CONTINGENT HORIZONS
The York University Student Journal of Anthropology

VOLUME 5, NUMBER 1 (2019)
OBJECTS

Infrastructures of Naloxone: Exploring Issues of Distribution and Access

Jordan Hodgins

MA student, Social Anthropology | York University, Toronto, Canada

PHOTOGRAPH CREDITS Jordan Hodgins 40.

Contingent Horizons: The York University Student Journal of Anthropology. 2019. 5(1):33–44.

First published online July 12, 2019.

Contingent Horizons is available online at **ch.journals.yorku.ca**.

Contingent Horizons is an annual open-access, peer-reviewed student journal published by the department of anthropology at York University, Toronto, Canada. The journal provides a platform for graduate and undergraduate students of anthropology to publish their outstanding scholarly work in a peer-reviewed academic forum. *Contingent Horizons* is run by a student editorial collective and is guided by an ethos of social justice, which informs its functioning, structure, and policies. *Contingent Horizons*' website provides open-access to the journal's published articles.

ISSN 2292-7514 (Print) ISSN 2292-6739 (Online)

EDITORIAL COLLECTIVE Meredith Evans, Nadine Ryan, Isabella Chawrun, Divy Puvimanasinghe, and Katie Squires

COVER PHOTO Jordan Hodgins

Infrastructures of Naloxone

Exploring Issues of Distribution and Access

JORDAN HODGINS
MA STUDENT, SOCIAL ANTHROPOLOGY
YORK UNIVERSITY, TORONTO, CANADA

This paper is an exercise in Joseph Dumit's (2014) implosion project and explores the object world of the opioid reversal drug naloxone. This narrative focuses on naloxone as it distributed in kit form across Canada and situates this kit according to its growing role as an overdose prevention tool within the context of an increase in opioid-related overdose deaths in Canada. Drawing from anthropological literature on the marketization of health and health infrastructures, as well as theories of the psychological stigma surrounding drug use, I focus on two elements of the complex assemblage of factors that lead to barriers in uptake: the economic and the social. Identifying potential barriers in accessing naloxone kits and arguing for the importance of such analysis, I turn to my own ethnographic exploration of the accessibility of state-subsidized naloxone throughout community pharmacies in the City of Toronto and the Greater Toronto Area.

KEY WORDS Naloxone, object implosion, opioids, Canada, public health

Often referred to as a "reversal drug," naloxone (also known by its commercial name, Narcan) can temporarily reverse an opioid overdose if administered within a given time period to the onset of the overdose. Having little effect on the body if opioids are not present, naloxone has no addictive properties (Campbell and Lovell 2012). In use for forty years (Lenton et al. 2015), naloxone's potential has primed it as one of the fastest growing harm reduction interventions in North America (Faulkner-Gurstein 2016). Within the last decade, naloxone has become politically salient as opioid related deaths in North America have risen to 72,000 in the United States (Sanger-Katz 2018), and 3,987 in Canada in 2017 (Health Canada 2018). In response, the Canadian federal government has implemented overdose prevention efforts, such as the 2016 rescheduling of naloxone from prescription access only to free over-the-counter kits available upon request (Health Canada 2018). Yet, despite such policy changes, naloxone provision is emerging within complex and dynamic assemblages of social, legal, political and economic forces which together produce impediments and barriers to its uptake (Farrugia et al. 2017).

In this paper I explore the object world of the opioid reversal drug naloxone, as an exercise in Joseph Dumit's implosion project (2014). Inspired by Donna Haraway, the

Contingent Horizons Volume 5, Number 1 (2019), pp.33–44, ISSN 2292–7514, online ISSN 2292–6739.

implosion project incites one to "wake up to" and think critically about the worldly connections embedded within everyday materials—to ask: "how is it in the world and how is the world in it?" (Dumit, 2014, 351). Following Dumit (2014), this paper maps my knowledge of naloxone: my common sense, what I have felt worth knowing, and of what I have learned to attend to in my life, every day and academically. Through this reflexive praxis, I aim to disrupt my own tolerance, as well as that of the reader. By intimately questioning how to see the intolerable and unbearable worlds that are encased in the everyday world of naloxone (Dumit 2014, 347), the particular threads I have chosen to follow reflect my own analytical, imaginative, physical, and political choices (Dumit 2014, 360). My ultimate goal is for this level of attunement that I cultivate through this implosion project to extend both to the reader, as well as beyond academia and into the world.

