

# The resilience of local health services under chronic and acute disaster conditions in the Rutshuru health district (North Kivu, Zaire) between 1985 and 1995.

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# Plan



- × Introduction
- × Objectives
- × Material & methods
  - RHD
  - Crisis conditions
- × Performances
- × Discussion
- × Conclusions

# Coping with crisis in RHD



✘ The "district paradigm"  
dominant since Harare → WB, WHO, ...

✘ But doubts

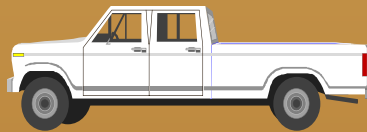
selective PHC?  
can it work in adverse circumstances?  
can it deal with crisis situation?  
emergency relief agencies?

# The district functions



management committee

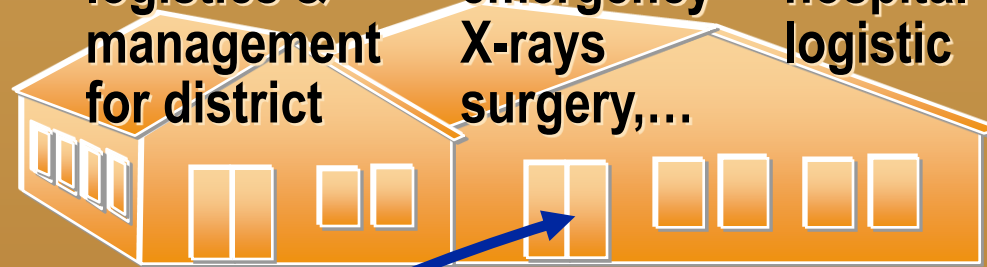
district mobile team



logistics & management for district

emergency X-rays surgery,...

hospital logistic



district hospital

HC1

HC2

HC3

drugs  
know how  
manpower  
finances

logistic of health centers



health promotion  
participation  
family planning  
nutritional rehabilitation  
care for chronic patients  
under 5  
antenatal care  
curative care

