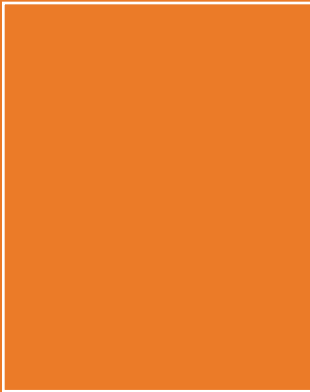


THE POSITIVE IMPACTS OF AFFORDABLE HOUSING ON HEALTH:

A Research Summary



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This summary is based on *The Positive Impacts of Affordable Housing on Health* by Jeffrey Lubell, Rosalyn Crain and Rebecca Cohen. It was published by the Center for Housing Policy in 2007. The full review, as well as annotated bibliographies of key research studies, are available at www.nhc.org/housing/intersections or www.enterprisecommunity.org.



The Center for Housing Policy is the research affiliate of the National Housing Conference (NHC). In partnership with NHC and its members, the Center works to broaden understanding of the nation's housing challenges and to examine the impact of policies and programs developed to address these needs. Combining research and practical, real-world expertise, the Center helps to develop effective policy solutions at the national, state and local levels that increase the availability of affordable homes.

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Cover photos by (left top to bottom) Lloyd Wolf, Mike Elliott, Lloyd Wolf (right clockwise from right) Mike Elliott, Mike Elliott and Lloyd Wolf

THE POSITIVE IMPACTS OF AFFORDABLE HOUSING ON HEALTH:

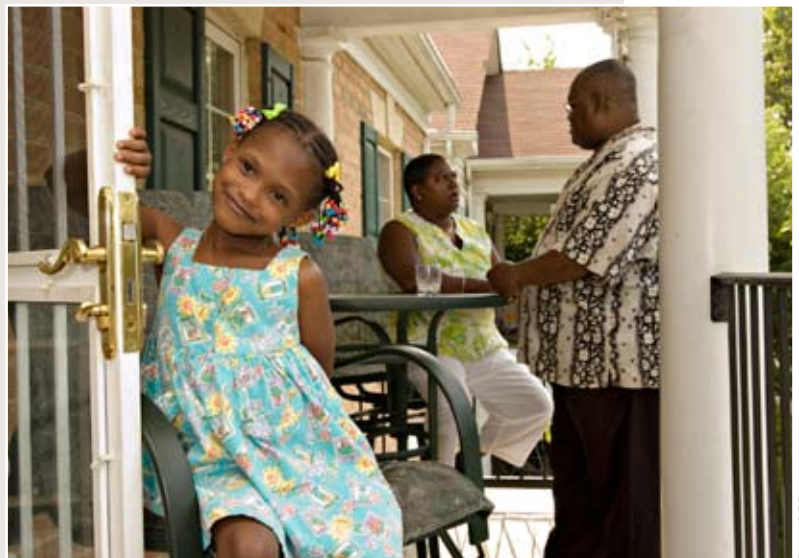
A Research Summary

By Rebecca Cohen¹

The Center for Housing Policy recently reviewed the growing body of research on the various ways in which the production, rehabilitation or other provisions of affordable housing may lead to improved health outcomes.² Based on this review, we identified nine promising hypotheses regarding the positive contribution of affordable housing to health, which we have summarized in this publication.



Mike Elliott



David Harp

1. Affordable housing may improve health outcomes by freeing up family resources for nutritious food and health care expenditures.



Mike Elliott

Families paying excessive amounts of their income for housing often have insufficient funds remaining to meet other essential needs, including food, medical insurance and health care.³ These tradeoffs threaten the health of their children. Several studies have found that children in low-income families that do not receive housing subsidies are more likely to suffer from iron deficiencies, malnutrition and underdevelopment than children in similar families receiving housing assistance.⁴

Other studies have found a correlation between the general affordability of housing and the health of children — particularly older children — suggesting the positive health impacts of housing affordability

may accumulate over time.⁵ By helping increase the amount of residual income available to families for food, health care and other essential expenses, affordable housing can improve children's well-being.

2. By providing families with greater residential stability, affordable housing can reduce stress and related adverse health outcomes.

