

percent), statistics (8 percent), data base management (6 percent), communication (5 percent), and graphics (4 percent) were the other major activities.

During the first day, the small groups identified "needs or visions" for the next 5-10 years. The results are outlined in the accompanying box. During the second day, the groups were asked to suppose that they were a task force formed to develop "a plan of action that could actually be implemented," to address one or more of the needs or visions of the previous day. The initiatives developed are listed in the box.

Discussion

The broad scope of the needs or visions and the proposed initiatives reflect the diverse backgrounds of the attendees. Software developers may be surprised at the emphasis given to data needs and to user support, while others may be stimulated by the wealth of technological suggestions. The results clearly demarcate several new threads of epidemiologic computing. The emphasis on international communication and cooperation reflects the success of international computing efforts such as Internet (2) and the translation of Epi Info (3) or its manual into 10 languages.

The struggle to link diverse data sources for public health use will require major advances in technology, public and private attitudes, and human resources and skills. It is clear that planning efforts to improve the state of epidemiologic computing must consider (a) data content, availability, and quality; (b) computer technology adapted to public health use; (c) human resources and skills for computing; and (d) international cooperation and data exchange in many languages.

The results provide ideas for future work in the epidemiologic use of microcomputers. Agencies and others should use the expressed ideas as a springboard for further discussion, planning, and implementation. A detailed, 60-page summary of the results is available from the author.

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Money Isn't Everything: Rural Physicians Identify Other Factors That Facilitate Providing Prenatal Care for Low-Income Women

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Synopsis

The problem of physicians dropping the practice of obstetrics is becoming more serious each year in the United States. Those who remain in practice are

increasingly reluctant to serve women who receive Medicaid assistance.

Previous research has tended to focus on low reimbursement and liability as barriers that physicians perceive to providing prenatal care to low-income clients. In a 1992 survey in rural Idaho, however, physicians who have been serving these clients for at least 4 years rated other factors equally or more important in treating low-income women.

These other factors, discussed in this paper, have to do with the administrative and psychosocial support coordinated by public health nurses for their internal clients, the physicians, as well as for their external clients, pregnant women.

A 1991 report by the American College of Obstetrics and Gynecology identified four barriers to physician participation in prenatal care for Medicaid-eligible clients—low reimbursement, malpractice liability, administrative hassles, and psychosocial problems with low-income clients (1).

The South Central Idaho Public Health District V Pregnancy Program has focused on overcoming barriers in these last two areas—administrative and psychosocial problems with low-income clients.

Physicians who have participated in this program for more than 4 years have rated several of its administrative and psychosocial components as equally or more helpful in overcoming problems in treating Medicaid patients than increased reimbursement and liability coverage.

A detailed history of the District V Pregnancy Program and its results appeared in a 1991 *Public Health Reports* article, “Piecing Together the Crazy Quilt of Prenatal Care” (2).

History

Idaho ranks last in the nation in physician-to-population ratio (114 per 100,000 versus the national average 184 per 100,000) (3). Public Health District V historically has had the poorest access to prenatal care in the State with only 61.1 percent of pregnant women receiving prenatal care in the first trimester (4). Since there are just seven obstetricians (OBs) in the district, family practice-general practitioners (FP-GPs) provide the bulk of obstetric care.

In the fall of 1988, the FP-GPs were threatening to quit obstetric practice altogether. They complained of low Medicaid reimbursement, high liability concerns, and the time-consuming psychosocial problems of low-income clients. Growing numbers of drop-in deliveries (those without prenatal care) were forcing the FP-GPs above the 40-procedure limit on their malpractice insurance. Tempers were rising and “dumping” (referring low-income women in labor from one hospital to another across county lines) was increasing. The two physicians contracting with the health district to provide prenatal care to low-income clients had quit.

Health district personnel decided that they had to pool limited rural resources, both public and private, to address the threat of physician dropout and other problems of access to prenatal care. They arranged community meetings at each of the five area hospitals. Participants included public health nurses and representatives from hospitals, Medicaid offices, migrant community clinics, and local government.

