Cost Analysis Report for Intervention Programs
to Address Socio-Economic Determinants of Health

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Introduction and Summary

At the request of Marion Danis, Milliman, Inc. (Milliman) has conducted the following analysis for the National Institutes of Health (NIH). The request was to estimate the cost of providing various interventions to the low income population of Washington D.C., and not the health benefits associated with the intervention. We have been assisted in this effort by Amy Tiedemann, Ph. D. of Rutgers University and Yvonne Chueh, Ph. D. of Central Washington University. This analysis is intended to provide information for the NIH to consider as it designs the “Reaching Economic Alternatives that Contribute to Health” (REACH) project for Washington, D.C.. This report is provided under the terms of the consulting services agreement between the NIH and Milliman, dated August 10, 2006.

The results in this report are intended for the internal use of The National Institutes of Health and may not be distributed to other parties without the written permission of Milliman, Inc. If we provide such permission and the results are distributed externally, the report should be distributed in its entirety. No benefit is intended to any other party from this analysis. It is our understanding that our analysis will serve as an input to the design of the REACH project’s scenarios, and we request the opportunity to review the use of our results prior to the external distribution of those scenarios.

Objective

The purpose of this report is to analyze the expected per capita costs of potential interventions provided to low-income urban residents to address the socio-economic determinants of poor health. The REACH project will survey low-income residents of Washington, DC to learn their preferences in prioritizing these various interventions. The areas of investigation include the following categories:

- Education
- Employment
- Health Care
- Housing
- Mobility and Transportation
- Nutrition
- Community Development
- Income Subsidies

Within these eight categories it is our understanding that NIH intends for income subsidies to be a fixed amount per household to be specified during the design of the REACH scenarios. The other seven categories included fifteen specific interventions which we evaluated. Our findings are presented in the remainder of this report.
As used in this report the following three words are given special definitions:

*Category* – One of the eight areas of intervention study.
*Intervention* – A specific option in the REACH exercise for one category.
*Benefit* – a real-life government or private sector program, found in the research for one of the categories.

**Structure of Report**

This report contains the following sections:

- **Introduction and Summary:** This section, which provides the objective and structure of the document.

- **Results:** This section provides the results of our analysis. It includes a table of estimated PMPM values for the interventions studied. This section also provides a summary of the programs that were chosen as representative of the selected interventions. Note that our results address the cost of providing each specific potential intervention, rather than the benefits associated with that intervention, as requested by NIH.

- **Methodology and Assumptions:** This section describes the approach that we took to produce these results.

- **Factors to Consider in Interpreting the Results:** This section describes some of the factors that we recommend NIH consider in interpreting and using our results.

- **Appendices:** Milliman developed Appendix 3. The two researchers and their staff developed the other six appendices covering each of the first seven categories. For example, Appendix 1 deals with benefits related to education. Each appendix provides as much of the following information as the research allowed:
  - **Summary:** Provides a brief description of the benefits that were identified through the research.
  - **Results:** Provides a summary table of the per capita cost estimates associated with each benefit found.
  - **Description of Applicable Research or Benefit Success:** Provides an overview of the benefit found either in a detailed description of the costs of that benefit, or the successful results demonstrated by the benefits in that category.
Results

Table 1, below, provides a summary of the estimates of the cost for providing specific interventions to the low-income population in Washington, DC. As described in the methodology section, these represent our combined best estimate, reflecting the unit cost of each intervention (i.e., the cost per individual who receives the specific service) and the utilization rate (i.e., the annual utilization rate for the use of that specific service) within the low-income population.

As described in the methodology section, the unit costs shown in Table 2 were taken from the research and adjusted to reflect the best estimate per capita cost for the target intervention that we understand NIH intends to present to the REACH survey participants. The unit costs and ultimate utilization rates reflect our collective judgment, based on our initial recommendations and subsequent discussions. The methodology and assumptions section contains the details supporting these estimates.

Per Member Per Month Cost

Based on our analysis and discussions, we propose Table 1 as the PMPM costs for the interventions associated with each category. The percent of total can be used to assign relative value to each benefit program. A sample distribution of values concludes the methodology and assumptions section in Table 4.

<table>
<thead>
<tr>
<th>Table 1: Intervention Per Member Per Month (PMPM) Cost</th>
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</thead>
<tbody>
<tr>
<td>Intervention Category</td>
</tr>
<tr>
<td>Education</td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td>Employment</td>
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<td></td>
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<tr>
<td>Health Care</td>
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<tr>
<td></td>
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<tr>
<td>Housing</td>
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<td></td>
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<tr>
<td>Mobility and Transportation</td>
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<td></td>
</tr>
<tr>
<td>Nutrition</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Community Development</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The interventions are intended to capture a wide variety of potential impacts to the socio-economic determinants of health. Below is a description of the specific interventions within
each category. While this description may not be exactly what will be presented to the REACH participants, it summarizes our understanding of the interventions.

The category of Education included three interventions targeted at improving the basic level of education in both adults and children of certain households. The programs covered are:

- **Adult Education** includes financial assistance to complete secondary-level education (GED) and up to 80% tuition reimbursement for college-level advanced degree courses or professional certification courses at a local community college. Continuing financial assistance will be subject to successful completion of previous courses.

- **Childhood Education** covers children from preschool age through grade 9. It covers enrollment in a school-readiness program or in kindergarten for younger children. For older children attending low-performing schools the intervention includes academic enrichment programs, such as after-school arts education.

