

## REFERENCES

- Alan Guttmacher Institute. The Financing of Maternity Care in the United States. New York: Alan Guttmacher Institute, 1987.
- Bilheimer, Linda. "Report on Description of State Programs: Study of Savings in Medicaid and Indigent Care for Newborns from Participation in the WIC Program." Princeton, NJ: Mathematica Policy Research, April 1990.
- Congressional Research Service, U.S. Congress. Medicaid Source Book: Background Data and Analysis. Washington, D.C.: U.S. Government Printing Office, November, 1988.
- Hill, Ian T. and Trude Bennett. Enhancing the Scope of Prenatal Services. Washington, D.C.: National Governors' Association, 1990.
- Howell, Embry, and Gretchen Brown. "Prenatal, Delivery, and Infant Care Under Medicaid in Three States." Health Care Financing Review, vol. 10, no. 4, Summer 1989, pp. 1-15.
- Hughes, Dana, Kay Johnson, Sara Rosenbaum, T. Simons and E. Butler. The Health of America's Children: Maternal and Child Data Book. Washington, D.C., Children's Defense Fund, 1988.
- Hughes, Dana, Kay Johnson, Sarah Rosenbaum, and Joseph Liu. The Health of America's Children: Maternal and Child Health Data Book. Washington, D.C., Children's Defense Fund, 1989.
- Institute of Medicine. Preventing Low Birthweight. Washington, D.C.: National Academy Press, 1985.
- Joyce, Theodore. "The Dramatic Increase in the Rate of Low Birthweight in New York City." American Journal of Public Health, vol. 80, no. 6, June 1990.
- Lewis-Idema, Deborah. Increasing Provider Participation. Washington, D.C.: National Governors' Association, 1988.
- National Center for Health Statistics. "Advance Report of Final Mortality Statistics, 1986." Monthly Vital Statistics Report. vol. 37, no. 6, Supplement, DHHS Pub. No. (PHS) 88-1120. Public Health Service. Hyattsville, MD, September 1988.
- \_\_\_\_\_. "Advance Report of Final Natality Statistics, 1987." Monthly Vital Statistics Report. vol. 38, no. 3, Supplement. Public Health Service. Hyattsville, MD: 1989.
- Newacheck, Paul. Estimating Medicaid-Eligible Pregnant Women and Children Living Below 185% of Poverty. Washington, D.C.: National Governor's Association, 1988.
- Public Health Foundation. Public Health Macroview. vol.3, no.1, January/February 1990.

Schramm, Wayne. "WIC Prenatal Participation and its Relationship to Newborn Medicaid Costs in Missouri: A Cost/Benefit Analysis." American Journal of Public Health, vol. 75, no. 8, August 1985.

\_\_\_\_\_. "Prenatal Participation in WIC Related to Medicaid Costs for Missouri Newborns: 1982 Update." Public Health Reports, vol. 101, no. 6, November-December 1986.

\_\_\_\_\_. "WIC Prenatal Participation: Cost/Benefit Analysis for Missouri 1985-86." Paper presented at the American Public Health Association Meeting, October 1989.

U.S. General Accounting Office. Drug-Exposed Infants: A Generation at Risk. GAO/HRD-90-138. Washington, D.C.: June 1990.

APPENDIX A

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECT OF WIC PARTICIPATION ON MEDICAID COSTS (DOLLARS)



TABLE A.1

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
 THE EFFECT OF WIC PARTICIPATION ON MEDICAID COSTS:  
 FLORIDA, BIRTH TO 60 DAYS AFTER BIRTH  
 (Standard Errors in Parentheses)

| Explanatory Variables             | Coefficients (\$):<br>Newborns and Mothers |
|-----------------------------------|--|
| Intercept                         | 2,101 **<br>(134)                          |
| <b>Prenatal WIC Participation</b> | -347 **<br>(48)                            |
| <b>Newborn Characteristics</b>    |  |
| Male <sup>a</sup>                 | 113 *<br>(46)                              |
| Multiple birth                    | 7,626 **<br>(197)                          |
| <b>Mother Characteristics</b>     |  |
| Age 18-19                         | 123<br>(89)                                |
| Age 20-34                         | 146<br>(84)                                |
| Age 35 and over                   | 797 **<br>(162)                            |
| Black                             | 399 **<br>(54)                             |
| Hispanic                          | 226 **<br>(86)                             |
| Other <sup>b</sup>                | -351<br>(278)                              |
| Not married                       | 20<br>(53)                                 |
| Kessner Index intermediate        | -105 *<br>(51)                             |
| Kessner Index inadequate          | 210 **<br>(73)                             |