operation al activities of the health centers



*géographical boundaries of the district*

## 2 tests



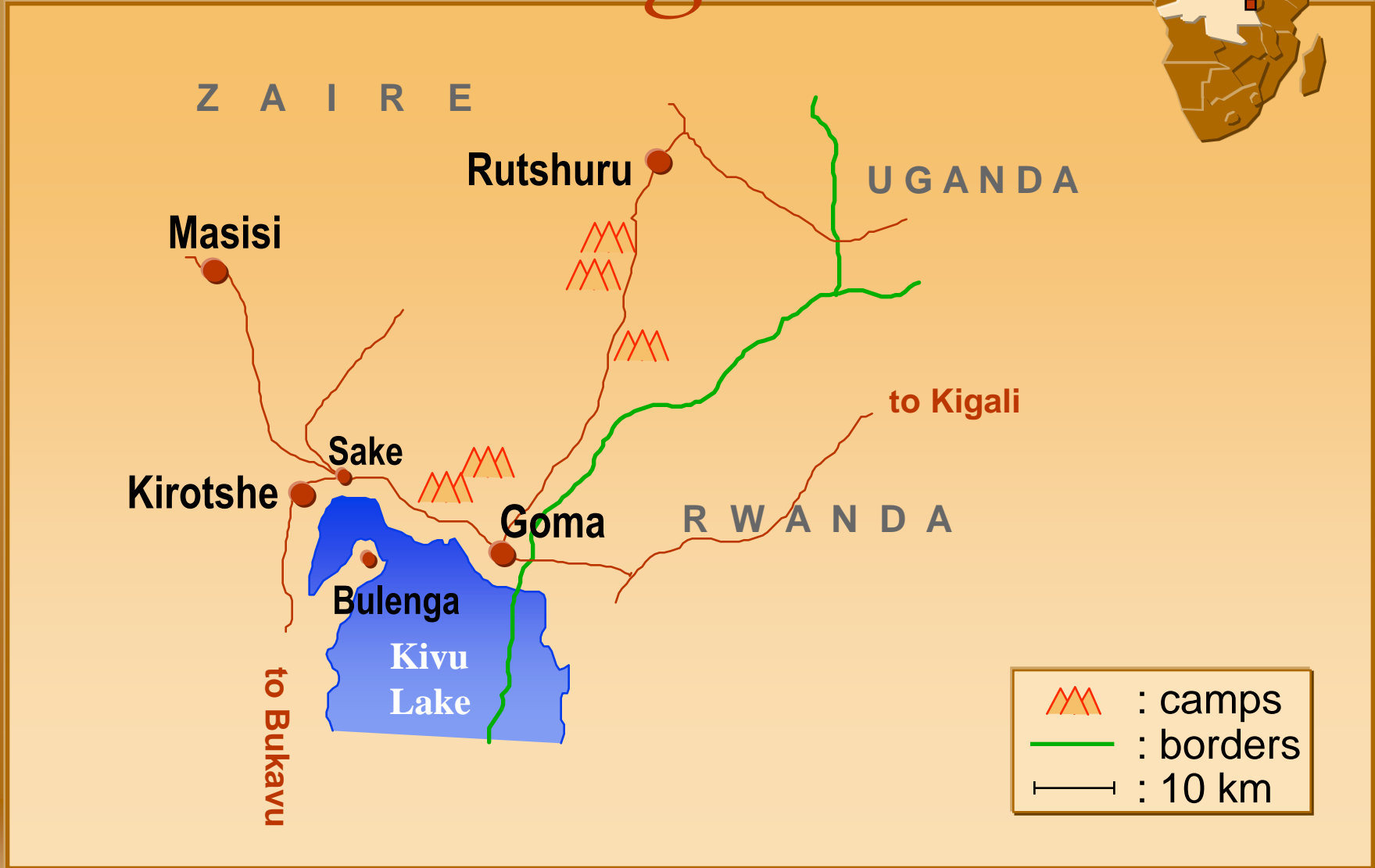
1. Ability to cope with *"chronic"* severe socio-economic deterioration
2. ability to cope with *"acute"* disaster conditions

# Objectives



1. to determine if a rural health district based on Primary Health Care is able to adjust and to hold its medical activities in unfavourable conditions.
2. to formulate some recommendations for the management of crisis conditions in region where the health system is already fonctionnal.

# North Kivu Region



# Material & methods (1)



RHD population: 215,000 inhabitants  
surface: 3 389 km<sub>2</sub>

- ✘ 14 health centres +1 reference hospital (111 beds)
- ✘ medical and administrative staff
- ✘ 3 doctors and about 60 nurses
- ✘ management committee



# Material & methods (2)



## Rutshuru HD's financing

- × Zairian Government
- × Population
- × External funding  
(NGO's, UNICEF, bilateral cooperation,...)

# Material & methods (3)



Period 1985-1995

Routine medical data

- ✗ health centre network
- ✗ outputs and performances
- ✗ dealing with priority problems (obstetrics)
- ✗ cost and financing

Refugees → specific data collection form

# Stresses in North Kivu



1980

Socio-economic deterioration

1992



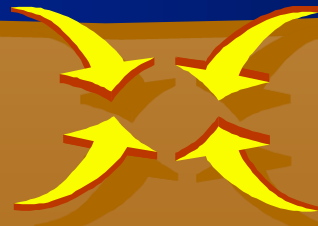
pillages  
(Goma)

1993



interethnic  
strife  
(Masisi)

1994



afflux of  
Rwandan  
refugees  
(North Kivu)

1995

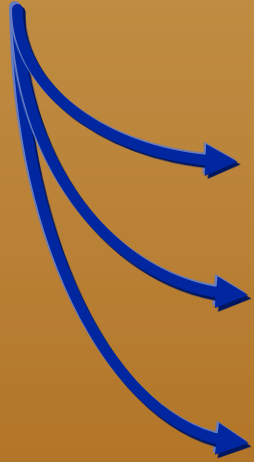


interethnic  
strife  
recrudescence

# Chronic stress (1)



## Socio-economic deterioration



GNP (1980-1992)	- 1.8 % / year
Currency devaluation	1.5 $10^{11}$ %
Average income per inhabitant	< 100 US\$

