

Surveying Ontario nurses using the COM-B framework shows a high level of readiness for nurse-led PEP and PrEP

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BACKGROUND

- Several implementation challenges have limited the clinical and public health impact of pre- and post-exposure prophylaxis for HIV in Ontario; currently PrEP and PEP are mainly prescribed in a centralized way, by a limited number of HIV specialists in large centers
- To achieve a greater public health impact, it is important to explore the decentralization of PrEP/PEP delivery by harnessing the skills of other healthcare providers, including nurses

OBJECTIVES

- To identify the proportion of Ontario nurses working in sexual health clinics, HIV clinics, and community health centres who would support the development of medical directives for PEP and PrEP in their workplace
- To determine nurses' readiness for delivering these interventions using the COM-B behavioural change framework¹, which posits there are three types of influences upon behavior; 'Capability' (knowledge and skills), 'Opportunity' (structural and environmental factors), and 'Motivation' (attitudes, habits, decision-making)
- To determine predictors of support for nurse-led PEP and PrEP

METHODS

- We contacted nursing leaders at each sexual health clinic, HIV clinic, and community health centre in Ontario and asked them to distribute a 37-item online survey to nurses in their institutions; surveys were in turn distributed to 470 nurses at 57 practice locations
- Two questions were asked for the primary outcome: "Would you support the development of a process at your institution through which nurses could provide [PEP/PrEP] under a medical directive?" where the outcome of interest was defined as "yes" to both
- The survey assessed five domains: 1) demographics and work environment 2) knowledge and/or experience with PEP/PrEP (capabilities), 3) current barriers and facilitators for providing PEP/PrEP (opportunities), 4) general attitudes and opinions on PEP/PrEP (motivations), and 5) learning needs for the future implementation of nurse-led PEP/PrEP
- Participants were compensated with a \$10 gift card or entered into a draw to win an iPad
- A multivariable logistic regression model was constructed to identify variables associated with support for nurse-led PEP and PrEP

RESULTS

- 214 individuals initiated the survey (45.6%), of which 165 (77.1%) had responses for the primary outcome and were included in the analysis
- 72.7% of respondents indicated that they would be supportive of both nurse-led PEP and nurse-led PrEP under medical directives

TABLE 1. PARTICIPANT CHARACTERISTICS

Characteristics	Value	Current knowledge of PEP
Sex		Very familiar 33 (20.0)
Female	156 (95.1)	Somewhat familiar 127 (77.0)
Male	7 (4.2)	Not familiar at all 5 (3.0)
Other	1 (0.6)	Current knowledge of PrEP
Primary nursing environment		Very familiar 43 (26.1)
Community Health Centre	21 (12.7)	Somewhat familiar 115 (69.7)
HIV Clinic	13 (7.9)	Not familiar at all 7 (4.2)
Sexual Health Clinic	108 (65.5)	Patients seen per week who are HIV-negative but high-risk for HIV-acquisition
Family Health Team	5 (3.0)	0 6 (3.9)
Other	18 (10.9)	1-10 83 (53.2)
Nursing classification		11-20 52 (33.3)
Registered Practical Nurse (RPN)	4 (2.4)	21 or greater 15 (9.6)
Registered Nurse (RN)	143 (87.2)	Work at an establishment which routinely provides PEP
Nurse Practitioner (NP)	15 (9.2)	Yes 37 (22.4)
Other	2 (1.2)	Work at an establishment which routinely provides PrEP
Years in practice	16 (16) median, IQR	Yes 22 (13.3)
Primary focus of work		Ever initiated a conversation about PEP with a patient
Clinical	127 (79.9)	Yes 116 (70.3)
Administrative	13 (8.2)	Ever initiated a conversation about PrEP with a patient
Research	5 (3.1)	Yes 103 (62.2)
Teaching	4 (2.5)	Currently provide care under a medical directive
Other	10 (6.3)	Yes 144 (87.3)
Region		
Eastern Ontario	31 (19.0)	
Central Ontario	48 (29.5)	
Metropolitan Toronto	32 (19.6)	
Southwestern Ontario	31 (19.0)	
Northern Ontario	21 (12.9)	

