LONDON (AP): Researchers have estimated that as many as 100,000 more Iraqis, many of them women and children, died since the start of the U.S.-led invasion of Iraq than would have been expected otherwise, based on the death rate before the war. Writing in the British-based medical journal The Lancet, the American and Iraqi researchers concluded that violence accounted for most of the extra deaths and that airstrikes by the U.S.-led coalition were a major factor.

Even with Fallujah factored out, the survey "indicates that the death toll associated with the invasion and occupation of Iraq is more likely than not about 100,000 people, and may be much higher," the report said. The study was funded by the Center for International Emergency Disaster and Refugee Studies at Johns Hopkins University and by the Small Arms Survey in Geneva, Switzerland, a research project based at the Graduate Institute of International Studies in Geneva. This does not include the Iraqi military forced that perished during the war.

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Mortality before and after the 2003 invasion of Iraq: cluster sample survey
Les Roberts, Riyadh Lafta, Richard Garfield, Jamal Khudhairi, Gilbert Burnham

Summary
Background In March, 2003, military forces, mainly from the USA and the UK, invaded Iraq. We did a survey to compare mortality during the period of 14·6 months before the invasion with the 17·8 months after it.

Methods A cluster sample survey was undertaken throughout Iraq during September, 2004. 33 clusters of 30 households each were interviewed about household composition, births, and deaths since January, 2002. In those households reporting deaths, the date, cause, and circumstances of violent deaths were recorded. We assessed the relative risk of death associated with the 2003 invasion and occupation by comparing mortality in the 17·8 months after the invasion with the 14·6-month period preceding it.

Findings The risk of death was estimated to be 2·5-fold (95% CI 1·6-4·2) higher after the invasion when compared with the preinvasion period. Two-thirds of all violent deaths were reported in one cluster in the city of Falluja. If we exclude the Falluja data, the risk of death is 1·5-fold (1·1-2·3) higher after the invasion. We estimate that 98,000 more deaths than expected (8000-194000) happened after the invasion outside of Falluja and far more if the outlier Falluja cluster is included. The major causes of death before the invasion were myocardial infarction, cerebrovascular accidents, and other chronic disorders whereas after the invasion violence was the primary cause of death. Violent deaths were widespread, reported in 15 of 33 clusters, and were mainly attributed to coalition forces. Most individuals reportedly killed by coalition forces were women and children. The risk of death from violence in the period after the invasion was 58 times higher (95% CI 8·1-419) than in the period before the war.

Interpretation Making conservative assumptions, we think that about 100,000 excess deaths, or more have happened since the 2003 invasion of Iraq. Violence accounted for most of the excess deaths and air strikes from coalition forces accounted for most violent deaths. We have shown that collection of public-health information is
possible even during periods of extreme violence. Our results need further verification and should lead to changes to reduce non-combatant deaths from air strikes.

The war in Iraq: civilian casualties, political responsibilities
Richard Horton
The present conflict in Iraq signals a contrast of paradoxical proportions. The Iraqi people, their interim government, and their largely US and British occupiers are preparing for landmark elections early in the new year. Yet a ruthlessly violent insurgency is successfully destabilising these arrangements, murdering foreign civilians and Iraqi law enforcement officers in the most brutal ways imaginable, and exploiting the world's media in doing so. Amid this deep national uncertainty, it is hard to judge what is happening among Iraqis themselves. This week The Lancet publishes the first scientific study of the effects of this war on Iraqi civilians.

In a unique US-Iraqi collaboration, Les Roberts and his colleagues report substantially more deaths in Iraq since the war began than during the period immediately before the conflict. Much of this increased mortality is a consequence of the prevailing climate of violence in the country, and many of the civilian casualties that are described were attributed to the actions of coalition forces. These findings—and the tentative countrywide mortality projections they support—have immediately translatable policy implications for those charged with managing the aftermath of invasion.
• Total number of coalition military deaths between the start of war and June 16, 2004: **952** (836 U.S.)

• Of those 952, the number killed after President George W. Bush declared “an end to major combat operations” on May 1, 2003: **693**

• Number of U.S. troops wounded in combat since the war began: **5,134** (Number ill or injured in “non-combat” incidents estimated to be over 11,000)

• Number of U.S. troops wounded in combat since President George W. Bush declared “an end to major combat operations” on May 1, 2003: **4,593**

• Number of civilian contractors, missionaries, and civilian workers killed: **50-90**

• Number of international media workers killed: **30**

• Iraqi civilians killed: **9,436 to 11,317**

• Iraqi civilians injured: **40,000** (est.)

• Iraqi soldiers and insurgents killed prior to May 1, 2003: **4,895 to 6,370**

• The bill so far: **$126.1 billion**

• Additional amount to cover operations through 2004: **$25 billion**

• What $151 billion could have paid for in the U.S.:
  - Housing vouchers: **23 million**
  - Health care for uninsured Americans: **27 mil.**
  - Salaries for elementary school teachers: **3 mil.**
  - New fire engines: **678,200**
  - Head Start slots: **20 million**

• Estimated long-term cost of war to every U.S. household: **$3,415**

• Amount contractor Halliburton is alleged to have charged for meals never served to troops and for cost overruns on fuel deliveries: **$221 million**

• Kickbacks received by Halliburton employees from subcontractors: **$6 million**

• Percentage of Americans who now feel that “the situation in Iraq was not worth going to war over”: **54**

• Percentage of Iraqis who said they would feel safer if U.S. and other foreign troops left the country immediately: **55**

• Percentage of U.S. soldiers in Iraq reporting low morale: **52**

• Percentage of soldiers who said they would not re-enlist: **50**

• Percentage of wounded unable to return to duty: **64**

• Number of soldiers whose tours of duty have been extended by the Army: **20,000**

• Percentage of reserve troops who earn lower salaries while on deployment: **30-40**

• Fraction of National Guard troops among U.S. force now in Iraq: **1/3**

• Percentage of U.S. police departments missing officers due to Iraq deployments: **44**

• Effect on al Qaeda of the Iraq war, according to International Institute for Strategic Studies: “Accelerated recruitment”

• Estimated number of al Qaeda terrorists as of May 2004: **18,000 with 1,000 active in Iraq**

• Percentage of Iraqis expressing “no confidence” in U.S. civilian authorities or coalition forces: **80**

• Iraq’s oil production in 2002: **2.04 mil. barrels/day**

• Iraq’s oil production in 2003: **1.33 mil. barrels/day**

• Price of a gallon of gasoline in the U.S. in May 2004: **more than $2**