Two Community-Based Initiatives Fail to Increase Breast-Feeding Levels Among Disadvantaged Women

Offering community-based support for breast-feeding to relatively socioeconomically disadvantaged women during and after pregnancy does not improve rates of breast-feeding, according to a pair of cluster-randomized controlled trials. In a trial conducted in Scotland, the proportion of women who were breast-feeding their infants 6–8 weeks after birth was about the same (roughly three in 10) in areas that expanded their breast-feeding support group programs and those that did not.[1] And in a trial conducted in the United Kingdom, the proportion of women who started breast-feeding their newborns before leaving the hospital was the same (seven in 10) whether women had attended antenatal clinics that offered peer support or clinics that did not.[2]

Breast-Feeding Group Support

In a trial conducted during 2002–2007 in 14 Scottish areas covered by a national surveillance program, half of the areas undertook an intervention to at least double their number of breast-feeding support groups and invite all pregnant and breast-feeding women to attend as part of routine primary care. The groups met weekly, were facilitated by female health professionals and focused on women's issues. The other half of the areas did not alter their number of breast-feeding groups. Health visitors and midwives collected data on breast-feeding, defined as an infant's receipt of any breast milk, and the women completed questionnaires about their satisfaction with breast-feeding and perceived social support.

Analyses were based on birth records of 9,635 eligible women in the intervention areas and 8,968 eligible women in the control areas. Women's median age was about 29. More than a quarter of the women overall were in the most deprived of five categories of socioeconomic status.

Intervention areas increased their total number of breast-feeding groups from 10 to 27, whereas control areas maintained their original 10 breast-feeding groups. Only about one in 10 of all women in intervention areas attended the groups, and they started attending a median of 36 days after giving birth. Women attending groups in intervention areas were older than women in those areas who began breast-feeding but did not attend groups; they had higher incomes than women attending general postnatal groups in control areas.

The proportion of women who were breast-feeding their infants at age 6–8 weeks, the trial's main outcome, did not differ significantly between the intervention areas and the control areas (26% vs. 30%); moreover, within the intervention areas, the proportion did not change after the intervention. The intervention and control areas were also statistically indistinguishable in terms of the proportions of women breast-feeding their infants immediately after birth (51% vs. 53%), at 5–7 days (42% vs. 45%) and at 8–9 months (21% vs. 20%).

Women in the intervention areas and their counterparts in the control areas gave similarly high ratings to their satisfaction with breast-feeding (median scores of 118 and 119, respectively, on a 150-point scale) and their perceived level of social support (median score of 4.25 in each group on a five-point scale). The intervention had an average annual cost of about $20,144 per area. The average cost per woman of attending one support group meeting was nearly the same as the average cost of one home visit by a health visitor ($54 vs. $47).

The investigators speculate that the lack of improvement in breast-feeding rates with expansion of group support may have been due to suboptimal group attendance, especially during pregnancy; the older age and higher incomes of attendees in the intervention areas (because the likelihood of breast-feeding increases both with age and with income); or the fairly high level of social support in the population generally. Given the ineffectiveness of this intervention, "resources may be better directed to the first two weeks after birth, when the highest proportion of women stop breast feeding," they conclude.

Breast-Feeding Peer Support

A 2007 U.K. trial conducted in 66 antenatal clinics in a socioeconomically deprived urban area of Birmingham assessed the impact of peer support for breast-feeding. Half of the clinics added a community-based peer support breast-feeding intervention to usual care, while the other half continued with usual care alone. In the intervention clinics, pregnant women were matched with peer support workers of similar race, ethnicity, and social and demographic background, who offered two sessions (at 24–28 weeks' and roughly 36 weeks' gestation), during which they gave advice about, information on and support for breast-feeding; the workers also provided postnatal follow-up to women who did start breast-feeding. At least one session was intended to take place in the woman's home. Initiation of breast-feeding, defined as a newborn infant's receipt of any breast milk before hospital discharge, was ascertained from hospital maternity records.

Analyses were based on 1,083 women attending the clinics offering peer support and 1,315 women attending the clinics providing only usual care. The large majority of women (80%) were 21–35 years old; 91% belonged to racial or ethnic minority groups. More than two-thirds of the women were in the most deprived of 10 socioeconomic categories.

In the peer support group, 80% of the women were in fact offered this support, and 74% accepted the offer, but only 42% of this group received the intended two sessions. First sessions lasted an average of 13 minutes, and most sessions overall occurred in the clinic.

