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ABSTRACT

The continuing surge of women into the work force and the tendency for women to remain on the job throughout pregnancy and to return to work within months after delivery have led companies to initiate and place increasing importance on prenatal health promotion. Such programs have been found to improve employees' prospects for healthy pregnancies and healthy babies, lower health insurance costs, improve worker productivity, reduce pregnancy-related absences, result in earlier returns to work after childbirth, reduce employee turnover, result in fewer days taken off to care for sick children, improve employee morale, and encourage employees to continue practicing healthful patterns learned during their pregnancies. As more pregnant women stay on the job throughout pregnancy, companies must pay more attention to worksite conditions that could adversely affect their employees' pregnancies, such as heavy work, stress, long periods of time at video display terminals, toxic substances, and other hazards. Worksite prenatal health programs can be individualized or based on group classes or seminars. Possible topics include genetics, exercise, smoking, nutrition, alcohol and drugs, stress management, environmental and workplace influences, and parenting. (Twelve examples of companies that offer worksite prenatal health programs are included in this document.) (MN)

WBGH WORKSITE WELLNESS SERIES

PROMOTING PRENATAL HEALTH IN THE WORKPLACE

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PROMOTING PRENATAL HEALTH IN THE WORKPLACE

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PROMOTING PRENATAL HEALTH IN THE WORKPLACE

PRENATAL HEALTH--A GROWING CONCERN FOR EMPLOYERS

Two fundamental changes in employment patterns have led companies to initiate prenatal health promotion in the workplace in the 1980s. One is the continuing surge of women into the work force. The other is the tendency to remain on the job throughout pregnancy and to return to work within months after delivery.

- o Working women in their childbearing years--almost 34 million of them--now make up close to 30 percent of the nation's work force.[1]
- o More women now work in their ninth month of pregnancy: in 1980, 41 percent of pregnant women in white-collar jobs did so.[2] A 1982 study found 48 percent of pregnant women managers and professionals worked in the ninth month.[3]
- o Fewer women are dropping out of the work force upon becoming mothers. The rate of resuming jobs after childbirth has doubled since 1970, from 24 percent to almost 50 percent in 1985.[4]

The magnitude of these trends in the past decade has focused attention on how working affects the health of pregnant women and the babies they will deliver, how pregnancy affects work performance, and how employers can encourage good health practices among pregnant employees.

In 1984, the American Medical Association published guidelines for working during pregnancy, pointing out that "the pregnant employee should be able, in most cases, to continue productive work until the onset of labor."[5]

As more employees follow that course, the value of prenatal

health promotion is becoming increasingly clear to employers. For only a small cost, a company can help to spare the babies of employees from birth defects that can be disabling or even fatal. Companies that sponsor prenatal education programs also report reductions in health-benefit costs and other savings.

The premise of prenatal education is that healthy parents are more likely to have healthy babies. When there are pregnancy complications or a new baby is less than healthy, the effects extend to the workplace:

- o The birth of a sick baby may delay or prevent an employee's return to work.
- o For working mothers and fathers, caring for a baby affected by birth defects may mean frequent time off from the job. Whether or not the employer permits sick days to be used for children's illnesses, unpredictable absences can become a problem. Thirty-six percent of major corporations responding to a national survey report they now allow use of sick days for that purpose.[6]

Birth Defects

The overriding concern of expectant mothers is: "Will my baby be born healthy?" For one out of 14 babies, the answer is "no."[7]

- o Birth defects are the nation's number one child health problem. Each year more than 250,000 babies are born with physical or mental defects. Half a million other pregnancies end in miscarriage or stillbirth.[7]
- o There are more than 3,000 types of birth defects--abnormalities of structure or function that arise from prenatal causes.[7,8]

But there is hope; some birth defects can be prevented. Businesses can help employees learn how they can reduce the risk of birth defects and the chance that their babies will weigh five-and-one-half pounds or less at birth. Low birthweight is the most common condition that contributes to illness at birth and is the major cause of infant deaths.[7]

- o Susceptible women who get rubella immunizations spare their babies from congenital rubella syndrome. A vaccine for women with Rh-negative blood can prevent Rh disease in their babies.[9]
- o Women who don't drink don't give their babies Fetal Alcohol Syndrome.[9]
- o Smoking, drinking, drug use, or poor nutrition during pregnancy can cause low birthweight. Failure to obtain early and regular medical care can increase the risk. Those behavior patterns, which can be changed, are found in many mothers of low-birthweight babies.[10]

Low Birthweight Babies

By explaining the effects of personal lifestyle habits, prenatal programs can play a direct role in reducing the incidence of birth defects, especially low birthweight. Programs pinpointing poor nutrition, smoking, alcohol consumption, and drug use as causes of low birthweight can help reduce a heavy toll:

- o Low-birthweight newborns are 40 times more likely than normal-weight babies to die during the first month of life.[11]
- o Low birthweight is a leading factor in childhood disability. Low-weight babies may experience slower mental and physical development, and may suffer respiratory, heart, kidney or nervous system disorders.[7]
- o Physician and hospital costs for initial hospitalization of a low-birthweight baby average $13,616,[12] compared to $2,378 for delivery of a normal-weight baby.[13]

- Babies of low-birthweight are more likely to be rehospitalized during the first year of life--about 19 percent of low birthweight babies are rehospitalized for an average of 12 days each.[14]

At a time when their health motivation is at a peak, learning about causes of low birthweight leads many women to give up smoking and drinking during pregnancy, as well as improve their nutritional and exercise habits, and their skills at managing stressful situations. These women may have better long-term health prospects because the same good health practices they adopt for the sake of the fetus are fundamental steps for avoiding heart disease, strokes, cancer and other killer diseases.

