



Retention, sexual risk, and behaviour change in a cohort of HIV-negative South African adolescents

Heather Jaspan, Daniella Mark,
Nosiphiwo Soka, Landon Myer, Keren
Middelkoop, Catherine Mathews, Alan
Flisher & Linda-Gail Bekker

Desmond Tutu HIV Centre
Institute of Infectious Diseases and Molecular Medicine
University of Cape Town



Background

- A total of 2.5 million children are living with HIV-1 currently (UNAIDS 2007)
- Adolescents are the fastest growing group of HIV-infected people
- Adolescents engage in high risk behaviour, with early sexual debut (Eaton 2002, Jaspan 2007, Shishana 2003)
- Sex is often coercive or transactional



Vaccine trials & adolescents

- Three of the over 110 HIV vaccine trials to date have included children (Safrit 2004)
- No HIV vaccines have been tested in adolescents
- Vaccines take many years from phase I trials to licensure
- HIV is more challenging in terms of vaccine design than any other recent pathogen
- **We do not have time to waste in the search for an HIV vaccine for adolescents**

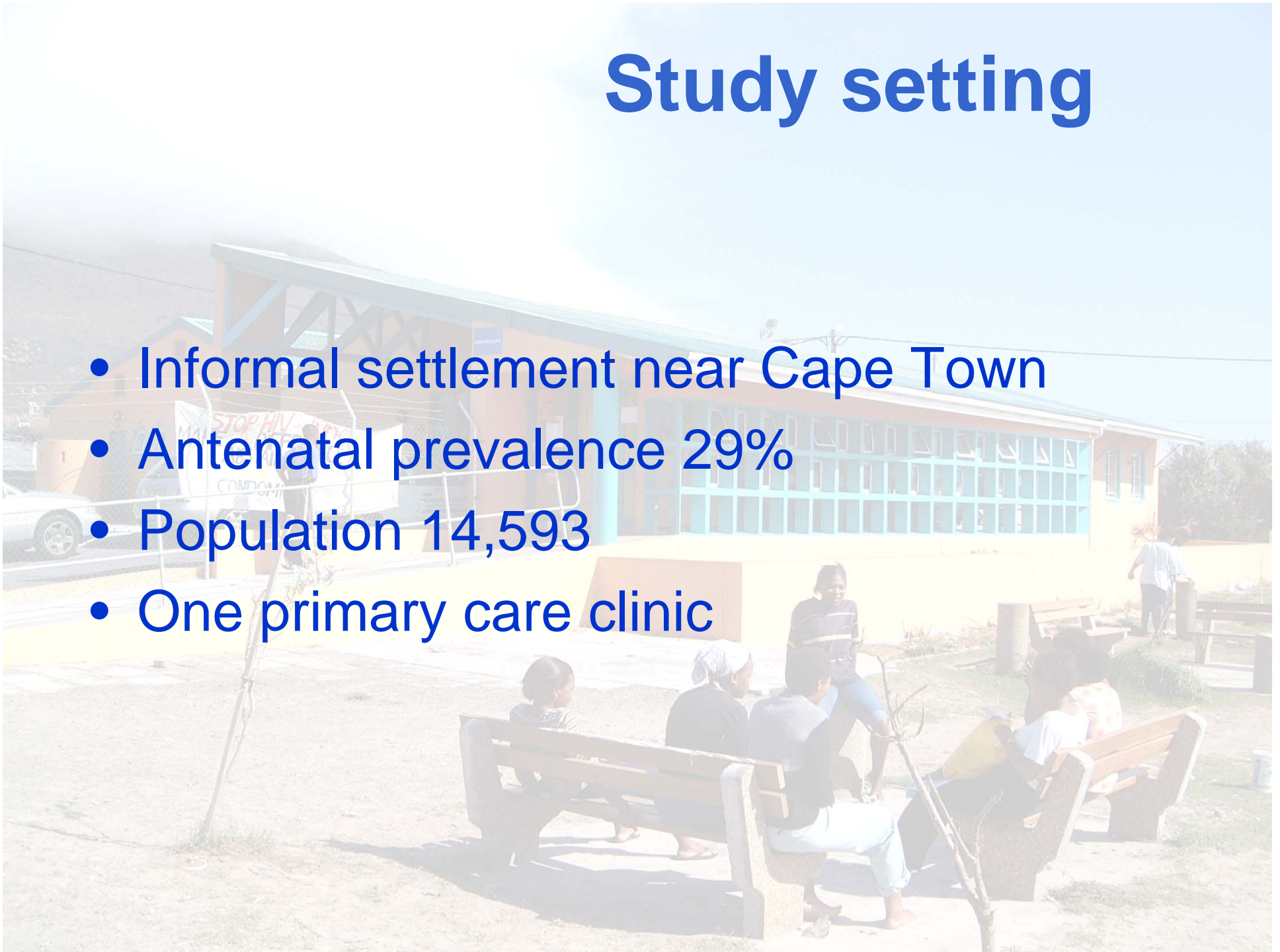


Aims

- To prepare for the next promising HIV vaccine candidate to be tested in adolescents by:
 - measuring incidence of HIV, syphilis and pregnancy in an adolescent cohort
 - assessing recruitment and retention
 - examining HIV and vaccine knowledge, willingness to participate, or whether enrolment causes change in risk behaviour

Study setting

- Informal settlement near Cape Town
- Antenatal prevalence 29%
- Population 14,593
- One primary care clinic





Study design

- Prospective cohort study of 100 HIV-negative 14 to 17 year olds
- Compared 3 methods of recruitment
- Parental and adolescent informed consent
- Follow-up 3 monthly for a year
- Questionnaires and HIV, RPR (syphilis), and pregnancy testing through time



