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Evaluation of maternal and child health services in Latin America

A methodology has been devised for evaluating the efficiencies of maternal and child health care services in 18 countries of Latin America. The results point towards ways of developing local health systems, strengthening coordination between programmes and services, and utilizing resources more rationally.

The evaluation of health services that provide care for women and children is one of the principal areas of cooperation for PAHO’s Program on Maternal and Child Health. The enhancement and application of methods for the evaluation of services is vital for the strengthening of local health systems and the reformulation and adaptation of procedures and standards.

In 1985 the Program initiated the development and application of methodologies for service evaluation. The initiative was well received and to date the methodologies have been used in 18 countries; others are expected to use them in the near future.

The results are given below of the application of an efficiency evaluation procedure between 1985 and 1990. They include findings for 1611 health units of different types. In all cases the evaluations were carried out by maternal and child health units in the countries concerned with support from the regional Program. Experts from other countries contributed their experience and later carried on the process in their own countries.

Present realities

If a positive change is to be made in the way a service operates, one of the first steps should be an evaluation. This means comparing an actual situation with a standardized one and interpreting any differences.

In the present case the evaluation of efficiency in maternal and child health services involved examining the structure of health care resources and assessing their capacity to ensure effective operation. The methodology is useful in identifying structural and procedural elements that either favour or hinder development, and
Extracts from evaluation instrument
Evaluation scheme for maternal and child health services
(primary care units, type 1)

Physical plant
There is a room where the patients can wait comfortably.
There is a separate place for the care of patients.

Material resources
All the elements belong to the unit and are operational.
In the place allocated to the care of patients there are two chairs, a desk and an examination table.
There is a calibrated scale for adults.

Human resources
There is one person responsible for managing the unit.
There is at least one nursing auxiliary or equivalent for every 2000 inhabitants.

Standards and procedures
There are written standards for maternal care.
These include assessment of maternal risk.
There are written standards for family planning.

Programming and administration
The unit has a well-defined geographical area and population.
There is an updated map or sketch of the area.
There is a written programme with quantitative goals for the activities of the unit.

Supplies
The vaccines required in accordance with the Expanded Programme on Immunization are available and arranged in order and identified in the refrigerator.
There are specific drugs for acute respiratory infections and specific regional endemic diseases, in accordance with expected demand.

Health education
Education activities are carried out in each consultation or household visit.
Group meetings are programmed for health education with fixed topics.

Community participation
The staff of the primary care unit:
- have identified the organizations specific to the community (church, social or sports groups, parent-teacher associations, cooperatives, etc.);
- have an updated population census.

The questionnaire with instructions is available from Pan American Health Organization (MCH Program), 525, 23rd Street, N.W., Washington, DC 20037, USA.
systematic application of the instrument can contribute to the reorganization and strengthening of the services. This methodology has been utilized in a number of countries of the Americas, in accordance with epidemiological and operational circumstances.

Early in 1985 the PAHO Programs on Maternal and Child Health and Health Services Development convened several groups of experts to revise the guidelines for evaluation, standardize the elements observed, and introduce updated criteria and approaches in maternal and child health care. The resulting model (see box) was promoted in all member countries of PAHO. An attempt was made to keep the questions and scoring uniform with a view to collecting data that would permit regional analysis, although it was recognized that the greatest value of this instrument lay in its capacity to promote changes at the level of the local health system.

To date, 18 countries have utilized the methodology to evaluate a sample of their services. In one case, that of Córdoba in Argentina, a study was conducted of all the services in the public sector and the data have been cross-referenced with indicators of hospital productivity and performance. In several countries, evaluations have been carried out at one- or two-year intervals, making it possible to follow the evolution of care conditions and to detect whether evaluation has any effect on services.

The instrument makes it possible to express numerically the degree of efficiency in every service. An optimum score would be 100% of the assignable points. The lists of questions are grouped into the following subject areas: physical plant, material resources, human resources, standards and procedures, programming and administration, supplies, health education, and community participation.

The types of unit that provide care for the maternal and child population are grouped as follows: health posts; health centres or outlying physicians’ offices; outpatient obstetrics and gynaecology; outpatient paediatrics; inpatient neonatology; inpatient paediatrics; and inpatient obstetrics and gynaecology.

The data are analysed by type of unit or by category of activity in general or within each type of unit. The results are presented in Tables 1 and 2 on the basis of the following scoring system:

- scores under 40%, critical situation;
- scores of 40–79%, unsatisfactory;
- scores of 80% or over, satisfactory.