Teenage Pregnancies

One facet of worksite prenatal education addresses a problem of growing concern among employees who have adolescent or pre- adolescent children. Teen-age pregnancy is a problem that affects employers as well as their employees.

- Teen-age pregnancy has an impact on a company's health-benefit costs when the young mother is a dependent of an employee covered by the health plan. The costs can be substantial if the teen-ager gives birth to a low-weight baby, and the costs can multiply if there are birth defects that require long-term care.
- Births to teen-age girls now total about 500,000 a year.[15]
- Girls under 17 are among the mothers at greatest risk of having a low-birthweight baby, with all the accompanying dangers of mental and physical birth defects.[10]
- The risks are intensified for teen-agers who fail to get medical care early in pregnancy or who smoke, drink, use drugs that aren't prescribed by their physician, or fail to maintain an adequate diet.[10]

Thus, some companies have developed seminars specifically for parents of adolescent and younger children designed to help parents develop ways of communicating with their children, and to help parents express their values on the subject of childbearing to their children at an early age.

Appropriate Medical Care

The importance of obtaining early and regular medical care during pregnancy is a priority topic. A prenatal program in the workplace does not substitute for individual medical care, but supplements and reinforces it. The workplace is a prime setting for reinforcement because of the time spent there and the role that co-workers can play as an informal support group. Moreover, a woman who works has little time to seek out and attend prenatal programs that may be available in her own community.

WOMEN'S IMPACT ON TODAY'S WORK FORCE

The combination of employment and childbearing has come to the fore as part of a demographic transformation of the work force. Government reports use words such as "explosive" to describe the still increasing numbers of women who work,[16] "phenomenal" for the number of working mothers,[17] "profound" for changes in the employment rate of mothers of infants and toddlers.[4]

No less profound is the reversal of attitudes toward working throughout pregnancy and returning to work after delivery and recovery--a practice becoming the norm for women of all economic levels.

Those sweeping trends, building since World War II, are still moving toward their peaks as American women, married or single, now routinely hold jobs to earn income. The strength of those trends in the last decade has created permanent change in the work force, inviting new considerations and responses by employers.

Childbearing by employees stands out among the new realities that warrant company attention, for several reasons.

More Women Working

Year by year, business and industry are relying in greater degree on women employees, both in numbers and in responsible jobs.

- The number of women holding jobs has more than tripled since World War II. In 1947, only 16.7 million women were in the work force.[18] By 1975 there were 37.6 million.[18] Then, in only one decade, the number leaped to 51 million in 1985.[19]

- o The makeup of the labor force is changing markedly. In 1975, it was 40 percent female. By 1985 it was 44 percent. The ratio of women to men is expected to edge up still more in the next 10 years.[20]
- o More women are moving into higher-level jobs and non- traditional occupations. In 1985, the number of women employed in executive, managerial and administrative positions grew by 12 percent. Of all employed women, 23.4 percent held managerial or professional positions in 1985.[19]

More Women of Childbearing Age Working

Women of childbearing age account for the most striking change in the makeup of the work force.

- o Before the 1970s, the peak years for women to work were 20 to 24 and 45 to 54. In the mid-1960s, 50 percent of women in those age groups were working. Women 25 to 34 had the lowest employment rate--under 40 percent.[21] Births and child rearing kept the majority from working.
- o Today, the employment rate exceeds 70 percent for women in every childbearing age group from 20 to 44. The greatest surge has been among women 25 to 34. Their employment rate caught up in 1985 to others of childbearing age.[21]
- o The number of working women age 20 to 44 now totals 33.7 million. Those women of childbearing age constitute almost 30 percent of the nation's labor force of 115.5 million men and women.[1]

Women Delaying First Child

Women today are starting families at later ages than a generation ago. Many women now delay marriage and childbearing until they finish their education and establish themselves in the work force.[22]

- o In the past, most women had their first babies by age 25. In the 1960s, first births increased among those 25 to 29. A trend to delay pregnancy until after age 30 began in the 1970s.[23]
- o The birth rate for women 25 to 29 now is about equal to that of the 20-to-24 age group. The next highest birth rate is for the 30-to-34 age group, which registered a substantial increase in the early 1980s.[24]
- o Births for women 35 and over increased 45 percent from 1975 to 1983, to the rate of 4,000 babies a week.[25] Births should continue to increase in that age group because of the huge number of today's women who were born in the 1950s and the tendency by many to delay their own childbearing.
- o Certain conditions, such as hypertension and adult onset diabetes, are more likely to occur in women over 35, and require careful monitoring of the pregnancy. Women over 35 also are at increased risk of bearing a baby with chromosomal abnormalities, such as Down syndrome.

More Women Working During, After Pregnancy

Many more women are continuing to work during pregnancy, to work closer to delivery, and to return to work within months of giving birth.

