

ITDPEurope

*European Section of the
Institute for Transportation & Development Policy*

The Role of the Bicycle in Improving Health Care Services

Pilot Projects on Integration of Appropriate Technology into Service Provision in Africa

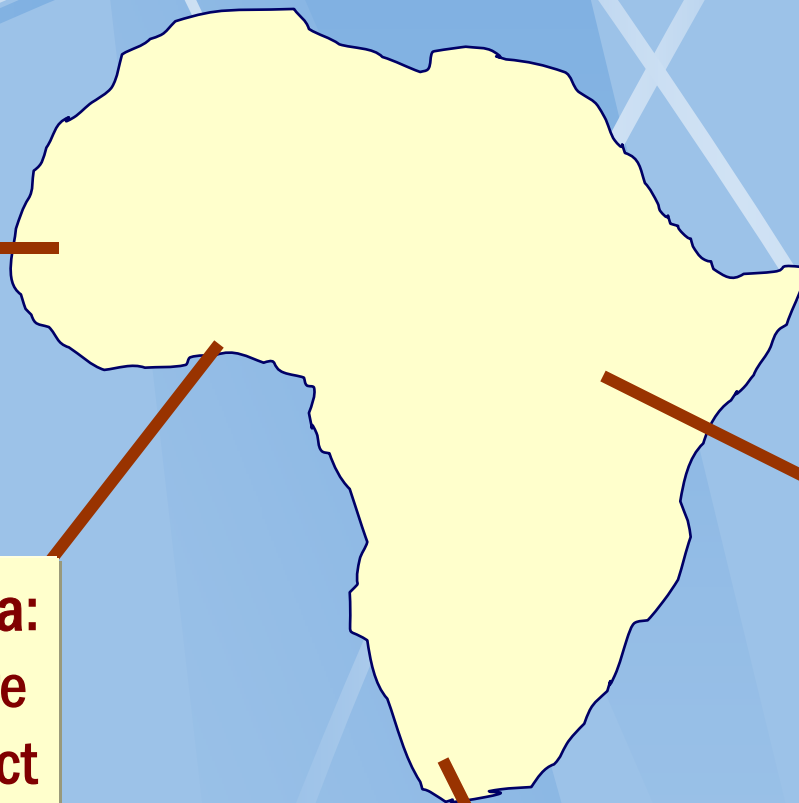
Current Project Regions

**ITDP Senegal:
Health Care
Pilot Project**

**ITDP Ghana:
Health Care
Pilot Project**

**FABIO Uganda
Production & Delivery
of Bicycle-
Ambulances
to rural communities**

**BEN South Africa:
Health Care Pilot Project**



Health Care in View of the Millenium Development Goals

