7 Family planning as a service

Some eighty-five countries in the developing world, representing about 95 percent of its population, now provide some form of public support to family planning programs. Tremendous progress has been made in improving couples' access to information and services. But in all countries more could be done. Nearly all programs still fail to reach most rural people; even in the towns and cities the quality of services is often poor and discontinuation rates high. In many countries the potential of the private sector to provide family planning services has hardly been tapped; in others the gap in services provided privately can be filled only by enlarging public programs. Twenty-seven countries have yet to introduce family planning programs. Almost half of these are in Africa, where incomes are the lowest in the world, population growth is the highest, and the potential benefits from family planning may be greatest.

The benefits of family planning, moreover, do not depend on the existence of demographic objectives.

- Family planning improves the health of mothers and children. Both infant and maternal mortality in developing countries could be substantially reduced if pregnancies were spaced at least two years apart, and if pregnancies among teenagers and women over forty were prevented (see Box 7.1). Couples with access to family planning services can prevent unwanted pregnancies that might otherwise result in poorly performed abortions and the risk of serious, even fatal, complications. Family planning services were recognized as one of eight essential components of primary health care by the International Conference on Primary Health Care in Alma-Ata in 1978.

- Family planning makes responsible parenthood easier. Parents can have the number of children for whom they know they can provide adequate food, health care, and education.

- Family planning enlarges the choices available to people, a central purpose of economic and social development. This is particularly true for women, who are often caught in a vicious circle in which too many children mean too few opportunities for other kinds of activity, and vice versa. By enabling women to control their fertility, family planning frees them to become better educated and to increase their own and their children's contribution to development.

- Family planning offers the greatest potential benefits for the poorest people, whose mortality and fertility rates are usually the highest of any group.

For all these reasons, programs to support family planning deserve a central role in the social and economic strategies of governments throughout the developing world. Properly designed, programs need not be particularly expensive. But lack of finance is one of the reasons family planning is

<table>
<thead>
<tr>
<th>Region and country</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivory Coast (1980-81)</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Kenya (1977-78)</td>
<td>7</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>(22)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt (1980)</td>
<td>24</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>Syria (1978)</td>
<td>20</td>
<td>34</td>
<td>5</td>
</tr>
<tr>
<td>East Asia</td>
<td>(65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines (1978)</td>
<td>36</td>
<td>47</td>
<td>31</td>
</tr>
<tr>
<td>Thailand (1981)</td>
<td>57</td>
<td>64</td>
<td>55</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>(40)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia (1980)</td>
<td>49</td>
<td>54</td>
<td>37</td>
</tr>
<tr>
<td>Mexico (1979)</td>
<td>39</td>
<td>51</td>
<td>27</td>
</tr>
<tr>
<td>South Asia</td>
<td>(25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangladesh (1983-84)</td>
<td>19</td>
<td>36</td>
<td>17</td>
</tr>
<tr>
<td>Sri Lanka (1982)</td>
<td>55</td>
<td>57</td>
<td>54</td>
</tr>
</tbody>
</table>

Note: Numbers are based on recent surveys, except for India and Indonesia, which are based on recent program statistics.

a. Average weighted by population for all countries in region with recent surveys.
b. Ever-married women aged 15 to 50.

Source: World Development Indicators, Table 20.
Box 7.1 Family planning for health

Early and frequent childbearing contributes substantially to illness and death of infants, young children, and mothers in developing countries. Family planning programs can tackle these problems through four main mechanisms:

- Lengthening the interval between pregnancies (child spacing). The interval between pregnancies is an important determinant of survival for both the newborn baby and his or her older sibling. Infants and children at highest risk of death are those born less than two years apart (see first chart). This relation holds even when allowance is made for birth order, mother's age, mother's education, urban or rural residence, and the sex of the child.

There are two main explanations for the link between mortality and spacing. The first is that the youngest and next youngest child must compete for the resources of the family and for the attention of the mother. When a woman becomes pregnant again soon after giving birth, the young child may be prematurely weaned, increasing the risk that he or she will suffer from malnutrition, gastrointestinal infection, diarrhea, and other illnesses. Second, a rapid succession of pregnancy, breastfeeding, and then another pregnancy weakens the mother and is linked to low birth weight in the newborn baby. One study of twenty-five developing countries suggested that, if births were spaced two to six years apart, infant mortality would decline by an average of 10 percent, and child mortality would decline by 16 percent. In Pakistan infant mortality (currently 140 per thousand) would fall by 30 percent if all birth intervals of less than thirty-six months could be lengthened to thirty-six to forty-seven months.

- Preventing births for women under twenty and over thirty-four years of age. In these age groups, women who become pregnant carry a greater risk of illness and death, both for themselves and their children. Infant and maternal mortality are highest among teenage mothers. In Pakistan, for example, babies born to teenage mothers have a 50 percent greater chance of dying than do those whose mothers are aged twenty to twenty-nine; in Peru the chance is 15 percent greater. There were 860 maternal deaths per 100,000 live births among teenage mothers in Matlab Thana, Bangladesh in the mid-1970s, compared with 450 for women aged twenty to twenty-nine (see second chart). Part of the explanation for these contrasts is that teenage mothers may not be physically mature enough for a safe pregnancy; in addition, most of their births are first births, which often carry a higher risk of infant and maternal death. As for mothers over thirty-five years old, their babies run an increased risk of congenital defects such as Down's syndrome, cleft

being neglected in some countries and is making only slow progress in others. Aid donors have a major contribution to make in ensuring that family planning programs receive the money they need to be effective.

The use of contraception

Surveys of married women of reproductive age (fifteen to forty-nine) show wide variations in contraceptive use among developing regions (see Table 7.1). In East Asia nearly two-thirds of the married women in that age group use contraception; in China, Hong Kong, and Singapore the proportion is 70 percent or more, as high as in the United States and western Europe. Latin America has reached about 40 percent, whereas the proportion in the Middle East and South Asia is only about 25 percent. Contraceptive use is lowest in sub-Saharan Africa, at less than 10 percent of married women, and this estimate excludes many countries in which use is negligible but data are unavailable.

Contraceptive use varies widely within countries as well. In most, a higher proportion of urban than rural couples use contraception; the distinction is particularly stark in Syria, where 34 percent of urban, but only 5 percent of rural, women were using contraception in 1978. In the Ivory Coast, Kenya, and Mexico, contraceptive use in rural areas is roughly half the rate in urban areas, and in Egypt it is less than a third. Regional differences are also great: in Indonesia, contraceptive use ranged from 53 percent of couples on the islands of Java and Bali to only 16 percent in some of the outer islands in 1983. In Maharashtra and Gujarat
states of India, 35 percent of couples were using contraception in 1981-82, compared with only 11 percent of couples in the states of Uttar Pradesh and Jammu and Kashmir.

Among countries for which more than one survey estimate is available, contraceptive use has increased fastest in East Asia and Latin America (see Figure 7.1). In Thailand, for example, the proportion of married women aged fifteen to forty-four using contraception rose from 15 percent in 1970, the year the official family planning program was launched, to 59 percent in 1981. Progress in South Asia has been slower, with contraceptive use increasing by about 1 percent of couples a year in Nepal, more quickly in Bangladesh, but not at all in Pakistan. In Egypt and Kenya contraceptive use has remained unchanged, despite longstanding public programs.

These survey-based estimates may underestimate contraceptive use because they do not include use among unmarried men or women and sometimes exclude use among couples in informal unions. There may also be underreporting by some women of the use of contraception by husbands, and some respondents may be reluctant to admit to using contraception themselves. At the same time, these figures may overstate the number of people protected by contraception because not all couples using a method are equally protected from the risk of pregnancy. Some are using "efficient" contraceptive methods such as sterilization, the pill, the IUD, injectable contraceptives, condoms, spermicidal foam, and the diaphragm. But others are using less effective methods, such as douche, rhythm, and withdrawal, or are abstaining (see Box 7.2). In Peru, 53 percent of those using...
rhythm or withdrawal had an unwanted pregnancy within three years after a birth, compared with only 29 percent of women who used the pill, the IUD, or injectable contraceptives. The 1978 Philippines Fertility Survey found that 36 percent of married women of reproductive age used some method, but only 16 percent used an efficient method. In contrast, in the Dominican Republic in 1975, contraceptive use was 32 percent for all methods and 26 percent for efficient methods.

Contraception is not the only method of birth control. Induced abortion is widespread, even where it is illegal. There may be as many as 30 million to 50 million induced abortions performed annually worldwide; this wide range is due to uncertainty about the number of illegal abortions. Illegal abortion carries with it a high risk of complications and death and can affect future fertility. In many developing countries abortion is illegal under any circumstances or is permitted only to save the life of the mother; China and India are major exceptions. Elsewhere legal abortion is an important method of birth control—in Cuba, Japan, Korea, the USSR, and eastern Europe. Legal abortion rates per thousand women of childbearing age range from 11 in Canada (1981) and 25 in the United States (1980) to 84 in Japan (1975) and 88 in Romania (1979). Resort to both legal and illegal abortion often results from lack of information about, and access to, safe and effective contraceptive methods.

Unmet need

In the surveys from which data on contraceptive use have been drawn women were also asked whether they would like to have more children. Forty to 75 percent of married women of childbearing age in East and South Asian countries and in Latin American and Caribbean countries want no more children. In a few countries women were also asked whether they wished to delay their next pregnancy for a year or more. Nineteen percent of women of childbearing age in Bangladesh and Thailand, 25 percent in El Salvador, and 32 percent in Guatemala said yes. In countries where both questions have been asked, from 50 to 90 percent of women want either to limit or to space births.

In virtually all countries surveyed, the number of women of childbearing age who want no more children exceeds the number using some kind of contraception. Some of the women who want no more children or who wish to delay a pregnancy are not using a method because they are currently pregnant or because they have been breastfeeding for less than one year and therefore are afforded some (but not total) protection. Others are unable to conceive, or their husbands are away. These women are not "exposed" to the risk of pregnancy, so they do not need contraception, at least not immediately.

The remaining women—those who would like to space or to limit births, who are not using contraception, and who are exposed to the risk of pregnancy—are said to have "unmet need" for contraception. By this definition, 6 to 12 percent of women of childbearing age in Egypt, Kenya, and the Philippines have unmet need for contraception to limit births (see Figure 7.2, low estimate). In Bangladesh, Korea, and Peru, where both limiting and spacing questions were asked, 16 to 33 percent of women of childbearing age have unmet need for contraception. If women who are breastfeeding and those using inefficient methods of contraception are also considered to have unmet need, more than 40 percent of women in Bangladesh and Peru have unmet need for limiting and spacing births; 22 percent of women in Egypt, 10 percent in Kenya, and 29 percent in the Philippines have unmet need for contraception only to limit births (Figure 7.2, high estimate). Estimates for other
The charts on this page show unmet need for contraception among married women aged 15 to 49. In the top pie and bar chart, unmet need for contraception to limit births is shown among women who want no more children. In the bottom pie and bar chart unmet need is shown for women who want no more children or who want to postpone a birth. In each case, the low estimate of unmet need is the percentage of women using no contraception. The high estimate is the percentage using an inefficient method (withdrawal, rhythm, and the like), breastfeeding (within a year of a birth), or using no method.

