Armed conflict and health

Imperial College

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30 January 2012

Learning objectives

1. Provide a background on armed conflict
2. Describe the pathways by which conflict affects health
3. Explore key issues in the health-sector response

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1. Background

Why bother?

1. Humanitarian impulse
2. Civilians bearing the brunt of conflict
3. Major contributor to global burden of disease
4. Technically easy and high impact interventions
5. Prevents long-term improvement in population health
6. Legal obligations
7. Halts development
8. Inequitable aid
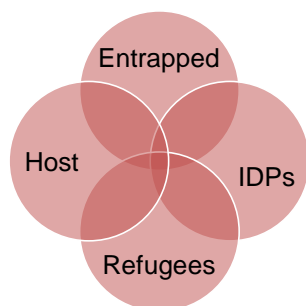9. Strategic: spill over, migration, loss of markets/resources etc

Source: World Development Report 2011 (World Bank).
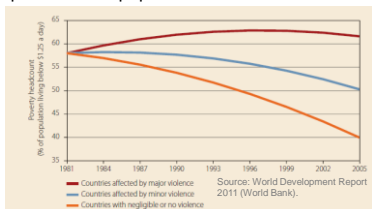
Numbers of Conflicts 1946-2006
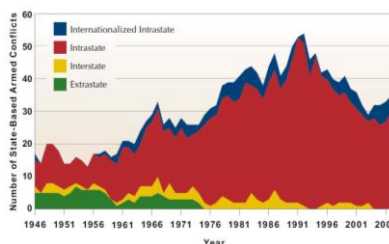
Source: Human Security Report 2009, Human Security Centre

Conflict maps: http://conflicthistory.com/#/period/2007-2012

Affected civilian populations

Entrapped

Host

IDPs

Refugees

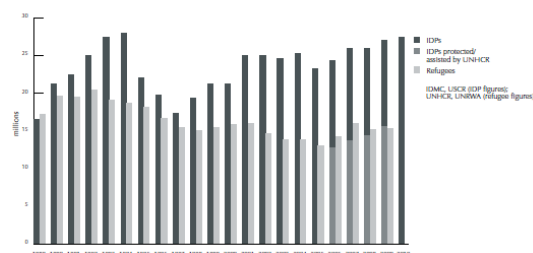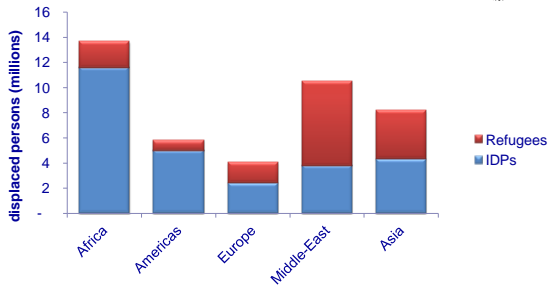## Global trends of IDPs and refugees

Long-term trends in IDP and refugee numbers
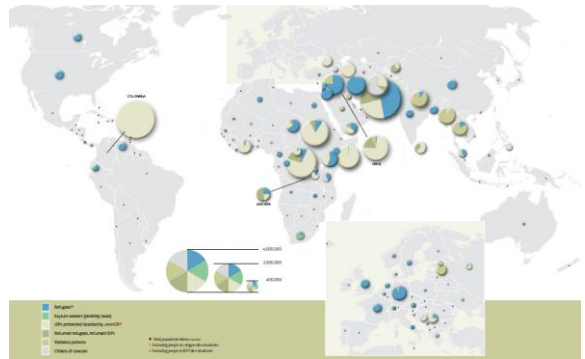

Source: Internal Displacement: Global Overview of Trends and Development in 2010. (IDMC, 2011)

Global numbers of IDPs and refugees

displaced persons (millions)

Legend:
- Refugees
- IDPs

Categories: Africa, Americas, Europe, Middle-East, Asia

Sources: Refugee data from Global Trends 2008 (UNHCR, 2009). IDP data from 'Internal Displacemenet: Global Overview of Trends and Development in 2009' (IDMC, 2010.)
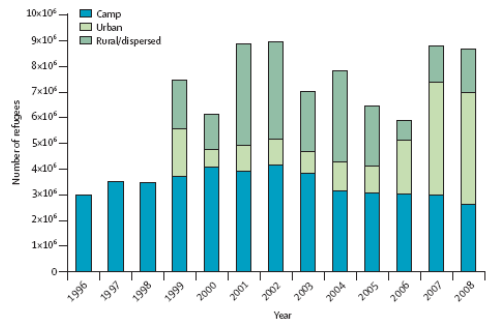
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Distribution of refugees and other Populations of concern to UNHCR
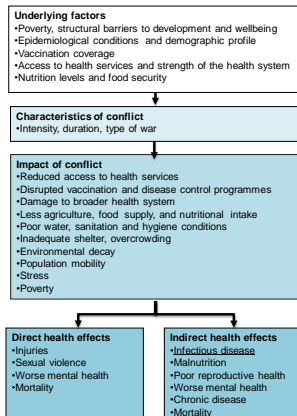

Source: UNHCR Global Trends 2010.