# Chronic stress (2)



- ✘ disintegration of State's administrative power
- ✘ supply problems
- ✘ military exactions
- ✘ population movements (displaced and refugees)
- ✘ violent interethnic disorders
- ✘ slump in informal activities



# Acute stress

## Rwandan refugee crisis in July 1994

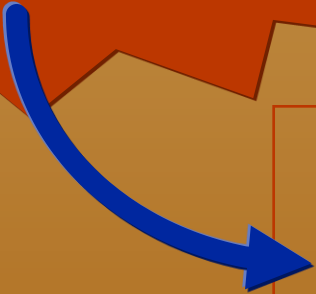
1,000,000 refugees in the North Kivu Region  
300,000 refugees on the RHD's territory  
80,000 refugees outside camps

Health care in RHD health services  
during 3 1/2 months  
(health centres and reference hospital)

# Chronic + acute stress



Complex crisis

- 
- × multifactorial aetiology
  - × systemic response
  - × long term  
(2 or more parallel phases)

# Performances



- × offer of services
- × curative and preventive care
- × maternal care → tracer
- × costs
- × dealing with refugees



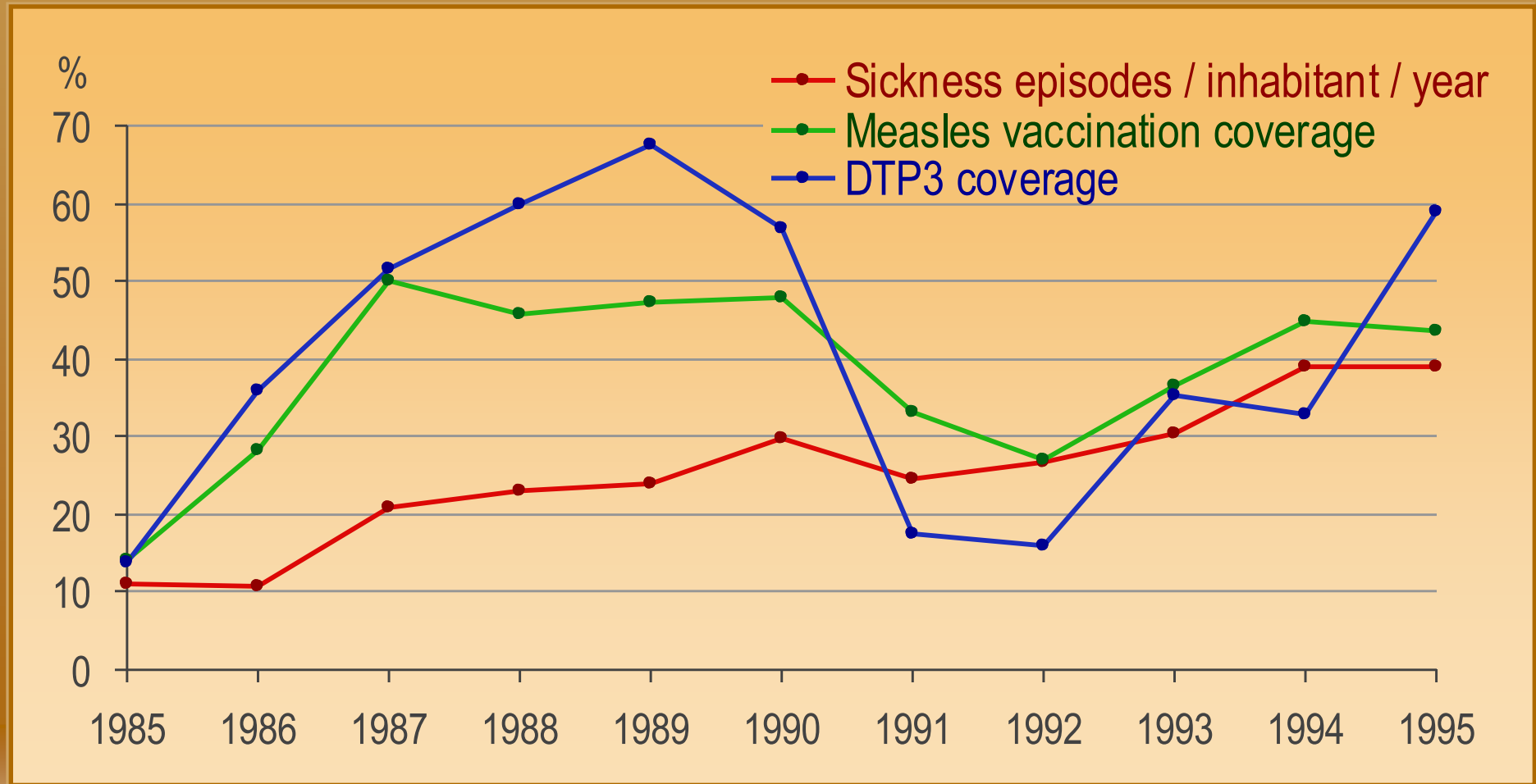
# Performances (1)