- **Language and Literacy Training** provides language education to adults and children for whom English is a second language as well as adults with no formal education or low levels of literacy.

The category of Employment included interventions to both increase employability of people under 200% of poverty, as well as providing childcare to allow individuals to work. The interventions include:

- **Job Training Programs** provides vocational training and professional development in-service or in the absence of a job. The programs will help people add to or strengthen the specialized knowledge and skills which enhance performance, job retention, and advancement. This may help people gain knowledge which allows them to move to another similar job or to a managerial position.

- **Job Placement Programs** focus on preparing adults for employment, helping them find a job, stay employed, and advance with their current set of skills.

- **Day Care for Working Parents** provides free or subsidized day-care (up to age 7) to a maximum of $450 a month and after-school programs (up to age 16). Day care and summer enrichment programs are considered in this benefit during the summer.

Health Care includes the intervention for the coverage of basic health care services. Basic **Health Care** is assumed to be a benefit package similar to a Medicaid or DC Healthcare Alliance program. The other two interventions aim at improving the coverage of dental services, and providing incentives for the enrollment in preventative health promotion programs:

- **Dental Care** is an individual or group insurance plan which helps pay the costs of routine dental care. Routine dental care includes periodic cleanings, oral evaluations, and diagnostic x-rays. There is no coverage for restoration or extraction of affected teeth.

- **Directed Preventative Coverage** is in addition to a basic health care enrollees can agree to participate in health promotion programs (such as weight control, hypertension management, smoking cessation). The number of markers equivalent to the expected savings in medical expenses will used by the study participants to provide other non-medical benefits or income subsidies.
Vouchers for Rent and Mortgage Payments will provide financial assistance toward the purchase of housing, renovation, and or repair of current housing.

Reduced Public Transportation Fares provide vouchers to cover the monthly cost of traveling to work on public transportation in the Washington D.C. area using the METRO system.

Nutrition includes three interventions to increase access to healthy foods, and provide a basic level of food assistance. This category includes:

- Grocery Store Incentive Locations is a corporate incentive program to increase the number of grocery stores located in low income areas. This will allow low income families to buy healthful foods easily within their own community.
- Food Stamps and Supplemental Nutrition is combination of the Food Stamp benefit and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). These benefits provide a source of funds for low income families and households to have nutritious meals.
- School Breakfast assures school aged children do not go hungry. This intervention provides a healthy breakfast and lunch year round at a free or reduced-price.

The Community Development category includes interventions targeted at increasing the mental and physical health of the participants. Counseling Programs include group counseling for substance abuse, anger management, gambling, anxiety and stress reduction. At-risk youth will also be eligible for mentoring programs to keep them in school and steer them away from risky behaviors like drug and alcohol abuse, unsafe sexual practices, and criminal activities. Healthy Living Improvements will create or enhance parks, bike trails and recreation areas in and around low income areas. This along with facilitating increasing pedestrian use of existing infrastructure will allow adults and kids the resources to exercise safely within their community.
Methodology & Assumptions

The population addressed in this report is low-income residents of Washington, DC. The low-income threshold for this report is household income below 200% of the Federal Poverty Level (FPL).

The research team (Amy Tiedemann and Yvonne Chueh) reviewed available literature to identify existing benefits that were similar to the desired interventions of the REACH exercise. The appendices contain the summary of major attributes for each benefit researched and an estimate of the per capita cost.

The research comprised of seven major areas: Education, Employment, Health Care, Housing, Mobility and Transportation, Nutrition, and Community Center Programs. Not all of the benefits researched for each area were used in the development of the final intervention description and cost estimate. The research area of Community Center Programs (Appendix 7) was changed to the intervention category of Community Development. This change was made so that the intervention category could capture additional healthy living improvements.

Table 2 below provides a summary of the benefit per capita costs. “Research” is the per capita cost developed from the research. The “2007 Target” is the intervention per capita cost. Both of these are organized by the categories and interventions of the REACH exercise.

<table>
<thead>
<tr>
<th>Intervention Category</th>
<th>Intervention</th>
<th>Research</th>
<th>2007 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Adult Education</td>
<td>$1,723</td>
<td>$2,185</td>
</tr>
<tr>
<td>(Appendix 1)</td>
<td>Childhood Education</td>
<td>7,689</td>
<td>2,242</td>
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<td></td>
<td>Language, and Literacy Training</td>
<td>2,382</td>
<td>2,417</td>
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<tr>
<td>Employment</td>
<td>Job Training Programs</td>
<td>2,233</td>
<td>2,370</td>
</tr>
<tr>
<td>(Appendix 2)</td>
<td>Job Placement Programs</td>
<td>3,607</td>
<td>4,063</td>
</tr>
<tr>
<td></td>
<td>Day Care for Working Parents</td>
<td>2,974</td>
<td>3,064</td>
</tr>
<tr>
<td>Health Care</td>
<td>Health Care</td>
<td>1,826</td>
<td>1,638</td>
</tr>
<tr>
<td>(Appendix 3)</td>
<td>Dental Care</td>
<td>127</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>Directed Preventative Coverage</td>
<td>420</td>
<td>420</td>
</tr>
<tr>
<td>Housing</td>
<td>Vouchers for Rent and Mortgage Payments</td>
<td>2,309</td>
<td>612</td>
</tr>
<tr>
<td>(Appendix 4)</td>
<td>Reduced Public Transportation Fares</td>
<td>2,088</td>
<td>418</td>
</tr>
<tr>
<td>Mobility and Transportation</td>
<td>Grocery Stores Incentive Locations</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>(Appendix 5)</td>
<td>Food Stamp Program and</td>
<td>1,576</td>
<td>1,600</td>
</tr>
<tr>
<td></td>
<td>Supplemenal Nutrition School Breakfast</td>
<td>481</td>
<td>488</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Counseling Programs</td>
<td>1,020</td>
<td>255</td>
</tr>
<tr>
<td>(Appendix 6)</td>
<td>Healthy Living Improvements</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Community Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Appendix 7)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The benefits researched were funded through a variety of sources: federal, local city, local state or charity grants. The research cost per capita is a baseline estimate from various sources.
calendar years of research, using the benefits that were closest to the intended intervention. The 2007 target cost is the research benefit cost adjusted for differences to the NIH intended REACH intervention. The adjustments for these benefits represent the collective best estimate of the research team. It is our understanding that it is NIH’s preference for no one intervention represents a disproportionate amount of the overall total. The design choices for the REACH interventions reflect this preference in the 2007 Target per capita cost.

