

**When wild war's deadly blast was blawn: update on UK's and other military fatality rates, and casualties, in Iraq and Afghanistan (updated to 4 September 2006)**

*Sheila M. Bird, MRC Biostatistics Unit, CAMBRIDGE CB2 2SR  
(Sheila.bird@mrc-bsu.cam.ac.uk)*

This commentary is a six-month update on UK military fatality rates per 1000 personnel-years in Iraq<sup>1</sup>, together with an account for Afghanistan for both UK and other forces. In 2006, there have been *32 UK military deaths in Afghanistan and 19 in Iraq where more than twice as many UK troops are stationed as in Helmand province, Afghanistan.*

Over 10,000 Afghan, British, Canadian and American troops are reported to be deployed on Operation Mountain Thrust in Afghanistan<sup>2</sup>. Military casualties, in addition to fatalities, are reported for both US and Canadian troops<sup>3,4</sup>. Blank columns signify that UK's non-fatal military casualties in Iraq and Afghanistan (specifically: those who do not return to duty within 72 hours, *as cited in the Edinburgh Fringe's highly-acclaimed play, 'Black Watch'*) are still<sup>1</sup> not properly collated, analysed and published.

UK's performance monitoring in the public services<sup>5</sup> requires better if we are to discharge the debt of honour that parliament and public owe to our military forces. Analysis should properly take into account that military fatalities, and indeed casualties, may occur in clusters as when a helicopter *or plane crashes, as occurred on 2 September 2006 when a Kinloss-based Nimrod came down in southern Afghanistan with the loss of 14 British lives*, or there is a suicide bombing, or ordinance explodes. Deaths and casualty also dog those who have returned home, but are haunted by operations; and they add to the wages of war<sup>6-9</sup>.

UK's military fatality rate at the outset of operations in Helmand province in Afghanistan is comparable with the initial period of major combat in Iraq. Ten out of 11 deaths in Helmand to 12 August 2006 were hostile, whereas only two were of the preceding period's (and locations') seven, which included at least one each of accidental weapon discharge, suicide, homicide, and vehicle accident; and, additionally, there has been one non-hostile death due to vehicle accident on 11 August 2006 in camp at Kabul.

*Between 13 August 2006 and 2 September 2006 (21 days only), besides the major loss of 14 British lives in the Nimrod disaster there have been three other British military deaths from hostile fire in Helmand province – which, sadly, is entirely in line with the ISAF expectation of 14 fatalities per 1000 personnel-years derived below.*

For comparison with UK, Canada's military fatality and non-fatal casualty rate in Afghanistan are also shown. They have been estimated from information on the Canadian Broadcasting Corporation's website<sup>3</sup>, and for Operation Enduring Freedom<sup>4</sup> where Canada's fatalities to 12 August 2006 were 26. Eleven of them had occurred since 1 May 2006 - a rocket propelled grenade (RPG) killed a cluster of three, one death was due to an improvised explosive devise (IED), and a suicide car bomb claimed two Canadian lives;

two others died separately from hostile fire and one from a suicide bomb; and two non-hostile deaths were traffic and shooting accidents respectively. Prior to May 2006, Canada's 15 fatalities (those listed<sup>4</sup> may omit a second death in a vehicle crash on 2 March 2003<sup>3</sup>) included two clusters of four - due to IED in April 2006, and in April 2002 by friendly fire during a training exercise - with only two listed (actually three) non-hostile deaths (in two separate vehicle accidents). Eight Canadian soldiers were also wounded in the US pilot friendly fire incident that cost four lives. (See appendix to National Audit Office report for accounts of four friendly fire episodes in which there were UK fatalities and casualties during major combat in Iraq<sup>10</sup>.)