### Unmet need for limiting births

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimate of unmet need (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt (1980)</td>
<td>High: 22.0, Low: 12.5</td>
</tr>
<tr>
<td>Kenya (1977-78)</td>
<td>High: 3.0, Low: 1.9</td>
</tr>
<tr>
<td>Philippines (1978)</td>
<td>High: 39.0, Low: 11.1</td>
</tr>
</tbody>
</table>

### Unmet need for limiting and spacing births

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimate of unmet need (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh (1979)</td>
<td>High: 41.1, Low: 12.6</td>
</tr>
<tr>
<td>Korea (1979)</td>
<td>High: 30.2, Low: 16.3</td>
</tr>
</tbody>
</table>

Source: Boulier, 1984b.
Box 7.2 Birth planning technology

Several methods of birth control have been practiced throughout human history—abstinence, abortion, prolonged breastfeeding, and coitus interruptus (withdrawal)—but with uncertain effectiveness, and psychological and health damage. Contraceptive research in the past thirty years has made possible a much greater variety of more effective methods. Combined estrogen and progestin oral contraceptives (the ‘pill’) and various intrauterine devices (IUD) were the first major breakthroughs in the late 1950s and early 1960s. Since then other methods have been developed: injectable contraceptives effective for two to three months; more effective copper and hormone-releasing IUDs; menstrual regulation (vacuum aspiration of the uterus within seven to fourteen days of a missed period); male sterilization; simplified female sterilization by laparoscopy and minilaparotomy; low-estrogen pills with fewer side effects; and a progestin-only ‘minipill.’ Barrier methods, such as the condom, diaphragm, and spermicides, have also been improved.

In 1980 the most commonly used methods of birth control worldwide were sterilization and the pill. Among developed countries the pill is the most used method, but sterilization has gained in popularity in the United States and in Great Britain, where it accounts for about a quarter of total use among married couples of childbearing age. The major exceptions to this pattern are Spain, Italy, and the Eastern European countries (except Hungary), where withdrawal, rhythm, or abstinence are still the most prevalent methods.

Among developing countries, sterilization is the most common modern method in Bangladesh, El Salvador, India, Korea, Nepal, Pakistan, Panama, Sri Lanka, Thailand, and Tunisia. The pill is the most favored method in Egypt, Jordan, Syria, much of Latin America, Malaysia, and Indonesia. Injectable contraceptives are widely used in Jamaica (11 percent of eligible women), Thailand (7 percent), Trinidad and Tobago (5 percent), and Mexico (3 percent); this method is convenient to use for rural women and, unlike the pill, does not interfere with lactation. Both the World Health Organization and IPPF have approved injectables—legal in more than 100 countries—but greater use in developing countries is partly constrained by the method’s limited availability. The United States, the major contraceptive donor worldwide, cannot donate injectables because US assistance policy prohibits supply of drugs not approved for domestic use.

Despite the greater variety of contraceptive methods now available, all have shortcomings:

- **Effectiveness.** Under the ideal conditions of controlled studies in developed countries, existing methods can be highly effective in preventing pregnancy: nearly 100 percent for sterilization, the pill, and injectables; 98 percent for the IUD; and as much as 97 percent for the condom and the diaphragm after one year of use. But outside these controlled studies, some methods can be significantly less effective owing to incorrect or inconsistent use. In the United States, one in 100 couples using the pill will have a pregnancy within one year, more than two couples using the IUD, twelve using the condom or diaphragm, and twenty using rhythm. In the Philippines more than three women out of 100 using either the IUD or the pill and thirty-three using rhythm will become pregnant within a year. The motivation of couples to prevent pregnancy is important in the effectiveness of contraceptives. Couples who want no more children are likely to use methods more effectively than those who are spacing births.

- **Side effects.** Physical side effects are a main reason that people switch, or stop using, contraceptives. For some methods, the long-term health risks of prolonged use are unknown. Methods such as the IUD and injectables, which alter bleeding patterns—by spotting between periods, increased or decreased flow, or amenorrhea—may be culturally unacceptable or restrict the activities of users.

Box 7.3 Measuring unmet need for family planning

The concept of “unmet need” used in this Report is based on two questions asked of married women in representative nationwide surveys during the past decade. In more than forty countries women were asked, “Do you want additional children?” Among women who were exposed to the risk of pregnancy (that is, they were neither pregnant nor infertile), some said that they did not want more children. Of them, those who were not using any contraceptive method were defined as having unmet need for spacing births. In some surveys (in fewer countries), women were also asked, “Do you wish to delay pregnancy for a year or more?” Among women at risk of pregnancy, some said yes. Of them, those who were not using any contraceptive method were defined as having unmet need for spacing births.

Some investigators have suggested that responses to such questions are meaningless or, at best, unreliable. They argue that many women in developing countries are not accustomed to planning their families or are uninformed about how to affect the number of births they will eventually have. These criticisms apply most strongly to questions on preferred family size (“Suppose you were recently married and were able to have just the number of children you wanted, how many would that be?”) and desired family size (“If you could choose exactly the number of children you have in your life, how many would that be?”) These questions contain significant hypothetical components, since women cannot costlessly choose family size, cannot have fewer children than they already have, and must imagine alternative life cycles involving different family sizes. Responses to such questions are not consistent even when women are asked the same question at different dates. For example, in Indonesia only 46 percent of women interviewed four months after an initial survey gave an identical response to a question on desired family size. In a similar study elsewhere, only
Research and contraceptive development,
Worldwide expenditure on reproductive
of women were consistent in answering
responses to a question on preferred
family size. (The Population Data
Supplement gives country-level informa-
tion on responses to this question.) In
the study in which two-thirds of
responses to a question on preferred
family size were inconsistent, 90 percent
of women were consistent in answering
a question about wanting additional chil-
dren. In countries surveyed as part of the
World Fertility Survey, contraceptive use
among women who said they wanted no
more children consistently exceeded use
among women wanting more children.
Obviously, not all women who want
no more children use contraception, and
not all women who want to limit their
family size cease bearing children. Sev-
eral factors may account for these dis-
crepancies between attitudes and behav-
ior. First, some women may not consider
the costs of birth control in answering
questions on family size. If the benefits
of avoiding births are small in relation to
the costs of contraception, women who
want no more children have little motiva-
tion to use contraception. Second, the
surveys inquire only about women’s, not
men’s, attitudes. Where both spouses
have been interviewed, the difference
between them tends to be small, but
there are differences. Third, growing
experience with children, plus unantici-
pated events—a child dying, illness of
husband or wife—may lead couples to
alter their plans. Fourth, even modern
contraceptive methods can fail, so that
some women will have more babies
despite their intention not to increase
family size.

67 percent of those reinterviewed after
one month gave an identical response to
a question on preferred family size.
In contrast, women respond consis-
tently over time to a question on whether
or not they want additional children, and
their replies are reasonably good predic-
tors both of contraceptive use and of
future fertility. (The Population Data
Supplement gives country-level informa-
tion on responses to this question.) In
the study in which two-thirds of
responses to a question on preferred
family size were inconsistent, 90 percent
of women were consistent in answering
a question about wanting additional chil-
dren. In countries surveyed as part of the
World Fertility Survey, contraceptive use
among women who said they wanted no
more children consistently exceeded use
among women wanting more children.
Obviously, not all women who want
no more children use contraception, and
not all women who want to limit their
family size cease bearing children. Sev-
eral factors may account for these dis-
crepancies between attitudes and behav-
ior. First, some women may not consider
the costs of birth control in answering
questions on family size. If the benefits
of avoiding births are small in relation to
the costs of contraception, women who
want no more children have little motiva-
tion to use contraception. Second, the

- Inconvenience. Barrier methods (con-
dom, diaphragm, spermicides) have to
be used each time couples have inter-
course. In households in developing
countries, pills and diaphragms are diffi-
cult to store and condoms difficult to dis-
pose of.
- Reversibility. Sterilization is highly
effective but rarely reversible. Injectables
are completely reversible but delay the
return to fertility for several months.
- Acceptability. To some couples, abor-
tion and sterilization are religiously or
culturally unacceptable; some may
regard only abstinence or rhythm as
acceptable.
- Delivery. Sterilization (of both men
and women) requires skilled medical or
paramedical staff, who are often scarce in
developing countries. The IUD, inject-
ables, and the pill require medical backup for treatment of complications and side effects. Programs which
promote the condom, pill, and spermicidal
foam require a good network of supply
points.

No single method of contraception is
appropriate to the needs of all people nor
is there one that is completely safe,
reversible, effective, and convenient. Nor
is such an “ideal” method likely to be
developed in the next twenty years. Family
planning programs will have to rely on a mix of existing methods and a
few new ones whose development is
already well advanced.

Research is being concentrated in two
areas: improving the safety, conven-
ience, and life span of existing methods,
such as the IUD, pill, injectables, and
female barrier methods; and developing
new methods, such as a monthly pill to
induce menstruation, long-lasting biode-
gradable hormonal implants for women,
nonsurgical chemical sterilization for
men and women, a male “pill,” and an
antipregnancy vaccine for women. Some
of these new methods—such as the hor-
monal implant (in the arm), improved
IUDs, the vaginal sponge, cervical cap,
and diaphragms which release spermicid-
emay be widely available in the near
future. Others, such as new male meth-
ods and an antipregnancy vaccine, re-
quire much more research and are
unlikely to be marketed before the end
of this century.

Compared with the past few decades,
the pace of technological development is
slowing. Worldwide funding for contra-
ception-related research was $155 million
in 1979, but has been declining in real
terms since 1972-73 (see chart). About 30
percent of the total is spent on contra-
ceptive development and safety studies;
the rest goes to training and basic research
on human reproduction. Some 72 per-
cent of the total was spent in the United
States. Over 80 percent of the total was
financed by the public sector; industry’s
share has shrunk from 32 percent in 1965
to less than a tenth. Special testing and
regulatory requirements, combined with
product-liability problems, have length-
ened the time between product develop-
ment and marketing, increased the cost
of developing new products, and made
the future profitability of research more
uncertain for private firms.
TABLE 7.2
Percentage of married women aged 15 to 49 practicing efficient contraception among those who want no more children

<table>
<thead>
<tr>
<th>Residence and education</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No education</td>
<td>Seven years' education or more</td>
</tr>
<tr>
<td><strong>Country and family planning index</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong or very strong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea, Rep. of, 1979</td>
<td>58</td>
<td>62</td>
</tr>
<tr>
<td>Colombia, 1980</td>
<td>35</td>
<td>69</td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia, 1974</td>
<td>37</td>
<td>..</td>
</tr>
<tr>
<td>Thailand, 1981</td>
<td>72</td>
<td>45</td>
</tr>
<tr>
<td>Philippines, 1978</td>
<td>22</td>
<td>60</td>
</tr>
<tr>
<td>Tunisia, 1979</td>
<td>21</td>
<td>55</td>
</tr>
<tr>
<td>Bangladesh, 1979</td>
<td>40</td>
<td>71</td>
</tr>
<tr>
<td>Mexico, 1978</td>
<td>40</td>
<td>71</td>
</tr>
<tr>
<td>Weak or very weak</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nepal, 1981</td>
<td>40</td>
<td>71</td>
</tr>
<tr>
<td>Egypt, Arab Rep., 1980</td>
<td>53</td>
<td>72</td>
</tr>
<tr>
<td>Ecuador, 1979</td>
<td>17</td>
<td>35</td>
</tr>
<tr>
<td>Pakistan, 1975</td>
<td>53</td>
<td>60</td>
</tr>
<tr>
<td>Venezuela, 1976</td>
<td>13</td>
<td>44</td>
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<tr>
<td>Kenya, 1977-78</td>
<td>53</td>
<td>58</td>
</tr>
<tr>
<td>Honduras, 1981</td>
<td>11</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: Efficient contraception includes male and female sterilization, pills, IUD, injectables, diaphragm, and condoms. Women who are pregnant or infecurmd are excluded from this table.

