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Summary and Recommendations

PRENATAL CARE

Reaching Mothers, Reaching Infants



Sarah S. Brown, Editor

**Committee to Study Outreach
for Prenatal Care**

**Division of Health Promotion and
Disease Prevention**

INSTITUTE OF MEDICINE

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Summary and Recommendations

In 1985, 76.2 percent of all U.S. infants were born to women who began prenatal care in the first trimester of pregnancy, 18.1 percent to women who delayed care until the second trimester, 4.0 percent to women who obtained care only in the third trimester, and 1.7 percent to mothers who had no prenatal care at all. When vital statistics are analyzed to determine rates of adequate care rather than trimester of onset, a slightly different picture emerges. In 1985, only 68.2 percent of all women obtained adequate prenatal care, 23.9 percent had an intermediate level of care, and 7.9 percent of all pregnant women had inadequate care.*

Trends in the use of prenatal care from 1969 to 1980 show steady improvement in the percentage of births to mothers obtaining prenatal care in the first trimester of pregnancy. Since 1980, however, this percentage has remained stable or decreased. Among black women, declines in early use of prenatal care were registered in 1981, 1982, and 1985.

More troubling is that since 1980, there has been an increase in the percentage of births to women with late or no prenatal care. Although this

*In this Summary and Recommendations, as in the full report, the terms "adequate, intermediate, and inadequate" prenatal care refer to the classification scheme developed by Kessner, and the terms "early, delayed, and late" refer to prenatal care that begins in the first, second, and third trimesters of pregnancy, respectively. The term "insufficient prenatal care" is a general label used to describe care that is neither adequate nor begun early in pregnancy. All such terminology is discussed in detail in Chapter 1.

trend applies to all races, the increase is more pronounced among black women. In 1981, 8.8 percent of births to black women were in this category; by 1985, 10.3 percent were.

These trends present important challenges to public policy and to the health care system for several reasons. First, there is widespread agreement that prenatal care is an effective intervention, strongly and clearly associated with improved pregnancy outcomes; moreover, available evidence suggests that prenatal care is especially important for women at increased medical or social risk, or both. Second, prenatal care is cost-effective. In a 1985 report, for example, the Institute of Medicine calculated that each dollar spent on providing more adequate prenatal care to low-income, poorly educated women could reduce total expenditures for direct medical care of their low birthweight infants by \$3.38 during the first year of life; the savings would result from a reduced rate of low birthweight. Finally, the importance of prenatal care is confirmed by international comparisons. Many other countries (particularly Japan and most Western European countries) provide prenatal care to pregnant women as a form of social investment, with minimal barriers or preconditions in place. As a consequence, very high proportions of women in these countries begin prenatal care early in pregnancy.

STUDY FOCUS

Faced with evidence of prenatal care's value and cost-effectiveness, and with data revealing poor and declining use of this key service, in the summer of 1986 the Institute of Medicine convened an interdisciplinary committee, the Committee to Study Outreach for Prenatal Care, to study ways of drawing more women into prenatal care early in pregnancy and of sustaining their participation until delivery. The Committee was asked to focus particularly on outreach as a means for increasing the use of prenatal services. In keeping with conventional understanding, outreach was defined in the study to include various ways of identifying pregnant women and linking them to prenatal care (casefinding) and services helping them remain in care once enrolled (social support).

The Committee's work, however, and the resulting report were not confined to outreach. It became evident early in the study that this service cannot be studied in isolation from the larger maternity care system within which it occurs and that, as a result, the study had to embrace aspects of the surrounding environment. The Committee's conclusions and recommendations are not limited to outreach, therefore, but also touch on issues of maternity care financing and organization. The report's major sections cover demographic risk factors, barriers to the use of prenatal care,

women's perceptions of barriers to care, providers' opinions about the factors that account for delayed care, multivariate analysis of predictors of prenatal care use, and lessons learned from a variety of programs that attempt to improve utilization of this basic health service.

DEMOGRAPHIC RISK FACTORS

Several demographic risk factors are closely associated with insufficient prenatal care:

Minority Status Among white women giving birth in 1985, 79.4 percent began care in the first trimester of pregnancy and 4.7 percent received late or no care. Black women were far less likely than white women to begin care early (61.8 percent) and twice as likely to receive late or no care (10.1 percent versus 4.7 percent). Hispanic mothers are substantially less likely than non-Hispanic white mothers to begin prenatal care early and are three times as likely to obtain late or no care. Moreover, Hispanic mothers as a group are more likely than non-Hispanic black mothers to begin care late or not at all. American Indian women are more likely than either white or black women to obtain late or no care.