- o Working during pregnancy was uncommon until after World War II. In 1963, 58 percent of married women who had a first child that year worked to some extent during pregnancy. A 1973 study found a slight rise, to 61 percent. In the next seven years, the rate soared to 79 percent in 1980.[2]
- o At one time, women were advised not to work beyond the sixth month of pregnancy. By 1973, the median was 6.9 months.[26] In 1980, 41 percent of pregnant while-collar women were working at the start of the ninth month.[2] In 1983, 48 percent of surveyed managers and professionals worked in the ninth month.[3] Today, working up to the week before delivery is common.

- Fewer women are leaving the work force after having a baby. In 1985, of all women with infants one year or under, close to 50 percent were working--up from 39 percent in 1980, from 31 percent in 1975, and double the percentage in 1970.[4]

Childbearing Among Working Women Increasing

Companies can expect childbearing among employees to increase and become an even greater factor in overall personnel matters.

- Each year, a larger proportion of the work force consists of women in childbearing years. Projections for 1995 forecast 81 percent of women 25 to 44 in the work force, along with 76 percent of those 20 to 24.[21]
- Eighty percent of employed women will become pregnant during their working lives.[6] Most will have one or two children.
- The pattern of delaying childbearing is meaningful to employers. Women who wait until their late 20s or their 30s to have children generally have developed advanced job skills and insights into company operations. Many occupy key positions. A Government study in 1983 found that one-third of women 25 to 34 earned more than their husbands.[27]
- The percentage of mothers returning to work after delivery is expected to increase. Still more will do so if child-care service is available or if they have the option of part-time work or flexible hours.
- While some new mothers leave the work force or shift to less demanding jobs, a 1985 survey of working women--mostly managers and professionals--found 27 percent had opted for more challenging work after becoming mothers.[22]

THE BENEFITS OF PRENATAL HEALTH PROMOTION

Prenatal programs can be very effective because motivation is high during pregnancy. Participants are eager to learn and ready to do what will help to assure a healthy pregnancy, delivery, and baby. Reports from companies sponsoring such programs indicate the kind of results that employees and employer can share.

- o Better prospects for healthy pregnancies and healthy babies.
- o Savings in health insurance costs.
- o Improved productivity.
- o Fewer absences during pregnancy.
- o Earlier return to work following childbirth.
- o Less employee turnover.
- o Fewer days off to care for sick children.
- o Improved employee morale, and a perception that the company cares.
- o Healthful habits adopted at this time may become the pattern for a lifetime.

Some of the benefits result from a better understanding of the pregnancy process. The Franklin Life Insurance Co., Springfield, Ill., started its program in 1979 in part because many employees tended to react to normal symptoms of early pregnancy, such as nausea and emotional episodes, as if they were sick. They didn't understand that their emotional ups-and-downs were influenced by hormonal changes of pregnancy, and didn't know how to deal with that or with the temporary nausea.[28]

- o Franklin's program presents the facts so that employees can successfully cope with the changes of pregnancy. Better attitudes and better productivity follow.[29]

- o A review after the program's first 18 months found absences had decreased an average of 4.5 days per pregnant employee. "Supervisors have noticed improved employee morale," the company nurse said.[29]

Franklin reports these other results from its overall prenatal program:

- o Employees are working longer through pregnancy and returning to the job much earlier. Time off per employee now averages nine weeks, compared to 15 weeks prior to the start of the program.[29]
- o Eighty-five percent of new mothers return to work, which decreases the necessity for hiring and training replacements, according to the Franklin nurse.[29]

Pregnant employees are not the only ones who benefit from prenatal health programs in the workplace. Other women employees join in while looking ahead to their own pregnancies. Nor is attendance only for women. Prospective fathers learn much about the changes that accompany pregnancy. Supervisors gain insights into the work capabilities of pregnant employees and about their needs.

HOW PREGNANCY AFFECTS WORK PERFORMANCE

A 1984 report by the American Medical Association's Council on Scientific Affairs sheds light on "what we know versus what we think we know" about the impact of pregnancy on a worker's ability to perform her job. The report, "Effects of Pregnancy on Work Performance," concluded that:[5]

> "The pregnant employee should be able, in most cases, to continue productive work until the onset of labor." Guidelines for working at various levels of activity are included in the report, which cautions against generalizing in making decisions about pregnant women continuing to work:
>
> "The determination that a pregnant woman can or cannot work a particular job should be made on a case-by-case basis. The determination is dependent on the types of activities and tasks the job requires, the general physical condition of the employee, and the length of gestation....
>
> "The table (on the following page) shows the period of time that healthy employees with normal uncomplicated pregnancies should be able to perform specific tasks without undue difficulty or risk to the pregnancy. It should not be interpreted that all pregnant employees need stop these activities at the exact time of gestation noted, but should be used as a guide to evaluate each case. An employee's job may require strenuous activity, such as lifting, and the anatomical changes of pregnancy make performing these tasks difficult.
>
> "If the employee is not disabled for another type of work, placement on an alternate lighter job assignment until the employee becomes unable to work may be appropriate."