To begin, I weave in and out of news media stories to walk the reader through the popular historical understandings of the rise in the novel forms of opioid-related overdose deaths, currently on the rise in Canada. Drawing from anthropological literature on the marketization of health and health infrastructures, as well as theories of the psychological stigma surrounding drug use, I focus on two elements of the complex assemblage of factors that lead to barriers in uptake: the economic and the social. Identifying potential barriers to access for naloxone and arguing for the importance of their identification, I turn to my own ethnographic exploration of the accessibility of state-subsidized naloxone throughout community pharmacies in the City of Toronto and the Greater Toronto Area. Making sense of these findings through Susan Star's (1999) infrastructural analysis provided the intellectual space to identify and theorize barriers to accessing naloxone. To conclude, I offer my own findings on the accessibility of naloxone within this region, arguing for the need for more qualitative studies on take-home naloxone programs in Canada so as to continue to identify and mitigate barriers to its access. As such, this paper blends an anthropological framework with activist driven, investigative journalism, and my own continued journey as a Canadian citizen tracing the path of this drug.

Three Object Worlds in One: OxyContin, Fentanyl and Naloxone

As extremely potent opioids such as fentanyl and its analogues have become ubiquitous within the illicit supply of drugs in Canada[1] the number of opioid-related overdose deaths continues to rise; with the latest national studies confirming 2,066 deaths from January to June of 2018 (Health Canada 2019). At the time of writing, there are more than 11 Canadians dying daily from opioid-related overdoses (Weeks 2018), and opioids are now responsible for bringing down the average life expectancy of Canadians, particularly those in British Columbia (Ireland 2018).

The increase in opioid-related overdose deaths in Canada is often traced back to the aggressive and fraudulent marketing of pharmaceutical companies such as Purdue Canada.[2] While the Purdue's OxyContin, aka. patent '738, is not the sole culprit, its trajectory in the Canadian landscape is exemplary of the ways in which Canadians are heavily effected by the marketization of health. With the advent of Patent '738 in 1992, Canadians were introduced to a new kind of pain-killing medication. Intentionally understating its addictive potential to physicians, Purdue's OxyContin was not merely a commercial success because of its effectiveness at killing pain but also due to its highly addictive quality.

The company went to extreme lengths to persuade a new generation of doctors that OxyContin was more effective and less powerful than other pain medication, by advertising it as safer and less addictive for patients. According to the Globe and Mail, Purdue used Key Opinion Leaders[3] at institutions such as the University of Toronto, where physicians taught classes using textbooks paid for by Purdue (Howlett and Robertson 2016).

Yet, ironically, some of the biggest concerns about OxyContin were raised by the drug industry itself, within numerous patent battles from 2005 to 2012 that did not attract any publicity (Howlett and Robertson 2016). As these patent battles continued to dog Purdue, the company's profit margins continued to soar, reaching hundreds of millions of dollars—quantifying the success of an aggressive faulty advertising campaign. Purdue was eventually accused of conscious faulty advertising, testifying that they were aware of the inaccuracy of their statements on the safety of OxyContin. Despite this controversy, in the fall of 2008, the former premier of Ontario, Dalton McGuinty, pledged 4.9 million dollars of tax-payer money towards the company's 32-million-dollar expansion of the Pickering facility (Howlett and Robertson 2016). In 2012, months before Purdue's patent was set to expire, the company took OxyContin off the market and replaced it with OxyNeo, a similar opioid that was thought to be more tamper proof, and therefore less easy to abuse.[4]

Recognizing the unethical corporate practices of Purdue, many harm reduction advocates argue that the media has highly over emphasized the correlation between physician prescription patterns and susceptibility to opioid overdose, arguing that this overemphasis has resulted in physicians increasingly withdrawing legitimate and necessary prescriptions, thereby diverting individuals to the illicit market wherein they are more likely to consume substances poisoned by stronger opioids such as fentanyl (Siegal 2018). However, despite this critique, the timing of the removal of OxyContin from the market, and the first appearance of fentanyl in Canada, is often constructed as not only coincidental but also directly related (Howlett and Woo 2018). For example, Health Canada's Federal Government's Action on Opioids described the introduction of fentanyl and its analogues as such:

> Fentanyl, which is fifty to one hundred times more potent than morphine, is a legitimate pharmaceutical used to treat severe pain. However, illegally produced fentanyl and fentanyl analogues, are now being found in Canada. These toxic drugs, many of which are coming from overseas, are making their way to the street in a pure form, pressed into counterfeit drugs or mixed into other illegal drugs, given their comparatively low cost. These drugs have significantly contributed to the overdose epidemic. The number of times fentanyl or an analogue has been identified in samples submitted by law enforcement to Health Canada laboratories has increased by than 2000% since fentanyl was first encountered in Canada in 2012… While the proportion of overdose deaths associated with fentanyl continues to grow, Canada is now seeing carfentanil, an even more deadly opioid, enter the illegal market (2018, 2).