## Offer of services



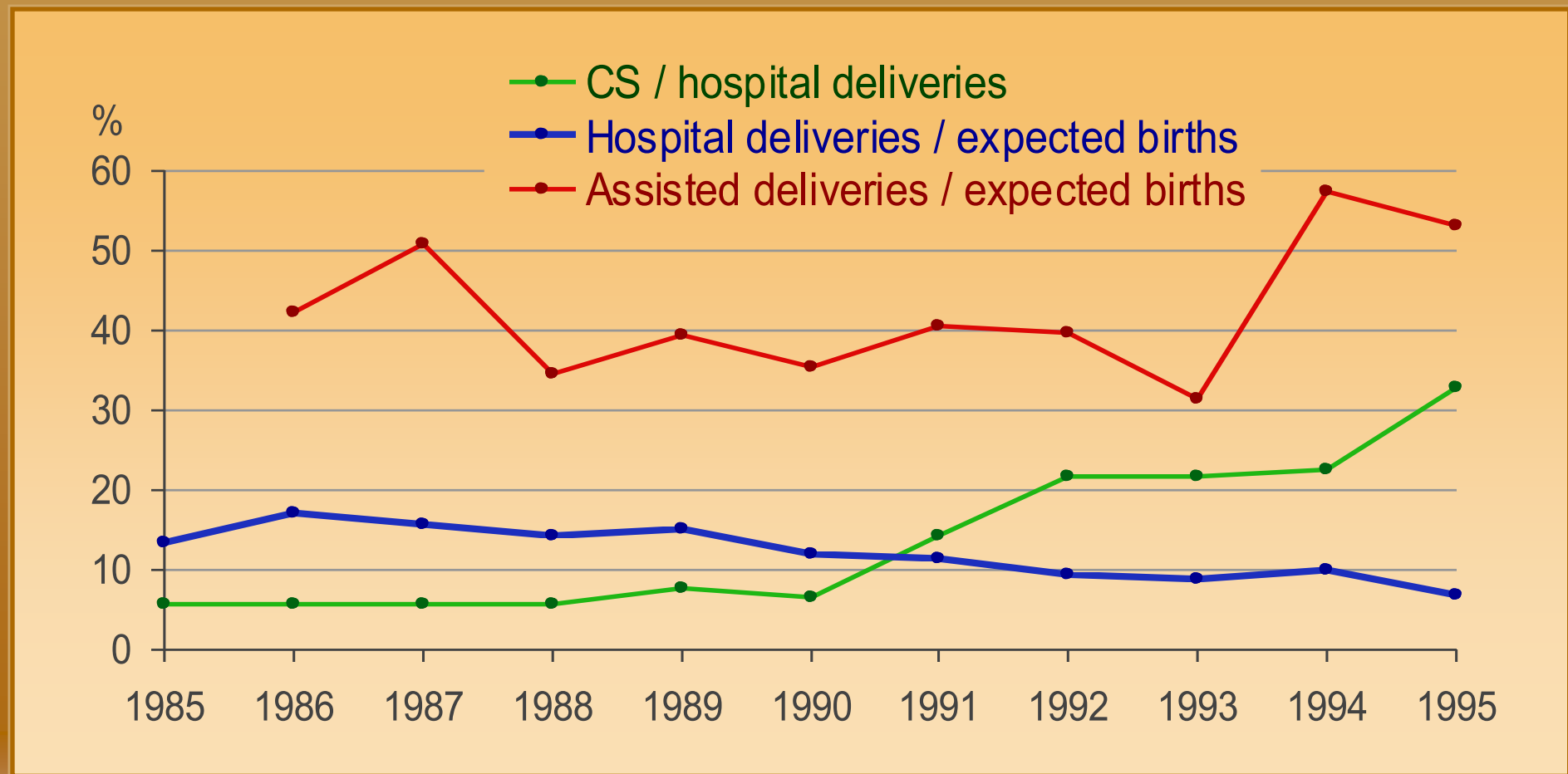
- ✘ Reference hospital
- ✘ 7 to 12 and then 14 health centres
  - curative, preventive & health promotion activities
- ✘ management committees
- ✘ monthly reports