GUIDELINES FOR CONTINUATION OF VARIOUS LEVELS OF WORK DURING PREGNANCY

Job Function	Week of Gestation
Secretarial and Light Clerical	40
Professional and Managerial	40
Sitting with Light Tasks	
Prolonged (>4 hr)	40
Intermittent	40
Standing	
Prolonged (> 4 hr)	24
Intermittent	
(>30 min/hr)	32
(<30 min/hr)	40
Stooping and Bending Below Knee Level	
Repetitive (>10 times/hr)	20
Intermittent	
(<10 >2 times/hr)	28
(<2 times/hr)	40
Climbing	
Vertical Ladders, and Poles	
Repetitive (≥ 4 times/8-hr shift)	20
Intermittent (< 4 times/8-hr shift)	28
Stairs	
Repetitive (≥ 4 times/8-hr shift)	28
Intermittent (< 4 times/8-hr shift)	40
Lifting	
Repetitive	
>23 kg	20
<23 >11 kg	24
<11 kg	40
Intermittent	
>23 kg	30
<23 >11 kg	40
<11 kg	40

Source: American Medical Association's Council on Scientific Affairs (1984).

What about those who do not meet the criteria of "healthy employees with normal uncomplicated pregnancies"? The American College of Obstetricians and Gynecologists tells pregnant women: "Your doctor may...advise you to stop working if you have certain diseases, have given birth to more than one premature baby, have a history of miscarriages, or are expecting more than one baby."[30]

As for "what we know versus what we think we know" about the impact of pregnancy on job performance, the AMA Council's report advises against accepting "traditional standard assumptions" as fact. "Advice given by generations of physicians regarding work during normal pregnancy has historically been more the result of social and cultural beliefs" than of documented medical experience, it said.

The report cited one study that compared perceptions of well- being by pregnant and nonpregnant women, prospective fathers and other men. "Responses of women in the first five months of pregnancy differ very little from those of men and nonpregnant women." Predictably, "pregnant women scored higher in...'feeling ill' and 'feeling overweight.'" But, of the four groups, "expectant women reported the least impact of their physical condition on performance..."[31]

How difficult is it to deal with common pregnancy symptoms at work? Dr. Linda Hughey Holt, author of AMA's Guide to WomanCare, provided suggestions in a 1984 article in Childbirth Educator magazine. First, during early normal pregnancy:[32]

- Nausea: Keep on hand small carbohydrate nibbles like crackers and melba toast. In severe cases, anti-nausea medications may be necessary.

- Tiredness: This is normal and temporary. More rest helps most women, but those who are overcommitted need to reduce nonessential activities.

About discomforts of the last months of pregnancy:

- Standing or sitting for long periods aggravates varicose veins, swollen legs, and backache. Moderate activity will reduce muscular aches and pains. Walking briskly aids circulation, eases muscle strain. Changing chair height and position frequently may help women with desk jobs.

WORKSITE INFLUENCES ON PREGNANCY

As more women stay on the job throughout pregnancy, greater attention is given to worksite conditions that could adversely affect the pregnancy.

Some situations can worsen discomfort and make it difficult to do the job:

Heavy Work

While pregnant women usually can continue accustomed physical activities, those involving heavy lifting, climbing and carrying may cause discomfort in some. If nausea, dizziness, or fatigue occur while doing strenuous tasks, the risk of accidents could increase.[30]

Stress

For everyone, stress causes definite changes in the body. These include increased muscle tension, faster breathing, quicker heartbeat, and increased blood pressure. Chronic stress can lead to physical and emotional problems ranging from fatigue to insomnia, ulcers to heart disease. Simple lifestyle changes and relaxation techniques, however, can keep stress manageable. There is some evidence that excessive maternal stress during pregnancy can contribute to prematurity in labor and delivery. Studies indicate that extreme psychological stress may play a role in low birthweight. The March of Dimes Birth Defects Foundation recommends that a woman who feels overwhelmed by stress at any time during her pregnancy consult her doctor or nurse-midwife.[33]

VDTs

A frequently asked question is: Are video display terminals safe, especially for pregnant women, or can they cause birth defects? Many VDT workers have complained of psychological stress. Other health complaints reported include eye strain, pains in the neck and back, dull headaches, blurred vision, dizziness and nausea, tension, and irritability. These discomforts can add to psychological stress; none, however, has ever been proven to adversely affect the outcome of pregnancy. Studies in the early 1980s concluded that there is no known detectable radiation hazard from VDT use. The levels of X-ray, ultraviolet, infrared, and microwave radiation are all well below current occupational standards. The March of Dimes is funding further research on VDT radiation.[34]

Toxic Substances and Other Hazards

Toxic substances and other hazards to the reproductive health of females and males and to the health of their babies are matters of increasing concern. The possibility of miscarriage, stillbirth, or birth defects from toxic substances and other hazards has prompted measures to prevent exposure of employees. This is done by modifying work activities, work location, or the work environment. For example:

- Hospital operating-room personnel, who could be affected by frequent longtime exposure to anesthetic gases, are protected by systems that remove the gases from the operating room.
- Operators of X-ray devices are shielded from frequent exposures to the machines' ionizing radiation.

Substances that can cause abnormal fetal development are known as teratogens, and include physical, chemical, and biological agents. Only a few have been confirmed as teratogens in humans.

But causes have not yet been identified for the majority of congenital malformations, and environmental agents cannot be ignored as possible contributing factors. More answers about possible hazards are being sought in research projects funded by the March of Dimes.

A comprehensive report on "Reproductive Health Hazards in the Workplace" was published in December 1985 by the Office of Technology Assessment of the U.S. Congress. It reviews current knowledge of hazards and suspected hazards to the reproductive health of workers and to the health of their children, and it discusses the regulatory process, ethical issues, sex discrimination, and other subjects related to possible reproductive health hazards in the workplace. Copies of the publication are available for $15 each from the Superintendent of Documents, Washington, DC 20402.

