

## **TRENDS IN MATERNAL AND CHILD HEALTH INDICATORS IN MAKING CONNECTIONS SITES**

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The Urban Institute, July 2006

### **Introduction**

This paper reviews trends in three key social indicators in Making Connections (MC) sites, all based on local vital statistics data:

- The teen-birth rate (births to women aged 15-19 as a share of total births)
- The low birth-weight birth rate (births of babies weighing less than 2,500 grams as a percent of total births)
- The prenatal care rate (births to women who received prenatal care in the first trimester as a share of total births)

For all sites, we compare levels and trends in these indicators for their central counties with those in the selected Making Connections neighborhoods. County data were derived from information collected centrally by the Centers for Disease Control (CDC) and released via their web-site. Neighborhood data were derived from the data systems being maintained by MC Local Learning Partnerships. (As will be itemized below, these data are not available for all sites).

Most of the information in this paper covers the late-1990s and first one to two years of this decade. More recent data (i.e., covering time after the MC initiative began) are now being collected and will be reported later this year.

For small areas, like individual neighborhoods, rates of this type tend to vary dramatically from year to year. Values for any single year may be misleading. Accordingly, all the values presented here are three-year averages. For example, the value presented for 1999 for an area is actually the average of the values for 1998, 1999 and 2000 for that area. Also, we refer to the sites by the name of the central city of the area rather than by the name of the county.

### **Main Findings**

The data confirm that MC neighborhoods have more serious problems denoted by these indicators (higher shares of teen and low birth-weight births, lower prenatal care rates) than their

surrounding counties in virtually all sites. However, there are marked differences in outcomes depending on the sites and the indicators.

For births to teen mothers, the picture is one of general improvement in almost all MC neighborhoods and narrowing gaps between neighborhood and county rates (1999 cross-site average of 21% for the neighborhoods vs. 13% for the counties). But differences between sites are notable with rates in two highest sites (Louisville and Milwaukee) averaging around three times those in the lowest (White Center-Seattle and Oakland).

Differences between MC neighborhoods with respect to low birth-weight rates are generally similar, with Milwaukee, Louisville and Indianapolis scoring highest and White-Center Seattle, San Antonio and Oakland at the low end (1999 cross site average of 9.8% for the neighborhoods vs. 8.1% for the counties, a much narrower gap than for teen births). Here, there are also differences in trends. Rates and neighborhood-county gaps have been getting worse in Denver, Louisville but improving on both scores in Milwaukee, Providence, and White Center-Seattle, while evidencing little change in the other sites.

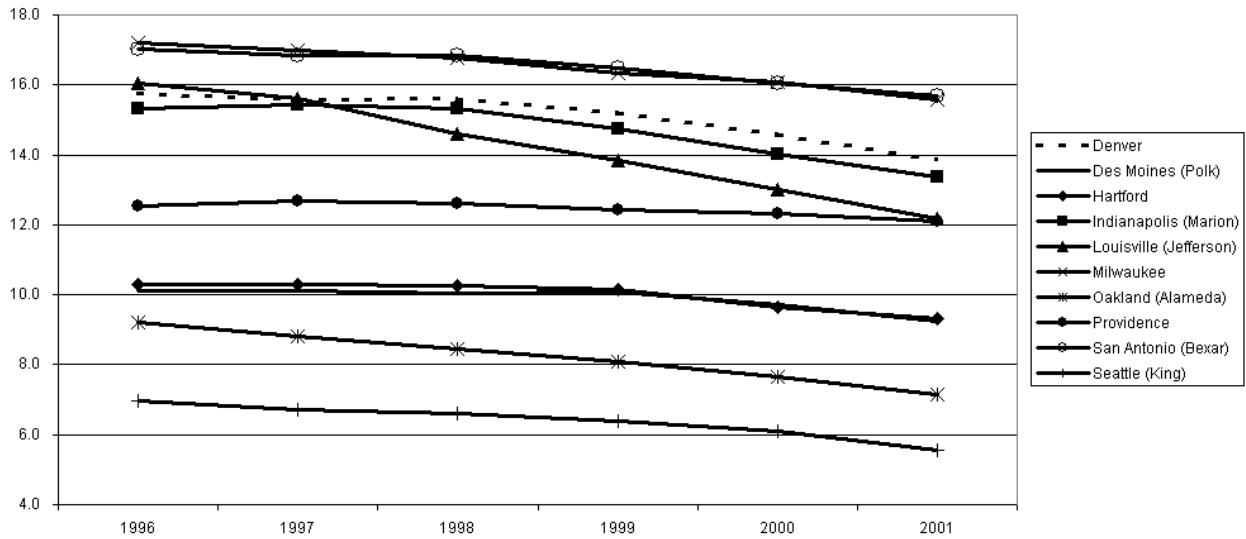
Prenatal care rates in 1999 averaged 68% in the neighborhoods vs. 84% in the counties. Here the sites with the best scores are Oakland, San Antonio, and White Center-Seattle while the worst are in Des Moines, Providence and Milwaukee. There was generally less change in this indicator over time. No MC neighborhoods evidenced serious declines in prenatal care and only two were trending upward: Oakland and Providence. No notable changes were observable in neighborhood-county gaps.

