TRAINING FOR IMPROVED PRACTICE:
Public Health and Nutrition in Emergencies

Rapid Assessments In Complex Humanitarian Emergencies

- UNICEF Core Corporate Commitments Training In collaboration with:

Feinstein International Famine Center, Tufts University

Mailman School of Public Health, Columbia University

International Emergency and Refugee Health Branch, Centers for Disease Control

Overview

- Place of Rapid Assessment
- Case Study Part One
- Case Study Part Two
- China Earthquake
- Southern Sudan: Problem solving

Methods of Data Collection

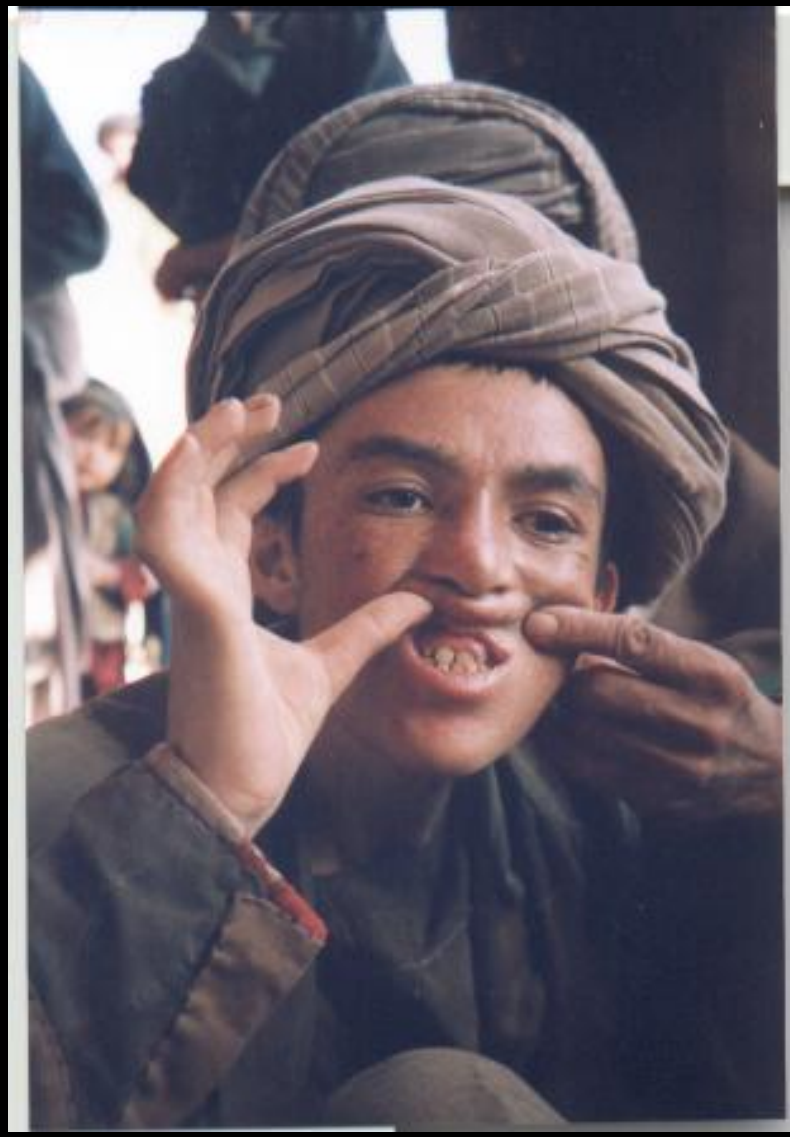
	Assessment	Survey	Surveillance
Objective	Rapid appraisal	Medium-term appraisal	Long-term appraisal
Data Type	Qualitative/ Cross sectional snapshot	Quantitative/ Cross sectional snapshot	Quantitative/ Longitudinal trends
Level of interest	Community	Household	Community
Method	Observational / Secondary source	Sample with survey instrument	Periodic or ongoing standardized data collection
Validity	+	++	+++