At the extreme, there is little question that residential instability has adverse health impacts. For example, studies continually show that homeless children are more vulnerable to mental health problems, developmental delays and depression than children who are stably housed.⁶ Frequent moves, living in doubled-up housing, eviction and foreclosure are also related to elevated stress levels, depression and hopelessness.⁷

An emerging body of evidence also suggests that less-severe manifestations of instability related to housing affordability, such as difficulty keeping up with mortgage payments or home repairs, may be linked to lower levels of psychological well-being and a greater likelihood of seeing a doctor.⁸



Mike Elliott

3. Homeownership may contribute to health improvements by fostering greater self-esteem, increased residential stability and an increased sense of security and control over one's physical environment.

Studies consistently show that homeowners achieve better physical and mental health outcomes than renters, including fewer longstanding illnesses, lower blood pressure and lower levels of depression and alcohol abuse.⁹ One possible explanation for this phenomenon is that homeowners experience higher levels of self-esteem, which may be related to improved health.¹⁰ Other research suggests that homeowners are more likely to live in higher-quality housing and have more freedom to adapt their surroundings to their needs, reducing stress and leading to greater levels of satisfaction.¹¹ Homeowners also move much less frequently than renters and thus enjoy the benefits associated with stability discussed above.¹²

Programs and policies that help families afford and sustain homeownership may extend the apparent benefits of ownership to families at a broader range of income levels. To the extent that homeownership's benefits are related to increased stability, affordable rental programs that improve the stability of families' living arrangements may offer similar benefits.

4. Well-constructed and managed affordable housing developments can reduce health problems associated with poor quality housing by limiting exposure to allergens, neurotoxins and other dangers.

When families have few affordable housing options, they may be forced to live in substandard housing that puts residents at risk of lead poisoning, asthma and accidental injury. Despite a major public health effort, many low-income families still live in homes that have lead-based paint hazards.¹³ Poor quality or poorly maintained housing may also be overrun with mold, dust mites, cockroaches and rodents — all of which are sources of allergens that cause asthma and other respiratory illnesses.¹⁴ Unsafe conditions in the home can also threaten resident safety and increase the risk of accidental burns and injuries.¹⁵

By facilitating the transfer of rental housing from neglectful owners to owners who take their maintenance and management responsibilities seriously, affordable housing policies can help remediate these problems. Evidence suggests that simple measures like the installation of smoke detectors and window guards can have major impacts on resident safety. Lead paint remediation and allergen relief may require somewhat more intense interventions such as window and carpet replacement and integrated pest management.¹⁶



Harry Connolly

Green building techniques also may help achieve health benefits by reducing exposure to toxic substances and indoor air pollutants. In addition, maintenance and renovations are not enough, housing vouchers and affordable new construction can help families move to safer, healthier housing.

5. Stable, affordable housing may improve health outcomes for individuals with chronic illnesses and disabilities and seniors by providing a stable and efficient platform for the ongoing delivery of health care and other necessary services.

An emerging body of research suggests that affordable housing may help individuals living with chronic diseases such as HIV/AIDS, diabetes and hypertension better maintain their treatment regimes and achieve higher rates of medical care.¹⁷ Homeless patients in particular may have difficulty properly storing medication and syringes, maintaining a recommended diet and going to follow-up appointments when faced with urgent competing demands, such as finding a place to stay for the night.¹⁸ With stable housing, patients with chronic diseases experience improved health outcomes and can access and maintain the level of care they need.¹⁹ Seniors and disabled households also have special needs for health-related services that can be addressed through assisted living housing arrangements that link affordable housing with access to care.

Finally, affordable housing can allow low-income individuals with physical disabilities to access a residential environment that goes beyond the bare legal minimum to truly and effectively accommodate their disabilities.



Harry Connolly

6. By providing families with access to neighborhoods of opportunity, certain affordable housing strategies can reduce stress, increase access to amenities and generate important health benefits.