### County Level Conditions and Trends

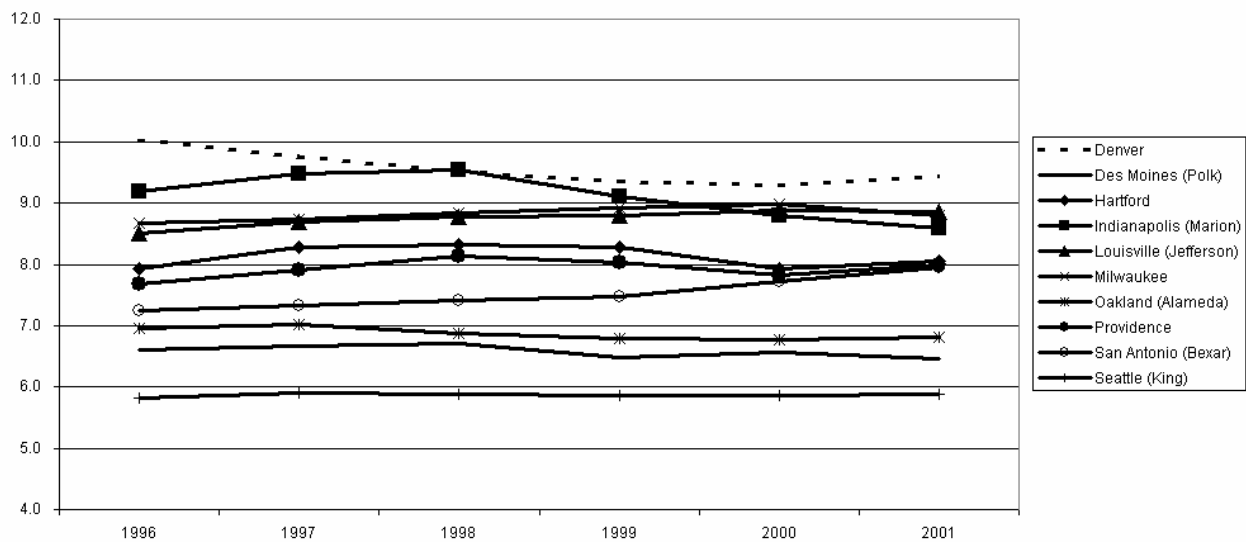
**Teen birth rates.** Figure 1 shows trends in teen births for all counties from 1996 through 2001 (again using the 3-year average approach). There are considerable differences between the sites. We make comparisons using the 1999 three-year average as our reference. Seattle had the lowest rate (teens accounted only 6.4% of county births in 1999; Oakland came next at 8.1%). At the other extreme, the rates were highest for Milwaukee (16.3%), San Antonio (15.7%) and Denver (15.2%).

The overall picture in this period is one of considerable improvement. On average, across the 10 sites, teen births declined from 13.1% of total births in 1996 to 11.4% in 2001, an average drop of -0.33 percentage points per year. In fact, all sites saw improvement in this indicator over the period, though there were important differences in the extent of the declines. The annual declines were highest for Louisville (-0.78 points), Oakland and Indianapolis (-0.40 to 0.41 points). On the other hand, improvement was quite modest in Providence (-0.08 points), Des Moines (-0.18 points), and Hartford (-0.2 points).