MDG No.4: Reduce child mortality

MDG No. 5: Improve maternal health

MDG No. 6: Combat HIV/Aids, malaria and other diseases

MDG No.4: Reduce Child Mortality

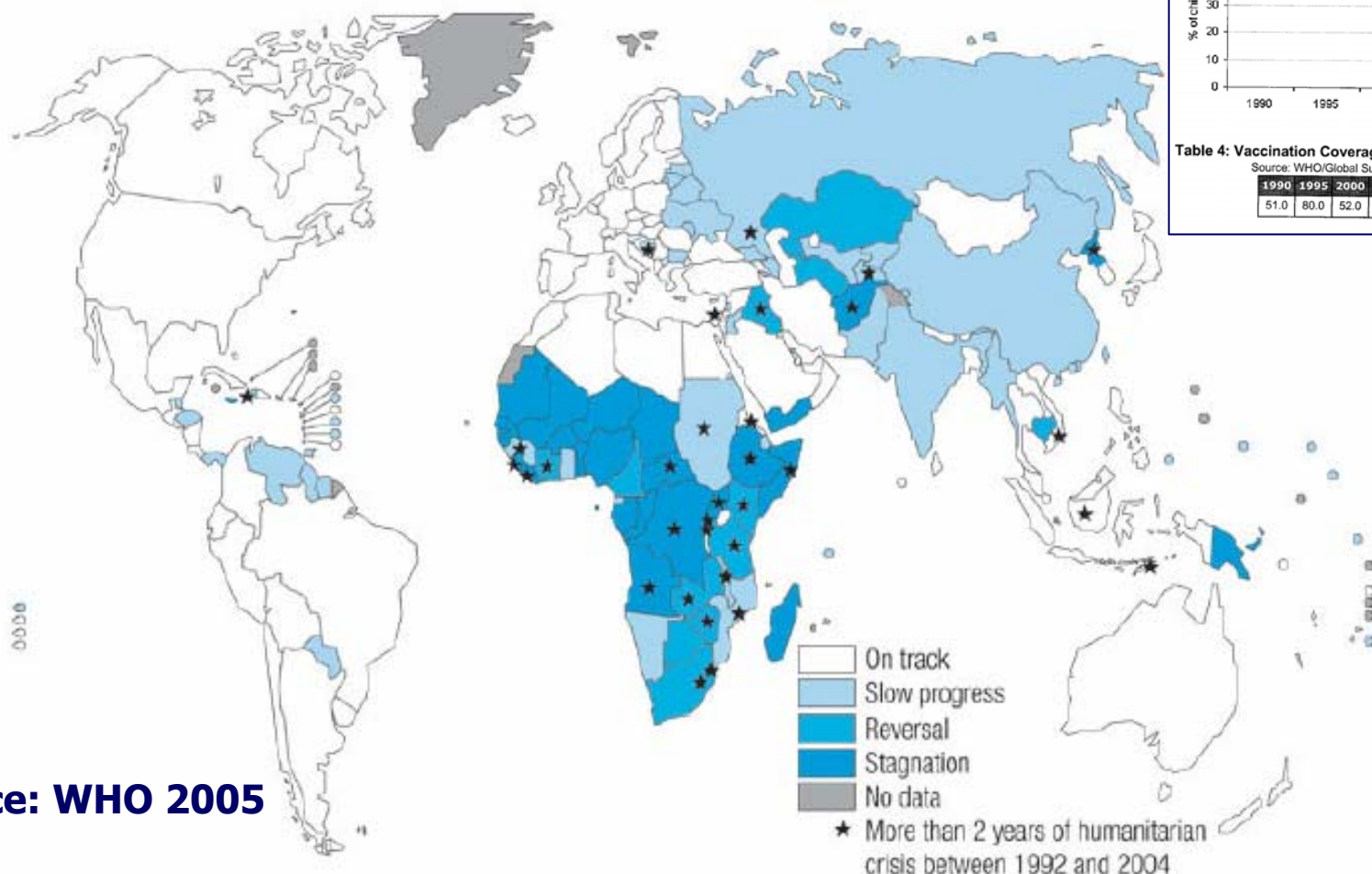


Figure 4: Vaccination Coverage (DPT3) Trends

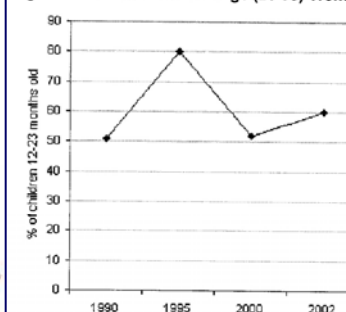


Table 4: Vaccination Coverage (DPT3) Trends

Source: WHO/Global Summary

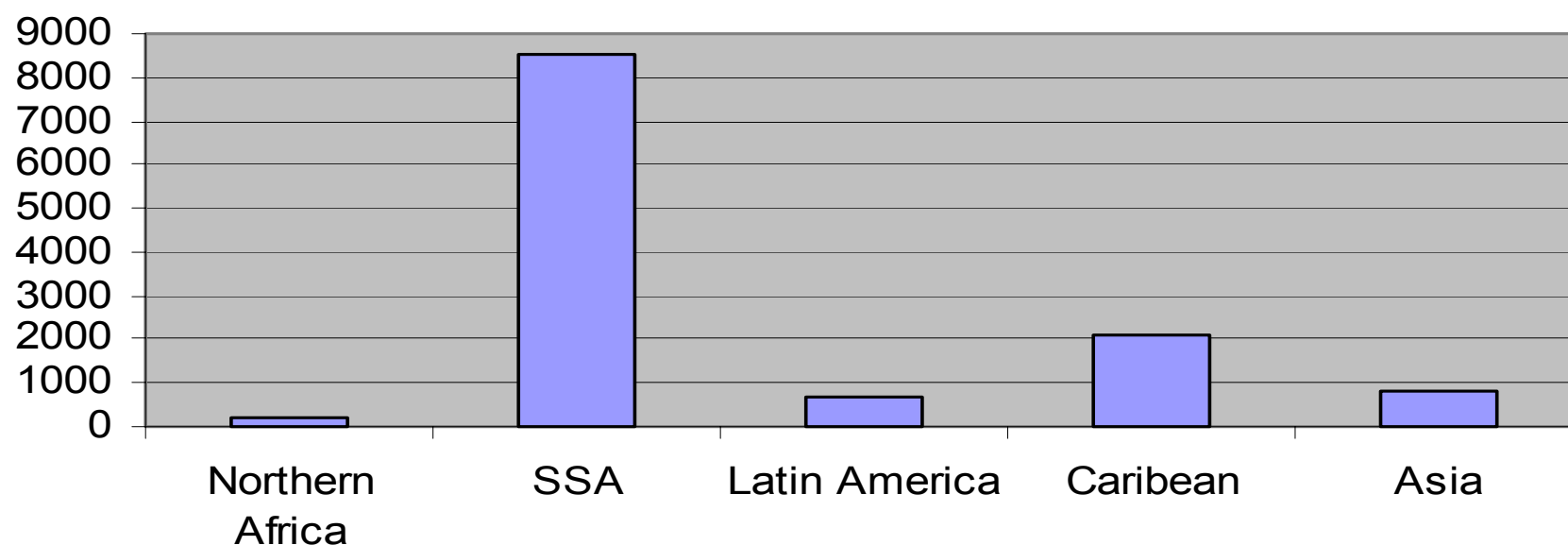
1990	1995	2000	2002
51.0	80.0	52.0	60.0

MDG No. 5: Improve Maternal Health

In Africa, the risk for women of dying in childbirth is 1 in 48 – often due to limited access to health facilities