TABLE A.1 (continued)

| Explanatory Variables                     | Coefficients (\$):<br>Newborns and Mothers |
|---|--|
| <b>Mother Characteristics (continued)</b> |  |
| Kessner Index missing                     | 511 **<br>(134)                            |
| Previous live births (number)             | -41<br>(20)                                |
| Education < 9 years                       | 8<br>(113)                                 |
| Education 9-11 years                      | 50<br>(83)                                 |
| Education 12 years                        | 47<br>(78)                                 |
| Urban                                     | 117<br>(69)                                |
| Prenatal Care from Public Health Clinic   | -203 **<br>(69)                            |
| R <sup>2</sup>                            | .052                                       |
| Sample Size                               | 30,968                                     |

SOURCE: Florida WIC/Medicaid birth event analysis file.

NOTE: The unit of observation is the birth event. Observations with Medicaid costs from birth to 60 days after birth  $\leq$  \$200 are excluded.

\*(\*\*): Significant at the .05 (.01) level, two-tailed test.

<sup>a</sup>In the case of multiple births, the binary "Male" is coded one if at least one of the newborns was a male.

<sup>b</sup>Other includes Native American and Asian.

TABLE A.2

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
 THE EFFECT OF WIC PARTICIPATION ON MEDICAID COSTS:  
 MINNESOTA, BIRTH TO 60 DAYS AFTER BIRTH  
 (Standard Errors in Parentheses)

| Explanatory Variables             | Coefficients (\$):<br>Newborns and Mothers |
|-----------------------------------|--|
| Intercept                         | 2,710 **<br>(383)                          |
| <b>Prenatal WIC Participation</b> | -277<br>(154)                              |
| <b>Newborn Characteristics</b>    |  |
| Male <sup>a</sup>                 | 210<br>(138)                               |
| Multiple birth                    | 11,007 **<br>(603)                         |
| <b>Mother Characteristics</b>     |  |
| Age 18-19                         | -499<br>(315)                              |
| Age 20-34                         | -249<br>(301)                              |
| Age 35 and over                   | -155<br>(490)                              |
| Black                             | 1,090 **<br>(250)                          |
| American Indian                   | -18<br>(274)                               |
| Asian                             | -787 **<br>(334)                           |
| Not married                       | 80<br>(156)                                |
| Kessner Index intermediate        | 390 *<br>(161)                             |
| Kessner Index inadequate          | 1,184 **<br>(254)                          |

TABLE A.2 (continued)

| Explanatory Variables                     | Coefficients (\$):<br>Newborns and Mothers |
|---|--|
| <b>Mother Characteristics (continued)</b> |  |
| Kessner Index missing                     | 1,663 **<br>(225)                          |
| Previous live births (number)             | -155 *<br>(60)                             |
| Pregnancy Terminations $\leq$ 20 weeks    | 316 **<br>(95)                             |
| Pregnancy Terminations of >20 weeks       | 484<br>(433)                               |
| Education < 9 years                       | 691<br>(425)                               |
| Education 9-11 years                      | 496 *<br>(236)                             |
| Education 12 years                        | 72<br>(208)                                |
| Education missing                         | 376<br>(312)                               |
| Urban                                     | 952 **<br>(154)                            |
| R <sup>2</sup>                            | .049                                       |
| Sample Size                               | 10,441                                     |

SOURCE: Minnesota WIC/Medicaid birth event analysis file.

NOTE: The unit of observation is the birth event. Observations with Medicaid costs from birth to 60 days after birth  $\leq$  \$200 are excluded.