Age Young mothers are at high risk of obtaining late or no prenatal care, with the greatest risk for the youngest mothers, those under 15. Mothers age 40 and over are less likely than mothers age 25 to 39 to begin care in the first trimester and more likely to obtain care late or not at all.

Education Timing of the first prenatal visit correlates highly with educational attainment. In 1985, 88 percent of mothers with at least some college education began care early in pregnancy, compared with 58 percent of mothers who had less than a high school education. The probability that a pregnant woman will obtain care late or not at all decreases steadily as her educational level increases.

Birth order The more children a woman has had, the more likely she is to obtain insufficient care or none at all. In 1985, nearly 5 percent of both first and second children were born to mothers who obtained late or no care. About 6 percent of third births fell into this category, however, and the numbers increased to 9 and 14 percent for fourth and fifth children, respectively.

Marital status Unmarried mothers are more than three times as likely as married mothers to obtain late or no prenatal care (13.0 and 3.4 percent,

respectively, in 1985). Unmarried white mothers are almost four times as likely as married white mothers to obtain late or no care; and unmarried black mothers are twice as likely as married black mothers to obtain late or no care. Among unmarried mothers, women of Hispanic origin are most likely to obtain late or no care, followed by white non-Hispanic and then black non-Hispanic mothers. The correlation of unmarried status with insufficient prenatal care has become more salient in recent years as childbearing among unmarried women has increased, reaching an all-time high of 828,000 births (about 22 percent of all births) in 1985.

Income Poverty is one of the most important correlates of insufficient prenatal care. Women below the federal poverty level consistently show higher rates of late or no care and lower rates of early care than women with larger incomes. Given that one-third of all U.S. births are to women with incomes less than 150 percent of the federal poverty level, the consistent correlation of low income with insufficient prenatal care is of major importance and forms the basis of many Committee recommendations.

Geographic location Insufficient prenatal care is concentrated in certain geographic areas, most often inner cities and isolated rural areas. States vary in their rates of early and late entry into care, and great diversity in use of prenatal care can exist within states, counties, cities and even neighborhoods.

BARRIERS TO THE USE OF PRENATAL CARE

Four categories of obstacles to full participation in prenatal care can be described: (1) a set of financial barriers ranging from problems in private insurance and Medicaid to the complete absence of health insurance; (2) inadequate capacity in the prenatal care systems relied on by many low-income women; (3) problems in the organization, practices, and atmosphere of prenatal services themselves; and (4) cultural and personal factors that can limit use of care.

Financial Barriers

Women with *private health insurance* are more likely to obtain adequate prenatal care than uninsured or Medicaid-enrolled women, but many women do not have access to employer-based group coverage (the most common means of obtaining private insurance). Even when such coverage is available, the cost to the employee may be too high to enroll or coverage may not include maternity care or require substantial cost sharing.

The *Medicaid* program is the largest single source of health care financing for the poor and is believed to be primarily responsible for the increased use of medical services by low-income individuals since its enactment in 1965. Natality data from 1969 (shortly after Medicaid was enacted) and 1980 show significant increases in the proportion of pregnant women seeking care in the first trimester. Medicaid has been particularly important in increasing minority access to prenatal care.

Despite such favorable trends, data also show that women covered by Medicaid do not obtain prenatal care as early in pregnancy or make as many visits to providers as women with private insurance. At least three reasons have been offered for this differential. The Medicaid enrollment process is so time-consuming that a woman may be well into her pregnancy before her eligibility is established. Second, Medicaid-insured women rely more heavily on clinics for prenatal care, and these clinics are often overburdened and unable to schedule appointments promptly; similarly, the number of physicians accepting Medicaid-enrolled pregnant women has always been limited and in some areas is decreasing. Finally, women on Medicaid are characterized by numerous demographic factors associated with insufficient prenatal care, including being unmarried, having less education, being under 20, and being in fair or poor health. Given these attributes of the Medicaid population, health insurance alone is unlikely to close the gap between their use of health services and that of more affluent women with private coverage.