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Living location of refugees

Number of refugees

Legend:
- Camp
- Urban
- Rural/dispersed

Year: 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008

Source: Spiegel, Checchi et al. The Lancet. Vol.375. January 23 2010.

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2. Pathways

Underlying factors
•Poverty, structural barriers to development and wellbeing
•Epidemiological conditions and demographic profile
•Vaccination coverage
•Access to health services and strength of the health system
•Nutrition levels and food security

Characteristics of conflict
•Intensity, duration, type of war

Impact of conflict
•Reduced access to health services
•Disrupted vaccination and disease control programmes
•Damage to broader health system
•Less agriculture, food supply, and nutritional intake
•Poor water, sanitation and hygiene conditions
•Inadequate shelter, overcrowding
•Environmental decay
•Population mobility
•Stress
•Poverty

Direct health effects
•Injuries
•Sexual violence
•Worse mental health
•Mortality

Indirect health effects
•Infectious disease
•Malnutrition
•Poor reproductive health
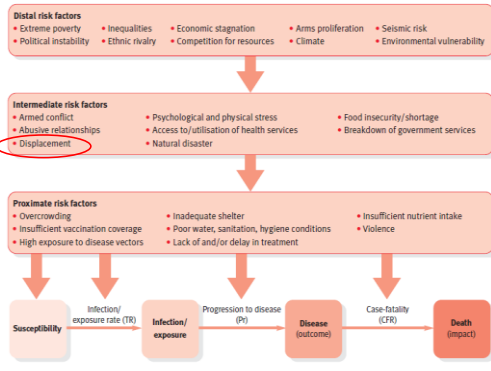•Worse mental health
•Chronic disease
•Mortality

a. Injuries and disability
•Injuries & death from direct and indirect violence

b. Communicable disease: risk-factors

Source: Public health in crisis-affected populations. A practical guide for decision-makers.
ODI Network Paper 61 (2007)

Distal risk factors
- Extreme poverty
- Political instability
- Inequalities
- Ethnic rivalry
- Economic stagnation
- Competition for resources
- Arms proliferation
- Climate
- Seismic risk
- Environmental vulnerability

Intermediate risk factors
- Armed conflict
- Abusive relationships
- Displacement
- Psychological and physical stress
- Access to/utilisation of health services
- Natural disaster
- Food insecurity/shortage
- Breakdown of government services

Proximate risk factors
- Overcrowding
- Insufficient vaccination coverage
- High exposure to disease vectors
- Inadequate shelter
- Poor water, sanitation, hygiene conditions
- Lack of and/or delay in treatment
- Insufficient nutrient intake
- Violence

Susceptibility → Infection/exposure rate (TR) → Infection/exposure → Progression to disease (Pr) → Disease (outcome) → Case-fatality (CFR) → Death (impact)

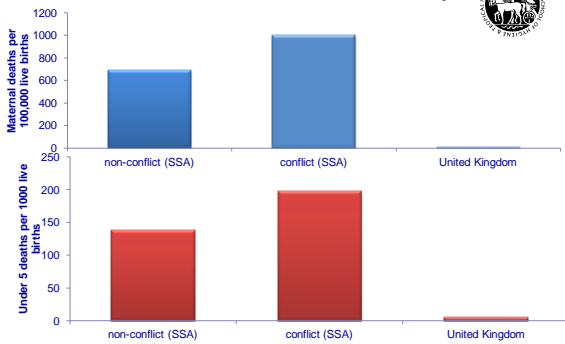## c. Poor sexual and reproductive health

Risk factors:
- High numbers of women and children
- Lack of reproductive health services
- Social and economic vulnerability
- Sexual and gender-based violence

Consequences on health:
- Pregnancy-related morbidity/mortality
- Physical injury (e.g. fistula)
- STIs and HIV/AIDS

Maternal and child mortality

Maternal deaths per 100,000 live births: non-conflict (SSA) ~700, conflict (SSA) ~1000, United Kingdom ~0

