Prenatal Care in Adolescent Pregnancy

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In 2012, 300,000 babies were born to teen mothers, age 15-19 (CDC Teen Pregnancy, 2014).

Pregnancy in adolescents is associated with preeclampsia, labor dystocia, and preterm birth. Pregnant adolescents are at an increased risk of experiencing psychosocial issues (Debiec et al., 2010).

In adolescent teens, the risk for preterm labor is 8 times higher when no prenatal care is initiated (Debiec et al., 2010).

Adolescent Birth Rates

Bar graph of 24,729,765 women’s level of prenatal care by age from 1995-2002. “Inadequate care” (initiated after 4 months’ gestation or fewer than half of predicted visits), “intermediate care” (initiated prior to 4 months and between 50% and 79% of expected visits), “adequate care” (initiated by 4 months and 80 to 109% of expected visits), or “adequate-plus care” (initiated by 4 months and 110% or more of expected visits) (Partridge et al., 2012).

Prevalence of Problem

Despite ongoing decline in adolescent birth rates, U.S. rates (31.3%) remain one of the highest among industrialized nations (Cypher, 2013).

15.3% of adolescents wait until after the first trimester to initiate prenatal care compared with 4.4% of adult women (Kingston et al., 2014).

44% of adolescents <15 and 33.8% of adolescents 15-19 receive inadequate or intermediate care (Partridge et al., 2012).

In 2009, infants of teenage mothers had the highest rate of mortality at 9.05 per 1,000 births (Planned Parenthood, 2013).
Populations at Risk

SDOH

- **Neighborhood and Built Environment:**
  - Substance abuse
  - Tobacco use

- **Health and Health Care:**
  - Lack of pregnancy knowledge
  - Uninsured
  - Fewer PCPs

- **Social & Community Context:**
  - Low maternal age
  - Ethnic minority
  - Fewer PCPs

- **Economic Stability:**
  - Unemployment rates
  - Single parent families

- **Education:**
  - Low-education

(Feijen-de Jong et al., 2011; Healthy People 2020, 2014; Hueston et al., 2008; Klein, 2005)
Prenatal Care in U.S. Adolescents

Purpose of Inquiry
• Determine evidence-based prenatal care strategies effective for adolescents

Search Strategy
• CINAHL
• Pubmed
• CDC National Vital Statistics
• DHHS
Search terms: “adolescent pregnancy”; “prenatal care”
Exclusion criteria: published before 2001
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| **Group Prenatal Care** | Grady & Bloom, 2004 | Retrospective comparison study | *Treatment group*: 124 adolescents, completed Centering Pregnancy  
*Comparison group 1*: 144 adolescents, gave birth in 2001, traditional prenatal care  
*Comparison group 2*: 233 adolescents, gave birth in 1998, traditional prenatal care | - Percentage of preterm births significantly reduced in treatment group (10.5%) compared to comparison groups 1 (25.7%) and 2 (23.2%).  
- Significantly reduced low birth weight infants (< 2500g) in treatment group (8.9%) compared to comparison groups 1 (22.9%) and 2 (18.3%).  
- No significant difference in cesarean birth weights  
- Decreased rate of missed appointments in group care population (19%) compared to traditional care population (28%) |
| Ickovics et al., 2007 | Randomized control trial | Adolescents age 15-24  
*Group prenatal care*: 623 adolescents  
*Individual prenatal care*: 370 adolescents | | - Preterm birth reduced significantly in adolescents with group prenatal care (9.8%) compared to individual prenatal care (12.8%)  
- Significant reduction in inadequate prenatal care received (26.6% in group care compared to 33%)  
- Significantly increased prenatal knowledge among participants who received group prenatal care  
- Higher satisfaction with prenatal care if received group care |
| Kennedy et al., 2009 | Randomized control trial, qualitative study | 322 women randomized into either group or individual prenatal care. Qualitative interviews conducted with 234 women after delivery. | | - Main theme identified by women in group prenatal care: sense of community and support that made them feel like they were not alone in their experiences  
- Continuity of care was more positively noted by women in group prenatal care  
- More women in group prenatal care described feeling educated and empowered |
| Picklesimer et al., 2012 | Retrospective cohort study | *Group prenatal care*: 316 women  
*Traditional prenatal care*: 3,767 women | | - Similar risk factors between comparison groups  
- Rate of preterm birth was significantly lower (7.9%) for women in group prenatal care than for women in traditional prenatal care (12.7%)  
- Racial disparity of increased preterm births in black women compared to Hispanic and white women was decreased |
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| School based programs | Strunk, 2008           | Literature review        | Search conducted with CINAHL, MedLine, and PubMed for studies on school-based health clinics and teen pregnancy outcomes from 1997 to 2006. Thirteen studies were included and all studied women aged 13-18. | • Majority of studies reviewed found that school-based clinics improved teenage pregnancy and parenting outcomes  
• Five studies found positive effect on continued education of pregnant teen and teen parent  
• Three studies found that school-based health care reduced incidence of low-birth weight babies  
• Two studies had positive impact on postpartum use of contraception |
| Age-specific Prenatal Clinic | Bensussen-Walls & Saewyc, 2001 | Retrospective chart review and case-comparison study | High Risk Adolescents age 13-18  
Teen Focused Care Clinics: YWC: 27 adolescents  
TPPC: 27 adolescents  
Adult Focused Care Clinics: UWMC: 25 adolescents  
GHC: 27 adolescents | • Fewer missed appointments with adolescent clinics (.96 vs 2.29)  
• No significant difference in how soon either group started prenatal care.  
• Teens treated in adolescent clinics were less likely to have caesarian sections (10% vs 25%)  
• Birth weights were higher in babies born to teen clinic patients  
• Teen clinic clients were more likely to start using contraception by 8 weeks postpartum compared to the counterparts treated in adult clinics (87.7% vs. 64.3%) |
|                     | Quinlival & Evans, 2004 | Multicentre prospective study | 651 Teenage patients - 18 years or younger at the time of conception  
Teen Clinic: 448 adolescents  
Adults Clinic: 203 adolescents | • Preterm birth significantly less in teen specific clinics (12%) compared to adults specific clinics (26%)  
• Adolescents treated at teen-specific clinics were less likely to have threatened preterm labor (15% vs. 28%) and PPPROM (5% vs. 13%) than their counterparts at adult-specific clinics. |
| Home Visit Prenatal Care | Roman et al., 2014    | Quasi-experimental cohort study | Population: 60,653 pregnant women who were Medicaid insured  
Maternal Infant Health Program (MIHP) Participants: 18,762 | • Prevalence of LBW, VLBW, preterm and preterm births was lower in MIHP participants compared to their non-participant counterparts  
• Enrollment in MIHP within the first two trimesters and completing at least three prenatal care visits was correlated with decreased adverse birth outcomes  
• Reductions of preterm births were significantly lower among black women |
The risk of preterm birth was significantly lower at each gestational age for the adolescent population receiving group prenatal care compared to the population receiving traditional care (Ickovics et al., 2007).

