

OBSTETRICS

Scheduling the first prenatal visit: office-based delays

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OBJECTIVE: The purpose of this study was to evaluate the office-based component of delayed entry into prenatal care.

STUDY DESIGN: Phone numbers for all obstetrics offices in a single state were obtained from a commercial list. A research assistant who posed as a newly pregnant, fully insured woman asked each clinic when she should come in for her first prenatal visit.

RESULTS: Information was provided by 239 of the 279 (86%) offices. The recommended appointment times ranged from immediately (4 weeks of gestation) to 10.6 weeks, which averaged 6.37 weeks.

Twenty-five percent of clinics recommended a first appointment at ≥ 8 weeks. Scheduling calls were not a source of prenatal advice: $< 5\%$ of clinics asked about smoking, alcohol, or medical condition; 88% of clinics did not mention vitamins.

CONCLUSION: Office-based delays in scheduling the first prenatal visit occur in a substantial proportion of clinics, even for fully insured women. There is a need for a standard source of advice in early pregnancy.

Key words: clinic, pregnancy, prenatal care

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Delayed entry into prenatal care has been associated with adverse outcomes for both mother and baby.¹ Of women who have delayed prenatal care or no prenatal care, more than one-half would have preferred to begin their care earlier. The top reasons for the delay include not recognizing the pregnancy, financial reasons, and inability to get an appointment.¹ With regard to the latter reason, no study has examined appointment availability systematically.

★ EDITORS' CHOICE ★

A woman's first prenatal visit typically includes a variety of health care messages. Advice includes use of folic acid, abstinence from alcohol, and avoidance of teratogenic medications. These measures have their maximal effectiveness if adopted early in pregnancy when the spinal cord and organs are still forming. Delays in receiving prenatal care reduce the potential effectiveness of these messages.

Some pregnant women may already have all pertinent health information before the first prenatal visit because of discussions with peers, advice during previous pregnancies, or information available in the lay media. However, studies have shown that such knowledge is not universal among pregnant women.²⁻¹¹ Information may also be provided over the phone at the time the prenatal visit is scheduled, but it is not known if this is done commonly.

The goal of the current study was to assess the office-based component of delay in obtaining prenatal care. A secondary goal was to assess the advice that is given to a pregnant woman when she schedules the appointment, especially if the appointment was delayed for office-based reasons.

through a commercial directory service (physiciandatabases.com). To maintain anonymity, counties with only 1 listed obstetrics office phone number were excluded. There were 279 valid phone numbers provided for obstetrics offices that delivered prenatal care. Of these, 21 offices could not be reached after repeated attempts; 6 offices did not have appointment scheduling available; 2 offices were not accepting new patients; 8 offices were included under another phone number (duplicates); 1 office did not accept self-referrals; 1 office did not accept the insurance product, and 1 office was closed permanently. Thus, 239 of the 279 obstetrics offices (86%) were included in the telephone survey.

A research assistant posed as a woman whose regular period was 2 days late and who had a positive urine pregnancy test. She asked when she should come to the office for her first prenatal visit. She did not volunteer additional information but responded to questions if asked. If asked, she stated that she had Blue Cross insurance and that she was married, 29 years old, had never been pregnant, and had no health problems. The date of her last period was stated as exactly 4 weeks before the call. The research assistant did not actually make an appointment; she portrayed herself as seeking information about when an appointment should be made. Phone calls took approximately 1 minute each.

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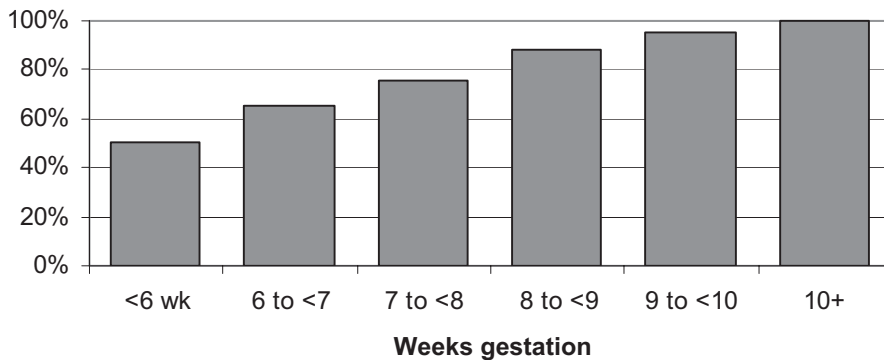
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MATERIALS AND METHODS

A list of phone numbers for all obstetrics offices in a single state was obtained

FIGURE

Recommendations for first prenatal care (PNC) visit

Nettleman. Office-based delays in prenatal care. *Am J Obstet Gynecol* 2010.

All data were recorded anonymously without phone numbers or office names, although the county in which the office was located was recorded. Thus, it was not possible to relate the results back to an individual office. The study was determined to be exempt by the institutional review board. Gestational age was calculated from the last menstrual period. Comparisons for continuous data were done with the unpaired *t* test and linear regression. The χ^2 test was used for categorical data.

