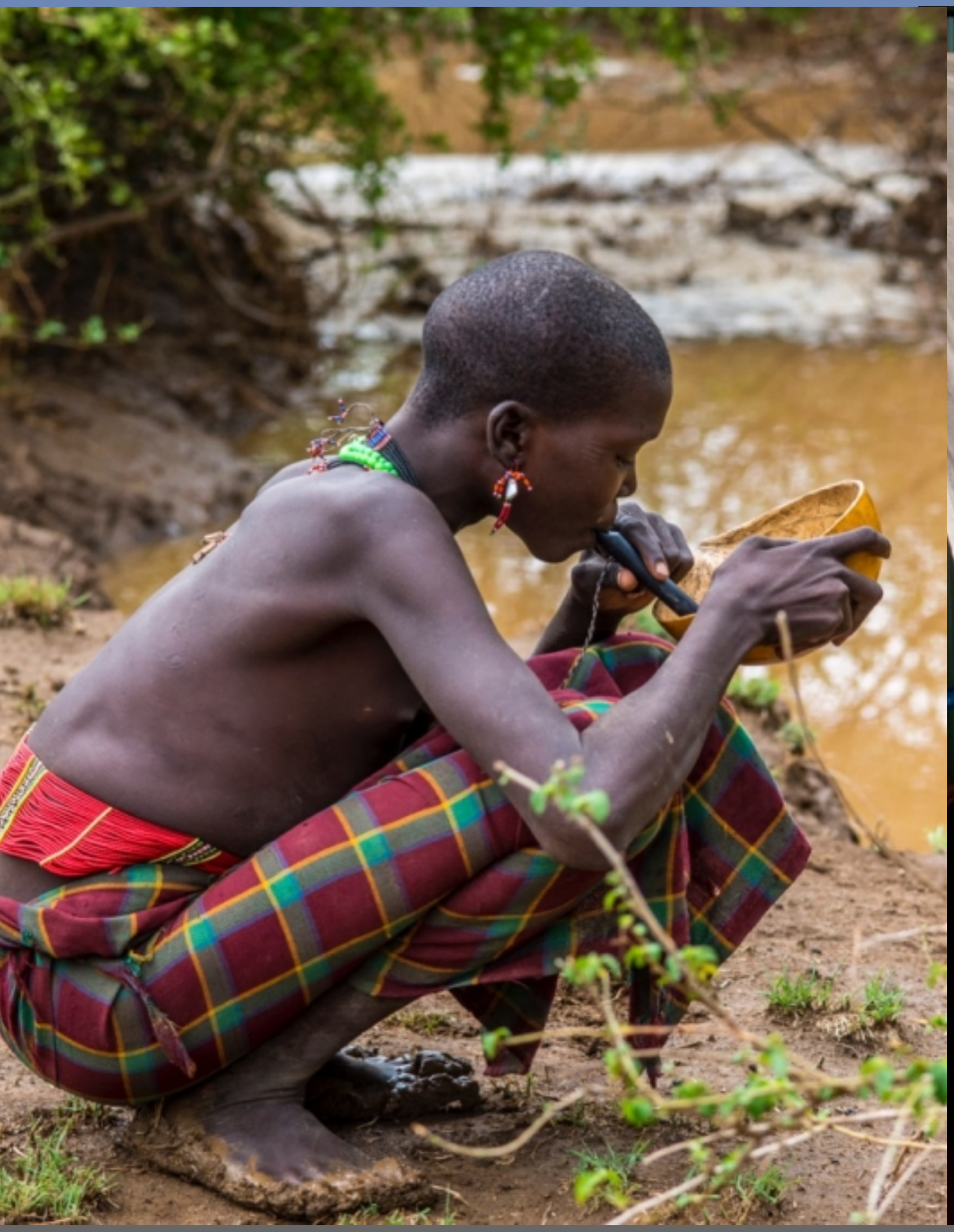
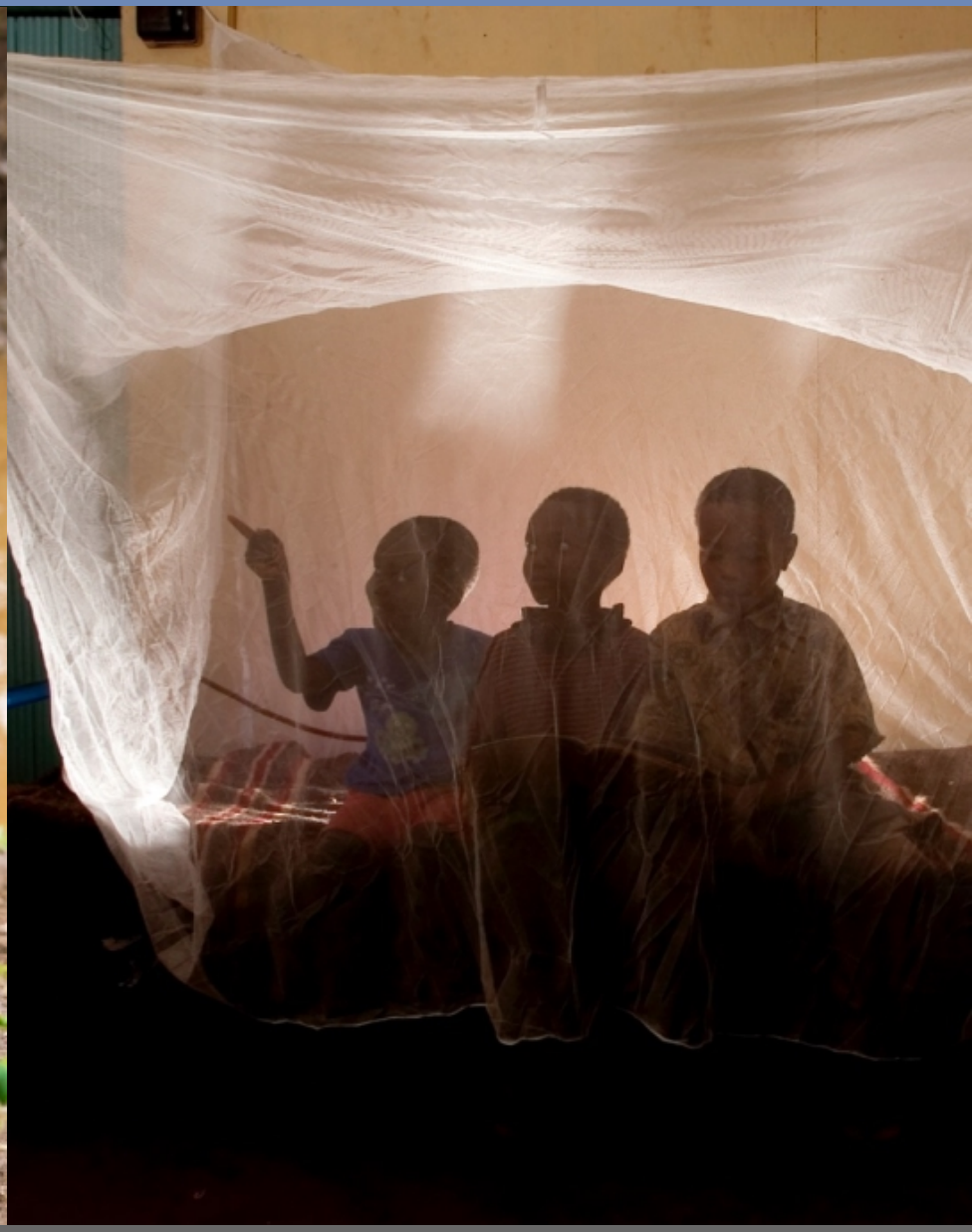
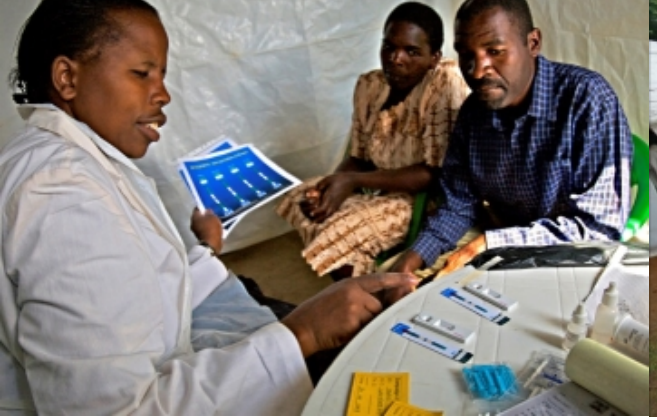
Controlling the HIV Epidemic with Antiretrovirals - 2016 Summit