\*(\*\*): Significant at the .05 (.01) level, two-tailed test.

\*In the case of multiple births, the binary "Male" is coded one if at least one of the newborns was a male.



TABLE A.3

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
 THE EFFECT OF WIC PARTICIPATION ON MEDICAID COSTS:  
 NORTH CAROLINA, BIRTH TO 60 DAYS AFTER BIRTH  
 (Standard Errors in Parentheses)

| Explanatory Variables             | Coefficients (\$):<br>Newborns | Coefficients (\$):<br>Newborns and Mothers |
|-----------------------------------|--------------------------------|--|
| Intercept                         | 2,204 **<br>(171)              | 2,699 **<br>(176)                          |
| <b>Prenatal WIC Participation</b> | <b>-744 **</b><br>(71)         | <b>-598 **</b><br>(73)                     |
| <b>Newborn Characteristics</b>    |                                |  |
| Male <sup>a</sup>                 | 79<br>(63)                     | 99<br>(64)                                 |
| Multiple birth                    | 8,578 **<br>(1,107)            | 8,001 **<br>(1,167)                        |
| <b>Mother Characteristics</b>     |                                |  |
| Age 18-19                         | -114<br>(118)                  | 9<br>(120)                                 |
| Age 20-34                         | -97<br>(115)                   | 112<br>(117)                               |
| Age 35 and over                   | 306<br>(245)                   | 699 **<br>(251)                            |
| Nonwhite                          | 227 **<br>(76)                 | 378 **<br>(77)                             |
| Not married                       | -178 *<br>(79)                 | -148<br>(81)                               |
| Kessner Index intermediate        | 342 **<br>(68)                 | 289 **<br>(69)                             |
| Kessner Index inadequate          | 743 **<br>(127)                | 542 **<br>(128)                            |
| Kessner Index missing             | 1,230 **<br>(180)              | 1,252 **<br>(184)                          |
| Previous live births (number)     | -121 **<br>(32)                | -162 **<br>(33)                            |

TABLE A.3 (continued)

| Explanatory Variables                     | Coefficients (\$):<br>Newborns | Coefficients (\$):<br>Newborns and Mothers |
|---|--------------------------------|--|
| <b>Mother Characteristics (continued)</b> |                                |  |
| Pregnancy terminations of >20 weeks       | 205 **<br>(57)                 | 224 **<br>(58)                             |
| Education <9 years                        | 288<br>(166)                   | 428 *<br>(169)                             |
| Education 9-11 years                      | 27<br>(113)                    | 40<br>(116)                                |
| Education 12 years                        | -12<br>(104)                   | -12<br>(107)                               |
| Education Missing                         | -46<br>(855)                   | -183<br>(846)                              |
| Urban                                     | 145 *<br>(63)                  | 220 **<br>(65)                             |
| R <sup>2</sup>                            | .020                           | .015                                       |
| Sample Size                               | 16,078                         | 17,135                                     |

SOURCE: North Carolina WIC/Medicaid birth event analysis file.

NOTE: The unit of observation is the birth event. Observations with Medicaid costs from birth to 60 days after birth  $\leq$ \$200 are excluded.

\*(\*\*): Significant at the .05 (.01) level, two-tailed test.

\*In the case of multiple births, the binary "Male" is coded one if at least one of the newborns was a male.

TABLE A.4

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECT OF WIC PARTICIPATION ON MEDICAID COSTS: SOUTH CAROLINA  
(Standard Errors in Parentheses)