MDG No. 6: Combat HIV/Aids, Malaria and other Diseases

**Adults 15-29 living with AIDS
(per 100000; source: UN-Data)**

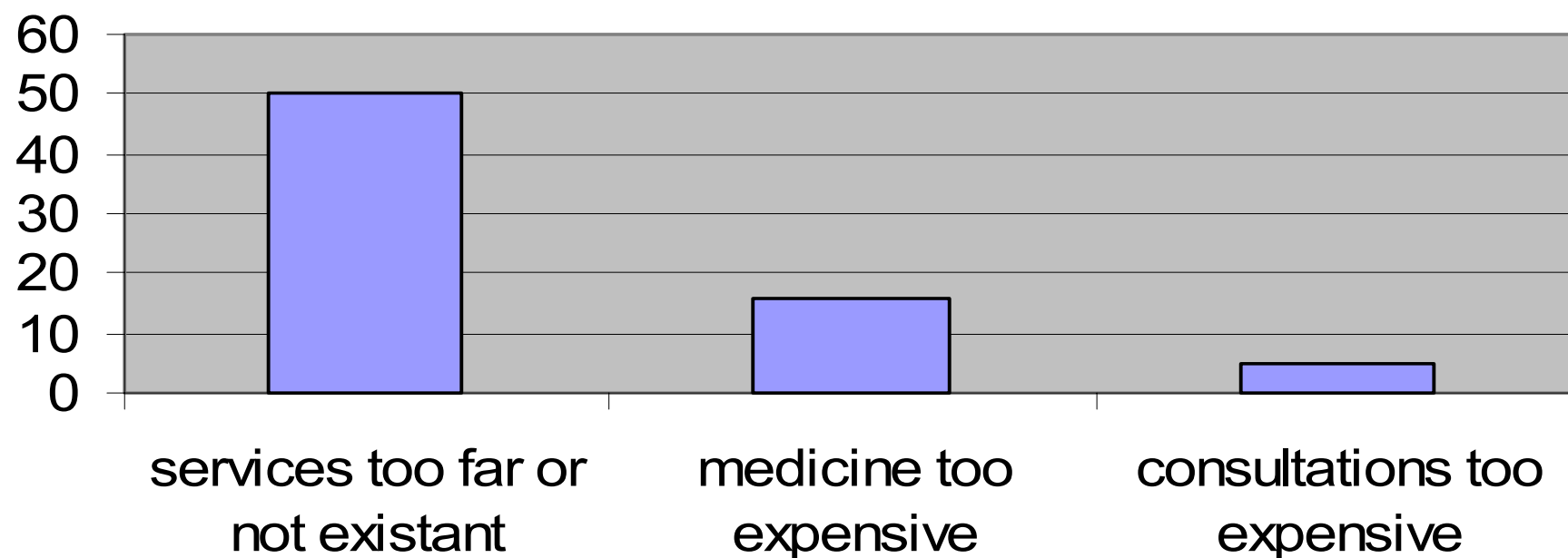


- >>> Only 2 out of the 28 most affected countries are not African
