

## Re-purposing Anticoagulation Clinics: Expanding Access to Opioid Agonist Therapy in Primary Care Settings

Pooja Lagisetty, MD, MSc<sup>1,2</sup>, Michele Heisler, MD, MPA<sup>2,3</sup>, and Amy Bohnert, PhD, MHS<sup>2,4</sup>

<sup>1</sup>Robert Wood Johnson Foundation Clinical Scholar, University of Michigan

<sup>2</sup>University of Michigan, Department of Internal Medicine, Ann Arbor, MI

<sup>3</sup>Center for Clinical Management Research, Ann Arbor VA, Ann Arbor, MI, United States

<sup>4</sup>Department of Psychiatry, University of Michigan, Ann Arbor, MI

Word Count: 974

Conflicts of Interest: none

Corresponding Author:

Pooja A. Lagisetty, M.D., MSc  
Robert Wood Johnson Foundation Clinical Scholars®  
North Campus Research Complex  
2800 Plymouth Road  
Building 10, Room G016  
Ann Arbor, MI 48109  
Phone: 734-647-0473  
lagiset@med.umich.edu

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as doi: [10.1111/add.13531](https://doi.org/10.1111/add.13531)

*To overcome structural barriers to providing opioid agonist therapy (OAT) in primary care settings, we propose building on the existing infrastructure of anticoagulation clinics. These clinics are well equipped to provide drug-monitoring and multidisciplinary support for medications through pharmacy and/or nurse-led teams. This proposal would use existing resources to expand current anti-coagulation clinics' capabilities to include OAT.*

As primary care physicians work to decrease opiate prescribing for chronic pain, more patients requiring treatment for opioid use disorders will be identified. Accordingly, policymakers internationally are calling to develop effective, scalable primary care models to increase access to therapies such as opioid agonist therapy (OAT). Globally, much of Europe, Australia, and Canada have already been using general practitioners to prescribe not only buprenorphine, but also methadone (1, 2). The World Health Organization has attested that in order to ensure the quality of OAT programs, care models in any setting need to follow national and international guidelines, be multidisciplinary, provide social and behavioral support, maintain a non-stigmatizing environment, and be patient-centered (1). Primary care-based multidisciplinary models that deliver OAT in the form of medication management clinics would meet these criteria whilst also providing logistical support to an already overburdened primary care workforce.

The necessary infrastructure for such medication management clinics already exists.

Anticoagulation clinics, providing interdisciplinary medication management and monitoring for patients on warfarin, have been established in over 3,000 care delivery settings internationally. Warfarin, similar to buprenorphine and methadone, requires frequent lab monitoring, ongoing patient education, and protocols for dose adjustment.

An analogous OAT protocol design could easily account for the specific needs of patients during the induction, maintenance, and stabilization phases of treatment. In addition, anticoagulation clinics are already well equipped to support both specialty and primary care physicians. Staffed by pharmacists, nurses, and/or nurse practitioners, these providers could conduct monitoring, patient education and counseling, and when authorized, implement dosing changes. This design would also be well suited to help support collaboration with multiple specialty providers, especially important when available pain specialists do not have addiction expertise. In this collaborative care approach, the nurses and pharmacists serve as liaisons between the primary care team and specialists. In addition, as newer direct oral anticoagulants that require less frequent laboratory monitoring are increasingly replacing warfarin for treatment of common cardiovascular conditions, anticoagulation clinics should have more capacity to start to manage other medications.

Author Manuscript

Re-purposing these clinics to safely manage multiple classes of drugs would reduce the start-up burden and cost of finding trained personnel and physical space to start OAT clinics. Moreover, by providing the familiarity of a parallel care structure and supports, primary care physicians may be more likely to take on the challenge of providing buprenorphine for patients with opioid addiction. Similarly, health care systems would be more likely to invest in a previously tested model that provides high quality care and lowers costs through reductions in hospitalizations and emergency department visits(3).

Logistical barriers are among the most commonly cited reasons by primary care physicians for not prescribing OAT(4). In addition, critics of increasing primary care-based prescribing of OAT often express concern for drug safety. The tools of OAT safety include checking prescription drug monitoring programs, drug contracts, pill counts, and urine toxicology screens to monitor for drug misuse and diversion. Medication management clinics offer a solution to the burden of this monitoring, as this structure provides a cost-effective, high quality model to support primary care physicians in safe prescribing practices.