| Explanatory Variables             | Coefficients (\$):<br>Newborns and Mothers                     |   |
|-----------------------------------|--|---|
|                                   | Hospital<br>Reimbursements,<br>Birth to 60 Days<br>after Birth | Total<br>Reimbursements,<br>Prenatal and Birth<br>to 60 Days<br>after Birth |
| Intercept                         | 2,828 **<br>(277)  | 3,867 **<br>(368)   |
| <b>Prenatal WIC Participation</b> | -565 **<br>(110)   | -710 **<br>(146)  |
| <b>Newborn Characteristics</b>    |  |   |
| Male <sup>a</sup>                 | 139<br>(94)  | 165<br>(125)  |
| Multiple birth                    | 6,729 **<br>(415)  | 8,391 **<br>(549)   |
| <b>Mother Characteristics</b>     |  |   |
| Age 18-19                         | -296<br>(179)  | -251<br>(237)   |
| Age 20-34                         | -279<br>(162)  | -230<br>(215)   |
| Age 35 and over                   | 530<br>(344)   | 884<br>(458)  |
| Nonwhite                          | -53<br>(120)   | -8<br>(159)   |
| Not married                       | -86<br>(114)   | -29<br>(151)  |
| Kessner Index intermediate        | 0<br>(108)   | -155<br>(144)   |
| Kessner Index inadequate          | 623 **<br>(144)  | 516 **<br>(192)   |

TABLE A.4 (continued)

| Explanatory Variables                     | Coefficients (\$):<br>Newborns and Mothers                     |   |
|---|--|---|
|   | Hospital<br>Reimbursements,<br>Birth to 60 Days<br>after Birth | Total<br>Reimbursements,<br>Prenatal and Birth<br>to 60 Days<br>after Birth |
| <b>Mother Characteristics (continued)</b> |  |   |
| Kessner Index missing                     | 685<br>(362)   | 801<br>(481)  |
| Education < 9 years                       | 229<br>(242)   | 529<br>(322)  |
| Education 9-11 years                      | 102<br>(172)   | 160<br>(229)  |
| Education 12 years                        | -62<br>(164)   | -104<br>(218)   |
| Education missing                         | 1,726 **<br>(654)  | 2,158 *<br>(866)  |
| Urban                                     | 81<br>(96)   | -49<br>(127)  |
| R <sup>2</sup>                            | .031   | .027  |
| Sample Size                               | 10,879   | 10,978  |

SOURCE: South Carolina WIC/Medicaid birth event analysis file.

NOTE: The unit of observation is the birth event. Observations with Medicaid costs from birth to 60 days after birth  $\leq$  \$200 are excluded.

\*(\*\*): Significant at the .05 (.01) level, two-tailed test.

\*In the case of multiple births, the binary "Male" is coded one if at least one of the newborns was a male.

TABLE A.5

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
 THE EFFECT OF WIC PARTICIPATION ON MEDICAID COSTS:  
 TEXAS, BIRTH TO 60 DAYS AFTER BIRTH  
 (Standard Errors in Parentheses)

| Explanatory Variables          | Coefficients (\$):<br>Newborns | Coefficients (\$):<br>Newborns and Mothers |
|--------------------------------|--------------------------------|--|
| Intercept                      | 2168 **<br>(154)               | 3572 **<br>(151)                           |
| Prenatal WIC Participation     | -573 **<br>(75)                | -493 **<br>(74)                            |
| <b>Newborn Characteristics</b> |                                |  |
| Male <sup>a</sup>              | 153 *<br>(74)                  | 223 **<br>(72)                             |
| Multiple birth                 | 8538 **<br>(297)               | 9428 **<br>(305)                           |
| <b>Mother Characteristics</b>  |                                |  |
| Age 18-19                      | -194<br>(138)                  | -238<br>(135)                              |
| Age 20-34                      | -92<br>(125)                   | 0<br>(123)                                 |
| Age 35 and over                | 711 **<br>(243)                | 844 **<br>(238)                            |
| Black, nonspanish              | -226 *<br>(101)                | -176<br>(100)                              |
| Mexican                        | -45<br>(92)                    | -319 **<br>(91)                            |
| Other Hispanic                 | 6<br>(226)                     | -213<br>(213)                              |
| Not married                    | -229 **<br>(79)                | -100<br>(78)                               |
| Kessner Index intermediate     | -19<br>(87)                    | -123<br>(85)                               |

TABLE A.5 (continued)

| Explanatory Variables                     | Coefficients (\$):<br>Newborns | Coefficients (\$):<br>Newborns and Mothers |
|---|--------------------------------|--|
| <b>Mother Characteristics (continued)</b> |                                |  |
| Kessner Index inadequate                  | 599 **<br>(108)                | 292 **<br>(106)                            |
| Kessner Index missing                     | 672 **<br>(146)                | 654 **<br>(144)                            |
| Previous live births (number)             | -115 **<br>(30)                | -128 **<br>(29)                            |
| Pregnancy terminations of<br>>20 weeks    | 495 **<br>(153)                | 678 **<br>(153)                            |
| R <sup>2</sup>                            | .046                           | .045                                       |
| Sample Size                               | 21,081                         | 23,787                                     |

SOURCE: Texas WIC/Medicaid birth event analysis file.