FIGURE 1. NURSES' EXISTING CAPABILITIES RELATED TO PEP and PrEP

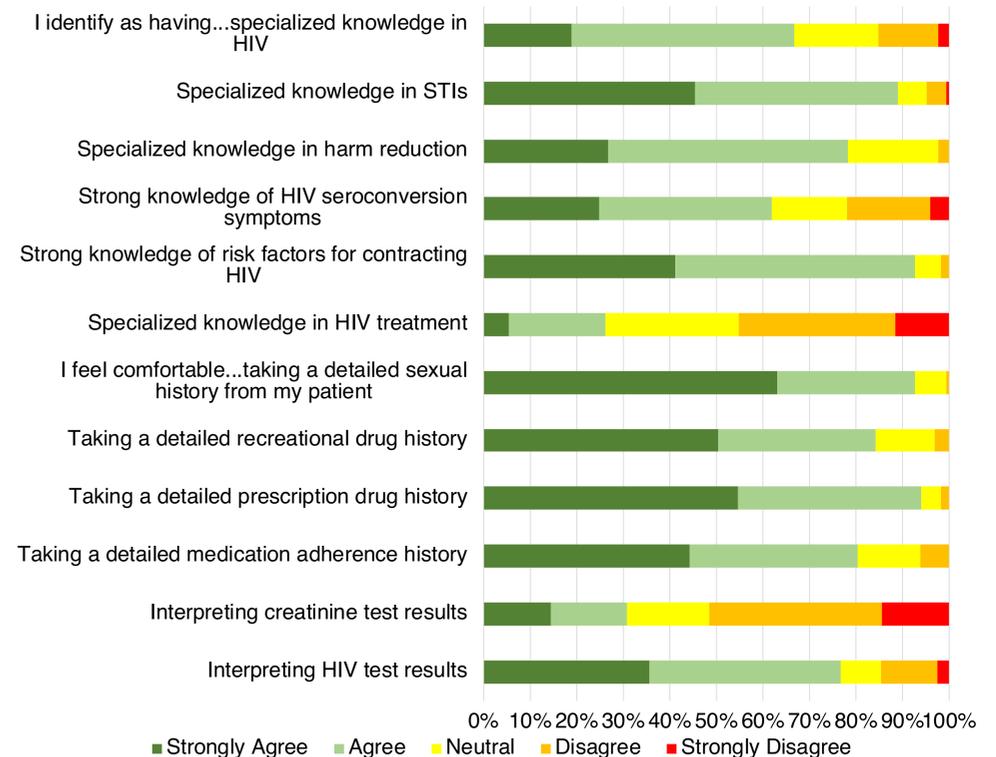


TABLE 2. PREDICTORS OF SUPPORT FOR NURSE-LED PEP AND PrEP

Variable	Univariable analysis		Multivariable analysis	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Region				
Toronto	1.00	-	1.00	-
Other regions of Ontario	1.49 (0.65-3.41)	0.34	2.27 (0.73-7.00)	0.15
Nursing environment				
Sexual health clinic	1.00	-	1.00	-
Other nursing environment	0.63 (0.31-1.28)	0.21	0.72 (0.28-1.87)	0.50
Years nursing (per decade)	0.70 (0.50-0.98)	0.04*	0.55 (0.37-0.82)	0.004*
Very familiar with PEP	1.50 (0.60-3.75)	0.38		
Very familiar with PrEP	1.58 (0.69-3.63)	0.28		
Have been asked about PEP	1.47 (0.68-3.19)	0.33		
Have been asked about PrEP	1.38 (0.62-3.06)	0.42	2.52 (0.96-6.60)	0.06
Have counselled patient on PEP	1.32 (0.63-2.75)	0.46		
Have counselled patient on PrEP	1.70 (0.84-3.46)	0.14		

- Most respondents would provide education positively supporting the use of PEP (85.8%) and PrEP (81.7%) among their patients
- The most commonly cited barriers to implementation were a lack of physician support (38.8% for PEP, 42.9% for PrEP), followed by a lack of knowledge among nurses (38.8% for PEP, 37.4% for PrEP)
- The most popular modalities for receiving further education were online modules (86.5%), followed by in-person workshops (71.2%)

CONCLUSIONS

- Nurses at Ontario sexual health clinics, HIV clinics, and community health centres exhibit a high level of support for nurse-led PEP and PrEP
- These nurses are largely proficient in the clinical skills needed to deliver PEP and PrEP, with the exception of interpreting serum creatinine results
- Nurses working in these settings are seeing patients who may benefit from these interventions as part of their routine clinical practice
- To increase implementation of nurse-led PEP and PrEP, priorities should include ensuring physician support, and providing online and in-person education for nurses, with a focus on renal monitoring

References

1. Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* 2011;6:42.:10.1186/1748-5908-6-42.

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