The adjustments and benefits used in developing the research and target per capita cost for each intervention are described below.

**Per Capita Cost for each Intervention**

We developed our estimates of per capita costs by selecting the benefits (identified through the research) that were closest to the NIH intended REACH interventions. In some cases we combined benefits or selected an average cost of two benefits. We then trended costs from the date of the benefit to 2007. Finally we made adjustments to reflect design differences between the scope of the benefits used from the research, and the scope of the interventions NIH intends to present in the REACH exercise. The remainder of this section describes considerations for each such intended intervention.

Benefits similar to that described in *Adult Education* include Pell Grants and an estimate for the reimbursement of community college tuition (which we assumed to be $1,250). Each of these benefits is needs based, requiring some portion of the adult education cost to be paid by the enrollee. The Pell Grant per capita cost estimate was averaged with an estimated community college tuition benefit. *Childhood Education* focused on the most costly Education benefit researched the federal Head Start program. This benefit cost was added to half the cost for benefits from the Adult Education and Family Literacy Act. *Language and Literacy Training* started with the other half of the cost from the Adult Education and Family Literacy Act benefits and included the cost of the Even Start Family Literacy benefits.

For the REACH interventions for Employment, *Job Training Programs* are similar to the Workforce Investment Act benefits. *Job Placement Programs* are similar to the benefits from Welfare-to-Work grants. Day Care for Working Parents is closest to the benefits from The Child Care Development Fund.

It is our understanding that three health care interventions are to be included in REACH. The Washington D.C. Medicaid program was unable to share their direct experience in providing basic *Health Care* services to low income individuals in Washington D.C. Milliman serves as the state actuary for several western Medicaid Programs. A survey of the 2007 capitation rates in these states was performed and area adjusted using the Milliman Health Cost Guidelines to an estimated PMPM cost in Washington D.C. for Medicaid benefits.

The second health care intervention is the coverage of basic *Dental Care* similar to benefits provided through the DC Healthcare Alliance. The third will be *Directed Preventative Coverage* for Medicaid enrollees. This intervention involves offering an enhanced benefit package to Medicaid participants in exchange for a preventative treatment plan covering several costly chronic conditions. The enhanced benefit package goes beyond coverage for...
the chronic care management to also include enhanced pharmacy and integrated mental health coverage. The state of West Virginia adopted this benefit strategy on a pilot basis in 2007, and served as a model for this intervention.

The housing category included *Vouchers for Rent and Mortgage Payments* which are most like the benefits from the federal Housing Choice Voucher Program. The local cost for the Washington D.C. area was only available for 2000, and so the national amount of the subsidy per household for 2005 was used for the estimate of per capita costs. This amount was a per household estimate with the per capita estimate being the household voucher divided by the average number of persons per household from Attachment A. The attachments are discussed further in the next section.

Washington D.C. area public transit system includes multiple options. The *Reduced Public Transportation Fares* were selected to apply only to the Metro System, which includes both bus and rail transportation.

For the nutrition interventions the *Grocery Store Incentive Locations* was the most challenging to tease out of the research. The benefits from the Pennsylvania Fresh Food Initiative are the closest example with $40,000,000 in grants across the entire city of approximately 1.5 million people in the year of the award. Pennsylvania spread these investments across the entire city and so the per capita adjustment could not be adjusted to only those individuals under 200% FPL. Using this per capita cost requires the assumption of a similar percentage of low-income beneficiaries between the two cities. The *Food Stamp Program and Supplemental Nutrition* has direct parallel benefits in the federal Food Stamp Program and Supplemental Nutrition for Women, Infants and Children (WIC). Both of these are currently active could be researched directly. *School Breakfast* and lunch are also active programs for which direct research was available.

The last category of community development, as discussed, was originally researched as community center programs. *Counseling Programs* are closest to the benefits of cognitive behavioral therapy delivered in a group setting. This research area was originally focused on a much broader spectrum of benefits. The lack of comparable community center programs forced the generalization of this benefit from specific interventions to reduce violence; domestic abuse; substance abuse, and mental health; This category was renamed “Community Development” to capture the broader perspective of Healthy Living Improvements.