The majority of women initiated breast-feeding, and the proportion did not differ between the peer support and usual care groups (69% vs. 68%). In a multivariate analysis, women had elevated odds of initiating breast-feeding if they were of a minority race or ethnicity (odds ratios, 1.6–6.5). On the other hand, women had reduced odds of initiating breast-feeding if they were multiparous (0.6) and if they had a cesarean delivery (0.7).

Discussing the lack of effectiveness of the peer support intervention, the investigators note that the sessions may not have been numerous or long enough and did not achieve the in-home contact intended. They add that improving on the level of support provided by usual antenatal care in the United Kingdom might require a more intensive home-based intervention, which would have considerable cost if provided to all women. "Peer support might be more effective if targeted at specific groups, such as those women not planning to breast feed … or those for whom routine advice on breast feeding is less accessible because of linguistic difficulties," they comment.

A Call for Integration

Taken together, the trials' results challenge recommendations for general community-based support strategies as a means to promote breast-feeding, according to the author of an accompanying editorial.[3] Instead, women need detailed information about how to breast-feed and how to overcome early problems with lactation. Additionally, single interventions are unlikely to work in isolation because multiple factors influence breast-feeding practices, especially among disadvantaged populations, he contends. "Effective interventions will have a higher chance of producing results if embedded in a national or local plan that is tailored to specific needs," the editorialist concludes. —*S. London*

REFERENCES

1. Hoddinott P et al., Effectiveness of policy to provide breastfeeding groups (BIG) for pregnant and breastfeeding mothers in primary care: cluster randomised controlled trial, *BMJ*, 2009, 338:a3026, <http://www.bmj.com/cgi/reprint/338/jan30_1/a3026>, accessed Mar. 10, 2009.

2. MacArthur C et al., Antenatal peer support workers and initiation of breast feeding: cluster randomised controlled trial, *BMJ,* 2009, 338:b131, <http://www.bmj.com/cgi/reprint/338/jan30_1/b131>, accessed Mar. 10, 2009.

3. Cattaneo A, Promoting breast feeding in the community: breastfeeding groups and peer counselling must be integrated into wider programmes, *BMJ*, 2009, 338:a2657, <http://www.bmj.com/cgi/content/full/338/jan30_1/a2657>, accessed Mar. 10, 2009.

Pill Use in the Month Before Conception Linked To Risk of Low Birth Weight, Preterm Delivery

Women who use oral contraceptives just prior to conception may be more likely than nonusers to experience adverse birth outcomes, according to a study of health records from the Canadian province of Saskatchewan.[1] Those who used the pill within 30 days of their last menstrual period had elevated odds of preterm birth and low birth weight, conditions that are associated with infant morbidity and mortality.

The researchers examined records from Saskatchewan Health Databases, which contain information on 99% of the province's residents. They obtained data on physician services, hospital stays and prescription drug use in the year prior to giving birth for a random sample of 50% of women who had a pregnancy between 1997 and 2000. Pill users, who totaled 1,540 women, were grouped according to the time interval between when contraceptive pills were dispensed to them and the estimated date of their last menstrual period (0–30, 31–60 or 61–90 days). For comparison, four women who had not used the pill in the year prior to giving birth were matched to each pill user by age, parity, infant's year of birth and whether they had a singleton or a multiple birth. The researchers made note of all women's chronic disease status (determined by their use of certain prescription medications) and socioeconomic status (determined by their participation in an income assistance program in the year in which their baby was born).

Births were evenly distributed over the four study years, and there were no significant differences in characteristics among subgroups of pill users or between users and nonusers. Most women in each subgroup were aged 20–29 (68–69%), had more than one child (57–59%), had a singleton birth (94–96%), had no chronic disease (86–90%) and were not receiving public assistance (85–89%).

Women's records were examined for the following adverse birth outcomes: very low birth weight (less than 1,500 g), low birth weight (less than 2,500 g), high birth weight (at least 4,000 g), very preterm delivery (less than 32 weeks' gestation), preterm delivery (less than 37 weeks' gestation) and postterm delivery (at least 42 weeks' gestation). The overall proportion of women experiencing an adverse birth outcome was higher among pill users than among women in control groups, but rates were highest among those who took the pill in the month prior to their last menstrual period. Among infants born to women who had used the pill in the month before their last menstrual period, 2% had a very low birth weight, 8% a low birth weight and 16% a high birth weight; 2% were born very early, while 10% were preterm and 3% were born late. Infants in the corresponding control group experienced lower rates of each of these outcomes.

