

whether these findings contribute to the exploration of the association between increased concentrations of proinflammatory cytokines and major depression. Therefore we agree with Tyring's prudent interpretation that etanercept might relieve symptoms of depression.

In future studies, it would be interesting to measure effects of anti-TNF $\alpha$  agents in patients with psoriasis with high levels of depression and fatigue. Undoubtedly, anti-TNF $\alpha$  agents will contribute significantly to the overall and domain-specific quality of life of these patients. However, we also agree with Tyring and colleagues that a broader conceptualisation of depression—and quality of life—in the context of psoriasis will permit consideration of the usefulness of pharmacological and biopsychosocial approaches in the management of psoriasis.

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- Boehncke W-H, Schön MP, Girolomoni G, et al. Leukocyte extravasation as a target for anti-inflammatory therapy—which molecule to choose? *Exp Dermatol* 2005; **14**: 70–80.
- Bos JD, De Rie MA, Teunissen MBM, Piskin G. Psoriasis: activation of innate immunity. *Br J Dermatol* 2005; **152**: 1098–107.
- Tyring S, Gottlieb A, Papp A, et al. Etanercept and clinical outcomes, fatigue, and depression in psoriasis: double-blind placebo-controlled randomised phase III trial. *Lancet* 2006; **367**: 29–35.
- Sterry W, Barker J, Boehncke W.-H, et al. Biological therapies in the systemic management of psoriasis: International Consensus Conference. *Br J Dermatol* 2004; **151**(suppl 69): 3–17.
- de Korte J, Mommers FMC, Sprangers MAG, Bos JD. The suitability of quality-of-life questionnaires for psoriasis research: a systematic literature review. *Arch Dermatol* 2002; **138**: 1221–27.
- Gupta MA, Gupta AK. Depression and suicidal ideation in dermatology patients with acne, alopecia areata, atopic dermatitis and psoriasis. *Br J Dermatol* 1998; **139**: 846–50.
- Devrimci-Ozguven H, Kundakci TN, Kumbasar H, Boyvat A. The depression, anxiety, life satisfaction and affective expression levels in psoriasis patients. *J Eur Acad Dermatol Venereol* 2000; **14**: 267–71.
- Pacan P, Szepletowski JC, Kiejna A. Stressful life events and depression in patients suffering from psoriasis vulgaris. *Dermatol Psychosom* 2003; **4**: 142–45.
- Feldman SR, Kimball BA, Krueger GG, Woolley JM, Lalla D, Jahreis A. Etanercept improves the health-related quality of life of patients with psoriasis: results from a phase III randomized controlled trial. *J Am Acad Dermatol* 2005; **53**: 887–89.
- de Korte J, Sprangers MAG, Mommers FMC, Bos JD. Quality of life in patients with psoriasis, a systematic literature review. *J Invest Dermatol Symp Proc* 2004; **9**: 140–47.
- Chren MM, Lasek RJ, Flocke SA, Zyzanski SJ. Improved discriminative and evaluative capability of a refined version of Skindex, a quality-of-life instrument for patients with skin diseases. *Arch Dermatol* 1997; **133**: 1433–40.
- Ware JE, Kosinski M, Keller SD. SF-36 physical and mental health summary scales: a user's manual. Boston, MA: The Health Institute, New England Medical Center, 1994.

## Pre-emptive war epidemiology: lessons from the Democratic Republic of Congo

Since 1998, civilians in the Democratic Republic of Congo (DRC) have come under sustained attack from six foreign armies and about 15 armed groups. In this week's *Lancet*, Benjamin Coghlan and colleagues report the findings of a retrospective mortality survey throughout the DRC in mid-2004.<sup>1</sup> By sampling 750 clusters (19 500 households) across a sometimes insecure territory nearly the size of western Europe, the investigators acquired independent estimates of mortality rates for numerous health zones in the east and west of the country.

This is the fourth such survey since 1999–2000, and the second with countrywide coverage. These consecutive studies, an effort until now unprecedented in conflict-mortality epidemiology, provide unique information on the evolution of the main health indicator in the DRC over the past 7 years. Using reliable methodology, Coghlan and colleagues estimate that there have been more than 600 000 excess deaths in the 16 months

up to May, 2004, and a staggering 3.9 million excess deaths since 1998, considering the previous surveys.

We knew that contemporary war could be immensely destructive to human health.<sup>2,3</sup> Coghlan and colleagues' study, however, shows the degree to which the indirect victims of violence can outnumber those killed by combatants—by up to 90% according to the recent 2005 Human Security Report.<sup>4</sup> Certain limitations of the study should be noted. Most importantly, possible confounders, such as site-specific health-services coverage, were not accounted for. Nevertheless, the evidence for a causal association between violence and all-cause mortality in DRC is hard to dismiss: regression modelling of violence-attributable mortality; comparisons of crude, under age 5 years, and maternal mortality in peaceful and non-peaceful regions; significant reductions in mortality in eastern regions and in a city (Kisangani) that were affected by violence in the initial International Rescue

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Committee surveys, but no longer are; and no such reductions where violence persists.