.. Not available.
a. Family planning index is interpolated from 1972 and 1982 data to year shown. See notes for Table 6 of the Population Data Supplement.
Sources: CPS and WFS data; Lapham and Mauldin, 1984.

countries are shown in the Population Data Supplement, Table 3.

These high and low calculations of unmet need provide rough estimates, given existing preferences for family size, of the potential for additional contraceptive use. Some analysts, however, have questioned the validity of estimates based on the responses of married women to survey questions (see Box 7.3). Others have noted that even women who are pregnant may have had unmet need in the past that resulted in an unplanned pregnancy, and that such women may shortly be in need again. Nor do these surveys include unmet need among unmarried people. Clearly, use of contraception depends not only on accessibility and cost, but also on how intensely a couple wishes to avoid a birth. This factor is difficult to measure in surveys. Whether unmet need can ever be completely satisfied is debatable. But in the United States, where contraception is widely available, unmet need for limiting births was estimated at only 4 to 8 percent of married women of childbearing age in 1976.

The concept of unmet need is not static. Unmet need may decline as more people have access to contraception or as the nature of services changes. It may increase as people want fewer children, or as the better availability of services raises interest in regulating fertility faster than new services can meet new need. Many women who say they want more children might be potential users of services if given the chance to plan their births. To some extent family planning programs do more than simply satisfy unmet need; they actually generate and then fill such need. In this sense "demand" for contraceptive services is not easily measured; it is partly a function of their supply.

In most countries women in rural areas and with less education are less likely to want to stop childbearing than are urban and more educated women. But of the former, those who do want to stop are less likely than their urban and educated
counterparts to be practicing contraception. Government plays a central role in narrowing these gaps, especially between urban and rural areas (see Table 7.2). In Colombia and Korea, which have strong family planning programs, rural women who want no more children are as likely as urban women to be practicing contraception. In Kenya, Nepal, and Pakistan, which have weaker programs, the contrast between rural and urban areas is much greater.

Reasons for not using contraception

Couples who wish to plan their families face certain costs—financial, psychological, medical, and time-related costs. If these exceed the net costs of additional children, couples will not regulate their fertility, even if, ideally, they would prefer to postpone or to prevent a pregnancy. To individuals, the costs of contraception include:

- Information—the effort to find out where contraceptive methods can be obtained and how they are properly used. In Kenya 58 percent of married women aged fifteen to forty-nine who are exposed to the risk of pregnancy do not know where they can obtain a modern method of contraception; in Mexico the figure is 47 percent.

- Travel and waiting time—the money and time needed to go to and from a shop or clinic and to obtain family planning services. Average waiting times are as high as three hours in hospitals and family planning clinics in El Salvador. Family planning programs in Bangladesh, India, and Sri Lanka compensate sterilization clients for their transport costs and lost wages.

- Purchase—the financial cost of either contraceptive supplies (condoms, pills, injections) or services (sterilization, IUD insertion and periodic checkups, menstrual regulation, and abortion). Most public family planning programs provide supplies and services free of charge or at highly subsidized rates. Purchase costs from private suppliers and practitioners may be substantially higher.

- Side effects and health risks—the unpleasant and sometimes medically serious symptoms that some women experience while practicing contraception. Users of the pill may gain weight or feel ill. The IUD may cause excessive menstrual bleeding, persistent spotting, and painful cramps. In addition, in some countries women are forbidden for religious or cultural reasons from cooking during their menstrual periods; spotting and heavier menstrual flow caused by the IUD can further restrict their activities. Some methods increase the risk of developing serious health problems; higher risk of pelvic inflammatory disease among IUD users and of cardiovascular disease among users of the pill have been reported. (These risks, however, are small compared with those associated with pregnancy and childbirth.)

- Social disapproval—the private nature of family planning and the difficulty of discussing it with providers of services or even with spouses. Family planning may violate personal beliefs, create marital disharmony, or be socially, culturally, or religiously unacceptable.

Surveys of contraceptive use in ten countries asked married women not practicing contraception why they were not doing so. Unless they wanted another child or were pregnant, their reasons included lack of knowledge of a source or method of contraception, medical side effects of methods, religious beliefs, opposition from husbands, and financial costs. In Nepal lack of knowledge of a source was the main reason. In Honduras, Mexico, and Thailand half of the women who did not practice contraception but were exposed to the risk of pregnancy either knew of no source of contraception or feared side effects. In Bangladesh, Barbados, and Nepal as much as a quarter to a third of all married women were not using contraception for these reasons. Contraceptive prevalence clearly could be increased by better information and services—directed to men as well as to women.

Discontinuation rates tell a similar story. According to surveys in thirty-three countries, as many as 30 percent of married women of childbearing age have used contraception in the past but are no longer doing so (see Table 7.3). When contraception is being used to space births, some discontinuation is normal. But many who discontinue contraceptive use do not want more children. As the second column of Table 7.3 shows, as many as 10 percent of all married women are discontinuers who want no more children and are at risk of getting pregnant. In Barbados, Guyana, Jamaica, Korea, and Pakistan, the proportion exceeds one-third (column 3). Follow-up surveys of women who have accepted contraception typically find that much discontinuation is due to medical side effects. In a follow-up survey in the Philippines, for example, this reason was cited by 66 percent of those who stopped using the pill and 43 percent of those who stopped using the IUD. Reducing discontinuation among women who want no more children could increase contraceptive use by at least one-fifth in eight countries (column 4).
SUPPLYING FAMILY PLANNING SERVICES

Family planning programs have evolved in various ways, but a typical pattern begins with services being provided only by private family planning associations and a few concerned doctors and nurses. These groups gradually show that family planning is feasible and acceptable and start pressing for government support. Once persuaded, governments typically provide family planning through the public health system. But because health care is often underfinanced and concentrated in urban areas, and because family planning competes with other medical priorities, the quality of services is uneven and available to only a small proportion of people. Eventually programs are
extended to the countryside, often by paramedical and semiskilled staff with backup support from health centers. More attention is paid to increasing the range of contraceptive methods, providing follow-up services to clients, and working with community leaders to encourage local support. Commercial organizations are also encouraged to provide family planning. Private associations are delegated major responsibilities within the national program for certain services or target groups and continue to test new ways of providing services.

Public family planning programs are now at different stages of development in different regions.

- **East Asia.** Governments have a longstanding commitment to reduce population growth. They have been extremely successful in improving access to family planning services and in widening the range of contraceptive methods available. Large numbers of field workers have been recruited to provide family planning, and sometimes basic health care, in villages in China, Indonesia, and Thailand. Contraceptive use has increased dramatically during the past decade.

- **South Asia.** Official commitment to reduce fertility is strong, but results have been mixed. Contraceptive use is highest in Sri Lanka and several states in southern India, and is lowest in Nepal and Pakistan. The demand for contraception is still constrained by high infant mortality and by a preference for large families. At the same time, recent surveys have revealed substantial unmet need for both limiting and spacing births. Most programs have yet to achieve the rural spread found in East Asia and have tended to emphasize sterilization. Other methods have been largely supplied through subsidized commercial outlets.

- **Latin America and the Caribbean.** At first, widespread demand for family planning was met largely by private doctors, pharmacies, and non-profit organizations, primarily in urban areas. Government support was weak, in part because of opposition from some religious authorities. The 1970s saw a growing interest on the part of governments and a greater tolerance by religious authorities. Most governments now support family planning services for health and humanitarian purposes; Barbados, Colombia, the Dominican Republic, El Salvador, Guatemala, Haiti, Jamaica, Mexico, and Trinidad and Tobago do so to reduce fertility as well. In rural areas, access to services is still inadequate in most countries.

- **Middle East and North Africa.** Some countries in North Africa—Egypt, Morocco, and Tunisia, for example—have long-established programs to reduce fertility. About half the countries in the Middle East provide family planning to improve child spacing and to promote health; only Turkey's program seeks to reduce fertility. In a few Middle Eastern countries, contraception is illegal. In others, cultural practices often confine women to their households, which makes it difficult for them to seek out family planning services. Programs that include home visits by family planning workers are not well developed.

- **Sub-Saharan Africa.** Of forty-one governments for which data are available, only nine have demographic objectives. Most governments that support family planning do so for health reasons, and twelve countries still provide no official backing for family planning. Where services exist, they are provided through health care systems that have only limited coverage, particularly in rural areas. Throughout Africa couples want large families, and infant mortality is high. There is some demand for family planning but it is poorly met by existing programs. As traditional ways of child spacing (prolonged breastfeeding and sexual abstinence) erode, the demand for modern contraception increases. Private organizations have helped to demonstrate that demand and to press for government support.

The management of family planning programs

Perhaps more than any other social programs, family planning programs can be effective only to the extent that they meet the needs of individuals, both for better information about the benefits of controlling fertility and for better services to facilitate doing so. At the same time family planning programs, like all public programs, operate within certain constraints: the availability of manpower and finance, the capacity for training and supervision, and the transport and communications infrastructure. Medical backup is necessary to deliver some contraceptive methods. The challenge for family planning managers is to address individual needs within the confines of these constraints, and in the longer term to ease such limitations.

The personal nature of family planning services has several important implications for designing and managing programs. First, programs must be able to accommodate local and individual needs and a variety of users. Potential clients include men and women; those who are married and unmarried; those of different social, economic, cultural, or religious backgrounds; and those who
may be delaying a first pregnancy, spacing between children, or preventing additional pregnancies. Staff must be discreet, sensitive to the individual needs of clients, and familiar with local customs and beliefs. This requirement has been addressed in several ways: by selecting staff from local communities, by training staff in the environment in which they will work, and by making special efforts to hire female workers. Special services have also been targeted for specific client groups: adolescents, women who have just given birth, and mothers with young children.