Canada's military deployment<sup>11</sup> was probably under 1,000 prior to May 2002, when 750 ground troops were to be pulled out; but was increased by 1,000 after February 2003 so that between July 2003 and January 2004, Canada's contribution had increased to nearer 2,000 military personnel; and has been around 2,200 since February 2006. In the Table, I have guesstimated that Canadian military personnel averaged 1,500 during their tours of duty in Afghanistan from 2 February 2002 to 30 April 2006.

The combined fatality rate for UK's Helmand and Canadian military personnel in Afghanistan from 1 May 2006 to 12 August 2006 has been desperately high at 22 deaths in 1,593 personnel-years, or 13.8 fatalities (8.6 – 20.9) per 1,000 military-years. This rate is higher ( $p = 0.02$ ) than UK's fatality rate during major combat in Iraq, six times the UK's military fatality rate after major combat in Iraq (82 deaths in 36,000 person-years = 2.3 per 1,000 person-years, see Table for detail), and over 25 times the age-expected mortality for military personnel when not engaging an enemy<sup>1</sup>. *In the three weeks since 12 August 2006, there has been another Canadian fatality. Thereafter, four Canadian deaths were recorded on 3 September 2006 and one, by friendly fire, on 4 September when there were also multiple non-fatal casualties.*

Set in broader context, to 12 August 2006, the sum of the coalition's military fatalities in 2006 in Afghanistan has been 68 for US and 46 for other nations at a time when NATO's International Security Assistance Force (ISAF) was expanded from 9,000 to 16,000 personnel<sup>2</sup>, and currently 18,500 ([http://www.afnorth.nato.int/ISAF/structure/structure\\_structure.html](http://www.afnorth.nato.int/ISAF/structure/structure_structure.html), accessed on 16 August 2006).

Of these fatalities, 40 for US and 33 for other nations (UK 12, Canada 11, as in Table; Italy 6, France 3, Netherlands 2, Roumania 1, Spain 1 with 3/10 being non-hostile) occurred in the period 1 May to 12 August 2006 which - on the basis of 73 fatalities among maximum 18,500 military personnel in theatre or headquarters for 104 days - gives an overall ISAF fatality of **13.8 (95% CI: 10.7 – 17.0) per 1000 personnel-years** or *4.9 fatalities per week expected among 18,500 military personnel in Afghanistan* - over twice the rate during the initial period of major combat in Iraq's Operation Telic, but for longer duration. *During the subsequent three weeks to 2 September 2006, when - on the basis of 13.8 deaths per 1000 personnel-years - we should have expected 14.7 military deaths, there have been 13 ISAF fatalities (only two non-hostile) in addition to the 14 British lives lost in the crashed Nimrod.*

Canada's casualties in Afghanistan<sup>3</sup> have been 3.2 times its number of fatalities to 12 August 2006 (82: 26), a military casualty: fatality ratio that is much lower than has applied for the US military in Iraq - where the ratio was 5:1 in 2003, 9:1 in 2004 and 7:1 in 2005<sup>1</sup> - but comparable with the US's casualty: fatality ratio in Afghanistan of 851:327 (or 2.6: 1) overall, 168:68 in 2006, and highest at 215:52 in 2004<sup>4</sup>. On these bases, UK's non-fatal casualties in Afghanistan may have been 2.6 to 3.2 times its number of fatalities, or 49 to 60 in expectation *to 12 August 2006*.

However, UK military casualties in both Iraq and Afghanistan are not routinely published as national statistics. Nor is an updated tally kept by the British Broadcasting Corporation (BBC) which links to a 'page not available' (6 August 2006) at the Ministry of Defence.

