As a clinician who has witnessed the devastating impact of the HIV/AIDS epidemic since the 1980s, Sheena McCormack is enthusiastic about her latest project, the UK Medical Research Council (MRC) PROUD study. As lead investigator, she has been investigating the effect of pre-exposure prophylaxis (PrEP) to protect against HIV infection in high-risk men who have sex with men (MSM). PROUD has shown that PrEP reduces new HIV infections by 86%. "These results show that MSM who know they are at high risk of HIV are willing to take PrEP and it works incredibly well at preventing HIV infection in the real world," says McCormack, who works at University College London and is a Professor of Clinical Epidemiology at Imperial College London. She believes "there is a now a real prospect of reversing the HIV epidemic in MSM worldwide."

Initially attracted to medicine by her father’s general practice while growing up in the Derbyshire region of the UK, McCormack “can’t remember not wanting to be a doctor”. Her medical degree at the University of London was followed by postgraduate training at the London School of Hygiene & Tropical Medicine. A key influence in her undergraduate training was Jimmy Fluker, a venereologist who insisted on a 2-week attachment for students on sexually transmitted infections (STIs). "I loved the fact that I could take a history, conduct an examination, do tests, diagnose, treat, and reassure patients all in one consultation", says McCormack.

After becoming a member of the Royal College of Physicians, she took a locum job as a junior doctor at the West London Sexual Health clinic in 1986, when AIDS was taking a deadly toll. Now, 30 years later, people with HIV on treatment can expect a normal life expectancy. But with these positive changes has come some degree of complacency. “There is definitely a generational gap between the MSM who experienced many deaths among their peers, and the new generation for whom HIV does not seem as serious”, says McCormack. She later joined the MRC’s programme on HIV vaccines, guided by mentors including Jonathan Weber, Janet Darbyshire, and Abdel Babiker. Although unsuccessful, the adjuvants created went on to be used in other vaccines such as Cervarix for cervical cancer. In the mid-1990s, McCormack decided to divide her time between research and clinical work, and managed Chelsea and Westminster Hospital’s Victoria Sexual Health Clinic, the precursor to 56 Dean Street Clinic, London’s well known sexual health centre for MSM.

Her peers welcome these findings. “The PROUD study quickly and definitively showed that oral PrEP was feasible to implement in busy public health clinics, and that the HIV prevention impact was large”, says Connie Celum, Professor of Global Health and Medicine and Director of the International Clinical Research Center, University of Washington in Seattle. “I commend Sheena’s vision, courage, and tenacity. The PROUD study results have provided a compass and galvanised enthusiasm for PrEP implementation.”

McCormack hopes to translate the lessons learned from PROUD to future research and clinical practice. "There is no doubt that tenofovir-based regimens work as PrEP if they are used, with minimal concerns regarding safety. The main challenges are finding people at risk and making delivery affordable, and providing more products for women to choose from”, she says. And that’s why she wants to “continue to work on prevention methods that MSM and women in sub-Saharan Africa can use to reduce their risk. These are the two populations I have worked with most closely and feel most passionately about.”

Tony Kirby