Second, programs must encourage clients not only to accept a method of contraception but also to use it effectively and continuously. In societies in which people marry young, couples who are spacing and limiting births may have to use contraception for twenty years. Prolonged, effective use is easier if information and support regarding side effects are assured, resupply is convenient, and the opportunity to switch methods is available. Medical backup and referral is critical, as is the capacity to follow up on clients. Managers need information not only on new acceptors but also on continuing users, dropouts, and nonparticipants (see Box 7.4). Indonesia is one country with an effective monitoring system, including acceptor records, quarterly follow-up surveys of acceptors, and periodic sample surveys of households in which information on fertility and contraceptive use is collected.

Third, because information about the benefits of family planning and of small families may not be widespread, programs must create an awareness of services and their benefits, as well as spread information about the proper use of methods. Information and education activities are necessary both within and outside the system for delivering

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**Box 7.4  Management information systems for improved service delivery**

The arrangements for providing family planning services in many countries are plagued by lack of reliable information on which to base management decisions. Requirements for data collection are imposed on overburdened staff and supervised by medical or other technical personnel untrained to make use of the information. Much time is spent collecting information that is never used.

A management information system (MIS) is any system which organizes the collection and interpretation of data needed by managers to make decisions. The rural health supervisor reviewing a worker's records to assess performance, and the health minister reviewing information on hiring and deployment of staff are both using an MIS. For a family planning program, an MIS could include information on target group size and characteristics, new and continuing acceptor rates and characteristics, numbers and types of follow-up visits, birth rates, staffing patterns, and availability of supplies. These data allow managers to make decisions based on up-to-date and reliable information that is collected as a matter of routine.

Studies in two states in India, Karnataka and Uttar Pradesh, in the mid-1970s showed that fieldworkers providing health and family planning services were spending as much as 60 percent of their time on activities not directly related to delivering their services. Keeping records and attending meetings were the most common extraneous activities. A total of forty-six registers were maintained by five types of fieldworkers, relating to a range of subjects (family planning, maternal and child health, immunization, malaria control) and with considerable overlap of the data they recorded. An assistant nurse-midwife alone maintained twenty-two records and prepared twelve reports a month. The information was not used by supervisors and managers, nor did workers receive any systematic feedback on their performance compared with others. There was little incentive to maintain good records and to report regularly and on time.

Following a review of the system, recordkeeping and reporting were streamlined. The number of registers kept by fieldworkers was reduced from forty-six to six: a register of eligible couples and children, a maternal and child health register, a report on blood smears for malaria, a birth and death register, a stock and issue register, and a diary of daily activities. The various separate reports forwarded to program managers were replaced by a single monthly report by each fieldworker, a single report by each supervisor, and a single report from each primary health center. Family planning staff were told immediately how they were measuring up to predetermined targets. To encourage competition, feedback reports from the district to the primary health centers also ranked centers on the basis of ten indicators, such as the number of immunizations and the number of sterilizations as a percentage of annual targets.

In three districts in the state of Andhra Pradesh where this system was introduced, the time spent on recordkeeping and reporting has been reduced considerably. An assistant nurse-midwife, for example, now spends only about half an hour a day with the new system compared with two hours before. Reports are complete and are submitted on time (in other districts reporting is about three months behind schedule), and managers are responding better to local needs. Steps to expand the system for statewide use are now being taken in Andhra Pradesh, and the government of India is recommending that all states adopt the new MIS.
services. Program staff recruit potential clients and offer information on proper use of methods. The mass media can be used to inform people of the benefits of small families and how to obtain contraceptive methods. Instruction on human reproduction, family planning, responsible parenthood, and problems of rapid population growth as part of school curricula can inform young people before they marry; such instruction can also be offered through nonformal education, such as adult literacy programs. These efforts complement other economic and social policies, discussed in Chapter 6, to create demand for smaller families.

Because of the need for medical services for provision or follow-up of many contraceptive methods, most family planning programs are linked to the public health system. The nature of these links varies among countries and has often changed. In some programs, family planning workers provide services through clinics administered by the ministry of health, but are responsible to some other body. In Pakistan primary responsibility for family planning lies with the Population Welfare Division of the Ministry of Planning and Development, using the division's own specialized facilities and workers. Elsewhere family planning is directly administered by the ministry of health, through a special department of family planning (as in Egypt) or as part of preventive or maternal and child health services (as in Botswana, Kenya, and Malawi). Staff may specialize in family planning (that is, as "single-purpose" workers), as in Kenya, Pakistan, and Indonesia; or they may be responsible for general health or maternal and child health services in addition to family planning (that is, as "multipurpose" workers), as in Bangladesh, Botswana, and India.

There have been obvious advantages in integrating health and family planning in the delivery of services. The health benefits for mothers and children of spacing and limiting births clearly establish family planning as a valuable component of maternal and child health services. For both services the main target group—married women of childbearing age—is the same. Joint delivery can reduce unit costs, and in countries where family planning is controversial, integrated services make the program more acceptable.

But integrated services also present difficulties. Health ministries are often understaffed and underfunded; they cannot always mobilize the political and administrative wherewithal to implement an effective family planning program. Heavy demands for health care may eclipse the provision of family planning services, and medical staff may give priority to curative rather than preventive services. Multipurpose workers who are overloaded with responsibilities will do none of their tasks well. If an integrated delivery system employs single-purpose workers, friction may arise over differences in training, seniority, salaries, and promotion. For example, in addition to their salaries, family planning workers have sometimes received incentive payments based on the number of acceptors they recruit, whereas health workers receive only salaries. In Kenya family health field educators (with family planning responsibilities) were paid more than the enrolled community nurses to whom they were to report. These personnel issues can seriously affect worker morale and performance.

Although family planning programs need some link with health systems, family planning services need not be confined to them. When services are provided through a maternal and child health program, important client groups may be overlooked: men, adolescents, unmarried women, and nonpregnant women. Ministries of health may be poorly equipped to organize social marketing schemes (for subsidized commercial distribution of contraceptives, discussed below), to develop mass media programs, or to coordinate public, private, nongovernmental, and commercial activities. Some of these responsibilities are often delegated, for example, to information or education ministries. Many programs have boards within or outside a ministry to coordinate the wide range of family planning activities. In Mexico the semi-autonomous Coordinacion General del Programa Nacional de Planificacion Familiar monitors and coordinates all family planning activities; it is located within the Ministry of Health but has direct access to the president and works closely with the National Population Council (CONAPO), a separate body responsible for population policy. In Indonesia the National Family Planning Coordinating Board (BKKBN) is an autonomous body that collects data, produces information and education programs, coordinates activities, and has its own fieldworkers who promote family planning, refer clients, and set up community distribution points. In some countries these family planning boards are also responsible for overall population policy—a role discussed more fully in Chapter 8.

In conclusion, there is no simple formula for the best organization of family planning programs. Programs that differ widely in structure can be equally successful. Workers in India deliver both
family planning and maternal and child health services and are under the general guidance of the Division of Family Welfare within the central Ministry of Health and Family Welfare. Indonesia provides family planning as part of maternal and child health services within the health system, but also uses single-purpose fieldworkers responsible to the BKKBN. The Chinese program relies on joint personnel in the health system but has a separate policymaking body for family planning and overall population policy. No matter how service delivery is organized, all programs need some health backup.

Other significant factors in the success of programs are the degree of political commitment and the overall administrative capacity of government to coordinate the deployment, training, supervision, and availability of staff. These influence the effectiveness of three program strategies for expanding contraceptive use: increasing access to services, improving service quality, and ensuring social acceptability.

Increasing access

Perhaps the greatest achievement of family planning programs in the past decade has been to make information and services more accessible to those who need them. In twenty-three of twenty-nine developing countries in which surveys have taken place, more than 80 percent of married women are aware of at least one effective method of contraception. In urban areas of almost all of thirty-six countries examined by the World Fertility Survey (WFS), family planning methods are available within an hour’s travel from home. In Costa Rica and Thailand most people in rural areas are also less than an hour away from services. Furthermore, most public programs provide services free of charge or at heavily subsidized rates.

But there are still many countries and areas in which information and travel costs are major obstacles to satisfying the unmet need of clients. According to household surveys in Guatemala and Piaui State, Brazil, 15 percent of married women of childbearing age said that they would like to use contraceptives but did not know where to get them. In Nepal half of married women do not know of a method of contraception; about 15 percent know of a method but not of an outlet. In Honduras about a quarter of women are unaware of either method or outlet. Of those women in rural areas who know where to obtain contraceptives, 32 percent in Colombia, 42 percent in Honduras, and 62 percent in Nepal live more than an hour away from the source of supply. These barriers—lack of information and distance—are particularly high in sub-Saharan Africa: more than half the eligible women in Senegal and Sudan are unaware of modern contraceptive methods, and in most African countries contraceptives are available only in urban areas.

To reach the rural areas, family planning programs have placed special emphasis on extending the work of health centers into communities and households through the use of fieldworkers and other outreach staff. Access has also been increased in many countries by encouraging the private sector to provide family planning services.

EXTENDING PUBLIC SERVICES THROUGH “OUT-REACH.” Until a decade ago almost all public family planning programs provided services from centers—usually clinics—and relied heavily on medical staff. Because health services were not well established in rural areas and medical staff were scarce, access to family planning as well as to medical care was limited.

Today many large family planning programs have succeeded in using their health centers as a springboard for taking services and supplies into the villages.

- Paramedical workers have been trained to provide many methods formerly provided only by physicians. In Thailand, for example, auxiliary midwives insert IUDs and administer injectable contraceptives. Elsewhere nonmedical workers distribute the pill; they receive careful training on screening for contraindications, proper use, how to deal with side effects, and referral procedures.

- Staff based in clinics have been supplemented with fieldworkers who provide a link between the clinic and the community (see Box 7.5). Fieldworkers periodically visit homes and outlying communities to refer clients to service outlets; to distribute nonclinical methods such as the pill, condom, and spermicidal foam; and to reassure users. In some cases fieldworkers also supervise local volunteers.

- Official outlets have been increased by organizing local supply depots for nonclinical methods. Such local outlets in Mexico and Indonesia assist the work of field staff and reduce costs to clients.

The advantages of outreach are considerable: fieldworkers take less time and money to train than do medical professionals; health staff can spend more time on health care than they other-
Box 7.5 Family planning fieldworkers

Outreach systems using fieldworkers have been a key to success in effective national family planning programs—overcoming the relative inaccessibility of physicians and lowering the costs of contraceptive use by bringing services directly to beneficiaries. Experience in different countries illustrates a diversity of approaches to the training, duties, and coverage of fieldworkers.

- **India.** Family planning services are delivered by male and female multipurpose workers. Female workers provide pre- and post-natal services to mothers, spread family planning information, distribute condoms, and deliver babies. The government has recently sanctioned the distribution of oral contraceptives by female workers; workers are trained to screen clients for contraindications, and each acceptor must be examined by a doctor within three months. Male workers concentrate mainly on environmental sanitation but also provide family planning information and distribute condoms. Between them they are expected to cover a population of 5,000 (3,000 in remote hilly and tribal areas), although in many parts of India, this coverage has not yet been achieved.