- >>> 70% of all new infections are in SSA
- >>> 1 in 4 women between 20 and 29 is HIV positive

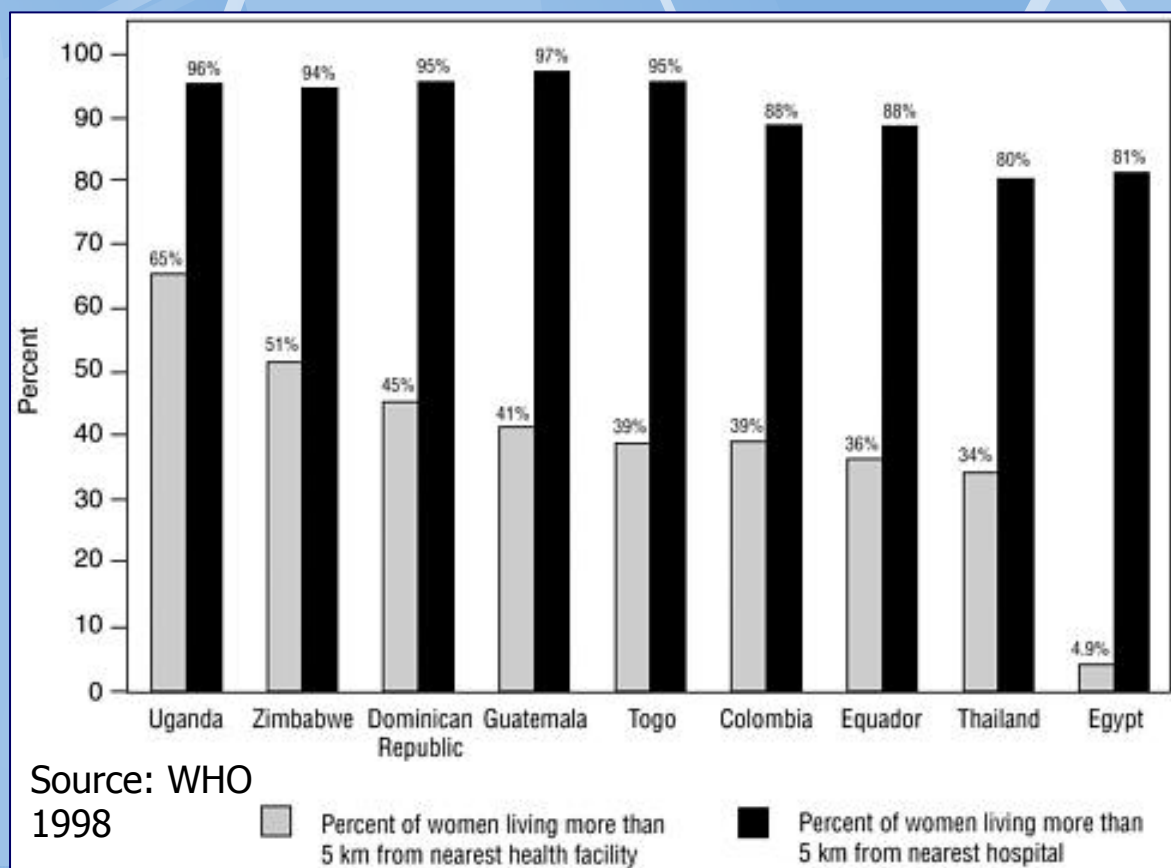
Transport as a Bottleneck of Efficient Health Care

