Decision makers want to know which strategies are most cost-effective for improving adolescent reproductive health and what resources are required to implement or scale up successful programs. Yet little is known about these programs’ costs, and few researchers are building cost-analysis into their program designs.

As part of a broader multi-partner program in India, the International Center for Research on Women (ICRW) developed costing analyses of adolescent and youth reproductive health intervention studies, working with the Christian Medical College, Vellore (CMC); the Foundation for Research on Health Systems (FRHS); and Swaasthya.

For more information contact:
Christian Medical College, Vellore (CMC)
Dr. Jasmine Prasad, jasminep@cmcvellore.ac.in
Foundation for Research in Health Systems (FRHS)
Dr. Alka Barua, director, frhs.mysore@gmail.com
Swaasthya
Dr. Geeta Sodhi, director, swaasthya@satyam.net.in
International Center for Research on Women (ICRW)
Rohini Pande, Sc.D., project director, rpande@icrw.org
Sunayana Walia, reproductive health specialist, swalia@icrwindia.org
Kerry MacQuarrie, research associate, kerry@icrw.org
Saranga Jain, research associate, sjain@icrwindia.org

Understanding Costs

Improving the Reproductive Health of Married and Unmarried Youth in India

Understanding Costs to Improve Adolescent Reproductive Health: Evidence from Three Adolescent Reproductive Health Programs in India

Table 1: Per Unit Costs by Arm and Round, in Rupees

<table>
<thead>
<tr>
<th>Round</th>
<th>Case ID</th>
<th>Treatment</th>
<th>Symptomatic Cure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42</td>
<td>32</td>
<td>139</td>
</tr>
<tr>
<td>2</td>
<td>47</td>
<td>37</td>
<td>211</td>
</tr>
<tr>
<td>3</td>
<td>53</td>
<td>44</td>
<td>352</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>45</td>
<td>236</td>
</tr>
</tbody>
</table>

Source: CMC, Tamil Nadu 2006
Rs 46.7 = $1 US based on August 2006 exchange rates.

The per unit costs for treatment of symptoms’ follow-up costs divided by the number of women reporting no remaining symptoms varied for the two approaches. The overall pattern suggests that the health aide study arm (Arm A) was more cost-effective, though the variation in costs per symptomatic cure suggests that this is not conclusive. The health aide approach also was more effective from the perspective that more women were examined, treated and cured of symptoms than in the study arm with a female doctor.

$1.54) per woman versus Rs. 81 (US $1.73) per woman, respectively. The per unit costs of identifying symptomatic women were consistently, but only slightly, higher in the health aide arm (Arm A). Per unit treatment costs, on the other hand, were consistently and sizably lower.
The costs of a social mobilization intervention compared to an intervention to improve government services: FRHS found that the social mobilization intervention cost nearly twice as much as improving government services over five years, Rs. 28,92,800 (US $61,944) versus Rs. 14,62,000 (US $31,306), respectively. However, the activities in the two interventions differed greatly, with the social mobilization intervention being more complex and intensive than the government services intervention. In fact, the cost per activity for the major activity in the social mobilization intervention—a health education session—was considerably lower than that for the major activity training for maternal and child health camp (mass-based clinic in the government services intervention, Rs. 1037.5 (US $22.21) versus Rs. 3249 (US $69.57), respectively.

The social mobilization approach was more effective in increasing reproductive health knowledge and use of services than the government service approach for many, but not all, outcome measures. Given that social mobilization total costs were higher and effectiveness varied by outcome, the relative cost-effectiveness of the two approaches, measured as per capita cost of increase in an outcome, varied depending on the outcome being considered (see Figure 1).

Conclusions
- It is feasible for organizations to cost their interventions. Organizations should cost adolescent reproductive health programs even when such measurement is not their principle goal to add data to a weak cost evidence base.
- Using health aides to diagnose and treat young women's RTIs in their homes every two weeks appears to be a more cost-effective approach than using a female doctor at CMC, Vellore, in Tamil Nadu.
- In the FRHS cost comparison, although the costs and activities of social mobilization and strengthening government services are too different to compare directly, the social mobilization approach appears to be more effective and, on average, less costly per activity.
- Start-up costs are a considerable portion of total costs of an integrated youth model, even one that is replicated. These costs and the per capita costs of program elements, particularly Swaasthya's skills-building modules and social support groups, would be more favorable the longer the program runs and the greater the number of participants.

Figure 2: Per Capita Costs to Increase Girls' Knowledge and Use of Services, in Rupees

Figure 3: Total Costs by Program Element, in Rupees

<table>
<thead>
<tr>
<th>Element</th>
<th>Cost</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC knowledge</td>
<td>785,230</td>
<td>41%</td>
</tr>
<tr>
<td>Use of RTI services</td>
<td>548,402</td>
<td>29%</td>
</tr>
<tr>
<td>SM = Social mobilization study arm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS = Government Services study arm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: FRHS, 2006

Rs 46.7 = US $1 based on August 2006 exchange rate.

The major comparable activity refers to the main activity in each arm for which costs were calculated.

Project Costing Questions

Reproductive Tract Infections among Married Adolescents, 2001-2006 (CMC, Vellore rural Tamil Nadu)
- What are the costs of using trained, rural health aides versus a female doctor to treat reproductive tract infections among young married women, and which is more cost effective?

Community-based Approach to Married Young Women's Reproductive Health, 2001-2006, (FRHS - Ahmednagar, Maharashtra)
- What is the more cost-effective way to increase young married women's reproductive health knowledge and their use of reproductive health services: social mobilization or strengthening government reproductive health services?

Replicating a Proven Model for Improving Adolescent Reproductive and Sexual Health, 2003-2006 (Swaasthya - Delhi)
- How much does it cost to replicate and implement a model adolescent reproductive and sexual health program in a new site?