



Learning from the past: How prepared are we for future HIV vaccine efficacy trials in Uganda

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Past

1987 Cohort studies



Rakai cohort 1987; MRC cohort 1988
CWRU-PAVE 1992; JCRC Military 1994

1987 Cohort studies



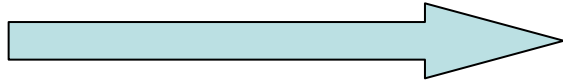
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1991 Other Vaccine Preparedness activities



- 1) WHO funded Virus Isolation and Characterization 1991
- 2) NIH & WHO funded Preparation for AIDS Vaccine Evaluation (PAVE) 1992
- 3) National plan for HIV/AIDS Vaccine Research 1992
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1990-2000 Intervention Trials



- 1) STI treatment 1990s
- 2) Microbicide trials
- 3) Circumcision trial
- 4) HSV2 treatment

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1999 HIV Vaccine Trials



1999 First Vaccine Trial
Up to date 7 Trials

Phase I and II Vaccine Trials

- ALVAC 205 (NIAD funded)
- DNA-MVA (IAVI funded)
- DNA (USA DoD, VRC)
- DNA- Ad5 (USA DoD, VRC)
- AAV (IAVI)
- ALVAC Perinatal vaccine (HPTN)

PAVE 100 (X)

- Was to be conducted in adults at high risk of HIV-1 infection in the Americas, Southern Africa and Eastern Africa.
- In Uganda two cohorts were identified:
 - MRC-UVRI- IAVI collaboration (Discordant couples)
 - Makerere University –Walter Reed Program (Rural community)
 - Protocol had been approved, staff ready and other infrastructure set up

20 years of cohort and vaccine
preparedness no vaccine ready
for efficacy trials

Challenges

- In the absence of a vaccine candidates for efficacy
 - How do we maintain the existing cohorts
 - How do we maintain community interest
 - How do we keep the vaccine research agenda
 - How do we maintain staff who would like to develop their career by doing actual clinical trials

How to sustain efficacy trial capacity

- Long term research investment
- Multidisciplinary approach to research and prevention
- Integration of prevention and care
- Human capacity and infrastructure development