Interestingly, Health Canada cites the first appearance of fentanyl in Canada as 2012—precisely the year OxyContin was removed from the market.

Remaining perhaps purposefully naïve of the geopolitical factors through which fentanyl and its analogues have been introduced to the illicit supply of drugs in Canada, it is

this presence—this poisoning—that has driven the federal government to introduce state-subsidized naloxone which can temporarily reverse an overdose. However, before I turn to a discussion of the economic and social barriers to access of publicly funded naloxone, it is necessary to understand how naloxone functions as a reversal drug.

Opiates are natural derivatives of the Persian poppy, the narcotic effects of which are the work of three chemical compounds in the plant—morphine, codeine and thebaine. *Opioids*, on the other hand contain synthetic components designed in a laboratory (an example being carfentanil which is 100 times more potent than its synthetic analogue of fentanyl). While all opiates are opioids, not all opioids are opiates. Despite this, both opiates and opioids such as heroin, methadone, oxycodone, hydrocodone, morphine, and codeine, bind to the brain's opioid receptors which are responsible both for controlling pain, as well as the instinct to breathe. Overdose occurs when the brain's opioid receptors become oversaturated with opioids from the drugs taken, stimulating respiratory depression which came become fatal in three to five minutes.[5] Often described as a "hat", or more provocatively as a "brain condom against an opioid" at an overdose prevention workshop I attended, naloxone acts as a narcotic antagonist to the opioids. By knocking opioids off the brain's opioid receptors, upon administration, naloxone opens up the neurological pathways to notify the brain to begin breathing again (Faulkner-Gurstein 2017). However, given that naloxone temporarily strips the body of opioids it can also catapult the chronic opioid user into immediate withdrawal, making its administration often incredibly unpleasant for the recipient.[6] Furthermore, more often one dosage of naloxone—paired with rescue breathing—is needed to stave off the potential of a recurrent overdose.

Identifying Barriers to Access: Marketization and the Deservingness Heuristic

Not surprisingly, naloxone has become just as profitable as OxyContin. While there is little data as to its price within Canada, according to Truc (2016), in the United States its price has risen from only 1 dollar as recently as a decade ago to over 40 dollars. During the 1990s—a decade which saw naloxone being used primarily by emergency rooms and ambulances—the drug was not as profitable, however, since harm reduction organizations have rightly pushed for an increase in its accessibility, the demand—and thus the price—has gone up exponentially (Jacobs 2016). In the United States, a popular injectable version of the drug has gone from 92 cents a dose to more than 15 dollars a dose over the last decade. As of 2016, an auto-injector version of naloxone is up to more than 2,000 dollars a dose in some areas (Jacobs 2016). Those hit the hardest by the increase of price are often smaller harm reduction organizations or community programs (Jacobs 2016), as well as regions in which naloxone is not subsidized by the state. In this vein Truc (2016) reminds us that:

> for all the life-saving benefits of naloxone, it's important to remember that, at best, it's just a stop-gap solution to treat a symptom—albeit an incredibly significant one—rather than a cure for a condition. Critics of wider naloxone availability point to the possibility that expanded access creates a moral hazard and doesn't address the crux of the problem—which is the actual opioid addiction. But again, that is a systemic problem that will take years, if not decades, to resolve … pharma

> companies know they have yet another life-saving drug in their pipeline and the means to leverage it for more dollars from willing buyers (1).

While take-home naloxone programs are subsidized country-wide in Canada, it is imperative to recognize the importance of it remaining as so, especially as its price continues to soar, which makes it extremely inaccessible for individual purchase.

