

BMJ Open Quality From 'pain management' to 'integrated health clinic': a quality improvement project to transition patients on chronic opioid therapy to more evidence-based therapies for chronic pain

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ABSTRACT

Background The State of New York, along with the whole nation, is struggling to combat the opioid epidemic. Major authoritative bodies on chronic pain and addiction have advocated against the use of opioids long term for chronic pain. In the spring of 2021, our pain management clinic made the decision to discontinue chronic opioid prescriptions, offering instead a three-part intervention to provide patients with support for chronic pain during the process of discontinuing chronic opioid therapy (COT). Our goal was to provide safer and more evidence-based care for our chronic pain population.

Objectives To safely wean patients in our pain management clinic off of COT and offer alternative pain interventions in order to help them reach their health goals.

Intervention Our three-part intervention included a unified plan for weaning patients off COT while simultaneously offering (1) expansion of integrated pain modalities, (2) Suboxone therapy and (3) a community health worker (CHW) support programme.

Results Over the course of 8 months, our clinic successfully transitioned 380 patients off of COT while simultaneously expanding access to alternative pain management modalities, Suboxone therapy and CHW support services.

Conclusion Alternative pain management modalities, Suboxone therapy and CHW support all help to aid patients weaning off of COT while still adequately addressing their chronic pain. Our model may be adaptable to other pain management practices hoping to decrease inappropriate use of COT.

INTRODUCTION

The State of New York, along with the nation as a whole, experiences a high burden of opioid-related disease and death. In 2018, in New York State (NYS), there were 2991 opioid overdose deaths.¹ In 2018, The Substance Abuse and Mental Health Services Administration reported 34 opioid prescriptions² per 100 persons in New York. Over the past few decades, tremendous evidence has emerged about the harms of long-term opioid

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Major authoritative bodies on chronic pain and addiction advocate against the use of opioids for chronic pain; however, many clinicians struggle to address chronic opioid use in their patients.

WHAT THIS STUDY ADDS

⇒ For this reason, our study provides an example of how our clinic was able to address chronic opioid use in our patients by offering alternatives: community health worker support, Suboxone therapy and alternative modalities for chronic pain.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This QI study adds to the body of literature on opioid reassessment and provides an example for other clinicians of how to offer alternatives to chronic opioid therapy in their own practices. In this way, we aim to address our country's opioid epidemic one patient and one clinic at a time.

prescriptions for chronic pain conditions.^{3 4} All major authoritative bodies on addiction and pain have reached the consensus that opioid use for chronic pain should be minimised whenever possible.^{4 5} The New York State Department of Health has made it a key aim to reduce the number of opioid prescriptions for chronic pain.¹ Over the last few years, the rates of opioid prescriptions have continued to drop in NYS.¹

Our pain management clinic is located in the Bronx, an area of the state with one of the highest opioid burdens.¹ The clinic was started within the family medicine department with the intention of providing comprehensive pain management services for our population. However, like so many pain management clinics, we found that a large percentage of our visits were revolving around opioid prescribing.⁶



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In 2020, Bronxcare pain management clinic's providers and administration committed themselves to transitioning from a 'pain management clinic' to an 'integrated health clinic' with the ultimate goal of discontinuing all opioid prescriptions for chronic pain conditions in keeping with best practices around curbing our country's opioid epidemic.⁵

CLINIC SITE

Bronxcare Health Systems is a community health centre network located in Bronx, New York. Approximately 66% of our patients are on public insurance. Thirty per cent of our patients are non-English speakers. Thirty-three per cent identify as black/African-American, only 1% as white and 66% as Hispanic/'other'.

The Bronxcare Family Medicine Department began a 'pain management clinic' in 2014. Since its inception, the clinic has seen over 4197 patients with over 18 186 unique patient visits. Our clinic consists of six physicians, one licensed nurse, one medical assistant and two to three part-time behaviorists/Licensed clinical Social Workers.

In terms of patient demographics, most patients in the Integrated Health Clinic are referred for chronic pain conditions. The most common of these diagnoses included chronic low back pain, sciatica, arthritis, cervical radiculopathy, migraine headaches and fibromyalgia. The most common opioid pain medication that was being prescribed was oxycodone, and dosages ranged from 5 morphine maintenance equivalent (MME)/day to 180 MME/day.