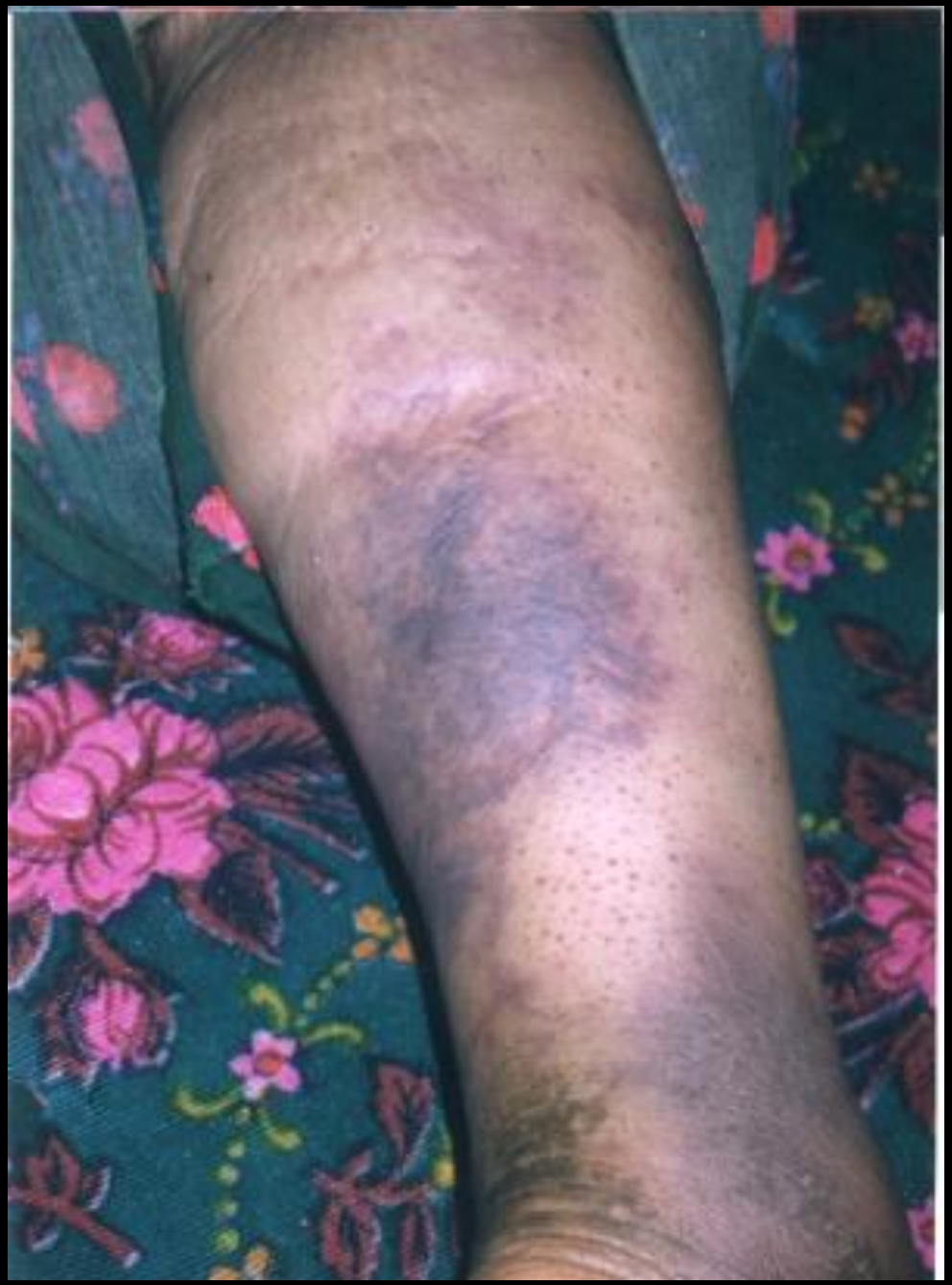
Rapid Health Assessment in Emergencies

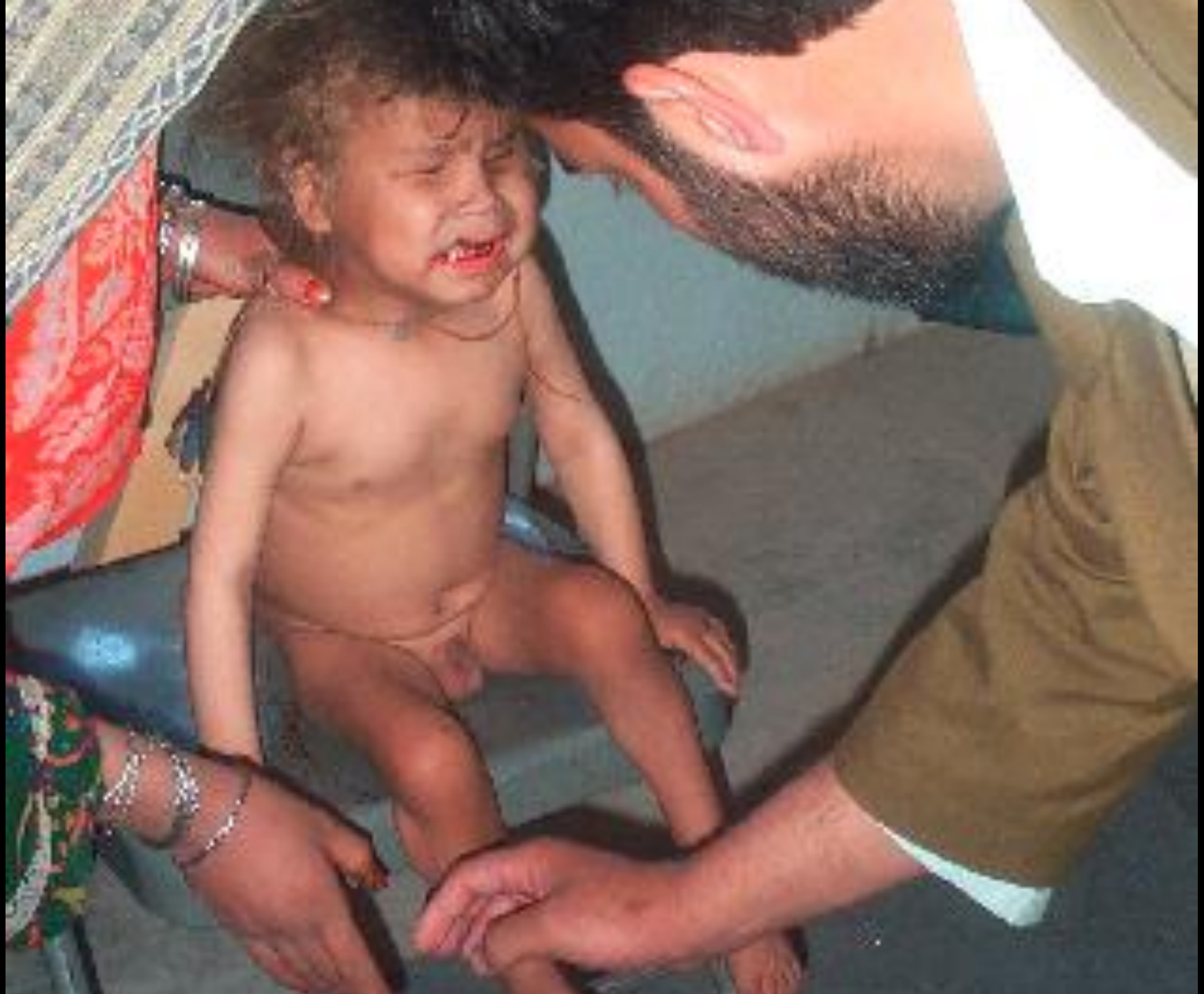
- What information do I need now?
- How will I get it?

Case Study: Afghanistan

- 3 years of consecutive drought to 2001
- Decrease in diversity of diet
- Reports of high mortality in isolated areas
- NGO nutrition surveys: < 10% GAM
- Disease reported: bleeding, inability to walk, swollen joints
- Rumors of haemorrhagic fever