RESULTS

Appointment times that were recommended by the clinics ranged from immediately (4 weeks of gestation) to 10.6 weeks of gestation, with an average of 6.37 weeks. Fifty-one percent of clinics recommended an appointment at <6 weeks of gestation; 66% of the clinics recommended an appointment at <7 weeks of gestation, and 75% of the clinics recommended an appointment at <8 weeks of gestation (Figure). For clinics that recommended a visit time after 6 weeks ($n = 118$), the caller asked if she could be seen earlier. Only 1 of the clinics offered an earlier appointment.

There was no association between time of recommended appointment and clinics per population or infant mortality rate in the county. On average, counties had 12.8 sampled obstetrics offices per 100,000 women of childbearing age (15-44 years). In counties with <13 clinics per 100,000 women of childbearing age, the mean recommended appoint-

ment time was 7.2 weeks of gestation, compared with 6.6 weeks of gestation in counties with ≥ 13 clinics per 100,000 women ($P = .26$). For counties with an infant mortality rate lower than the state average, the mean recommended time for appointment was 7.4 weeks of gestation, compared with 6.7 weeks for counties with a higher infant mortality rate ($P = .21$). Linear regression did not show a significant association between gestational age at appointment time and clinic density ($r^2 = 0.05$; $P = .16$).

Ninety-one percent of the clinics asked the woman about insurance status; 75% of the clinics asked the caller's age; 67% of the clinics asked for the date of the last menstrual period; 14% of the clinics asked about the number of previous pregnancies, and 8% of the clinics asked for marital status. Twelve percent asked about vitamin use. Fewer than 5% of clinics asked about general well-being, medication use, hypertension, diabetes mellitus, history of pregnancy complications, or smoking. No clinic asked about alcohol use. There was no difference in recommended time of appointment between clinics that asked about insurance and clinics that did not (average, 6.4 vs 6.3 weeks of gestation; $P = .74$).

There were only minor differences in the frequency of questions asked between clinics that made appointments before 8 weeks of gestation and those who made appointments ≥ 8 weeks of gestation. Specifically, clinics that made later appointments were more likely to ask about the woman's age (90% vs 70%

of clinics making earlier appointments; $P < .02$), date of last menstrual period (100% vs 56%, respectively; $P < .01$), and use of vitamins (20% vs 9%, respectively; $P = .03$).

COMMENT

Early pregnancy is a critical time in fetal development. Yet, 25% of clinics in this study recommended a first prenatal appointment at >8 weeks of gestation, by which time all major organs in the fetus would have formed. The caller was unable to negotiate an earlier appointment in all but 1 case. Thus, office-based delays may occur in a substantial portion of women who seek prenatal care.

In view of the high infant mortality rate in the United States,¹² it would be desirable for pregnant women to receive basic information as early as possible in pregnancy. For example, folic acid is most effective in very early pregnancy,¹³ and alcohol use is the major preventable cause of birth defects in the United States.¹⁴ Our data show that obstetrics offices were unlikely to be the source of this advice, even if office issues delayed the visit until late in the first trimester. There are several reasons that an obstetrics office scheduling system might not be the appropriate venue for this advice. There are limitations to the provision of counseling over the phone in a busy practice to a patient who has not yet been examined. Moreover, clinic schedulers are unlikely to have the expertise to provide such advice, and the liability issues are unclear.

Women can seek information on their own while awaiting a prenatal appointment. There are multiple online resources. However, they may be difficult to navigate, and many at-risk women may not have access to the internet. Several organizations provide brochures that can be purchased or ordered. In addition, women can seek information from friends or relatives. However, studies have shown that many pregnant women do not have all relevant information that includes the importance of prenatal vitamins,⁴⁻⁶ the importance of smoking cessation⁷ and abstinence from alcohol,³ diabetes mellitus control,^{8,9}

signs of impending miscarriage,¹⁰ or which of their medications should not be taken in pregnancy.¹¹ One solution might be a toll-free phone number that would be maintained by a national organization or the Centers for Disease Control and Prevention to provide automated advice in early pregnancy. Clinics could then suggest that pregnant women call the toll-free number for information while awaiting their first prenatal appointment.

There are some limitations to this study. The caller posed as a married woman with good insurance. It is not clear what would have happened if the caller had been single or uninsured, although access probably would not have improved. The number of obstetrics offices per population was not correlated with average time to prenatal visit. Offices may contain single or multiple providers; thus, this may not be a very refined measure. However, other researchers have found that delayed onset of prenatal care was not associated with provider density.¹⁵ In this analysis, the unit of study was the office and not the individual physician. We did not have information on the visit volume in individual clinics or the number of physician providers or other factors that might affect availability. It is possible that a specific referral to an individual physician might have procured an earlier appointment. The study was limited to a single state; however, 86% of listed offices in

that state were sampled. The purchased list included obstetrics offices but did not include family medicine practices that included obstetrics. Finally, the commercially obtained list of phone numbers may have missed some offices, especially newer offices that had not yet been indexed.

Office-based delays in scheduling a prenatal visit occur in a substantial proportion of cases. Obstetrics clinics are not a source of advice for pregnant women during these delays, and there are reasons that the clinic might not be an appropriate venue for advice. As a result, there is an unmet opportunity to provide basic information to women in early pregnancy. ■

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