According to anthropologist Joseph Dumit (2014), the substantial profits garnered from pharmaceuticals such as OxyContin and its counterweight, naloxone, are a common, if not fundamental feature of the marketization of pharmaceuticals. Thus, opioids that lead to overdose, and the naloxone that reverses it, rely on a particular understanding of health that fits into corporate research agendas. This kind of conceptualization of health is what Dumit (2014, 17) calls *surplus health*. Based on capitalist logic of accumulation, surplus health refers to the maximizing of treatment populations for corporate profits. In this framework, health is valued in terms of potential treatment growth, as this is seen as the only way to translate into corporate growth, and thus capitalist profits (Dumit 2012, 197). Within this context, facts about health become highly contestable things (Dumit 2012, 158). To the extent that "pharma companies design clinical trials and therefore the facts we have about risk and health" (Dumit 2012, 204), are thusly designed and informed by these trials, begging us to question the discourses and the knowledge of health. The question of ethics today thus becomes not about what decision to make, but *how* to make a decision within financialized medicine (Dumit 2012, 210). It is this marketization of health and the prioritization of profit that permits the same pharmaceutical companies to profit from both the licit opioids causing overdose, and the overdose antidote.[7]

In addition to economic factors, deeply social notions regarding drug use act as a barrier for availability of, and access to, naloxone. Jensen and Petersen's (2017) sociological study on the influence of subconscious bias on citizens' views on public policy demonstrates that citizens views on "deservingness" of state-subsidized support depends on deeply psychological and political notions of responsibility. The authors contend that support for subsidized health care (rather than unemployment or disability) cross-cuts political and ideological beliefs such that they play on psychological intuitions of the proper relationship between illness and government responsibility. It is interesting to note that "obesity and smoking related problems are viewed less as diseases and also less as deserving of help—presumably because people feel that these problems are under an individual's control to some extent, which clashes with their intuitive understanding of 'disease'" (Jensen and Petersen 2016, 80). Implicit in this idea is the assumption that if a "disease" or illness is out of an individual's control, they are seen as deserving of care; however, if an individual's illness is seen as the result of their actions, they are seen as no longer worthy of social support financed by precious tax dollars. From this perspective, even subconscious psychology is heavily stigmatized wherein citizens justify subsidies for those they perceive as victims of uncontrollable events, yet they cannot justify subsidies for those who are to "blame for their own plight" (Jensen and Petersen 2016, 69). Jensen and Peterson's "deservingness heuristic" prompts individuals to oppose basic health care and social assistance when the need reflects a lack of motivation, but support subsidies when the need is believed to be beyond an individual's control (Jensen and Petersen 2016, 71). Given that the enduring classificatory scheme that consigns nonmedical drug users to

the category of "criminals," while designating medical users as "patients" suffering from a "disease," the legitimacy of harm reduction practices, particularly those with public funding, are constantly questioned along ideological lines. The deservingness heuristic continually constructs people who use drugs as personally responsible for the harms related to drug use, and therefore undeserving of subsidized health care. In this way, stigma effectively produces gross social barriers to access within the infrastructures of naloxone.

In an interview with the CBC's Metro Morning, Zoë Dodd (2017), a frontline harm reduction worker, emphasizes the need for low barriers for people who use drugs to access harm reduction services, such as take-home naloxone. Taking this contention seriously and thinking with Susan Star's (1999, 389) critique that some infrastructures contain gross barriers which require large scale social movements to upheave, this object implosion leads me to consider how particular economic and social barriers to naloxone access exist within take-home naloxone programs in the city of Toronto and the Greater Toronto Area. To do so, I first address the distribution of naloxone within the Canadian and provincial landscape in order to narrow in on the particular region I identify and discuss my own findings.

Federal and Provincial Approaches to Take-Home Naloxone

In March 2016 the national pharmaceutical regulating body, Health Canada moved naloxone to the status of a non-prescription drug making its over-the-counter access available to anyone who requests naloxone *without cost* (Health Canada 2018, 8). However the Canadian Agency for Drugs and Technologies in Health report entitled "Funding and Management of Take-Home Naloxone Programs in Canada" notes that "jurisdictional legislation may align in some provinces and territories but may be more restrictive in others" citing that as of November 2017, British Columbia and Alberta have changed the status of non-hospital use of naloxone to the "Unscheduled" category, while elsewhere in Canada naloxone is a Schedule II category. Such variance in the scheduling of naloxone leads to provincial discrepancies in its accessibility, making it more difficult to obtain in certain regions (Canadian Agency for Drugs and Technologies in Health 2018, 8). In addition, Health Canada's Actions on Opioids Report identifies its approach to First Nations and Inuit communities as one that seeks to provide community-based and culturally appropriate health programs and services, providing naloxone access through nursing stations in remote and isolated locations via its provincial partners (Government of Canada 2018, 12). While beyond the scope of this paper, it is imperative to recognize that First Nations and Inuit communities' vulnerability to opioid use and overdose stems from the very colonial health care system that is responsible for ensuring their well-being (Webster 2013).

