Teenagers’ Babies Do Not Appear to Suffer from Poor Health Solely Because of Their Mothers’ Young Age

To the extent that infants born to adolescents need more health care services than babies born to older mothers, a study of South Carolina infants enrolled in fee-for-service Medicaid suggests that the disparity may be attributable to differences in maternal characteristics, rather than to teenage mothers’ inability to obtain proper care for their children.¹ In each of the first two years of life, rates of use of five of six types of care were higher among babies born to teenagers than among those born to older women. The pattern was the same when infant and delivery characteristics were controlled for, but few significant differences remained in analyses that took maternal characteristics into account.

The study used statewide data that linked Medicaid claims with birth certificate files for infants born in 2000–2002. Only healthy infants who were delivered at term, had a normal birth weight and were continuously enrolled in a fee-for-service plan from age two months through two years were included. These criteria yielded a sample of nearly 42,000 infants—about 4,000 whose mothers were teenagers (i.e., 11–17 years old) at delivery and 38,000 whose mothers were 18 or older.

In separate analyses for each of the first two years of life, researchers assessed infants’ use of six types of health service: doctor visits for preventive care, doctor visits for illness, emergency department visits, hospital admissions, and both emergency department visits and hospital admissions for conditions that can be managed through ambulatory care. Differences by maternal age at delivery were examined in bivariate and multivariate models.

Chi-square and t tests revealed significant—although generally small—differences in a wide range of maternal, infant and delivery characteristics according to the mother’s age at delivery. Most notably, teenage mothers had had less schooling than older women (9.8 vs. 11.8 years, on average), were less likely to be married (7% vs. 20%) and were more likely to have given birth only once (91% vs. 35%). They also were less likely to have received adequate prenatal care, as measured on a standard index (53% vs. 64%).

On average, the number of doctor visits for illness did not differ by maternal age at delivery in either year; however, in each year, teenagers’ babies made greater use of every other health service examined than did infants born to older women. They made 5–6% more preventive medical visits than other infants and had 9–17% more hospital admissions, 20–24% more hospital admissions for conditions that can be managed through ambulatory care, and 33–36% more emergency department visits in general and for conditions that were treatable on an ambulatory basis.

In analyses that controlled for infant and delivery characteristics, these findings were largely unchanged; the exception was that a marginally significant result suggested that infants born to teenagers made slightly more doctor visits due to illness than other babies during the first year. By contrast, when maternal characteristics were controlled for, maternal age was associated with differences in only two outcomes and only during the first year: Infants born to teenagers again had marginally more doctor visits because of illness than other babies during the first year. By contrast, when maternal characteristics were controlled for, maternal age was associated with differences in only two outcomes and only during the first year: Infants born to teenagers again had marginally more doctor visits because of illness than other infants, and they had 27% more hospital admissions for conditions treatable by ambulatory care. Results were similar when infant, delivery and maternal characteristics were controlled for simultaneously. In the full model, during the first year, babies born to teenagers made 8% more sick-infant doctor visits than children of older mothers (a marginally significant difference), had 9% more hospital admissions and had 29% more admissions for conditions that could be managed through ambulatory care.

According to the analysts, despite data limitations that restrict the generalizability of the results and may lead to certain biases, the findings suggest that health problems among infants of adolescent mothers reflect mothers’ socioeconomic disadvantage, rather than an inherent inability of young mothers to care for their children. Thus, “policies that aim to provide additional social support to adolescent mothers or additional financial resources may be useful ways to improve the health outcomes of infants who are born to younger women.”

–D. Hollander

REFERENCE
Associations Between Smoking, Poor Pregnancy Outcomes Are Cumulative

Compared with their counterparts who have never smoked, women who smoke during one pregnancy and continue to do so in the next have roughly two times the odds of having a preterm second birth, three times the odds of delivering an infant with a low birth weight and nearly 50% higher odds of having a pregnancy that ends in perinatal death, according to a retrospective epidemiologic study conducted in Australia. Women who stop smoking after the first pregnancy have smaller elevations of risk. The likelihood of having a preterm birth or a low-birth-weight infant are also positively associated with the number of cigarettes smoked daily.