In the year 2019, the clinic conducted 7325 visits. Of those visits, 2762 (36%) involved an opioid prescription and 348 (4%) involved a Suboxone prescription. A total of 386 individual patients received an opioid prescription that year. In 2020, the clinic had 5982 unique patient visits. Of those visits, 3429 (46%) involved an opioid prescription and 273 (4%) involved a Suboxone prescription. In 2021, the clinic so far had 4704 unique patient visits, 2399 of which (50%) involved an opioid prescription and 209 (4%) involved a Suboxone prescription.

INTERVENTION

In April 2021, our 'pain management' clinic made the decision to reframe itself as an integrated health clinic. Our objective was to discontinue all chronic opioid prescriptions by the end of 2021. Each provider was responsible for initiating discussions around opioid weaning with their patients. We instituted a policy of 10%–15% decrease in MME per month in accordance with current guidelines.⁴ This was required of all providers in order to maintain fairness and consistency for all patients regardless of their provider. Patients were informed of the clinic's new policy and were given the option to receive a referral to alternative pain management clinic (other local clinic information was provided) versus continuing to receive care at our facility with a plan to wean opioids versus receiving a Suboxone prescription. In addition, in order to provide

our patients on chronic opioid therapy (COT) with optimal support during the process of weaning opioids, we designed a three-part intervention. Our three-part intervention included (1) expansion of integrated pain modalities, (2) Suboxone therapy and (3) a community health worker (CHW) programme. Each component of this intervention will be discussed in the subsequent sections.

Expansion of integrated modalities

The first component of our intervention was to ensure the provision of alternative, non-pharmacological options for pain management. These therapies included cupping therapy, acupuncture, trigger point injections, osteopathic manipulation, cognitive behavioural therapy, joint injections, wellness groups and walk-in hours for alternative modalities.

Cupping therapy

At the time of our intervention, one provider was offering cupping therapy⁷ to patients, and that provider subsequently trained other providers in the department to provide cupping therapy to their patients. Currently, three out of six providers are regularly providing cupping therapy. In October 2021, approximately 70 patients had participated in cupping for their chronic pain conditions.

Acupuncture

Acupuncture⁸ has level A evidence for efficacy in certain chronic pain conditions, and thus we wanted to ensure its availability at our centre. In September of 2020, our facility hosted a training for 20 providers in the department (including the six IHC providers) in auricular acupuncture. The training involved use of the National Acupuncture Detox Association (NADA) protocol⁹ for auricular acupuncture with the goal of expanding the number of providers who offer this service to their patients. By October 2021, over 80 individual patients had received at least one acupuncture session, with many regularly receiving treatments.

Trigger point injections/dry needling

Two providers in our clinic currently offer lidocaine injections and dry needling¹⁰ services. As of October 2021, approximately 19 patients had received trigger point injections or dry needling for a number of chronic musculoskeletal conditions including ulnar tendinopathy, lower back pain, trapezius muscle spasm, occipital headache, etc.

Joint injections

One provider currently offers steroid-based joint injections including knee injections, carpal tunnel injections, de Quervain's injections and acromio-clavicular joint injections.

Walk-in hours

In general, patients were being seen in the IHC on a monthly basis, and many expressed interest in getting

more frequent treatments. In order to expand access to regular treatments, 'walk-in hours' were established on a weekly basis (every Wednesday evening) for patients to arrive without an appointment in order to receive acupuncture, cupping or osteopathic manipulation. On average, the clinic sees anywhere from two to eight patients during a weekly walk-in session.

Osteopathic manipulation

Currently, two providers, 1 doctor of osteopathic medicine (DO) and 1 allopathic physician (MD), offer osteopathic manipulation for various chronic musculoskeletal conditions including trapezius muscle spasm, low back pain, occipital headaches and temporomandibular joint pain, among others.

Yoga and meditation

Currently, one provider offers a weekly yoga and meditation group that is open to any patient at the health centre.

Wellness groups

In September 2020, the IHC started a weekly women's wellness group open to any woman in the clinic. The group is currently run by one physician and has on average four to eight participants on a weekly basis. The group offers support as well as formal weekly education on multiple strategies for addressing pain and improving quality of life. Frequent topics covered include mindfulness-based stress reduction, nutrition, physical therapy, exercise and sleep, among others.

Suboxone therapy

The second component of our planned intervention was to offer Suboxone therapy to all patients as an alternative to chronic opioid therapy for pain control. Evidence is emerging about the efficacy of Suboxone as a medication for pain management in patients with and *even without* concurrent opioid use disorder^{11–13} that may be a safer option than COT long term. Therefore, we offered Suboxone as a safer and more evidence-based alternative for all patients on COT. All providers within the clinic were waived to provide Suboxone. In order to ensure all providers were comfortable with Suboxone prescribing, CME time was provided to complete additional coursework in Suboxone prescribing and grand rounds were held on the topic of Suboxone. All patients were offered Suboxone as an alternative to COT. CHWs (discussed in the CHW program section) were assigned the task of following up with patients 48 hours after starting Suboxone by telephone. In addition, several Suboxone information sessions were held for patients in a group setting where providers, CHWs and current Suboxone patients were present in order to ask questions and provide information about Suboxone for those considering this therapy.

