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In Defence of STI and Contraception Clinics: Recommendations for Modernization

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A Commentary

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1 INTRODUCTION

In Ontario, many public health units operate local sexually transmitted infection (STI) and contraception clinics, although in a few cases, physicians operate such clinics and receive support from their public health units, often in the form of paid nursing time (Shah 2003). Such involvement by local health units occurs because, while the Ontario Health Insurance Plan (OHIP) covers fees for physician services for STI/contraception, contrary to the case with family health groups or teams, no money is available for nursing time in these clinics. This is despite nurses predominately operating them. Funding for nursing time must therefore come from money generated through physician OHIP billings or from health units' operational expenses.

In the context of budget cuts in Ontario and so-called “public health modernization” (Government of Ontario 2020), the ongoing role of—and need for—STI/contraception clinics is being discussed by the provincial government. The question is: do the clinics represent a duplication of services, considering that access to STI/contraception services is covered by OHIP and therefore available through primary care and walk-in clinics? In other words, what is being debated is whether STI/contraception clinics could be closed for cost-saving purposes because the health care services provided in these clinics are covered elsewhere. My answer to these questions is that these clinics should not be shuttered for monetary reasons. To support this assertion, I will provide some background about the rates of STIs and unintended pregnancies in Ontario and Canada and argue that STI/contraception clinics are valuable because 1) they help improve timely and appropriate access to care, and 2) they are locales of clinical expertise that provide excellent (and at times unique) patient care.

2 STIs AND UNINTENDED PREGNANCIES

In Ontario, from 2005-2017, the incidence of chlamydia increased by 79.7% (from 174.6 to 313.8 per 100,000), gonorrhea by 107.9% (26.5 to 55.1 per 100,000), and syphilis by 279.3% (2.9 to 11.0 per 100,000) (PHO 2019). Similar increases occurred across Canada (CBC 2019). These rate changes are concerning because STIs can both cause discomfort and increase the risk of HIV acquisition (PHAC 2019). Syphilis, as well, can lead to irreversible neurologic, ocular, and/or cardiovascular damage; death, while rare, is also possible (PHAC 2019). In females, gonorrhea and chlamydia can further cause chronic pelvic pain, pelvic inflammatory disease, and infertility, and can increase the risk of ectopic pregnancy, preterm delivery, and low birth weight (PHAC 2019).

While the rates of unintended and teen pregnancies have decreased since the 1970s (Black *et al.* 2015), about 40% of pregnancies in Canada continue to be unintended, with about 58% of such pregnancies being among 20-29-year-olds (Black *et al.* 2015). Further signalling the high rate of unintended pregnancies is that, by age 45, about one-in-three females in Canada will have had an abortion (Black *et al.* 2015). Because these high rates of

unintended pregnancies arise from both a lack of contraception use and from contraception failure, access to contraception is not the sole concern; services need to be sufficiently specialized to ensure females can obtain contraception best suited to them (Black *et al.* 2015).

STI/contraception clinics play a central role in addressing both unintended pregnancies and STI rates. As discussed below, this is because these clinics have a strong focus on prevention, in that contraception outright prevents pregnancy, while STI services, although often focused on diagnosis and treatment, avert onward transmission through treatment. These clinics also provide preventive services that are not often readily available in a timely way in primary care. For these reasons of timely and appropriate access and specialization, STI/contraception clinics continue to be needed. I will now explain each of these points.

