

represent potentially important sources of variation in charges for the severely ill from hospital to hospital. Comparative hospital charge analyses that ignore deaths are therefore at best incomplete. At worst, they may be misleading.

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Dr. Horn's Response

In quantifying Severity of Illness, we place all deaths in Level 4, the highest level of Severity. Hence, the only possible change in the cross hospital comparisons, if deaths were included, would be in Level 4 patients. We frequently find that Level 4 contains patients with very variable charges. This is because these sickest patients either:

- Die (with very short or very long length of stay), or
- Are discharged alive, but are considered to be so ill that few resources are used on them. These patients are usually discharged to home, a nursing home, or hospice to die, or
- Are discharged alive, but receive "full court press" treatment in an attempt to save their lives. Large quantities of resources are usually expended on these patients.

In performing cross-hospital comparisons, we always analyze the data in several different ways: with all cases included, with deaths removed, with miscodes removed, and with transfers out removed, plus combinations of the latter three.

We chose to report the results in the January 1983 article with deaths (in addition to miscodes and transfers out) removed because deaths are "not complete cases" just as transfers out are "not complete cases." Hence their charges do not properly reflect differences in care in hospitals. In Maryland, deaths are excluded from the prospective reimbursement process and hence are not included in cross-hospital comparisons. Since three of the hospitals

studied were in Maryland, we followed this pattern.

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On the Cost of Repealing Motorcycle Helmet Laws

In 1980, an article by Muller appeared in the *Journal* evaluating the costs and benefits of motorcycle helmet laws.¹ In that article, the benefits of helmet laws were characterized solely in terms of the reduced medical care required by crash victims who wear helmets. Reanalysis of the data using Muller's methods and recent medical cost estimates by Hartunian, *et al*,² has indicated that Muller may have underestimated by half the medical care saved due to helmet laws. Furthermore, it is clear that there are significant direct savings *other than* medical care, as well as very large indirect savings, attributable to helmet laws.

There is little doubt that the repeal of motorcycle helmet laws by state legislatures since 1976 has been responsible for a significant increase in preventable mortality and morbidity.³ Using medical care cost estimates provided by Faigin,⁴ Muller calculated the extra annual medical care per 100,000 motorcycles subsequent to helmet law repeal. His figure of \$694,255 (1975 dollars) is only 46 per cent of the \$1,502,996 (1975 dollars) which results from application of the well documented cost estimates of Hartunian, *et al*. Other direct costs of helmet law repeal (such as insurance administration, police investigation, legal proceedings, and family/employer losses), not estimated by Muller, add \$418,003 (1975 dollars) yearly per 100,000 motorcycles.

On top of the direct accident costs due to helmet law repeal one can consider the indirect losses to society from preventable disability and death. Although Muller declined to place a value on disability and death, a number of techniques are available for doing so. The human-capital approach taken by Hartunian, *et al*, leads to an estimate of \$5,008,175 (1975 dollars) per 100,000 motorcycles per year. Alternate conventions could easily lead to even higher estimates of indirect costs.⁵

The total annual cost of helmet law repeal per 100,000 motorcycles in 1975 dollars corresponds to over \$13.5 mil-

lion in 1983 dollars. This is well above the estimated 1983 dollar savings in new motorcycle helmets of \$0.5 million per 100,000 motorcycles. Clearly, with more than five million motorcycles on American roads, the decision to "let those who ride, decide" makes poor sense on economic as well as on public health grounds.

Further details of this analysis are available on request to the undersigned.

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On Newborn Sick Cell Screening in NYC

On the recently published study by Grover and colleagues,¹ an update on the status of newborn sickle cell screening in New York City was reported. The authors found no deaths in 131 infants followed through ages 8 to 20 months despite the expected occurrence of life threatening complications and compare their results to previously reported mortality rates of 13-14 per cent in the first two years of life. Certainly the reader worries about the fate of the 10 infants (7 per cent of the homozygous group) who were not located for follow-up as well as the still too brief follow-up period to date. No description is available to the reader regarding the "comprehensive care" which these infants received at 34 participating hospitals and no assurance is given that all 131 infants did indeed receive such care. The authors' statement that "absence of mortality in the