NOTE: The unit of observation is the birth event. Observations with Medicaid costs from birth to 60 days after birth  $\leq$ \$200 are excluded.

\*(\*\*): Significant at the .05 (.01) level, two-tailed test.

<sup>a</sup>In the case of multiple births, the binary "Male" is coded one if at least one of the newborns was a male.

APPENDIX B

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECTS OF WIC PARTICIPATION ON BIRTHWEIGHT (GRAMS)





TABLE B.1

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECTS OF WIC PARTICIPATION ON BIRTHWEIGHT: FLORIDA  
(Standard Errors in Parentheses)

| Explanatory Variables          | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|--------------------------------|---------------------------------------|--|--|
| Intercept                      | 3,308 **<br>(19)                      | 2,569 **<br>(73)                                       | 3,412 **<br>(18)                                       |
| Prenatal WIC Participation     | 73 **<br>(7)                          | 150 **<br>(26)   | 29 **<br>(6)   |
| <b>Newborn Characteristics</b> |                                       |  |  |
| Male                           | 128 **<br>(7)                         | 65 **<br>(25)  | 142 **<br>(6)  |
| Multiple birth                 | -983 **<br>(23)                       | -791 **<br>(48)  | -745 **<br>(25)  |
| <b>Mother Characteristics</b>  |                                       |  |  |
| Age 18-19                      | 12<br>(13)                            | 14<br>(46)   | -12<br>(12)  |
| Age 20-34                      | -12<br>(12)                           | -48<br>(44)  | -37 **<br>(11)   |
| Age 35 and over                | -73 **<br>(24)                        | -178 *<br>(82)   | -63 **<br>(22)   |
| Black                          | -189 **<br>(8)                        | -54<br>(31)  | -151 **<br>(7)   |
| Hispanic                       | 7<br>(13)                             | 98<br>(54)   | 1<br>(11)  |
| Other <sup>b</sup>             | -117 **<br>(40)                       | 197<br>(136)   | -107 **<br>(37)  |
| Not married                    | -57 **<br>(8)                         | 10<br>(31)   | -55 **<br>(7)  |
| Kessner Index intermediate     | -11<br>(7)                            | 53<br>(29)   | -19 **<br>(7)  |
| Kessner Index inadequate       | -195 **<br>(11)                       | -92 **<br>(35)   | -148 **<br>(10)  |
| Kessner Index missing          | -129 **<br>(20)                       | -237 *<br>(111)  | -80 *<br>(31)  |
| Previous live births (number)  | 14 **<br>(3)                          | 29 **<br>(10)  | 17 **<br>(3)   |
| Education < 9 years            | -53 **<br>(17)                        | 0<br>(63)  | -60 **<br>(15)   |
| Education 9-11 years           | -64 **<br>(12)                        | -33<br>(46)  | -70 **<br>(11)   |
| Education 12 years             | -19<br>(11)                           | -19<br>(43)  | -22 *<br>(10)  |

TABLE B.1 (continued)

| Explanatory Variables                     | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|---|---------------------------------------|--|--|
| <b>Mother Characteristics (continued)</b> |                                       |  |  |
| Urban                                     | -14<br>(10)                           | -75<br>(38)  | -8<br>(9)  |
| Prenatal Care from Public Health Clinic   | 24 *<br>(10)                          | 86 *<br>(39)   | 2<br>(9)   |
| R <sup>2</sup>                            | .11                                   | .08  | .09  |
| Sample Size                               | 31,732                                | 4,093  | 26,795   |

SOURCE: Florida WIC/Medicaid newborn analysis file.