3 JUSTIFYING STI/CONTRACEPTION CLINICS

3.1 Timely and Appropriate Access

Timely access is crucial to reducing contagion and prevalence. In contrast to viral infections, antibiotics disrupt bacterial STI transmission by eliminating offending pathogens. A necessary condition in this sequence, however, is that people must access care. To help explain this, we can use the Anderson-May (1991) equation $R_0 = \beta cd$, where R_0 (known as the basic reproductive number) represents the number of new infections generated from a single person, β is infectivity, c is the number of contacts, and d is the duration of infection. Following this equation (1991), access to STI care can reduce the duration of infection and number of contacts; as an outcome, R_0 decreases. To explain further, the consequence of prompt STI detection and treatment is that future sexual partners do not acquire an infection because it was eliminated before they could be exposed. A study from England, for example, found that some participants, when denied STI services, had new sexual partners before returning for care, even if they were symptomatic at initial visit (White *et al.* 2005). Prompt STI care can thus reduce the duration of infectivity and the number of contacts exposed to an STI, thereby improving individual and population-level STI control (Anderson and May 1991). STI clinics contribute to this function. As gonorrhea, chlamydia, and syphilis are all bacteria, this point applies to these infections. Because HIV medication can make a person’s HIV viral load “undetectable,” which renders them “untransmittable” (Eisinger, Dieffenbach, Fauci 2019), access to HIV testing and treatment also reduces the duration of infectiousness and number of contacts.

STI clinics are crucial to guaranteeing timely access. While primary care and walk-in clinics can provide STI/contraceptive care, access cannot be reduced to determining *if* services exist. The Natsal-3 survey identified that “effective, diverse service provision is needed to engage those at-risk and ensure they can attend services appropriate to their needs” (Tanton *et al.* 2018). Access, therefore, must be measured not only by geography and time coverage, but also by the perceptions of services by those living with or at greatest

risk for STIs or unintended pregnancy. Affected patients must feel services are appropriate, with researchers finding that some persons prefer STI/contraception clinics, compared to primary care, for sexual health services (Hoover *et al.* 2015; O'Byrne and Watts 2014). As such, while having a primary care provider means potential access, it does not guarantee patients will feel comfortable seeking care. This finding is more pronounced among sexual minorities who may not disclose their sexual practices to primary care providers and thus avoid care because it is not culturally sensitive (Coleman *et al.* 2017).

Another important component of timely and appropriate access is that STI/contraception clinics ensure that persons without health insurance obtain care. STI transmission occurs irrespective of insurance status, and transmission continues until care is received. This is not to say that STI/contraception clinics provide services to everyone; in some cases, alternate insurance plans mean that other locales for care delivery are more appropriate. This point simply applies to persons without any insurance coverage, and this works only in the situation where the health units subsidize the clinics, as OHIP billing usually cannot be obtained for these patients. Although an argument could be made for STI/contraception clinics to see everyone, this might not be the best use of their resources during periods of fiscal constraint.

A final situation is that some teens cannot access their health cards because their parents or guardians keep them. These youth must then request access to their health cards, possibly having to justify why they want it to access STI/contraception services. In such cases, youth may not feel comfortable asking parents/guardians, and the converse may be true as well, in that parents/guardians may be reluctant to provide their children/dependents with their health card for STI/contraception care. In both cases, access to care among one of the groups most affected by STIs (i.e., youth) is restricted, particularly regarding access to primary care services. STI clinics help overcome this barrier for these insured youth through non-OHIP billing funding approaches. The outcome: those who need access to STI/contraception care can obtain it.

3.2 Specialization

STI/contraception clinics are locations of clinical expertise. Physicians, nurses, and nurse practitioners in these settings specialize in STI/HIV risk assessments/counselling, STI care, and contraception. In doing so, these practitioners create a place where other health care providers can refer patients, whether for immigration or primary care purposes, or because a practitioner has identified an STI as the etiology of concern but is unsure about treatment or any other aspect of clinical management.

This transfer of care to STI/contraception clinics can reduce unnecessary referrals to infectious disease specialists, who are already occupied and more costly (O'Byrne, Orser and Jacob 2019). As part of their specialized work, staff at these centres also engage in comprehensive STI/HIV testing, including point-of-care syphilis, HIV, and gonorrhea testing, plus extragenital (i.e., oral and rectal) gonorrhea and chlamydia screening. The

STI clinics in Toronto and Ontario further help rapidly validate new testing technologies, such as occurred for extragenital testing by the Public Health Ontario Laboratory. However, while the goal of this validation process was to enable broader access to this testing modality across the province, many primary care practitioners do not offer (or possibly do not even know about) extragenital testing. Nonetheless, the STI clinics served as a location to validate this test for all practitioners in Ontario, and where patients can consistently obtain this testing when it is clinically indicated.

