



HIV Vaccine: Is There Any Hope?

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Vaccines have played one of the most significant roles in public health progress in the past two centuries. In the field of communicable disease control vaccines have been the single most important if not the only significant weapon in the fight against many diseases such as small-pox, polio, measles, pertussis, tetanus, diphtheria and others. Perhaps even more importantly, there are new threats to health on a global scale that are potentially epidemic such as a new influenza strain or already epidemic such as HIV which require vaccine development and widespread use as a public health emergency.

At the last estimate there were 3 million new HIV infections occurring per year despite considerable knowledge about the behavioral and biological factors related to transmission. Despite dramatic improvements in HIV care including OI prevention and treatment and ART scale up programs, unless there also dramatic reductions in new infection rates the prospect for effective control look almost impossible. In addition the economic costs and consequences will overwhelm families, communities and national health budgets.

In the light of these challenges, the need for an HIV vaccine has become even greater. What is the progress to date and what are the prospects for an effective vaccine in the near future? Despite a high level commitment to finding a vaccine and the involvement of many expert scientists and institutions for the past 20 years, progress has been frustratingly slow with no proven protective vaccines currently available.

In 2005, there are important new developments that do need to be recognized. These have primarily been in the fields of: humoral; immunity; candidate vaccines; pox vectors, other vectors such as DNA products, subunits and peptides; Mucosal immunity; Animal model development; Adjuvants; and the preparation of community cohorts.

So, is there any hope? Yes and we must dramatically increase our efforts to find an effective preventive vaccine. In mean time there is much work to be done to bring available and proven HIV prevention strategies to the millions who are at risk and to bring care to the millions who currently who need it.