Within the province of Ontario, publicly funded naloxone is distributed through three of the provincial Ministry of Health and Long-Term Care's (MOHLTC) programs: the Ontario Naloxone Program (ONP), the Ontario Naloxone Program for Pharmacies (ONPP), and the Provincial Correctional Facilities Take Home Naloxone Program (Canadian Agency for Drugs and Technologies in Health 2018, 8). Actors involved in each respective program then distribute the naloxone to those deemed "eligible," such as: "a current user, or a past user at risk of opioid overdose, friends and families of persons at risk, a person in a position to assist a person at risk of an overdose from opioids, newly released inmates at

risk of an opioid overdose" or any organization/persons whose clients may fall under these categories (Canadian Agency for Drugs and Technologies in Health 2018, 8). Naloxone is available in two forms: injection and nasal spray, each of which come in a small, portable kit form. The injection kit contains: two vials or ampoules of naloxone injection (0.4mg/mL), two ampoule breakers per kit for opening ampoules safely (only for kits containing ampoules; kits containing vials do *not* require ampoule breakers), two safety-engineered syringes with 25g one-inch needles attached, one pair of non-latex gloves, one card that identifies the person who is trained to give the naloxone, and one hard case (Canadian Agency for Drugs and Technologies in Health 2018, 9). While the nasal spray kit contains: two dosages of nasal naloxone spray (4 mg/0.1mL), one pair of non-latex gloves, one card that identifies the person who is trained to give the naloxone, one insert with instructions in English and French, and one hard case (Canadian Agency for Drugs and Technologies in Health 2018, 9).

In operation since June 2016, the ONPP makes both forms of naloxone available at pharmacies, at no charge; however, participation is voluntary meaning that not all pharmacies carry naloxone. While at the time of launch of the ONPP the ministry provided a one-time drop shipment of pre-assembled injectable kits to pharmacies that ran methadone/suboxone programs, currently participating pharmacies primarily receive naloxone via a wholesale distributor, such as McKesson Canada,[8] and the remaining supplies come from various suppliers and are put together in house to form the kit (Ontario Ministry of Health, 2019). In turn, pharmacies bill the provincial government for fees: 120 dollars for intra-nasal and 70 dollars for initial injectable kit (Ministry of Health 2019, 3). Unless an individual has received previous training in the administration of naloxone, upon request of the kit, individuals are given a brief one-on-one instruction on its use. Information regarding locating participating pharmacies is available via the Ministry's website (Government of Ontario). In March 2018, the ministry made two key amendments to the ONPP policy making available both the injection and previously unavailable intranasal forms of naloxone, now allowing individuals to request one of each kit and without a health card (Ministry of Health 2019).[9]

Accessing Take-Home Naloxone via the ONPP in the city of Toronto and the Greater Toronto Area

When I initially began visiting pharmacies in November 2017 conducting research for a graduate course paper, I was under the auspices that naloxone kits were extremely hard to come by and that it was only possible to obtain one kit. I began visiting pharmacies across the city of Toronto and the Greater Toronto Area (GTA) to gauge the availability and accessibility of naloxone kits. While I did not find the kits difficult to come by per se, I found the experience to be fraught with both economic and social barriers which were mediated in varying degrees by my positionality as a privileged racially unmarked woman (Haraway 1988, 586). For me, locating a pharmacy that distributes naloxone was not difficult. I have access to the internet to look up the nearest pharmacy, access to a vehicle to get there, and the time to go to the pharmacy—although I often experienced confused reactions from pharmacists when requesting a kit. At a Shoppers Drug Mart pharmacy close to my home, neither employee knew how to bill the kit through the system, nor how to give the

PHOTOS: JORDAN HODGINS

The injection naloxone kit (left) and the nasal spray naloxone kit (right) available for free at participating pharmacies in the Province of Ontario via the Ontario Naloxone Program for Pharmacies (ONPP).

short training speech. I was asked to return later on that day. At a Walmart pharmacy I was given a kit without any inquiry after mentioning that I was hoping to obtain a kit for a research project. Here, none of my information was collected. At a pharmacy in a budget grocery store, I was given a kit with considerable apprehension, quizzical (and frankly judgemental) looks. At this pharmacy, I was asked to jot down my phone number and name and received a call once I had made it back to my car wherein, I was asked for my Ontario Health Insurance Plan number, and my address. At another pharmacy in the bottom floor of a major GTA hospital, the pharmacists were reluctant to give me a kit. When I finally convinced them, the one kit they did have did not contain any naloxone and they could not locate it anywhere. Recognizing that I was attempting to access a program that had been in operation for under six months, I needlessly felt access to this life-saving drug to be fraught with social and economic barriers. How, I wondered, would anyone in need ever feel comfortable walking into a pharmacy to obtain a naloxone kit, especially with prior experience of stigma against drug use?