NOTE: The unit of observation is the newborn.

\*(\*\*) : Significant at the .05 (.01 level)

TABLE B.2

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECTS OF WIC PARTICIPATION ON BIRTHWEIGHT: MINNESOTA  
(Standard Errors in Parentheses)

| Explanatory Variables          | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|--------------------------------|---------------------------------------|--|--|
| Intercept                      | 3,370 **<br>(30)                      | 2,183 **<br>(123)                                      | 3,492 **<br>(26)                                       |
| Prenatal WIC Participation     | 51 **<br>(12)                         | 138 **<br>(49)   | 16<br>(11)   |
| <b>Newborn Characteristics</b> |                                       |  |  |
| Male                           | 122 **<br>(11)                        | -8<br>(48)   | 132 **<br>(10)   |
| Multiple birth                 | -921 **<br>(34)                       | -255 **<br>(73)  | -761 **<br>(38)  |
| <b>Mother Characteristics</b>  |                                       |  |  |
| Age 18-19                      | -1<br>(24)                            | 108<br>(97)  | -41<br>(22)  |
| Age 20-34                      | -22<br>(23)                           | 54<br>(90)   | -65 **<br>(21)   |
| Age 35 and over                | -42<br>(38)                           | 330 *<br>(147)   | -94 **<br>(34)   |
| Black                          | -218 **<br>(20)                       | -123<br>(72)   | -187 **<br>(18)  |
| American Indian                | 129 **<br>(22)                        | 129<br>(116)   | 93 **<br>(19)  |
| Asian                          | -146 **<br>(27)                       | 210<br>(115)   | -189 **<br>(24)  |
| Not married                    | 39 **<br>(12)                         | 30<br>(54)   | 40 **<br>(11)  |
| Kessner Index intermediate     | -55 **<br>(13)                        | 31<br>(60)   | -52 **<br>(11)   |
| Kessner Index inadequate       | 238 **<br>(20)                        | 61<br>(72)   | -165 **<br>(18)  |
| Kessner Index missing          | -146 **<br>(18)                       | -128<br>(73)   | -90 **<br>(18)   |
| Previous live births (number)  | 40 **<br>(5)                          | 52 **<br>(20)  | 35 **<br>(4)   |
| Education < 9 years            | -143 **<br>(34)                       | -37<br>(134)   | -121 **<br>(30)  |
| Education 9-11 years           | -155 **<br>(19)                       | -126<br>(83)   | -149 **<br>(16)  |
| Education 12 years             | -84 **<br>(16)                        | -14<br>(75)  | -84 **<br>(14)   |
| Education Missing              | -129 **<br>(24)                       | -223 *<br>(106)  | -134 **<br>(23)  |

TABLE B.2 (continued)

| Explanatory Variables                     | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|---|---------------------------------------|--|--|
| <b>Mother Characteristics (continued)</b> |                                       |  |  |
| Urban                                     | -3<br>(12)                            | 50<br>(55)   | -5<br>(11)   |
| Pregnancy Terminations ≤ 20 weeks         | -31 **<br>(8)                         | -135 **<br>(31)  | -8<br>(7)  |
| Pregnancy Terminations of > 20 weeks      | -88 *<br>(35)                         | -115<br>(120)  | -60<br>(31)  |
| R <sup>2</sup>                            | .118                                  | .079   | .103   |
| Sample Size                               | 11,547                                | 973  | 10,022   |

SOURCE: Minnesota WIC/Medicaid newborn analysis file.

NOTE: The unit of observation is the newborn.