Risk of preterm birth

Preterm births in AA Adolescents

The number of preterm births were significantly reduced in adolescents who received group prenatal care over traditional care. The reduction was more significant among African American adolescents (Ickovics et al., 2007).
Evidence Based Strategies

Group prenatal care models, age-specific clinics, and **school-based health centers** are effective in adolescent populations at:

- Decreasing adverse perinatal outcomes
- Decreasing missed appointment rates

**Home visit prenatal care** were effective reaching low income populations and decreasing adverse birth outcomes especially in black women.

- More research is needed in adolescent population
Overcoming SDOH in Adolescents

**Group prenatal care**: discussion based format increased health education, skills development, peer support, continuity of care, patient satisfaction

**Age-specific clinics**: multidisciplinary case management focused on developing trust, rapport, emphasizing confidentiality

**School-based clinics**: focus on increased early access to prenatal care and maintaining access to education

**Home visit care**: decreasing barriers to early access
Gaps in Current Body of Evidence

Limited research in prenatal care among adolescents
  • Little research addressing evidence based strategies for increasing early prenatal care utilization in teens
  • No research focused on overcoming barriers to care
  • Some research focused on high risk populations, no research on cultural competency

Healthy People 2020: Maternal, Infant, and Child Health
  • Increase proportion of pregnant women who receive prenatal care in first trimester by 10% (MICH-10.1) (2014)
  • No evidence based recommendations to achieve goal
Implications for Nursing Research

Gaps are indicative of specific areas where nursing research should be conducted:
• Outpatient & inpatient MBU APNs & RNs can organize data collection to survey pregnant adolescents
• Public health nurses collect data in the community

Research should address:
• Barriers preventing early prenatal care
• Factors promoting access to care in 1st trimester
• Nurses should expand indicators for initiation of prenatal care: e.g. time between conception and 1st prenatal appointment
Implications for Nursing Practice

As nurses we can:
• Advocate for creation and funding of group prenatal classes, school based programs and age based prenatal clinics especially in areas of low SES and where access is limited
  • Advocate to government (local and national), community leaders, join committees
• Lead group prenatal classes, school based classes and age based prenatal clinics
• Educate adolescents on the importance of prenatal care, where and how to access prenatal care
Clinical Site

CICS Ralph Ellison High School: 9-12th grade
- Primarily African American and Latino students
  - Auburn Gresham: 83.1 per 1000 females
  - Chicago: 57 per 1000 females

Nursing Role:
- School nurse as a resource
- CPS sexual health course
  Focus on:
  - Signs and symptoms of pregnancy
  - Importance of prenatal care
  - Awareness of available resources
References


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