Physicians were also key participants. They took the opportunity to voice their concerns and suggest solutions that they would be willing to accept. These solutions varied from county to county; some physicians wanted to care for patients in their private offices. Others wanted to serve in hospital-based clinics. Others agreed to provide delivery and hospitalization services but arranged for migrant community clinic physicians to give prenatal care to their low-income clients for a given period.

Community hospitals agreed to pay insurance premiums for their FP-GP physicians to help overcome the malpractice liability problem. This participation and input from the private sector was essential for the implementation of the District V pregnancy program that was then developed.

By January 1989, all obstetric care providers in the district (7 OBs and 27 FP-GPs) had agreed to participate in the pregnancy program. They participated without additional reimbursement for more than a year before a federally mandated increase in Medicaid payments in April 1990 increased reimbursement from \$436 to \$1,070 for global obstetric care. Participation of all 34 physicians has continued for the 3 years since. Level of participation varies from 4 to 60 Medicaid-eligible clients per year.

Concurrently, a dramatic decrease in drop-in deliveries occurred district-wide from 192 in 1989, the first year of pregnancy program implementation, to 89 in 1990, 45 in 1991, and approximately the same in 1992, with a slight increase in the total number of deliveries each year. A 50-percent reduction in very low birth weight infants and a decrease in newborn intensive care unit admissions from 158 in 1989 to 115 in 1990 to 108 in 1991 occurred during the same period (5,6).

Concerned with the possibility of cuts in all public health programs in 1992, the Pregnancy Program coordinator decided to ask obstetric care providers which program factors were facilitating their continuing prenatal care services to low-income clients. One purpose of the survey was to retain those factors most valued by participating physicians.

Method

In April 1992, the Pregnancy Program coordinator distributed a survey form to participating physicians who were asked to rate 20 factors that facilitated their prenatal care of low-income pregnant women. The rating ranged from 0—not helpful to 1—helpful, and 2—very helpful. (See table).

Of the factors, 18 relate to components of the Pregnancy Program; 7 (A through G) refer to services

performed in pregnancy screening clinics at county public health offices where women receive pregnancy testing, screening for Medicaid eligibility, temporary medical cards, and referral to community resources. At these screening clinics, the public health nurse-case coordinator assigns Medicaid-eligible clients to physicians in their own counties on a rotating basis for prenatal care.

Seven factors (H through N) refer to services provided or coordinated by public health nurses (PHNs). All except factor L (antepartum and postpartum home visits to patients) are provided through monthly one-stop shopping clinics now offered at county public health offices. Here PHNs coordinate the Women, Infants and Children's nutrition program from the Department of Agriculture, follow up on the physician's medical recommendations, assure that patients receive medical cards, provide patient screening for substance abuse, refer to treatment programs and community resources, provide one-on-one prenatal education, and keep physicians informed of patient status.

Three factors (O, P, and Q) refer to services provided by a nutritionist, social worker, and dental hygienist at the monthly one-stop shopping clinics.

The last two factors refer to elements outside the pregnancy program. Factor R alludes to increased Medicaid reimbursement for obstetric care, and factor S refers to hospital coverage of obstetric malpractice insurance. It was assumed that these two external factors would be considered most helpful to physicians providing obstetric care for Medicaid-eligible women and that these external factors would therefore serve as useful comparisons for Pregnancy Program factors. A final open-ended question requested additional comments.

Results

The surveys were completed and returned by 24 of the 34 physicians—all 7 obstetricians and 17 of the 27 family practice-general practitioners, a 71-percent response.

All factors listed on the survey form received mean scores of helpful or better (see table). As expected, both OBs and FP-GPs rated the increased Medicaid reimbursement as helpful or very helpful, with a mean score of 1.6. Each group rated four Pregnancy Program factors as equally or more helpful, however.