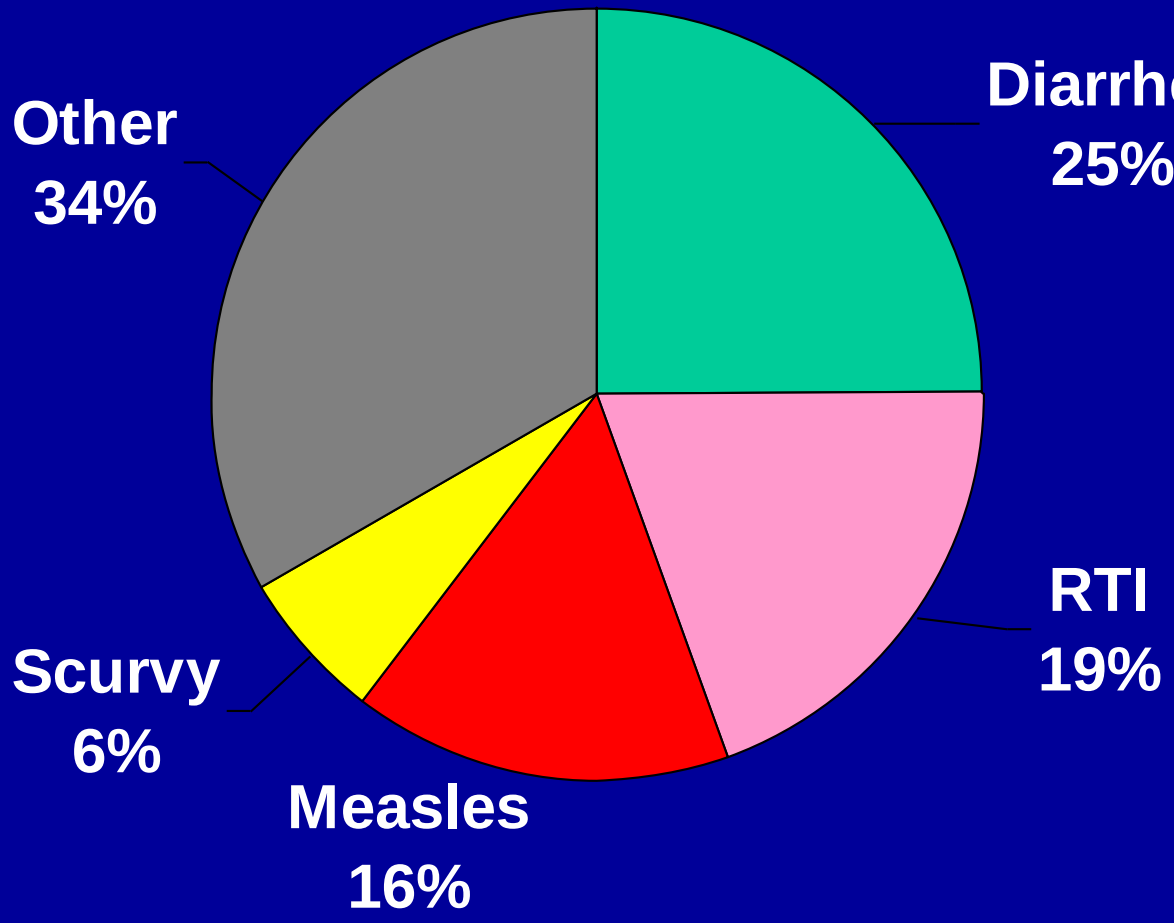




Nutrition and mortality survey results

- CMR: 2.6 /10,000/ day
- <5 MR: 5.9 /10,000/ day
- GAM: 7.0% < -2 Z scores W/H
- Stunting: 63.7% < -2 Z scores H/A
- Severe food coping strategies

Causes of Death, Kohistan District, Afghanistan, April 2001



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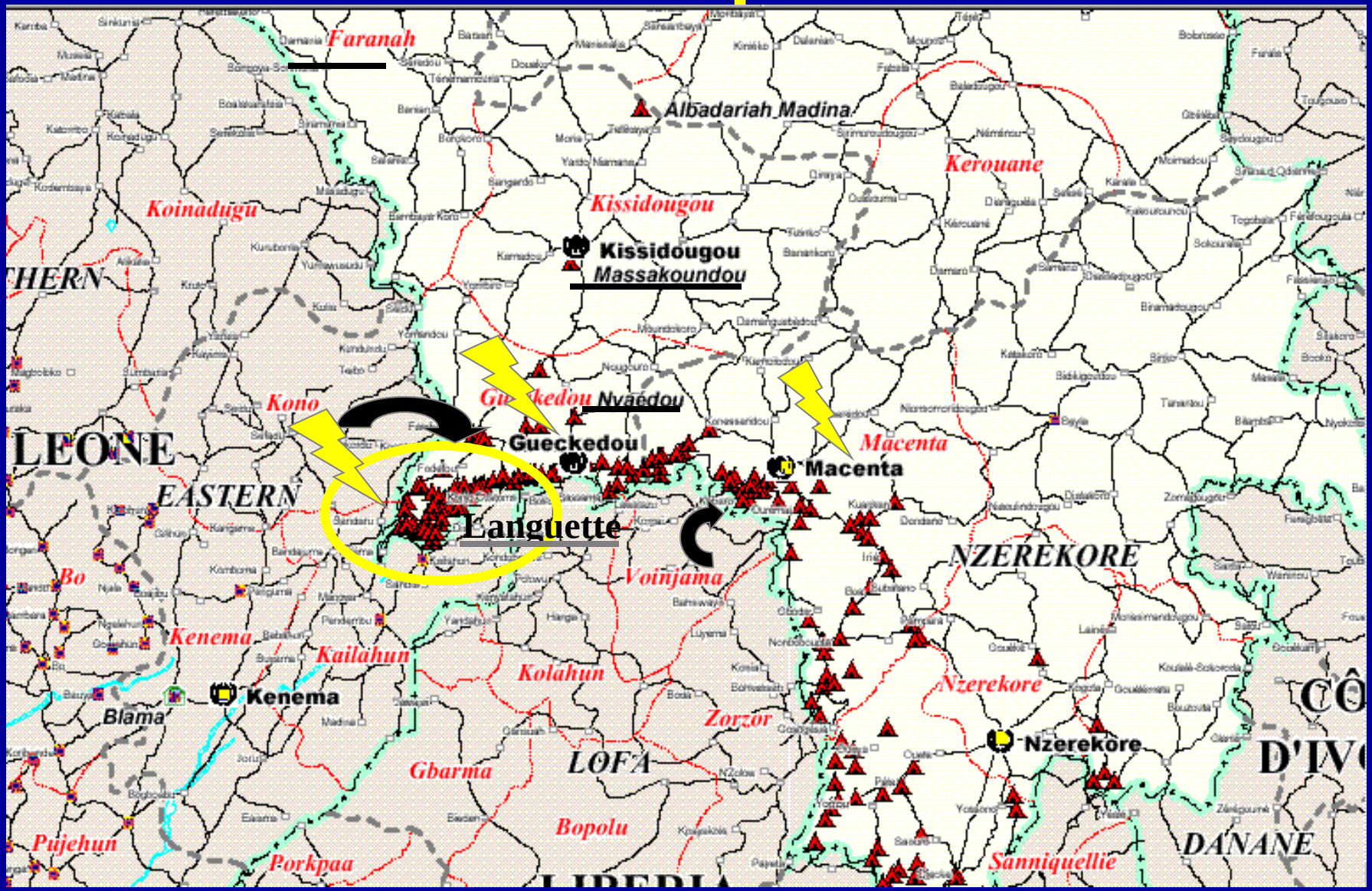
Source: SCF US / CDC