**Figure 1**  
**Births to teens (age 15-19) as a share of all births**  
**County Three Year Average**

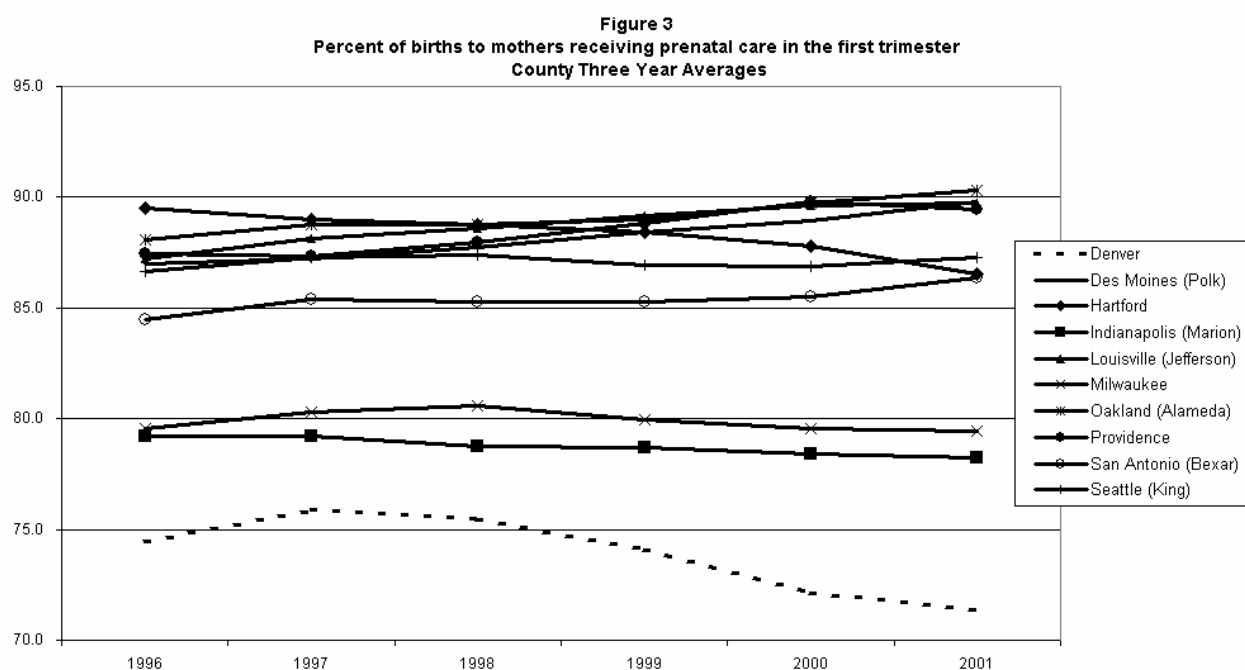


**Figure 2**  
**Percent of births with low weight**  
**County Three Year Averages**



**Low birth-weight rates.** For this indicator, there was somewhat less variation in the levels between the counties (Figure 2, again showing county level results). At the low end, low-birth-weight births accounted for 5.9% of the 1999 total in Seattle, followed by 6.8% in Oakland. Denver (9.4%) was the highest, followed by Indianapolis (9.1%).

Overall, there was comparatively little change in this indicator over the period. The average stayed flat, at around 7.9%-8.0%. Only two sites saw notable improvements: Denver and Indianapolis where the rate dropped by an average of -0.12 percentage points per year. In three sites the low birth-weight problem was getting worse: San Antonio (+0.14 points per year), Louisville (+0.07) and Providence (+0.06). This indicator exhibited negligible variation between 1996 and 2001 in the other five sites.