STI/contraception clinics offer other services as well that, while potentially available in primary care, are not often provided in such settings (Cook *et al.* 2019; Rubin, Campos, Markens 2013). For example, while almost any primary care provider could insert intrauterine devices—which the Canadian Pediatric Society (Di Meglio *et al.* 2018) recommends as first-line contraception for youth—many primary care providers are not trained to insert these devices (Hulme *et al.* 2015). These centres also provide subsidized access to this form of contraception, stock intrauterine devices, and engage in same-day insertions. By routinely inserting intrauterine devices, staff become more proficient and safer, and serve as a resource to community practitioners who would infrequently need to perform this procedure for their rostered patients. This means that STI/contraception clinics must continue to perform these insertions because, otherwise, first-line contraception would become increasingly inaccessible for Ontarian teens, among whom unintended pregnancies continue.

Another benefit of the expertise of STI clinics is the availability of on-site treatment, which allows for immediate and directly observed treatment based on the probability that an STI is the cause of a patient's symptoms, either due to the clinical (empiric) or risk-factor-based (epidemiologic) likelihood. Providing such treatments before laboratory test results are available requires clinical acumen and specialization, as exists in STI clinics. Having these medications on-site, as well, ensures patients can receive treatment promptly (by removing delays caused by requiring the second step of having patients attend pharmacies) and without monetary barriers (i.e., the costs associated with having to purchase medications at a pharmacy). This specialized consolidated service thus facilitates timely and appropriate access to STI care, with the corresponding benefits of decreased onward STI transmission.

As a final example, the expertise in these centres includes prevention initiatives such as nurse-led post-exposure and pre-exposure prophylaxis (PEP and PrEP, respectively), in which nurses assess and initiate patients on HIV medications for prevention purposes (O'Byrne *et al.* 2015; O'Byrne, MacPherson *et al.* 2019). These interventions are important, as they have been shown to reduce the risk of HIV acquisition by over 90% when taken correctly with appropriate clinical monitoring (Tan *et al.*, 2017). These centres thus maximize nurses' work by having them operate these HIV prevention initiatives. These clinics also streamline care—likely better than could occur in primary care—through *express testing*, in which nurses perform comprehensive testing on asymptomatic patients, thereby increasing access and focusing the work of physicians and nurse practitioners on symptomatic patients who require treatment (O'Byrne and Orser 2019). These clinics also

use their staff’s expertise to develop services for sexual minority groups, such as GayZone, which shows the benefits of intertwining cultural sensitivity and clinical expertise (O’Byrne *et al.* 2014).

4 RECOMMENDATIONS

While the Ontario health care system can be made more efficient by removing duplication of services, eliminating STI/contraception clinics—despite STI/contraception services being available in primary care—is an ill-advised change that would likely further inundate infectious disease specialists, exacerbate wait times, and increase the incidence of STIs and unintended pregnancies, leading to higher future costs. STI/contraception clinics, however, can be modernized to maximize their functioning and output. Options to achieve such improvements are listed below. Notably, this is not an exhaustive list, but four options among many.