MATERNITY POLICIES

The extent of childbearing by employees in the 1980s is leading employers and others to reevaluate company policies regarding pregnancy and resumption of work afterward. Major considerations are health insurance coverage for doctor and hospital costs, leave time for childbirth and recovery, additional time for rearing the infant, pay while on maternity leave, job protection, and availability of dependable child-care facilities.

Company responses to those subjects vary widely. The level of support available to a pregnant employee depends on which company employs her, which state she lives in, or even individual decisions by her supervisor. The pattern is erratic because the United States is the only industrialized country without national legislation that mandates maternity benefits. The Pregnancy Discrimination Act (PDA), which Congress passed in 1978, deals with the whole employment-maternity subject in a limited way. It serves to focus attention on disability benefits, but doesn't require them universally. The Act requires that if a company provides leave time or other benefits for temporary disability, it must grant those benefits for an absence due to childbearing.

Dr. Sheila Kamerman of Columbia University's School of Social Work told a 1985 Congressional hearing: "The PDA is mistakenly assumed by many in industry and in society generally to have led to almost complete coverage of women employees, guaranteeing them a job-protected leave and ensuring the replacement of at least some portion of lost wages for some period of time around childbirth...The reality is very different."[35]

PDA covers less than half of all working women because many companies do not provide temporary disability benefits to their employees. Only five states--California, Hawaii, New York, New Jersey, and Rhode Island--as well as Puerto Rico, have laws

requiring employers to provide benefits for temporary disabilities.[35]

Moreover, PDA does not deal with the special nature of childbearing and the separation of the working parent from the infant during the crucial early months of development.

The absence of an overall employee-maternity policy has become an issue of widespread interest as the number of working women continues to increase in the 1980s. As a result, a Parental and Medical Leave Act (HR 4300) was introduced in the House of Representatives in May 1986, and a companion bill (S 2278) in the Senate.

The proposed legislation would require employers of 15 or more workers to allow up to 18 weeks of unpaid leave for employees to care for newborn, newly adopted or seriously ill children and to allow up to 26 weeks of unpaid disability leave to employees with serious medical problems. The legislation also would require employers to continue health benefits while the employee is on leave for either reason, and to give the returning employee the right to the same job or a comparable one, with full benefits and seniority.

The parental leave elements of the legislation would apply to fathers as well as mothers, because men increasingly are sharing in the care of their newborn children. However, relatively few men make use of parental leave that is now granted to males by some companies.

While the proposed legislation specifies that the leave time for females and males would be unpaid, it also would set up a commission to explore the feasibility of establishing a paid leave policy, which is common in other countries.

- Every developed country and many of the underdeveloped

nations have established maternity policies and benefits by law for working women.[35]

- o In most countries that means a childbearing woman can go on leave from the job for a specified time, receive payments equal to all or a substantial part of her wages, and have job protection while on leave.[35]
- o Among European nations, three months' paid maternity leave is the minimum.[35]

Companies with a clear perspective on the changed makeup of the work force in general and the childbearing employee in particular are taking their maternity policies beyond the "disability" category of the Pregnancy Disability Act of 1978 and beyond the proposed legislation of 1986. That perspective takes into account the fact that childbearing by employees has become part of the everyday life of a company, and that attracting and retaining valued employees can depend very much on how the company measures up in terms of its maternity policies.

Beyond the basic elements of maternity health-care coverage, paid leave for childbearing and recovery, and paid or unpaid leave for infant care, companies today are addressing the advisability of:

- o Authorizing flexible hours or part-time work for new mothers who want to phase in their return to full-time work.
- o Assistance in finding or establishing child-care facilities.
- o Provision for the working mother who wants to continue breast feeding her baby. (Franklin Life Insurance Company and others provide a suitable room at the workplace where breast-feeding women can pump their milk.)

A prenatal education program in the workplace is a good indication that the company is in the forefront of those dealing with today's reality of childbearing employees.

TYPES OF PRENATAL HEALTH PROMOTION PROGRAMS

Whether it is part of a company's overall health promotion program or presented by itself, prenatal education is winning a place in factories, offices, and other places of employment.

The value of addressing the educational needs of pregnant employees is evident, even in cases where companies offer a wide variety of health programs to all employees. Some elements of general health promotion, such as smoking cessation, are especially pertinent to pregnant women. But such all-employee programs usually do not concentrate on the specific effects of smoking, for example, on pregnancy and the fetus.

Audience

Attendance at prenatal health seminars should not be limited to those already pregnant. Women, and men, too, need to know what conditions prior to conception can affect the pregnancy and the fetus. That includes personal health habits and environmental situations that can pose reproductive hazards to men as well as women. Prospective mothers and fathers also can learn much in prenatal seminars about the stresses that each may experience with the approach of parenthood. Co-workers of pregnant employees can be encouraged to attend so they can lend support. Supervisors also can get a contemporary perspective on pregnancy and work performance from prenatal classes.

Group Seminars and Classes

Worksite prenatal education programs usually address aspects of pregnancy and childbearing in the context of employment, with emphasis on reducing risks through lifestyle changes. In all programs, special care must be taken to ensure that qualified individuals and/or organizations are involved in developing and

presenting the classes. Following are some typical seminar subjects.