- **Indonesia.** On the islands of Java and Bali, there is about one family planning fieldworker to every 2,000 eligible couples. The fieldworkers, who are normally secondary school graduates, recruit new acceptors, provide door-to-door supplies, and provide the managerial link between health clinics and part-time local volunteers who run village and sub-village contraceptive resupply centers. Financing constraints have precluded reliance on paid fieldworkers in recent extensions of the program into the other islands.

- **Kenya.** The privately run Chogoria hospital project in the Meru district has used volunteer workers selected by local health committees to provide pills, condoms, and other basic health services to villages. Volunteers are supervised by paid workers attached to local health centers. Contraceptive prevalence has reached 28 percent, compared with a rate of 7 percent in the rest of the country.

- **Korea.** Full-time paid family planning fieldworkers—nurses, midwives, and nurse aides—are assigned to health subcenters from which they spend at least fifteen days each month making home visits and organizing group meetings to recruit eligible couples. They also distribute condoms and pills and refer IUD and sterilization clients to designated family planning clinics. Coverage averages one fieldworker per 2,600 married women of reproductive age nationwide but is greater in rural areas (one per 1,200 couples), than in urban (one per 6,900 couples) because of greater distances in rural areas.

- **Mexico.** The national program provides outreach services through four different government agencies. The Secretariat of Health and Welfare trains multipurpose fieldworkers who concentrate mainly on family planning. They are local volunteers who receive small incentive payments. The Social Security Institute runs a program to reach isolated areas by training traditional midwives and other local volunteers to provide information and supplies in exchange for a modest payment. The Secretariat of Agrarian Reform and the National System for Integrated Family Development also provide services through outreach workers.

- **Pakistan.** In 1981 the government reorganized its program to include a system of fieldworkers and community volunteers. The earlier system was based entirely on paid fieldworkers, which proved costly and ineffective. The new program uses locally recruited male and female volunteers—including satisfied clients, barbers, and teachers—to inform couples about available services, teach them the advantages of family planning, encourage breastfeeding and childspacing, distribute nonclinical methods, and refer clients to family welfare centers for other methods. The volunteers are trained and supervised by one male and one female worker at the family welfare center.

- **Philippines.** About 3,000 outreach workers—one to every 2,000 eligible couples—work as full-time government employees. Each worker recruits, trains, and supervises about sixteen community volunteers who provide information to couples, supply condoms and pills to current users, and make referrals to government health clinics. Some 50,000 volunteers serve almost three-quarters of the nation’s eligible couples. The future of the outreach program is uncertain because external funding will terminate in 1985 and local governments have not been able to absorb the cost of the fieldworkers’ salaries as rapidly as expected.

- **Thailand.** Until recently, the Thai national program has been clinic based. Now multipurpose village health volunteers—serving nearly half of the nation’s villages—have been trained to provide family planning information and are authorized to resupply pill and condom acceptors. They also serve as referral agents for a mobile sterilization service.

- **Zimbabwe.** The Child Spacing and Family Planning Council, a parastatal under the Ministry of Health, provides many of the services and has about 300 full-time, single-purpose outreach workers who supply oral contraceptives to rural couples through regular home visits. A new project will train another 500 to 600 fieldworkers by 1987.

Wise would; and community-based fieldworkers are often most aware of local needs. But the extensive use of fieldworkers requires regular, supportive supervision. They must be trained well at the outset and must receive periodic refresher courses to maintain the quality of services. They should concentrate on a few main tasks; additional responsibilities must be introduced only gradually. Fieldworkers also require a good medical backup and referral system so that any side effects that
clients may develop can be promptly treated. Finally, supervisors and fieldworkers must travel frequently, and contraceptive supplies must be made available in an increasing number of remote outlets. Money for transport is often first to be sacrificed when budgets are cut, yet the whole strategy depends on extensive travel and good logistics.

ENCOURAGING PRIVATE SUPPLIERS. Another way in which governments have increased access to family planning services is by encouraging wider private involvement. This strategy makes fewer demands on scarce public funds and on administrative capacity. Policies include subsidizing commercial distribution of contraceptives, coordinating with and encouraging private nongovernmental organizations (NGOs), and removing legal and other barriers to private and commercial provision of contraception.

Subsidized provision of contraception through commercial outlets—often called social marketing—has been tried with some success in at least thirty countries. Social marketing programs use existing commercial distribution systems and retail outlets to sell, without prescription, contraceptives that are provided free or at low cost by governments or external donors. The first social marketing scheme was in India, selling subsidized “Nirodh” condoms. Almost all countries with such schemes sell condoms, and at least seventeen are known to sell oral contraceptives, sometimes several brands. Spermicides, in the form of suppositories, creams, pressurized foam, and foaming tablets are also commonly sold. Until recently, social marketing schemes have been limited to methods that do not require clinical services for distribution. But Egypt now sells subsidized IUDs through private doctors and pharmacies. And in Bangladesh there are plans to test-market injectable contraceptives through social marketing arrangements.

Social marketing makes family planning supplies more easily accessible by increasing the number and variety of outlets through which they can be obtained: pharmacies, groceries, bazaars, street hawkers, and vending machines. In Sri Lanka some 6,000 commercial outlets sell subsidized condoms and pills—more than five times the number of government family planning outlets. In the late 1970s social marketing schemes accounted for more than 10 percent of total contraceptive use in Jamaica, Colombia, Thailand, and Sri Lanka. In Bangladesh the social marketing program supplied about one-quarter of couples who used contraception in 1983: it accounted for 67 percent of total condom use, 12 percent of oral contraceptive use, and 70 percent of spermicide use. In 1981 about half of all pill users and 80 percent of condom users in Sri Lanka obtained supplies from the social marketing program.

Reliance on commercial distributors does not lift all the burden off the public sector, however. The public sector still has to provide advertising, promotion, contraceptive supplies, distribution, and medical backup. Some training is necessary for commercial suppliers to dispense oral contraceptives and to advise clients how to use them properly, as has been done in Jamaica, Korea, Nepal, and Thailand. Failing that, some system of referral or prescriptions must be developed.

Although government subsidies to the commercial sector are usually provided for contraceptive supplies only, some governments also subsidize IUD insertion, abortion, and sterilization by private physicians. In Korea more than 2,300 physicians have been trained and authorized by the government to provide family planning services. The government pays the entire cost of sterilization, but the cost of IUD insertion is shared—two-thirds by the government, one-third by the client. The involvement of private physicians has been a crucial factor in the success of the Korean program, although in 1978 about 60 percent of rural townspeople still had no authorized physician.

Access to services has also been increased by collaborative efforts between government and NGOs. This collaboration has taken many forms: subsidization of or grants to NGO services, coordination of NGO and government services to assure maximum coverage and allocation of responsibility for critical functions or services in certain regions to NGOs. In Bangladesh and Indonesia, for example, government services are allocated to rural areas, leaving NGOs to provide a large share of urban services. Since 1973 the Brazilian Family Planning Association (BEMFAM) has worked with the governments of several states in Brazil to establish community-based programs for low-income groups in the Northeast. The private nonprofit program in Thailand acts as an extension of the government’s rural health service and recruits local distributors to promote family planning and sell subsidized contraceptives donated by the government and international agencies. By mid-1978 there were some 10,000 distributors covering one-quarter of the 600 districts in Thailand. In Kenya in 1980, NGOs were operating 374 out of 1,204 rural
health facilities. But less than 1 percent of the NGO facilities offered daily family planning services, and only 7 percent offered part-time services. A new project is creating family planning service delivery points in at least thirty of the NGO facilities. In addition, both government and NGO representatives will sit on a National Council on Population and Development that will coordinate national efforts in population information, education, and communications.

Governments have also removed legal and regulatory obstacles that restrict commercial distribution. In Egypt the sale of oral contraceptives through private pharmacies does not require a physician’s prescription, although their provision through government clinics serving rural areas does. Several countries—including China, Mexico, Morocco, the Philippines, and Thailand—allow pills to be distributed in facilities other than pharmacies or health centers. Other options for stimulating the private sector include removal of import tariffs on contraceptive supplies (Korea recently eliminated a 40 percent tariff on raw materials for domestically produced contraceptives); active government promotion of condoms, spermicides, and pills that can be easily supplied through commercial outlets; and training of private pharmacists and physicians who frequently have little knowledge of modern family planning methods.

Improving quality

The quality of family planning services matters in all phases of program development. In the early stages services are new, and contraception still lacks social legitimacy. Once programs are well established and accessible, quality counts because other costs of family planning—such as physical side effects—have replaced access as the factor limiting the success of the program. Three ingredients of quality—the mix of contraceptive methods, the information and choice provided, and program follow-up—have contributed much to program success (see Box 7.6).

THE METHOD MIX OF PROGRAMS. The number and characteristics of available contraceptive methods affect the ability and willingness of clients to practice birth control. Additional options are likely to increase acceptance, permit switching, and reduce discontinuation rates.

- Some women have medical conditions that rule out certain methods. Oral contraceptives should not be prescribed for women who are over forty years old, who smoke and are over thirty-five years old, who are breastfeeding, or who have a history of stroke, thromboembolism, cancer, liver damage, or heart attack. The IUD is undesirable for women with pelvic infection or a history of ectopic pregnancy. Some women cannot be properly fitted with diaphragms.

- If the side effects of one method cannot be tolerated, the availability of other methods improves the chance that couples will switch rather than stop using contraception altogether. For example, in Matlab Thana, Bangladesh, 36 percent of women had switched methods within sixteen to eighteen months after initial acceptance. And a study in the United States showed that married white women aged twenty-five to thirty-nine had used an average of more than two methods; more than a third of those aged twenty-five to twenty-nine had used three or more.

- Couples’ preferences are influenced by their fertility goals—postponing a first birth, spacing between children, or limiting family size. Women using the pill tend to be younger and to have had fewer births than those protected by sterilization; many of the former are spacing births, while the latter have completed their families.

- Some methods of fertility control may be religiously or culturally unacceptable. Two-fifths of the world’s countries, comprising 28 percent of its population, either prohibit abortion completely or permit it only to save the life of the mother. For religious reasons, sterilization is illegal in several countries. When couples regard periodic abstinence as the only acceptable form of birth control, programs should provide information on proper timing of abstinence, although this method carries higher risks of unwanted pregnancy.

Due to sheer lack of alternatives, early family planning programs offered only a limited range of contraceptive methods. In the late 1950s and early 1960s, the Indian program had to rely on rhythm, the diaphragm, and the condom. Today, most national programs offer a wider variety of methods, although the number available at any given outlet is often fewer than that implied by official statements. Some governments still promote a single method because such an approach is easier to administer or because certain methods, such as sterilization and the IUD, are viewed as more “effective” and require less follow-up over the long run than do other methods. For example, India, Korea, and Sri Lanka continue to emphasize sterilization. Until recently, Indonesia had almost
Box 7.6  The impact of service quality: Matlab Thana, Bangladesh

Matlab Thana is an administrative division of 280,000 people in a rural area of Bangladesh. Its population density is 2,000 people per square mile. Transport is difficult—mostly by boat—and incomes are low. Fishing and farming are the main activities.