Desmond Tutu HIV Centre

m a s i t h a n d a n e

Study procedures

	Visit 1 (day 0)	Visit 2 (mo 3)	Visit 3 (mo 6)	Visit 4 (mo 9)	Visit 5 (1 year)
Demographics	X				
Pregnancy & RPR	X	X	X	X	
Pretest counsel	X	X	X	X	X
HIV test	X	X	X	X	X
Social harms		X	X	X	
Informed assent & consent	X				
Risk behaviour	X				X
Education session		X			
Willingness to participate		X			X
Vaccine knowledge		X			



Results: Recruitment

- Three different flyers were used:
 - **Pink** handed out by community educators/recruiters
 - **Green** to adolescents who tested negative through the VCT center
 - **Orange** to adults receiving ARVs from the clinic with adolescents at home
- All adolescents brought **pink** flyers or reported they came via word-of-mouth
- Fully enrolled in 3 months



Desmond Tutu HIV Centre

masithandane

Masiphumelele educators





Results: Demographics

Mean age	15 years, sd 0.9
Female gender	70%
Mean grade	8 th grade, sd 1.3
Live with mother	94%
Live with both parents	42%



HIV and vaccine trial knowledge

- In general HIV knowledge excellent
 - However, only 12% considered themselves at risk of HIV
- 91% had heard of an HIV vaccine
 - 80% of these from the study
- 92% would be willing to participate in an HIV vaccine trial
- HIV vaccine trial knowledge was poor
 - 30% thought a vaccine could infect participants with HIV



Results: Biological

- Six pregnancies (9% of females)
- No HIV seroconversions
- No positive RPRs at baseline or through follow-up



Reported risk behaviour: baseline

Ever had sex	43%
More than 1 partner past year	13 (30%)
Partner in the last year a boyfriend/ girlfriend	41 (95%)
Anal sex past 6 months	2 (5%)
Casual sex past 6 months	0
Sex on drugs past year	5 (11%)
Always used condom past 6 months	24 (59%)

