The killing season—fact or fiction?

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You come out of medical school knowing bugger all—no wonder August is the killing season. We all kill a few patients while we're learning.¹

In making the above statement, one of the principal characters in the controversial BBC television series *Cardiac Arrest* suggests that hospital patients are at increased risk of dying during the early days of August, when newly qualified doctors start as house officers for the first time. The belief that hospital patients are at increased risk of dying during this period because of the inexperience of the doctors looking after them is fairly widespread and has led to the first week of August being dubbed the "killing season." In view of the increased emphasis on the quality and outcome of clinical care and on the rights of patients,² we thought that it would be appropriate to determine whether the idea of the killing season was fact or fiction.

Patients, methods, and results

We obtained from the Office of Population Censuses and Surveys details of all deaths occurring in NHS hospitals (except psychiatric institutions) in England and Wales for the last week of July (25-31 July) and the first week of August (1-7 August) from 1983 to 1992. Of the 107 576 deaths that occurred during the study period, 54 240 were in the last week of July and 53 336 in the first week of August. We found that for each major cause of death more deaths occurred during the

last week of July than in the first week of August (table). Because we had no data on the number of admissions during the study period, we were not able to calculate rates of death. We did calculate, however, proportional mortality ratios³ for each cause of death; no significant differences occurred in the proportion of hospital deaths due to potentially avoidable causes such as asthma and ulcers between the last week of July and the first week of August (table).

Comment

Our data do not support the hypothesis that hospital patients are more likely to die in the first week of August than at other times of the year. Our study shows that there are in fact fewer hospital deaths in the first week of August than in the last week of July. The main limitation of our study was that we had no data on the number of admissions during the study period and were not therefore able to calculate rates of death. If fewer patients were admitted in the first week of August then the expected number of deaths would be smaller, giving a favourable impression of the risk of death during this time.

We did examine, however, the deaths that occurred in hospital by their cause and found no evidence that the number of deaths from conditions that usually require the patient to be admitted as an emergency (and that cannot usually be prevented)—such as myocardial infarction and road traffic accidents—was any higher during the first week of August. We also found no evidence that the proportion of hospital deaths due to potentially avoidable causes such as asthma increased in early August. A study in an American hospital also found no evidence that hospital deaths rose when newly qualified doctors started work.⁴ We therefore conclude that newly qualified house officers have been falsely accused of increasing the number of deaths in hospital and that the idea of the killing season is very much fiction.

1 Dillner L. Frightening realism. *BMJ* 1994;308:1108.

2 Department of Health. *The patient's charter: raising the standard*. London: DoH, 1991.

3 Hennekens CH, Buring JE. *Epidemiology in medicine*. 1st ed. Boston: Little, Brown, 1987:85-6.

4 Buchwald D, Komaroff AL, Cook EF, Epstein AM. Indirect costs for medical education—is there a July phenomenon? *Arch Intern Med* 1989;149:765-8.

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Number of deaths in hospital in England and Wales by cause during 25-31 July and 1-7 August from 1983 to 1992 and proportional mortality ratios by cause of death (July:August)

Cause of death	Deaths during 25-31 July (n=54 240)	Deaths during 1-7 August (n=53 336)	Difference in No of deaths (July v August) (n=904)	Proportional mortality ratio for July:August (95% confidence interval)
Ischaemic heart disease:				
Myocardial infarction	7 515	7 150	365	1.03 (1.00 to 1.06)
Other causes	4 345	4 329	16	0.99 (0.95 to 1.03)
Stroke	7 913	7 749	164	1.00 (0.97 to 1.03)
Asthma	135	129	6	1.03 (0.81 to 1.31)
All malignant neoplasms	14 628	14 396	232	1.00 (0.98 to 1.02)
Gastric and duodenal ulcers	374	352	22	1.04 (0.90 to 1.21)
Accidents:				
Road traffic	561	529	32	1.04 (0.93 to 1.17)
Others	777	763	14	1.00 (0.91 to 1.11)
All other causes	17 992	17 939	53	0.99 (0.97 to 1.01)

A lesson in Indonesian

The British prefer definite answers. Let your yea-yea be your yea-yea. No greys, please. Is the IRA ceasefire permanent: yes or no?

In Indonesia there is a word in common use that nicely circumvents the need for black and white. *Belum* means "not quite yet"; it is a word implying continuing possibility.

Do you speak English? *Belum*.

Do you have children? *Belum*.

Do you know the meaning of life? *Belum*.

It is considered both impolite and cynical to say no outright. This heads for some funny moments:

Is the taxi on fire? *Belum*.

It is an attitude akin to that old music hall joke:

Do you play the violin? *I don't know. I have never tried.*

Perhaps; maybe; possibly; not yes or no but within the realm of what might have been. Soft edges are welcome in this great bus ride of human adventure.

Is this the best of all possible worlds? *Belum*.

Might the world soon come to an end? *Belum*.

Will there be health for all by the year 2000? *Belum*.

Can we do without weapons of war? *Belum. I don't know.*

We have never tried.

Is it hopeless to think that we might . . . ? *Belum . . . not yet.*—Adapted from an anonymous source by DOROTHY LOGIE, general practitioner, Earlston