While my initial experiences visiting pharmacies were less than encouraging, in the spring of 2018 my continued visits began to morph with a program that was beginning to find its feet. With some time to spare one chilly afternoon, I decided to visit a major grocery store pharmacy in the downtown core. After requesting a naloxone kit, the head pharmacist offered a brief training seminar, so as to teach me how to administer the injectable naloxone (something I had not yet once been offered). The training session lasted roughly 10 minutes, in the private room to the side of the pharmacy designed for

consultations regarding somewhat more private prescriptions. The pharmacist—from whom I refreshingly received no air of judgement—carefully walked me through the process of administering naloxone (recognizing the signs of an overdose, making sure you call 911, trying to wake them up, and, if they are unresponsive, administering naloxone in the thigh, the arm, the buttock, or in the nose for the nasal spray). Upon confirming that I was indeed comfortable to administer it, I was given an injectable naloxone kit, to be used in any opioid-related emergency I should find myself in.

Conclusion

Tracing the object world of the opioid-reversal drug, naloxone, I have aimed to situate the drug within the context of a marked rise in opioid-related overdose deaths in Canada, tracing its shifted role as a state-subsidized overdose prevention tool responding to the ubiquity of fentanyl and its analogues within the illicit supply of drugs in Canada since the early 2010s. Arguing for the importance of identifying and rectifying barriers to access within the infrastructures of naloxone, I identify and explore economic and social factors which impede its uptake, particularly within pharmacy-based take-home naloxone provision in the City of Toronto and the Greater Toronto Area. Through an ethnographic narrative, which explores my own experiences requesting a naloxone kit at various pharmacies, I aim to highlight the ways in which broader economic and social issues such as the marketization of health and stigma surrounding drug use impede the uptake of naloxone at the pharmacy level. Recognizing my own positionality, I seek to make sense of the ways in which social barriers such as stigma surrounding drug use impedes access for more vulnerable individuals. In conclusion, I argue for the need for more qualitative studies on take-home naloxone programs in Canada, with the goal of improving its distribution at all levels.

Notes

1 For example, Woo (2018) writes that according to the B.C. Centre for Substance Use, nearly 80 per cent of street drugs being sold as heroin in Vancouver do not contain any heroin at all, while nearly all contain fentanyl.

2 Indeed, the province of British Columbia has launched a lawsuit against Purdue (among other pharmaceutical companies) alleging "misinformation and deception," claiming that the distributors knew the drugs were addictive and "seeping into the illicit market" (Howlett and Woo 2018).

3 "Key Opinion Leaders" (KOLs) are physicians targeted by Purdue to ease anxieties surrounding OxyContin, and to encourage its prescription throughout the medical community. These KOLs were often hosted by Purdue at as many as five annual lavish conferences designed to convince physicians that OxyContin was safe and non-addictive (Howlett and Robertson 2018).

4 OxyNeo was thought to be more "tamper proof" in that is more difficult to alter it by, for example crushing it, thereby releasing the entire dosage at once rather than periodically over time as it is designed to do (Howlett and Robertson 2018).

5 For more information on the difference between opiates and opioids as well as their effects on the brain, please see Brownstein (1993).

6 Hence why it took time to become a popular overdose prevention strategy among people who use drugs, as it was often used as a tool of punishment by law enforcement who administered naloxone with the intention of inducing painful withdrawal symptoms (Neale and Strang 2015).

7 Interestingly, the pharmaceutical industry also stands to substantially benefit from further harm reduction strategies such as opioid-maintenance programs, and the provision of a safe supply of opioids (so as to provide an alternative to the illicit supply which is poisoned with unknown substances).

8 Which, in the spirit of Purdue, is also in the midst of its own legal troubles. Currently, McKesson Canada is being investigated for offering "kickbacks" or "rebates" to pharmacies who stock its products—a process that is illegal in the province of Ontario (although, kickbacks continue to remain legal for physicians) (Sawa et al. 2019).

9 Previous to this amendment, an Ontario Health Insurance Plan card was needed to obtain a naloxone kit for billing purposes.