Overall, only 6% of units achieved a rating of satisfactory; 80% were unsatisfactory and 14% were in a critical situation. Low percentages of health posts, health centres and outpatient centres were in a critical situation, but the figures for inpatient services in neonatology, obstetrics, and paediatrics were close to and sometimes above 20%. This shows the weakness of hospital referral levels and indicates a need to strengthen this area.

Clearly, “community participation” is the weakest category of activity, given that the situation was critical in 61% of the services that should include such participation and
was satisfactory in only 2%. The Region has only recently begun to democratize health care; even in services at the primary level, authoritarianism and exclusion of the community from decision-making are still common. Programming and administration were in a critical situation in 47% of instances and satisfactory in only 7%, reflecting a failure to programme activities or to have data on the populations served. In contrast, only 9% of supplies were in a critical situation and 39% were satisfactory, probably because of efforts to provide essential supplies on a timely basis.

**Future goals**

There were tremendous weaknesses in maternal and child health care services. Nevertheless, only 14% of the units were in a critical condition. It should be possible to raise standards in the medium term, without huge outlays, through improved programming and management.

The methodology should be adopted by additional countries and retained by those that have already applied it as a means of monitoring the advances made in local health systems. Four countries have already undertaken successive evaluations and thus have been able to identify changes in the condition of their services.

The relationship between decentralization and the development of local health systems led PAHO to establish an interprogramme group, which is formulating more comprehensive methodologies with a view to developing mechanisms for evaluating the general operating capacity of the services and measuring their impact on community health. At the same time, the Program on Maternal and Child Health is working to develop a methodology for the evaluation of community participation.

### Table 1. Evaluation of efficiency of services by type of unit in countries of Latin America

<table>
<thead>
<tr>
<th>Type of unit</th>
<th>Number of units</th>
<th>Critical situation (score 0–39%) (%)</th>
<th>Unsatisfactory (score 40–79%) (%)</th>
<th>Satisfactory (score 80–100%) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health post</td>
<td>462</td>
<td>15</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>Health centre</td>
<td>427</td>
<td>8</td>
<td>86</td>
<td>6</td>
</tr>
<tr>
<td>Outpatient obstetric unit</td>
<td>173</td>
<td>7</td>
<td>82</td>
<td>11</td>
</tr>
<tr>
<td>Outpatient paediatric unit</td>
<td>174</td>
<td>16</td>
<td>80</td>
<td>4</td>
</tr>
<tr>
<td>Neonatology</td>
<td>74</td>
<td>19</td>
<td>70</td>
<td>11</td>
</tr>
<tr>
<td>Inpatient obstetric unit</td>
<td>147</td>
<td>22</td>
<td>74</td>
<td>4</td>
</tr>
<tr>
<td>Inpatient paediatric unit</td>
<td>154</td>
<td>23</td>
<td>69</td>
<td>8</td>
</tr>
<tr>
<td>All units</td>
<td>1611</td>
<td>14</td>
<td>80</td>
<td>6</td>
</tr>
</tbody>
</table>

The evaluation of efficiency and the progressive application of the methodology clearly make a contribution towards the development of local health systems, the strengthening of coordination between programmes and services, and a more rational utilization of resources.

### Table 2. Evaluation of efficiency by category of activity in countries of Latin America

<table>
<thead>
<tr>
<th>Category of activity</th>
<th>Critical Situation (score 0–39%) (%)</th>
<th>Unsatisfactory (score 40–79%) (%)</th>
<th>Satisfactory (score 80–100%) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical plant</td>
<td>20</td>
<td>58</td>
<td>22</td>
</tr>
<tr>
<td>Material resources</td>
<td>11</td>
<td>64</td>
<td>25</td>
</tr>
<tr>
<td>Human resources</td>
<td>43</td>
<td>52</td>
<td>6</td>
</tr>
<tr>
<td>Standards and procedures</td>
<td>26</td>
<td>60</td>
<td>14</td>
</tr>
<tr>
<td>Programming and administration</td>
<td>47</td>
<td>46</td>
<td>7</td>
</tr>
<tr>
<td>Supplies</td>
<td>9</td>
<td>52</td>
<td>39</td>
</tr>
<tr>
<td>Health education</td>
<td>21</td>
<td>48</td>
<td>31</td>
</tr>
<tr>
<td>Community participation</td>
<td>61</td>
<td>27</td>
<td>2</td>
</tr>
</tbody>
</table>