Under 5 deaths per 1000 live births: non-conflict (SSA) ~140, conflict (SSA) ~200, United Kingdom ~5
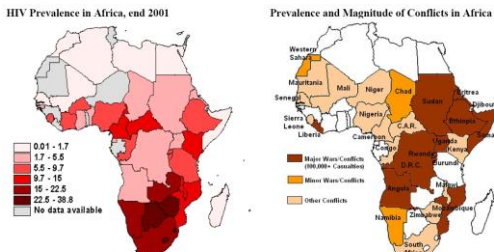
Source: O'Hare, B. A. and D. P. Southall (2007). "First do no harm: the impact of recent armed conflict on maternal and child health in Sub-Saharan Africa." J R Soc Med 100(12): 564-570.

d. HIV/AIDS

"Armed conflicts and natural disasters also exacerbate the spread of the epidemic"

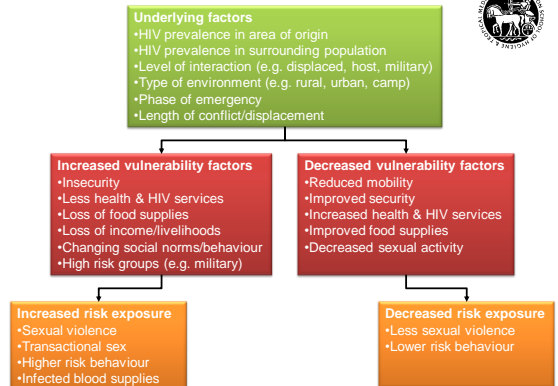- The 2001 UN General Assembly Special Session on HIV/AIDS (UNGASS)

Distribution of HIV prevalence and conflicts in Africa

HIV Prevalence in Africa, end 2001

Prevalence and Magnitude of Conflicts in Africa

0.01 - 1.7
1.7 - 5.5
5.5 - 9.7
9.7 - 15
16 - 22.5
22.5 - 38.8
No data available

Major Wars/Conflicts (100,000+ Casualties)
Minor Wars/Conflicts
Other Conflicts

Source: Mock et al. Emerging Themes in Epidemiology 2004 1:6

See also: Spiegel, P. et al. B. Prevalence of HIV infection in conflict-affected and displaced people in seven sub-Saharan African countries: a systematic review. Lancet, 369(9580): 2187-95.

HIV conflict-related risk-factors

Underlying factors
- HIV prevalence in area of origin
- HIV prevalence in surrounding population
- Level of interaction (e.g. displaced, host, military)
- Type of environment (e.g. rural, urban, camp)
- Phase of emergency
- Length of conflict/displacement

Increased vulnerability factors
- Insecurity
- Less health & HIV services
- Loss of food supplies
- Loss of income/livelihoods
- Changing social norms/behaviour
- High risk groups (e.g. military)

Decreased vulnerability factors
- Reduced mobility
- Improved security
- Increased health & HIV services
- Improved food supplies
- Decreased sexual activity

Increased risk exposure
- Sexual violence
- Transactional sex
- Higher risk behaviour
- Infected blood supplies

Decreased risk exposure
- Less sexual violence
- Lower risk behaviour

e. Non communicable disease

- Diabetes
- Hypertension
- Cancer

Context:
- Older populations
- Middle-income settings
- Urban displaced
- Lifestyle factors

Editorials

Noncommunicable diseases and post-conflict countries
Bayard Roberts,[a] Preeti Patel[b] & Martin McKee[a]   *Bull World Health Organ* 2012;90:2–2A

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f. Mental and psychosocial health

i. Emergency-induced factors
- Exposure to traumatic events
- Living conditions
- Insecurity
- Uncertainty
- Loss of livelihoods and impoverishment
- Disruption of social/cultural networks coping norms

ii. Pre-emergency social factors
- (e.g. extreme poverty; political oppression)

iii. Pre-existing psychological factors
- (e.g. mental disorders; alcohol abuse)

iv. Humanitarian aid-induced social factors
- (e.g. undermining of community structures; aid distribution)

3. The Response

Information – why?

Benchmark the severity of the crisis
- Population mortality rate
- Prevalence of acute malnutrition

Orient public health priorities
- Establish main epidemiological risk factors
- Detect and respond to unusual events (epidemics)

Advocate for humanitarian and political intervention
- Witnessing and documentation

Monitor and evaluate relief interventions
- Coverage of interventions (e.g. vaccination, water and sanitation)
- Impact of entire relief operation (decline in mortality?)