\*(\*\*): Significant at the .05 (.01 level)

TABLE B.3

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECTS OF WIC PARTICIPATION ON BIRTHWEIGHT: NORTH CAROLINA  
(Standard Errors in Parentheses)

| Explanatory Variables           | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|---------------------------------|---------------------------------------|--|--|
| Intercept                       | 3,272 **<br>(24)                      | 2,197 **<br>(81)                                       | 3,398 **<br>(21)                                       |
| Prenatal WIC Participation      | 117 **<br>(10)                        | 238 **<br>(29)   | 42 **<br>(9)   |
| <b>Newborn Characteristics</b>  |                                       |  |  |
| Male                            | 112 **<br>(9)                         | 90 **<br>(28)  | 125 **<br>(8)  |
| Multiple birth                  | -994 **<br>(27)                       | -776 **<br>(53)  | -788 **<br>(31)  |
| <b>Mother Characteristics</b>   |                                       |  |  |
| Age 18-19                       | 9<br>(16)                             | 34<br>(50)   | -20<br>(15)  |
| Age 20-34                       | -12<br>(16)                           | 3<br>(48)  | -36 *<br>(15)  |
| Age 35 and over                 | -39<br>(34)                           | -39<br>(102)   | -27<br>(31)  |
| Nonwhite                        | -174 **<br>(10)                       | -61<br>(35)  | -146 **<br>(9)   |
| Not married                     | -6<br>(11)                            | 51<br>(37)   | -16<br>(10)  |
| Kessner Index intermediate      | -117 **<br>(9)                        | 107 **<br>(36)   | -47 **<br>(8)  |
| Kessner Index inadequate        | -243 **<br>(17)                       | 27<br>(52)   | -169 **<br>(16)  |
| Kessner Index missing           | -218 **<br>(25)                       | 503 **<br>(45)   | -116<br>(80)   |
| Previous Live Birth (number)    | 40 **<br>(4)                          | 58 **<br>(13)  | 31 **<br>(4)   |
| Pregnancy Terminations (number) | -50 **<br>(8)                         | -143 **<br>(25)  | -21 **<br>(7)  |
| Education <9 years              | -138 **<br>(23)                       | 117<br>(72)  | -152 **<br>(21)  |
| Education 9-11 years            | -94 **<br>(16)                        | 119 *<br>(54)  | -113 **<br>(14)  |
| Education 12 years              | -39 **<br>(15)                        | 108 *<br>(50)  | -46 **<br>(13)   |

TABLE B.3 (continued)

| Explanatory Variables                     | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|---|---------------------------------------|--|--|
| <b>Mother Characteristics (continued)</b> |                                       |  |  |
| Education Missing                         | -41<br>(116)                          | -339<br>(342)  | 57<br>(106)  |
| Urban                                     | -20 *<br>(9)                          | -68 *<br>(28)  | -13<br>(8)   |
| R <sup>2</sup>                            | .109                                  | .123   | .081   |
| Sample Size                               | 20,688                                | 3,625  | 17,063   |

SOURCE: North Carolina WIC/Medicaid newborn analysis file.

NOTE: The unit of observation is the newborn.

\*(\*\*): Significant at the .05 (.01 level)

TABLE B.4

ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
THE EFFECTS OF WIC PARTICIPATION ON BIRTHWEIGHT: SOUTH CAROLINA  
(Standard Errors in Parentheses)

| Explanatory Variables      | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|----------------------------|---------------------------------------|--|--|
| Intercept                  | 3,215 **<br>(32)                      | 2,377 **<br>(114)                                      | 3,366 **<br>(29)                                       |
| Prenatal WIC Participation | 113 **<br>(13)                        | 259 **<br>(40)   | 30 **<br>(12)  |
| Newborn Characteristics    |                                       |  |  |
| Male                       | 101 **<br>(11)                        | 111 **<br>(38)   | 104 **<br>(10)   |
| Multiple birth             | -958 **<br>(36)                       | -803 **<br>(74)  | -725 **<br>(40)  |
| Mother Characteristics     |                                       |  |  |
| Age 18-19                  | 28<br>(21)                            | -23<br>(67)  | -6<br>(19)   |
| Age 20-34                  | 45 *<br>(19)                          | 56<br>(60)   | 8<br>(17)  |
| Age 35 and over            | 17<br>(40)                            | -92<br>(136)   | 23<br>(36)   |
| Nonwhite                   | -162 **<br>(14)                       | -67<br>(53)  | -146 **<br>(12)  |
| Not married                | -67 **<br>(13)                        | 50<br>(50)   | -60 **<br>(12)   |
| Kessner Index intermediate | -11<br>(13)                           | 71<br>(46)   | -20<br>(11)  |
| Kessner Index inadequate   | -144 **<br>(17)                       | 39<br>(53)   | -125 **<br>(15)  |
| Kessner Index missing      | -201 **<br>(42)                       | -95<br>(205)   | -308 **<br>(44)  |
| Education <9 years         | -101 **<br>(28)                       | -49<br>(98)  | -87 **<br>(25)   |
| Education 9-11 years       | -84 **<br>(20)                        | -98<br>(73)  | -62 **<br>(18)   |
| Education 12 years         | -31<br>(19)                           | -54<br>(70)  | -8<br>(17)   |
| Education Missing          | -317 **<br>(77)                       | -380<br>(218)  | -262 **<br>(74)  |
| Urban                      | -3<br>(11)                            | -44<br>(39)  | -11<br>(10)  |
| R <sup>2</sup>             | .105                                  | .087   | .083   |
| Sample Size                | 11,773                                | 1,820  | 9,872  |

