

material to the community. The mean values are shown in the Box. In both groups there was a small incremental rise in mean serum folate concentrations, and a fall in the prevalence of low values, after the introduction of fortification. The mean value of 14.0 nmol/L for women in 1993–1996 increased by about 19% to 16.7 nmol/L in 2000. The percentage of low values decreased from 8.5% to 4.1% over that period. Although it is possible that the increase in serum folate concentration reflects dietary education and use of folate supplements in women of reproductive age rather than food fortification specifically, parallel changes were also observed in men.

In the United States, folate fortification of all enriched cereal grain products was mandated from January 1998. This led to a dramatic increase of 250% in mean folate levels in women aged 15–44 years,⁴ and an increase of 50% in the median values (uncorrected for outliers) for men, women and children of all ages submitted for clinical evaluation.⁵ By comparison, the increase in folate levels in Australia has been very small. We conclude that to obtain a significant increase in folate intake in the community by food fortification, a policy of mandatory rather than voluntary fortification is required.

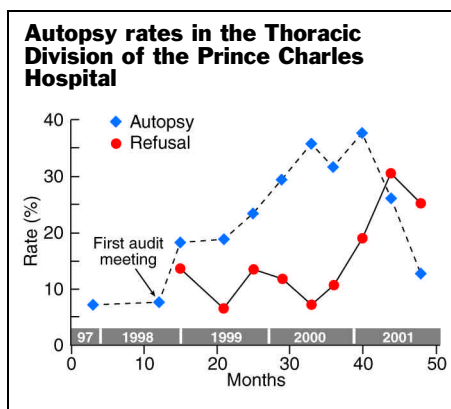
1. MRC Vitamin Study Research Group. Prevention of neural tube defects: results of the Medical Research Council Vitamin Study. *Lancet* 1991; 388: 131-137.
2. Czeizel AE, Dudás I. Prevention of the first occurrence of neural-tube defects by periconceptional vitamin supplementation. *N Engl J Med* 1992; 327: 1832-1835.
3. Bhattacharya CG. A simple method of resolution of a distribution into Gaussian components. *Biometrics* 1967; 23: 115-135.
4. Folate status in women of child bearing age – United States, 1999. *MMWR Morb Mortal Wkly Rep* 2000; 49: 962-965.
5. Lawrence JM, Petitti DB, Watkins M, Umekubo MA. Trends in serum folate after food fortification. *Lancet* 1999; 354: 915-916. □

The decline in hospital autopsy rates in 2001

Helen E Ward,* Belinda E Clarke,†
Paul V Zimmerman,‡ Michael I Cleary§

* Medical Officer in Clinical Audit; † Director of Anatomical Pathology; ‡ Director of Thoracic Medicine; § Executive Director Medical Services, The Prince Charles Hospital, Cherrmside, QLD 4032

TO THE EDITOR: In late 1998, a clinical audit in the Thoracic Division of the Prince Charles Hospital found the autopsy rate was 7% of all patients who died in the Division (excluding Palliative Care) for the 12 months to September 1998. Following discussions and acknowledgement of the importance of hospital autopsy as a clinical audit tool, the Division's policy to consider an autopsy in all patients who died was



reinforced. Registrars were educated in seeking approval and in counselling relatives.

As a result of these interventions and ongoing audit, a decision in relation to autopsy is now recorded in more than 90% of charts following a patient's death, compared with 40% initially. The autopsy rate progressively increased, and, from March 2000 to January 2001, it was 35%, five times the baseline rate, and the refusal rate was 11% (Box). The rate of limited autopsies (generally only excluding the brain) increased from 20% to 50%.

However, from early 2001, coinciding with the ongoing negative Australian press coverage related to aspects of autopsies, there has been a marked decrease in relatives' agreement to allow autopsy and extent of autopsy. The refusal rate for autopsy increased to 30% for the four months to May 2001, and was 25% to September 2001. The autopsy rate fell dramatically to 27% and 13% for the same periods. Nine of the 10 autopsies were limited, usually to a single organ or body cavity.

Data from death certificates are vital for education, research and public health purposes.^{1,2} Autopsies remain the only way to audit the accuracy of death certificates. A review found that the rate of clinical diagnostic inaccuracy for major findings at autopsy is about a third, and this rate has not changed since 1912.³ This unavoidable baseline of diagnostic error⁴ does not

necessarily indicate incompetence or malpractice. It is essential that the public understand that medicine is not an exact science, that we do misdiagnose conditions, and that identification of these "errors" is of value to relatives, to future patients and to society.

Legislative changes are being proposed in Australia that will make obtaining consent for autopsies more complex and potentially distressing for relatives. Education of medical staff and the general public must accompany these changes if they are not to be the final "nail in the coffin" of the hospital autopsy and remove an important facet of continuing improvement of medical practice.

1. Australian Bureau of Statistics. Cause of death certification Australia — a booklet for the guidance of medical practitioners in completing medical certificates of cause of death. Canberra: ABS, 1999.
2. McKelvie PA. Medical certification of causes of death in an Australian metropolitan hospital. Comparison with autopsy findings and a critical review. *Med J Aust* 1993; 158: 816-821.
3. Kingsford DPW. A review of diagnostic inaccuracy. *Med Sci Law* 1995; 35: 347-351.
4. Hill RB, Anderson RE. An autopsy-based quality assessment program for improvement of diagnostic accuracy. *Qual Assur Health Care* 1993; 5: 351-359. □

How much alcohol is drunk in Australia in excess of the new Australian alcohol guidelines?

Tim R Stockwell,* Penny Heale,†
Tanya N Chikritzhs,‡ Paul Dietze,§
Paul Catalano¶

* Director, † Health Science Research Fellow, ‡ Research Associate, National Drug Research Institute, Curtin University of Technology, Perth, WA 6845; † Research Officer, § Senior Research Fellow, VicHealth Research Fellow, Turning Point Drug and Alcohol Centre Inc, Fitzroy, VIC.
tim@ndri.curtin.edu.au

TO THE EDITOR: The National Health and Medical Research Council has launched new Australian alcohol guidelines¹ to help reduce alcohol-caused deaths in Australia, estimated to have been 3290 in 1997.² Male drinkers are advised to drink no more than an average of 40 g alcohol per day and

Percentage of alcohol consumed at risk levels for acute and/or chronic harm, as specified in the new Australian alcohol guidelines,¹ by age and sex (n = 10 030, weighted data)

Age (years)	Females (%)	Males (%)	Total (%)
14–17	71.3	77.4	75.1
18–24	82.3	92.9	89.9
25–39	68.1	66.4	66.9
40–64	67.7	62.0	63.6
65 +	46.5	39.5	41.4
All ages	68.4	66.5	67.0