- o Genetics: Information on the principles of genetics, selected hereditary diseases, and how couples determine if they would benefit from genetic counseling.
- o Exercise: A growing number of companies are instituting pre- and post-natal exercise classes. Special attention is given to the exercise needs and limitations of pregnant women and to helping women regain their body tone after delivery. It is especially important to ensure that qualified physical fitness professionals, knowledgeable about exercise and pregnancy, are utilized.
- o Smoking: Studies show that smoking during pregnancy can lead to low birthweight babies and other problems. In large workforces, companies sometimes offer one or two special smoking cessation classes each year for pregnant employees or those who are considering becoming pregnant. In smaller worksites, special attention can be paid to the affects of smoking on the fetus during regular sessions on smoking or in overview programs on prenatal health.
- o Nutrition: The relationship between food choices and the health of the fetus; calorie requirements for the stages of pregnancy; discussions of special diets for women with metabolic disorders, obese women, vegetarians, and others.
- o Alcohol and Drugs: Programs cover information about the use of alcohol and drugs during pregnancy, with emphasis on how even over-the-counter drugs, such as aspirin, can affect a developing fetus. Fetal Alcohol Syndrome, use of caffeine, and other relevant topics also are important.
- o Stress Management: The need to manage one's reactions to stressful situations may be even more important during pregnancy because of psychological and physiological

changes. Information about these changes, techniques for managing stress, and information about the relationship between stress and low birthweight infants are included in programs.

- o Environmental and Workplace Influences: Some of the conditions that can affect the pregnancy, such as stress, heavy work, commuting, toxic substances, X-rays, etc.
- o Seminars for Parents: Employees who are parents of adolescent and pre-adolescent children are concerned about such problems as teen alcohol and drug use, the numbers of teenage pregnancies, teen smoking, etc. In addition to providing information on these topics, programs often promote open communication between parents and their children, help parents understand and express their values, explore strategies for initiating family discussion, etc. Information on how to locate and evaluate day care centers and techniques for interviewing child care personnel also is popular.

See this paper's chapter titled "Company Examples--Prenatal Programs" for details about activities in a variety of companies.

Prenatal education programs usually are conducted during lunchtimes, but also may be held before or after work. Many companies present a series of prenatal seminars one week apart; others prefer to offer them on consecutive days to concentrate interest in the program.

Individualized Attention

For a large company with its own medical department, prenatal health promotion sometimes goes beyond group seminars. The Franklin Life Insurance Company, which planned and initiated its own program in 1979, provides individualized support. Pregnant employees see the company nurse for monthly health checks.[29]

Small Employers

Small companies with relatively few employees are joining in prenatal education in several ways. In Pinellas County, Florida, the March of Dimes chapter arranged communitywide prenatal education for working women. Sessions are conducted after work at hospitals in different parts of the area.

Company Commitment

Offering a prenatal education program in the workplace takes minimal cost on the part of a company. But in order for the program to be successful, it takes company commitment--in visible management support, encouragement of employee attendance, and in promoting the program.

March of Dimes Material

The March of Dimes Birth Defects Foundation has developed a comprehensive program that can be adapted to fit the specific needs of any company. Called "Good Health is Good Business," the program is constructed around a series of one-hour seminars, usually provided at lunchtime. Local March of Dimes chapters can provide films and pamphlets and can arrange speakers for company- sponsored programs.

"Good Health is Good Business" is offered as a free service to employers, who can choose from eight seminar subjects. In addition to supplying educational materials, March of Dimes personnel help individual companies plan and carry out the seminars and assist in promoting attendance by employees. Resource materials also are made available to a company's own health professionals.

COMPANY EXAMPLES--PRENATAL PROGRAMS

Blue Cross & Blue Shield of New Jersey, Inc., Florham Park, N.J.
Susan Delia Rosenthal, B.S.N., R.N.
(201)593-7465

This major health insurer offers its employees a variety of health programs at its several office locations. At Florham Park, prenatal education was added in 1986. The many questions asked by employees in maternity-leave interviews with the nurse led to the introduction of the program. Initially, a pilot project was conducted for 15 pregnant employees. Nonpregnant women also showed interest and will be included in future offerings of the program. The seven sessions are given one week apart during lunchtime, covering nutrition, Fetal Alcohol Syndrome, body changes while pregnant, labor and delivery, natural childbirth, and breast-feeding.

Dow Chemical USA, Torrance, CA
Florence Rousseau, R.N., Occupational Health Nurse
(213)533-5228

With only 10 women among the 160 employees at this facility and with the average age for both men and women at 40, a session for parents on teen-age pregnancy was singled out as the most appropriate prenatal program.

"Those who participated found the program very informative," said the occupational health nurse. "I plan to schedule more." Other health programs offered to employees range from blood pressure screening to education in sound nutrition.

First Bank Minneapolis, Minneapolis, MN
Lorraine Iversen, R.N., Occupational Health Nurse
(612)370-4444

Twice a year this bank attracts a new select group from among the 2,500 employees at several locations of First Bank Systems in the Minneapolis area to attend its prenatal program.

The genesis of this highly successful series came in 1980 when Lorraine Iversen learned that materials and guidance were available from the March of Dimes to teach pregnant working women what they should know about prevention of birth defects. It was in line with her assessment of health education needs among the bank's predominantly female work force. The number of pregnancies kept increasing, at all career levels.

Working with personnel of the local March of Dimes chapter, a pilot program was developed. This initial program, with a few modifications, became the pattern that has been followed regularly twice a year since 1983.