What are the real advantages of repurposing traditional anticoagulation clinic model to also serve as OAT medication management clinics? Addiction, unlike diseases warranting anticoagulation, is highly stigmatized, and these clinics would also need to

work towards overcoming stigma-related barriers. In order to be successful, medication management clinics would have to move beyond just managing medication dosing and drug monitoring protocols, and focus on offering multiple patient-centered benefits with respect to providing an integrated approach to managing addiction. First, these clinics could foster a less stigmatizing environment where patients are more likely to engage in care, relative to traditional OAT clinics in specialty addictions clinics. Second, the pharmacist/nurse leaders of the clinic could offer patients more dedicated time to address their concerns with respect to their addiction and building trust with the medical team. Finally, this multidisciplinary approach could provide more dedicated time for patient education and behavioral counseling to encourage adherence to medication regimens which may not be possible by primary care physicians who are practising alone.

There is precedent for using a similar multi-disciplinary team structure in the setting of managing long-term opioid prescriptions. Researchers at the Philadelphia Veterans Affairs Medical Center tested a nurse practitioner- and clinical pharmacist-led model, aided by a multi-specialty pain team, to help support primary care providers follow opioid prescribing guidelines for patients with non-cancer chronic pain(5). After two years, the model had increased primary care provider satisfaction, saved pharmacy costs, and decreased medication misuse(5)(4).

Author Manuscript

Although OAT management for patients with substance use disorders is not completely analogous to opiate management for patients with chronic pain, there are similar requirements in terms of a need for multi-specialty care (e.g., mental/behavioral health, primary care, and pain management), stigmatization, and possessing a need to monitor for medication misuse and diversion. In the OAT medication management model, the clinics could also play a critical role within health systems of identifying and treating patients with chronic pain who have developed a co-occurring opioid use disorder.

Successful innovation often relies on re-inventing prior solutions and learning from other disciplines. When it comes to OAT, we should consider capitalizing on the infrastructure and workforce that exists within anticoagulation clinics, especially as their demand to manage warfarin decreases. These clinics have the potential to foster an environment of support and empathy where patients are going to heal rather than be chastised for their addiction. This inventive re-interpretation of an existing model has the potential to increase access to high quality care, lower health care costs, provide patient-centered care, and allow more time for primary care physicians to manage diseases rather than drugs. We are in dire need of a readily available, effective solution to help curtail opioid related deaths. OAT medication management clinics in primary care may be the answer.

Author Manuscript

**Acknowledgements:** The authors would like to thank Vineet Chopra, MD, MSc for his valuable editorial comments. The authors have no conflicts of interest.

1. World Health Organization. How to improve Opioid Substitution Therapy implementation. [http://www.euro.who.int/\\_data/assets/pdf\\_file/0015/241341/How-to-improve-Opioid-Substitution-Therapy-implementation.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0015/241341/How-to-improve-Opioid-Substitution-Therapy-implementation.pdf?ua=1); 2014 January 2014.
2. McNeely J, Drucker E, Hartel D, Tuchman E. Office-based methadone prescribing: acceptance by inner-city practitioners in New York. *Journal of urban health : bulletin of the New York Academy of Medicine*. 2000;77(1):96-102.
3. Chiquette E, Amato MG, Bussey HI. Comparison of an anticoagulation clinic with usual medical care: anticoagulation control, patient outcomes, and health care costs. *Archives of internal medicine*. 1998;158(15):1641-7.
4. Walley AY, Alperen JK, Cheng DM, Botticelli M, Castro-Donlan C, Samet JH, et al. Office-based management of opioid dependence with buprenorphine: clinical practices and barriers. *Journal of general internal medicine*. 2008;23(9):1393-8.
5. Wiedemer NL, Harden PS, Arndt IO, Gallagher RM. The opioid renewal clinic: a primary care, managed approach to opioid therapy in chronic pain patients at risk for substance abuse. *Pain medicine (Malden, Mass)*. 2007;8(7):573-84.

Author Manuscript