The benefits from *Healthy Living Improvements* were not originally included in any of the research areas. An abbreviated research effort discovered a few comparable programs funded with the intention of improving health, but the per capita cost of these benefits could not be estimated. This benefit seemed most comparable to the capital program for grocery store incentives. Thus, the per capita cost was estimated relative to this benefit. Community Block Development Grants could be used for this and several other benefits, so as a general source of capital funding for these benefits it is difficult to allocate the grant into any one particular intervention.
Conversion Process from Per Capita to PMPM

The targeted program cost per capita converts to a PMPM for each benefit program by multiplying the percentage of eligible households, the estimated number of members per household, and the percentage rate of utilization for the program.

Table 3 below shows the demographic assumptions for each intervention. The PMPM intervention costs, shown in Table 1, were calculated from the product of assumptions shown in Tables 2 and 3. The target intervention per capita from Table 2 multiplied by the Table 3 factors and divided by 12 equals the PMPM from Table 1.

<table>
<thead>
<tr>
<th>Intervention Category</th>
<th>Intervention</th>
<th>Eligible Households</th>
<th>Mems per Household</th>
<th>Util Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Adult Education</td>
<td>100%</td>
<td>1.37</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Childhood Education</td>
<td>55%</td>
<td>1.66</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Language, and Literacy Training</td>
<td>36%</td>
<td>3.03</td>
<td>65%</td>
</tr>
<tr>
<td>Employment</td>
<td>Job Training Programs</td>
<td>100%</td>
<td>1.37</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Job Placement Programs</td>
<td>100%</td>
<td>1.37</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Day Care for Working Parents</td>
<td>55%</td>
<td>1.66</td>
<td>25%</td>
</tr>
<tr>
<td>Health Care</td>
<td>Health Care</td>
<td>100%</td>
<td>3.03</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Dental Care</td>
<td>100%</td>
<td>3.03</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>Directed Preventative Coverage</td>
<td>100%</td>
<td>3.03</td>
<td>25%</td>
</tr>
<tr>
<td>Housing</td>
<td>Vouchers for Rent and Mortgage Payments</td>
<td>60%</td>
<td>3.03</td>
<td>97%</td>
</tr>
<tr>
<td>Mobility and Transportation</td>
<td>Reduced Public Transportation Fares</td>
<td>100%</td>
<td>1.37</td>
<td>97%</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Grocery Stores Incentive Locations</td>
<td>100%</td>
<td>3.03</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Food Stamp Program and Supplemental Nutrition</td>
<td>60%</td>
<td>3.03</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>School Breakfast</td>
<td>55%</td>
<td>1.66</td>
<td>75%</td>
</tr>
<tr>
<td>Community Development</td>
<td>Counseling Programs</td>
<td>100%</td>
<td>1.37</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Healthy Living Improvements</td>
<td>100%</td>
<td>3.03</td>
<td>85%</td>
</tr>
</tbody>
</table>

Attachments A, B, and C provide the assumed distribution of households under 200% FPL, under 100% FPL and between 100% and 200% FPL respectively. These distributions form the basis for some of the estimates in Table 3. The percentage of households with children, the average adults, children, or members per household, and the percentage of households under 100% FPL are all assumptions from these distributions.

The distributions are based upon the U.S. Census Bureau’s Current Population Survey (CPS). The CPS can be restricted by a given percentage FPL, and estimate the number of households by income range, household size and number of children. In review of the CPS output, several high income households were reported under the 200% FPL. These households as well as those households with expanded adult relationships were removed from the raw CPS data to develop the assumed distributions. All of the 2005 household income levels were then inflated to 2007.
Attachments A, B and C also include a 2007 living wage estimate from a Pennsylvania State University web site. The relative gap between the 2007 average living wage and the 2007 average household income was initially used for a reasonableness benchmark for the total household cost of all interventions.

The final benchmark used to test the reasonableness of the program cost estimates was double the expenditures of a standard Medicaid program. As noted in Tables 1 and 2, the total Health Care cost is approximately $413, while the total PMPM cost for all other interventions beside health care is approximately $870 PMPM.
Relative Value Estimation

The final step is converting the percentage of total cost by benefit program to a relative number of markers. It was our understanding that the participants in the REACH Survey will be given 60 markers, to cover 124 spaces. The initial set up for the survey will place the markers in certain categories, one of which will be health care. This amount of markers is approximately 50% of the total spaces. Table 4 below summarizes the resulting rounded allocation of markers based upon our analysis. The PMPM value of any 1 space is $10.35.

The Directed Preventative Programs is a credit for additional markers to be used on other spaces. If the format of the final REACH survey is different then the assumptions described above the results in Table 1 can be used directly to set the relative value of each benefit program.

<table>
<thead>
<tr>
<th>Intervention Category</th>
<th>Intervention</th>
<th>Relative Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Adult Education</td>
<td>8</td>
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<tr>
<td></td>
<td>Childhood Education</td>
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<tr>
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<td>Employment</td>
<td>Job Training Programs</td>
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<td>Job Placement Programs</td>
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<td></td>
<td>Day Care for Working Parents</td>
<td>6</td>
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<td>Health Care</td>
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<td>Mobility and Transportation</td>
<td>Reduced Public Transportation Fares</td>
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<td>Nutrition</td>
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<td>Food Stamp Program and</td>
<td>20</td>
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<tr>
<td></td>
<td>Supplemental Nutrition</td>
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</tr>
<tr>
<td></td>
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<td>3</td>
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Factors to Consider in Interpreting the Results

Please recognize the following factors when using our results for the REACH project:

- Our results are projections, not predictions. They depend on the findings of our researchers and supplemental data sources, the methodology we used, and the assumptions we made for the key variable that influence the results.