In an analysis that adjusted for women's socioeconomic and chronic disease status, pill use within 30 days of the last menstrual period was positively associated with the occurrence of very low and low birth weight (odds ratios, 3.2 and 1.9, respectively) and preterm delivery (1.6). Use 2–3 months prior to the last menstrual period was not associated with adverse birth outcomes.

The researchers note that their data set is subject to certain limitations. The health records do not contain data on prescription drug compliance, so it is impossible to know whether women actually took the pills they obtained from the pharmacy. Furthermore, the records do not include information on body mass index, or on smoking or alcohol consumption during pregnancy—all factors that could contribute to adverse birth outcomes.

The investigators point out several possible explanations for the association between hormonal contraceptive use and adverse birth outcomes, including the presence of ingredients in the drug that might inhibit fetal growth and potential links between the birth outcomes and unplanned pregnancy or poor contraceptive compliance. While advocating continued research on the mechanisms by which pill use might lead to adverse birth outcomes, as well as on factors that might confound that association, the researchers encourage women to avoid the possible negative effects of the pill on their infants by considering "the use of barrier methods for [one] month after discontinuing oral contraceptive use." Clinicians, in turn, should practice "increased surveillance of pregnancies in women taking oral contraceptives near the time of conception."—*H. Ball*

REFERENCE

1. Chen X-K et al., Recent oral contraceptive use and adverse birth outcomes, *European Journal of Obstetrics & Gynecology and Reproductive Biology,* 2009 (forthcoming).

Among Arab American Mothers, Foreign Birth, Marriage May Explain Reduced Risk of Preterm Birth

Ethnic differences in maternal birthplace and marital status may explain most of the established association between Arab ethnicity and a reduced risk of preterm birth, according to a Michigan study of all births over the period 2000–2005.[1] The prevalence of preterm births was slightly lower among Arab Americans than among non-Arab whites (8% vs. 9%), and the risk of such births was reduced for the former group when each of six background characteristics was considered (odds ratios, 0.7–0.9). However, when all covariates were analyzed simultaneously, no association was found between preterm births and Arab ancestry.

Arab Americans make up a greater share of Michigan's population than of any other state's population. To assess what factors contribute to the lower risk of preterm birth among Arab Americans, researchers analyzed data on all 617,451 births that occurred in Michigan between September 2000 and March 2005, as reported by the state's Department of Community Health. The main outcome was preterm births, defined as births at less than 37 weeks of gestation. Self-reported race and ethnicity were considered along with the following covariates: maternal marital status at birth, parity, birthplace, age, education and tobacco use. Chi-square tests were used to identify associations between each covariate and the risk of preterm birth, as well as between each covariate and race and ethnicity (Arab American or non-Arab white). Logistic regression models assessed associations between Arab ancestry and risk of preterm birth.

Seventy-six percent of women were non-Arab white, 17% were black, 3% were Asian and 2% had Arab ancestry; 10% were foreign-born. Nearly three-quarters were married, 39% had had no children and 17% smoked tobacco. The prevalence of preterm births was 8% among Arab Americans and 9% among non-Arab white mothers, and the difference was statistically significant. In bivariate analysis, all covariates were associated with preterm birth; the proportion of such births was lower among foreign-born than among U.S.-born mothers (8% vs. 10%), lower among married than among unmarried mothers (9% vs. 10%) and lower among mothers who did not smoke than among smokers (9% vs. 11%). The prevalence was 9–13% among the other subgroups, and it was elevated among women with three or more children, those older than 35 and those whose parity or education level was unknown.

All covariates were also associated with mothers' ethnicity: For example, Arab Americans had a lower prevalence of out-of-wedlock pregnancies than did non-Arab whites (4% vs. 28%), were less likely to smoke (3% vs. 16%) and were more likely to be foreign-born (81% vs. 7%).

The first set of regression analyses found that Arab Americans were less likely than non-Arab whites to have a preterm birth (odds ratio, 0.8), and this association remained when any one covariate was added as a control (0.7–0.9). In addition, the likelihood of having a preterm birth was decreased among foreign-born mothers (0.7), married mothers (0.8) and those who had had one child (0.9), and was elevated among those who smoked (1.2), those younger than 20 or older than 30 (1.1–1.5), those with a college education or less (1.04–1.2), those who had had two or more children (1.04–1.4) and those whose parity or education level was unknown (1.5–1.6). Additional calculations showed that ethnic differences in three covariates—maternal birthplace, marital status and tobacco use—explained most of the difference in risk of preterm birth between the two ethnic groups. In a model that included all of the covariates simultaneously, however, no association was found between Arab ancestry and risk of preterm birth.

