LETTER TO THE EDITOR—
from Dr J. C. Barbenel and Dr Ferguson-Pell

Sir,

We read the paper by W. A. Denne, on The 'Hammock' Effect in Wheelchair Cushion Covers (*Paraplegia*, 19, 38) with considerable interest, but the conclusions with some scepticism.

The obvious criticisms of the methodology are that the general conclusion has been based on too few results—a single cushion and only two normal subjects were investigated—and that no details have been given of how the pressures were measured. These criticisms are, however, minor in the light of the author's failure to understand the rationale underlying the use of extensible covers: that the interface pressure depends primarily on the cushion and that the cover is secondary and is of importance only when a satisfactory pressure distribution has been established.

We have provided numerous special cushions for wheelchair users at high risk of developing pressure sores, many of whom are spinal injury patients. Having selected or made a cushion which produces a satisfactory pressure distribution for the patient, we then try to supply a cover which has the least deleterious effect on these pressures. To produce a satisfactory pressure distribution we, and others (Reswick and Rogers, 1976; Ferguson-Pell *et al.*, 1980) use cushions which are thicker, and foams which are denser than the 3 in Department of Health and Social Security cushion used by Dr Denne. We think that this cushion is too soft and too thin, and as a result becomes compacted beneath the sites of high pressure, producing an unsatisfactory pressure distribution; under these circumstances the nature of the cover is unimportant and this Dr Denne appears to have confirmed for his male subject.

It is not possible, however, to extrapolate from the 3 in cushion to others which are thicker and denser and produce different, and more favourable, pressure distributions. Dr Denne appears to have failed to appreciate this vital point and his results apply only to the cushion he has investigated. His results cannot justify the general statement that the effect of the cover 'is insufficient under most clinical conditions to adversely affect the seating pressure distribution'.

REFERENCES

- FERGUSON-PELL, M. W., WILKIE, I. C., RESWICK, J. B. & BARBENEL, J. C. (1980). Pressure sore prevention for the wheelchair-bound spinal injury patient. *Paraplegia*, 18, 42-51.
RESWICK, J. B. & ROGERS, J. E. (1976). *Experience at Rancho Los Amigos Hospital with devices and techniques to prevent pressure sores. In Bed Sore Biomechanics.* Ed. R. M. Kenedi, J. M. Cowden and J. T. Scales, pp. 301-310. Macmillan, London.