Current complex emergencies, such as in the DRC, Darfur (Sudan), northern Uganda, Somalia, Afghanistan, the Central African Republic, the Ivory Coast, and Zimbabwe, are characterised by periods of precarious calm interrupted by upsurges of violence, displacement, epidemics or food crises. Shifting pockets of fighting and a general descent into lawlessness create a climate of chronic instability. UN funding appeals are unmet.<sup>5</sup> Resulting increases in mortality may be moderate in size,<sup>6,7</sup> but sustained over long periods and across large populations, they may ultimately dwarf other acute but geographically and temporally circumscribed crises.<sup>8</sup>

The conflict in DRC has destroyed health, transport, and social infrastructure and capacity. Health facilities are inadequate or non-existent, and access for humanitarian agencies is limited and irregular.<sup>9,10</sup> Less than half of the population uses improved drinking-water sources,<sup>11</sup> and 16–20% of children are acutely malnourished.<sup>12</sup> Not unexpectedly, Coghlan and colleagues find that most deaths, especially in children, occur from easily preventable illnesses. For example, they report a measles proportionate-mortality of 5%, suggesting a yearly death toll in the tens of thousands from one of the most easily preventable public-health problems. In the DRC, raging measles epidemics may be a result of war, but also indicate vast deficiencies in the humanitarian response.

Indeed, today's global humanitarian system appears strikingly unable to respond equitably to needs. Rich donor nations are miserably failing the people of the DRC, even though every few months the mortality equivalent of two southeast Asian tsunamis ploughs through its territory.<sup>13</sup> Though existing aid efforts in the DRC may be praiseworthy, we believe that rational interpretation of Coghlan and colleagues' findings should translate into massively increased resource allocation for simple yet life-saving interventions, such as provision of safe water, sanitation, vaccination, and access to effective treatments. Future mortality surveys would then serve to show progress, not merely chronicle an ongoing disaster.

Beyond relief, the curtailment of the rampant insecurity would clearly be the best health-related development for the DRC. In particular, Coghlan and colleagues' paper should spur the UN and member states to intensify efforts to prevent a resumption of widespread hostilities, currently a realistic scenario.<sup>14</sup> We can no longer claim ignorance about this and other wars' profound and protracted effect on human health. In this sense, mortality studies could play a pre-emptive role to provide further justification for peace initiatives when conflicts threaten to break out. We encourage the mass media and civil society to critically monitor global humanitarian and political responses to the DRC emergency, and to not switch off the lights yet again on what may well be the world's greatest humanitarian crisis.

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- 1 Coghlan B, Brennan R, Ngoy P, Dofara D, Otto B, Stewart T. Mortality in the Democratic Republic of Congo: a nationwide survey. *Lancet* 2006; **367**: 44–51.
- 2 Roberts L, Lafta R, Garfield R, Khudhairi J, Burnham G. Mortality before and after the 2003 invasion of Iraq: cluster sample survey. *Lancet* 2004; **364**: 1857–64.
- 3 Depoortere E, Checchi F, Broillet F, et al. Violence and mortality in West Darfur, Sudan (2003–04): epidemiological evidence from four surveys. *Lancet* 2004; **364**: 1315–20.
- 4 Human Security Centre. The human security report 2005: war and peace in the 21st century. June 21, 2005: <http://www.humansecurityreport.info/index.php?option=content&task=view&id=28&Itemid=63> (accessed Nov 21, 2005).
- 5 Oxfam International. 2005: Year of disasters. <http://www.reliefweb.int/library/documents/2005/oxfam-various-18oct.pdf> (accessed Oct 30, 2005).
- 6 WHO, The Republic Of Uganda Ministry Of Health. Health and mortality survey among internally displaced persons in Gulu, Kitgum, and Pader districts, northern Uganda. July, 2005: <http://www.who.int/hac/crises/uga/sitreps/Ugandamortsurvey.pdf> (accessed Nov 21, 2005).