- Different assumptions or methodology would produce different results. The actual costs to provide these interventions in the DC population would likely vary from our projected results, perhaps substantially, due to a variety of factors, including but not limited to the following:
  - Population characteristics
  - Personal preferences
  - Actual take-up rates
  - Actual per-intervention costs
  - Random fluctuations

- We have conducted very limited sensitivity testing of our results to variations in the underlying assumptions.

- The appendices provide the findings of the two groups of researchers (at Central Washington University and Rutgers University). The results are shown here for completeness, but please note that these results were not subjected to Milliman peer review; and are not a Milliman work product

- We have relied on the researchers’ findings and data from other sources. If these are incomplete or incorrect, our results are likely misstated.
### Assumed Distribution of Households with an Income-to-Poverty Ratio Below 200%

**State: Washington D.C.**

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**Subtotal by Adult/Child Comp.**

|                |                          | 0.3073 | 0.1436 | 0.0873 | 0.0642 | 0.0983 | 0.0572 | 0.0400 | 0.0190 | 0.0297 | 0.0206 | 0.0149 | 0.0486 | 0.0074 | 0.0151 | 0.0082 | 0.0386 |

**Average Household Income**

- **$15,770**
  - **$10,326**
  - **$14,616**
  - **$13,909**
  - **$18,188**
  - **$14,391**
  - **$26,224**
  - **$15,433**
  - **$25,703**
  - **$7,764**
  - **$35,217**
  - **$18,840**
  - **$23,846**
  - **$9,335**
  - **$33,340**
  - **$6,668**
  - **$29,830**

**Composite Measures**

|                |                          | 0.6317% | 0.3683% | 1.3685% | 0.4509% | 0.1515% | 0.3976% | 1.6594% | 3.0272% |

**Living Wage**

- **$47,732**
  - **$25,299**
  - **$33,961**
  - **$42,424**
  - **$46,615**
  - **$52,177**
  - **$56,394**
  - **$61,948**
  - **$66,159**
  - **$71,719**
  - **$75,923**
  - **$81,490**
  - **$85,688**
  - **$91,261**
  - **$95,453**
  - **$101,032**
  - **$110,803**

**Living Wage vs Household Income**

- **$31,962**
  - **$14,973**
  - **$19,345**
  - **$29,415**
  - **$28,427**
  - **$37,785**
  - **$30,170**
  - **$46,515**
  - **$40,455**
  - **$63,955**
  - **$40,706**
  - **$62,650**
  - **$61,843**
  - **$81,926**
  - **$62,113**
  - **$94,364**
  - **$80,974**

**Table Guide:**

- **(A) - (G)**
  - See Table 2

**Footnotes:**

## Household Income in 2007 (2)

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| Subtotal by Adult/Child Comp. | 0.3770 | 0.1717 | 0.0706 | 0.0899 | 0.0667 | 0.1070 | 0.0285 | 0.0361 | 0.0000 | 0.0276 | 0.0000 | 0.0251 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

### Average Household Income

- **200% Poverty Threshold 2007**
  - $30,133
  - $20,420
  - $27,380
  - $34,340
  - $41,300
  - $48,260
  - $55,220
  - $62,180
  - $69,140
  - $76,100

### Composite Measures

- **Living Wage (2)**
  - $40,469
  - $25,299
  - $33,961
  - $42,424
  - $46,615
  - $52,177
  - $56,394
  - $61,948
  - $66,159
  - $71,719
  - $75,923
  - $81,490
  - $85,688
  - $91,261
  - $95,453
  - $101,032
  - $110,803

### Table Guide:

1. Distribution of Households derived from Source Data, with Subtotals by Mid-point of Reported Household Income Range, and Adult/Child Composition
2. Average Household Income in Total and by Adult/Child Composition
3. Percentage of Households with 1 or 2 Adults and the Average Adults per Household
4. Percentage of Households with 0, 1, or 2+ Child(ren) and the Average Children per Household
5. Average number of persons per household
6. Average Living Wage in Total and by Adult/Child composition
7. Average Gap in Reported Household Income and Average Living Wage
8. Average Poverty Threshold in Total and by Adult/Child Composition

### Footnotes:

Appendix 1: Education

Prepared by Amy Tiedemann, Rutgers University

Summary

Our primary sources for data regarding publicly funded education programs that benefit low-income populations were the US Department of Education and the Administration for Children and Families within the US Department of Health and Human Services. The programs identified ranged in annual per capita costs depending on scope from a low of $542 to a high of $7,287. The average annual per capita cost across these programs is $2,179.