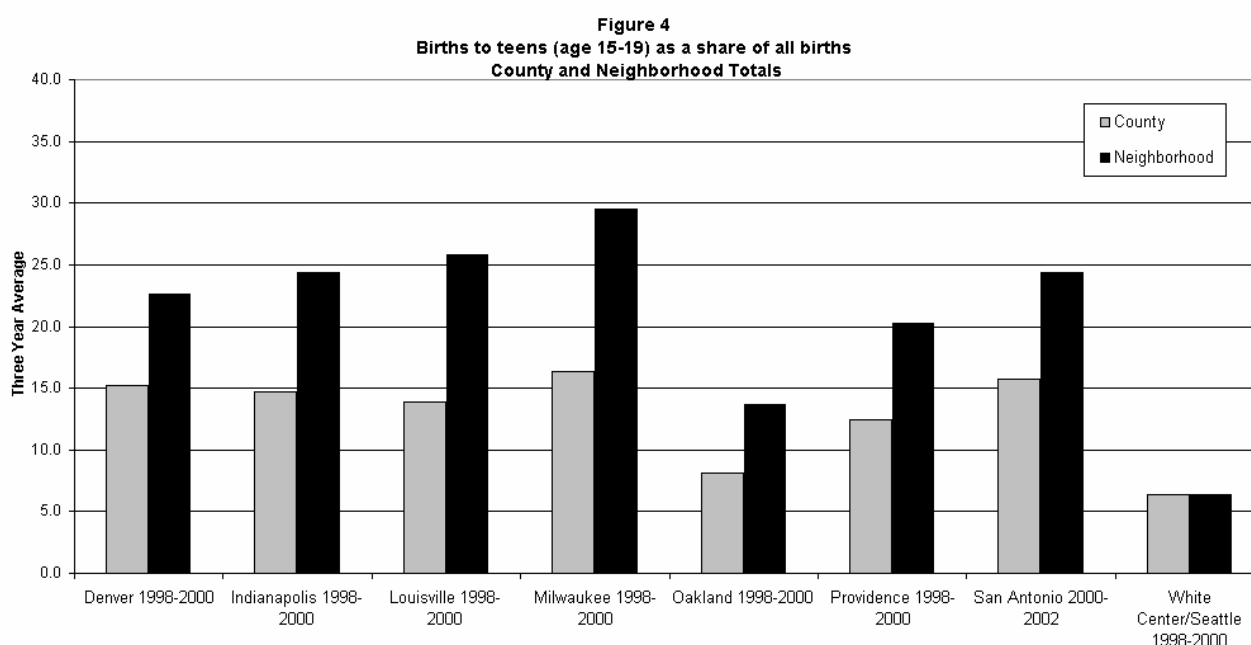
**Prenatal care rates.** In all MC counties, a sizeable majority of mothers have recognized the need for adequate prenatal care (Figure 3). On average, prenatal care had been given in the first trimester for 84% of births in 1999. The highest rates were found in Oakland, Des Moines and Providence (rates rounding to 89%). The only counties with rates below 80% were: Indianapolis (79%) and, by far the poorest score, Denver (74%).

For this indicator, there was a modest improving trend from 1996 to 2001 on average: an average gain of 0.10 percentage points per year. The highest gains were in Des Moines (+0.56 points) and Louisville (+0.50 points). At the other end of the spectrum, prenatal care rates were going down notably in three sites: Indianapolis (-0.19 points per year), Hartford (-0.59 points) and, most seriously, Denver (-0.62 points).

## MC Neighborhood Trends and County Gaps

Almost all MC sites have some multi-year data on these indicators for their MC neighborhoods. In this section, we compare scores for counties and neighborhoods for a standard period for which most have data: 1998-2000.<sup>1</sup> We then look at neighborhood trends where data are available.

As would be expected, in almost all cases, the problems noted by these indicators were more serious in the MC neighborhoods than in their surrounding counties.<sup>2</sup>



**Teen birth rates.** Figure 4 shows the comparisons for the teen birth indicator. The highest (worst) neighborhood scores for this indicator occur in the sites where the county scores were also among the most problematic: Milwaukee (neighborhood score of 29.5%), Louisville (25.8%) and Indianapolis and San Antonio (both at 24.4%). The lowest neighborhood teen birth share by far was in White Center-Seattle (6.4%). The next closest on the low side was Oakland (13.7%).