Rapid Health Assessment in Emergencies, Case Study: Guinea 2001


Guinea
International boundary
Region boundary
MALI
SENEGAL
THE GAMBIA
GUINEA-BISSAU
SIERRA LEONE
LIBERIA
IVORY COAST
North Atlantic Ocean
Conakry
Koundara
Mali
Gaoual
Koubia
Tougué
Labé
Lélouma
Pita
Dinguiraye
Sangarédi
Boké
Télimélé
Dalaba
Kamsar
Fria
Mamou
Boffa
Kindia
Dubréka
Coyah
Forécariah
Bissikrima
Dabola
Sisséla
Kouroussa
Siguiri
Niandakoro
Mandiana
Kankan
Faranah
Kissidougou
Kérouané
Guéckédou
Macenta
Beyla
Nzérékoré
Lola
Yomou
Niagassola
Kali
Kédougou
Dialakoto
Vélingara
Kolda
Farim
Gabú
Bafatá
Mansôa
Buba
Catió
Kita
Koulikoro
Bamako
Bougouni
Odienné
Touba
Man
Guiglo
Yekepa
Gahnpa
Gbarnga
Tubmanburg
Robertsport
Sulima
Voinjama
Freetown
Pepel
Waterloo
Kupr
Mange
Makeni
Lunsar
Kabala
Falaba
Sefadu
Bo
Kenema
Moyamba
Niger
Bafing
Bakoye
Baoulé
Gambie
Tinkisso
Sankarani
Niantan
Milo
Diani
Mano
Gbeya
Saint Paul
Sewa
Jong
Little Scarcies
Mongo
Bagbe
Konkouré
Kogon
Tominé
Rio Geba
ferry
12
9

Case Study Guinea: Armed Attacks Sep-Dec 2000

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Rapid Health Assessment in Emergencies, Case Study: Guinea 2001

PART 1

RHNA; Scope

- Political, social and economic context
- Logistics and security
- Resources / actors / coordination
- Geography i.e. maps
- Vital statistics:
  - Population size
  - % of pop <5 years and female:male ratio
  - CMR and <5MR
  - Nutritional status/food security
  - Measles immunization rate
- Common endemic diseases/ history of epidemics
- Environmental conditions

1.Rapid Assessment: Background

- Social
  - How do people organize themselves
  - Affected/host population interaction
  - Health beliefs and practices in refugees and host population
- Political
- Economic
  - Livelihood/coping mechanisms/host

1.Rapid Assessment: Background

- **Health and Nutrition:**
  - **Coverage of existing programs e.g., EPI, nutrition**
  - **Previous outbreaks - Cholera? Dysentery? YF?**
  - **Is area in meningitis belt? When is the dry season?**
  - **Patterns of malaria transmission in refugee/host pop**

1.Rapid Assessment: Background

- Other endemic diseases
- Nutritional /food security status
- Health facilities in area
- Health workers in host and displaced population
- Mortality and fertility rates in host/displaced populations
- Population data

1.Rapid Assessment: Background

- Logistics
  - Availability of lodging
  - Fuel and vehicle repair
  - Maps
- Security
  - Important local contacts
  - Security
  - Communications

2.Rapid Health Assessment in Emergencies - Objectives

- **Need to determine:**
  1. **Is it an emergency?**
  2. **How many affected?**
  3. **What are the immediate needs?**
  4. **Are local resources available?**
  5. **What external resources needed?**
  6. **Develop plan of action**

3.RHA – Vital Health Info cont
Methods of data collection

1. Direct observations of pop and environment
2. Interviews with key informants
3. Review of records from:
   - Camp and local health/nut facilities
   - Community health workers, graveyard workers
   - Camp leaders and women's groups
4. Limited surveys

Rapid Health Assessment in Emergencies, Case Study: Guinea 2001

PART 2

4.Rapid Health Assessment in Emergencies

- We already know essential human needs:
  - Water
  - Food
  - Shelter
  - Health
  - Sanitation
  - Security

- UNICEF's Core Corporate Commitments

5.RHA – Team composition

- 3 – 6 persons, including national health authorities and affected pop representatives, partner UN agencies, NGOs
- Multidisciplinary team with skills in:
  - Logistics
  - Water and sanitation
  - Nutrition
  - Health care
  - Epidemiology
  - Other expertise depending on situation

6. Rapid Assessment: Affected Population

- Size of affected population
- Demographics
- Vulnerable groups
- Patterns of movement
- Ethnicity

6. Rapid Assessment: Affected Population Data Sources

- Pre-existing data
- Aerial photographs
- Refugee registration systems, census
- NGO/WFP food distribution lists
- Bed net distribution lists
- Count new arrivals

6.Rapid Assessment: Vital Health Information - Mortality

- Reported number of deaths
- Mortality rates - CMR, U5MR
- Age/Sex specific mortality rates
- Cause specific mortality rates
- Case fatality ratio - measles, cholera

6.Rapid Assessment: Sources of Mortality Data

- Sources of data
  - Hospitals/clinics
  - Burial grounds
  - Burial cloth distribution
  - Other support to families
  - CHWs/TBAs
- Difficulties
  - Deaths under-reported
  - Exaggerated
  - Concealed
  - Denominator inflated

6.Rapid Assessment: Vital Health Information - Morbidity

- Diseases of public health importance
- Diseases of epidemic potential
- Other “unexpected”- violent injuries, rape

6.Rapid Assessment: Morbidity

- How many cases of disease of public health importance:
  - Diarrhea, ARI, malaria?
  - What are the case fatality ratios?
- Any disease of epidemic potential?
  - Measles, meningitis, cholera
- Violent injuries, rape?
- Proportional morbidity?