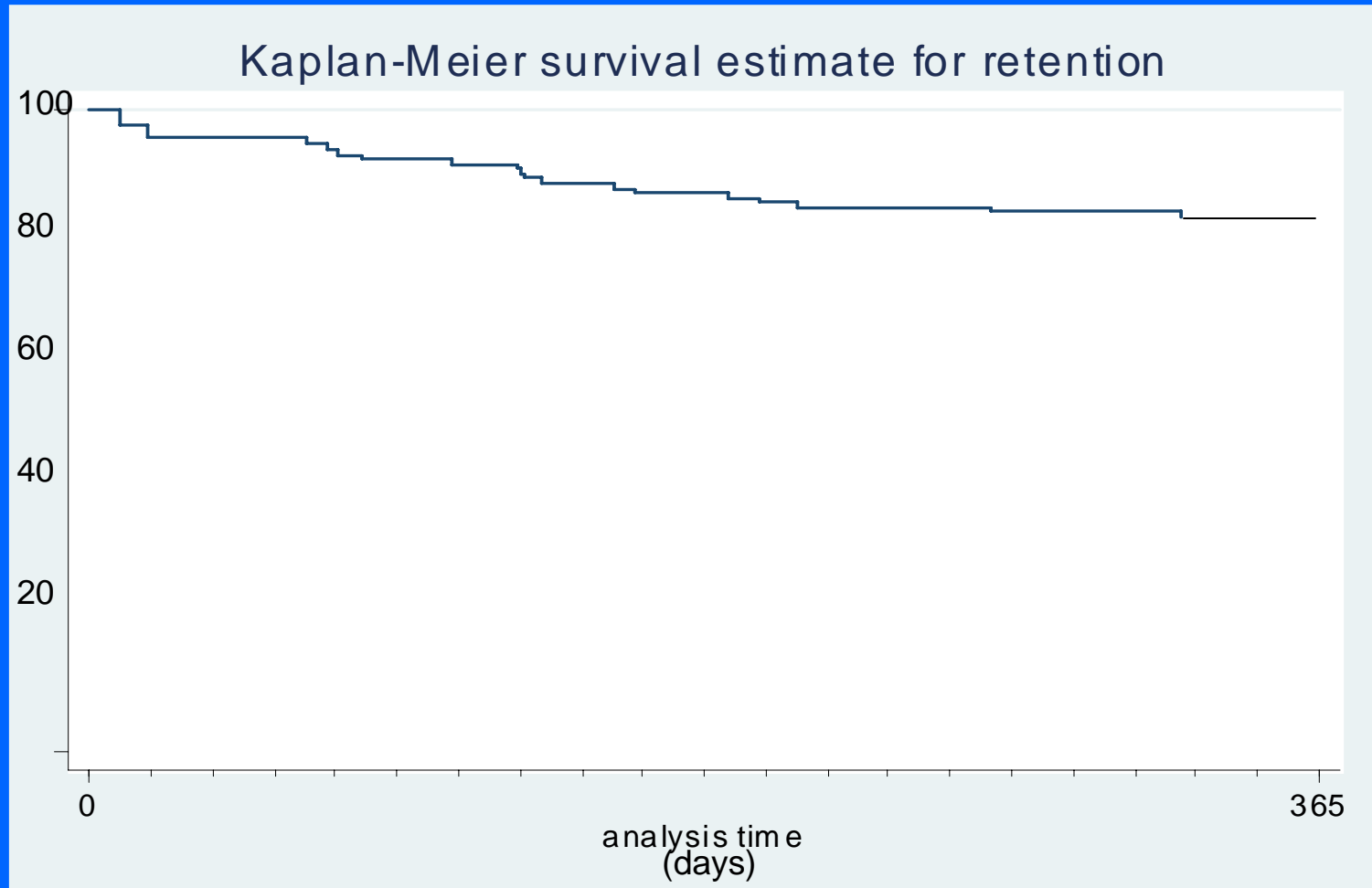


Change in sexual behaviour

	Baseline n (%)	Month 12 n (%)	McNemar p value*
>1 partner past yr	13 (13)	10 (14)	0.47
Ever had sex	43 (43)	60 (68)	<0.001
Always used condom past yr	24 (59)	33 (70)	0.80
Know partner HIV negative	7 (17)	40 (83)	<0.001