- 7 WHO. Federal Ministry of Health Sudan. Mortality survey among Internally Displaced Persons and other affected populations in greater Darfur, Sudan. September, 2005: [http://www.emro.who.int/sudan/pdf/CMS%20Darfur%202005%20final%20report\\_11%2010%2005.pdf](http://www.emro.who.int/sudan/pdf/CMS%20Darfur%202005%20final%20report_11%2010%2005.pdf) (accessed Nov 21, 2005).
- 8 Salama P, Spiegel P, Talley L, Waldman R. Lessons learned from complex emergencies over past decade. *Lancet* 2004; **364**: 1801–13.
- 9 Médecins Sans Frontières. DRC: a never ending health crisis. June 6, 2004: [http://www.msf.org/msfinternational/invoke.cfm?component=article&objectid=CF0F0A78-E88C-4E10-86391D9E2C2E0E69&method=full\\_html](http://www.msf.org/msfinternational/invoke.cfm?component=article&objectid=CF0F0A78-E88C-4E10-86391D9E2C2E0E69&method=full_html) (accessed Oct 28, 2005).
- 10 WHO. Health action in crises: Democratic Republic of the Congo. April 2005: <http://www.who.int/hac/crises/cod/en/> (accessed Oct 28, 2005).
- 11 UNICEF. At a glance: Democratic Republic of the Congo. Statistics. ([http://www.unicef.org/infobycountry/drcongo\\_statistics.html](http://www.unicef.org/infobycountry/drcongo_statistics.html)) (accessed Oct 28, 2005).
- 12 UN World Food Programme. World hunger, Democratic Republic of Congo. Sept 9, 2004: [http://www.wfp.org/country\\_brief/indexcountry.asp?region=2&section=9&sub\\_section=2&country=180](http://www.wfp.org/country_brief/indexcountry.asp?region=2&section=9&sub_section=2&country=180) (accessed Oct 30, 2005).
- 13 BBC News. Indonesia quake victims await aid. March 29, 2005: <http://news.bbc.co.uk/1/hi/world/asia-pacific/4391063.stm> (accessed Oct 31, 2005).
- 14 International Crisis Group. A Congo action plan: Africa briefing Number 34. Oct 19, 2005: [http://www.crisisgroup.org/library/documents/africa/central\\_africa/b034\\_congo\\_action\\_plan.pdf](http://www.crisisgroup.org/library/documents/africa/central_africa/b034_congo_action_plan.pdf) (accessed Oct 30, 2005).

## Interpreting mortality data in humanitarian emergencies



Congratulations to Francesco Checchi and Les Roberts for their excellent recent review on the collection, analysis, interpretation, and use of mortality data in humanitarian emergencies.<sup>1</sup> They highlight the substantial progress in this field over the past few years, and point out the remaining major difficulties in collecting and disseminating such data. Only a few years ago, epidemiologists and others attempting to gather objective health-data in emergencies were commonly greeted with the cry of: “Why are you wasting time collecting data? We must save lives!” Thankfully, most humanitarian-aid workers now understand that programme interventions need to be based on sound data, so that life-saving interventions can be targeted toward conditions posing the greatest risk to life.

The use of survey methods to measure mortality rates has increased in the past few years. Use of these methods allows mortality to be measured in situations where it would otherwise be impossible. Moreover, most humanitarian organisations and donors now understand the need to use outcome indicators—and mortality is the ultimate outcome—to assess the overall quality of the humanitarian response. As a result, various recommendations and guidelines have been published on measuring mortality in cross-sectional surveys.<sup>2–4</sup> These guidelines are aimed at non-epidemiologists because surveys in emergencies are rarely done by people with specific survey training. Underfunded relief organisations rarely have the money to hire specially trained survey personnel. In most cases, programme managers take care of all aspects of the relief operation, including assessment and monitoring.

Mortality is the final outcome common to most conditions of public-health importance. As such, mortality can be used to monitor the overall health status

of a population. However, as Checchi and Roberts point out, the crude mortality rate alone cannot be used to evaluate specific programmes, and mortality should not be monitored alone. The crude mortality rate cannot show who is at increased risk of death, or what the cause of death is. It is essential that additional data are gathered, analysed, and incorporated into monitoring efforts and programme evaluation.

It is important to recognise, however, that the methods described in various guidelines and in Checchi and Roberts’ Humanitarian Policy Group paper are still in their infancy. As Checchi and Roberts point out, there are several methods for collecting retrospective mortality data in household surveys, each championed by its supporters as the easiest, cheapest, and most accurate. Unfortunately, virtually no empirical evidence exists to support these claims. Although there is no reason to doubt the overall accuracy of mortality estimates produced by careful surveys, recommendations for specific aspects of mortality assessment, such as which set of questions to use, what recall period to include, and how best to calculate the denominator, are based on extrapolation from studies in non-emergency settings, personal experience, or theoretical considerations. There is an acute need to test the proposed methods against a gold standard, such as reasonably complete registration of deaths, to determine which is best. However, the barriers to such testing are formidable. During the acute emergency, when populations have increased mortality, the gold standard is often not reliable because death reporting is incomplete. In more stable populations in which mortality is rarely elevated and death is well reported, the large sample size required—because of low mortality rates—may pose substantial logistic demands.

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