A substantial proportion of the poor is not covered by Medicaid. In fact, in 1988, the average income eligibility ceiling for Medicaid was only 49 percent of the federal poverty level. In addition, the proportion of the poor covered by Medicaid has decreased: it is estimated that in 1976, 65 percent of the poor were covered by Medicaid; in 1984, the comparable figure was 38 percent. Congress has expanded Medicaid eligibility for pregnant women through numerous laws passed in the mid-1980s. One of the most important reforms in these laws severs the link between Medicaid and AFDC (that is, Aid to Families with Dependent Children—welfare). Thus, some women may now become eligible for Medicaid even if they are not eligible for AFDC, and states have the opportunity to increase Medicaid eligibility for targeted subgroups, and to receive federal matching funds, without increasing AFDC program costs.

Between the group covered by private insurance and the group enrolled in Medicaid are the *uninsured*. By the mid-1980s, more than 37 million Americans were completely uninsured, and women of childbearing age are disproportionately represented among them. An estimated 26 percent of women of reproductive age (14.6 million) have no insurance to cover maternity care, and two-thirds of these (9.5 million) have no health insurance at all. Of poor women, 35 percent are completely uninsured.

Women with no insurance face significant obstacles to obtaining prenatal services and must rely on free or reduced-cost care from willing private physicians or from health department clinics and other settings usually financed by public funds. Unfortunately, the proportion of women age 15 to 44 who are uninsured is likely to grow.

Inadequate System Capacity

Numerous reports document inadequate numbers of, and long waiting times for appointments at, such facilities as Community Health Centers and health department clinics—settings that have traditionally provided prenatal care to those unable or unwilling to use the private care system. Similarly, there appears to be a growing demand for prenatal services in clinics—a picture consistent with the increasing number of women of reproductive age without adequate private health insurance and the decreasing number of private providers caring for Medicaid-enrolled and other low-income women. Adequate or even excess capacity can exist for affluent women in the same geographic area as inadequate capacity for low-income women.

Limited availability of maternity care providers is a major contributor to the capacity problem. Many areas of the country have few or no obstetricians in practice. Large numbers of obstetricians will not take patients who are uninsured, and many do not accept Medicaid clients. An important reason for this disinclination is that Medicaid reimbursement rates are often very low and represent only a fraction of cost or of privately reimbursed fees. The increase in malpractice insurance premiums and a growing concern about the risk of malpractice litigation are also associated with the increasing number of providers who have discontinued or appreciably reduced their obstetrical practice. In some communities, particularly those with poorer populations and no teaching or public facilities, obstetrical care may be disappearing entirely.

Organization, Practices, and Atmosphere of Prenatal Services

Use of prenatal care can also be limited by the way services are organized and provided at the delivery site. Common barriers include inadequate coordination of services (such as poor links among health department clinics, private physicians, and such other service systems as welfare and housing); problems in securing Medicaid (the application and enrollment process can often be time-consuming and difficult, and eligible women may know little about the program or how and where to apply); and a host of classic access barriers well known to limit use of not only prenatal care but also health services generally (including transportation problems, difficulties in arranging child care, service hours that do not accommodate the schedules of women who work or go to school, long waits in clinics,

communication problems between providers and clients, language and cultural barriers, unpleasant surroundings, and lack of easily accessible information about where to go for prenatal care).

Cultural and Personal Barriers

Use of prenatal care can be limited by a woman's attitudes toward her pregnancy and toward prenatal care, her cultural values and beliefs, a variety of other personal characteristics often called life-style, and certain psychological attributes. Attitudes toward pregnancy that may influence efforts to seek prenatal care include whether the pregnancy is planned or unplanned and whether the woman views her pregnancy positively or negatively. These are particularly important issues because more than half of all pregnancies in the United States are unplanned. In addition, not all women believe that prenatal care is important and worth the effort to seek it out. Some believe that care is needed only if a pregnant woman feels ill; among some cultures, pregnancy is regarded as a healthy condition not requiring medical treatment or advice from a health care provider. A few women may actually be unaware of what prenatal care is or what the signs of pregnancy are. Previous, unsatisfying experiences with prenatal services may also act as a deterrent.

Pregnant women may avoid prenatal care because they fear providers or medical procedures, because they fear others' reactions to the pregnancy, or because they fear that their illegal status in the country will be discovered. Pregnant women who are aware that such personal habits as drug and alcohol abuse, heavy smoking, and eating disorders place their health and that of their babies at risk may also avoid care because they anticipate sanction or pressure to change. Unfortunately, numerous reports detail alarming increases in the proportion of women, including pregnant women, who abuse heroin and cocaine and in the number of babies born with varying degrees of addiction.