The researchers note that their study was limited by the use of a narrow range of covariates, particularly for socioeconomic status, and reliance on clinical estimates of gestational age, which can be inaccurate for small infants. They also acknowledge that because the difference in the prevalence of preterm births between Arab Americans and non-Arab whites was small, the findings may have limited clinical significance, and that the findings may not be generalizable beyond Michigan. The researchers recommend that future analyses attempt to identify factors that may influence links between marital status and maternal birthplace and the risk of preterm birth, such as "differences in prenatal care habits, diet, attitudes toward childbirth, and levels of social cohesion between married and unmarried [mothers and between] American and foreign-born mothers." —*J. Thomas*

REFERENCE

1. El-Sayed AM and Galea S, Explaining the low risk of preterm birth among Arab Americans in the United States: an analysis of 617,451 births, *Pediatrics,* 2009, 123(3):e438–e445.

In the Period Before Age 21, Women, but Not Men, May Have Elevated STD Risks

New Zealand women participating in a longitudinal cohort study reported a greater incidence of STD diagnoses before age 21 than between ages 26 and 32; for men, by contrast, incidence was higher at ages 21–26 than earlier.[1] In addition, the reported incidence of any STD by age 21 was nearly three times as high among women as it was among men, and a gender difference was apparent for both bacterial and viral infections. Between ages 21 and 32, however, women and men reported similar STD rates.

The cohort consisted of men and women who were born in Dunedin in 1972–1973 and were enrolled in a multidisciplinary health study at age three. Cohort members were followed up every two years until they were 15, and then at ages 18, 21, 26 and 32. At age 21, the cohort was roughly representative of 21-year-olds nationwide. The last three follow-up assessments, administered through a computerized questionnaire, elicited information about participants' sexual behavior and sexual health. At each of these assessments, 400–500 men and a similar number of women were sexually active and answered questions on STDs; researchers used data from these participants to calculate STD incidence rates, which they compared in a series of regression analyses.

By the time they were 21, about eight in 10 of both men and women with sexual experience had had more than one partner; at age 26, a substantial majority of both reported having had multiple partners since the previous survey, and at age 32, three in four men and half of women said that they had had multiple partners since the previous assessment. More than half of respondents of each gender reported always or usually using condoms when they were 21; in subsequent study intervals, the proportions were about

20–40%. Concurrent partnerships were reported by 10% or fewer of respondents at each assessment, and most participants said that their last partner had had no more partners than they had.

At age 21, 9% of men and 18% of women said that they had had at least one STD diagnosed by a clinician. Fourteen percent of each reported having had an STD between ages 21 and 26, and 9% of each said they had had one between ages 26 and 32. Chlamydia, genital warts and herpes were the most commonly reported STDs by both men and women at each survey.

Men's reported incidence of STDs translated to a rate of 2.0 infections per 100 person-years by 21 years of age, 3.2 per 100 at ages 21–26 and 2.0 per 100 at ages 26–32. Analyses adjusting for participants' number of sexual partners indicated that the rate in the middle period was almost twice that of the earliest period (incidence rate ratio, 1.9). In separate examinations of bacterial and viral STDs, the analysts found no significant differences by age in men's reported rates of infection.

Among women, STDs occurred at a rate of 4.4 per 100 person-years between first intercourse and 21 years of age, 3.0 per 100 between ages 21 and 26, and 1.4 per 100 at ages 26–32. In analyses that adjusted for both number of partners and condom use in the last 12 months, the rate was significantly lower in the last interval than in the first (incidence rate ratio, 0.4); the rates in the first two intervals were statistically indistinguishable. Rates of bacterial STDs were significantly reduced at ages 21–26 (0.5) and 26–32 (0.4), and the rate of viral STDs was reduced at ages 26–32 (0.4).

Women's reported STD incidence by age 21 was significantly higher than men's (incidence rate ratio, 2.6 in analyses adjusting for number of sexual partners). No gender difference was apparent in the later study intervals. The pattern was the same for both bacterial and viral diseases (incidence rate ratios, 4.3 and 2.0, respectively, at the age 21 assessment).

