

Overview to the Debate Generated by the “Shrinking Costs of War”

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On 20 January 2010, the Human Security Report Project (HSRP) launched a report at the United Nations that argued that the human costs of war had declined dramatically since the early 1950s. The report’s most counterintuitive finding came from a review of countries in sub-Saharan Africa that found that child mortality rates actually *decline* during most wars.

The report’s findings sparked considerable debate in the media and the expert community, with the major source of contention being the HSRP’s critique of the International Rescue Committee’s (IRC) much-cited claim that some 5.4 million people had died in the Democratic Republic of the Congo (DRC) as a consequence of the war that started in August 1998.

The IRC’s shockingly high estimates were derived from data generated by five retrospective mortality surveys carried out between 2000 and 2007. They focused world attention on a long neglected humanitarian crisis in the DRC and helped build international support for increased humanitarian assistance and a greater peacekeeping presence in the conflict-wracked east of the country.

The beneficial humanitarian consequences of the IRC’s advocacy campaigns are not in doubt. But the “Shrinking Costs of War” argues that the excess death estimates derived from the IRC’s surveys were marred by major methodological errors and that the real death toll is far lower than the IRC claims. More generally we argue that getting it wrong about wartime mortality has serious implications for the equitable provision of humanitarian assistance around the world.

The HSRP agrees that population health surveys play a critically important role in providing health statistics for war-affected populations in poor countries, but argues that they are very rarely capable of providing accurate estimates of excess war deaths—which was a major goal of the IRC’s surveys.

The IRC’s survey-based research project in the DRC is the most comprehensive and ambitious exercise ever undertaken to determine excess war death tolls using retrospective mortality surveys and, unlike mortality surveys elsewhere—notably Iraq—it has not been the subject of public controversy. The HSRP chose this project as a case study in part for these reasons, and in part because its startlingly high death toll estimates presented such an obvious counter example to the main thesis of the “Shrinking Costs of War”—namely that the human costs of armed conflict have declined dramatically since the early 1950s.

* The excess death toll projection for the DRC in the text of page 5 was revised and additional text was added to page 7 on 7 May 2010.

Both the IRC (together with the Burnet Institute) and Dr. Les Roberts, who directed the first two surveys that the IRC conducted in the DRC, circulated long critiques of the “Shrinking Costs of War”. More detailed responses, which incorporate the critiques, are available on the HSRP website at www.humansecurityreport.info. Here we provide a brief overview of the issues that have been raised.

The Key Issues

The HSRP identified two major methodological problems with the IRC’s excess death estimates. First, the sample populations that the IRC selected for its first two surveys were not representative of the eastern DRC—the region whose excess death toll the IRC sought to estimate. Second, the baseline mortality rate that was used to determine the excess death rate was too low.

Inappropriate Survey Procedures

Extrapolating from a non-representative sample, as the IRC did in its first two surveys, is a fundamental violation of standard survey practice. When this occurs no confidence can be placed in any estimates that result. For this reason the HSRP argues that the IRC’s excess death estimate for the period covered by the first two surveys should be rejected.

The HSRP is not alone in its critique of the methodology of the first two surveys. WHO epidemiologist, Francesco Checchi, has described their findings as “speculative at best”.¹

The IRC, however, continues to insist that its findings are based on “standard and scientifically grounded methodology” despite the fact that its own report on the first survey makes it clear that the survey data were *not* representative of the eastern DRC.

The IRC’s response is surprising given that Dr. Les Roberts, the team leader of the first two surveys, has been quite open about the fact that his team disregarded “standard academic protocols” and has described the survey procedures the team employed as “kind of bad science.” The findings of the first two surveys accounted for 2.5 of the 5.4 million of the IRC’s total excess death estimate.

¹ Note: Any references in the present response that are not footnoted in this document are footnoted in the HSRP’s detailed responses to the IRC and Dr. Roberts.