Both physician groups gave highest ratings to factors E and M—screening for Medicaid presumptive eligibility and one-on-one prenatal education by the public health nurse. OBs placed a value equal to increased reimbursement on factors I and N—public

health nurse followup to insure that clients get medical cards and that physicians are informed of client status. FP-GPs placed a value equal to increased reimbursement on factors F and J—referral to physicians for prenatal care and screening for substance abuse with referral to drug treatment programs.

Factor S—hospital coverage of obstetric malpractice insurance did not apply to OBs and was answered by only 12 of the 17 FP-GPs. This factor received a mean score of 1.3 from the 12 who responded. The overall mean score for the 18 Pregnancy Program factors was 1.5. Comments at the end of the survey were mainly positive or offered useful insights, or both. For example,

The 'hassle factor' in dealing with Medicaid has in the past been the only reason I have declined seeing Medicaid recipients. When or if the process again becomes cumbersome, antagonistic, etc., I will again stop seeing new Medicaid patients.

These findings are consistent with a 1992 California study that relied on open-ended questions to participating physicians. Those obstetric care providers rated administrative hassles as the most serious barrier to participation in prenatal care programs for Medicaid-eligible clients and psychosocial problems of clients as second and equal to low reimbursement barriers (7).

The public health nurse-case coordinator in Health District V serves both the internal clients—physicians—and the external clients—patients—in the pregnancy program. She facilitates both participation of the physicians and improved birth outcomes of Medicaid-eligible women in District V. To what extent these improved outcomes are a result of case coordination services, as has been demonstrated in a recent North Carolina study (8), warrants further research.

Motivation and job design theorist Frederick Herzberg gives many examples of improvements in services when core jobs in organizations are enriched to serve internal and external clients (9). His advice to public health organizations is to enrich the jobs of public health nurses with sufficient resources and authority to coordinate services for these clients (10).

Unfortunately, a 1992 cutback in State maternal and child health funding for District V's program has translated into fewer women being case coordinated (234 in 1992 versus 357 in 1991, or less than one-third of the estimated target population). Loss of the social worker and dental hygienist at support service

Responses of 24 of 34 physicians¹ to Idaho Public Health District V Pregnancy Program survey on facilitation of prenatal care for Medicaid clients, April 1992

| Factor | Question and response by type of practice | Number of physicians responding— | | | Mean score ² |
|--------|---|----------------------------------|---------|--------------|-------------------------|
| | | Not helpful | Helpful | Very helpful | |
| A | Physician assigned Medicaid eligible patients on a rotating basis from their county-service area only: | | | | |
| | General-family practice | 3 | 7 | 5 | 1.0 |
| | Obstetrics | 3 | 2 | 2 | 1.0 |
| B | Health department providing districtwide program coordination and data collection: | | | | |
| | General-family practice | 0 | 10 | 7 | 1.4 |
| | Obstetrics | 0 | 3 | 4 | 1.6 |
| C | Health department county-based pregnancy testing clinics: | | | | |
| | General-family practice | 2 | 8 | 7 | 1.3 |
| | Obstetrics | 0 | 4 | 3 | 1.4 |
| D | Pregnancy testing clinics offering pregnancy option counseling: | | | | |
| | General-family practice | 3 | 7 | 7 | 1.2 |
| | Obstetrics | 0 | 3 | 4 | 1.6 |
| E | Health department personnel screening for Medicaid eligibility at pregnancy testing clinics: | | | | |
| | General-family practice | 0 | 6 | 11 | 1.6 |
| | Obstetrics | 0 | 0 | 7 | 2.0 |
| F | Referral from pregnancy testing clinics to physicians for prenatal care, to WIC and other community resources: | | | | |
| | General-family practice | 0 | 6 | 11 | 1.6 |
| | Obstetrics | 1 | 1 | 5 | 1.6 |
| G | Public health nurse is local contact for pregnancy program in her county: | | | | |
| | General-family practice | 1 | 11 | 5 | 1.2 |
| | Obstetrics | 0 | 3 | 4 | 1.6 |
| H | Public health nurse case coordinator sees patients monthly in WIC and follows up on medical recommendations and patient noncompliance issues: | | | | |
| | General-family practice | 1 | 6 | 10 | 1.5 |
| | Obstetrics | 0 | 4 | 3 | 1.4 |
| I | Public health nurse case coordinator assures patients follow through and receive medical cards: | | | | |
| | General-family practice | 0 | 8 | 9 | 1.5 |
| | Obstetrics | 0 | 2 | 5 | 1.7 |