Results

Table 1 – 1 Education

<table>
<thead>
<tr>
<th>Year</th>
<th>Per Capita Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-School Education</strong></td>
<td></td>
</tr>
<tr>
<td>Head Start</td>
<td>2005</td>
</tr>
<tr>
<td>Child Care Development Fund</td>
<td>2005</td>
</tr>
<tr>
<td>Early Intervention Program for Infants and Toddlers with Disabilities</td>
<td>2005</td>
</tr>
<tr>
<td>Preschool Grants for Children with Disabilities</td>
<td>2005</td>
</tr>
<tr>
<td>Title I Preschool</td>
<td>2002</td>
</tr>
<tr>
<td>State Funding of Prekindergarten</td>
<td>2004-2005</td>
</tr>
<tr>
<td><strong>After School Programs</strong></td>
<td></td>
</tr>
<tr>
<td>21st Century Community Learning Centers</td>
<td>2005</td>
</tr>
<tr>
<td>Child Care Development Fund</td>
<td>2005</td>
</tr>
<tr>
<td><strong>College enrollment</strong></td>
<td></td>
</tr>
<tr>
<td>Pell Grants</td>
<td>2006</td>
</tr>
<tr>
<td>Federal Supplemental Educational Opportunity Grant</td>
<td>2006</td>
</tr>
<tr>
<td>Community College Tuition</td>
<td>2007</td>
</tr>
<tr>
<td>Hope Scholarship</td>
<td>2006</td>
</tr>
<tr>
<td>Lifetime Learning Tax Credit</td>
<td>2006</td>
</tr>
<tr>
<td><strong>English language and literacy training</strong></td>
<td></td>
</tr>
<tr>
<td>Even Start</td>
<td>2006</td>
</tr>
<tr>
<td>Adult Education and Family Literacy Act (Includes Adult Basic Education, Adult Secondary Education, and English Literacy Programs)</td>
<td>2006</td>
</tr>
</tbody>
</table>

Pre-School Education Program

Description

Head Start and Early Head Start programs are administered by the Head Start Bureau. They are child-focused programs that serve children from birth to age 5, pregnant women and their families, and have the overall goal of increasing the school readiness of young children in low-income families. In FY 2004, nearly $677 million was used to support more than 650 programs that provide Early Head Start, child development, and family support services in all 50 States, the District of Columbia, and Puerto Rico. These programs served nearly 62,000 children younger than 3 years. Head Start programs promote school readiness by enhancing the social and cognitive development of children through the provision of educational, health,
nutritional, social and other services to enrolled children and families. They engage parents in
their children's learning and help them in making progress toward their educational, literacy
and employment goals. Significant emphasis is placed on the involvement of parents in the
administration of local Head Start programs.

The Child Care Development Fund (CCDF) assists low-income families: families receiving
temporary public assistance; and those transitioning from public assistance in obtaining child
care so they can work or attend training/education. CCDF serves children younger than 13
years; however, some States may elect to serve children age 13 to 19 who are physically or
mentally incapacitated or under court supervision. In FY 2003, 63 percent of children served
were between birth to 5 years, and 35 percent were between 6 and 13 years.

The Program for Infants and Toddlers with Disabilities (Part C of the Individuals with
Disabilities Education Improvement Act of 2004) is a Federal grant program administered by
the Office of Special Education Programs that assists States in operating a comprehensive
Statewide program of early intervention services for infants and toddlers with disabilities,
ages birth through 2 years, and their families.

The Preschool Grants Program, authorized under Section 619 of Part B of IDEA and
administered by the Office of Special Education Programs, was established to provide grants
to states to serve young children with disabilities, ages 3 through 5 years.

Many school districts support preschool programs with their Title I (Education for the
Disadvantaged) funds. In FY 2002, the Department of Education estimated that about 2% to
3% of Title I funds, or approximately $200 million, was used for this purpose. Title I
preschool programs help more than 300,000 children in high-poverty communities enter
kindergarten with the skills they need to succeed in school.

Also, States have started creating programs to increase access, improve quality, and invest
public resources in preschool education. For the 2004-2005 school year, states spent nearly 3
billion funding these efforts.

**After-School Program**

*Description*

The 21st Century Community Learning Centers program is now a State formula grant. It was
formerly a discretionary grant program under the Improving America's Schools Act. Under
the reauthorized authority, funds flow to States based on their share of Title I, Part A funds.
States use their allocations to provide competitive awards to eligible entities. The purpose is
to provide expanded academic enrichment opportunities for school-age children attending
low-performing schools.

All above descriptions and figures are from the Administration of Children and Families,
Community College Enrollment Program

Description

Established in 1972, the Pell Grant program is the largest source of need-based grant assistance in the United States and serves as the foundation of low-income undergraduates’ financial aid packages. About one-quarter of all undergraduates receive a Pell Grant each year. The Pell Grant program provides $11 billion in financial assistance to nearly 4.6 million students annually. Individual awards are determined by the amount of each student’s expected family contribution, attendance status (whether the student is enrolled full time, half time, or less than half time), and cost of attendance. Currently, the maximum grant students may receive is $4,050.

According to the authorizing statute, Federal Supplemental Educational Opportunity Grant program's purpose is "to provide, through institutions of higher education, supplemental grants to assist in making available the benefits of postsecondary education to qualified students who demonstrate financial need." Over half of the nearly 5 million Pell Grant recipients each year have an expected family contribution of zero. Since the average cost of college significantly exceeds the Pell Grant maximum award, many if not most of these students qualify for additional grant assistance particularly through this program. This description can be found at Expectmore.com http://www.whitehouse.gov/omb/expectmore/detail/10001033.2003.html.