References

Bird, Sheila M., Andrew Mcauley, Samantha Perry, and Carole Hunter. 2016. "Effectiveness of Scotlands National Naloxone Programme for Reducing Opioid-Related Deaths: a before (2006–10) versus after (2011–13) Comparison." *Addiction* 111 (5): 883–91. doi:10.1111/add.13265.

Campbell, Nancy D., and Susan J. Shaw. 2008. "Incitements io Discourse: Illicit Drugs, Harm Reduction, and the Production of Ethnographic Subjects." *Cultural Anthropology* 23 (4): 688–717. doi:10.1111/j.1548-1360.2008.00023.x.

Campbell, Nancy D., and Anne M. Lovell. 2012. "The History of the Development of Buprenorphine as an Addiction Therapeutic." *Annals of the New York Academy of Sciences* 1248 (1): 124–39. doi:10.1111/j.1749-6632.2011.06352.x.

Dodd, Zoë. 2017. "Zoe Dodd on importance of Moss Park site: 'It feels like carnage'". Interview by Matt Galloway. *Metro Morning*, CBC, November 1, 2017. Accessed November 20, 2017. http://www.cbc.ca/news/canada/toronto/programs/metromorning/zoe-dodd-on-importance-of-moss-park-site-it-feels-like-carnage-1.4381869

Dumit, Joseph. 2012. *Drugs for Life: How Pharmaceutical Companies Define Our Health*. Durham, NC: Duke University Press.

_____. 2014. "Writing the Implosion: Teaching the World One Thing at a Time." *Cultural Anthropology* 29 (2): 344–62. doi:10.14506/ca29.2.09.

Farrugia, Adrian, Suzanne Fraser, and Robyn Dwyer. 2017. "Assembling the Social and Political Dimensions of Take-Home Naloxone." *Contemporary Drug Problems* 44 (3): 163–75. doi:10.1177/0091450917723350.

Fassin, Didier. 2008. "Beyond Good and Evil?" *Anthropological Theory* 8 (4): 333–44. doi:10.1177/1463499608096642.

Faulkner-Gurstein, Rachel. 2017. "The Social Logic of Naloxone: Peer Administration, Harm Reduction, and the Transformation of Social Policy." *Social Science and Medicine* 180: 20–27. doi:10.1016/j.socscimed.2017.03.013.

"Funding and Management of Naloxone Programs in Canada." 2018. Accessed April 6, 2018. *Canadian Agency for Drugs and Technologies in Health (CADTH)*. March. https://www.cadth.ca/funding-and-management-naloxone-programs-canada-0.

"Funding of Naloxone Nasal Spray Kits through the Ontario Naloxone Program for Pharmacies (ONPP) and Updates to the Existing Program: Updates Frequently Asked Questions for Pharmacists." 2018. *Ministry of Health and Long-Term Care Ontario Public Drug Programs.* March 27. Accessed April 25, 2018. http://www.health.gov.on.ca/en/pro/programs/drugs/opdp_eo/notices/fq_exec_office_20180321.pdf .

Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 (3): 575. doi:10.2307/3178066.

Health Canada. 2019. "Opioid-Related Harms and Deaths in Canada." *Canada.ca.* Last modified April 10. Accessed November 25, 2018. https://www.canada.ca/en/health-canada/services/substance-use/problematic-prescription-drug-use/opioids/data-surveillance-research/harms-deaths.html.

_____. 2018. "Government of Canada Actions on Opioids: 2016 and 2017." *Canada.ca.* November 30. Accessed December 3, 2018. https://www.canada.ca/en/health-canada/services/publications/healthy-living/actions-opioids-2016-2017.html.

Howlett, Karen, and Andrea Woo. 2018. "B.C. Alleges 20 Years of Deception in Opioid Lawsuit." *The Globe and Mail*, August 29. Accessed September 3, 2018. https://www.theglobeandmail.com/canada/article-bc-launches-proposed-class-action-lawsuit-against-opioid-manufacturers/.

Howlett, Karen, and Grant Robertson. 2016. "How a Little-Known Patent Sparked Canada's Opioid Crisis: the Untold Story of How a Single Pill Sparked Canada's Opioid Crisis, and Ignited One of the Biggest Pharmaceutical Battles in Canadian History." *The Globe and Mail*, December 30. Accessed November 21, 2017. https://www.theglobeandmail.com/news/investigations/oxycontin/article33448409/.

Ireland, Nicole. 2018. "Life Expectancy in Canada May Be Decreasing as Opioid Crisis Rages On." CBC, October 23. Accessed October 25, 2018. https://www.cbc.ca/news/health/life-expectancy-canada-decrease-opioid-crisis-1.4874651.