The researchers acknowledge several limitations of their study—among them, the use of participants' own reports of STD diagnoses and deficiencies in available measures of sexual behavior and partners' risk characteristics. Nevertheless, they point out that the longitudinal data set, with its repeated measures of sexual behavior and STDs, provided them with a "unique opportunity" to examine age effects on reports of STD diagnoses and to directly compare patterns in these effects by gender. The results, they add, "should be generalizable" to the United States and other developed countries with similar STD-specific incidence rates. Given the study's strengths, they conclude that the period between first intercourse and age 21 is "a time of special risk" for STDs among women, but of reduced risk among men.—*D. Hollander*

REFERENCE

1. Paul C et al., Longitudinal study of self-reported sexually transmitted infection incidence by gender and age up to age thirty-two years, *Sexually Transmitted Diseases,* 2009, 36(2):63–69.

Even at Term, Timing Of Cesarean Is Linked To Adverse Outcomes

The timing of elective repeat cesarean section, even for term births, may have important implications for infant heath, according to a large, multicenter study conducted in the United States.[1] When compared with infants delivered by elective repeat cesarean section at 39 weeks' gestation, infants delivered at 37 weeks' and 38 weeks' gestation are at increased risk for a range of adverse outcomes, including death, respiratory complications and admission to the neonatal intensive care unit (odds ratios, 1.3–4.2).

Infants delivered by cesarean are at increased risk for adverse neonatal outcomes, even when they are delivered at term (i.e., at 37 weeks' gestation or later). Furthermore, elective delivery before 39 weeks' gestation generally is not recommended unless there is evidence of fetal lung maturity. Therefore, researchers sought to describe the timing of elective repeat cesarean deliveries and to assess the associations between the risk of adverse neonatal outcomes and such deliveries at term but before 39 weeks. Using data from a network of 19 academic centers, they identified 24,077 women who delivered a viable infant by repeat cesarean section in 1999–2002; gestational age was determined by the date of the woman's last menstrual period or by the results of the earliest ultrasound. Women with medical conditions that would warrant early delivery and those with multiple gestations or a fetus with a major congenital defect were excluded; the final sample consisted of 13,258 women.

The primary outcome was a composite of any adverse outcome, including death, respiratory distress syndrome or rapid and labored breathing, admission to the neonatal intensive care unit, newborn sepsis, hypoglycemia, cardiopulmonary resuscitation or ventilation in the first 24 hours after birth, and hospitalization for five or more days. The infants were followed for 120 days or until they were discharged from the hospital. Using logistic regression to adjust for maternal age, race or ethnicity, marital status, number of previous cesarean sections, insurer, and whether the woman had smoked or had had gestational diabetes, the researchers determined the associations between adverse neonatal outcomes and gestational age at delivery.

Six percent of women who had an elective repeat cesarean delivery at term did so at 37 weeks of gestation; 30% did so at 38 weeks, 49% at 39 weeks and 15% at 40 weeks or later. Compared with women who delivered at 39 weeks' gestation, those who delivered earlier were older; had a lower body-mass index at delivery; and were more likely to be white, to be married, to have private insurance and to have had two or more cesarean sections. As the infants' gestational age increased, so did their mean birth weight.

The incidence of the primary outcome was 11% among all infants; it was 8% among infants delivered at 39 weeks' gestation, 11% among those delivered at 38 weeks' and 15% among those delivered at 37 weeks' gestation. The incidence of the primary outcome and of any adverse outcome decreased as gestational age increased from 37 to 39 weeks; these trends remained significant even after adjustment for confounders. Compared with infants delivered at 39 weeks, infants delivered at 37 weeks had higher odds of the primary outcome (odds ratio, 2.1) and any adverse outcome (1.8–4.2); for infants delivered at 38 weeks, the adjusted odds ratio was 1.5 for the primary outcome and 1.3–2.1 for any adverse outcome. Delaying delivery until 39 weeks might have reduced the occurrence of any adverse outcome by 48% among infants delivered at 37 weeks' gestation and by 27% among those delivered at 38 weeks'.

More than one-third of all elective repeat cesarean deliveries examined in the study occurred before 39 weeks of gestation. According to the researchers, "these early deliveries are associated with a preventable increase in

neonatal morbidity and admissions to the neonatal [intensive care unit], which carry a high economic cost." They believe their "findings support recommendations to delay elective delivery until 39 weeks of gestation and should be helpful in counseling." —*L. Melhado*

REFERENCE

1. Tita ATN et al., Timing of elective repeat cesarean delivery at term and neonatal outcomes, *New England Journal of Medicine,* 2009, 360(2):111–120.