Having friends and family to offer emotional support and tangible assistance, and having well-developed skills in overcoming isolation, may minimize or eliminate barriers to prenatal care; lack of these assets, particularly when combined with poverty, may constitute a barrier to care in and of itself. Homeless women, for example, have very poor rates of prenatal care use. Stress, depression, and denial may also decrease a woman's ability to seek prenatal care.

BARRIERS TO CARE: WOMEN'S AND PROVIDERS' PERSPECTIVES

Although numerous barriers to prenatal care have been noted in many studies, the relative importance of these barriers to women themselves is

not as well documented. Few reports on obstacles to prenatal care cite “consumer” views, and programs aimed at increasing participation in care are often designed without careful assessment of women’s experiences with maternity care. To help fill this gap, the Committee synthesized the findings of numerous studies of women who had obtained insufficient prenatal services and who had been queried about factors they felt had caused their delay in entering care.

Financial barriers—particularly inadequate or no insurance and limited personal funds—were the most important obstacles reported in 15 studies of women who received insufficient care. Transportation problems also emerged as major barriers. A very important message from these studies is that many women who obtained insufficient care attach a low value to prenatal services. Other barriers that frequently appeared include some variation on “I didn’t know I was pregnant,” inhospitable institutional practices (such as inconvenient hours and long waits in clinics), limited provider availability, and dislike or fear of prenatal care.

In six studies of women who obtained no prenatal care at all, financial barriers were again the most commonly cited obstacle. The second most common was a low value placed on prenatal care. Other barriers frequently reported by these women include transportation difficulties, inhospitable institutional practices, and a dislike or fear of prenatal services.

The Committee reviewed three studies that assessed teenagers’ views of barriers to prenatal care. These studies suggest that such internal factors as fear, shame, and denial may well overshadow financial obstacles to care, at least at the outset. Given their youth, adolescents may also be particularly likely to know little about prenatal care and to place a low value on what they do know of it. Common sense suggests that when adolescents actually try to seek care, the problems of limited personal funds and no insurance also loom large.

A 1987 survey conducted by the American College of Obstetricians and Gynecologists studied whether obstetricians see barriers to prenatal care in roughly the same way their clients do. In general, the survey found notable agreement between clients and providers. The most important obstacle to care cited by the obstetricians was financial problems followed by a belief that prenatal care is not necessary.

MULTIVARIATE ANALYSIS

The Committee reviewed 12 studies that used multivariate analysis to determine predictors of prenatal care use. The value of this analytic technique is that it can consider the combined effects of demographic risk factors, general barriers to care, and the reasons offered by women about

why they obtained insufficient care. Although results of the 12 analyses could not be pooled, several themes emerged. Poverty (especially as represented by inadequate or no health insurance) was a consistently important predictor of insufficient care. Except for race, all of the other demographic risk factors noted earlier were also found to predict insufficient care in many of the studies, along with unintended pregnancy and a low opinion of prenatal services. Despite the clear value of these studies in defining key risk factors and in defining target groups, there is need for more sophisticated understanding of the factors influencing use of this key health service.

IMPROVING THE USE OF PRENATAL CARE: PROGRAM EXPERIENCE

The Committee studied 31 programs that have tried to improve participation in prenatal care. These programs were divided into five groups, depending on their major emphasis:

1. reducing financial obstacles to care;
2. increasing the basic capacity of the prenatal care system relied on by many low-income women;
3. improving institutional practices to make services more easily accessible and acceptable to clients;
4. identifying women in need of prenatal care (casefinding) through a wide variety of methods, including hotlines, community canvassing using outreach workers or other paraprofessional personnel, cross-agency referrals, and the provision of incentives; and
5. providing social support to encourage continuation in prenatal care and smooth the transition into parenthood.

The last two categories include the majority of activities generally viewed as outreach. Consonant with the Committee's charge, a special effort was made to examine programs in these categories.

The objective of studying a given program was not merely to understand its approach to improving access, but also to determine which activities appeared effective, with what populations, and under what circumstances. Program effectiveness was measured in terms of the month of pregnancy in which prenatal care was begun or the number of prenatal visits or both. Programs that had assessed their impact using only birth outcome measures (such as length of gestation, birthweight, Apgar score, or infant mortality) were excluded from the group of programs studied.

