Understanding Costs to Improve Youth Reproductive and Sexual Health: Results from a Study in Rural Tamil Nadu

Access to health care is a crucial factor in improving youth reproductive and sexual health in India. Researchers increasingly evaluate the effectiveness of programs to consider whether factors such as different settings and the level of health practitioners' expertise affect the quality and availability of health care. Few studies, however, have considered how costs affect access.

As a first step, the Christian Medical College, Vellore (CMC) in Tamil Nadu and the International Center for Research on Women (ICRW) considered the cost differences of using village-based health aides versus a female doctor to treat sexually transmitted infections (STIs) and other reproductive tract infections (RTIs) of young married women. The research considered several different types of costs associated with this treatment and found that village health aides most often resulted in lower costs for treatment and women's access to health services.

Analyzing Costs

CMC tested this cost comparison by considering the health care costs to CMC of providing care via village health aides (Arm A) compared to care from a female doctor (Arm B). The project team analyzed absolute costs and per unit costs (cost effectiveness) for three intervention components:

(1) Costs associated with identifying symptomatic women (case ID);
(2) Costs associated with treating women (treatment); and,
(3) Costs associated with follow-up activities (follow up).

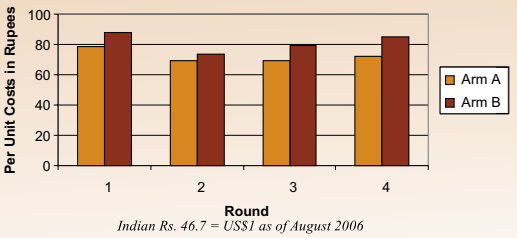
The team also collected data for the costs incurred by women to access the different health care services, such as transportation. Research and training costs were excluded. Data were collected from July 2002 to September 2005 for four rounds of intervention activities.

Project Findings

Results show that young married women who used village-based health aides often incurred fewer costs than women who used the female doctor to treat RTIs. Specific findings include:

- Health care through a village health aide had lower per unit costs on average than care through a female doctor.

Figure 1: Per Unit Costs of Arm A vs. Arm B, in Rupees



Rs. 46.7 = US$1 based on August 2006 exchange rate
Source: CMC-ICRW

- Treatment costs were much lower for village health aides than a female doctor.
- In terms of the number of women reached, treatment from a village health aide was more cost effective than treatment from a female doctor. Monitoring data showed that the percent of women with symptoms who received treatment from health aides was higher than those who saw a female doctor (53 percent versus 28 percent, respectively), because the community-based health aides were able to examine women at home as soon as symptoms were diagnosed.
- The costs to women (actual and opportunity) were lower with a village health aide because women lost less time away from work and had no travel costs, whereas women usually must travel away from their village to see a female doctor.

These findings suggest that integrating village-based health aide services for RTI/STI management into the existing health system rather than relying on highly trained but less frequently available doctors is less costly and possibly more cost effective.

Key Challenges

- How to control for variations in quality among health providers either village aides or doctors which can influence costs, particularly per unit costs, if one group is more successful than the other in persuading symptomatic women to seek treatment.

Table 1: Per Unit Costs of Treatment by Village Health Aide vs. Female Doctor by Category, in Rupees

Per Unit Costs by Arm and by Round						
	Case ID		Treatment		Symptomatic Cure	
Round	Arm A	Arm B	Arm A	Arm B	Arm A	Arm B
1	42	32	139	268	138	209
2	47	37	211	281	281	264
3	53	44	352	577	874	609
4	50	45	236	525	223	471

Source: CMC-ICRW

- How to maintain health worker quality, sustain motivation and provide good supervision when replicating the study in the government system.

The project team also found a few cost comparisons to be ambiguous:

- Costs of identifying symptomatic women were relatively similar regardless of the service provider.
- Relative costs of follow-up activities varied from one round to another and thus could not be definitively determined.

Reproductive Tract Infections among Married Adolescents in Rural Tamil Nadu (2001-2006)

Study site: Kaniyambadi block, Vellore, Tamil Nadu, India.

Target group: Rural, married women, ages 15 to 30, and their partners.

Objective: Compare two alternative approaches to examine, diagnose and treat reproductive tract infections (RTIs) and sexually transmitted infections (STIs) among the target group:

(1) Use trained female, rural health workers to examine, diagnose and treat women in their homes during regular, biweekly visits. The project expectation is that village-based health aides are more accessible but not as highly trained as doctors.

(2) Refer symptomatic women to a female doctor, who is available once every six weeks at a central clinic. Doctors are less accessible but more highly trained than health workers.

Study design: A quasi-experimental design with the two approaches randomly assigned to two catchment areas and a third catchment as a control site.

Costing question: What is the cost of using trained, village-based health workers versus a female doctor to treat RTIs and STIs among married youth? Which

About CMC and ICRW's Adolescent Reproductive Health Program in India

The Christian Medical College, Vellore (CMC) is a teaching hospital that has been operational in Vellore, Tamil Nadu, for 100 years. This brief reflects findings from CMC and International Center for Research on Women (ICRW) 2001-2006 project, where CMC worked with health aides and a female doctor to determine the most effective way to manage reproductive tract infections among married adolescents. Feasibility was key, and this study aimed to provide models for use in state health systems. Ongoing monitoring data provided additional information on reliability of diagnosis and treatment patterns and outcomes. Ramesh Bhat, Ph.D., of the Indian Institute of Management, Ahmedabad, led the cost-analysis portion of the intervention study. The Adolescent Reproductive Health Program in India was funded by the Rockefeller Foundation.

For further information on this project contact:

CHD, CMC Vellore

Christian Medical College, Vellore (CMC)
Dr. Jasmine Prasad, principal investigator, jasminep@cmcvellore.ac.in

ICRW International Center for Research on Women

International Center for Research on Women (ICRW)
Rohini Pande, Sc.D., project director, rpande@icrw.org
Kathleen Kurz, Ph.D., director, reproductive health and nutrition, kkurz@icrw.org
Sunayana Walia, reproductive health specialist, swalia@icrwindia.org
Kerry MacQuarrie, research associate, kerry@icrw.org
Saranga Jain, research associate, sjain@icrw.org