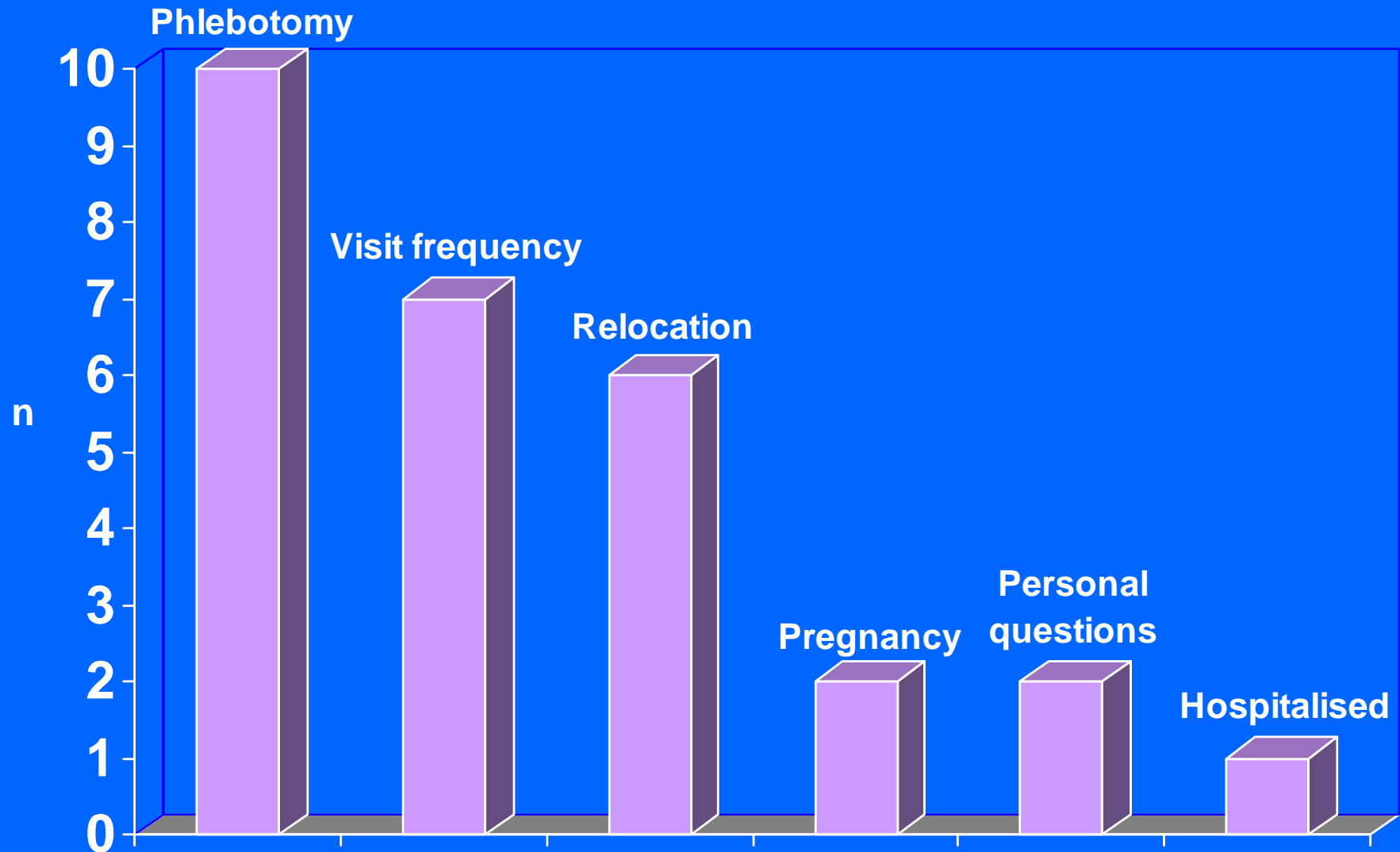


Results: Retention





Reasons for withdrawal





Factors associated with dropout

Factor*	OR	95% CI
Age**	0.51	0.15 – 1.74
Gender	1.97	0.25-15.90
Told anyone about participation**	0.13	0.02-0.64
Had sex ever**	2.87	0.30-28.35
Perceived at risk for HIV**	2.22	0.13-38.25
Live with both parents**	0.73	0.14-3.84

*Adjusted for all other variables in the table

**At baseline or visit 2



Conclusions

- Recruitment of adolescents through word of mouth or targeted community recruitment was rapid
- Sexually active group, but no disinhibition
- High pregnancy rate
- No HIV seroconversions
 - Sampling? Serosorting? Inclusion criteria?
- Retention was challenging:
 - Mobile age group
 - Dislike blood draws and frequent visits



Lessons

- Adolescent HIV vaccine trials will be facilitated by:
 - Making clinic visits more pleasant (e.g. food, anesthetic cream)
 - Requiring a number of visits pre-enrolment to ensure retention once enrolled
 - Requiring disclosure about participation
 - On-site pregnancy prevention
 - Transport for visits
 - Different recruitment methods or inclusion criteria



Thank you

- The Participants
- Prudence Mthimunye
- Du Joni, Lundi Ncana
- Wadi Dyani
- Claire Schuster
- Eva Operskalski
- Coleen Cunningham
- Adolescent Trials Network
- Glenda Gray, Guy de Bruyn
- The Future Fighters
- The Masi Educators
- This study was funded in part by the **International Maternal, Pediatric, Adolescent AIDS Clinical Trials Group** (formally PACTG) of the **National Institutes of Allergy and Infectious Diseases**