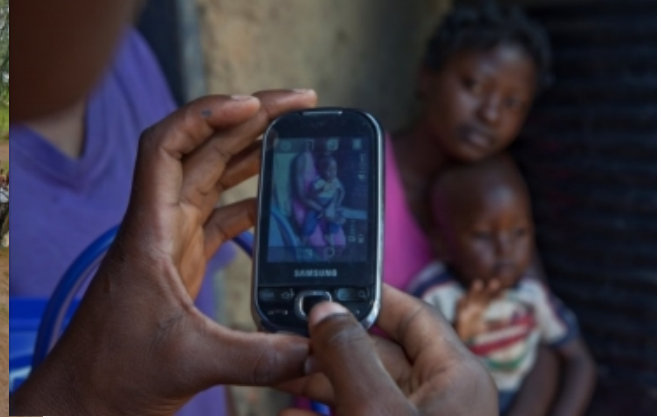
The role of the private sector in developing and introducing innovations

Mikkel Vestergaard Frandsen



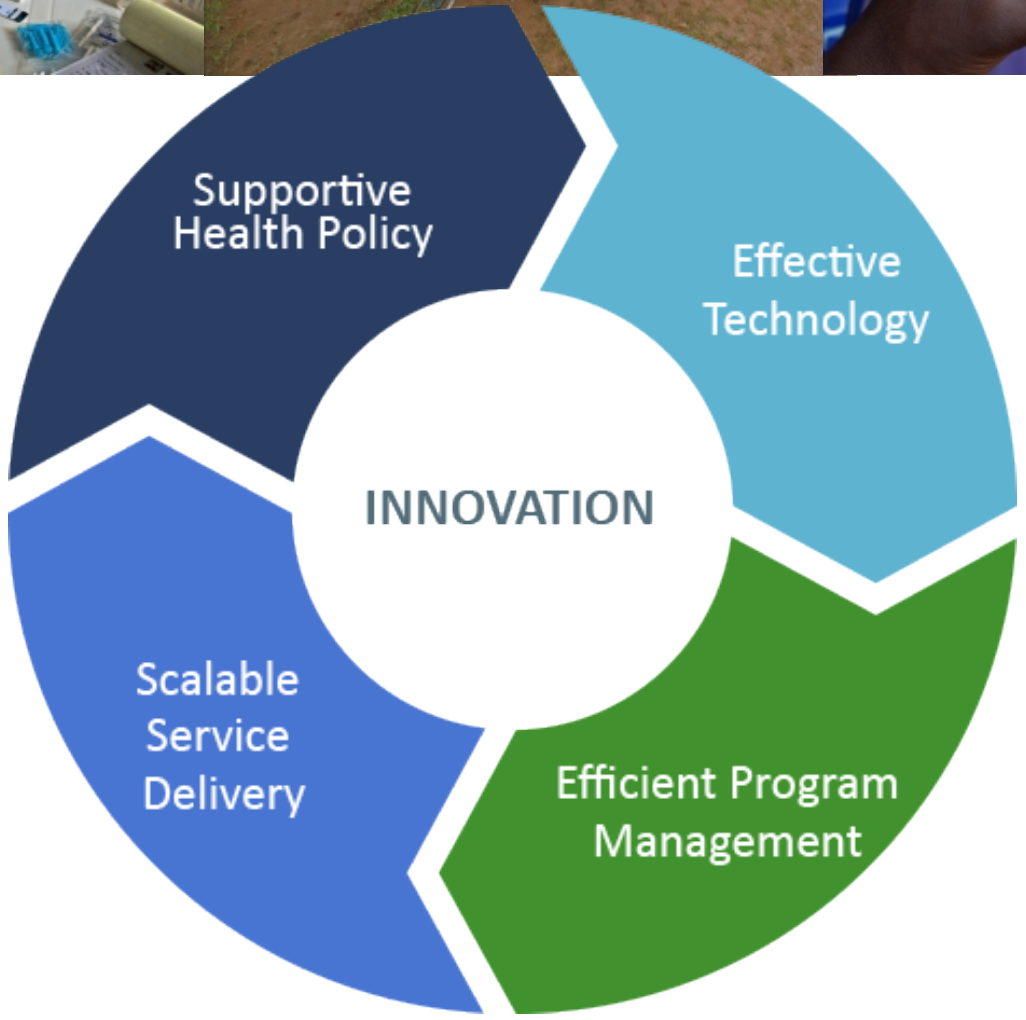






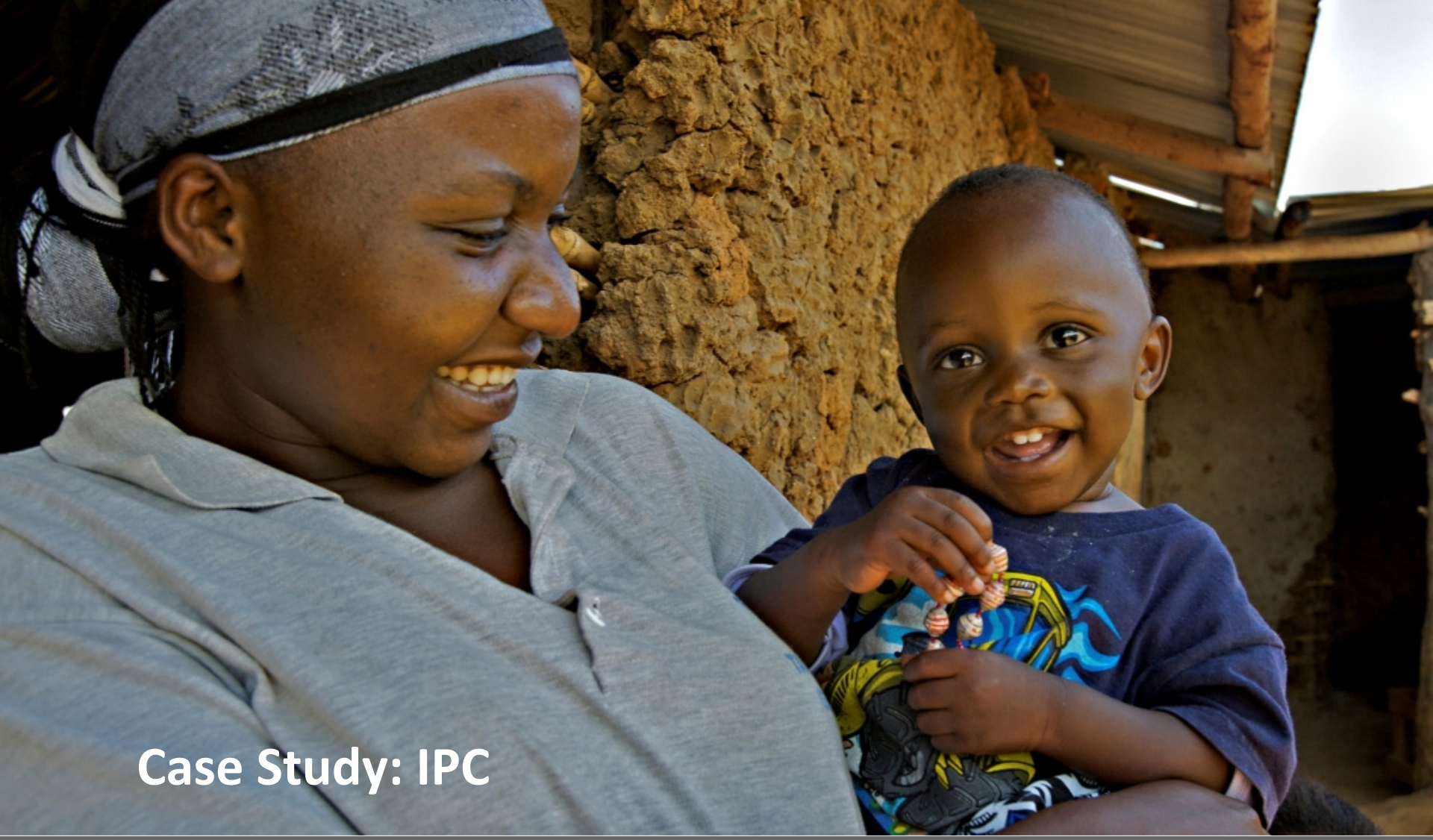
Global Economics of Policy & Development Financing