Families who can only find affordable housing in very high-poverty areas may be prone to greater psychological distress and exposure to violent or traumatic events. The federally funded *Moving to Opportunity* (MTO) demonstration gave participants in five cities the chance to move from public housing located in high-poverty areas to affordable housing in neighborhoods with lower levels of

poverty. Based on a rigorous randomized study, researchers found that adults who were offered the opportunity to move to a low-poverty area experienced significant improvements in mental health at levels comparable to those achieved with “some of the most effective clinical and pharmacologic mental health interventions.”²⁰ Other studies provide further evidence that residents of public housing benefit when given the opportunity to relocate to low-poverty areas that would otherwise be unaffordable.²¹

A separate approach that shows promise is to use community development strategies to improve the amenities and opportunities offered by existing neighborhoods or new developments. For example, creating walkable communities facilitates healthy exercise, and adding retail establishments increases access to fresh fruits and vegetables.



David Harp

7. By alleviating crowding, affordable housing can reduce exposure to stressors and infectious disease, leading to improvements in physical and mental health.



Mike Elliott

When housing is not affordable, families may be forced to double-up with others or live in homes that are too small. Individuals who live in a crowded setting may have limited ability to manage daily stressors and successfully maintain supportive relationships, which can lead to increased levels of psychological distress, helplessness and even higher blood pressure.²² Studies have also demonstrated that crowding can negatively impact physical health through increased exposure to infectious diseases.²³ A randomized study found that the receipt of a housing voucher that helps families afford their housing costs greatly reduced the likelihood of crowding.²⁴ Other assisted housing programs that increase the availability of affordable housing also may help alleviate crowding.

8. By allowing victims of domestic violence to escape abusive homes, affordable housing can lead to improvements in mental health and physical safety.

Domestic violence is one of the leading causes of homelessness in the United States.²⁵ Unable to find affordable alternative housing arrangements, many women choose to stay in an abusive situation rather than become homeless.²⁶ Domestic violence can also impair women's ability to obtain alternative

housing by limiting their access to financial resources and causing erratic employment histories and poor landlord references related to disturbances and property damage.²⁷ Affordable housing can help victims of domestic violence escape the physical and mental health trauma caused by abuse and avoid the health risks associated with homelessness.²⁸



Harry Connolly

9. Use of green building and transit-oriented development strategies can lower exposure to pollutants by improving the energy efficiency of homes and reducing reliance on personal vehicles.

The energy used by the buildings in which families live and the transportation they use to get to work and around town account for nearly 40 percent of the nation's total energy consumption.²⁹ By using green building techniques to increase the energy efficiency and environmental sustainability of new or renovated housing, the community at large may benefit from reduced exposure to emissions associated with burning fossil fuels and the negative health impacts linked to smog, acid rain and air pollution.³⁰ Similarly, communities built according to transit-oriented development and other smart growth principles provide an array of amenities within walking distance that may reduce residents' need to use personal vehicles, leading to reduced exposure to unhealthy automobile emissions.



Mike Elliott

ENDNOTES

¹ Rebecca Cohen is a research associate at the Center for Housing Policy.

² This summary is based on the following literature review: Lubell, Jeffrey, Rosalyn Crain, and Rebecca Cohen. 2007. *The Positive Impacts of Affordable Housing on Health*. Washington, D.C.: Center for Housing Policy and Enterprise Community Partners. The full review, as well as annotated bibliographies of key research studies, are available for download at www.nhc.org/housing/intersections or www.enterprise.org.

³ Lipman, Barbara J. 2005. *Something's Gotta Give: Working Families and the Cost of Housing*. Washington, D.C.: Center for Housing Policy; Lee, Wang, Eric Beecroft, Jill Khadduri, and Rhiannon Patterson. 2003. *Impacts of Welfare Reform on Recipients of Housing Assistance: Evidence from Indiana and Delaware*. Prepared for the U.S. Department of Housing and Urban Development by Abt Associates, Inc.; Levy, Helen and Thomas DeLeire. 2003. *What Do People Buy When They Don't Buy Health Insurance and What Does That Say About Why They Are Uninsured?* Working Paper 9826. Cambridge, Mass.: National Bureau of Economic Research.