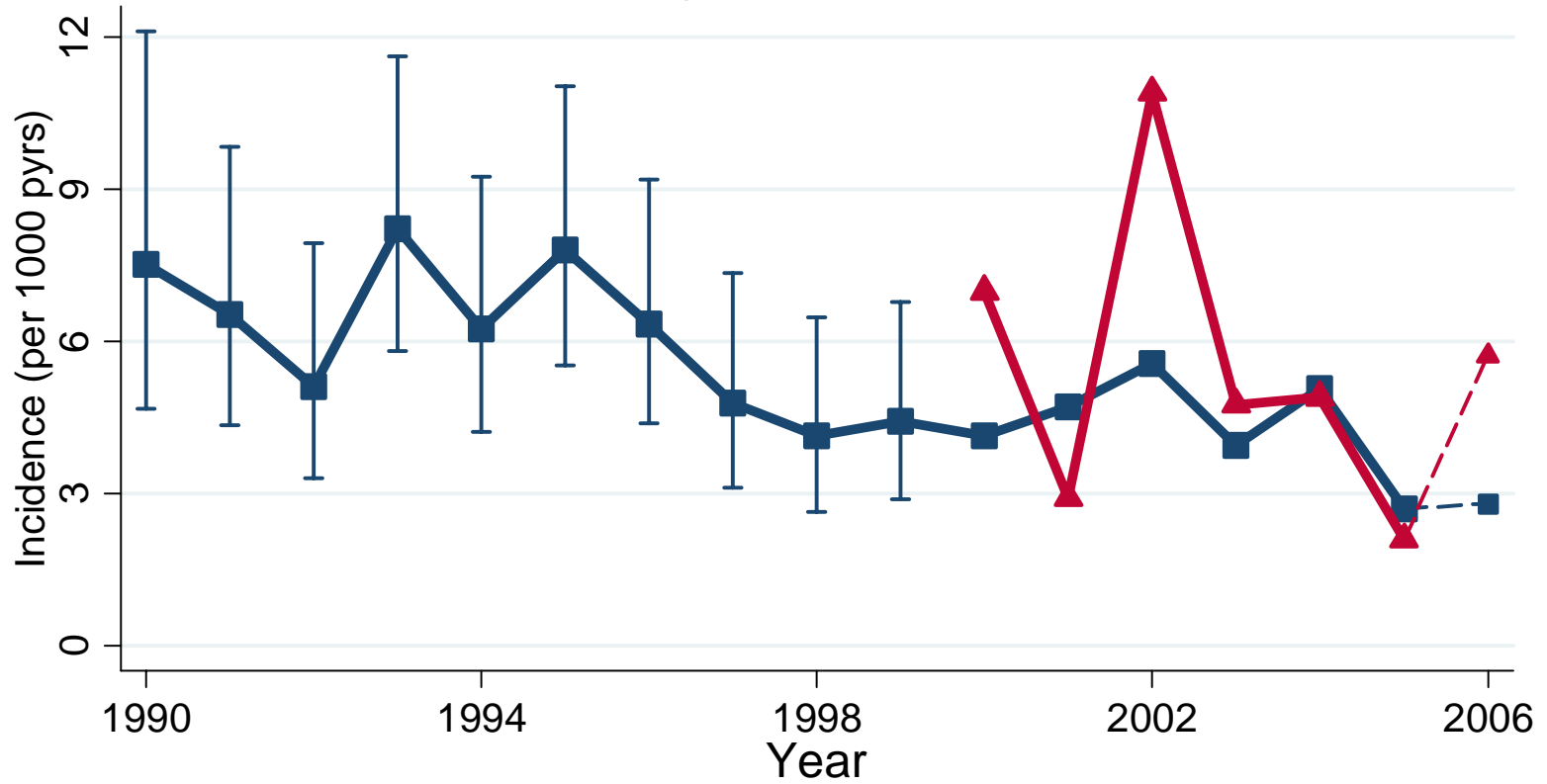
MRC / UVRI Uganda Research Unit on AIDS

- Long Term investment by Medical Research Council (MRC UK), now 20 years

Multidisciplinary approach to research

1. Epidemiological studies of the HIV epidemic
2. Intervention trials to prevent HIV transmission
3. Intervention studies to improve HIV/AIDS care
4. Basic science studies on HIV
5. Social science research relevant to HIV infection
6. Training of young researchers

Figure 2: HIV Incidence - Rural Masaka
By Village Group and Year



Shift to other high-risk cohorts

- Commercial sex workers (EDCTP, MRC)
- Fishing communities (EDCTP)

HIV prevention research programme

- up to 16,000 participants
- trial of behaviour change and STI control (completed)
- microbicide trial (Pro 2000)
- HIV vaccine studies (with IAVI)