Heterosexual Latino Men's Same-Sex Behavior May Put Their Partners at Risk

Four percent of Latino men who participated in a community-based survey in California said both that they were heterosexual and that they had had sex with men. These men were more likely than those who had had sex only with women to report characteristics and behaviors that could put their partners at risk of acquiring an STD: They had elevated odds of having had an STD and of having engaged in unprotected sex with a woman. Meanwhile, they were only marginally more likely than other heterosexual men to think of themselves as having a medium or high risk of acquiring HIV.[1]

The sample of 680 men were recruited in 2005–2006 at 12 venues in San Diego County, including five places that were thought to be (or to be near) sites where risky sexual behavior occurs. Men were eligible to participate if they were Latino, were at least 18 years old and were alone or in the company of other men. Participants took a self-administered survey that asked about their demographic characteristics, sexual orientation, lifetime history of STD testing, and lifetime and recent sexual behavior and substance use.

In all, 92% of men identified themselves as heterosexual, 2% as bisexual and 5% as gay. However, sexual identity was not always consistent with sexual behavior. Whereas 88% of participants considered themselves heterosexual and had had sex only with women, 4% considered themselves heterosexual and had had both female and male partners; 2% said that they were bisexual and had had partners of both genders, and 5% identified as gay and had had sex only with men.

Within the 60 days before the survey, 57% of men had had intercourse with a woman, 4% had had insertive anal intercourse with a male partner and 4% had had receptive anal sex. About half of men reporting each of these activities reported not having used condoms. In bivariate analyses, heterosexual men who had had both male and female partners were significantly more likely than other heterosexual men or bisexual men to report recent unprotected intercourse with a woman; gay men were the most likely to report recent receptive anal intercourse.

Sexual intercourse with a female was compared across categories of sexual identity and behavior, with controls for age, education, marital status, acculturation and type of survey venue. (The numbers of men reporting anal sex were too small to examine in a multivariate context.) In this model, heterosexual men who had had partners of both genders were significantly more likely than other heterosexual participants to report recent intercourse with a woman (odds ratio, 2.5) and recent unprotected intercourse with a woman (3.5).

The prevalence of other risk-related behaviors varied widely by sexual identity and behavior in bivariate analyses. For example, 53% of gay men were carrying condoms when surveyed, compared with 21–23% of heterosexual men; roughly 60–70% of gay and bisexual men thought they had a medium or high risk of acquiring HIV, compared with about 25–40% of heterosexual men. Of those who had had an STD test, heterosexual participants who had had partners of both genders were more likely than those who had had only female partners to have had an infection.

Multivariate analyses revealed substantial differences in risk-related behavior between heterosexual men who had had partners of both genders and those who had had sex only with women. The former were significantly more likely than the latter to report using alcohol and drugs during sex (odds ratios, 3.3 and 6.2, respectively), to have been tested for HIV or other STDs (4.5 and 4.2) and, if they had been tested, to have had an STD (4.3); despite their levels of risky behavior, however, they were only marginally more likely to consider their HIV risk medium or high. By contrast, bisexual men had significantly elevated odds of considering their level of risk medium or high (7.4) and of having been tested for STDs (3.1). Gay men also had an increased likelihood of reporting these behaviors (4.8 and 3.7, respectively); in addition, they were more likely than heterosexual men reporting only female partners to have had condoms with them at the time of the survey (3.3), to have been tested for HIV (11.3) and to be planning to have an HIV test in the next six months (2.7).

The researchers acknowledge that their findings may have been influenced by a number of factors, including their use of lifetime sexual activity to classify men behaviorally, limitations of their sample and the omission of same-sex behavior other than anal intercourse. Nevertheless, they contend that their findings have "significant implications." Nationwide estimates of the share of HIV infection attributable to bisexual behavior "rely on openly reported bisexual behavior." These findings, however, demonstrate that men may underreport same-sex behavior and that underreporting "may lead to an underestimation of the contribution that this transmission avenue makes to the HIV epidemic in the United States." In the Latino community, where cultural attitudes force many people to hide same-sex behavior, the researchers conclude that there is a vital need for prevention programs that are "consistent with and respectful of" individuals' sexual identities and that reduce stigma associated with same-sex intercourse.—*D. Hollander*

REFERENCE

1. Zellner JA, The interaction of sexual identity with sexual behavior and its influence on HIV risk among Latino men: results of a community survey in northern San Diego County, California, *American Journal of Public Health,* 2009, 99(1):125–132.