Memos that invite bank employees to attend the next program make the point that the kind of lifestyle that gives a baby a healthy legacy begins before conception. Employees are encouraged to bring their spouses or other partners. A limit of 30 participants allows good interaction.

The program is given during the lunch hour on three consecutive days. A film gives participants the chance to see how the fetus grows and develops, and the birth of the baby. Hazards are covered from alcohol to X-rays. Participants learn about the value of exercise in pregnancy and in family life, creative ways to incorporate good nutrition into a busy schedule, genetics and local resources for genetic counseling, different types of delivery procedures, and more.

The March of Dimes continues to take an active role in presentation of the program. Management support is essential for the success of worksite prenatal health education, Ms. Iversen says. The turnout for each of the First Bank's programs is one measure of its success. A comment by a participant at the start of one of the earlier programs sums it all up: "I'm planning my pregnancy for next March and I am here to learn all I can."

Franklin Life Insurance Company, Springfield, IL
Nancy L. Hopkins, R.N., Employee Health Nurse
(217)528-2011

Franklin Life, with about 1,500 employees at its home office, is widely known for the comprehensive prenatal education program it started in 1979. About four percent of the 1,200 female employees were pregnant at any time. That same four percent represented 30 percent of Franklin's disability recipients. The company's nurse found that many pregnant employees were ill-informed about normal symptoms of pregnancy. Also at that time, Franklin's policy called for employees to go on unpaid leave two months before expected delivery.

Franklin set out to change things with the introduction of a program of education and individual support and a new maternity leave policy.

Since 1979, a pregnant employee is allowed to work until delivery, if her doctor permits, and she receives her pay during her leave. She is expected to return to work when her doctor releases her as no longer disabled.

The education program, offered twice a year, consists of three one-hour sessions. They cover nutrition, breast-feeding, growth and development of the fetus, the physical and psychological changes that occur in the mother, substance abuse, what to expect at the hospital, the delivery process, community resources available to new mothers, and company disability benefits. Common problems of working mothers are discussed. Audiovisual materials and pamphlets from the March of Dimes and area hospitals are used in the program. Each pregnant employee sees the company nurse monthly for blood pressure and weight checks, and a chance for one-on-one discussions. Any suspected problems are referred to the woman's own physician.

"Feedback has been overwhelmingly positive...Supervisors have noticed improved morale," nurse Nancy Hopkins reports. Absences during pregnancy have declined. So has the length of maternity leave, which now averages nine weeks compared to 15 prior to inception of the program. The improvements "can be attributed to changes in employee and employer attitudes and to healthier mothers producing healthier children, thus requiring less time off. Eighty-five percent of our new mothers return to work, which decreases the necessity of hiring and training replacements."

C.F. Hathaway, Waterville, ME
Pei-loh Lo, Director of Human Resources
(207)873-4241

This manufacturer of men's shirts was exploring the possibilities of health and fitness promotion for its employees--733 women and 267 men. The prenatal education program offered by the March of Dimes was chosen as a start because of the large number of women employees, because the program was "nicely packaged, flexible," and because there was no cost to the company.

Thirty-nine women and one man attended two lunchtime sessions. They came from factory and offices, and included a few professionals. Because Hathaway's average employee age is in the high 30s and many have adolescent children, one session was devoted to a parent seminar on teen-age pregnancy. It covered the health and social risks, the need for dialogue between parents and children about sexuality and parenting, and programs that help adolescents examine their behavior and attitudes on those subjects.

Employees reported that they were very pleased by the quality of the presentations, and by the fact that the company had arranged for the program.

Madison Newspapers Inc., Madison, WI
Audrey M. Martino, Public Affairs Coordinator
(608)252-6276

This company publishes two newspapers. Two hundred of its employees are women. The company offered the same March of Dimes program as Methodist Hospital (below), on the very same days of National Healthy Baby Week. Four pregnant women and two others attended all three sessions.

Methodist Hospital, Madison, WI
Nancy Topp, Project and Teaching Dietitian
(608)251-2371, ext. 3610

Known as a childbirth center, Methodist Hospital has more than 800 women employees. It chose National Healthy Baby Week in March 1986 to introduce a prenatal education program.

Three lunch-hour sessions were conducted on consecutive days. The first, "Be Good to Your Baby Before It Is Born," presented an overview of what a pregnant woman should know about safeguarding her health and that of the fetus. The second session, "Recipe for Healthy Babies," provided a guide for nutrition during pregnancy. The third session dealt with known risk factors.

Attendance ranged from 32 to 36, mostly women of childbearing age. Fifty percent were pregnant. A few prospective fathers joined in. Reaction? "Solid health information to a highly motivated audience," a hospital representative said.

Olin Corporation, Stamford, CT
R. J. MacDonald, M.D., Corporate Medical Director
(203)356-2550

Of Olin's 1,000 headquarters employees, about 550 are women. "The working mother and the pregnant employee are a normal part of everyday life in the office, store, or factory," Dr. MacDonald says. Referring to birth defects, he says, "There are some very compelling reasons for emphasizing healthy lifestyles and disease prevention in the workplace."

Olin already had a variety of employee health programs, including smoking cessation, nutrition counseling, clinics for early detection of cancer, weight reduction, and exercise programs. To those were added a prenatal education program developed by the March of Dimes especially for Olin.