Using data from a surveillance system that captures most births in New South Wales, investigators identified women who had two consecutive singleton births during 1994–2004. Births were categorized as preterm if they occurred before 37 weeks of gestation, and infants were categorized as having a low birth weight if they weighed less than 2,500 g at delivery. Perinatal deaths were
defined as the composite of stillbirths (deaths of fetuses having a gestational age of at least 20 weeks or a weight of at least 400 g) and early neonatal deaths (deaths within the first 28 days of life). Women were classified as never-smokers (if they did not smoke during either pregnancy), moderate smokers (if they smoked 1–9 cigarettes daily) or heavy smokers (if they smoked 10 or more cigarettes daily) for each pregnancy.

The 244,840 women included in analyses were, on average, about 28 years old at the time of the first delivery and 30 years old at the time of the second delivery. The large majority (87% for each pregnancy) began receiving prenatal care before 20 weeks of gestation. About 4% developed gestational diabetes. The first and second births were closely spaced (between 12 and less than 24 months apart) in roughly a third of cases, moderately spaced (between 24 and less than 36 months apart) in another third and distantly spaced (36 or more months apart) in the remaining third; in only 2% of cases were the births very closely spaced (less than 12 months apart). Some 19% of women smoked during the first pregnancy, and 18% did so during the second; of the former group, almost three-fourths smoked during the second pregnancy.

Overall, 5% of the women had a second pregnancy that ended in a preterm birth. In multivariate analyses, compared with never-smokers, women who smoked during both pregnancies had almost two times the odds of having a preterm birth (odds ratio, 1.9). The odds were also elevated among women who smoked only during one pregnancy (1.4 for each). The likelihood of a preterm second birth varied with the frequency of smoking: The odds ratios ranged from 1.2 among women who smoked moderately during the first pregnancy and not at all during the second to 3.1 among women who smoked heavily during both.

Several other maternal and pregnancy-related factors also were positively associated with the risk that the infant was low-birthweight. Most notably, a preterm second birth was associated with a dramatically elevated risk of delivering a low-birth-weight infant (odds ratio, 68.9). In addition, compared with their counterparts whose first infant had a normal weight, those who had had a low-birth-weight baby had nearly five times the odds of experiencing the same outcome a second time (4.7).

For nearly 1% of women, the second pregnancy ended in perinatal death. In a multivariate analysis that included gestational age, the only determinant of this outcome was gestational age itself: Compared with their peers delivering at 37 weeks or later, women delivering at 32–36 weeks had sharply elevated odds (odds ratio, 17.6), and women delivering earlier than that had astronomically elevated odds (455.8). However, when gestational age was excluded, women who smoked during both pregnancies had an elevated risk of this outcome (1.5), as did those who smoked during one or the other (1.4). The odds were also sharply higher if the two births were very closely spaced, as opposed to moderately spaced (4.6), and if the first pregnancy had ended in stillbirth (3.6) or early neonatal death (5.9), as opposed to any other outcome.

Smoking during the second pregnancy accounted for 15% of the risk of preterm birth, 26% of that of low birth weight and 10% of that of perinatal death. Adverse outcomes of the previous pregnancy explained much of the remaining risk of preterm birth and low birth weight.

Factors predating conception exert a large influence on the health of a pregnancy, the investigators contend; therefore, early identification of women at elevated risk for poor pregnancy outcomes and appropriate intervention hold promise as strategies for ensuring healthy pregnancies. The researchers note that smoking is a modifiable risk factor, and that both smoking cessation and reduced frequency of smoking were associated with comparatively better pregnancy outcomes. “Strategies to reduce the prevalence of [smoking during pregnancy] may include intense intervention for women who have had smoking-related adverse outcomes in a previous pregnancy, but primary prevention is probably more important,” they conclude.

REFERENCE
Teenagers’ Sexual Identity May Not Reflect Behavior; Both Are Linked to Risk

Teenage women’s sexual identity frequently does not mesh with their sexual behavior, and as analyses of data from the Massachusetts Youth Risk Behavior Survey show, both identity and behavior are independently related to the likelihood of risky outcomes among young women. Participants who considered themselves lesbian or bisexual, as well as those who were unsure of their sexual identity, were more likely than self-identified heterosexuals to say they had ever been coerced to have sex; women who had had partners of both sexes were more likely than those who had had sex only with males to have experienced coercion, but those with only female partners had reduced odds of this outcome. Lesbians and bisexual women reporting any male partners had an elevated likelihood of having been pregnant, and participants reporting sexual experience with women were more likely than others to have had four or more partners.