Between 1975 and 1981 the International Centre for Diarrhoeal Disease Research, Bangladesh conducted two experiments in Matlab Thana to measure the effect that availability, access, and quality of family planning services had on contraceptive use. Before 1975 family planning services were based in a government-run center in Matlab town. A small staff provided a conventional range of contraceptives and IUD insertions but, with the exception of two brief house-to-house campaigns conducted nationally, made little attempt to reach out to the villagers. Throughout Bangladesh, unmet need for contraception clearly existed. A national survey in 1968 showed that 55 percent of rural married women wanted no more children and that 13 percent would consider using contraception, but that only 1.9 percent were currently using a method.

The Contraceptive Distribution Programme (CDP). The first of two experiments, from 1975 to 1978, tested the effect of house-to-house distribution of oral contraceptives and, one year later, of condoms. Female workers were given six half-days of training on the proper use of the condom and the pill, adverse symptoms, expected side effects, and simple treatments for them. These workers were mostly elderly, widowed, and illiterate women, with almost no personal experience of contraceptives. Beginning in October 1975, they visited each household in the project area of 150 villages. During a 5-10-minute visit, women were told about the benefits of spacing and limiting births, proper use of the pill, and possible side effects. Those who were interested were given a six-month supply of pills. For thirty months, workers were responsible for continuing to recruit acceptors, resupplying users, and advising on side effects.

The impact of the CDP was great but shortlived. Contraceptive use in the project area jumped from 1.1 to 17.9 percent in three months, but declined to 11 percent after two years. During the same period, the rate of contraceptive use outside the project area increased from 2.9 to 3.8 percent. After a year, 34 percent of married women in the project area had accepted contraception, but only 42 percent of these women were continuing to use it (see chart). Some ten to fourteen exclusively promoted the pill but now is giving more emphasis to the IUD.

Supply constraints also limit the availability of different methods. Most contraceptives are imported and are often provided free or cheaply by donors; China, India, and Korea, which produce most of their own contraceptives, are major exceptions. Heavy reliance on one donor can cause problems, since some donors can supply only certain types of contraceptives. The United States Agency for International Development (USAID) is legally prevented from financing abortion training or services and does not finance Depo-Provera, an injectable contraceptive, because it has not been approved for use in the United States. Because of the limited number of donors that supply injectable contraceptives, Thailand almost exhausted its supplies in 1982, raising the prospect that many clients would have to switch methods or discontinue altogether. Difficulties can also arise if donors change suppliers, since the hormonal makeup of oral contraceptives varies from one manufacturer to another. Other factors restricting method mix include shortages of trained staff to perform sterilizations, poor transport and logistics for timely resupply, and the great distances that clients must travel to obtain some methods.

To improve the method mix of programs, male
months into the program, fertility had declined by 11 to 17 percent, but this effect lasted only one year. The project's limited impact was attributed to poor management of side effects, inadequate training of staff, insufficient information provided to clients, the narrow range of contraceptive methods (which discouraged method switching), and too little supervision.

The Family Planning-Health Services Project (FPHSP). In October 1977 a second experiment also tested house-to-house distribution of contraception, but with much better quality of services. Female village workers were recruited locally and received seven weeks of preservice training and weekly in-service training sessions. They were literate, married with children, had contraceptive experience, and came from respected families. Eighty workers—one per 1,000 people—received technical supervision and medical backup from four clinics staffed by qualified women paramedics, and administrative supervision from a male senior health assistant.

The FPHSP provided comprehensive services for the special needs of each current and prospective client. The methods offered included not only pills and condoms, but foam tablets and injectables. In addition, women were referred to centers where tubectomy, IUD insertion, and menstrual regulation could be performed, and where their husbands could get vasectomies. All households were visited once a fortnight, regardless of whether couples were using contraceptives. Side effects were managed through reassurance, frequent method-switching, and medical referral for treatment. Workers also offered aspirin, vitamins, and iron tablets, thereby gaining access to households that had previously rejected family planning.

In the first three months contraceptive use in the project area rose from 7 to 21 percent. Unlike the trend in the CDP, however, the rate continued to climb slowly to 34 percent. Continuation rates were dramatically improved: after a year, 39 percent of eligible women in the FPHSP had accepted contraception and 81 percent of these women were continuing to use it (see chart). During the first two project years, fertility declined by 22 to 25 percent compared with villages outside the project area. After a three-year plateau at 34 percent, contraceptive use began to rise and now stands at 41 percent—almost exclusively modern methods. The injectable, Depo-Provera, accounts for almost half of contraceptive use. In the rest of the country in 1983, modern methods account for only 14 percent of contraceptive use. Tetanus, toxoid, and oral rehydration therapy have been added to the Matlab project’s service package but were apparently not responsible for increased contraceptive prevalence.

Replicability. The FPHSP has been highly effective in increasing contraceptive use in field conditions typical of rural Bangladesh. But it may be hard to replicate on a larger scale because the FPHSP was able to draw on extra resources unavailable to the national family planning program. For example, although fieldworkers in the project receive salaries equivalent to workers in the national program, their supervisors’ salaries are much higher. The project also used costly speedboats to move supervisors and research staff around the area. And management was decentralized to an extent rarely found in national programs. The managerial and organizational structure that guaranteed close, supportive supervision, worker accountability, continuous training, good recordkeeping, and continuous feedback to workers should take much of the credit for the project’s success.

The government of Bangladesh and the International Centre are now embarking on an extension project to transfer some of the management techniques of the Matlab project to government health and family planning workers in several thanas in North Bengal and to measure the impact of these changes on fertility, mortality, and contraceptive use. The project will make minimal changes in the existing program structure and there will be no special inputs other than for training, organization-building, and research.

and female sterilization and IUDs can be made more readily available through mobile facilities (such as sterilization vans in Thailand) or periodic “camps” (such as vasectomy and tubectomy camps in India and IUD “safaris” in Indonesia). Careful attention must be paid to providing follow-up services in the case of complications, however. Paramedical workers can be trained to provide the IUD and injectable contraceptives in clinics and even in homes. Referral procedures can be strengthened so that clients are informed about all methods available from public, private, and commercial sources. Private suppliers can be encouraged to offer contraceptive methods that are in short supply or that cannot be offered by the official program. Finally, governments can sponsor local research on the effectiveness, side effects, and acceptability of methods that might be introduced into the national program.

INFORMED CHOICE. Although family planning workers may know more about the advantages and disadvantages of each method, clients are best equipped to choose what suits them—provided they have information on effectiveness, side effects, reversibility, and proper use. In the early stages of the Indian and Pakistani programs, the side effects of the IUD were not fully explained, a
medical examination was not always conducted before insertion, and there was little in the way of treatment or referral for side effects. For years afterward, IUDs were shunned. With a fuller explanation of side effects and greater care paid to screening and medical backup, the IUD is now regaining popularity. When private pharmacies in Colombia provided their customers with pamphlets explaining effectiveness, proper use, and side effects, sales of contraceptives increased.

Virtually all family planning programs provide some information to clients about methods, but fully informed choice is still only an ideal in many countries. Family planning workers still tend to doubt the ability of couples to use effectively methods such as the condom and pill, thereby discouraging their use. Staff may also fail to mention methods of which they disapprove, such as the pill, abortion, or sterilization. When incentives are offered to staff for recruiting acceptors of some methods but not of others, the information provided to clients may be biased. Sometimes clients are given inaccurate or incomplete information because family planning staff are themselves not properly informed about methods and their side effects. A survey of the Dominican Republic, Kenya, and the Philippines by the United Nations Fund for Population Activities (UNFPA) in the mid-1970s found that workers felt that their training in methods had been inadequate. A study in India, Korea, the Philippines, and Turkey demonstrated the strong influence of providers of services on clients’ choice of method: clients given a thorough explanation of all available contraceptive methods chose a very different mix of methods than did those prior to the study, who had not been given this information.

From the manager’s viewpoint, what are the critical requirements for better information? First is appropriate training. Workers must be trained to explain properly the methods available to clients and to encourage them to participate in the choice. Informal explanation works better than formal presentations that use technical or anatomical terms. As new contraceptive methods are included in programs, staff must receive prompt training. Second is more and better supervision of workers to ensure that they are not holding back information on methods because of their own prejudices or because they are receiving financial incentives for encouraging some but not all methods. The incentive structure might also be altered by offering financial or other awards (such as educational opportunities or additional training) to the worker who attracts and retains the most clients for a variety of different methods.

FOLLOWING UP ACCEPTORS. In their early stages, family planning programs devoted much time to recruiting new clients. It is now obvious that sustained use cannot be assumed—follow-up support is needed. Follow-up support includes medical backup and referral for side effects; encouraging clients to change contraceptive methods if their initial choice has caused problems or if their needs have changed; reassuring them that they are using contraceptives properly; and reminding them of the benefits.

Follow-up is most important in the first few months after acceptance, since this is when side effects are first experienced, when clients are learning to use methods properly, and when they need reassurance in the face of social disapproval. A study in Calabar State, Nigeria, found that 11 percent of pill acceptors never took even the first month’s allotment of pills, and only 53 percent were using the pill three months later. A lack of concern with follow-up is believed to be the major contributory cause of the low continuation rates among IUD and pill users in Korea. According to a survey of contraceptive acceptors, only 24 percent were followed up at home or returned to health centers for consultation on side effects. Korea’s program sets targets for the number of acceptors, but none for follow-up work.

Follow-up cannot be left to clients, who are likely to return to the family planning center only if they are living close by or if they experience severe side effects that they cannot correct even by abandoning contraception. Follow-up is best provided by fieldworkers and by community-based services. But in areas in which family planning is still regarded with suspicion, some clients would like to be spared the embarrassment of a follow-up visit from a family planning worker. Some programs have managed this by having fieldworkers deliver health services as well.

With or without an extensive field network, family planning programs can improve follow-up.

- They can change policies that encourage staff to recruit new acceptors but not to follow up on them. Targets and incentives can be offered to staff on the basis of the number of current users of contraception or of the number of checkups, rather than only on the basis of the number of new acceptors. Training must also emphasize follow-up procedures.
• Where the burden of follow-up rests on clients, programs can experiment with various ways of encouraging clients to seek appointments. For example, financial incentives might be offered to clients who return for a follow-up visit within a specified period of time, just as South Asian programs offer compensation to acceptors of sterilization for the costs of transport, food, and work time lost. The media can also be used to reassure acceptors about side effects and to encourage them to return for checkups.

• The quality of follow-up can be monitored by periodic sample surveys of acceptors.