A first idea would be to increase the scope of practice for registered nurses who work in STI/contraception clinics to allow them to autonomously provide the testing and treatments that many currently do under medical directives. This would eliminate one layer of bureaucracy and enable these nurses to spend more time engaging in patient care, and less time preparing and writing these directives. The rationale for this change is straightforward. Registered nurses primarily operate STI/contraception clinics in Ontario and across Canada. As it stands presently, however, this occurs by having a physician or nurse practitioner sign medical directives for these nurses to work in an expanded scope. While such medical directives are a seemingly simply way to “fix” the current system, the problem is that they take time to draft, approve, and enforce. Medical directives are also highly prescriptive, and do not apply to patients who do not fulfill all criteria of the medical directive. This results in many unnecessary consultations by registered nurses that they otherwise would be clinically competent to address. Allowing registered nurses to autonomously provide more services in STI/contraception clinics could thus be one way to maximize safe patient care, while also streamlining health care delivery (and its costs).

Another idea is to change the remuneration mechanism for STI/contraception clinics by allowing nurse practitioners to bill OHIP, or by creating nurse practitioner-led STI/contraceptive clinic funding models. Studies have shown this to be a sustainable (O’Byrne, Hollett, Campbell 2020) and cost-efficient way to delivery STI care (O’Byrne, Orser, Jacob 2019). Standard OHIP performance indicators could then be used to evaluate these clinics; e.g., how many patients are seen, what were the diagnostic and treatment outcomes, how much contraception was provided? An alternative would be to allow STI/contraception clinics that are operated by health units to bill OHIP for any patient seen by a nurse, physician, or nurse practitioner—which would allow patients to be seen by the most appropriate provider, rather than the one who can generate income for the clinic. This approach, again, could help maximize patient care while minimizing costs.

A third option is to mandate that STI clinics demonstrate how they provide services that complement primary care. Easy examples of how STI/contraception clinics could do this is by focusing on targeted testing among the groups most affected by STIs/HIV, and by engaging in novel testing strategies (express testing), comprehensive testing that is often missed in primary care (extragenital gonorrhea/chlamydia testing), and PEP/PrEP initiation and monitoring. Rapid access, same-day intrauterine contraception initiation could be part of these services as well. Primary care providers would thus be able to prescribe an intrauterine device and send the patient for insertion or could refer to this center for assessment and same-day insertion. This is not to say that STI/contraception clinics should stop providing services more broadly, but that their mandate should include efforts to ensure that local communities and the persons most affected by or living with STIs and unintended pregnancies have easy and culturally sensitive access to the most advanced and up-to-date services for these health issues. This approach would thereby build on the position of STI/contraception clinics as milieux of timely access and specialization, which in turn could reduce reliance on infectious disease physicians for these matters, while also hopefully reducing the rates of ongoing unintended pregnancy and of increasing STI incidence.

A fourth suggestion relates to alleviating congestion within STI/contraception clinics by expanding STI medication availability. While health units presently order and distribute STI medications, a pharmacy system could be instituted more broadly to remove this duty from public health units in Ontario. One solution could be to follow the model in Québec, where prescribers use prescription codes, similar to the limited use (or LU) codes in the Ontario Drug Benefits Formulary, which let patients obtain free treatment at the pharmacy. Providers would thereby not need to order these medications or send patients to STI clinics, and health units would not need to organize STI medication management. Pharmacy distribution could thus alleviate congestion in these clinics, reduce health unit involvement, and use the many health care professionals already employed in the Ontario health care system in an updated (i.e., modern) way.

5 CONCLUSIONS

Returning to the question of whether STI/contraception clinics should continue after modernization, the answer is yes. STI rates have increased, unintended pregnancies continue, research supports the need for various clinical options for patients with or are at-risk for STIs, and STI/contraception clinics have expert health care professionals who provide specialized services not available in primary care. These clinics, however, are not flawless, and improvements could be made. Some options for modernization include a greater reliance on the many nurses and nurse practitioners already working in these clinics. This could involve increasing the scope of practice of nurses so they can autonomously provide STI/contraception services. Changed funding models that allow nurse practitioners to bill

OHIP could also create a more cost-efficient care delivery model. If the government is truly interested in modernization, and not simply in cutting budgets, then they should consider the strategies proposed here. While time will reveal the true meaning of modernization, as we wait, it is hoped that STI/contraception clinics survive.

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