Technology innovation, Product design, and scalable manufacturing and logistics



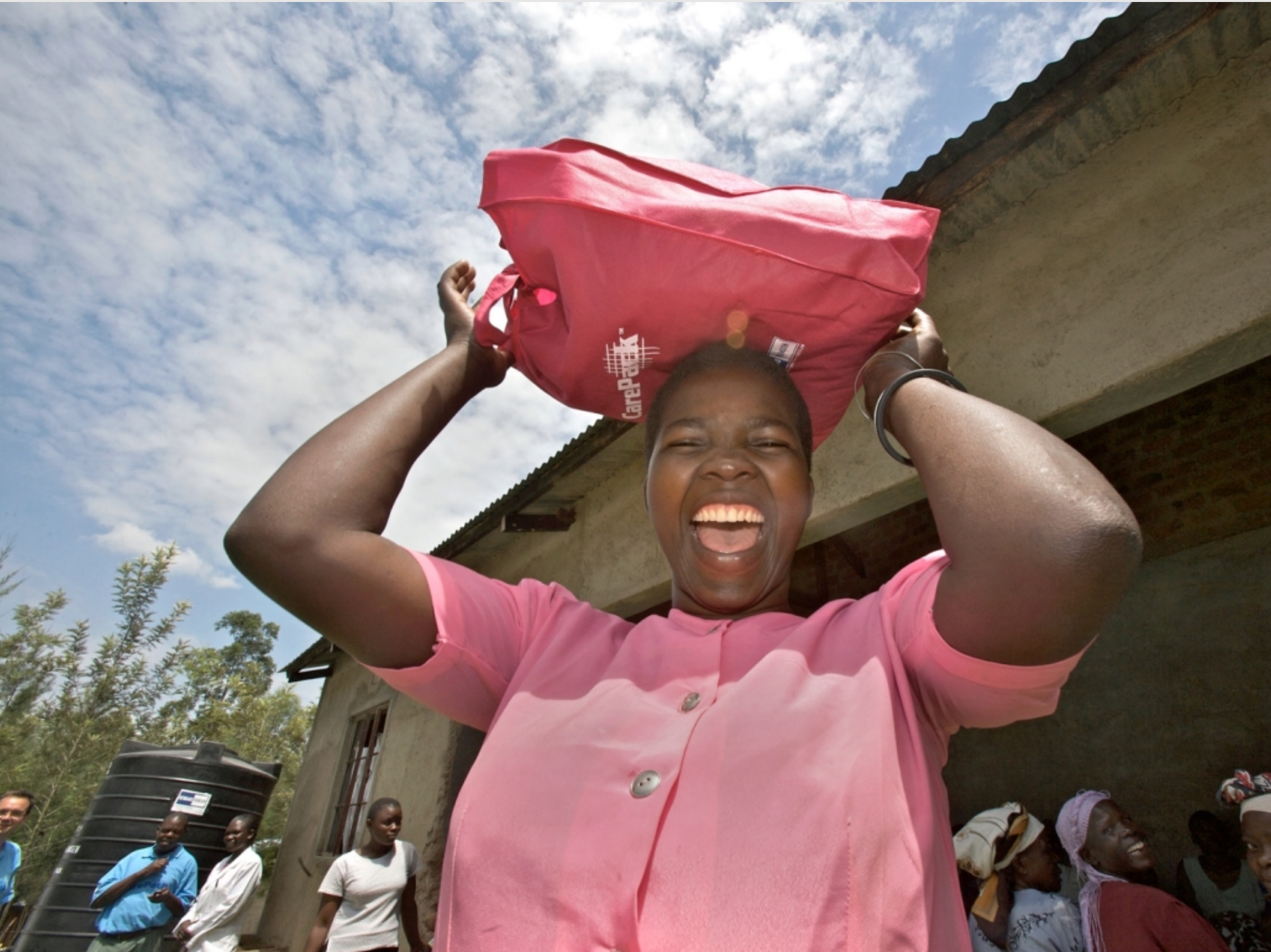
Integrated Health Service Delivery Economics