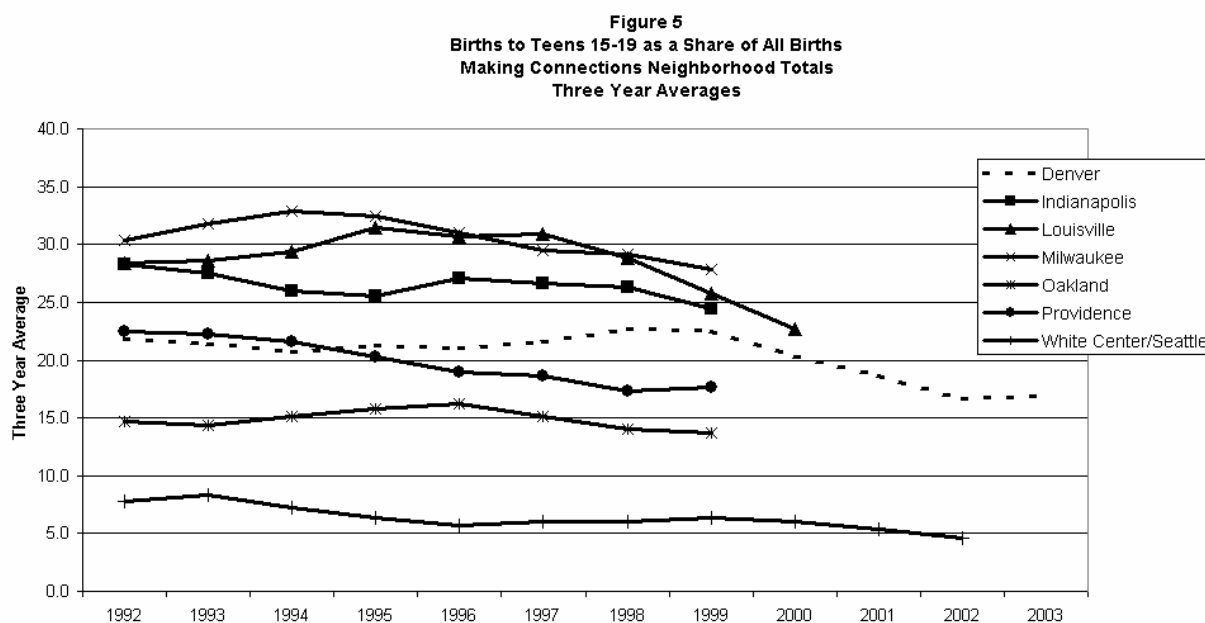
On average, the teen birth rate for the reporting MC neighborhoods was 20.9%, considerably higher than the all-county average of 12.8%, indicating a 63% difference or gap. The largest

<sup>1</sup>The only exception was San Antonio where data availability required the use of the 2000-2002 period. The sites that did not have adequate data for this analysis were Des Moines (for teen and low birth-weight births), Louisville (for prenatal care) and Hartford (for all indicators).

<sup>2</sup> See analysis in Kathryn L.S. Pettit, G. Thomas Kingsley and Claudia J. Coulton, *Neighborhoods and Health: Building Evidence for Local Policy* (Washington, DC: The Urban Institute, May 2003).

negative gaps between the neighborhood and county scores were in Louisville (86%) and Milwaukee (81%). At the other extreme was White Center-Seattle where there was no gap at all (i.e. their teen pregnancy share was the same as that for the county). The gaps for the others fell in the range from 49% to 69%.

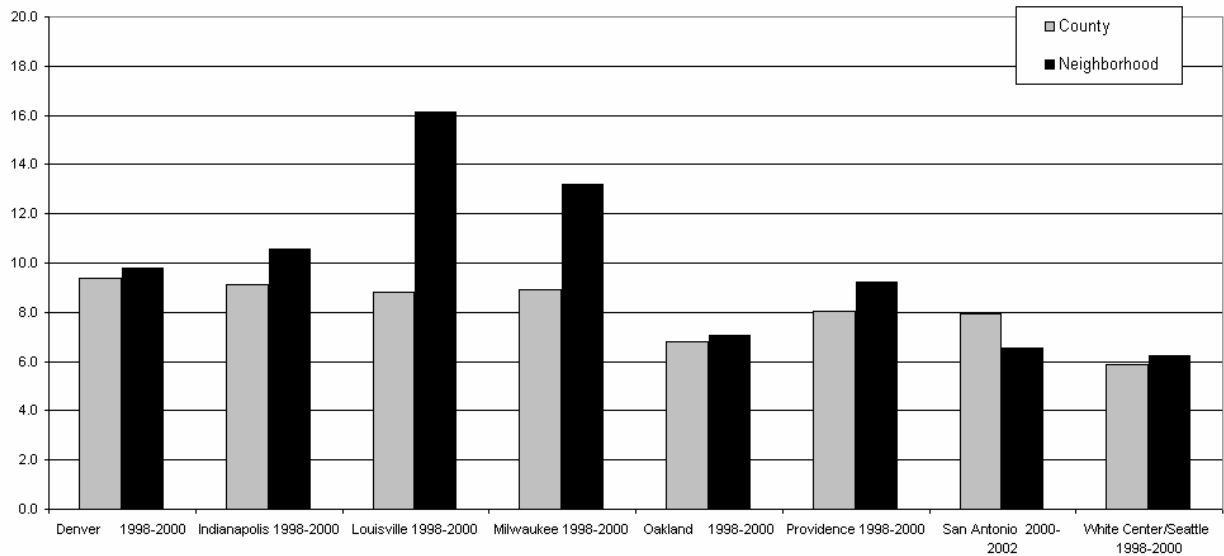
Figure 5 shows neighborhood trends in this indicator for the seven sites where sufficient multi-year data are available at this level. All of these sites show declining teen birth shares since 1996. The indicator for Denver actually went up from 1996 to 1999, but it has declined significantly since then. Overall, Louisville, which has the worst teen birth score overall has experienced the sharpest improvement. Alternatively, improvement has been slowest for White Center-Seattle with the best overall score. The gap between the neighborhood and county scores has been narrowing over this period in four of these sites: Louisville, Milwaukee, Oakland and Providence.