Clustering of military deaths is tragically illustrated by the other two non-Afghan nations with the highest overall number of fatalities in Afghanistan bar United States, Canada and UK<sup>4</sup>, namely Spain and Germany. Seventeen of Spain's 18 fatalities occurred when a helicopter crashed on 16 August 2005. Helicopter crash on 21 December 2002 accounted for seven of Germany's 18 fatalities, none was in 2006, and only six were from hostile causes. A suicide car bomb (hostile) on 7 June 2003 killed four, but defusing an anti-aircraft missile claimed two German lives in March 2002, and exploding ordinance another two in June 2005. In addition, one German soldier died in a vehicle accident in August 2005 with the two remaining (hostile) deaths having been due to a mine (May 2003) and suicide bomber (November 2005) respectively. Germany's military personnel in Afghanistan numbered about 2,000 from late 2001, but increased to 2,250 around October 2003 and to 3,000 from around October 2005 (<http://www.strategypage.com/htm/htun/articles/20050930.aspx>, accessed on 4 August 2006).

In-depth analysis of military fatalities and casualties needs to take cause, clustering (which widens confidence intervals), location and numbers deployed into account. At least some moderately sophisticated analysis can and should be publicly reportable. Why? For democratic assurance that statistical science is being deployed – and as diligently as medico-surgical skills are<sup>12</sup> - in the service of our forces so that anticipated, or empirical, risks are rapidly redressed<sup>12-15</sup>; and to assuage concerns about the rules of engagement that govern proportionate military response to threats. In Afghanistan, by empirical measures, those threats are considerable. Military sources equate them to the Korean war.

The media need to heed not just national numbers of military fatalities and casualties but also rates per 1000 military personnel which requires keeping track of changes in numbers deployed and that an equivalent tally be kept up to date for other nations besides our own. The combined fatality data from Afghanistan for Canadian and UK military personnel are a siren for politicians to back-up the troops who, in our name, safeguard the freedoms of others.

**TABLE: Military deployments, fatalities and casualties in Iraq (UK) and Afghanistan (UK and Canada).**

Period and Location Of Operations	Number of days	Military deployment	Military fatalities	Military casualties {rate per 1000 personnel years (95% CI)}	Military fatality rate per 1000 personnel years (95% CI)
<b>UK military deployment in Iraq</b>					
Mar 20 to May 1, 2003 (end of major combat, & includes friendly fire fatalities <sup>11</sup> )	43	46,000	33	?	6.1 (4.0 – 8.2)
May 2, 2003 to June 28, 2004 (sovereignty to Iraq)	424	10,150	27	?	2.3 (1.4 – 3.2)
June 29, 2004 to Jan 30, 2005 (Iraqi elections & 10 lives lost in downed Hercules)	216	9,800	25	?	4.3 (2.6 – 6.0)
Jan 31, 2005 to Dec 14, 2005 (Iraqi elections) plus Dec 15, 2005 to Feb 12, 2006	378	9,850	16	?	1.6 (0.8 – 2.3)
Feb 13, 2006 to August 12, 2006 (cluster of 5 deaths in a plane)	181	8,500	14	?	3.3 (1.8 - 5.6)
<b>UK military deployment in Afghanistan</b>					
<i>Dec x 2001 to April 30, 2006 (UK assumes ISAF command in May 2006)</i>	1,596	1,000 (guesstimate)	7	?	1.6 (0.6 - 3.3)
May 1 to July 12, 2006 plus July 13 to August 12, 2006 (On 10 July, Minister of Defence announced additional 900 troops to increase British contingent in Helmand to about 4,500 by October 2006 <sup>13</sup> )	73 + 31	3,300 + 3,600	6 + 6 (includes one at camp in Kabul)	?	11.4 (5.7 – 20.4)  that is: <b>11</b> fatalities in estimated 660+306 personnel years in Helmand
<b>Canadian military deployment in Afghanistan</b>					
<i>Feb 2 2002 to April 30, 2006 (cluster of 4 deaths and 8 wounded in friendly fire)</i>	1,549	1,500 (guesstimate)	15	46 in 6,366 personnel-years { 7 ( 5 - 9)}	2.4 (1.3 - 3.9)
May 1 to August 12, 2006	104	2,200	11	36 in 627 personnel-years {57 (39 – 76)}	17.5 (7.6 – 29.3)

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