# Performances (2): Curative and preventive care



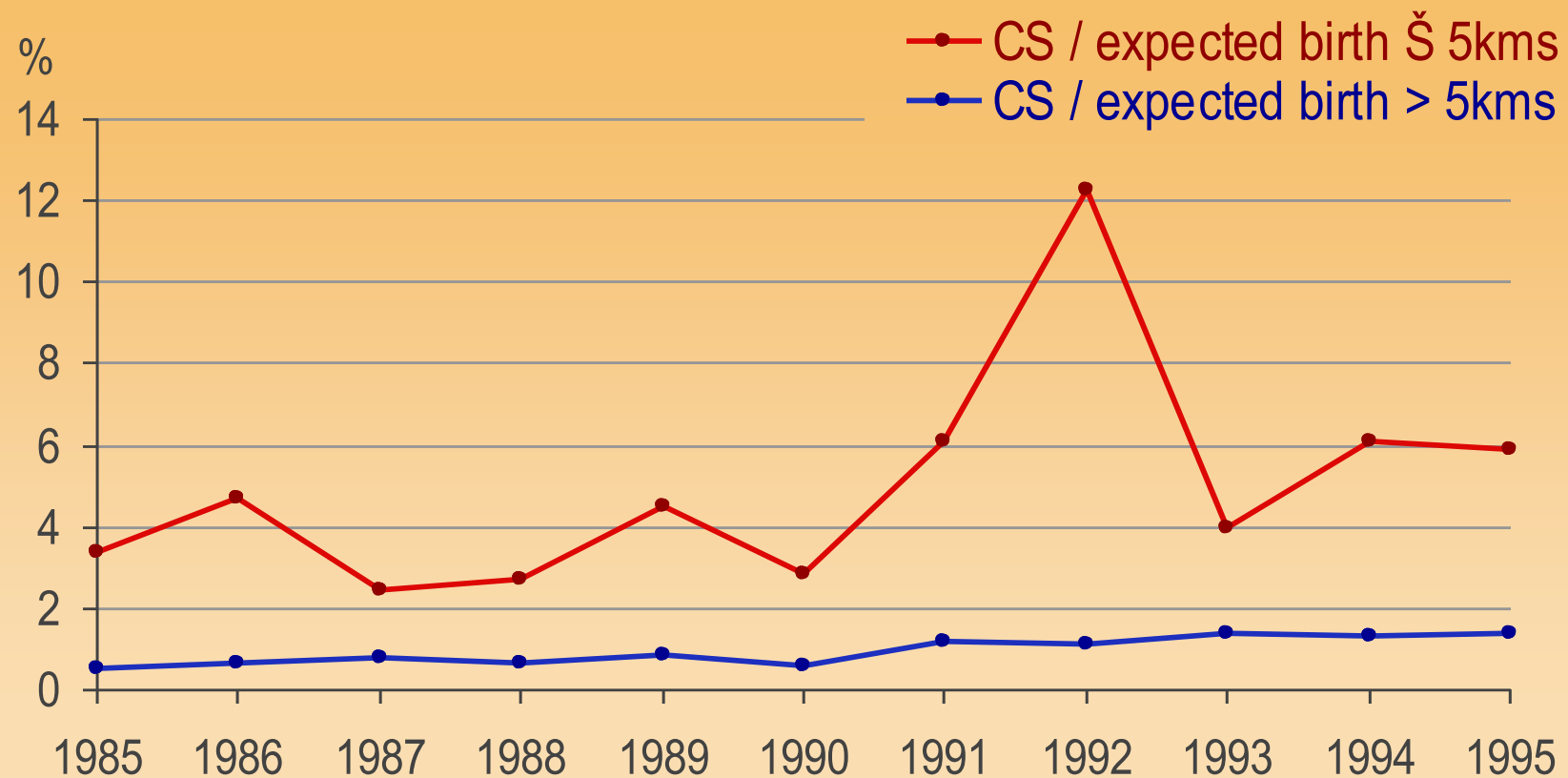
# Performances (3)