Unfortunately, the data available to judge program effectiveness are rarely excellent and often inadequate. Most programs have few funds for

evaluation; when unrestricted dollars are available, service demands usually take precedence. Even the few evaluated programs reviewed by the Committee seldom used randomization techniques or other strong research designs to assess program effects. Selection bias, in particular, clouds most evaluations. Moreover, because many programs are complex, it is often difficult to distinguish the impact of individual elements.

This is not to say, however, that no judgment could be made regarding program effectiveness. The Committee concluded that each of the five types of programs can succeed in bringing women into prenatal care and maintaining their participation. It is nonetheless true that the success of many programs is modest, often because they are anomalies in a complicated, fragmented network of maternity services characterized by pervasive financial and institutional obstacles to care. The Committee was struck by the amount of effort these disparate programs involve, the degree of personal dedication required of their leaders, and the difficulties many have had to overcome to make progress. The goal of early and continuous use of prenatal care by pregnant women may seem straightforward and obviously sensible, but attaining it in the United States at present is proving to be an arduous task.

More specific conclusions were also drawn about the five types of programs. With regard to the first category—removing financial barriers to care—the Committee noted how few programs could be identified that take this direct approach to improving participation in prenatal care, despite the salience of financial obstacles. Most try to ease financial barriers by enlarging the clinic systems relied on by low-income pregnant women, rather than by enabling them to use provider systems already in place, including physicians in private practice.

The program data also suggest that increasing the capacity of the prenatal care systems relied on by low-income women can improve utilization among this population. Nurse-practitioners, certified nurse-midwives, and other mid-level practitioners are often central to this approach.

With regard to the third programmatic approach—revising internal procedures and policies—the Committee found very persuasive data that institutional modification can improve participation in prenatal care substantially. The programs reviewed in this category underscore the importance of how clients are treated, what the clinic or office procedures are, and what the atmosphere of the setting is.

The fourth cluster of programs reveals great variety in casefinding methods. Data from projects that conduct casefinding with outreach workers and similar personnel suggest that the number of clients recruited is often low and that the cost per client enrolled can be very high, particularly in highly mobile urban settings; nonetheless, outreach work-

ers can sometimes find the hardest-to-reach women. Program managers report that outreach workers can be difficult to recruit, train, supervise, and motivate, and that only the most skilled and persistent are likely to succeed. Both funders and program planners tend to underestimate the costs and complexity of using this means of casefinding.

Hotlines appear to be meeting a real need and their success shows that the telephone has great potential for casefinding. When hotline workers follow up on referrals and attempt to solve the problems faced by their callers in securing care, they can help to overcome major barriers. Casefinding through cross-program referrals can also improve participation in prenatal care. Close cooperation between prenatal services and pregnancy testing services, pediatric services, and WIC sites (that is, sites administering the Special Supplemental Food Program for Women, Infants, and Children) seems particularly useful.

The Committee found little evidence that incentives in kind or in cash brought women into care, although the amount of data available in this area is extremely limited. Programs that use this approach generally report that the women are appreciative, but program staff do not think the incentives themselves are the primary factor in initiating or maintaining care.

The final category of projects reviewed emphasizes social support, principally as a means of encouraging women to continue care. Program data indicate that this approach can result in an increased number of prenatal visits. Populations at greatest risk of insufficient prenatal care, such as young teenagers and low-income minority women, often require significant social and emotional support, information, advice, and caring. Those providing such assistance through health care or social service agencies are well positioned to urge pregnant clients to seek and remain in prenatal care and to comply with the recommendations of their health care providers.

Program Implementation and Evaluation

Many program leaders face major difficulties in implementing and maintaining programs. Problems fall into five groups: planning programs, finding financial and community support, dealing with bureaucracies, recruiting and keeping personnel, and sustaining momentum. The Committee also found that virtually all programs struggle with evaluation—what to evaluate, how to build data collection into routine program activities, how to enlist staff in the process of evaluation when providing service is their primary focus, and, above all, how to find adequate money, staff, and time to do high-quality evaluation studies. Some programs that believed they were evaluating their activities properly were found, on

closer examination, to be using inadequate evaluation designs, yielding data of limited value. The net result is that the quality of most program evaluation reviewed by the Committee was poor and that considerable energy was being wasted.