⁴ Frank, Deborah A., Nicole B. Neault, Anne Skalicky, John T. Cook, Jacqueline D. Wilson, Suzette Levenson, Alan F. Meyers, Timothy Heeren, Diana B. Cutts, Patrick H. Casey, Maureen M. Black, and Carol Berkowitz. 2006. Heat or Eat: The Low Income Home Energy Assistance Program and Nutritional and Health Risks Among Children Less Than 3 Years of Age. *Pediatrics* 118(5): 1293-1302; Meyers, Alan, Diana Cutts, Deborah A. Frank, Suzette Levenson, Anne Skalicky, Timothy Heeren, John Cook, Carol Berkowitz, Maureen Black, Patrick Casey, and Nieves Zaldivar. 2005. Subsidized Housing and Children's Nutritional Status: Data from a Multisite Surveillance Study. *Archives of Pediatrics and Adolescent Medicine* 159: 551-556; Meyers, Alan, Dana Rubin, Maria Napoleone, and Kevin Nichols. 1993. Public Housing Subsidies May Improve Poor Children's Nutrition. *American Journal of Public Health* 83(1): 115.

⁵ Harkness, Joseph and Sandra J. Newman. 2005. Housing Affordability and Children's Well-Being: Evidence from the National Survey of America's Families. *Housing Policy Debate* 16(2): 223-255.

⁶ Haber, Mason G. and Paul A. Toro. 2004. Homelessness, Mental Health, and Economic Justice. PsyACT Policy Brief. Detroit, MI: Wayne State University, Research Group on Homelessness and Poverty; Zima, Bonnie T., Kenneth B. Wells, and Howard E. Freeman. 1994. Emotional and

Behavioral Problems and Severe Academic Delays Among Sheltered Homeless Children in Los Angeles County. *American Journal of Public Health* 84(2): 260-264; Goodman, Lisa, Leonard Saxe, and Mary Harvey. 1991. Homelessness as Psychological Trauma. *American Psychologist* 46(11): 1219-1225; Rafferty, Yvonne and Marybeth Shinn. 1991. The Impact of Homelessness on Children. *American Psychologist* 46(11): 1170-1179; Bassuk, Ellen L. and Lynn Rosenberg. 1990. Psychosocial Characteristics of Homeless Children and Children with Homes. *Pediatrics* 85(3): 257-261; Wood, David L., R. Burciaga Valdez, Toshi Hayashi, and Albert Shen. 1990. Health of Homeless Children and Housed, Poor Children. *Pediatrics* 86(6): 858-866.

⁷ Guzman, Carolina, Rajiv Bhatia, and Chris Durazo. 2005. Anticipated Effects of Residential Displacement on Health: Results from Qualitative Research. Research Summary. Prepared by the San Francisco Department of Public Health and South of Market Community Action Network; Kappel Ramji Consulting Group. 2002. *Common Occurrence: The Impact of Homelessness on Women's Health. Phase II: Community Based Action Research*. Final Report: Executive Summary. Prepared for Sistering—A Woman's Place; Bartlett, Sheridan. 1997. The Significance of Relocation for Chronically Poor Families in the USA. *Environment and Urbanization* 9(1): 121-132.

⁸ Taylor, Mark P., David J. Pevalin, and Jennifer Todd. 2006. *The Psychological Costs of Unsustainable Housing Commitments*. Working Paper. Essex, U.K.: University of Essex, Institute for Social and Economic Research; Smith, Susan J., Donna Easterlow, Moira Munro, and Katrina M. Turner. 2003. Housing as Health Capital: How Health Trajectories and Housing Paths Are Linked. *Journal of Social Issues* 59(3): 501-525; Ford, Janet, Roger Burrows, and Sarah Nettleton. 2001. *Home Ownership in a Risk Society: A Social Analysis of Mortgage Arrears and Possessions*. London, England: Policy Press; Rohe, William M., Shannon Van Zandt, and George McCarthy. 2001. *The Social Benefits and Costs of Homeownership: A Critical Assessment of the Research*. Low-Income Homeownership Working Paper Series. Cambridge, Mass.: Harvard University, Joint Center for Housing Studies; Nettleton, Sarah and Roger Burrows. 1998. Mortgage Debt, Insecure Home Ownership and Health: An Exploratory Analysis. *Sociology of Health and Illness* 20(5): 731-753; Weich, Scott and Glyn Lewis. 1998. Poverty, Unemployment, and Common Mental Disorders: Population Based Cohort Study. *British Medical Journal* 317: 115-119.