6.Rapid Assessment: Nutritional Status

- Acute malnutrition: (children 6-59mnths)
- Micronutrient deficiencies
- Other vulnerable populations: Elderly? Pregnant women?
- Food security

6.Rapid Assessment: Nutrition – Data Sources

Supplementary feeding centers	
Therapeutic feeding centers	
Nutritional screening	
Convenience samples	
Surveys using MUAC	
Population based surveys using weight/height	

6.Rapid Assessment: Nutrition – Data Sources

Supplementary feeding centers	Maybe
Therapeutic feeding centers	Maybe
Nutritional screening	Maybe
Convenience samples	NO
Surveys using MUAC	NO, NO, NO
Population based surveys using weight/height	Previous

Assessment of Nutritional status

Only really reliable data are:

- Population-based
- Weight/height

- Don’t use MUAC

6.RHNA – Vital Health Info cont
Environmental conditions

- **Water: minimum 20 L/p/d**
- **Latrines: minimum 1 latrine/20 persons**
  - **Goal: 1 latrine/ household**
- **Fuel**
- **Solid waste**

Rapid Health Assessment: Limitations of process

- Sound methodology versus security and time constraints
- Lack of coordination
- Performed too late/ obvious interventions need not wait
- Findings ignored/not shared
- Historical data forgotten

Rapid Health Assessment: Limitations of Data

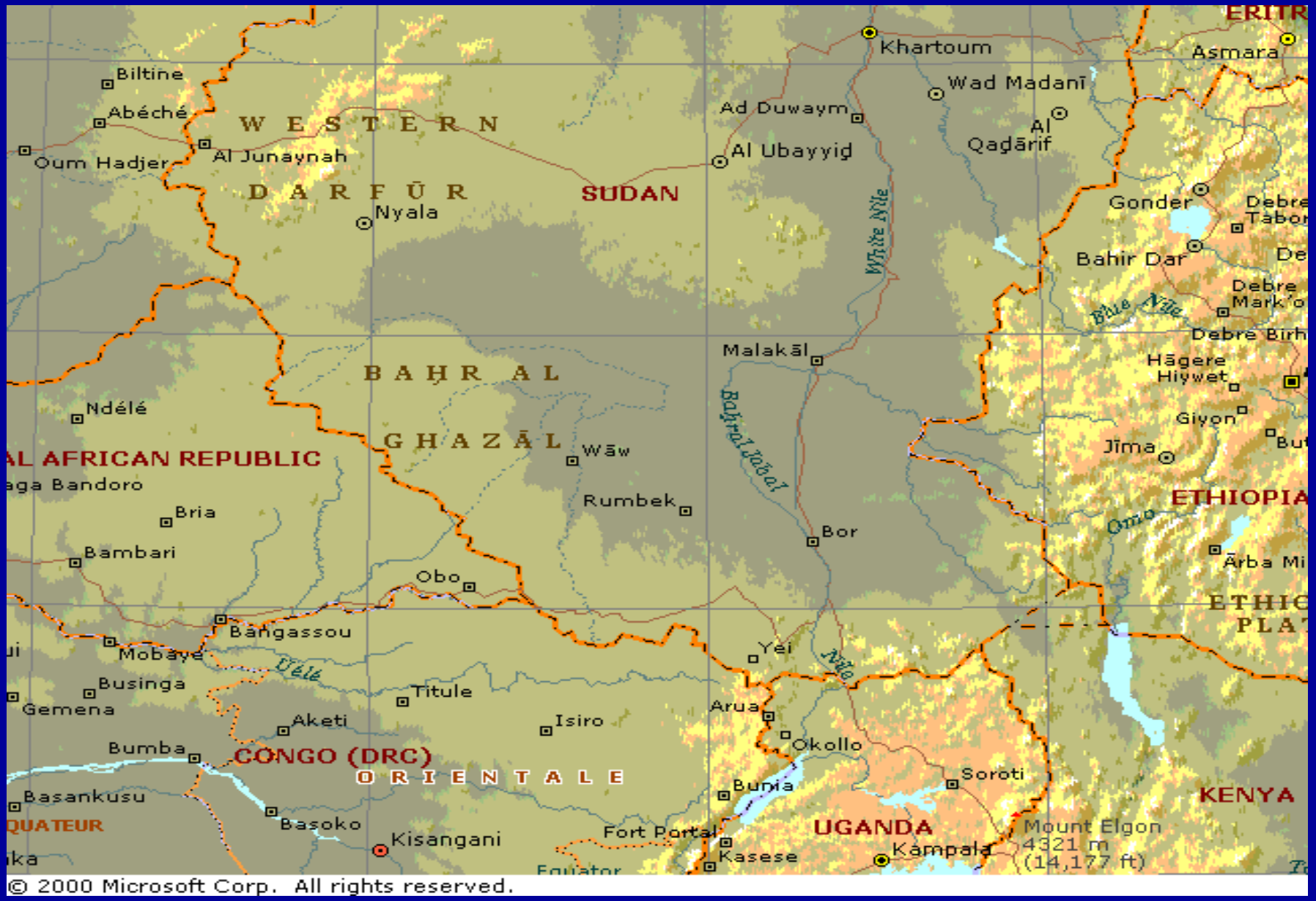
- Incomplete i.e. lack of access
- Not population-based
- Secondary source data i.e. bias
- Limited generalizability / validity

Rapid Assessment: Key Elements

- Timely
- Clear recommendations stating:
  - Who should do what, when
- State limitations of the data
- Include a plan for surveys and surveillance

Case Study: southern Sudan

Case Study: Ajiep, Bahr el Ghazal, southern Sudan



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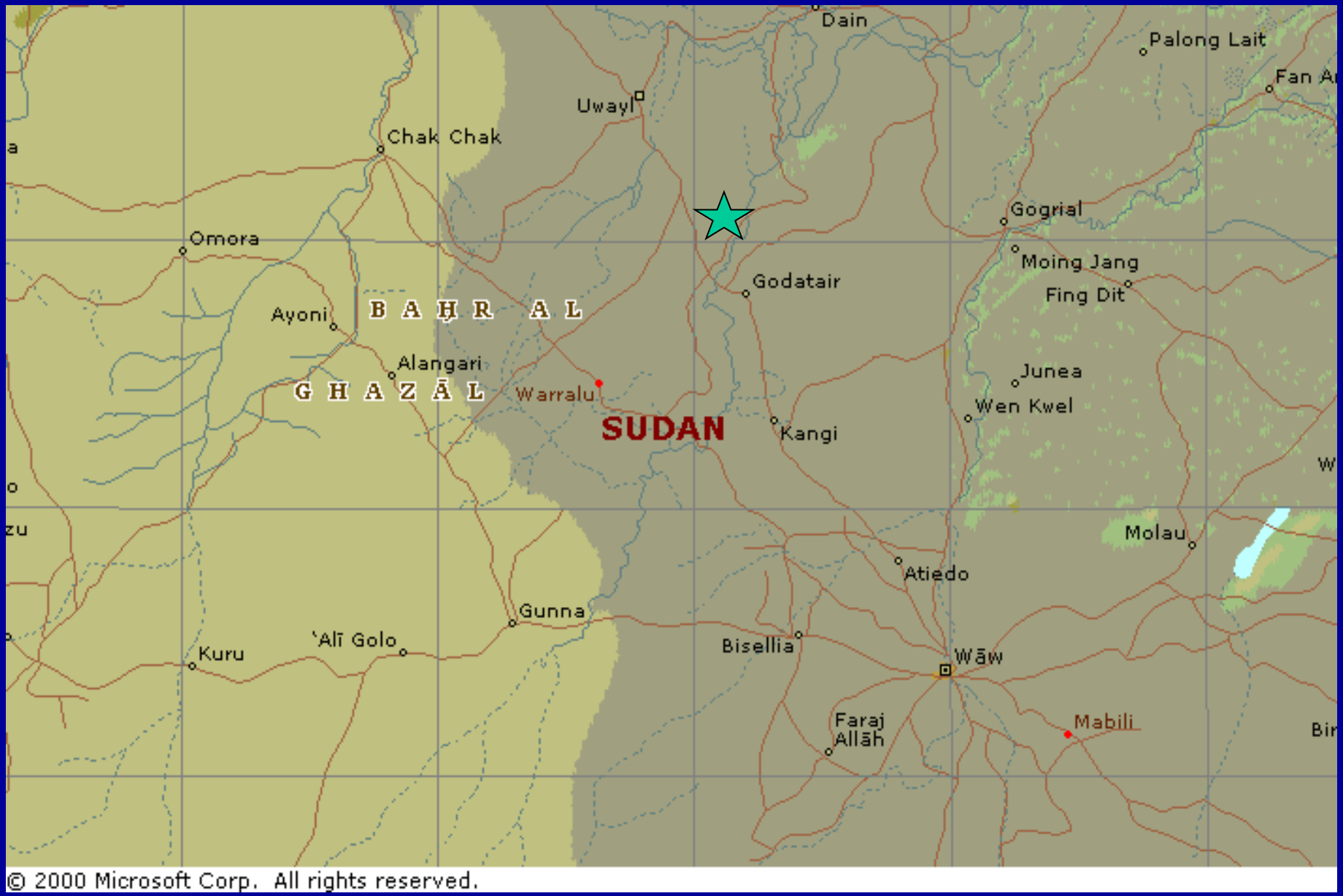
Case Study: Ajiep, Bahr el Ghazal, southern Sudan