Problems of access to health care in rural Senegal

(in % of household perception/ source: Enquete Senegalaise sur les indicateurs de Santé 2000)



Percentage of women living more than 5km from health center/ hospital in selected developing countries



Means for bringing patients to health facilities – especially for pregnant women in emergency cases – are either non existent or technically and financially unsustainable to cover the entire region

3 Types of delays:

- 1a) Household:** The head of the household (in most cases the husband) makes the first decision, if medical consultancy is required
- 1b) Selection of type of treatment:** Due to cultural or financial reasons traditional treatment (witch doctor/traditional healer) is the first choice of households
- 2) Transport:** Both immobile HCW and lack of affordable transport to health facilities cause delays
- 3) Health facility:** Medical professionals, treatment (OPs) and medicine are not available at the facility*

Transport as a Bottleneck of Efficient Health Care

➤ **Health care workers... are most often women**

...are often unpaid

*...overloaded with work
(Burnout)*

*...lack skills and medicine
(negative image)*

*...have no means for
communicating to
health professionals*

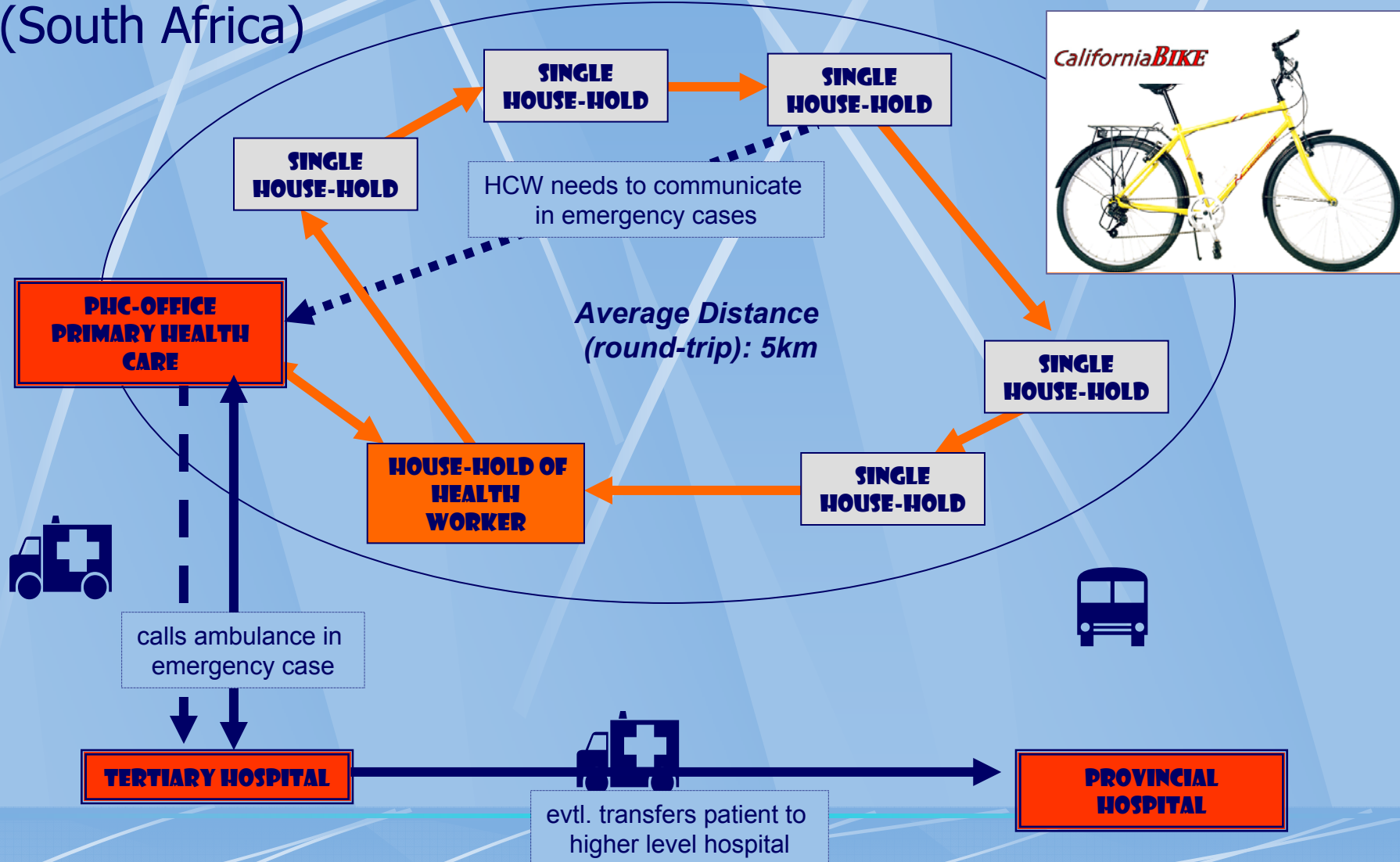
*...and are in need of