- ⁹ Macintyre, Sally, Anne Ellaway, Geoff Der, Graeme Ford, and Kate Hunt. 1998. Do Housing Tenure and Car Access Predict Health Because They Are Simply Markers of Income or Self Esteem? A Scottish Study. *Journal of Epidemiological Community Health* 52: 657-664; Page-Adams, Deborah and Nancy Vosler. 1997. *Homeownership and Well-Being Among Blue-Collar Workers*. Working Paper No. 97-5. St. Louis, Mo.: Washington University, George Warren Brown School of Social Work Center for Social Development.
- ¹⁰ Clark, Hugh Gregory. 1997. *A Structural Equation Model of the Effects of Homeownership on Self-Efficacy, Self-Esteem, Political Involvement and Community Involvement in African-Americans*. Doctoral Dissertation. Arlington, Texas: University of Texas at Arlington, School of Social Work; Balfour, Danny L. and Janet L. Smith. 1996. Transforming Lease-Purchase Housing Programs for Low Income Families: Towards Empowerment and Engagement. *Journal of Urban Affairs* 18(2): 173-188; Rossi, Peter H. and Eleanor Weber. 1996. The Social Benefits of Homeownership: Empirical Evidence from National Surveys. *Housing Policy Debate* 7(1): 1-35.
- ¹¹ Elsinga, Marja and Joris Hoekstra. 2005. Homeownership and Housing Satisfaction. *Journal of Housing and the Built Environment* 20: 401-424; Rohe, William M. and Victoria Basolo. 1997. Long-Term Effects of Homeownership on the Self-Perceptions and Social Interaction of Low-Income Persons. *Environment and Behavior* 29(6): 793-819; Rohe, William M. and Michael A. Stegman. 1994. The Impact of Home Ownership on the Social and Political Involvement of Low-Income People. *Urban Affairs Quarterly* 30(1): 152-172.
- ¹² National Association of Realtors Research Division. 2006. *Social Benefits of Homeownership and Stable Housing*. Washington, D.C.: Author.
- ¹³ Jacobs, David E., Robert P. Clickner, Joey Y. Zhou, Susan M. Viet, David A. Marker, John W. Rogers, Darryl C. Zeldin, Pamela Broene, and Warren Friedman. 2002. The Prevalence of Lead-Based Paint Hazards in U.S. Housing. *Environmental Health Perspectives* 110(10): 599-606.
- ¹⁴ Cohn, Richard D., Samuel J. Arbes Jr., Renee Jaramillo, Laura H. Reid, and Darryl C. Zeldin. 2006. National Prevalence and Exposure Risk for Cockroach Allergen in U.S. Households. *Environmental Health Perspectives* 114(4): 522-526; Breyse, Patrick, Nick Farr, Warren Galke, Bruce Lanphear, Rebecca Morley, and Linda Bergofsky. 2004. The Relationship Between Housing and Health: Children at Risk. *Environmental Health Perspectives* 112(15): 1583-1588.
- ¹⁵ Sandel, Megan and Joshua Sharfstein. 1998. *Not Safe at Home: How America's Housing Crisis Threatens the Health of Its Children*. Boston, Mass.: Children's Hospital Medical Center, The Doc4Kids Project.
