, the CCNC nurse coordinator was able to help implement this initiative countywide at the practice level, thus taking burden off practice clinicians and staff to implement on their own.

At present, the initiative continues to develop. CCNC has recently instituted a prescription tracking system. Any patient within the CCNC network who is prescribed an opioid must identify one prescriber and one pharmacy which can be tracked within the CCNC system. If the patient goes to another prescriber or another pharmacy other than the one on file with CCNC, the system has a mechanism with which to notify the prescriber and/or pharmacy to not write/fill the prescription. The effects of this initiative have not been fully evaluated.

The initiative in Caldwell County, NC, indicates that well-developed, community level systems may be able to improve prescribing practices and decrease drug diversion. The chronic opioid guideline implementation was successful because of several integral components. Although the statewide registry was beneficial, it was not the key component that initiated or enabled the development and implementation of the guidelines. The existence of a trusted information broker and learning collaborative, spearheaded by the local branch of CCNC, supported the development and dissemination of the guidelines. The work of CCNC, a true grassroots organization, is driven by community needs, not a top-down organization. This same approach may work in urban settings, if practices commit to implementing the approach for all patients. Such implementation likely requires a supportive infrastructure similar to that created by CCNC.

Our study has several limitations, beginning with the use of confiscation as an endpoint. Although narcotic confiscations were dramatically reduced in our county, it could be that the problem was shifted to a neighboring county. A statewide implementation of our intervention might reduce diversion in a larger geographic area. Further, it is possible that the local law enforcement authorities shifted attention to other issues, resulting in fewer confiscations; however, we maintain regular contact with the sheriff's office, and he indicates that to the present time, his office is focused on reducing prescription drug diversion. This was also a small study in one county; our sample had just 35 physicians. This relatively small number was the entire primary care workforce in our county, and 77 percent responded to the surveys. As we continue to work for a statewide implementation of this intervention, a larger study may soon be possible. Finally, other initiatives to curb unintended use/illegal distribution of medical opioids, such as the Lazarus Project,[13] were underway during the study period, so we cannot say what effect these other initiatives had on our results.

Although components of the guidelines, such as opioid contracts, have not been proven beneficial in reducing opioid abuse,[14] the combination of actions in this intervention appears to have had a positive impact in this county. The community-based approach to delineating the problems, identifying solutions, and disseminating the task force's findings to the county's primary care clinicians appears to have been embraced by most clinicians in the county. The intervention was achievable in primary care offices without additional resources and resulted in greater clinician confidence in caring for patients with chronic pain. The basic care processes can be embraced by all primary care offices, whether or not their state supports a opioids registry.

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