

HIV Research for Prevention conference (HIVR4P 2018): Conference highlights

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The HIVR4P conference is a global scientific conference that exclusively focuses on biomedical HIV prevention research. HIVR4P supports research on HIV vaccines, microbicides, PrEP, treatment as prevention, and other biomedical prevention approaches (1). The HIVR4P 2018 conference which was organised by Global HIV Vaccine Enterprise was held from 21 – 25 October 2018 in Madrid, Spain. The conference brought together about 1500 HIV researchers, policymakers and advocates from around the world. The four-day conference program comprised of plenary sessions, oral presentation sessions and poster sessions, meet-the-expert lunches, symposia and roundtables. Various pre-conference satellite sessions sponsored by research and community-based organisations from around the world were also held.

HIV prevention choices

“Whose choice is it anyway?” was the theme question verbalised by many of the world’s leading scientists, researchers and advocates. The discussion about choice arose in response to National Institutes of Health’s (NIH) new funding priorities which were concluded after NIH’s 2017 survey “Refining the Research Enterprise” Request for Input on Research Priorities (2). Every seven years, the NIH reviews its HIV prevention and treatment research priorities as well as its funding of HIV clinical trials networks working in the United States and globally. The new funding proposal for streamlining the HIV clinical research networks was presented in early 2018. The NIH resolved to modify HIV prevention research priorities giving preference to long-acting, systemic formulations such as vaccines, implants and injectables while declining the need for user-controlled, short-acting, non-systemic options such as the vaginal and rectal microbicides. The NIH reassured support for multi-purpose prevention products that were shown to be highly efficacious. Several presenters at the HIVR4P felt that if the level of efficacy for locally acting investigational products was competitively contrasted against systemic products, then the bar could be too high to be reached. Several advocacy groups and researchers objected to the microbicides being under threat.

Throughout the conference, the call for end-user choice for HIV prevention tools was highlighted by various advocacy groups and researchers (3). The importance of meaningful community engagement in the research process was emphasised. The need for a variety of effective HIV prevention tools particularly for females was highlighted strongly. Many expressed support for HIV prevention choices, continuing microbicides research and multi-purpose technologies. During the conference, various speakers pointed to the need for

options that can protect vulnerable women without the need for their partner’s knowledge or permission. Many highlighted the importance of developing a multifaceted HIV prevention toolbox because different people have different needs at different times - “one size does not fit all”. Delegates reiterated that putting “all eggs in one basket” would prevent the expansion of HIV prevention method mix by neglecting various research directions. Many comparisons were made to lessons learned from the contraception field.

HIV vaccine research

Numerous presentations highlighted the growing knowledge of immune responses including mucosal immunity, microbiome responses and bNAb generation, among others (4). Updates from the three vaccine efficacy studies underway were presented; and discussions of vaccine approaches such as bNAb and CD8+ T cell pathways, DNA, RNA and mosaic strategies took place. Various global leaders emphasised the need to continue developing the emerging immunogens. Calls were made to begin making plans for a successful vaccine.

PrEP as prevention

The potential impact of PrEP as an HIV prevention intervention was emphasised. Numerous discussions about PrEP highlighted the impact of PrEP in HIV prevention. PrEP acceptability in communities, long-term adherence, targeting of high-risk groups, costs and benefits were emphasised. A recurring theme on PrEP was the varying patterns of distribution and access of PrEP around the globe. Although PrEP was licensed in several countries, it was generally not readily available in most countries. Other researchers highlighted the different responses elicited by PrEP use which raised the possibility that PrEP could work differently for diverse individuals. Several new PrEP drugs and diverse potential delivery options were presented. These aimed to increase PrEP impact and included products such as rings, implants, gels and inserts. Scale-up options, opportunities and challenges to make PrEP available for those who could benefit most were discussed. Limited data was presented on long-acting PrEP including the injectable cabotegravir which was tested in females.

Microbicides

Concern was raised regarding the funding of microbicide research including the dapivirine ring, as well as the development of other new rings, microbicides and female-controlled products (5). Updates were provided

on the status of the dapivirine vaginal ring and rectal microbicides. Specific highlighted features of value with microbicides included:

Capacity for multi-purpose products such as HIV prevention combined with contraception and sexually transmitted infection (STI) prevention,

- Vulnerable users such as women, girls, and other receptive partners could discreetly use microbicides ensuring privacy and control,
- Microbicides acceptance and uptake could build on existing practices such as douching or use of lubricants during sex,
- A reduction in the long-term burden on the user and healthcare system was anticipated because microbicides are generally short-acting and could be used on-demand at the time of sex or during the period when the user is sexually active and at risk of contracting HIV infection.

Future of biomedical HIV prevention

Generally, the conference delegates seemed optimistic for the future of HIV prevention research and implementation projects. A sense of expectancy and hope saturated the HIVR4P 2018 meeting with many attendees articulating their anticipation about the range of pipeline approaches and products in development. The high turnout to meetings discussing new HIV prevention products which were still under development showed a high level of interest by the delegates. Topical discussions included the new HIV prevention drugs and delivery systems such as fast-dissolving inserts, implants, gels, films, enemas, biodegradable polymers, refillable reservoirs, osmotic pumps and other products. The increasing number of HIV prevention options available and in development raised various opportunities and challenges which were also discussed extensively.

In line with the demand for a greater choice of HIV prevention products, delegates called for a range of HIV prevention options. Delegates highlighted the importance of long-lasting HIV prevention approaches while also continuing to prioritise the development of safe, effective, acceptable and accessible vaginal and rectal microbicides. The need for evolving HIV clinical trial designs, understanding product end-user preference, evaluation of health system capacity and the managing of the introduction of new HIV prevention products was discussed. A collective call was made for funders and global leaders to maintain financial and political support for future-focused biomedical HIV prevention.

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