appropriate means of
transport*

BICYCLES are an efficient and appropriate transport alternative in a spatial radius up to 20km, covering three times the distance and, cutting the transport cost in half.

Healthcare workers with bicycles can reach 15 times more patients for...

- ...Immunization programmes
- ...Pre-natal care
- ...Administration of therapy
- ...Home based primary care for the aged and chronically ill
- ...Preventive promotion (e.g. AIDS and family planning)

Bike Delivery for Home-Based Care in Peri-Urban Areas (South Africa)



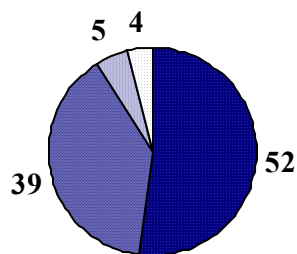
BICYCLE AMBULANCES can carry immobile patients to health and emergency facilities. They can cover a radius of 10-20km.

**1 of 250 delivered
Ugandan Bicycle-
Ambulances**

BICYCLE AMBULANCES can substitute the traditional stretcher-groups with of 8 to 12 men, taking days for reaching the hospital

BICYCLE AMBULANCES are mainly used by women in pregnancy and young patients for trips to the local clinic

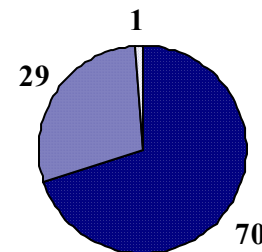
Diagram 15:
Medical indications
(as % of all journeys)



- Pregnancy and related complications
- Other
- Fractures
- Death

Heyen-Perschon 2001;
after Mbonye 1998

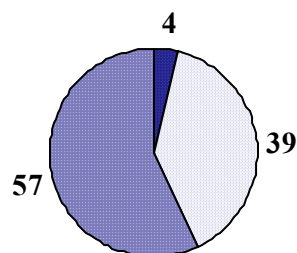
Diagram 16: Transported people
(as % of all journeys)