As of the fall of 2021, approximately 45 patients were on Suboxone, which was a 150% increase from the previous year (2020).

CHW programme

There is strong evidence for the use of CHWs, also called community navigators or health coaches, to improve patient care.¹⁴ Our health centre currently has a grant-funded CHW programme. Seven CHWs are employed by the health centre to help patients navigate care. In April of 2021, we integrated three CHWs into the IHC full time. Each of these health workers underwent a formal training in health and wellness coaching through the American College of Lifestyle Medicine.⁴ This training took place in several monthly sessions, better familiarising CHWs with basic motivational interviewing and health coaching training.

In May 2021, each CHW was assigned to cover the patients of two physicians. The CHW is present at all visits with the clinician so that physician and CHW were seeing the patient together as a team and patients began to see CHWs as part of the therapeutic team. The CHW is responsible for following up with patients after visits, providing 'check-in' phone calls, ensuring follow-up visits are scheduled and helping arrange transportation for patients in collaboration with the clinic's case manager.

RESULTS

Opioid prescriptions by month during the intervention

As displayed in figure 1, the slight rise in prescriptions in March is attributable to the fact that providers were seeing their long-time patients on a monthly or bimonthly basis and beginning discussions about opioid weaning during this time. Thus, we did not begin to see a drop-off until April and May during which time we were actively weaning the majority of our patients.

Patient retention rates

Out of the patients who were receiving opioid prescriptions at the beginning of the intervention in April 2021, 55% were still attending clinic visits in December 2021.

DISCUSSION

In the past year, the clinic discontinued the inappropriate use of COT in over 380 patients. Not only have we been able to reduce the opioid burden in our population, but we have made an important cultural shift toward deprescribing, in keeping with current best practices.¹ In addition, we have drastically increased the availability of alternative, safer options for pain management including multiple integrated modalities for pain. Lastly, providers have reported increased job satisfaction. One provider stated:

"I used to feel like all I was doing was prescribing opioid medications to patients (in pain management clinic). I didn't really look forward to coming to work. Now I feel like I am doing a lot more toward helping patients manage their chronic pain and actually making them feel better and achieve their (health) goals. Now I actually really look forward to my days (in the integrated health clinic)".

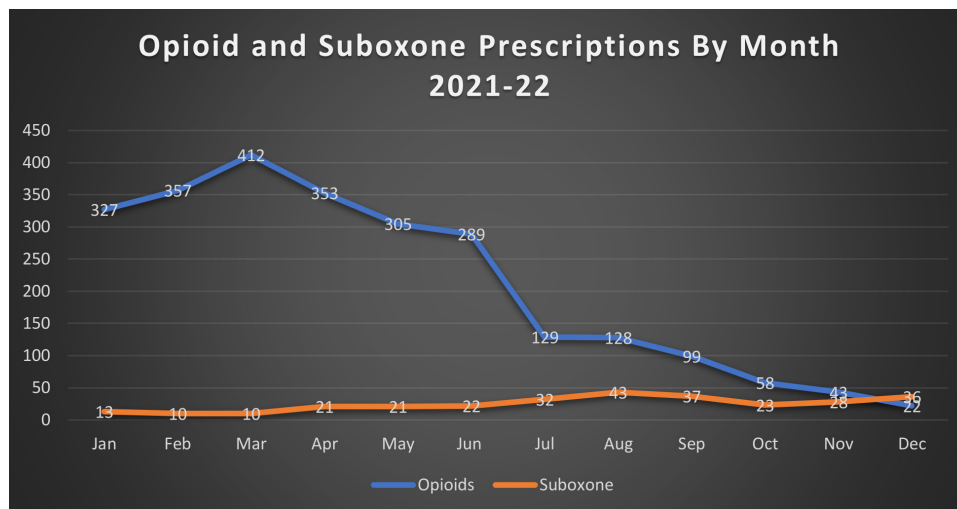


Figure 1 Opioid and Suboxone prescriptions by month, 2021–2022.