Why the IRC's 2.5 Million Death Toll Estimate is Too High

It is theoretically possible that extrapolating from non-representative sample data could, by chance, have produced a correct death toll, but the evidence strongly suggests that the IRC's excess death estimate for the first two surveys greatly exceeds the true toll.

The IRC's estimates in its first two surveys are for overall mortality (i.e. mortality for all age groups). Other surveys undertaken in the DRC that cover this period have measured child, not overall, mortality. However, it is possible to derive the IRC's estimate of *national* child mortality data from the IRC's child mortality data for individual survey areas. The IRC's child mortality trend data can then be compared with those of other surveys. (It is important to note that the overall and child mortality trend data generally track each other quite closely, so major trends in child mortality will almost certainly be reflected in the overall mortality trend data)

When the HSRP undertook this exercise it found that there was a sharp and unprecedentedly large increase in the IRC's child mortality rate in the eastern DRC after the war started in August 1998.² But, another survey undertaken by the widely respected Demographic and Health Survey (DHS) organization covering the same period as the IRC's surveys records no sign of such an increase in child mortality.

It is possible that the IRC data are correct and the DHS data completely wrong. But this is highly unlikely because the DHS data were derived using standard—and appropriate—survey practice, while the IRC's were not. Unless the DHS data are extraordinarily inaccurate, it is inconceivable that they would not have revealed *some* of the dramatic increase in mortality that the IRC claims took place during the period covered by the first two surveys.

The HSRP is not alone in its skepticism. Jon Pedersen of Norway's FAFO Institute notes in a review of the IRC's study for the WHO-affiliated Health and Nutrition Tracking Service (HNTS) that the increase is "problematic." Similarly, Pierre Salignon, Project Director of the HNTS, has stated that, "It is unlikely that the war led to a sudden increase."

If, as the evidence indicates, there was no sudden and dramatic increase in the mortality rate, then the IRC's 2.5 million excess death estimate for the first two surveys must be too high.

² There have been just two child mortality surveys that showed comparably sharp increases. Both were in Iraq. One was withdrawn; the other discredited. See: Zaidi, S. "Child Mortality in Iraq." *The Lancet* 350 (1997): 1105 and Dyson, T. "New Evidence on Child Mortality in Iraq." *Economic and Political Weekly* 44(2) (2009): 56-59.

The Problematic Baseline Mortality Rate

The second major methodological problem with the IRC's huge excess death estimates arises from its choice of the pre-war—"baseline"—mortality rate. The excess mortality rate for the survey period is the difference between the average mortality rate measured by the survey, and the baseline rate. It follows that if the baseline is too low, the excess mortality rate, and hence the excess death toll, will be too high.

The IRC chose the sub-Saharan African (SSA) average mortality rate as the baseline rate for the DRC. But, the DRC is anything but an average sub-Saharan African country. It lies at, or near, the bottom of every development indicator for the region. All three experts who reviewed the IRC's findings for the HNTS expressed reservations about the IRC's choice of baseline estimate. Harvard's Kenneth Hill, for example, notes that, "...the IRC counterfactual is not appropriate. [The] DRC almost certainly has had above average mortality by SSA standards for decades." Insofar as this is true, the IRC's excess mortality toll must be too high.

In its response to the IRC, the HSRP provides new evidence that casts further doubts on the IRC's claim that the SSA average—1.5 deaths per 1,000 per month—is an appropriate baseline rate for the DRC. It determined a more plausible baseline mortality rate using the IRC's own data. The HSRP's suggested rate, one also recommended by WHO epidemiologist Francesco Checchi, is 2.0 deaths per 1,000 per month—one third higher than the IRC's. The HSRP used this revised rate to recalculate the excess death toll for the three most recent of the IRC's surveys. The result was startling. The IRC's excess death toll for this latter period—2001 to 2007—shrank from more than 2.83 million to less than 900,000.

The point of this exercise was not to produce a "correct" estimate—indeed, we do not believe that the data are reliable enough to permit this. Rather it was to show how a modest increase in a highly questionable baseline mortality rate can lead to a radically lower excess death toll.

