THE LAST WORD

BIOMEDICINE IN THE THIRD WORLD

by James M. Grant

We have the potential *today* to improve human well-being on a grand scale—by accelerating the application of biomedical sciences to Third World health problems. But how do we accomplish this? There are two main courses of action, both well-known, yet seriously neglected. One is to combat (if not eradicate) “diseases of the poor”—about which relatively little research is done even now, despite the heightened attention they have received in recent years.

There is a great degree of inequity between the quantity and quality of research on diseases to which the rich are prone, such as cancer, and those from which the poor suffer, such as diarrhea and schistosomiasis. Diarrhea still takes an annual toll of 3.5 million—primarily the young children of the world's poorer families. Even for economically neutral diseases, such as AIDS, medical breakthroughs so far have been decidedly rich-prone.

The second approach involves applying the results of medical breakthroughs in massive health problems to people who need them. This tack was, in fact, adopted by UNICEF's call in 1982 for a “Child Survival and Development Revolution (CSDR)” —a call made realistic by the availability of low-cost/high-impact medical technologies (applicable on a mass scale, yet grossly underutilized) together with greatly improved means of communicating with and organizing the citizens of developing nations. The global community that concerns itself with children's health dared to strive in earnest to achieve an unprecedented goal: halving 1980 infant and child mortality rates by the turn of the century. Existing low-cost medical technologies with maximum capacity to impact children's health were identified, and approaches for making these technologies available through social mobilization on a massive scale were designed.

The actual methods CSDR identified are familiar to most everyone: growth monitoring to warn of impending malnutrition; oral rehydration therapy (ORT) to combat diarrhea's lethal effects; breastfeeding combined with proper weaning practices; and universal immunization against the six main child-killing diseases (measles, tetanus, whooping cough, polio, diphtheria, and tuberculosis)—which took the lives of 4.5 million children in 1980. These are all simple techniques that have been available for some time. Yet 10 years ago, only five percent of the world's children were immunized and fewer than one percent were receiving ORT. CSDR initiatives have vastly improved those statistics: by late 1987, ORT was being used to treat more than 20 percent of children with diarrhea, and 50 percent of the world's children under the age of one were being immunized.

With such historically unprecedented progress, it is obvious that the goal of the CSDR set for the year 2000 can be attained. But along with this revolutionary capacity for change comes a tremendous responsibility and challenge. It will come about if—and only if—we are willing to assure that biomedical sciences are put to use in poor countries and communities. This will only be possible if members of the medical scientific community assume active leadership roles in solving the problems that still remain.

The Task Force for Child Survival, which first met in Bellagio, Italy in March 1984, includes among its members health ministers from most major developing countries, heads of international organizations including the World Bank and the World Health Organization, and major bilateral aid agency administrators. Kenneth Warren, the Rockefeller Foundation's (New York, NY) representative on the Task Force, emphasized the problems that we face in his paper at the second Bellagio Conference (October 1985). “In spite of the great potential power of vaccines, there has been little, if any, increase in support for vaccine research by most funding organizations.” Research has to be conducted under contrived and “bootlegged” conditions. “Given all of this subterranean activity, there are still relatively few new and better vaccines on the market. But the pressure is building up, and it is now inevitable that there will be a virtual eruption of vaccines within the next 15 years.”

Those who are committed to improving the health and well-being of the world's children—especially its poor ones—eagerly await that “eruption.” We are ready to put to use the secrets hidden so close beneath the surface. And there is another tremendous force at hand: the potential to mobilize and empower people to take greater charge of their own health. This mobilization takes advantage of the new communication capacity of developing countries: radios are ubiquitous, televisions and videotape recorders are widely available, almost every village has a school, and farmers', women's and religious groups are actively involved.

We call for a shift in research priorities. Having a heat-stable measles vaccine would be a tremendous aid in preventing this disease. Producing a multivalent, single-oral-dose vaccine for all six child-killing diseases will be another major breakthrough. Can the leaders of today's scientific community take responsibility for seeing that these vaccines come to market? As a gift from the 20th century to the 21st, can we eliminate polio as well? Can we cut the infant mortality rate in half? I add my voice to those who have already issued the challenge.

As it becomes increasingly undeniable that the capacity to save children's lives—and to improve their health and well-being—is well within our reach, it also becomes increasingly unconscionable *not* to act on that knowledge. Surely the time has come to put the mass deaths of children from preventable causes alongside slavery, colonialism, racism, and apartheid as phenomena that are simply no longer acceptable. Surely the time has come to say that it is obscene to let this continue day after day, year after year. It is you—the world's leaders in the health sciences—who must lead this peaceful revolution for health...worldwide.

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