Jacobs, Harrison. 2016. "The Price of the 'Antidote' to the Overdose Crisis Is Skyrocketing." *Business Insider,* August 1. Accessed October 12, 2017. http://www.businessinsider.com/price-of-naloxone-narcan-skyrocketing-2016-7.

Jensen, Carsten, and Michael Bang Petersen. 2016. "The Deservingness Heuristic and the Politics of Health Care." *American Journal of Political Science* 61 (1): 68–83. doi:10.1111/ajps.12251.

Kerr, Debra, Paul Dietze, Anne-Maree Kelly, and Damien Jolley. 2008. "Attitudes of Australian Heroin Users to Peer Distribution of Naloxone for Heroin Overdose: Perspectives on Intranasal Administration." *Journal of Urban Health* 85 (3): 352–60. doi:10.1007/s11524-008-9273-z.

Lenton, Simon, Paul Dietze, Anna Olsen, Nicole Wiggins, David Mcdonald, and Carrie Fowlie. 2014. "Working Together: Expanding the Availability of Naloxone for Peer Administration to Prevent Opioid Overdose Deaths in the Australian Capital Territory and Beyond." *Drug and Alcohol Review* 34 (4): 404–11. doi:10.1111/dar.12198.

Ministry of Health. 2019. "Naloxone – Health Care Professionals - MOHLTC." *Drugs and Devices - Health Care Professionals – MOHLTC.* Government of Ontario, Ministry of Health and Long-Term Care. Accessed January 15, 2019. http://www.health.gov.on.ca/en/pro/programs/drugs/naloxone/naloxone_faq.aspx.

Neale, Joanne, and John Strang. 2015. "Naloxone-Does over-Antagonism Matter? Evidence of Iatrogenic Harm after Emergency Treatment of Heroin/Opioid Overdose." *Addiction* 110 (10): 1644–52. doi:10.1111/add.13027.

Sanger-Katz, Margot. 2018. "Bleak New Estimates in Drug Epidemic: A Record 72,000 Overdose Deaths in 2017." *The New York Times*, August 15. Accessed October 15, 2018. https://www.nytimes.com/2018/08/15/upshot/opioids-overdose-deaths-rising-fentanyl.html.

Sawa, Timothy, Lisa Ellenwood, and Mark Kelley. 2019. ""Greed Is a Powerful Weapon': Are Illegal Kickbacks in Ontario Driving up the Cost of Your Generic Drugs?" CBC, January 13. Accessed January 20, 2019. https://www.cbc.ca/news/health/pharmaceutical-drugs-rebates-ontario-1.4952256.

Siegal, Zachary. 2018. "Hating Big Pharma Is Good, But Supply-Side Epidemic Theory Is Killing People." *Longreads*, September. Accessed October 21, 2018. https://longreads.com/2018/09/20/hating-big-pharma-is-good-but-supply-side-epidemic-theory-is-killing-people/.

Star, Susan Leigh. 1999. "The Ethnography of Infrastructure." *American Behavioral Scientist* 43 (3): 377–91. doi:10.1177/00027649921955326.

Truc, Henry. 2016. "'Naloxone Stocks: Who's Really Winning the Battle Against the Opioid Epidemic." *Equities.com*, April 26. Accessed October 12, 2017. https://www.equities.com/news/naloxone-stocks-who-s-really-winning-the-battle-against-the-opioid-epidemic.

Webster, Paul C. 2013. "Indigenous Canadians Confront Prescription Opioid Misuse." *The Lancet* 381 (9876): 1447–48. doi:10.1016/s0140-6736(13)60913-7.

Weeks, Carly. 2018. "The Crisis Is Not Abating': Opioids Killing More than 11 Canadians Daily." *The Globe and Mail*, September 18. Accessed September 21, 2018. https://www.theglobeandmail.com/canada/article-the-crisis-is-not-abating-opiod-overdose-kills-more-than-1/.

"Where to Get a Free Naloxone Kit." 2017. *Ontario.ca*. October 3. Accessed November 5, 2017. https://www.ontario.ca/page/where-get-free-naloxone-kit.

Woo, Andrea. 2018. "Nearly All Drugs Sold as Heroin in Vancouver Contain Fentanyl, Study Finds." *The Globe and Mail*, July 31. Accessed August 13, 2018. https://www.theglobeandmail.com/canada/british-columbia/article-nearly-all-street-drugs-in-vancouver-contain-fentanyl-study-finds/.