To make the point even clearer, we asked a hypothetical question: what would the excess death toll be if we assumed that the average mortality rate in the DRC declined from 2.2 deaths per 1,000 per month (the nationwide survey-derived rate in 2006-2007), to 2.0 deaths per 1,000³ and that this latter rate held steady for a further ten years?

³ The nationwide mortality rate has been declining steadily throughout the new millennium so it is not at all unreasonable to assume that for the ten years after 2007, the nationwide death rate could continue to decline from 2.2 deaths per 1,000 per month—which is the survey-measured nationwide crude mortality rate in the DRC as of

The HSRP then determined what the impact of using the 2.0 deaths per 1,000 per month mortality rate would be on the excess death toll for the period 2008-2017 with the two different baseline mortality rate estimates. The answer was instructive. With the IRC's baseline mortality rate of 1.4 deaths per 1,000 per month there would be an *additional 5.0 million deaths*.⁴ But with the modestly higher baseline mortality rate of 2.0 deaths per 1,000 per month *there would be zero excess deaths*.

The HSRP's point here is not to claim that its choice of baseline mortality rate is necessarily correct—no one can know this. Rather it is to demonstrate how a relatively modest and wholly plausible increase in the IRC's baseline—a baseline which all reviews suggest is too low—can reduce an excess death toll estimate of 5.0 million to zero.

Given the serious methodological errors that the HSRP research team uncovered in the first survey, given the IRC's admission that it failed to follow standard survey practice in the first two surveys, given Dr. Roberts' unequivocal statements about "bad science" and "violating academic protocols", and given the skepticism expressed by the HNTS peer reviewers about the IRC's baseline mortality estimate, we simply do not understand how the IRC can continue to claim that its methodology was based on "standard and scientifically-grounded methods."

Dr. Roberts' Responses

The most extreme attacks on the "Shrinking Costs of War" have come from Dr. Les Roberts, the lead researcher of the IRC's first two surveys. The widely circulated first response was in the form of a letter to HSRP Director, Andrew Mack. It was accompanied by a separate appendix.

Dr. Roberts also wrote an OpEd entitled, "Death Rates Don't Actually Decline During Wars" that was posted on Juan Cole's influential *Informed Comment* blog. The OpEd claimed that the

2007 (Benjamin Coghlan et al., "Mortality in the Democratic Republic of Congo: An Ongoing Crisis" (New York: International Rescue Committee, 2008), http://www.theirc.org/sites/default/files/migrated/resources/2007/2006-7_congomortalitysurvey.pdf, ii)—to an average of 2.0. Note that it is not being argued that this figure is correct, simply that it is plausible.

⁴ When originally posted, the excess death toll was noted as 5.8 million. However, a computational error was later discovered.

HSRP's report was "...a brazen attack on the ability of non-state and non-UN actors to tell the world about humanitarian crises."⁵

The central claim of the OpEd was that the HSRP's thesis that the deadliness of warfare has declined dramatically was untrue.⁶ In particular, Dr. Roberts objected to the fact that the HSRP's review of child mortality rates in conflict-affected countries in sub-Saharan Africa included wars with low death tolls.

But this objection completely misses the point of Chapter 2 of the "Shrinking Costs of War"—namely that warfare has become much less deadly over the past 60 years. This is *why* Africa's recent wars have death tolls that are too low to reverse the long-term decline in child mortality that has become the norm throughout the developing world.

To demonstrate the extent of the declining deadliness of warfare, the HSRP drew on recent research from the International Peace Research Institute, Oslo (PRIO) and the Uppsala Conflict Data Program (UCDP) to reveal that, while the average conflict generated some 10,000 fatalities from war-related injuries in the 1950s, in the new millennium the average toll had shrunk dramatically to around 1,000.⁷ We argue that deaths from war-exacerbated disease and malnutrition have declined along with deaths from violent injuries.