CONCLUSIONS AND RECOMMENDATIONS

The data and program experience reviewed by the Committee reveal a maternity care system* that is fundamentally flawed, fragmented, and overly complex. Unlike many European nations, the United States has no direct, straightforward system for making maternity services easily accessible. Although well-insured, affluent women can be reasonably certain of receiving appropriate health care during pregnancy and childbirth, many women cannot share this expectation. Low-income women, women who are uninsured or underinsured, teenagers, inner-city and rural residents, certain minority groups, and other high-risk populations are likely to experience significant problems in obtaining necessary maternity services.

The Committee concludes that in the long run, the best prospects for improving use of prenatal care—and reversing current declines—lie in reorganizing the nation's maternity care system. Although a new system may include some elements of the existing one, the Committee specifically recommends against the current practice of making incremental changes in programs already in place. Instead, it argues for fundamental reform. Several ways are available for designing the specific components of a new system, but no such work should proceed until the nation's leaders first make a commitment to enact substantial changes. A deeper commitment to family planning services and education should accompany improvements in the maternity care system.

In the short term, the Committee urges strengthening existing systems through which women secure prenatal services. This includes simultaneous actions to:

1. remove financial barriers to care;
2. make certain that basic system capacity is adequate for all women;
3. improve the policies and practices that shape prenatal services at the delivery site; and
4. increase public information and education about prenatal care.

Federal leadership of this four-part program is essential, supplemented by state action to ensure the availability of prenatal services to all residents.

*That is, the complicated network of publicly and privately financed services through which women obtain prenatal, labor and delivery, and postpartum care.

Even if all four system changes were implemented, however, there would still be some women without sufficient care because of extreme social isolation, youth, fear or denial, drug addiction, cultural factors, or other reasons. For these women, there is a clear need for casefinding and social support to locate and enroll them in prenatal services and to encourage continuation in care once begun. These outreach services, supplementing a well-designed, highly accessible system of prenatal services, can help draw the most hard-to-reach women into care.

Unfortunately, though, outreach is often undertaken without first making certain that the basic maternity care system is accessible and responsive to women's needs. Too often, communities organize outreach to help women over and around major obstacles to care rather than removing the obstacles themselves. To fund outreach in isolation and hope that it alone will accomplish major improvements in the use of prenatal services is naive and wasteful.

In support of this general view, the Committee makes a number of recommendations regarding program management, evaluation, and research. The Committee concludes that not all programs should have to muster the funds and expertise to conduct formal evaluation studies. For those that choose to do so, a higher quality of effort is needed than that exhibited by most of the programs reviewed. With regard to research, the Committee specifically urges that no more research be conducted to demonstrate the importance of financial and other institutional barriers to care. The Committee does, however, suggest six specific research topics (see recommendation 14 below) and recommends that the current practice of securing funds for services under the guise of research cease.

SPECIFIC RECOMMENDATIONS

The full report includes 14 major recommendations; most have one or more subsidiary recommendations not included in this brief summary.

1. We recommend that the nation adopt as a new social norm the principle that all pregnant women—not only the affluent—should be provided access to prenatal, labor and delivery, and postpartum services appropriate to their need. Actions in all sectors of society, and clear leadership from the public sector especially, will be required for this principle to become a clear, explicit, and widely shared value.

2. We recommend that the President, members of Congress, and other national leaders in both the public and private sectors commit themselves openly and unequivocally to designing a new maternity care system—or systems—dedicated to drawing all women into prenatal care and providing them with an appropriate array of health and social services throughout

pregnancy, childbirth, and the postpartum period. Although a new system might build on existing arrangements, long-term solutions require fundamental reforms, not incremental changes in existing programs.

3. We recommend that more immediate efforts to increase participation in prenatal care emphasize four goals: eliminating financial barriers to care, making certain that the capacity of the maternity care system is adequate, improving the policies and practices that shape prenatal services at the site where they are provided, and increasing public information about prenatal care. (In recommendations 5 through 8, each of these four goals is developed more fully.)

4. We recommend that the federal government provide increased leadership, financial support, and incentives to help states and communities meet the four goals we advocate (recommendation 3). In a parallel effort, states should accept responsibility for ensuring that prenatal care is genuinely available to all pregnant women in the state, relying on federal assistance as needed in meeting this responsibility.

5. We recommend that top priority be given to eliminating financial barriers to prenatal care. (More specific recommendations are directed toward Medicaid, the various federal grant programs, state and local health departments, and private insurance.)

6. We recommend that public and private leaders designing policies to draw pregnant women into prenatal care make certain that services are plentiful enough in a community to enable all women to secure appointments within two weeks with providers close to their homes. (Numerous methods for achieving this goal are suggested.)