## Maternal care: activities



# Performances (4)

## Maternal care: accessibility



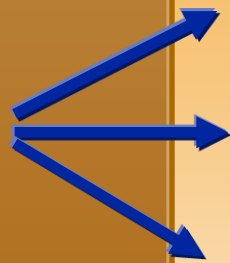
# Performances (5)

## Refugees



80 000 people (27 %)

case mix

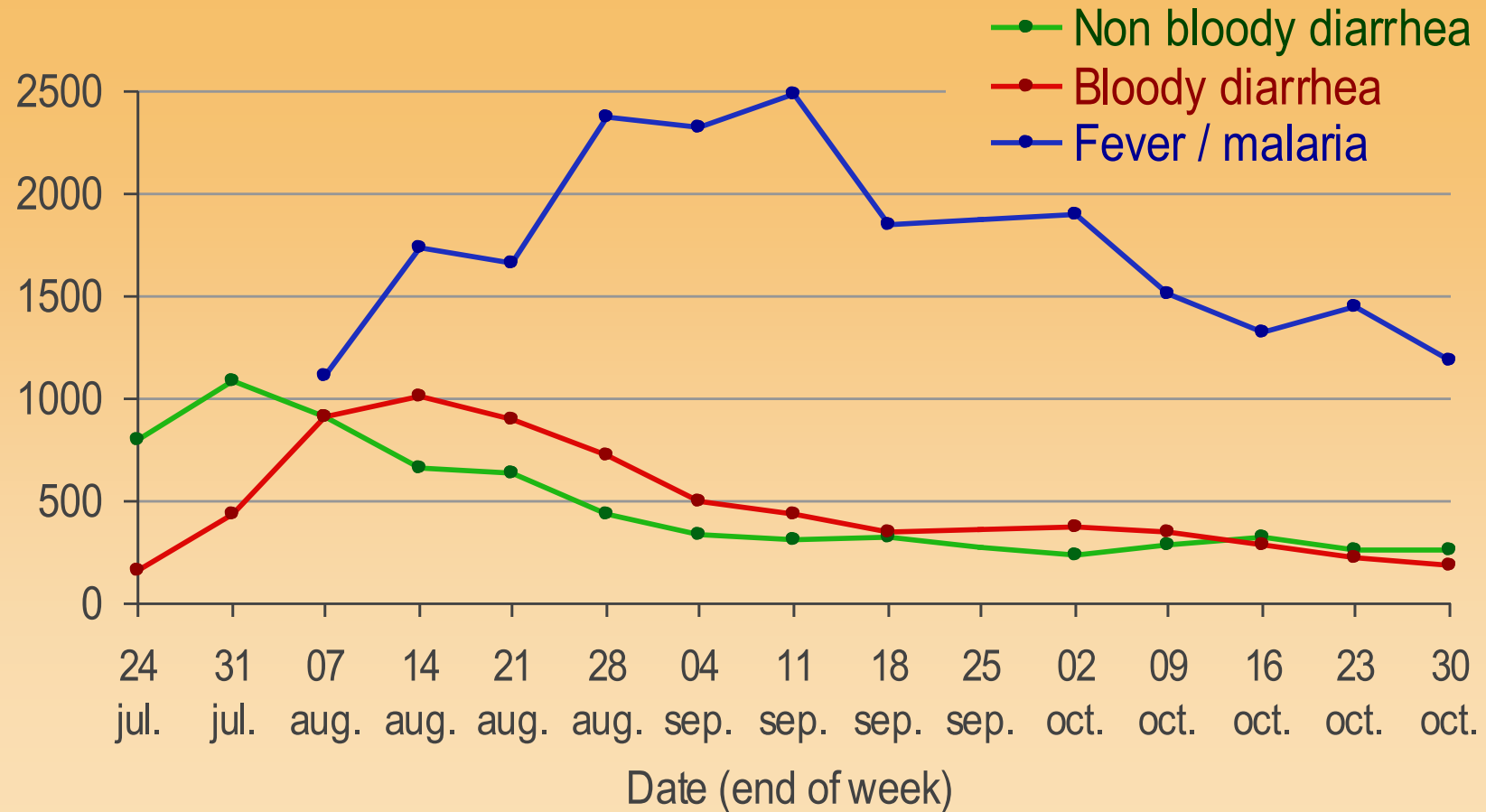


common pathologies

bloody diarrhoea

non bloody diarrhoea

# Refugees: case mix



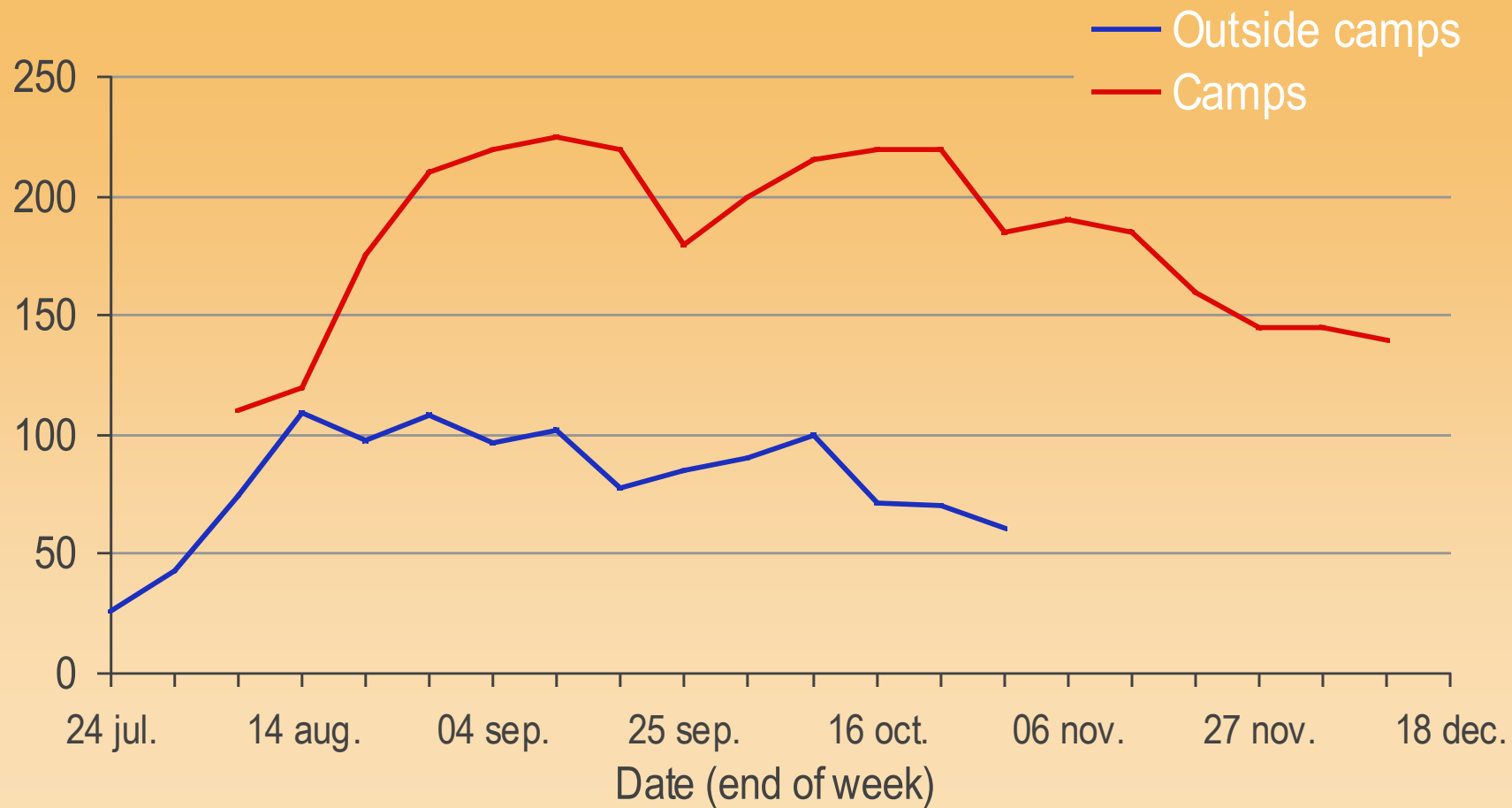
# Performances (6)

## Refugees



- ✘ 65 000 curative consultations (9.8 %)
- ✘ 400 % increase
- ✘ 4 NC / person / year  
(in camps: 4 - 8 NC / person / year)

# Refugees





# Performances (7)



## Resources

- ∅ 8 x more nurses - 20 x more doctors
- ∅ usually less than US\$ 3 / person / year
- ∅ refugee crisis: US\$ 3 to 6 / refugee / year
