To the Editor

Weight of all births and infant mortality

SIR—In response to the paper by Saugstad on weight of all births and infant mortality (September 1981, p 185), we would like to share our experience in India concerning the influence of birth weight and gestation on mortality.

Perinatal, neonatal, and infant mortality was studied in an urban cohort in Delhi in a population of 100 000.¹ Birth weight and gestation were important factors which influenced the outcome, except in babies with a birth weight of less than 1500 g in whom outcome was poor irrespective of the period of gestation. Perinatal, neonatal, and infant mortality was 703·70, 461·54, and 615·38, respectively, in birthweight group 1001–1500 g and fell to 3·89, 4·88, and 21·62 in the weight group 2501–3000 g. Above 3000 g the figures were 4·08, 5·47, and 17·89 (table 1). When gestation was considered along with birth weight, there were remarkable differences within the same birthweight group (table 2).

The overall perinatal mortality rate was 38·8, neonatal mortality rate 21·18, and infant mortality rate 46·5.

Similar influence of birth weight was observed in a hospital study of 27 000 consecutive births,² even though the overall perinatal death rate was much higher (75·6). The perinatal death rate was 901·03 in the weight group 1001–1500 g and fell to 16·71 in the weight group 3001–3500 g, after which it again

rose to 28·24 and 54·79 in the weight groups 3501–4000 g and above 4000 g, respectively. In this study 31·3% of births occurred with a birth weight of 2500 g or less and 7·79% with a birth weight of 2000 g or less.

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Epidemiology of sudden infant death syndrome

SIR—The study of a large birth cohort from which cases who subsequently died from the sudden infant death syndrome (SIDS) have been identified is a potentially exciting adjunct to our knowledge of this perplexing disorder. Unfortunately, however, the study based on the Cardiff Birth Survey¹ may suffer from inadequate case ascertainment.

It is a common misconception that all cases of SIDS occur at home. Certainly, comparatively few such deaths occur to infants who are hospital inpatients but many are not ascertained as being dead until they have reached hospital. Indeed, the Foundation for the Study of Sudden Infant Death actually suggests to the health personnel that this is the advisable course to take. In a study carried out in Oxfordshire and West Berkshire² we found that 29% of the sudden unexpected infant deaths were registered as having occurred at or en route to hospital. A further factor presumably lacking in this study is the identification of any child actually dying outside Cardiff. We found that a not inconsiderable number of such deaths occurred while the parents were on holiday outside the region, or shortly after they had moved house.

How might such biases affect the published results? Obviously the reported incidence will be a pronounced underestimate, but that in itself would not affect the calculation of the relative risks, nor the computation of overall risk.

Nevertheless, for the patterns of relative risk to be meaningful it is vital that there be no bias in the distribution of maternal, social, and medical factors

Table 1 Mortality rates by birth weight

Birth weight (g)	No of babies	Perinatal	Neonatal	Infant
≤1000	7	1000·0	1000·0	1000·0
1001–1500	27	703·70	461·54	615·38
1501–2000	118	177·97	150·94	242·72
2001–2500	914	15·32	22·03	60·39
2501–3000	2054	3·89	4·88	21·62
≥3000	1471	4·08	5·47	17·89

Table 2 Mortality rates by birth weight/gestation

Birth weight—(g) (gestation (weeks))	No of babies	Perinatal	Neonatal	Infant
≤1500	34	764·70	562·50	687·50
1501–2000 (<37)	33	272·73	214·28	259·26
1501–2000 (≥37)	69	159·42	142·86	241·93
2001–2500 (<37)	145	48·27	62·50	114·28
2001–2500 (≥37)	681	8·81	16·22	46·44
≥2501 (<37)	300	13·33	10·07	28·24
≥2501 (≥37)	2900	3·10	4·50	17·82