- Women
- Men
- Children

Heyen-Perschon 2001;
after Mbonye 1998

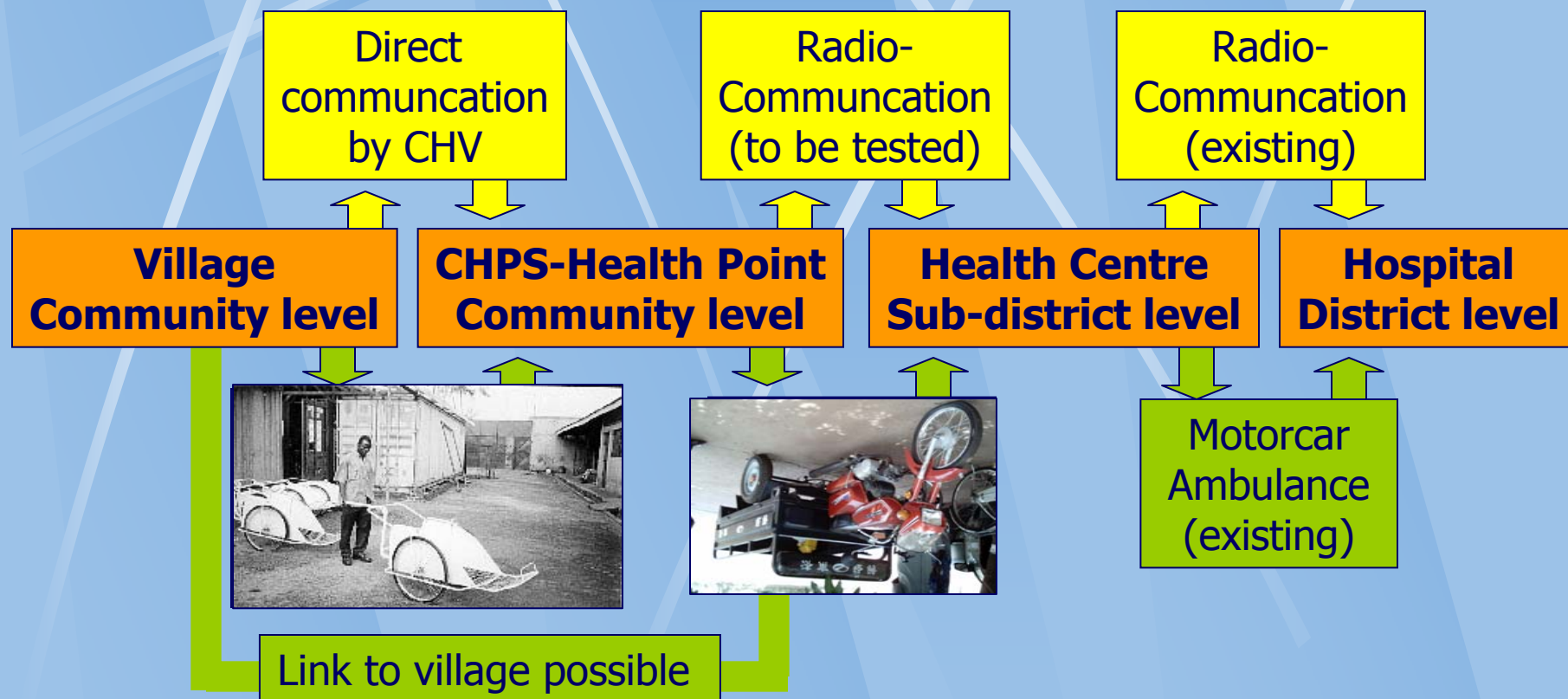
Diagram 17: Destinations
(as % of all journeys)