Patient retention

Out of the patients who were receiving opioid prescriptions at the beginning of the intervention in April 2021, 55% were still attending clinic visits in December 2021. We were not able to collect data on whether the remaining 45% left because of deprescribing or for other reasons (improvement in pain, loss to follow-up, etc); thus, this number may underestimate our retention rate.

Successes of our intervention

We attribute our success in universally discontinuing COT in our clinic to several important factors which we would recommend to any facility aiming to replicate our model.

Unified/consistent provider messaging

It was very important to send *consistent* messages between all six providers and patients. Before beginning any conversations with patients, we met as a team to establish policies/standards that each provider would adhere to. Each provider was instructed to make it clear to patients that the clinic's policy as a whole was changing around opioid prescriptions and that *all* patients would be weaning off of opioids at the same rate (10%–15% per month) regardless of their medical condition. This consistency helped prevent any one patient from feeling stigmatised or targeted (ie, that they were being asked to wean off opioids when other patients were not). It also helped providers to avoid bias when assessing a patient's pain management needs. By reassuring patients that the decision to wean was a clinic-wide policy and not a decision of their individual doctor, patients were less likely to blame their doctor and preserved the therapeutic relationship, allowing us to continue to provide them care.

Availability of referrals

All patients were advised that they had a *right* to continue to pursue COT at another institution and were given contact information for other local pain management clinics. We assisted in writing referrals to other pain management clinics if patients requested them. We

made it clear to patients that they were not obligated to continue care with us but that we were always available to offer other non-opioid therapies for pain. We found that, when counselled in this way, the vast majority of our patients were actually understanding and ultimately decided to continue therapy with us.

Administrative support

One of the key reasons we were successful in our objective to wean opioids was having an administration/leadership that was supportive of our goals. During the beginning of our efforts, our administration allowed increased visit time and fewer visits per session in order to ensure physicians enough time to have these complicated conversations with patients. Thus, administrative and leadership support was essential in making this effort feasible.

Physician champions

We were uniquely privileged to have several physicians who felt strongly about opioid cessation and 'championed' the efforts to decrease inappropriate opioid prescribing. Specifically, we had several clinicians who were already offering alternative modalities for pain management within their practice and were willing to take on new patients and teach other providers to provide the same services.

Behavioral health support

One of the factors attributable to our success was the availability of colocated behavioural health professionals to help support patients as they went through the process of weaning COT. It would have been difficult and likely unethical to deprescribe without offering patients appropriate behavioural support. Our clinic has three behaviouralists who are available on a daily basis for warm hand-offs and are able to follow patients as they pursue opioid weaning.

Community health workers

Our clinic has the luxury of three CHWs to help support our patients. There is strong evidence that CHW can improve clinical outcomes for patients.¹¹ CHWs serve two essential roles: first, they have a clinical role in providing support to patients—our CHWs were trained in basic motivational interviewing and health coaching and provide follow-up calls with patients to check in with them. This provided an additional point of contact for our patients as they weaned their COT. In addition, our CHWs were able to assist with concrete services (appointment reminders, setting up transportation, etc) that helped eliminate barriers to care. We have not yet collected data on the efficacy of our CHW programme but recognise that a formal evaluation will be important, likely in the form of patient satisfaction survey.

Limitations of our intervention

We wish to recognise several limitations to our study.

First, external validity is limited by the fact that our clinic serves a small, specific population in the Bronx; thus, these interventions might work differently in other populations. In addition, the specific modalities offered are available because we have providers trained in these modalities. These modalities therefore may not be available currently at other pain management or primary care facilities wishing to implement a similar model.

Second, we were limited to quantitative outcome measures. We were able to collect quantitative data on both decreases in opioid prescriptions and retention data. However, we have not yet collected more qualitative data including pain scores, satisfaction with other treatment modalities or impact on quality of life. We recognise that qualitative data would be more patient centred and more clinically useful.

Third, we only have data for one period of time and recognise the benefit of having multiple improvement cycles which we hope to collect in the future as we have more time offering these interventions.

Challenges of our intervention

Expanding capacity to provide integrated modalities

Once we began to offer integrated modalities to our chronic pain patients, the demand for integrated modalities exceeded our capacity. We hope to continue address this in two ways. First, we continue to train additional providers (either through continuing medical education and certification for our current MDs in therapies such as cupping and acupuncture). Second, we hope to hire other multidisciplinary professionals (full body acupuncturists, massage therapists, nutrition, physical therapists, etc) to work in the integrated health clinic, although we recognise that funding these positions is a limitation.