The analyses were based on data from four rounds (1995, 1997, 1999 and 2001) of the cross-sectional survey, which is conducted among public high school students throughout the state, and included only sexually experienced participants. Analysts used chi-square tests to examine demographic and risk-related characteristics of subgroups defined by sexual identity and sex of partners, and logistic regression to examine associations between these dimensions of sexual orientation and selected outcomes related to HIV risk.
A total of 3,973 students were included in the analytic sample. Of these, 3,666 identified themselves as heterosexual, 21 as lesbian and 163 as bisexual; 113 were not sure of their sexual identity, and 10 did not answer the question. (Because of small numbers, the researchers combined all women identifying as sexual minorities—i.e., lesbians and bisexuals—for analysis.) Some 3,714 of the women said they had had sex only with men, 79 only with women and 180 with both. Nearly all women who reported only male partners considered themselves heterosexual, but 4% gave other responses. By contrast, among those who had had sex exclusively with females, only 14% identified as lesbian or bisexual; 82% thought of themselves as heterosexual, and 4% were unsure. Fifty-eight percent of those reporting sexual experience with both men and women said that they were lesbian or bisexual, 31% identified as heterosexual, and the rest were unsure.

Participants were about 16 years old, on average, and mean age did not differ by sexual identity or sex of partners. Among identity subgroups, women who were unsure were the least likely to be white and the most likely to be Hispanic; heterosexuals were the least likely to have immigrated in the last six years. Comparisons by partners’ sex showed that participants with exclusively same-sex experience were the least likely to be white and the most likely to be recent immigrants.

At the bivariate level, a wide range of risk-related outcomes differed by sexual identity. Women who identified as sexual minorities were the most likely to report injection-drug use, very early intercourse, multiple lifetime or recent partners, pregnancy or STD history, and sexual coercion; they were the least likely to have immigrated in school. Those who were unsure about their identity reported the highest incidence of dating violence and, if they had had male partners, the lowest level of condom use at last sex. Heterosexuals had the lowest risk profile.

All of these outcomes except for condom use at last sex also differed by sexual behavior. Participants who had had partners of both sexes exhibited the highest level of risk; those reporting only male partners generally were at lowest risk.

An initial set of multivariate analyses examined predictors of sexual coercion and receipt of AIDS education. The findings indicate a positive association between minority sexual identity or uncertainty and reports of sexual coercion (odds ratios, 1.7 and 1.6, respectively, in a model controlling for age, ethnicity, immigrant status, survey year and partners’ sex), but no association between identity and AIDS education. Sexual coercion was negatively associated with having had only female partners and positively associated with having had partners of both sexes (0.5 and 2.1, respectively, in a model including sexual identity). Receipt of AIDS education was negatively associated with reporting only female partners or partners of both sexes (0.4–0.5).

Analyses that included sexual coercion and AIDS education among the controls showed few relationships between sexual identity and the risk-related outcomes. Lesbian and bisexual women who had ever had a male partner were more likely than heterosexuals to have been pregnant (odds ratio, 2.2), and women who were unsure of their sexual identity had reduced odds of reporting condom use at last sex if they had had only male partners (0.5). Partners’ sex was associated with three outcomes. Women reporting only female partners or partners of both sexes had elevated odds of reporting injection-drug use (3.2 and 5.0, respectively) and at least four partners (2.3 and 3.5); in addition, those who had had sex with both women and men had elevated odds of reporting two or more recent partners (2.6).

Sexual coercion was the most consistent predictor of risk outcomes. The likelihood of reporting condom use at last sex was reduced among women who had experienced coercion (odds ratio, 0.7), and the likelihood of reporting each of the other outcomes was elevated (1.9–3.3). Receipt of AIDS education was negatively associated with injection-drug use, experience with multiple lifetime and recent partners, and STD diagnoses (0.3–0.5).

While acknowledging several study limitations (including the grouping together of all sexual minorities, the age of the data and uncertainty about participants’ understanding of some questions), the analysts say that their findings show that adolescents whose sexual identities or behaviors “place them outside the heterosexual majority” are at increased risk of unhealthy outcomes. They therefore stress the need for interventions that “are sensitive to the complexity of sexual-orientation development during adolescence and that are effective in helping young people make healthy choices.” —D. Hollander

REFERENCE
A Majority of Teenagers Who Have Had Intercourse Also Have Had Oral Sex

Some 55% of adolescents have had oral sex, and 11% have had anal sex, according to an analysis of data from a nationally representative sample of 15–19-year-olds. A large majority of youth who have recently initiated vaginal sex have also engaged in oral sex, but the proportion increases steadily with time. Teenagers have elevated odds of engaging in oral sex if they have been sexually experienced for more than a few months, have a high socioeconomic status or are 18 or 19 years old; in contrast, they have reduced odds if they are nonwhite or consider nonmarital sex before age 18 inappropriate. Time since first vaginal intercourse and socioeconomic status are also positively associated with the likelihood of engaging in anal sex, whereas black race is negatively associated with the odds of this behavior.