- ∅ in the camps: US\$ 14 / refugee / year  
(more ?)



# Discussion (1)

- ∅ confidence of the population in RHD health services
- ∅ caesarean section → quality of care

# Discussion (2)



Evolution of indicators related to obstetrical activities in the RHD between 1985 and 1995.

Indicators	Means 1985-1995	Evolution 1985-1995	Comparative data
caesarean sections / expected births (%)	1.5	0.7 - 2.3	1.1
caesarean sections / assisted deliveries (%)	3.5	2.3 - 3.9	-
caesarean sections / deliveries at hospital (%)	12.3	5.6 - 32.8	9.3 - 29.1 7.0 - 32.0 9.9
Maternal mortality after caesarean section (%)	2.9	7.1 - 0.9	0.6 - 5.0 0.1 - 0.2



# Discussion (3)

× assistance to refugees



efficiency of RHD

× human resources

× financial resources

× swiftness of reaction

× prefinancing

× low costs

× collapse ?



# Discussion (4)

## Which conditions ?



- structure of the district
- self-reliance and decentralisation
- build-up of human resources capital
- constant support and contacts with the outside world

# Conclusions (1)



- ∅ districts are viable systems
- ∅ utility of a life-line
- ∅ no de-motivation of African health personnel

# Conclusions (2)



- × local health services → emergency crisis
- × bridges between local health services and emergency agencies

## 3 principles:

1. to potentiate local health services
2. to ensure consistency
3. to improve equity