Billing for integrated modalities

Compensation/billing for integrated modalities can often be a challenge. For example, in NYS, only certain insurances compensate for acupuncture. As of now, our

strategy was to bill a regular office visit and simply document that acupuncture was performed, without an additional charge for the acupuncture service. We have been working with our billing department to pursue compensation from payers who will compensate for acupuncture as well as other integrated therapies.

Suboxone providers

Even though the majority of our providers were Suboxone waivered, some providers were much more comfortable or experienced providing Suboxone than others. The recent elimination of the Suboxone waiver in order to prescribe will eliminate some of the barriers to employing enough providers to prescribe Suboxone. In addition, for those providers who felt less comfortable prescribing Suboxone, we held several meetings with all providers in which we discussed Suboxone prescribing in order to increase all provider's comfort with Suboxone prescribing. We anticipate that lack of familiarity and comfort with Suboxone prescribing might be a barrier to other practices hoping to replicate our model.

Funding for CHWs

We recognise that funding for CHWs poses a challenge to other practices seeking to replicate our model. Currently, our CHW programme is grant funded. CHW programmes have also been paid for out of practice overhead, and in certain occasions their services (health coaching, etc) may be billable under a billing provider.

Future directions

One of the major limitations to this study was our outcome measures. We were able to collect quantitative data on both decreases in opioid prescriptions as well as retention data; however, we have not yet collected more qualitative data including pain scores, satisfaction with other treatment modalities or impact on quality of life. We believe subsequent studies on these more patient-centred metrics would prove important in validating this intervention for other clinics. We are currently in the process of beginning to analyse patient satisfaction data.

CONCLUSION

In conclusion, we believe our three-part intervention was successful in providing more evidence-based care for our patients with chronic pain conditions and was responsible for our success in weaning over 380 patients off of COT in a short period of time. We hope our strategy might provide a model for similar practices who are hoping to transition patients off of COT, with the ultimate goal of continuing to address our country's opioid epidemic, one patient and one clinic at a time.

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REFERENCES

- 1 New York State Department of Health. Opioid annual report, 2020. Available: https://www.health.ny.gov/statistics/opioid/data/pdf/nys_opioid_annual_report_2020.pdf
- 2 National Institute on Drug Abuse. Opioid summaries by state. Available: <https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates>
- 3 Busse JW, Craigie S, Juurlink DN, *et al*. Guideline for opioid therapy and chronic noncancer pain. *Can Med Assoc J* 2017;189:E659–66.
- 4 American College of lifestyle medicine. Available: https://www.lifestylemedicine.org/ACLM/Education/Continuing_Education/Lifestyle-Medicine-for-Coaches/ACLM/Education/Lifestyle_Medicine_for_Coaches.aspx?hkey=03bbd764-80ba-4818-9d80-06e75ba10cbf
- 5 Substance Abuse And Mental Health Services Administration (SAMHSA). Managing chronic pain in adults with or in recovery from substance use disorders, 2013. Available: https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP20-02-01-022.pdf
- 6 Juergens J. Pain Clinics In America: The Danger of “Pill Mills”. Available: <https://www.addictioncenter.com/community/pain-clinics-america-danger-pill-mills/>
- 7 Moura CdeC, Chaves Érika de Cássia Lopes, Cardoso ACLR, *et al*. Cupping therapy and chronic back pain: systematic review and meta-analysis. *Rev Lat Am Enfermagem* 2018;26.
- 8 Rubinstein SM, van Middelkoop M, Kuijpers T, *et al*. A systematic review on the effectiveness of complementary and alternative medicine for chronic non-specific low-back pain. *Eur Spine J* 2010;19:1213–28.
- 9 National Acupuncture Detox Association. Available: <https://acudetox.com/>
- 10 Trigger point dry Needling. *J Orthop Sports Phys Ther* 2017;47:150.
- 11 Chen KY, Chen L, Mao J. Buprenorphine-Naloxone therapy in pain management. *Anesthesiology* 2014;120:1262–74.
- 12 VA Pharmacy Benefits Management Services, Medical Advisory Panel, VISN Pharmacist Executives. Buprenorphine formulations for chronic pain management in patients with opioid use disorder or on long term opioid therapy with physiologic tolerance and dependence; 2019.
- 13 CDC. Guideline for prescribing opioids for chronic pain. Available: https://www.cdc.gov/drugoverdose/pdf/prescribing/Guidelines_Factsheet-a.pdf
- 14 Thompson MP, Podila PSB, Clay C, *et al*. Community navigators reduce hospital utilization in super-utilizers. *Am J Manag Care* 2018;24:70–6.