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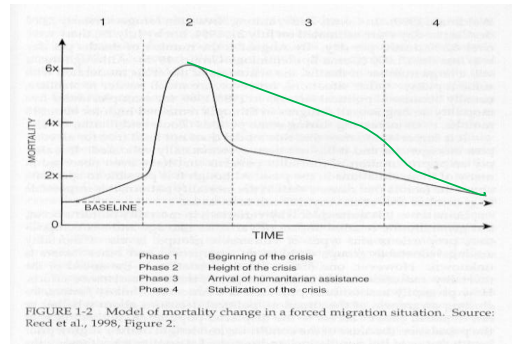| Information needs	Information sources
•Demographic profiles	•Existing data (e.g. population and epidemiological data)
•Size of affected population	
• Epidemiological profiles	•Rapid assessments (observations, clinic data, grave counts, community meetings, satellites images etc)
•Vaccination coverage	
•Risk profiles (prox., intermediate, distal)	•Coverage mapping (e.g. health facilities).
•Existing disease control programmes	•Participatory methods with community members
•Existing vaccination services	
•Existing health facilities/services	•Population estimation methods
•Stakeholders	•Surveillance: births and deaths, disease outbreaks, health worker/facility records.
•Malnutrition rates	
•Morbidity data	•Sample surveys: e.g. Mortality, malnutrition, mental health etc
•Mortality data (CMR/U5MR, CFR)	
•Disease prevalence/incidence	•Programme monitoring /evaluation reports
•Programme/project performance (Efficiency, Effectiveness, Equality/Equity, Accessibility, Appropriateness, Acceptability)	

What do you think is the most important
health indicator in a humanitarian crisis?

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Mortality

- Mortality rates measured in emergency settings as the number of deaths per 10,000 persons per day

- Sphere emergency threshold – crude mortality rate (CMR) and under 5 mortality (U5MR) doubling of 'norm' (context specific)

Mortality trend

FIGURE 1-2   Model of mortality change in a forced migration situation. Source: Reed et al., 1998, Figure 2.

Phase	
Phase 1	Beginning of the crisis
Phase 2	Height of the crisis
Phase 3	Arrival of humanitarian assistance
Phase 4	Stabilization of the crisis

Selected Crude Mortality Rates
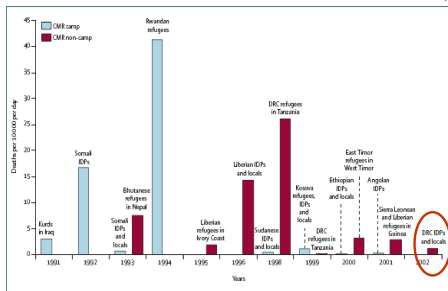
Figure 1: Crude mortality rates from selected complex emergencies disaggregated by camp and non-camp situations
IDPs= Internally displaced people. DRC= Democratic Republic of Congo. CMR=crude mortality rates.

Source: Salama et.al., Lancet, November 2004

Criteria for selecting interventions

- Potential to address main health problems
- Feasibility
- Maximum opportunity benefit
- Minimum opportunity cost
- Maximum effectiveness/cost-effectiveness
- Timeliness

Maximising impact - coverage and effectiveness

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Key interventions

- Adequate and appropriately spaced shelter
- Sufficient and safe food
- Sufficient and safe water
- Adequate sanitation facilities
- Mass vaccination
- Access to primary health care and referral hospitals
- Disease surveillance, outbreak preparedness and control
- Vector control
- Health education and social mobilisation

Guidelines

Eg. Sphere, IASC guidelines, Cluster Guidelines, individual agency guidelines (Red Cross movement, MSF etc)
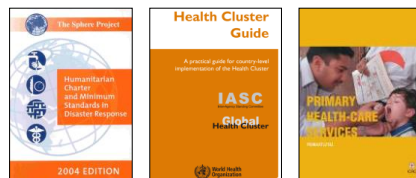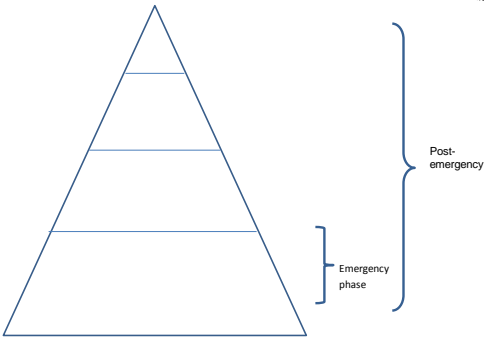

Online courses/training:
MISP (reproductive health)**:** http://misp.rhrc.org/
Medical Peace Work: http://www.medicalpeacework.org/

Hierarchy of needs

Intervention pyramid of mental/psychosocial health

Post-emergency

Emergency phase

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Adapt according to time & place

Intervention pyramid of psychosocial health

Examples:

Mental health care by mental health specialists (psychiatric nurse, psychologist, psychiatrist, etc).

