



Appropriate Technology in Maternal and Child Health



WORLD HEALTH ORGANIZATION

INTERNATIONAL FEDERATION
OF GYNECOLOGY AND OBSTETRICS

Appropriate technology is defined by the World Health Organization as, methods, procedures, techniques and equipment that are scientifically valid, adapted to local needs, acceptable to those who use them and to those for whom they are used, and that can be maintained and utilized with resources the community or the country can afford. In order to comprehend how this definition applies to the health of mothers and children, we need to take a closer look at its individual components.

- "Scientifically valid" refers to how effective the technology performs in achieving its objective. Obstetric and pediatric procedures have a long history of being introduced into clinical practice without undergoing careful evaluation necessitating clinical trials. Once a technique or technology has been established in clinical practice and is considered "a standard" of good care, it becomes difficult to evaluate objectively.

- "Adapted to local needs" means that the technology should help ameliorate a condition which is relevant to the public's health rather than rare diseases of academic interest. The use of epidemiologic parameters like relative and population attributable risks are important in identifying priorities for formulating health strategies and deciding on which technologies should be used in their implementation.

- "Acceptability" to both the consumer and user is basic to health care principles. Careful explanations of procedures and techniques to patients together with consent forms are sometimes required. Health workers should be knowledgeable of techniques and equipment in terms of safety, effectiveness, costs/benefits and be able to explain them in terms that the patient understands. The theoretical performance of a technology (measured by highly skilled technicians) may differ from its real performance (measured in the average clinical setting). The medical profession is often lured by sophisticated

technology over appropriate technology for the simple reason that it provides professional satisfaction, a feeling of being more scientific and "modern", and acceptance by colleagues. In order to overcome this, research funds should be specifically allocated to R & D and evaluation efforts in appropriate technologies. International obstetric and pediatric organizations should call for research papers in this area for their conferences and journals.

- "Maintenance and cost issues" reflects the concern that medical equipment which is developed and tested in industrialized countries is often unsuitable when used in developing countries. Manufacturers, often do not test their products by subjecting them to extreme environmental conditions, consequently little or no information is provided to doctors and nurses using medical equipment in these situations. Product specifications should include equipment performance under a wide range of physical circumstances and operator skills. Furthermore, with "modernization", developing countries with already limited resources spend outrageous amounts of money on specialized equipment, with no proven advantage over less expensive and already available procedures, leaving basic health needs unmet.

The concept of appropriate technology applies worldwide. Antenatal, delivery and postnatal practices should be justified in terms of quantitative outcome measures before general acceptance. Properly conducted epidemiological studies, taking into account diverse cultural and economic differences, together with randomized clinical trials will provide the basis for appropriate MCH practices. This approach is still needed to optimally define the appropriate management of common obstetrical entities like: anemia in pregnancy, hypertensive disorders, hemorrhage and perinatal infections at different levels of health care.

Much work still needs to be done if these principles are to be put into practice. Health professionals should help stimulate the interest and resources necessary for it to happen. Adherence to the principles and approaches of appropriate technology will help us reduce both maternal and perinatal mortality.