7. We recommend that those responsible for providing prenatal services periodically review and revise office or clinic procedures to make certain that access is easy and prompt, bureaucratic requirements minimal, and the atmosphere welcoming. Equally important, services should be provided to encourage women to continue care. Follow-up of missed appointments should be routine, and additional social supports should be available where needed. (Many suggestions are made to improve institutional practices at the delivery site.)

8. We recommend that public and private groups—government, foundations, health services agencies, professional societies, and others—invest in a long-term, high-quality public information campaign to educate Americans about the importance of prenatal care for healthy mothers and infants and the need to begin such care early in pregnancy. The campaign should carry its message to schools, the media, family planning and other health care settings, social service networks, and places of employment. Additional campaigns should be aimed at the groups at highest risk for insufficient care. Whether directed at the entire population or a specific subgroup, public information campaigns should always include specific

instructions on where to go or whom to call to arrange for prenatal services.

9. We recommend that initiatives to increase use of prenatal care not rely on casefinding and social support to correct the major financial and institutional barriers that currently impede access. Rather, outreach should be only one component of a well-designed, well-functioning system and should be targeted toward women who remain unserved despite easily accessible services. Outreach should only be funded when it is linked to a highly accessible system of prenatal services, or, at a minimum, when it is part of a comprehensive plan to strengthen the system, emphasizing the four areas previously described.

10. We recommend that in communities where financial and institutional barriers have been removed, or as part of a comprehensive plan to do so, at least five kinds of casefinding be considered for their compatibility with a program's goals and constraints: (a) telephone hotline and referral services that can make prenatal appointments during the initial call and can provide assistance to callers in arranging needed maternity, health, and social services; (b) television and, in particular, radio spots to announce specific services, coordinated with posters displayed in the mass transit system; (c) efforts to encourage current program participants to recruit additional participants from their friends, neighbors, and relatives; (d) strong referral ties between prenatal programs and a variety of other systems in which pregnant women at risk for insufficient care may be found: family planning clinics, schools, housing programs, WIC agencies, welfare and unemployment offices, churches and community service groups, shelters for the homeless, the police and corrections systems, substance-abuse programs and treatment centers, and other health and social service networks; and (e) outreach workers who canvass in carefully defined target areas and seek clients among well-defined target populations. Whatever the method used, casefinding should be directed toward high-risk groups and areas. This requires that program leaders pinpoint the sociodemographic characteristics and geographic locations of women who obtain insufficient prenatal care.

11. We recommend that programs providing prenatal services to high-risk, often low-income groups include social support services to help maintain participation in care and arrange for additional services as needed. Home visiting is an important form of social support and should be available in programs caring for high-risk women.

12. We recommend that programs to improve participation in prenatal care invest generously in planning and needs assessment. Doing so will require a deeper appreciation, among funders in particular, of the time needed for responsible, intelligent program design and planning. Substantial improvements in the use of prenatal care (or in other measures of

outcome such as low birthweight or infant mortality) should not be expected too soon.

13. We recommend that early in a program's course its directors decide whether it is to be primarily a service program (with data collected mainly to help in program development and monitoring) or whether it is also to test an idea in the field. The latter type requires ample funding if the evaluation is to be sound; it also requires experts in program evaluation and sophisticated systems for data collection—resources that must be built into the program from the outset.

14. We recommend that *in communities where financial and institutional obstacles to care have been significantly lowered*, research be undertaken on several topics: (a) Why do some pregnant women register late—or not at all—for prenatal care, even when financial and institutional barriers are ostensibly absent? In particular, what are the emotional and attitudinal factors that limit participation in care? (b) How can the content of prenatal care be revised to encourage women to seek such care early in pregnancy? (c) What casefinding techniques are most helpful in identifying very high-risk groups (such as low-income multiparous teenagers) and linking them to prenatal services? (d) What are the costs associated with various forms of casefinding and social support? (e) What are the most effective ways to forge links between physicians in private practice and community agencies providing the ancillary health and social services that high-risk women often need? and (f) How is access to maternity services being affected by such recent developments as the decreased ability of hospitals to finance care for indigent patients through cost shifting, the increase in corporate ownership of hospitals, the gradual expansion of the DRG (diagnosis-related groups) system beyond the Medicare program, and the increasing profit orientation of the health care sector generally?

NOTE: Reference documentation for material in this Summary and Recommendations is presented in the full report.