- Burial site
- Transport to hospital
- Transport to local clinic

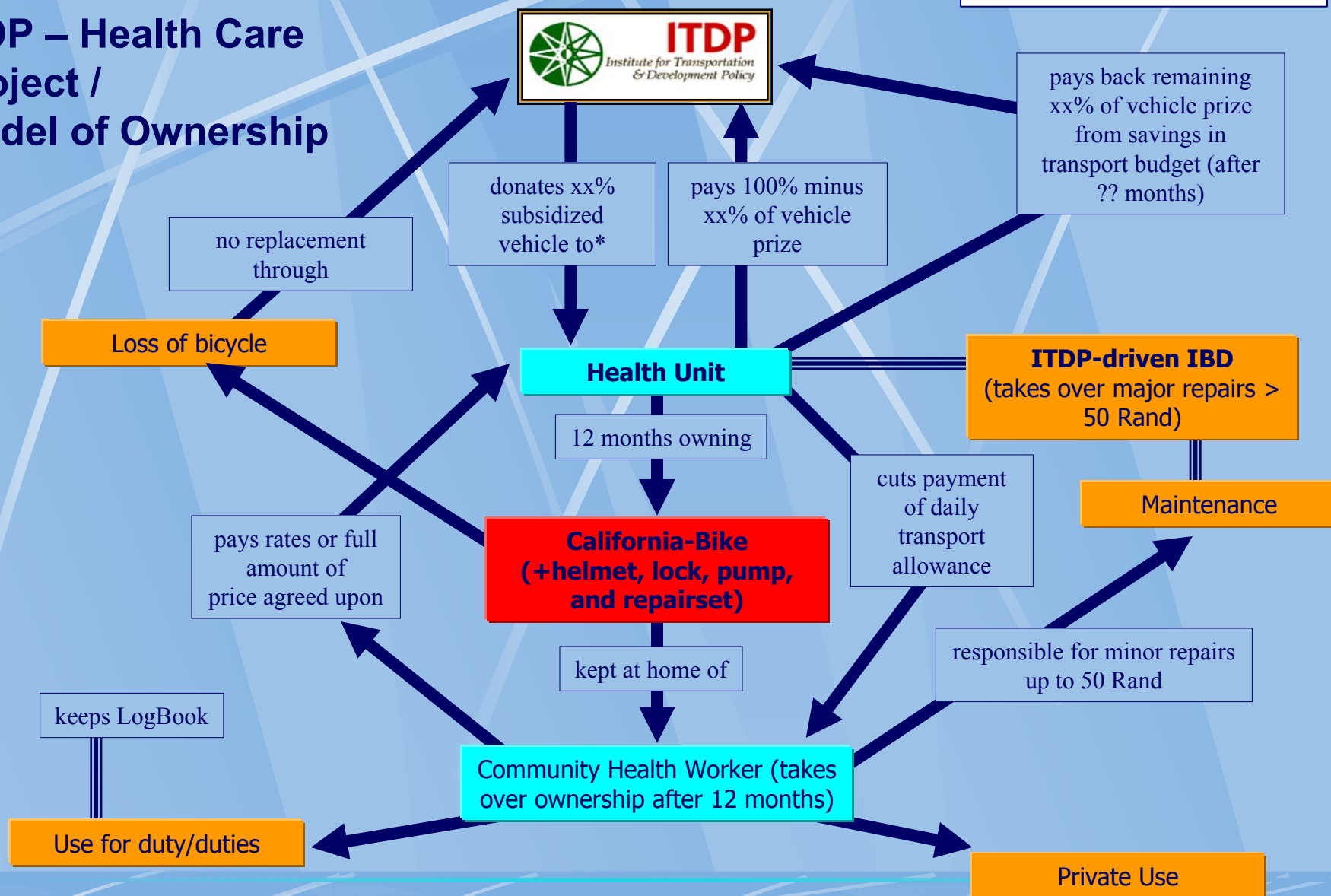
Heyen-Perschon 2001;
after Mbonye 1998

Integration of Rural Communication and Patient's Referral in Health Care (Ghana)



HEALTH CARE PROJECTS

ITDP – Health Care Project / Model of Ownership



*ITDP donates 50% of Health Unit's need for bikes and delivers full fleet in case 90% of trial fleet still in use after 12 months

Contact us !



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