Established as part of the Taxpayer Relief Act of 1997, the Hope Scholarship and Lifetime Learning Credit are among the largest federal investments in higher education. The stated objective of these tax cuts is to expand opportunities to postsecondary education for students who otherwise would not be able to afford college. Individuals who use the Hope Scholarship are eligible for a tax credit equal to 100 percent of the first $1,000 of tuition and fees they pay and 50 percent of the second $1,000. Those taking advantage of the Lifetime Learning Credit in 2002 received a 20 percent tax credit for the first $5,000 in tuition and fees paid. After 2002, the amount of tuition for which the 20 percent credit can be received is $10,000.

Descriptions of these tax credits and the Pell Grants are from the American Council on Education http://www.acenet.edu/AM/Template.cfm?Section=Improving_Lives2&Template=/CM/ContentDisplay.cfm&ContentID=11227.

English Language and Literacy Training Programs

Description

The Even Start Family Literacy Program addresses the basic educational needs of parents and children up to age 8 from low-income families by providing a unified program of (1) adult basic or secondary education and literacy programs for parents, (2) assistance for parents to promote their children's educational development, and (3) early childhood education for children.
Appendix I: Education

The Adult Education and Family Literacy Act (AEFLA), enacted as Title II of the Workforce Investment Act (WIA) of 1998, is the principal source of federal support for adult basic and literacy education programs for adults who lack basic skills, a high school diploma, or proficiency in English. AEFLA funds are distributed by formula to states using Census data on the number of adults (ages 16 and older) in each state who lack a high school diploma and who are not enrolled in school. States must match 25% of the federal contribution with state or local funds, but many states contribute considerably more. From U.S. Department of Education, Office of Vocational and Adult Education.

http://www.ed.gov/about/offices/list/ovae/pi/AdultEd/aeflaprogsfacts.doc
Appendix 2: Employment
Prepared by Amy Tiedemann, Rutgers University

Summary
Our sources for program costs for employment programs that benefit low-income populations include the US Department of Labor, the Association for Career and Technical Education, and the Office of the Assistant Secretary for Planning and Evaluation for information on the Welfare to Work Grant Program. Excluding the Perkins Grants which is an outlier, the average annual per capita cost across these programs is $2,938.

Results

<table>
<thead>
<tr>
<th>Table 2 – 1 Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job training programs</strong></td>
</tr>
<tr>
<td>Workforce Investment Act (training activities only)</td>
</tr>
<tr>
<td>Carl D. Perkins Career and Technical Education Act</td>
</tr>
<tr>
<td>Perkins - Title I - Basic Grant to States</td>
</tr>
<tr>
<td>Perkins - Title II - Tech-Prep</td>
</tr>
<tr>
<td>Day care for working parents</td>
</tr>
<tr>
<td>Child Care Development Fund</td>
</tr>
<tr>
<td>Job placement programs</td>
</tr>
<tr>
<td>Welfare to Work Grant Program</td>
</tr>
</tbody>
</table>

Job Training Programs

Description
The federal Workforce Investment Act (WIA), which superseded the Job Training Partnership Act, offers a comprehensive range of workforce development activities through state and local organizations. Available workforce development activities provided in local communities can benefit job seekers, laid off workers, youth, incumbent workers, new entrants to the workforce, veterans, persons with disabilities, and employers. The purpose of these activities is to promote an increase in the employment, job retention, earnings, and occupational skills improvement by participants. This, in turn, improves the quality of the workforce, reduces welfare dependency, and improves the productivity and competitiveness of the nation.

http://www.edd.ca.gov/wiarep/wiaind.htm

The Carl D. Perkins Career and Technical Education Act (Perkins) was originally authorized in 1984, and most recently reauthorized in August 2006. The purpose of Perkins is to provide individuals with the academic and technical skills needed to succeed in a knowledge- and skills-based economy. Perkins supports career and technical education that prepares its students both for postsecondary education and the careers of their choice. Perkins Basic State Grant funds are provided to states that, in turn, allocate funds by formula to secondary school districts and postsecondary institutions. States have control over the split of funds between secondary and postsecondary levels. After this decision is made, states must distribute at least 85 percent of the Basic State Grant funds to local programs using either the needs-based formula included in the law or an alternate formula that targets resources to disadvantaged
schools and students. States may reserve up to ten percent for leadership activities and five percent (or $250,000, whichever is greater) for administrative activities. States also receive a Tech Prep grant that can be folded into Basic State Grant funds or used to provide grants to consortiums of secondary and postsecondary partners that develop articulated pathways. From The Association for Career and Technical Education (ACTE) http://www.actonline.org/policy/legislative_issues/Perkins_background.cfm. Description and analysis of both the WIA and Perkins Act can be found at: Both acts http://www.milhs.org/EDocs/WIAPerkReautho.pdf

**Day Care for Working Parents**

**Description**

The Child Care Development Fund (CCDF) is a primary source of federal funding for child care to allow low-income parents to work. See full description of program under Pre-school education programs.

**Job Placement Program**

**Description**

The Welfare-to-Work (WtW) grants program is one of several major federally funded initiatives to help welfare recipients and other low-income parents move into employment. In 1997, the Balanced Budget Act authorized the U.S. Department of Labor to award $3 billion in WtW grants to states and local organizations. These grants were intended to support efforts to help the hardest-to-employ recipients of Temporary Assistance for Needy Families (TANF), as well as noncustodial parents, prepare for employment, find jobs, stay employed, and advance in the job market. See “Understanding the Costs of the DOL Welfare-to-Work Grants Program,” August 2002. http://aspe.hhs.gov/HSP/wtw-grants-eval98/costs02/.
Appendix 3: Health Care

Prepared by Ben Diederich, Milliman

Summary

Programs that benefit the health of low-income populations include health insurance, dental care, Chronic Condition Management, pre-natal and post-natal home visits for infants, and reduced insurance co-payments for non-smokers. The District of Columbia (DC) provides some of these services to its low-income population. Web sites of the DC Department of Health (DOH) Health Care Safety Net Administration Offices (HCSNA) and the DC Mayor’s Office describe the costs of providing these services. The programs identified range in annual per capita costs from $1818 to $3846.

