

total number of vehicles, estimated mileage, traffic density, and other criteria used by road safety authorities. In fact, as Mr Leeming well knows, these rates give the impression of a reduction of road accident mortality and morbidity in all technically developed countries. What the BMA was trying to do was to point out that the rates give rise to a false sense of complacency and disguise the fact that, relative to other causes of mortality and morbidity, road accidents are steadily growing in importance.

Finally, Mr Leeming repeats his claim, recently publicised in *The Times*, that the fall in mortality following the introduction of the 80 mg/100 ml blood alcohol limit in 1967 was due to environmental measures which were taken about the same time. It would be interesting to know which of them was responsible for such a remarkable time distribution of casualty savings. As compared with the previous year, savings of more than 40% were recorded on late Saturday nights and early Sunday mornings (corresponding with peak drinking times), whereas the savings on weekdays during working hours were minimal.

Mr Leeming should not assume that it is impossible to get full information about human factors because he has personally failed to obtain it or that it will need "total reform of the law" in order to get it. There is nothing to stop attitude and distribution studies being carried out in the driving population, and a number of studies, although not nearly enough, have already been carried out. One suspects from his letter that Mr Leeming is not aware of epidemiological techniques, as he assumes that information can be obtained only from the police. No one trained in epidemiology can accept Mr Leeming's parting shot: "You must, however, remember that we engineers know how to stop the accidents. We have done it many times. I have done it." Public health authorities have admitted that highway engineering is as important to public health in the twentieth century as was sanitary engineering in the nineteenth century. Mr Leeming should repay the compliment by trying to understand the epidemiological approach to road accident prevention.

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Molar dosage of calcium chloride solutions

SIR,—The confusion arising from the labelling and apparent change in strength of calcium chloride solution *BP* is not due to the adoption of SI units (Dr D A Chamberlain and others, 30 October, p 1068) but to the succession of changes made by the General Medical Council in the official *BP* standard for calcium chloride, which exists in various degrees of hydration.

Until 1958 the official *BP* form of calcium chloride was the anhydrous salt, CaCl_2 (M Wt=111), a 10% solution of which contained 0.9 mmol (1.8 mEq) of calcium per ml. In 1958 calcium chloride hexahydrate, $\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$ (M Wt=219), became official and a 20% solution of this was made to maintain the calcium ion concentration at 0.9 mmol/ml. In 1971 calcium chloride dihydrate, $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ (M Wt=147), was made official and consequently a 13.4% solution of this salt was

necessary to maintain the calcium concentration.

Our supplies of calcium chloride solution *BP* 13.4% $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ (Evans) are adequately labelled on the outer box as: "This solution contains the equivalent of 20% of calcium chloride hydrated *BP* 1963, $\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$, or 10% of calcium chloride anhydrous=912 mmol of Ca^{++} per litre." While we agree that the apparent changes in strength on a metric weight/volume basis is confusing, the calcium ion concentration has remained unchanged in each case. Thus the prescribing of calcium in millimole doses eliminates any problems arising from changes in salt form.

We should also like to point out that the DHSS recommended that the changeover to SI units within the NHS be completed by 1 December 1975 (DHSS Circular HSC (IS) 140) and that by now most hospitals in the UK have adopted this system.

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The Framingham study

SIR,—I would like to clarify the situation pursuant to the claim of Dr J C Petrie (31 July, p 289) and the response of Dr I McD G Stewart (4 September, p 584) about blood pressures in the Framingham study.

I think it is fair to say that in general the Framingham study is "concerned with the natural history of a population with a wide range of blood pressures." However, some qualifications are necessary because Dr Stewart's scepticism is to some extent justified. First of all it must be admitted that no study of a human population can be premised on the assumption that people can be kept from medical care (except possibly in some primitive societies—but even they have their medicine men). I think it is fair to say that the Framingham data provide a reasonable estimate of the natural history of hypertension but that it to some extent underestimates the risk. The accompanying table seems relevant. It shows that only a small percentage of those who have hypertension receive treatment and that even at systolic pressures of 200 mm Hg

Percentage of subjects first started on antihypertensive treatment at examinations 4-10

Systolic blood pressure* (mm Hg)	Age (years)			
	35-44	45-54	55-64	65-74
	<i>Men</i>			
<120	0.40	0.43	0.58	2.90
120-129	0.45	0.76	0.73	1.46
130-139	0.56	0.96	1.23	2.05
140-149	2.26	2.23	2.49	1.66
150-159	7.75	5.74	7.12	7.02
160-169	10.42	8.25	8.55	7.02
170-179	12.50	18.89	15.44	14.81
180-189	23.08	27.27	23.75	14.29
190-199	25.00	26.92	30.61	17.39
≥200	40.00	27.78	36.73	20.83
Total	1.63	2.49	4.21	4.46
	<i>Women</i>			
<120	0.88	1.91	1.23	1.47
120-129	1.31	2.25	1.58	4.58
130-139	2.82	2.70	2.93	3.60
140-149	3.45	5.30	5.86	5.95
150-159	10.53	10.84	6.35	7.97
160-169	10.71	14.76	11.60	9.47
170-179	22.22	20.77	16.28	16.13
180-189	22.22	31.43	17.45	20.25
190-199	40.00	33.33	40.85	26.92
≥200	42.86	53.33	39.58	32.26
Total	2.20	5.04	6.69	8.96

*On examination preceding the first use of antihypertensive drugs.

or greater less than one-half receive treatment. It is noteworthy that the percentage treated increases (as expected) with the pressure but decreases with age and that women unexpectedly receive more treatment than men.

Antihypertensive therapy in Framingham has thus far had a disappointing impact on blood pressure and cardiovascular mortality in the Framingham cohort on comparing the experience before antihypertensive agents were available with that after they were introduced into wide use. Only malignant hypertension and its common sequel of renal failure have passed into oblivion. This disappointing impact of the availability of effective oral antihypertensive agents is very likely a consequence of the failure of physicians to appreciate fully the hazard of asymptomatic hypertension before organ damage and of their patients to understand they are in real jeopardy, as well as difficulty in obtaining long-term compliance with antihypertensive regimens. Referral of patients to private physicians has, in fact, had a disappointing impact on all risk factors. The obese remain fat; cholesterol values remain elevated; and hypertensives remain so. We are beginning to see some impact on cigarettes in middle-aged men but not women.

I think it is fair to say that the Framingham study provides a reasonable estimate of the natural history of cardiovascular disease as it evolves in a general population. It is also worth noting, however, that it is virtually impossible to study a population long term without having some influence upon it.

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Which college?

SIR,—In a medical journal which is described as "British" it is disappointing to find the president of the Royal College of Surgeons of England continually referred to as the "President of the Royal College of Surgeons" (23 October, p 1024). Surely you do not need reminding that there are three other Royal Colleges of Surgeons in the British Isles, and I can inform you that the Royal College of Surgeons of Edinburgh, founded in 1505, is by no means defunct. I must protest against this constant inferred assumption that there is only one Royal College of Surgeons in the United Kingdom, and this insensitivity to the other nations of the British Isles.

The royal colleges work together today in the greatest harmony and we have the highest regard for each other—witness our newly established Conference of Medical Royal Colleges and their Faculties in the United Kingdom. Please do not ruffle up feelings and disturb the present happy situation.

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Oral contraceptives and myocardial infarction in older women

SIR,—Dr J I Mann and his colleagues, in their paper on this subject (21 August, p 445), imply in table II that no user of the diaphragm suffered a myocardial infarction or thromboembolism. Do they mean *excess* mortality