Basic mental health care by PHC doctors. Basic emotional and practical support by community workers

Activating social networks
Communal traditional supports
Supportive child-friendly spaces

Advocacy for basic services that are safe, socially appropriate and protect dignity

Specialised services

Focused (person-to person) non -specialised supports

Strengthening community and family supports

Social considerations in basic services and security

Post-emerg-ency

Emerg-ency phase

Broader and longer-term planning

a. Inter-sectoral thinking

Key themes of Health Cluster:
- Improved coordination with other sectors (protection, wat/san, food, camp management etc).
- Better coordination of UN, NGOs, government, donors, and community members.
- Mapping of health actors, available health services, and service delivery activities.
- Better information on the health situation and needs
- Agreement on priority health problems and risks/joint health strategy/pooled funding appeals
- Agreed standards, protocols and guidelines for basic health care delivery and capacity building
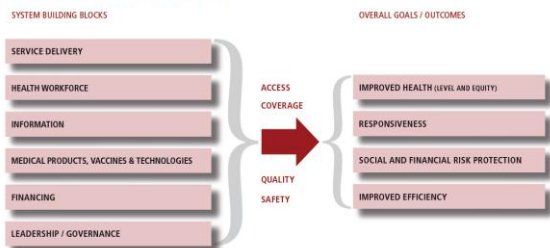- A common advocacy strategy and plan
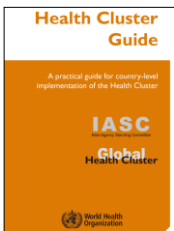
Disease treatment

MSF provision of ARVs to conflict-affected population in Bukavu, DRC
- Drop out rate in Bukavu: 5.4% [95%CI 3.2–7.5]
- Drop out rate in low-income setting: 15% [No CI given]
- Dropt out rate in high-income setting: 5% [No CI given]

Source: Culbert H, et al. PLoS Med 2007;4(5):e129

Health system support

See also: Van Damme et al. Primary Health Care Vs. Emergency Medical Assistance. Health Policy and Planning; 17(10):49-60.

See also: Health Cluster Guide. http://www.who.int/hac/global_health_cluster/en/

More resources

Annual trends of total RH ODA disbursements (2000-2009)

US$ per capita

■ LDCs conflict-affected countries only
■ LDCs (excluding confict-affected LDCs)
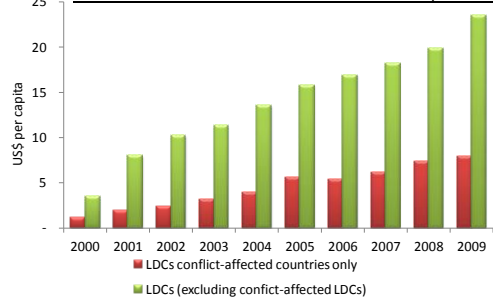
Ethical dilemmas

Humanitarian principles: Humanity, Impartiality, Neutrality, Independence

"Doing The Right Thing: Relief Agencies, Moral Dilemmas and Moral Responsibility in Political Emergencies and War" - by Hugo Slim

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Conclusions

- Need to engage with conflict-affected states
- Multiple pathways from conflict to poor health
- Variation of conflicts and related health needs
- Importance of good information & guidelines
- Adapt according to local needs
- Need for broader and longer-term thinking
- More support and resources required

Information sources

- Centre for Research on the Epidemiology of Disasters: http://www.cred.be/cred1/index.htm
- Health and Fragile States Network: http://www.healthandfragilestates.org
- HealthNet TPO: http://www.healthnettpo.org
- Humanitarian Policy Group (ODI) : www.odi.org.uk/hpg/index.html
- Inter-Agency Standing Committee: http://www.humanitarianinfo.org/iasc
- International Committee of the Red Cross: http://www.icrc.org
- Internal Displacement Monitoring Centre: http://www.internal-displacement.org
- LSHTM Public Health in Humanitarian Crises Group: http://crises.lshtm.ac.uk/
- One Response: http://oneresponse.info/Pages/default.aspx
- ReliefWeb: www.reliefweb.int/w/rwb.nsf
- Reproductive Health Response in Conflict Consortium: http://www.rhrc.org
- Sphere Project: http://www.sphereproject.org
- WHO (HAC): http://www.who.int/hac/en/index.html
- WHO Disease Control in Humanitarian Emergencies: http://www.who.int/diseasecontrol_emergencies/resources/en/

Questions?

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