- ¹⁶ Nevin, Rick and David E. Jacobs. 2006. Windows of Opportunity: Lead Poisoning Prevention, Housing Affordability, and Energy Conservation. *Housing Policy Debate* 17(1): 185-207; Breyse, Patrick, Nick Farr, Warren Galke, Bruce Lanphear, Rebecca Morley, and Linda Bergofsky. 2004. The Relationship Between Housing and Health: Children at Risk. *Environmental Health Perspectives* 112(15): 1583-1588; Istre, Gregory R., Mary A. McCoy, Linda Osborn, Jeffrey J. Barnard, and Allen Bolton. 2001. Deaths and Injuries from House Fires. *New England Journal of Medicine* 344(25): 1911-1916.
- ¹⁷ Aidala, Angela A., Peter Messeri, David Abramson, and Gunjeong Lee. 2001. *Housing and Health Care Among Persons Living with HIV/AIDS*. Update Report #37. New York, N.Y.: Columbia University; Kinchen, Kraig and James D. Wright. 1991. Hypertension Management in Health Care for the Homeless Clinics: Results from a Survey. *American Journal of Public Health* 81(9): 1163-1165.
- ¹⁸ Bamberger, Joshua D., Jay Unick, Pamela Klein, Marcy Fraser, Margaret Chesney, and Mitchell H. Katz. 2000. Helping the Urban Poor Stay with Antiretroviral HIV Drug Therapy. *American Journal of Public Health* 90(5): 699-701; Hwang, Stephen W. and Ann L. Bugeja. 2000. Barriers to Appropriate Diabetes Management Among Homeless People in Toronto. *Canadian Medical Association Journal* 163(2): 161-165; Brickner, Philip W., Brian C. Scanlan, Barbara Conanan, Alexander Elvy, John McAdam, Linda Keen Scharer, and William J. Vicic. 1986. Homeless Persons and Health Care. *Annals of Internal Medicine* 104: 405-409.
- ¹⁹ National AIDS Housing Coalition. 2005. *Housing Is the Foundation of HIV Prevention and Treatment: Results of the National Housing and HIV/AIDS Research Summit*. Washington, D.C.: Author, citing Riley, Elise D., David Guzman, Sharon Perry, David Bangsberg, and Andrew Moss. 2005. Antiretroviral Therapy, Hepatitis C, and AIDS Mortality Among San Francisco's Homeless and Marginally Housed. *Journal of Acquired Immune Deficiency Syndromes* 38(2): 191-195 and Ledergerber, Bruce, Matthias Egger, Milos Opravil, Amalio Telenti, Bernard Hirschel, Manuel Bategay, Pietro Vernazza, Philippe Sudre, Markus Flepp, Hansjakob Furrer, Patrick Francioli, and Rainer Weber. 1999. Clinical Progression and Virological Failure on Highly Active Antiretroviral Therapy in HIV-1 Patients: A Prospective Cohort Study. *Lancet* 353: 863-868.
- ²⁰ Kling, Jeffrey R., Jeffrey B. Liebman, and Lawrence F. Katz. 2006. Experimental Analysis of Neighborhood Effects. World Wide Web page. www.nber.org/~kling/mto/mto_exp.pdf (last accessed March 7, 2007).

