

Bridging the know-do gap: Developing strategies to improve oral HIV pre-exposure prophylaxis uptake using implementation science theory

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Background

Although pre-exposure prophylaxis (PrEP) is highly effective at preventing HIV, its uptake remains low among individuals at higher risk of acquiring HIV. While studies have identified barriers and facilitators (determinants) of PrEP use, few translate these into actionable strategies. We used implementation science theory to develop theory-informed strategies to address PrEP implementation gaps.

Methods

A scoping review of PrEP use determinants sourced 142 peer-reviewed journal articles published from 2018-2024 from Australia, United Kingdom, Canada, and New Zealand. To inform strategy development, initiation and continuation determinants from the review were mapped to the Theoretical Domains Framework (TDF) and Behavior Change Techniques (BCTs), while prescribing determinants were mapped to the Consolidated Framework for Implementation Research (CFIR) and Expert Recommendations for Implementing Change (ERIC).

Results

Our analysis yielded 41 implementation strategies derived from/matched to 49 facilitators and 70 barriers. Generally, PrEP use and prescribing barriers related to lack of knowledge, cost, multiple stigmas, restrictive policies, and limited healthcare service capacity. To increase PrEP use, consumer-targeted strategies involved promoting alternative dosing regimens, cheaper personal importation of PrEP, PrEP access points, and dosing reminder tools; delivered through targeted health promotion, peers and peer-led services, and culturally-appropriate healthcare. Healthcare provider-targeted strategies involved increasing PrEP knowledge

and awareness, supporting culturally-appropriate care delivery, navigating patients' PrEP concerns, and addressing stigma through training and education. Clinic-level strategies included task-shifting to nurses/pharmacists/peer-workers, telehealth expansion, strengthening referral pathways, and streamlining appointments. Socio-environmental/healthcare system-level strategies included reducing PrEP costs, funding target-population services, implementation/review of inclusive eligibility criteria, PEP-to-PrEP clinical pathways, and streamlining PrEP care.

Table 1: The development of 41 innovations that could be implemented or scaled-up were informed by mapping determinants to implementation science frameworks

#	Potential Innovations	Status in Australia
1.	Provide information about PrEP through credible sources (tailored to targeted communities)	Ongoing
2.	Provide access to PrEP and associated services for free/reduced cost	Partial
3.	Integrate PrEP services with gender affirming care	Differs for each service
4.	Train peers to provide PrEP knowledge and support to their network	Ongoing
5.	Create opportunities for community to come together and connect with each other	Ongoing
6.	Provide training to HCPs to increase their PrEP knowledge and promote proactively discussing PrEP with patients	Ongoing
7.	Prioritise confidentiality in service design	Differs for each service
8.	Promote PrEP as another socially responsible way of ending HIV acquisition	Ongoing
9.	Provide training to HCPs to promote empathy and cultural awareness of priority populations	Ongoing
10.	Train peers to provide PrEP-associated services, and integrate them into PrEP service delivery models	Differs for each service
11.	Promote the adaptability of the regimen that suits the community member's life circumstances	Partial
12.	Provide reminder aid tools and techniques for each dosing regimen	Differs for each service
13.	Adapt appointment format to suit PrEP requirements	Differs for each service
14.	Provide resources to assist HCPs to discuss PrEP with their patients	Ongoing
15.	Increase appointment availability through task-shifting	Partial
16.	Credible sources promote the legitimacy of imported PrEP	Ongoing
17.	Provide instructions and promote sites where PrEP can be obtained	Ongoing
18.	Discuss concerns a patient may have about PrEP, and develop strategies to mitigate these	Ongoing
19.	Review PrEP eligibility criteria to ensure it takes a person-centred approach, meeting the needs of community members	Ongoing
20.	Simplify/demedicalise PrEP access process	Ongoing
21.	Provide supports (peers/technology) to assist community members to navigate the PrEP access process	Partial
22.	Promote PrEP as a safer-sex option for all priority population members, with flexible regimens to suit any lifestyle	Ongoing
23.	Form partnerships with community and healthcare providers to provide access to PrEP	Ongoing
24.	Create partnerships with community, service providers, and government, and utilise this collective influence to advocate to government about the needs of the partnership's stakeholders	Ongoing
25.	Alter criteria so a HIV diagnosis does not impact a permanent residency application decision	Action needed
26.	Ensure community members are aware of legal support available if they receive a HIV diagnosis	Ongoing
27.	Create PrEP guidelines and other guidance material to support PrEP access	Complete
28.	Provide a pathway for community members to legally access PrEP	Complete
29.	Produce translated health promotion resources	Differs for each service
30.	Integrate translation services into clinical care	Differs for each service
31.	Expand and promote telehealth/ehealth PrEP services	Partial
32.	Provide opportunities for community members to access programs that support mental health, address substance use, and find stable housing	Ongoing
33.	Have ED-PrEP endorsed by professional and regulatory bodies	Partial
34.	Advocate for more funding for Aboriginal and Torres Strait Islander HIV and STI services	Ongoing
35.	Create pathways to transition from PEP to PrEP	Complete
36.	Develop incentive systems to promote PrEP service provision	Partial
37.	Ensure computer systems are practical for the type of service provided and user-friendly	Differs for each service
38.	Develop and strengthen referral pathways to PrEP-experienced healthcare providers	Ongoing
39.	Provide opportunities for patients to provide confidential feedback and overall satisfaction	Differs for each service
40.	Integrate stigma-focused media campaigns and training sessions into the service	Differs for each service
41.	Have those in managerial positions discuss the impact of stigmas regularly with their staff	Differs for each service

Conclusion

Australia can maximise the impact of oral PrEP implementation by applying theory-informed strategies. Our approach generated tailored strategies that leveraged existing facilitators to respond to multi-level barriers to PrEP implementation. These strategies can address identified gaps, supporting broader adoption and equitable access.

Disclosure of Interest Statement:

The Kirby Institute receives funding from the Australian Government Department of Health. No pharmaceutical grants were received for this study.

Acknowledgement of Funding:

The NSW HIV Prevention Research Implementation Science Monitoring (PRISM) Partnership is supported by funding from the National Health and Medical Research Council (GNT2006448 & GNT183295) and the NSW Ministry of Health.