To ascertain levels and determinants of heterosexual oral sex and anal sex among adolescents, researchers analyzed data from the 2002 National Survey of Family Growth, in which behavioral and demographic data were collected by in-person interviews and computer-assisted self-administered questionnaires. Analyses were based on 1,505 women and 1,121 men aged 15–19. Some 50% had engaged in vaginal sex (i.e., were sexually experienced), 55% had engaged in oral sex and 11% had engaged in anal sex.

Bivariate analyses revealed that larger proportions of sexually experienced youth than of their sexually inexperienced peers had engaged in oral sex (87% vs. 23%) and anal sex (21% vs. 1%). In addition, larger proportions of 18–19-year-olds than of 15–17-year-olds had engaged in oral sex (71% vs. 43%) and anal sex (17% vs. 7%). Adolescent women were more likely than their male counterparts to report having given oral sex (44% vs. 39%); however, in stratified analyses, this gender difference persisted only among sexually experienced youth. Similar proportions of women and men reported having received oral sex (50–52%).

The temporal pattern of oral sex and anal sex differed among sexually experienced youth. Eighty-two percent of adolescents who had initiated vaginal intercourse in the preceding six months had also engaged in oral sex, and the value was only modestly higher—92%—among those who had initiated vaginal intercourse more than three years earlier. In contrast, 6% of teenagers who had begun having vaginal sex in the preceding six months had engaged in anal sex, but the proportion was substantially higher—28%—among those who had done so more than three years ago.

At the multivariate level, sexually experienced adolescents had higher odds of engaging in oral sex than their sexually inexperienced counterparts, and the differential increased with time since first vaginal intercourse. Some 55% of adolescents have had oral sex, and 11% have had anal sex, according to an analysis of data from a nationally representative sample of 15–19-year-olds. A large majority of youth who have recently initiated vaginal sex have also engaged in oral sex, but the proportion increases steadily with time. Teenagers have elevated odds of engaging in oral sex if they have been sexually experienced for more than a few months, have a high socioeconomic status or are 18 or 19 years old; in contrast, they have reduced odds if they are nonwhite or consider nonmarital sex before age 18 inappropriate. Time since first vaginal intercourse and socioeconomic status are also positively associated with the likelihood of engaging in anal sex, whereas black race is negatively associated with the odds of this behavior.
intercourse: Odd ratios climbed from 9.5 for those who had been sexually experienced for no more than six months to 32.8 for those who had first had vaginal sex more than three years earlier. In addition, 18–19-year-olds were more likely to have engaged in oral sex than were 15–17-year-olds (1.4), and teenagers whose socioeconomic status was categorized as medium or high had greater odds of reporting this behavior than did their peers with a low socioeconomic status (2.2–2.9). On the other hand, relative to white youth, youth who were black, Hispanic or of other races had lower odds of having had oral sex (0.4–0.6), and youth who did not believe that sex among unmarried teenagers was appropriate had lower odds relative to those who believed it was or were neutral on the topic (0.4).

Time since first vaginal intercourse also was a key predictor of anal intercourse. (This analysis excluded sexually inexperienced teenagers, because reports of anal intercourse were uncommon in this group.) Compared with youth who had initiated vaginal sex within the previous six months, those who had done so 7–12 months earlier had more than four times the odds of reporting anal sex (odds ratio, 4.4), and the difference was even higher for those who had done so more than three years earlier (6.1). Other predictors of this behavior were having a medium socioeconomic status (1.6) and being black (0.6).

Two-thirds of sexually inexperienced adolescents who had engaged in oral sex reported having had only a single sex partner. The proportion was similar among sexually experienced youth who had never had oral sex. In sharp contrast, more than two-thirds of sexually experienced youth who had engaged in oral sex had had multiple partners; in fact, more than one-third reported having at least four.

The study’s findings, the researchers assert, suggest that vaginal and oral sex are “closely related” for many teenagers; in contrast, the pattern observed for anal sex is more consistent with that for a “taboo” behavior. They also note that the results do not support contentions that adolescents engage in oral sex instead of vaginal sex as a means of reducing their risk. “Adolescents need education and counseling about the [STD] risks from both coital and noncoital sex,” the researchers recommend.