Case Study

- CHE in 1998, drought and war: most affected area BEG
- Expanding humanitarian response:
  - WFP air lifting 15,000 MT grain/month
  - By July, 18 NGOs: 50 SFPs and 21 TFCs
  - 40,753 and 6,430 beneficiaries respectively
  - 1 million USD/day

Case Study: Ajiep, Bahr el Ghazal, southern Sudan

- Ajiep, epicenter of famine
- March-July, 1998: population swells from 3,000 to 21,000
- July 1998: 30 cluster nutrition survey:
  - 80% <-2 Z score
- CMRs 20-30/10,000/day

Case Study: Ajiep, Bahr el Ghazal, southern Sudan

- Retrospective under 5 mortality study: 134/10,000/day (period: July 11-20, 1998)
- Intense media presence
- Logistical difficulties
- Low coverage <5s in TFC (12.5%)
- High mortality in TFC (50%)

Case Study: Ajiep, Bahr el Ghazal, southern Sudan

- From July, 1998: WFP, MSF
  - 100% GFR
  - Blanket SF for 5,000 children < 130cm
  - Wet SF for 1,500 children <130cm
  - TFC for 200 children <130cm
  - Palliative care for 10-20 malnourished adults
  - SPLA humanitarian wing concerned and asks CONCERN to assist in 2 day RA

2 Day Rapid Assessment

- 1) Direct observation:
  - Swamp-like conditions
  - Flooded community latrines
  - Over-whelmed TFCs not meeting minimum standards, mean admission W/H: 50% median
  - High proportion ‘volunteer’ expatriates