Management and Monitoring Economics



Case Study: IPC

In 2008, Vestergaard partnered with the Kenyan Ministry of Health and Ministry of Public Health to implement a campaign designed to help the Government meet their ambitious targets for HIV testing and to invest in the health of the community at large


CarePacket

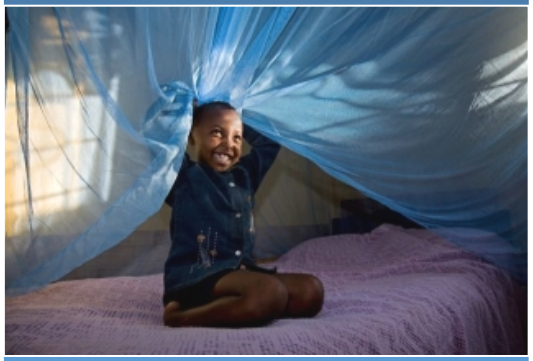
The Integrated Prevention Demonstration, a seven-day long campaign held in Kenya in September 2008, combined voluntary HCT with distribution of an evidence-based CarePack® containing multiple interventions for the prevention of malaria, diarrhea and HIV.

Contributing to National Targets

- Increasing rates of VCT to at least 80%
- Increasing coverage of bednets
- Addressing high rates of diarrheal illness, low child health indicators and HIV outcomes

Developing the CarePack

MALARIA



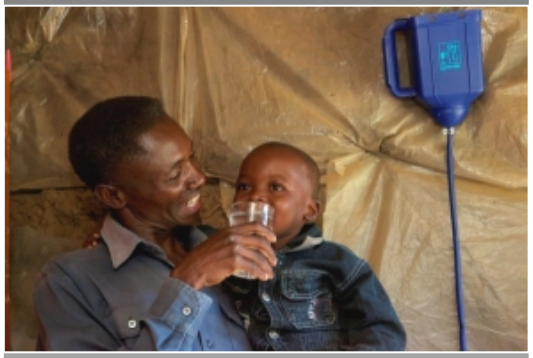
Target: Universal coverage of LLINs.

Status: Campaign only targeted pregnant women and children <5.

Gap: No campaign targets adult population.