The author of an accompanying editorial questions whether oral sex in fact has any net benefit relative to vaginal sex among adolescents and whether it constitutes a gateway behavior to vaginal sex. On the latter topic, she notes that studies based on cross-sectional data have had conflicting results and leave unresolved issues of whether oral sex coincides with or delays the onset of vaginal sex, and whether adolescents’ initiation of one type of sex increases their likelihood of initiating others. “Sorely needed are prospective, longitudinal studies that can address these remaining queries,” the editorialist concludes. – S. London

REFERENCES
Feelings of Abandonment May Predict Pregnancy Among Homeless Adolescents

Among homeless or runaway teenage women who seek short-term shelter services, those with difficult family situations have an increased risk of being pregnant, according to an analysis of a national sample of this population. Women who felt abandoned by their families or who had been emotionally abused by their mothers had about 50% higher odds of being pregnant than those not reporting these situations; those who lived in two-parent families had reduced odds of being pregnant. Teenagers’ likelihood of being pregnant was also linked to the amount of time they had been away from home, their school enrollment status and their age, among other characteristics.

Even though homeless or runaway youth often lack familial and community support, and tend to engage in high-risk behaviors, little research has examined pregnancy among this population at the national level. To examine possible risk factors for pregnancy among this group and possible differences between young women who are pregnant and those who are not, researchers used data from the 1997 Runaway/Homeless Youth Management Information System, the only source of national data available on young people who obtained services at youth emergency shelters. The study was limited to 12–18-year-olds who lived away from home at least overnight without permission or supervision. The researchers identified young women who were pregnant when they arrived at the shelter and randomly selected an equal number of female adolescents, matched by age, who were not pregnant to serve as a comparison group; the final sample consisted of 476 pregnant and 475 nonpregnant teenagers.

On average, women in the sample were 17 years old; 59% were white, 23% were black and 13% were Hispanic. One-quarter had dropped out of school. Substantial proportions had used alcohol (75%) or illicit drugs (61%). Twenty-seven percent of the young women had lived in a two-parent household; some 16–32% had been physically abused, emotionally abused or neglected by at least one parent.

Chi-square and t tests revealed significant differences between pregnant and nonpregnant teenagers on a wide array of individual and family-level characteristics. For example, a higher proportion of pregnant adolescents were black (27% vs. 20%) or Hispanic (16% vs. 10%). Roughly twice as many pregnant as nonpregnant young women felt abandoned by their family (30% vs. 16%) and reported a variety of high-risk behaviors: having an STD (6% vs. 3%), having dropped out of school (33% vs. 17%) and being on probation (7% vs. 4%). Some 33% of young women who were not pregnant had lived with two parents, while 22% of those who were pregnant had. Though a smaller proportion of pregnant adolescents than of others had physically abusive mothers (15% vs. 20%), the reverse was true regarding emotionally abusive mothers (35% vs. 29%). Seventy-three percent of pregnant teenagers had stayed away from home for more than two days, compared with 63% of nonpregnant teenagers. A few high-risk behaviors, including drug use and attempted suicide, were equally common for both groups.

In a logistic regression analysis, most of these relationships remained significant. Teenagers who had been emotionally abused by their mothers or who felt abandoned by their family had higher odds of being pregnant than those who did not report these situations (odds ratio, 1.5 for each). The odds of pregnancy were also elevated for young women who had lived away from home for two or more days (1.4), had dropped out of school (2.2) or had an
STD (2.2). Interestingly, those who reported having physically abusive mothers had lower odds of being pregnant than those who did not (0.5). White youth and those who had lived with two parents also had reduced odds of being pregnant (0.6 and 0.8, respectively), and the likelihood of pregnancy fell with increasing age (0.9).

While the results of this study indicate that “long-term family difficulties” and a lack of “positive experiences in educational settings” are associated with homeless or runaway young women’s risk of pregnancy, the investigators acknowledge that the findings should be viewed “with caution” because of a few important limitations. Specifically, causality cannot be determined since the study was cross-sectional, and the questions and definitions that shelters used in data collection were not standardized. In addition, the risk of pregnancy may be even higher for homeless or runaway youth not included in this sample, such as those who do not access shelter services. However, these findings point toward the types of support needed by these young women, according to the researchers, who suggest that shelters could serve as a gateway to services like teenage parenting programs. Beyond this, they encourage service providers to “help the pregnant teen to recognize the complexity of her problems and to take steps to overcome them rather than simply running away.”—S. Ramashwar

REFERENCE