Integration with care



HIV care research programme

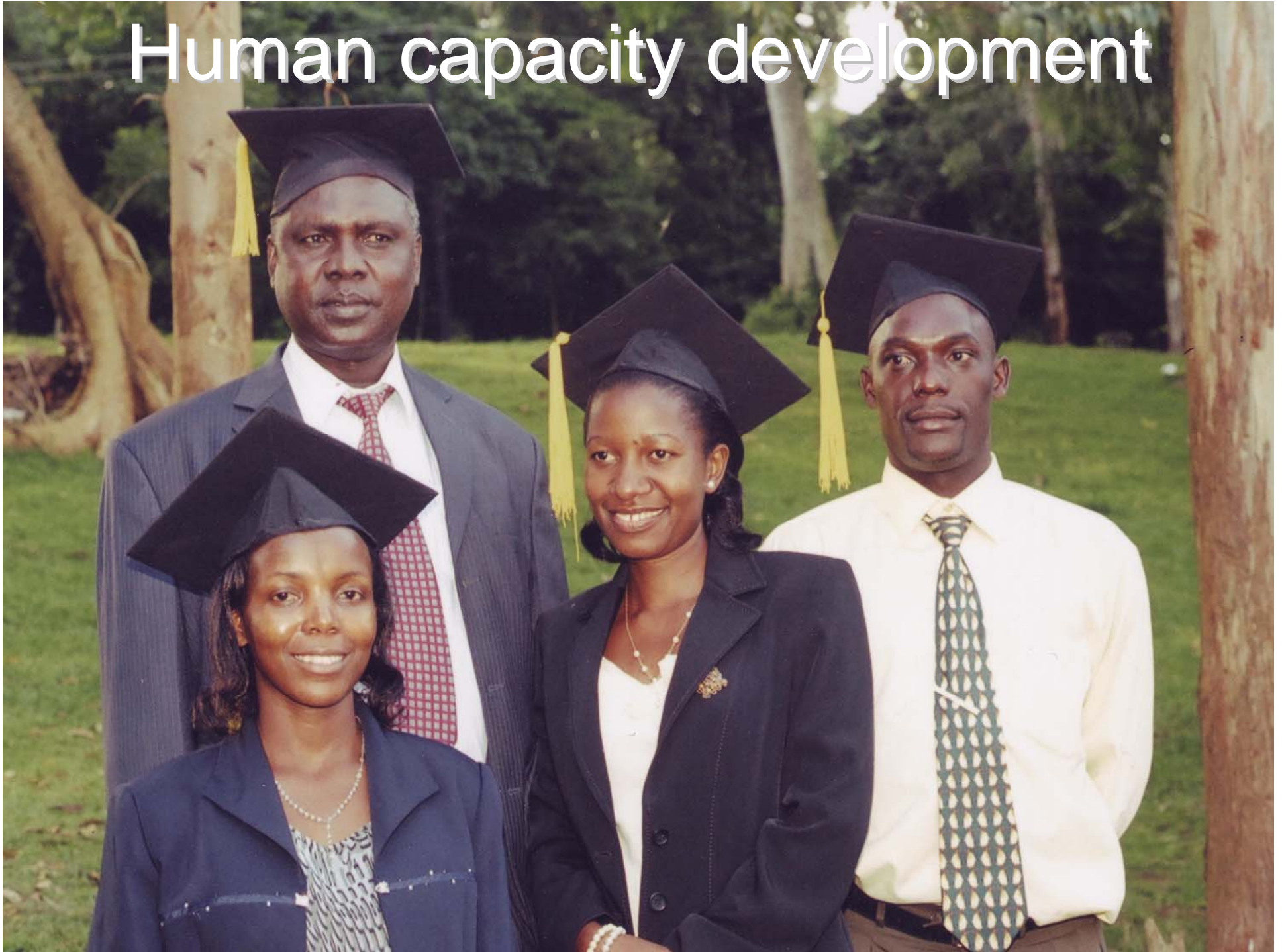
- Prevention of OIs: e.g.
 - Cryptococcal disease prevention trial
- ART trials
 - evaluation of monitoring and delivery strategies
 - ART and HIV prevention
 - ART in early HIV infection (SPARTAC Trial)

Basic science studies

- Studies to understand protective immune responses
 - Exposed Seronegatives (CHAVI)
 - Acute infection (IAVI, Wellcome Trust)
 - Disease progression studies (EU, Wellcome Trust)
 - Studies on dual and super infection (MRC, EDCTP)



Human capacity development



Strong partnerships with IAVI

- Protocols (A,B,C,D,E, F, G)
 - B incidence (P07-02);
 - C Acute/early infection studies
 - D reference ranges (P13-13)
 - G (Broad Neutralization)
- Improving laboratory standards
 - Accreditations
 - Better assays



The future

- Other interventions
 - Oral PrEP studies
 - Other microbicides
 - ARVs in discordant couples
- Broaden to other diseases
 - Malaria
 - TB

Maintaining the infrastructure
is very costly



MRC/UVRI Unit Funding



DFID



Conclusion

- In order to sustain our research infrastructure and cohorts that will be needed for future vaccine efficacy trials, we need to a multidisciplinary approach to research
- We need to be very innovative, continue explore other intervention studies
- However, this will be very expensive and will require resources from multiple partners

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