Ensuring social acceptability

To be successful, family planning programs must have the support of the clients and communities they serve. But in communities in which modern family planning has never been provided, there may be little evident demand because potential clients are not aware of the benefits of the service, of smaller families, or of longer child spacing intervals. Services introduced by an "outside" agency with few local links and little appreciation of local customs and needs may not be readily accepted. The absence of links to the local community can be a weakness for family planning in particular, because it is a personal matter and may conflict with social norms that favor high fertility.

Private family planning associations and NGOs have led in experimenting with new ways to involve clients and communities. Their strategies have included consultation with local leaders, training local people as paid or volunteer workers, consulting and training traditional midwives and healers, establishing local management or review committees, encouraging local contributions of money and labor, and organizing groups of family planning acceptors to reinforce effective use and to engage in other community development projects.

In communities where there is no apparent demand for family planning, it can be introduced jointly with services in greater demand. The Honduran Family Planning Association includes a planned parenthood theme in its community-based adult literacy program. In Awutu, Ghana, family planning is promoted for child spacing as part of a maternal and child health project. Family planning is provided with agricultural extension to a population of 100,000 in Allahabad (in the state of Uttar Pradesh, India) and as part of the nationwide Integrated Rural Development Project in Pakistan. It has been offered through the resettlement schemes of the Federal Land Development Authority in Malaysia and through women's rural credit cooperatives and vocational training in Bangladesh. Profamilia, the private family planning organization in Colombia, extended its services to the countryside through the National Federation of Coffee Growers. In China, India, and the Philippines family planning services are organized in factories. Both the Indonesian and Chinese programs have used strong political organizations, which extend into rural areas, to provide many economic and social services, including family planning.

Private family planning associations are well suited to implement these approaches: they are small, decentralized, well staffed, highly motivated; have greater control over service quality; and are less confined by the bureaucratic constraints of government. But many of these approaches have also been tried on a larger scale. For example, the Planned Parenthood Federation of Korea pioneered the highly successful mothers' club program. At first these clubs served as sources of contraceptives, of reassurance for acceptors, and of information on the benefits of family planning. They now have merged with the Saemaul Women's Association and are also involved in agricultural cooperatives and community construction projects. Mothers' clubs have also been used by programs in Indonesia and Bangladesh. The national program in Indonesia has successfully involved village headmen, religious leaders, and local volunteers on the islands of Java and Bali, where more than two-thirds of Indonesia's population lives. In the Philippines some outlets for contraceptives are organized and run by local volunteers.

Where communities and clients are involved, they are less likely to see family planning as being imposed by outsiders. Use of traditional midwives and volunteers, and local contributions in cash or in kind also reduce the cost of services. But these strategies require certain managerial qualities not always found in larger public programs: decentralized decisionmaking; technical and organizational expertise to support local organizations, volunteers, and clients; skilled managers and field-workers who can identify local leaders, stimulate community activities, supervise volunteers, and reconcile local needs with program capabilities; and, sometimes, workers who are technically competent in more than one field. Finally, social acceptance of family planning takes time and is a continuous process. There is no benchmark for
measuring social acceptability, or easy formula for ensuring it.

**Financing family planning**

Public family planning programs, like programs in education and health, are heavily subsidized, and services are often offered free of charge. Although the private sector makes a significant contribution to providing services in some countries, public finance will continue to be critical, especially in low-income countries and in backward regions, where contraceptive demand is limited and health services are weak.

**Public spending**

China and India—the two most populous countries in the developing world, with approximately half its population—spent roughly $1.00 and $0.30 per capita, respectively, on population programs in 1980. In most of three dozen developing countries for which rough estimates are available, spending fell within this range (see Table 7.4). If other developing countries with programs were spending equivalent amounts, the total spent on population activities in all developing countries in 1980 must have been about $2 billion.

Practically all spending on population in China, and close to 80 percent of the total in India, is financed from domestic resources. For all other developing countries combined, government and foreign donors each contribute about 50 percent. The government share tends to rise the longer a program has been in existence. Three out of four countries with programs less than five years old were contributing less than 10 percent of the costs of their programs, in contrast to an average of 15 percent of their time to family planning, valued at approximately $3 million. Health workers and midwives probably spend more time on family planning. Adding all these contributions together produces a figure for family planning expenditure in China of nearly $1 per capita.

Although governments finance a large share of their population programs, the amounts spent are still trivial—both in absolute terms and in relation to other government outlays (see Box 7.7). In China the state budget for the family planning program absorbs only 0.4 percent of total current spending, compared with 5.2 percent for health and 13.1 percent for education. In India and Mauritius spending on family planning in 1981 accounted for only 0.5 percent of total government expenditure. The figures are even lower in Korea (0.2 percent) and in Malaysia (less than 0.1 percent).

Foreign donors spent an estimated $491 million for population programs in developing countries in 1981; about two-thirds of this amount was for family planning and related programs. In real terms, population assistance grew at almost 6 percent a year during the 1970s but fell 3 percent in 1980 and 6 percent in 1981. The prospects for increased assistance are not good: UNFPA, a major channel for population assistance, expects its spending to rise by barely 1 percent over the next four years. Population assistance from donors is discussed further in the next chapter.

**Private spending**

Important constraints limit the growth of private suppliers of family planning, especially in rural areas. The most severe constraint is the need for
<table>
<thead>
<tr>
<th>Region and country</th>
<th>Total public expenditure (millions of dollars)</th>
<th>Per capita public expenditure (dollars)</th>
<th>Expenditure per current contraceptive user (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>2.8</td>
<td>0.24</td>
<td>16</td>
</tr>
<tr>
<td>Kenya</td>
<td>11.8</td>
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</tr>
<tr>
<td>Liberia</td>
<td>2.3</td>
<td>1.22</td>
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<tr>
<td>Mauritius</td>
<td>1.7</td>
<td>1.81</td>
<td>24</td>
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<tr>
<td>Sierra Leone</td>
<td>1.5</td>
<td>0.44</td>
<td>a</td>
</tr>
<tr>
<td>Swaziland</td>
<td>1.8</td>
<td>2.89</td>
<td>a</td>
</tr>
<tr>
<td>Tanzania</td>
<td>3.3</td>
<td>0.18</td>
<td>a</td>
</tr>
<tr>
<td>Zaire</td>
<td>1.8</td>
<td>0.06</td>
<td>a</td>
</tr>
<tr>
<td>Zimbabwe (1978)</td>
<td>1.9</td>
<td>0.27</td>
<td>13</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt, Arab Rep.</td>
<td>34.1</td>
<td>0.81</td>
<td>22</td>
</tr>
<tr>
<td>Iran, Islamic Rep. (1976)</td>
<td>50.6</td>
<td>1.30</td>
<td>38</td>
</tr>
<tr>
<td>Jordan</td>
<td>2.5</td>
<td>0.78</td>
<td>21</td>
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<tr>
<td>Morocco</td>
<td>13.3</td>
<td>0.66</td>
<td>a</td>
</tr>
<tr>
<td>Tunisia</td>
<td>8.3</td>
<td>1.31</td>
<td>32</td>
</tr>
<tr>
<td>South Asia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>45.1</td>
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<td>India</td>
<td>226.9</td>
<td>0.34</td>
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<td>Nepal</td>
<td>10.6</td>
<td>0.72</td>
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<tr>
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<td>24.5</td>
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<td>0.42</td>
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<td>East Asia</td>
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<tr>
<td>China</td>
<td>979.6</td>
<td>1.00</td>
<td>10</td>
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<td>2.0</td>
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<td>86.2</td>
<td>0.59</td>
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<td>27.1</td>
<td>0.71</td>
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<td>Malaysia</td>
<td>16.4</td>
<td>1.18</td>
<td>19</td>
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<tr>
<td>Philippines</td>
<td>37.6</td>
<td>0.78</td>
<td>11</td>
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<tr>
<td>Singapore</td>
<td>1.8</td>
<td>0.74</td>
<td>7</td>
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<tr>
<td>Thailand</td>
<td>28.1</td>
<td>0.60</td>
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<td>Latin America and Caribbean</td>
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<td></td>
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<tr>
<td>Bolivia (1977)</td>
<td>0.1</td>
<td>0.03</td>
<td>a</td>
</tr>
<tr>
<td>Brazil</td>
<td>10.6</td>
<td>0.09</td>
<td>a</td>
</tr>
<tr>
<td>Colombia</td>
<td>8.1</td>
<td>0.31</td>
<td>4</td>
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<tr>
<td>Costa Rica</td>
<td>3.3</td>
<td>1.45</td>
<td>15</td>
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<tr>
<td>Dominican Rep.</td>
<td>3.8</td>
<td>0.70</td>
<td>11</td>
</tr>
<tr>
<td>Ecuador</td>
<td>6.3</td>
<td>0.75</td>
<td>15</td>
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<tr>
<td>El Salvador</td>
<td>8.1</td>
<td>1.77</td>
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<td>Guatemala</td>
<td>9.3</td>
<td>1.28</td>
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<td>Haiti</td>
<td>3.9</td>
<td>0.77</td>
<td>27</td>
</tr>
<tr>
<td>Honduras</td>
<td>3.0</td>
<td>0.81</td>
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<tr>
<td>Jamacia</td>
<td>4.8</td>
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<tr>
<td>Mexico</td>
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<td>15</td>
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<tr>
<td>Panama</td>
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<td>Paraguay</td>
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<tr>
<td>Peru</td>
<td>5.3</td>
<td>0.32</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: Expenditure includes funding from domestic and foreign sources on population activities, including (but not limited to) family planning services.
a. Contraceptive prevalence rate unavailable or close to zero.
Source: Bulatao, 1984a.
Military versus social expenditure

Military spending is not easy to measure. What estimates there are indicate that global military expenditure in constant 1982 dollars has risen from $300 billion to more than $600 billion in the past twenty years. The amount spent in the developing world quadrupled from $30 billion to more than $138 billion. In 1981 developed countries spent more than 4.9 percent of GNP on defense, and about 0.3 percent of GNP on aid to developing countries. In 1980 the United States spent 5.6 percent of its GNP on defense, almost $170 billion, and 0.28 percent ($8.2 billion) on aid. In developing countries almost as much is spent on defense as on education and health combined (see chart).

Expenditures on defense, education, and health as a percentage of GNP, 1980

<table>
<thead>
<tr>
<th>Percent</th>
<th>World</th>
<th>Developed</th>
<th>Developing</th>
</tr>
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<tbody>
<tr>
<td>10</td>
<td>0</td>
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<td>5</td>
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</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Sivard, 1983.

Despite these constraints, private suppliers provided more than 20 percent of all family planning services in more than two-thirds of the countries studied in recent surveys (see Table 7.5). In some countries private suppliers play a major or even dominant role, especially among urban consumers. In Korea 42 percent of all contraceptive users are supplied by pharmacies or physicians; in the state of Sao Paulo, Brazil (a country with some state, but no central government, programs), the proportion is as high as 63 percent.