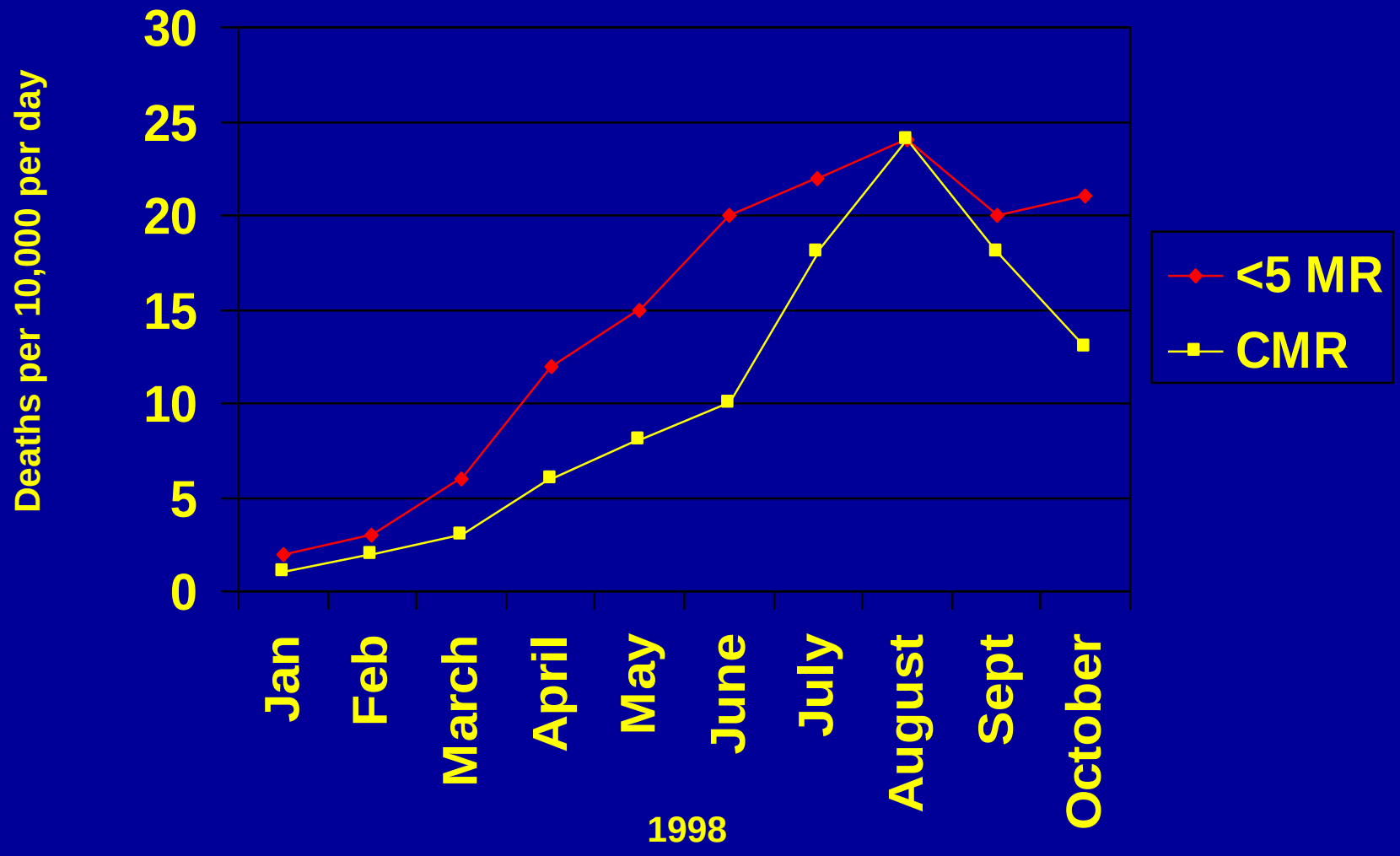
2 Day Rapid Assessment

- 1) Direct observation:
  - Swamp-like conditions
- 2) Health clinics records:
  - >50% of diarrhoea cases and deaths >5 years
  - ? Increase incidence bloody diarrhoea
  - ? Poor response to treatment with standard antibiotics e.g. co-trimoxazole, nalidixic acid

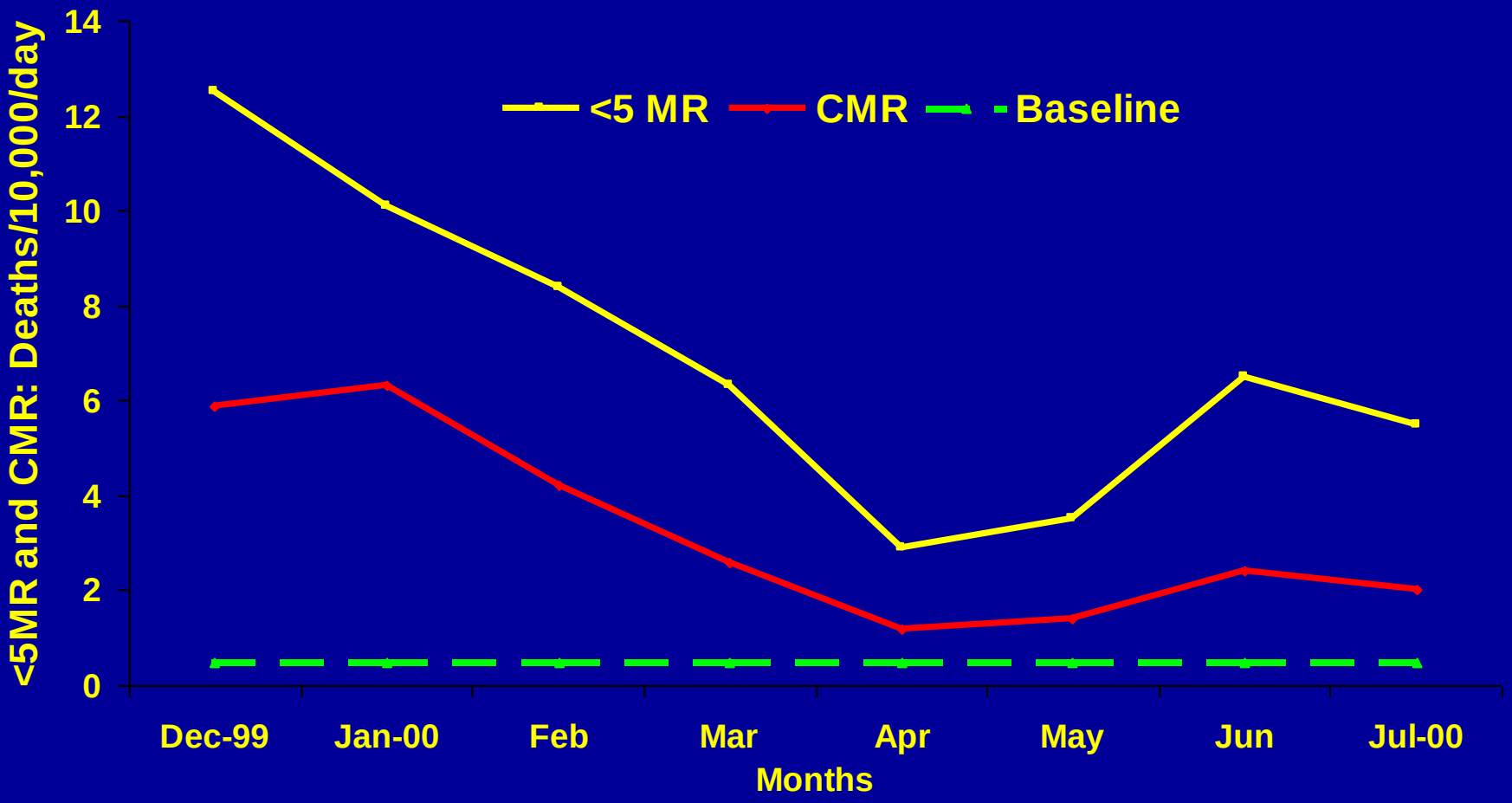
2 Day Rapid Assessment

- 1) Direct observation:
  - Swamp-like conditions
- 2) Health clinics:
  - Older age distribution of diarrhoea cases and deaths ? Resistant bloody diarrhoea
- 3) Focus groups and household visits
  - Unusual disease at unusual incidence rate
  - Adults dying in tukuls with full GR visible