Initially, the program was titled "Birth Defects: A Review of Nongenetic Causes," and consisted of two one-hour sessions. About 100 employees attended, two-thirds of whom were women. Some of the pregnant employees were accompanied by their spouses, and several single men attended.

The initial program emphasized the importance of refraining from alcohol, smoking, and drugs, including prescription drugs if not ordered by a physician who knows a woman is pregnant. Other risk factors cited were sexually transmitted diseases, diabetes, and rubella.

The program was so well received by Olin employees, the March of Dimes was asked to develop additional sessions to cover other topics, such as genetic counseling, that employees indicated would be most useful to them. An added session on congenital defects recently was attended by 60 employees. Three attendees were pregnant, and 75 percent of the attendees were nonpregnant women of childbearing age. Joining in were supervisors, prospective fathers, and prospective grandparents.

A gynecological clinic four times a year and a physical therapist for back-strengthening exercises are among other supporting services made available to Olin employees.

The prenatal program "uses the work setting as a support system to encourage employees to adopt good health practices," Dr. MacDonald said. "It makes sound management sense to instruct and inform both women and men in the workplace, particularly those in the childbearing years, of the risks and responsibilities of parenting...Employees educated in the health program become part of this support system, particularly men in supervisory positions who frequently have pregnant females on their staffs."

Among results of the program, Dr. MacDonald cites improved employee morale and a reduction in health care costs.

PPG Industries Inc., Torrance, CA
Robyn Shenkman, R.N.
(213)328-7260

This facility manufactures coatings and resins and employs 228 men and women. In cooperation with the March of Dimes, prenatal seminars were added in 1985 to the health education programs offered to employees. Information on birth defects and their causes was presented in two sessions. One at lunchtime drew 20 men and women and the other on company time drew 35. Among those attending were five prospective fathers and three supervisors.

Reactions from employees lead presenters to believe that the knowledge gained by participants about the effects of personal behavior during pregnancy made an impact. For example, many of those attending had known little about Fetal Alcohol Syndrome in newborns and were surprised at the explanations of the cause and effect.

The Quaker Oats Co., Chicago, IL
Virginia Onines, R.N., Corporate Office Nurse
(93192)222-7362

More than 800 of the 1,500 employees at Quaker Oats' corporate office are women. As part of its overall health promotion policy, a "Family Workshop" was offered at lunchtime on two consecutive days to help inform parents on relevant subjects. One session dealt with genetics and the other with assessing a child's health.

Most of those attending were either parents of young children or prospective parents. Among them were several pregnant employees and prospective fathers, prospective grandparents, and four supervisors.

Southern Illinois University, Edwardsville, IL
Debbie Al Arian, SIU-E Student Program Board
(618)692-2617

This university provides innovative programs open to residents of the surrounding area. In this case, it sponsored a special program in cooperation with the St. Louis chapter of the March of Dimes on the subject of prenatal education for working women.

The idea was to inform counselors and others of the need for such education, and how it can be done. The concentrated program was given in one day, covering in one-hour periods five of the seminars from the "Good Health Is Good Business" program.

State Farm Insurance Companies, Austin, TX
Rachel Flake, R.N., Regional Office Nurse
(512)834-5614

About 850 women and 150 men are employed in State Farm's regional office. The women's average age is 28. Because a substantial number are pregnant at any time, a prenatal program was introduced in 1985.

Two sessions two days apart dealt with general prenatal information and with nutrition during pregnancy. Memos addressed "To: Mothers-to-be" from the regional office nurse invited attendance because "the health behaviors of parents have much to do with the physical and mental health of their offspring..."

Each session was planned for 30 minutes during the lunch hour. The information was presented in talks and films. Employees had the option of attending one or both sessions. Thirty attended the general information session and 45 turned out to learn about nutrition during pregnancy. All but a few were pregnant

employees. Several other women of childbearing age attended, and so did two supervisors. Nurse Rachel Flake reports improved employee morale and increased knowledge for healthier pregnancies, as demonstrated in a commitment to stop smoking.

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All About WBGH

The Washington Business Group on Health (WBGH), established in 1974, gives major employers a credible voice in the formulation of federal and state health policy. WBGH began with five companies and now works with more than 200 of the Fortune 500. WBGH members direct health care purchasing for 40 million of their employees, retirees and dependents.

In 1976, WBGH expanded to become the first national employer organization dedicated to medical care cost management. WBGH is an active participant in discussions, hearings and other aspects of the legislative and regulatory arena. It also serves as a reliable resource base providing information and expertise on a variety of health care issues and concerns as well as consulting to its members, government, other employers, health care providers, and the media.

WBGH, through its institutes and public policy division, provides long-range planning and analysis on many sensitive economic and social issues. As specific areas of need were identified, WBGH formed: the Institute on Aging, Work and Health; the Institute for Rehabilitation and Disability Management; the Institute on Organizational Health; and Family Health Programs. WBGH also publishes two magazines, *Business & Health* and *Corporate Commentary*, and other resource information, reports, studies, and surveys.

WGBH assists the business community through: the Policy Exchange telecommunications network; an annual conference to discuss new health policy issues, cost management strategies, benefit design solutions and health promotion ideas; formation of nationally recognized task forces on topics ranging from legal issues of interest to employers to tax policy; and numerous seminars on timely subjects such as AIDS and utilization data. WBGH has been instrumental in helping form over 35 local business health care coalitions across the country.