¹ 17 general-family practitioners responded to every factor except A (15) and Q (16); and 7 obstetricians responded to every factor except S, to which none responded.

clinics was also a result of the cutback. What effects these changes may have on district birth outcomes and physician participation in the program have yet to be determined.

The problem of physician reluctance to provide prenatal care for Medicaid-eligible women is especially acute in rural areas (11,12). Other studies have noted the importance of input from the private sector for solutions to public health problems in rural areas (13,14). But much past research has tended to focus on nonparticipating physicians and on reimbursement and liability barriers to their service (15-17).

The experience of District V with 1989-93 physician participation in its pregnancy program seems to show that adequate reimbursement is important, but not sufficient, to sustain physician participation in prenatal care for low-income clients. Help with Medicaid administration and client psycho-

social problems appear to be at least equally important. It is futile to expect physicians to handle problems for which they have neither the time nor the resources and then to blame them for not serving low-income clients.

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Responses of 24 of 34 physicians¹ to Idaho Public Health District V Pregnancy Program survey on facilitation of prenatal care for Medicaid clients, April 1992 (Continued)

| Factor | Question and response by type of practice | Number of physicians responding— | | | Mean score ² |
|--------|---|----------------------------------|---------|--------------|-------------------------|
| | | Not helpful | Helpful | Very helpful | |
| J | Public health nurse provides patient screening for substance use and refers to treatment programs (including smoking cessation): | | | | |
| | General-family practice | 0 | 7 | 10 | 1.6 |
| | Obstetrics | 0 | 3 | 4 | 1.6 |
| K | Public health nurse coordinates services for patients and refers to community resources for transportation, housing assistance, emergency food: | | | | |
| | General-family practice | 1 | 6 | 10 | 1.5 |
| | Obstetrics | 0 | 3 | 4 | 1.6 |
| L | Public health nurse provides antepartum and postpartum home visits for patients: | | | | |
| | General-family practice | 1 | 6 | 10 | 1.5 |
| | Obstetrics | 0 | 4 | 3 | 1.4 |
| M | Public health nurse provides one-on-one prenatal education for patients: | | | | |
| | General-family practice | 1 | 4 | 12 | 1.6 |
| | Obstetrics | 0 | 2 | 5 | 1.7 |
| N | Public health nurse keeps physician informed of patient status: | | | | |
| | General-family practice | 2 | 7 | 8 | 1.4 |
| | Obstetrics | 1 | 0 | 6 | 1.7 |
| O | Patient evaluation, counseling by nutritionist: | | | | |
| | General-family practice | 2 | 7 | 8 | 1.4 |
| | Obstetrics | 0 | 4 | 3 | 1.6 |
| P | Patient evaluation, counseling by social worker: | | | | |
| | General-family practice | 3 | 4 | 10 | 1.4 |
| | Obstetrics | 0 | 3 | 4 | 1.6 |
| Q | Patient evaluation by dental hygienist and referral for emergency dental care: | | | | |
| | General-family practice | 1 | 9 | 6 | 1.3 |
| | Obstetrics | 1 | 3 | 3 | 1.3 |
| R | April 1990 increase in Medicaid reimbursement for obstetric care to \$1,070: | | | | |
| | General-family practice | 1 | 5 | 11 | 1.6 |
| | Obstetrics | 0 | 2 | 5 | 1.7 |
| S | Hospital coverage of obstetric malpractice insurance (if applicable): | | | | |
| | General-family practice | 2 | 4 | 6 | 1.3 |

² Responses were scored on a scale of 0-2; 0=not helpful, 1=helpful, 2=very helpful.

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