LONG LASTING INSECTICIDAL NETS

DIARRHOEA



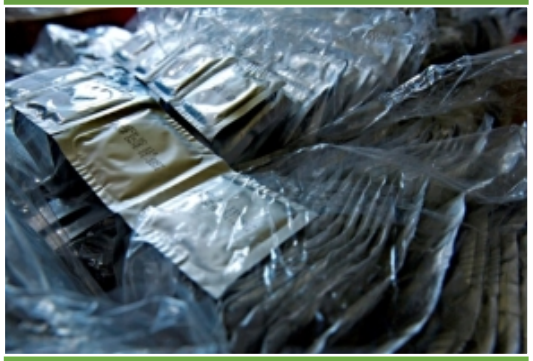
Problem: 1.8 million people, mostly children under 5, die each year from diarrhoeal diseases.

Status: Clean water has a big impact, however coverage remains low.

Gap: No long-lasting, clean drinking water intervention that could be scaled up in the developing world setting.

WATER FILTRATION TOOLS

HIV /AIDS



Target: Universal access to treatment, and thus testing.

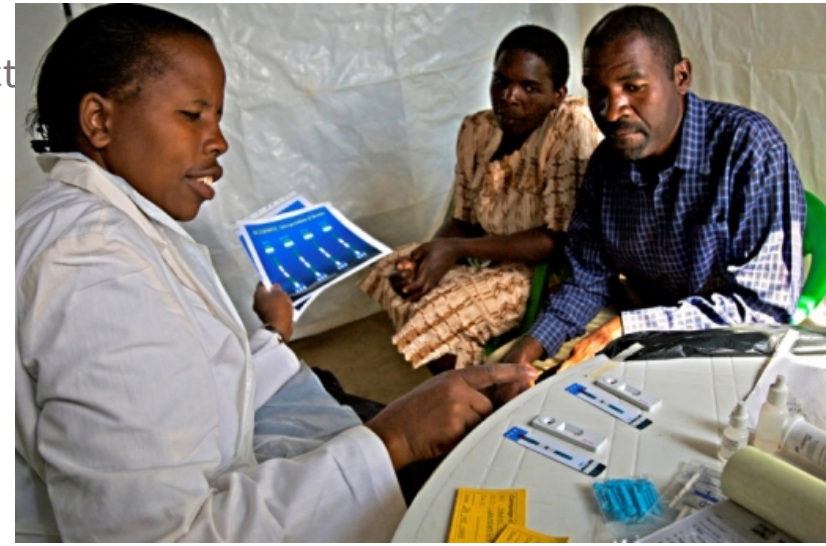
Status: 83% or approximately 1.2 million HIV-infected Kenyans do not know they are infected and need CD4 monitoring to start ARVs.

Gap: Innovative ways to break stigma and get CD4 testing out of health settings.

CONDOMS AND ARVs

Key Statistics

Target population	51,178 sexually- act
Total cost	$1,958,000
Cost per person	$41.66 ($32 at scale)
Total tested	47,007
Tested in age group 15 to 49	41,040 (>80%)
Testing for the first time	81%

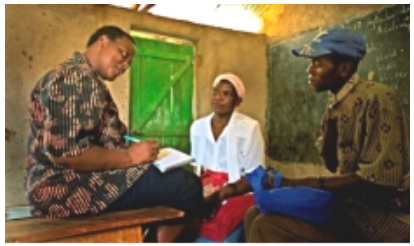


Women	28,906
Women diagnosed HIV+	1,448 (5.0%)
Men	18,101
Men diagnosed HIV+	508 (2.8%)
Lowest HIV prevalence by age	15-19 years (0.8%)
Highest HIV prevalence by age	30-39 years (6.7%)
HIV+ put on cotrimoxazole	96%

Linking Research to Program Implementation

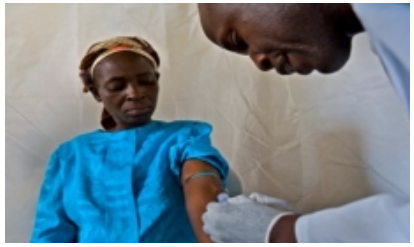
Rapid Implementation of an Integrated Large-Scale HIV Counseling and Testing, Malaria, and Diarrhea Prevention Campaign in Rural Kenya

