ing the capital and of operating the system.†

The analogous question regarding health services is not (as addressed by Dr. Walsh) whether people pay a large amount for health services. Rather, there are two questions: 1) whether the cost of an improved service is less than the cost of the present service; and 2) whether the served population is prepared to pay for the costs of the improved service. With reference to the first question, the Narangwal data cited by Dr. Walsh ‡ suggest that the total annual per capita health expenditures in villages with primary health care programs are greater than the total expenditures in villages without primary health care programs, but that the difference is less than the cost of the primary health care program. With reference to the second question, the evidence is sparse and conflicting. In Malaysia, the source of medical care chosen appears to be responsive to the relative prices of different services,2 while in the Philippines, visit prices appear to have no effect on whether services are used or on which practitioner is chosen.3 In any case, it is evident that at least a portion of the costs of improved health care services can be mobilized from resources presently spent on inferior health care services and that, as in the water supply case, the cost-effectiveness calculations should take account of this.

2) The Effectiveness

With respect to the impact of water and sanitation projects on diarrheal disease, as noted in our paper and as confirmed by Dr. Walsh, the typical impact is five to ten times greater than the 5 per cent assumed in the original Selective Primary Health Care calculations.4

3) The Use of the Cost-Effectiveness Method

In our paper it was argued that this use of the cost-effectiveness method is inappropriate when, as in the case of water and sanitation programs, the investments produce a broad mix of benefits. It is thus gratifying to see that Dr. Walsh explicitly recognizes this and recommends that decisions on investments in the water and sanitation sector should not be made on the basis


†† of the considerations presented in the original Selective Primary Health Care paper, but that these decisions be made jointly by planners from all sectors (including health) which benefit from such investments.

REFERENCES


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On Trends in Childhood Disability

The summary and analysis by Newacheck, et al.,1 of growing numbers of American children with physical disabilities casts helpful light on several explanations for the increase but ignores the possibility that medical interventions may be partially responsible for the upward trend in numbers of children requiring significant and long-term medical, financial, and social support.

Our reading of fetal mortality rates from 1968–1978 shows a decrease from 2,178/100,000 live births to 1,378.4, a decline of 36.7 per cent in 10 years.2 We suggest that infants who would have died two decades ago are, increasingly, salvaged and face life with impaired function. For example, advances in neonatal medicine have yielded striking gains in survival rates for infants weighing 1500 gm and even as little as 800 gm. Despite the improved survival rates, nearly half of those lowest birthweight infants manifest "major neurological and developmental sequelae at one to five years."

Moreover, the possibility that interventions may carry their own risks of disability, such as retinopathy of prematurity from excessive use of oxygen, should not be excluded from discussions of etiology.4

Reduced infant mortality rates are desirable, as are reduced risks for lifelong physical disability. Perhaps one message from these inquiries into the origin of childhood disabilities is that health professionals must work harder than ever to reduce risks and to prevent disabilities through childbirth education and prenatal care.

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Response from Newacheck, et al.

We appreciate the argument raised by Reich, et al, that some part of the increase in reported childhood activity limitations may be attributable to increased survival rates for low birthweight and other babies over the last 20 years. It is precisely this type of issue that generated our initial interest in conducting the study.1

While it is possible to argue that advancements in medical technology have led to increased numbers of survivors with physical and mental abnormalities, the reverse argument can also be made, i.e., that the same advancements have led to a reduction in incidence of abnormalities. A review by Budetti, et al,2 of some 18 studies of mortality and morbidity of low birthweight (<1500 grams) babies suggests the evidence is mixed. Using the results of these studies, they calculated that intensive care nationwide produced approximately 350 severely handicapped individuals of birthweight 1500 grams or less in 1978 who would have died in 1960. At the same time, they estimated that about 1,350 fewer than expected babies with moderate abnormalities were produced in 1978 when compared with 1960. They did point out, however, that while the incidence of physical and mental abnormalities appears to have fallen in recent