- ²¹ Yonkers Family and Community Project. 1997. *Yonkers Revisited: The Early Impacts of Scattered-Site Public Housing on Families and Neighborhoods*. A Report to the Ford Foundation, ed. Xavier de Souza Briggs. New York, N.Y.: Columbia University, Teachers College.
- ²² Evans, Gary W., Stephen J. Lepore, B. R. Shejwal, and M. N. Palsane. 1998. Chronic Residential Crowding and Children's Well-Being: An Ecological Perspective. *Child Development* 69(6): 1514-1523; Lepore, Stephen J., Gary W. Evans, and M. N. Palsane. 1991. Social Hassles and Psychological Health in the Context of Chronic Crowding. *Journal of Health and Social Behavior* 32(4): 357-367; Gove, Walter R., Michael Hughes, and Omer R. Galle. 1979. Overcrowding in the Home: An Empirical Investigation of Its Possible Pathological Consequences. *American Sociological Review* 44(1): 59-80.
- ²³ Cardoso, Maria Regina Alves, Simon Nicholas Cousens, Luiz Fernando de Goes Siqueira, Fatima Maria Alves, and Luiz Antonio V. D'Angelo. 2004. Crowding: Risk Factor or Protective Factor for Lower Respiratory Disease in Young Children? *BMC Public Health* 4(1): 19-26; Baker, Michael, Anne McNicholas, Nicholas Garrett, Nicholas Jones, Joanna Stewart, Vivien Koberstein, and Diana Lennon. 2000. Household Crowding: A Major Risk Factor for Epidemic Meningococcal Disease in Auckland Children. *Pediatric Infectious Disease Journal* 19(10): 983-990; Fonseca, Walter, Betty R. Kirkwood, Cesar G. Victora, Sandra C. Fuchs, Jose A. M. Flores, and Chizuru Misago. 1996. Risk Factors for Childhood Pneumonia Among the Urban Poor in Fortaleza, Brazil: A Case-Control Study. *Bulletin of the World Health Organization* 74(2): 199-208; Victora, Cesar G., Sandra C. Fuchs, Jose A. M. Flores, Walter Fonseca, and Betty Kirkwood. 1994. Risk Factors for Pneumonia Among Children in a Brazilian Metropolitan Area. *Pediatrics* 93(6): 977-985.
- ²⁴ Mills, Gregory, Daniel Gubits, Larry Orr, David Long, Judie Feins, Bulbul Kaul, Michelle Wood, Amy Jones & Associates, Cloudburst Consulting, and QED Group LLC. 2006. *Effects of Housing Vouchers on Welfare Families*. Prepared for the U.S. Department of Housing and Urban Development, Office of Policy Development and Research by Abt Associates.
- ²⁵ Gotbaum, Betsy. 2005. *Safety Shortage: The Unmet Shelter and Housing Needs of New York City's Domestic Violence Survivors*. New York, N.Y.: Public Advocate for the City of New York; United States Conference of Mayors. 2005. *Hunger and Homelessness Survey*. Washington, D.C.: Author; Correia, Amy and Jen Rubin. 2001. *Housing and Battered Women*. World Wide Web page www.vawnet.org/DomesticViolence/Research/VAWnetDocs/AR_housing.pdf (last accessed March 7, 2007); Menard, Anne. 2001. Domestic Violence and Housing: Key Policy and Program Challenges. *Violence Against Women* 7(6): 707-720.
- ²⁶ Economic Stability Working Group of the Transition Subcommittee of the Governor's Commission on Domestic Violence. 2002. *Voices of Survival: The Economic Impacts of Domestic Violence, A Blueprint for Action*. Boston, Mass.; Menard, Anne. 2001. Domestic Violence and Housing: Key Policy and Program Challenges. *Violence Against Women* 7(6): 707-720.
- ²⁷ Correia, Amy and Jen Rubin. 2001. *Housing and Battered Women*. World Wide Web page www.vawnet.org/DomesticViolence/Research/VAWnetDocs/AR_housing.pdf (last accessed March 7, 2007).
- ²⁸ Moracco, Kathryn E., Carrie L. Brown, Sandra L. Martin, Judy C. Chang, Lisa Dulli, Mary Beth Loucks-Sorrell, Tracy Turner, Ingrid G. Bou-Saada, and Leslie Starsoneck. 2004. Mental Health Issues Among Female Clients of Domestic Violence Programs in North Carolina. *Psychiatric Services* 55(9): 1036-1040; Menard, Anne. 2001. Domestic Violence and Housing: Key Policy and Program Challenges. *Violence Against Women* 7(6): 707-720; Eistenstat, Stephanie A. and Lundy Bancroft. 1999. Domestic Violence. *New England Journal of Medicine* 341(12): 886-892; Bassuk, Ellen L., Sharon Melnick, and Angela Browne. 1998. Responding to the Needs of Low-Income and Homeless Women Who Are Survivors of Family Violence. *Journal of the American Medical Women's Association* 53(2): 57-64.
- ²⁹ Estimate based on Davis, Stacy C. and Susan W. Diegel. 2007. *Transportation Energy Data Book: Edition 26*. Prepared by Oak Ridge National Laboratory for the U.S. Department of Energy. Tables 2.1 and 2.5. Energy Information Administration data indicate that in 2005, residential energy consumption accounted for 21.9 percent of overall energy consumption, and the transportation sector accounted for another 28.5 percent. Oak Ridge National Laboratory data indicate that of overall transportation energy consumption, light vehicles accounted for 58.4 percent, buses for 0.6 percent and passenger rail for 0.2 percent, for a total of 59.2 percent of transportation energy consumption, or 16.8% of the nation's energy use. Adding the 21.9 percent for residential buildings and the 16.8 percent for residential transit yields a total of 38.7 percent of the nation's energy.
- ³⁰ United States Environmental Protection Agency. No Date. *A New Energy Star Qualified Home Improves Our Environment*. World Wide Web Page. www.energystar.gov/index.cfm?c=new_homes.nh_benefits (last accessed July 2, 2007).



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