

## EDITORIAL

### **Specialized Versus Conventional Treatment of infertility in Africa: Time for a Pragmatic Approach**

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Available evidence indicates that infertility is a major problem associated with reproductive health in sub-Saharan Africa. Worldwide, an estimated 580 million people (approximately 5–8% of couples) experience infertility at some point in their reproductive lives<sup>1</sup>. Of these, nearly 372 million persons (about 186 million couples) reside in low- and middle-income countries<sup>2</sup>. Africa shares the largest burden of infertility in the world. Estimates indicate that an average of 10.1% of couples experience infertility in Africa, with a high percentage of 32% in some countries and ethnic groups within Africa<sup>3</sup>. An “infertility belt” spreading through West Africa, through Central Africa to East Africa has been described<sup>4, 5</sup>. In some countries in this belt, up to one-third of women may be childless at the end of their reproductive lives<sup>6</sup>.

While infertility is a major problem in Africa, very little has been done at the programmatic and service delivery levels to address the problem. Reducing the burden of infertility in Africa would involve the implementation of several primary, secondary and tertiary prevention initiatives. Primary prevention consists of the prevention of

the medical and reproductive health factors that lead to infertility. By contrast, secondary prevention involves the early and appropriate treatment of these conditions, while tertiary prevention is the treatment and rehabilitation of couples affected by infertility.

The World Health Organization estimates that up to 60 percent of infertility cases in Africa are attributable to genital tract infections in males and females as compared to other regions of the world<sup>7</sup>. Thus, interventions aimed at modification of sexual behavior, and early recognition and prompt evidence-based treatment of genital tract infections are important in efforts to address the primary and secondary prevention of infertility in Africa.

To date, the tertiary prevention of infertility has been less than optimal in many African countries. The treatment of infertility consists of conventional methods as well as the assisted reproductive techniques (ART). Conventional methods of infertility treatment involve the surgical repair of blocked fallopian tubes, induction of ovulation, and donor insemination. These have been less well applied in

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many African countries due to inadequate facilities and the poor training of health personnel in infertility management. On the other hand, assisted reproductive techniques are more recent methods, and have only begun to gain grounds in African countries. The first baby conceived through in vitro fertilization was born in England in 1978<sup>8</sup>, while several such babies have been delivered in several parts of the world since then. Since its discovery, the arrays of ART methods have expanded considerably, a development which has opened up new opportunities to resolve the problems of infertility for couples throughout the world.

With the increasing availability of ART, a continuing debate has been the extent to which African countries should imbibe the new technology, and the priority they should accord to its development as part of their public health policies. Although many babies have been born in many African countries through ART in the private sector<sup>9</sup>, it is evident that the procedure is not cost-effective in these countries. ART successes have been achieved in some African countries through small scale efforts to create the ideal conditions that prevail in developed countries, but at great costs to health care system. Despite the efforts, only a few births have been achieved in many African countries compared to the high numbers of couple who seek specialized infertility treatment. Sustaining such ideal conditions for the treatment of a condition that benefits only a few who become pregnant is

hardly an equitable way to allocate resources.

Yet, Africa is burdened by a large number of conditions – maternal mortality, sexually transmitted infections, HIV/AIDS, and malaria – that are more deadly, and for which allocation of similar resources will benefit a greater number of people. Clearly, with the limited health resources available in Africa, the primary and secondary prevention of infertility would be more cost-effective as they would benefit a larger number of people.

Our argument has always been that efforts should be concentrated on the prevention of infertility while improving facilities and infrastructure for the conventional treatment of infertility<sup>10</sup>. As part of this argument, we posit that high-technology treatment of infertility would be a heavy burden on the public health sector in a developing economy, and would limit resources for addressing other pressing health problems.

Some have countered this view by stating that high-technology treatment should be provided as a public health effort to provide comprehensive care and to allow low-income countries to match recent advances in knowledge in developed countries<sup>11</sup>. Our response has been that matching scientific advances in developed countries is a tall order as African countries do not have the economic prerequisites for such an exercise<sup>12</sup>. However, low-income countries can seek to locate ART within the private sector since full economic recovery is needed to sustain the efforts over time<sup>13</sup>. Indeed, the public health

sector that frequently runs on subsidies in low-income countries is unlikely to be able to sustain the economic requirements for a high-technology infertility treatment service.

In conclusion, the management of infertility is an important issue that demands the appropriate and judicious allocation of resources in Africa. However, we believe that from the public health perspective, African countries should invest in the prevention and conventional treatment of infertility, rather than on high-cost ART. The emphasis should be on prevention, since such programs will benefit other sexual and reproductive health problems and also free resources to address the mounting rate of ill-health from other diseases in Africa. The development of high-tech treatment of infertility in the public sector should be a long-term venture, when basic health and social issues have been adequately addressed.

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