Private spending on family planning services as a consequence equals about a fourth of public spending on these services in the developing world. In some regions private spending is greater: in Latin America it may in fact be slightly above public spending.

In urban areas some commercial suppliers may be displaced by publicly subsidized contraceptives: half of the initial users of an official program of oral contraception in Piaui State, Brazil, in 1979 had shifted over from the private sector. Yet private suppliers do benefit from family planning advertising financed by the government. It is probably not a coincidence that they flourish in several countries, such as Korea, Mexico, and Thailand, where government strongly supports birth control.

The activities of private suppliers demonstrate that many people in developing countries are willing to pay for contraceptive services. Although charges for publicly subsidized services are usually low or nonexistent, data for twenty developing countries show that private sector prices can be high enough to absorb a significant fraction of household income. The cost of a year's supply of oral contraceptives averaged $25 in 1980, ranging from $5 in Mexico and $6 in Egypt to as much as...
$90 in Nigeria. Across countries, the various forms of contraception cost an average of $20 to $40 a year.

In the better-off developing countries, the cost of buying commercially available contraceptives is small in relation to average income per capita (although even in those countries the cost may be relatively large for the poor). For example, the retail price of a year’s supply of oral contraceptives in 1979 was equivalent to only 0.3 percent of per capita income in Mexico and to 0.5 percent in Brazil. But in low-income countries the cost can be prohibitive—equivalent to 17 percent of per capita income in Bangladesh, for example, and 18 percent in Zaire, or about 3 percent of total income for the average household. All these figures underscore the real cost of obtaining family planning services, whether private or public, because people also have to pay for the time and travel needed to obtain their contraceptives.

In Korea some 1.2 million users bought contraceptives commercially in 1979 at an average annual cost of about $12—a total outlay of $15 million, about $0.40 per capita for Korea’s entire population, and roughly equivalent to the $0.42 per capita spent on the domestic government budget, exclusive of foreign donor contributions. In Peru about 300,000 users of commercial sources of contraception spent an average of $30 each in 1981, their total outlay being several times what the government spent. Private spending on this scale—which understates the total because it excludes access costs—is not typical of all developing countries, but it shows a widespread willingness to pay for contraception.

### Allocation of public expenditures

The bulk of public spending on population—almost 50 percent in seventeen countries reporting details of expenditures—goes directly to providing contraceptive services. Progressively smaller shares are taken up by general program administration, information-education-communication activities, research and evaluation, and personnel training.

With all public spending on family planning taken into account, expenditure averages about $0.70 per capita across all developing countries. For each contraceptive user, spending is much higher—around $21 a year. But most users are in China and India, where programs spend less per user, so the weighted average is lower at $11. Adding private expenditures could easily double the

### TABLE 7.5

Source of contraception among currently married women aged 15 to 44 and their husbands

(percentage distribution of current contraceptive users)

<table>
<thead>
<tr>
<th>Region and country</th>
<th>Government programs</th>
<th>Other publicly funded or subsidized programs</th>
<th>Private sector</th>
<th>No source or other*</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Korea, Rep. of (1979)</td>
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<td>Jendouba (1979)</td>
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a. Applies to rhythm or withdrawal; other may include contraceptives obtained from a friend or in a foreign country.

costs per user. Public cost per user varies among countries, as Table 7.4 shows, depending on many factors, including local salaries and program efficiency and quality.

Cost per user tends to be very high in the first few years of a family planning program; it then falls sharply as the rate of contraceptive use rises above 5 percent. At higher rates the cost per user tends to stabilize, or perhaps to rise slightly. Between 1965 and 1980, while contraceptive use in Korea rose from 12 to 30 percent, cost per user fluctuated (with little apparent trend) between $7 and $13 (in constant 1982 dollars).

In any country with contraceptive use of at least 5 percent, current cost per user is a conservative guide to costs at higher levels of use. Marginal costs could rise if new users are in inaccessible rural areas with high delivery costs, though they could also fall if services are more intensively used.

Future financial requirements

What would it cost to satisfy the unmet need for limiting births? Some idea can be obtained by extrapolating levels of unmet need—the proportion of women exposed to the risk of pregnancy who want no more children—in thirty-five developing countries in the mid-1970s to cover the developing world as a whole. That extrapolation suggests a possible increase in the rate of contraceptive use of 13 percentage points. If the public cost for each additional user were the same, country by country, as the cost per user in 1980, such an increase would require another $1 billion in public spending (see Table 7.6).

In the next two decades total spending for family planning programs will need to increase because of the growing number of women of childbearing age and the increasing proportion of them who are likely to want modern contraceptives. World Bank projections indicate that the number of married women of reproductive age in all developing countries will increase from about 500 million to more than 700 million between 1980 and 2000. About 40 percent of these women used contraception in 1980.

The "standard" projections in Chapter 4 imply an average total fertility rate of 3.3 in developing countries in the year 2000. If it is assumed that the fertility effects of later marriage and of shorter breastfeeding will largely cancel each other out and that the abortion rate will stay constant, achieving this fertility decline will require an increase in the rate of contraceptive use to 58 percent. For the projections of a "rapid" decline in fertility, which imply a total fertility rate of 2.4 in 2000, contraceptive use would need to reach 72 percent.

How much would this cost? To achieve the standard decline in fertility, and assuming 1980 costs per user, total public spending on population programs would need to reach $5.6 billion (in constant 1980 dollars) by the year 2000—a rise in real terms of 5 percent a year. To ensure the rapid decline, spending would need to total $7.6 billion by 2000, a rise of 7 percent a year in real terms.

Growth in spending will have to be much greater in some regions than in others. Average real increases in spending of 2.5 percent a year would be enough to meet targets in East Asia as a whole (though not for individual countries), and 5 percent would be enough for Latin America and the Caribbean. In South Asia, the Middle East and North Africa, and sub-Saharan Africa, however, population spending would have to grow 8 to 10 percent every year to achieve a standard decline in fertility, and in sub-Saharan Africa as much as 16 percent every year to support a rapid decline.

Because spending on population currently represents less than 1 percent of government budgets, small increases could go a long way toward meeting the requirement for higher spending. The same is true for external assistance. Only about 1 percent of official aid now goes for population assistance (and only a part of that for family planning). Increasing spending by 50 percent could fill "unmet need" today, but larger increases will be needed in the future. In many countries the required increase in public expenditure for family planning would be more than offset by reductions in public expenditure in other sectors. With constant enrollment rates, rapid fertility decline would generate per capita savings in education expenditure in the year 2000 of $1.80 in Egypt, $3.30 in Kenya, $6.00 in Korea, and $6.60 in Zimbabwe.

Obstacles to program expansion

If the financial resources to expand family planning services were made available, could they be put to good use? Program expansion may be difficult for a variety of reasons, including administrative and logistical obstacles, scarcity of personnel, and limited demand. These tend to limit the rate at which a good program can be expanded, but not expansion itself.

The administrative and logistical obstacles include many of the same constraints that hamper
TABLE 7.6
Fertility targets and estimates of population program expenditures, 1980 and 2000

<table>
<thead>
<tr>
<th>Region and scenario</th>
<th>Year</th>
<th>Fertility targets</th>
<th>Expenditures</th>
<th>Total</th>
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<tr>
<td></td>
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<td>Total fertility rate</td>
<td>Contraceptive prevalence (percent)</td>
<td>Per capita (constant 1980 dollars)</td>
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<td>All developing countries</td>
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<tr>
<td>Current estimate</td>
<td>1980</td>
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<td>39</td>
<td>0.62</td>
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<tr>
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<td>1980</td>
<td>3.54</td>
<td>52</td>
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<tr>
<td>Under standard decline</td>
<td>2000</td>
<td>3.30</td>
<td>58</td>
<td>1.14</td>
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<tr>
<td>Under rapid decline</td>
<td>2000</td>
<td>2.32</td>
<td>72</td>
<td>1.66</td>
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<tr>
<td>Sub-Saharan Africa a</td>
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<td>1.07</td>
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</table>

Note: The fertility targets and per capita expenditure figures are population-weighted means. Because of lack of data on contraceptive prevalence for many countries, regional estimates include country rates which were estimated based on various social and economic data.

a. Includes Republic of South Africa.
b. Includes Afghanistan.

Source: Bulatao, 1984a.

Other development programs. For example, a family planning program requires a system for obtaining, storing, and distributing contraceptives. If a program attempts to provide a mix of methods, this system can become complicated; it may require more than one distribution network—commercial, clinical, and nonclinical. Where overall government administration is weak, roads are poor, and communications slow, even the best-run programs will appear inefficient and incapable of sustained expansion. These limits may not be evident in small pilot projects, but they can become important when an attempt is made to extend services on a larger, national scale. In areas where health services are scant or nonexistent, a family planning program will be extremely difficult to implement.

The personnel requirements for an extensive family planning program are not large in relation to the supply of educated people. Desirable ratios are about 1 fieldworker to 300 families, and 1 supervisor for every 8 fieldworkers. For Upper Volta, a country with extremely low literacy, a program could be fully staffed at these ratios by about a tenth of a single year's primary and secondary school graduates. The conclusion becomes less
sanguine, however, as soon as one takes into account specific requirements for fieldworkers: for instance, they should be village-based rather than city-based, belong to the appropriate ethnic, linguistic, or caste group, and be favorably disposed to contraception. The Pakistani program has faced recruitment problems of this sort. In the late 1960s only a seventh of the midwives assigned as fieldworkers believed in the efficacy of modern contraceptives. In the early 1970s they were replaced by a group including many unmarried women from urban areas who did not have the confidence of the villagers. If finding appropriate fieldworkers in each area is difficult, finding higher-level supervisors can be even more of a problem.

Program expansion also depends on the demand for contraceptive services. A principal task of programs is to generate some of this demand itself, but where initial interest is low or nonexistent this task can take time.

Taken together, these limits to rapid expansion might seem to suggest that programs could not make good use of more money. But such a view would be wrong. During the 1970s India, Pakistan, Bangladesh, and Sri Lanka were spending as much as $2.50 per married woman on family planning programs and were still producing contraceptive users at acceptable cost—under $20 each, in some years much less. Despite the unpromising conditions—per capita GNP between $100 and $300, adult literacy rates as low as 20 percent, and infant mortality rates as high as 150 per thousand—spending on family planning was effective and economical.

Furthermore, many of the factors that hamper effectiveness can be overcome as a program develops. Culturally acceptable solutions to administrative and personnel problems, and to limited public interest, take time to develop, as do the quality improvements discussed above. But in every part of the world where an effort has been made, there has been progress.

Foreign funding has been largely absent in the early stages of some family planning programs, as it continues to be in China. In other programs it has played a catalytic role—for instance, through stimulating pioneering research of demographic problems. Local finance, however, eventually becomes critical; most of the older, more effective programs in 1980 had 40 percent or less foreign funding. For one thing, local finance demonstrates political commitment to family planning, the subject of the next chapter. Many of the obstacles to expansion of family planning can be overcome with sufficient commitment, and most of them cannot be overcome without it.