SOURCE: South Carolina WIC/Medicaid newborn analysis file.

NOTE: The unit of observation is the newborn.

\*(\*\*): Significant at the .05 (.01 level).

TABLE B.5  
 ESTIMATED REGRESSION COEFFICIENTS FOR MODEL TO ESTIMATE  
 THE EFFECTS OF WIC PARTICIPATION ON BIRTHWEIGHT: TEXAS  
 (Standard Errors in Parentheses)

| Explanatory Variables                | Coefficients (grams):<br>Total Sample | Coefficients (grams):<br>Gestational Age<br>< 37 Weeks | Coefficients (grams):<br>Gestational Age<br>≥ 37 Weeks |
|--------------------------------------|---------------------------------------|--|--|
| Intercept                            | 3,126 **<br>(16)                      | 2,261 **<br>(50)                                       | 3,272 **<br>(15)                                       |
| Prenatal WIC Participation           | 77 **<br>(8)                          | 165 **<br>(24)   | 25 **<br>(7)   |
| Newborn Characteristics              |                                       |  |  |
| Male                                 |                                       |  |  |
| Multiple birth                       | 116 **<br>(8)                         | 110 **<br>(23)   | 124 **<br>(7)  |
| Mother Characteristics               |                                       |  |  |
| Age 18-19                            | -961 **<br>(24)                       | -893 **<br>(48)  | -713 **<br>(27)  |
| Age 20-34                            | 52 **<br>(14)                         | 118 **<br>(41)   | 10<br>(13)   |
| Age 35 and over                      | 51 **<br>(13)                         | 88 *<br>(37)   | 12<br>(12)   |
| Black, nonspanish                    | 95 **<br>(25)                         | 79<br>(68)   | 95 **<br>(23)  |
| Mexican                              | -127 **<br>(11)                       | 42<br>(32)   | -130 **<br>(10)  |
| Other Hispanic                       | 17<br>(9)                             | 114 **<br>(30)   | 5<br>(9)   |
| Not married                          | 23<br>(22)                            | 99<br>(75)   | 10<br>(20)   |
| Kessner Index intermediate           | -34 **<br>(8)                         | 26<br>(25)   | -34 **<br>(7)  |
| Kessner Index inadequate             | -8<br>(9)                             | 140 **<br>(34)   | -25 **<br>(8)  |
| Kessner Index missing                | -129 **<br>(11)                       | 133 **<br>(35)   | -101 **<br>(10)  |
| Previous live births (number)        | -94 **<br>(15)                        | 476 **<br>(34)   | -42 *<br>(19)  |
| Pregnancy terminations of > 20 weeks | 23 **<br>(3)                          | 39 **<br>(9)   | 23 **<br>(3)   |
| R <sup>2</sup>                       |                                       |  |  |
| Sample Size                          | .091<br>25,710                        | .137<br>4,788  | .072<br>20,922   |

SOURCE: Texas WIC/Medicaid newborn analysis file.

NOTE: The unit of observation is the newborn.

\*(\*\*): Significant at the .05 (.01 level).