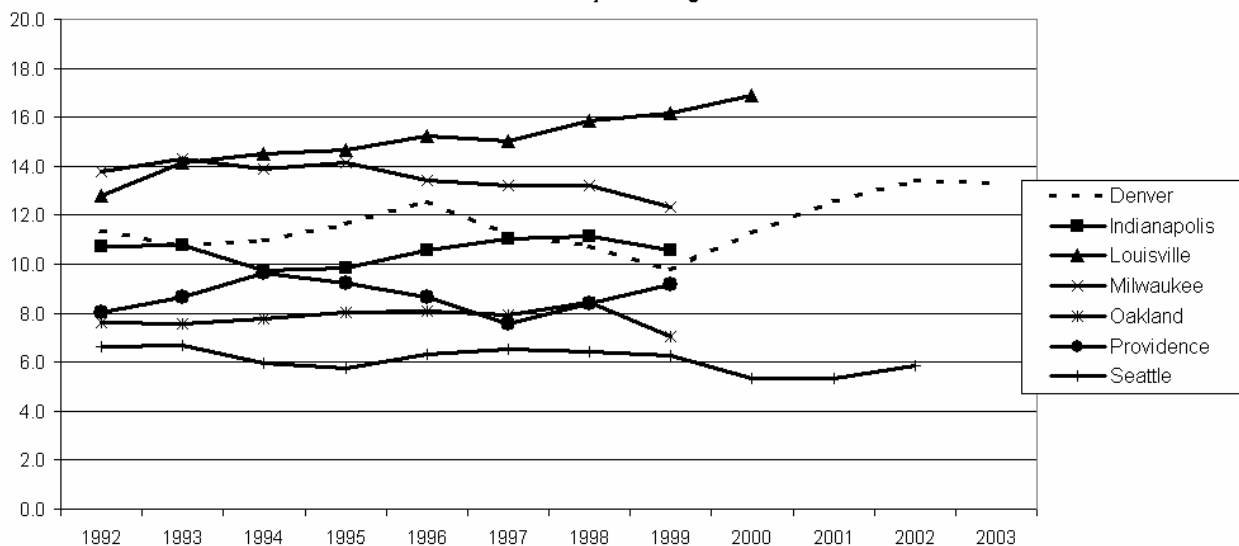
**Low birth-weight rates.** On average, the low birth-weight rate for the neighborhoods was 9.8%. Figure 6 shows that the worst neighborhood scores for this indicator overlap those that had the most problematic scores for teen births: Louisville (neighborhood score of 16.2%), Milwaukee (13.2%) and Indianapolis (10.6%). The best neighborhood low-birth-weight scores were for White Center-Seattle (6.3%), San Antonio (6.6%) and Oakland (7.0%).

Generally the neighborhood-county gaps for this indicator were smaller than they were for teen births (averaging 22%). There were large negative gaps between the neighborhood and county scores, however, in Louisville (84%) and Milwaukee (48%). Gaps were somewhat problematic in Indianapolis (16%) and Providence (15%), but were not large in the other sites. In San Antonio, in fact, the MC neighborhood had a better low birth-weight score than the county.

**Figure 6**  
**Percent of births with low weight**  
**County Compared to Neighborhood**  
**1998-2000**



**Figure 7**  
**Percent of births with low weight**  
**Making Connections Neighborhood Totals**  
**Three year Averages**



Trends in neighborhood low birth-weight rates for seven sites are shown in Figure 7. In this case, the results are definitely mixed. The problem was consistently trending upward in Louisville, which also had the highest level to begin with – the gap with the county rate there was also widening. In Denver, after improving from 1996 to 1999, the indicator has moved considerably higher since then and the gap with the county rate there has also expanded. In

contrast, Milwaukee's neighborhood which started with the highest rate, shows a consistent improvement (and a narrowing of the gap with its county).