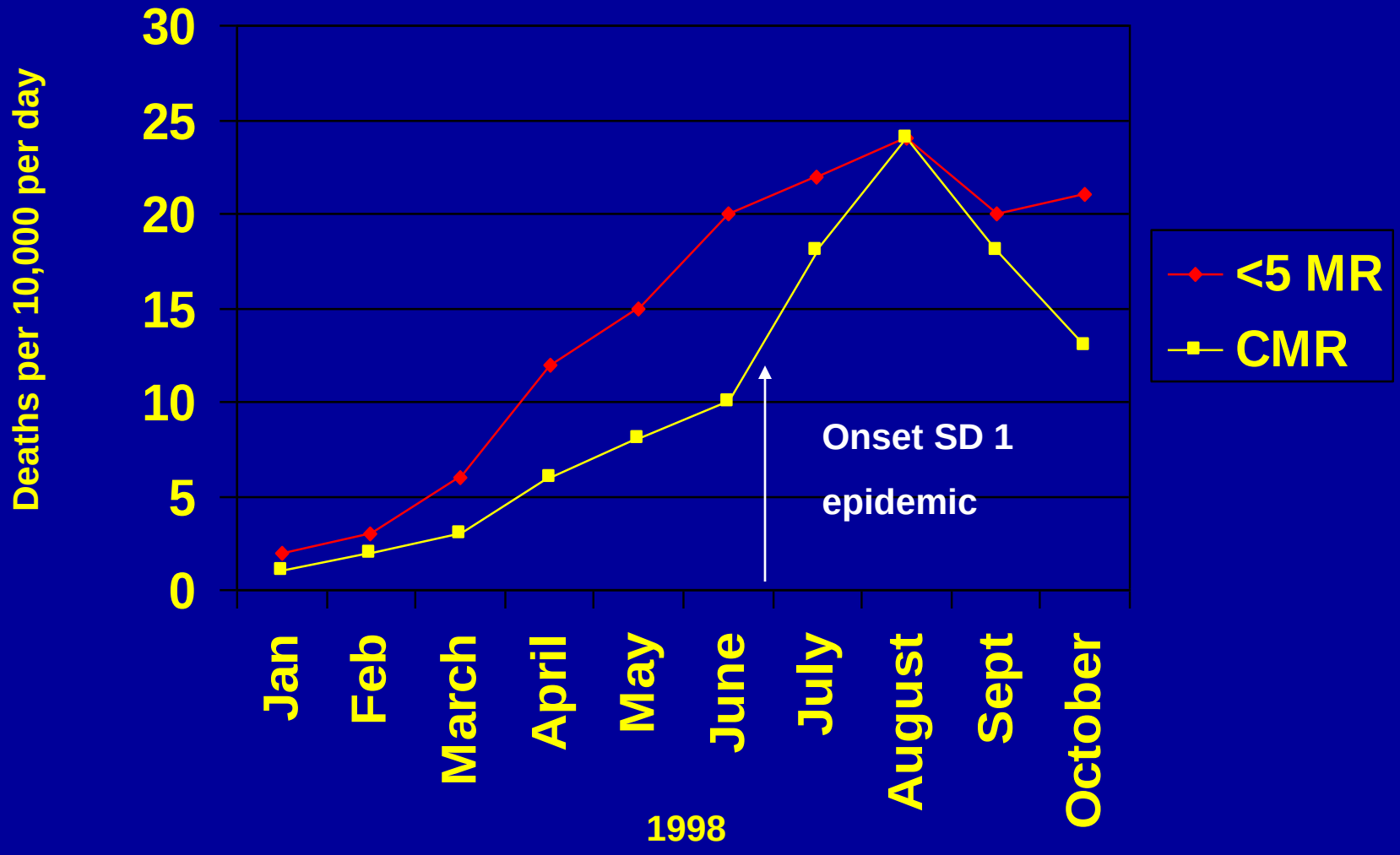
Case Study: Ajiep, Bahr el Ghazal, southern Sudan



Mortality Trends, Gode District, Ethiopia, December 1999- July 2000



Case Study: Ajiep, Bahr el Ghazal, southern Sudan



The Answer

- June-July 1998, epidemic of bloody diarrhea commenced
- By mid-September, 1000 cases of SD 1
- Contributed to massive acute undernutrition among adults
- Response focused on treatment of adult undernutrition, shigella, community outreach, water purification and hygiene promotion including soap distribution

Potential Role for UNICEF?

Potential Role for UNICEF?

- Rapid assessment
  - ?nutrition and mortality survey
- TFCs and SFPs: supplies and M and E
  - ?adults- ?mothers
- Essential drugs
- Measles vaccination
- Water purification, soap, hygiene
- ?Advocacy
- ?Coordination

Results: Mean BMI/ MUAC in Dinka adults southern Sudan: Ajiep, TFC and Aweil, population-based survey, 1998-1999

	Ajiep, SS		Aweil, SS	Somalia*
	Admission	Discharge	(N=520)	(N=573)
Mean BMI (kg/ m^2): Female	12.4	15.4	17.9	12.8
Mean BMI (kg/ m^2): Male	12.6	15.6	18.1	12.9
Mean MUAC (cms): Female	16.4	19.2	24.7	N/A
Mean MUAC (cms): Male	16.7	19.5	25.4	N/A

*Collins, 1995

Major information needs for assessment: the initial picture in outbreak settings

1. **What was it like before?** ***Previous mortality rates and major endemic diseases***
2. **How bad is it now?** ***Mortality rates***
3. **Who's dying?** ***Ratio, age distribution***
4. **How widespread is the problem?** ***Travel***
5. **What's causing it?** ***Proportionate mortality and morbidity***
6. **Is wasting contributing a lot?** ***Nutritional status***
7. **Is water and sanitation contributing a lot?** ***Environmental conditions***

Case Study: Earthquake in Bachu County, Xinjiang province, China

- Feb 24th, 2003: earthquake 6.8 strikes 8 counties at 10.03am
- Epicenter: Bachu County
- 268 people killed and 4672 injured (70% women and children)
- > 34,000 houses collapsed affecting >100,000 people homeless
- Damage to water, clinics, schools

Case Study

- Response coordinated by Bachu County Government Commanding Committee
- Within 30 minutes: 3 medical teams
- March 3rd: basic needs met by local pop
  - Later 31 medical teams added or 300 HCWs and 50 ambulances
  - >5000 police and officials mobilized
- March 4th: UNICEF 7 member team deployed
  - 3 film crew, 2 HK committee, 1 artist, 1 PO

➢ Areas assessed: food and drinking water, health, education, public water supply, environmental sanitation, housing and accommodation


救灾
救灾
救灾
救灾
救灾

Extract of Results: Food, Water, Sanitation

- Cooking was a problem because the damage caused to the cooking facilities and flour
- Water supply systems damaged
- “Nang” and bottled drinking water were donated at the earlier stage
- Water was supplied to some community center and people get water from the centers
- Some households used nearby pond
- No household latrine witnessed
- 2 temporary latrines in the township location, excreta exposed

Actions

- Food, blankets, gerry-cans, water-purification and drugs and also education facilities supported
- 1.6 million HKD raised
- Principle: support to local authorities

Short-term Effects of Major Natural Disasters

Effect	Earth-quakes	High Winds	Tsunamis: Flash Flood	Floods
Deaths	+++	+	+++	+
Injuries	+++	++	+	+
CD risk	Potential	Potential	Potential	Potential
Food scarcity	Rare	Rare	++	++
Pop Mt	Rare	Rare	++	++

Disaster Myths

- 1) Foreign medical help always needed
- 2) Any kind of international aid needed
- 3) Epidemics inevitable
- 4) Disaster bring out worst in human behaviour
- 5) Affected pop too shocked to do anything useful
- 6) Disasters are random killers
- 7) Temporary shelters are best alternative
- 8) Food aid always required
- 9) Clothing always needed
- 10) Things are back to normal within weeks