The HSRP goes on to argue that the decline in both violent war deaths and those from war-exacerbated disease and malnutrition is the result of three factors: the change in the nature of warfare over recent decades; the impact of peacetime health interventions in reducing wartime mortality; and the trebling of humanitarian assistance per displaced person since the end of the Cold War.

It is these changes that explain the apparent paradox of child mortality rates that continue to decline in wartime.

⁵ Leslie F. Roberts, "Death Rates Don't Actually Decline During Wars," Informed Comment Blog, posted January 27, 2010, <http://www.juancole.com/2010/01/roberts-death-rates-dont-actually.html>.

⁶ Ibid.

⁷ "Indirect deaths" from war-exacerbated disease and malnutrition are closely—though not consistently—associated with the extent of wartime violence. It follows, the HSRP argues, that indirect deaths will have declined along with direct deaths—indeed the report argues, there are reasons to believe that they have declined to a greater degree.

Dr. Roberts suggests that had we chosen only the most severe conflicts being waged around the world, rather than a regional sample of countries that included a considerable number of minor wars, we would *not* have found that most wars experienced declining child mortality rates.

We never of course denied that the most severe conflicts can reverse the downward trend in child mortality. Indeed, we pointed out that in some 20 percent of cases in our review of sub-Saharan African countries mortality rates were higher at the end of wars than at the beginning.

However, to test Dr Roberts claim, we extended the dataset of conflict-affected countries from sub-Saharan Africa all countries that experienced war from 1970 to 2008. We also excluded all low- and medium-intensity conflicts, counting only periods of war i.e., those in which there were more than 1,000 battle deaths in a given year. We then examined how many of these countries experienced increases in their child mortality rates during the years in which they experienced war.

The results were instructive. Under-five mortality rates increased in just 5 percent of all “country-years” in war. To our surprise the 5 percent did not include conflicts that most people would have assumed were among the most deadly during this period: Vietnam, Sri Lanka, Algeria, Nepal, Colombia, Guatemala and Ethiopia, for example.

Why Getting It Wrong About Excess Death Tolls Matters

Debarati Guha-Sapir, Director of the Centre for Research on the Epidemiology of Disasters, commenting on the “Shrinking Costs of War” argues that, while the debate over excess deaths in the DRC may be valuable academically, it is “less useful in practice”.⁸ The HSRP agrees that the academic debate is important, but believes that the issues raised in the “Shrinking Costs” also have important implications for policy.

First, governments are increasingly concerned that policy should be “evidence-based,” but this is impossible if the evidence is—by its very nature—unreliable. Excess deaths are those that would not have occurred had there been no war. But as Dr. Guha-Sapir points out, “...no one can actually know what the mortality would have been in the absence of war.”⁹ This is another way

⁸ Debarati Guha-Sapir, “From the Director’s Desk”, *CE-DAT Scene* (January 2010), Centre for Research on the Epidemiology of Disasters, http://www.cred.be/sites/default/files/CE-DAT_Scene_January_2010.pdf.

⁹ “Human Security Report 2010”, *CE-DAT Scene* (January 2010), Centre for Research on the Epidemiology of Disasters, http://www.cred.be/sites/default/files/CE-DAT_Scene_January_2010.pdf.

of saying that excess death tolls are essentially unknowable—precisely the point that the HSRP makes in Chapter 4 of “Shrinking Costs”.

Second, insofar as unreliable survey-derived excess death estimates play a role in determining the allocation of humanitarian aid between different complex emergencies, there is a real risk that that aid will not be allocated according to need.

Third, the continuing controversies over survey-derived excess death tolls risk undermining the credibility of population surveys more generally and further increasing what a recent study has described as a “climate of distrust” between donors, international agencies, and NGOs.¹⁰

The accompanying responses expand on these arguments addressing in turn the IRC’s critique, and that of Dr. Roberts. The full texts of the IRC and Roberts critiques are also included.

¹⁰ Andrew Lawday, “Good Humanitarian Donorship and the CAP”, *Humanitarian Exchange Magazine*, March 2005, <http://www.odihpn.org/report.asp?id=2713>.