Farther down the scale, rates for neighborhoods in Indianapolis and Providence have remained relatively flat since 1996, while those for the neighborhoods in Oakland and Seattle have experienced modest improvements. Among these last four, the neighborhood-county gap has been lessening in Providence and Seattle, but remaining about the same in Indianapolis and Oakland.

**Prenatal care rates.** Prenatal care rates in MC neighborhoods were lower (worse) than the rates for their counties in all cases (Figure 8). The Des Moines neighborhoods had by far the worst score for this indicator (41%). Oakland, San Antonio and White Center-Seattle had the best (88%, 81% and 75% respectively). Rates for the neighborhoods in the other sites fell in the 60-70% range.

The cross-site average rate for the neighborhoods was 68%, compared to 84% for the counties, yielding an implied gap of -19%. The biggest negative gap was for Des Moines (-54%), followed by Providence (-30%). In contrast, the gap was only -1% for Oakland's neighborhood and -6% for San Antonio's.

Figure 8  
Percent of births to mothers receiving prenatal care in the first trimester  
County and Neighborhood Comparison  
1998-2000

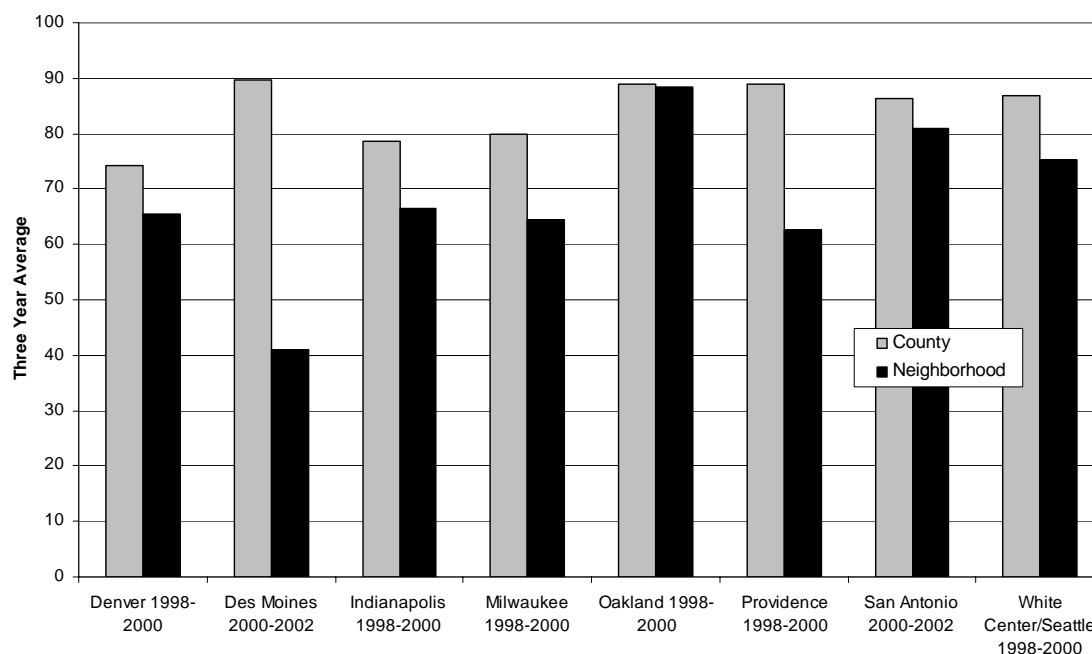


Figure 9 shows the neighborhood trend-lines for this indicator for the six sites with sufficient data. Two of these MC neighborhoods have evidenced notable improvements over time: Oakland and Providence (although in both cases the neighborhood-county gaps showed little



change). White Center-Seattle's rate and gap were comparatively good throughout, but both worsened slightly over time. In Milwaukee, Denver and Indianapolis, neither rates nor gaps showed strong trends either up or down.

**Figure 9**  
Percent of births to mothers receiving prenatal care in the first trimester  
Making Connections Neighborhood Totals  
Three Year Averages