Eric Lugada[1*], Debra Millar[2], John Haskew[3], Mark Grabowsky[4], Navneet Garg[5], Mikkel Vestergaard[5], James Kahn[6], Nicholas Muraguri[7], Jonathan Mermin[8]



A Qualitative Assessment of Participation in a Rapid Scale-Up, Diagonally-Integrated MDG-Related Disease Prevention Campaign in Rural Kenya

Timothy De Ver Dye[1*], Rose Apondi[2], Eric Lugada[3]



Predictors of Linkage to Care Following Community-Based HIV Counseling and Testing in Rural Kenya

Abigail M. Hatcher · Janet M. Turan · Hannah H. Leslie · Lucy W. Kanya · Zachary Kwena · Malory O. Johnson · Starley B. Shade · Elizabeth A. Bukusi · Alexandre Doyen · Craig R. Cohen

Community-based multi-disease prevention campaigns for controlling human immunodeficiency virus-associated tuberculosis

A. B. Suthar,* E. Klinkenberg,† A. Ramsay,‡ N. Garg,§ R. Bennett,¶ M. Towle,* J. Sitienei,# C. Smyth,* C. Daniels,** R. Baggaley,* C. Gunneberg,** B. Williams,†† H. Getahun,** J. van Gorkom,† R. M. Granich*

Modeling the Economics of Delaying the progression of Disease

Evaluation of impact of long-lasting insecticide-treated bed nets and point-of-use water filters on HIV-1 disease progression in Kenya

Judd L. Walson[a,b,c,d,f], Laura R. Sangaré[a], Benson O. Singa[f], Jacqueline Mulongo Naulikha[c,f], Benjamin K.S. Piper[c,f], Krista Yuhas[b], Frankline Magaki Onchiri[e], Phelgona A. Otieno[f], Jonathan Mermin[g], Clement Zeh[g], Barbra Ann Richardson[a,e,h] and Grace John-Stewart[a,b,c,d]

Results of 589 individuals included:

- After controlling for baseline CD4 count, individuals receiving the intervention were 27% less likely to reach the endpoint of a CD4 count <350 cells/mm3 (HR: 0.73; 95% CI: 0.57–0.95)
- CD4 decline was also significantly less in the intervention group (54 vs. 70 cells/ mm3/year, p¼0.03)
- Incidence of malaria and diarrhea were significantly lower in the intervention group.

Provision of bednets and water filters to delay HIV-1 progression: cost-effectiveness analysis of a Kenyan multisite study. – Kern E. et.al

The cost per death averted was US$3,100 and the cost per disability-adjusted life year (DALY) averted was US$99

Assessing the Economics of this Model

Integrated HIV Testing, Malaria, and Diarrhea Prevention Campaign in Kenya: Modeled Health Impact and Cost-Effectiveness

James G. Kahn[1]*, Nicholas Muraguri[2], Brian Harris[1], Eric Lugada[3], Thomas Clasen[4], Mark Grabowsky[5], Jonathan Mermin[6], Shahnaaz Shariff[2]

Results:

- Per 1000 participants, projected reductions in cases of diarrhea, malaria, and HIV infection avert an estimated:
- 16.3 deaths,
- 359 DALYs and
- $85,113 in medical care costs

Earlier care for HIV-infected persons adds an estimated:

82 DALYs averted (to a total of 442), at a cost of $37,097

reducing total averted costs to $48,015

Accounting for the estimated campaign cost of $32,000, the campaign saves an estimated $16,015 per 1000 participants.

* James G. Khan, Nicholas Muraguri, Brian Harris, Erich Lugada, Thomas Clasen, Mark Grabowsky, Jonathan Mermin, Shahnaaz Shariff

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- KEMRI
- CHF International
- SUNY

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If we are to achieve Fast-Track Cities

- 90% of people living with HIV (PLHIV) knowing their HIV status
- 90% of people who know their HIV-positive status on HIV treatment
- 90% of PLHIV on HIV treatment with suppressed viral loads
- Zero stigma and discrimination