Results

Table 3-1 Health Care

<table>
<thead>
<tr>
<th>Year</th>
<th>Per Capita Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>$3,846</td>
</tr>
<tr>
<td>2007</td>
<td>$1,826</td>
</tr>
<tr>
<td>2007</td>
<td>$127</td>
</tr>
<tr>
<td>2002</td>
<td>$1,818</td>
</tr>
<tr>
<td>2007</td>
<td>$420</td>
</tr>
</tbody>
</table>

Note: See References section for endnotes

DC Healthcare Alliance

Description

The DC Healthcare Alliance is a public-private partnership providing free health insurance to Washington DC residents who have no health insurance and have income at or below 200% of the federal poverty level, including those not eligible for Medicaid. The Washington DC Department of Health (DOH) Health Care Safety Net Administration (HCSNA) oversees the program and administers it through two managed care organizations, Chartered Health Plan and Health Right.

Benefits of the DC Healthcare Alliance plans, listed below, are available to members at more than 100 locations throughout the city, delivered through community clinics. Additionally, Chartered Health Plan makes transportation services available to its members on a limited basis. DC Healthcare Alliance is funded with local dollars; however, it was never DC’s intention to continue this program indefinitely with 100% local funding, and the city has pursued opportunities to obtain federal funds. The Alliance provides pre-natal and post-natal home visits and case management for infants from low-income backgrounds.

The DC Healthcare Alliance was under review by the Washington D.C. Department of Health Services which prevented the release of the 2005 cost estimate. In lieu of this, we estimated the cost of providing these services to the low-income population in Washington D.C. using a survey of western Medicaid states Temporary Aid for Needy Families (TANF) capitation reimbursement rates.
Table 3-2: Summary of Benefits provided by DC Healthcare Alliance

<table>
<thead>
<tr>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic Services - Freestanding Ambulatory Surgery Center</td>
</tr>
<tr>
<td>Clinic Services - Public and Mental Health Clinics</td>
</tr>
<tr>
<td>Outpatient Hospital Services</td>
</tr>
<tr>
<td>Dental Services</td>
</tr>
<tr>
<td>Dentures</td>
</tr>
<tr>
<td>Hearing Aids</td>
</tr>
<tr>
<td>Services for Speech, Hearing and Language Disorders</td>
</tr>
<tr>
<td>Laboratory and X-Ray Services</td>
</tr>
<tr>
<td>Medical Equipment and Supplies</td>
</tr>
<tr>
<td>Prosthetic and Orthotic Devices</td>
</tr>
<tr>
<td>Inpatient Hospital Services</td>
</tr>
<tr>
<td>Diagnostic, Screening and Preventive Services</td>
</tr>
<tr>
<td>Family Planning Services</td>
</tr>
<tr>
<td>Certified Nurse Anesthetist Services</td>
</tr>
<tr>
<td>Medical and Remedial Care - Other Practitioners</td>
</tr>
<tr>
<td>Medical Surgical Services of a Dentist</td>
</tr>
<tr>
<td>Nurse Midwife Services</td>
</tr>
<tr>
<td>Nurse Practitioner Services</td>
</tr>
<tr>
<td>Physician Services</td>
</tr>
<tr>
<td>Prescription Drugs</td>
</tr>
<tr>
<td>Physical Therapy Services</td>
</tr>
<tr>
<td>Occupational Therapy Services</td>
</tr>
<tr>
<td>Ambulance Services</td>
</tr>
<tr>
<td>Non-Emergency Medical Transportation Services</td>
</tr>
<tr>
<td>Home Health Services</td>
</tr>
<tr>
<td>Case Management</td>
</tr>
<tr>
<td>Health Education Classes</td>
</tr>
</tbody>
</table>
**Dental Care**

The Dental care services included in the DC Healthcare Alliance Benefit program is a preventative and diagnostic focused benefit. This benefit covers periodic cleanings, oral evaluations, and diagnostic x-rays. Basic and major restorative services have been assumed to be excluded from the benefit program.

The cost of this benefit was estimated from a survey of western state Medicaid programs. The beneficiary categories related to the Temporary Aid for Needy Families (TANF) program adjusted for the age gender distribution of the entire under 200% Federal Poverty Level population assumed for this study.

**Pre-Natal & Post-Natal Home Visits**

**Description**

In the District of Columbia, two initiatives provide pre-natal and post-natal home visits for infants from low SES backgrounds: the Newborn Home Visiting Initiative and Case Management and Care Coordination. These initiatives are both funded by Title V Grants, with budgeted annual amounts represented in Table 3-3.

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
<th>Quantity</th>
<th>Approx Cost per Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn Home Visiting Initiative</td>
<td>$723,000</td>
<td>9,750</td>
<td>$74.15</td>
</tr>
<tr>
<td><em>Welcome Baby Package</em></td>
<td></td>
<td>6,000</td>
<td></td>
</tr>
<tr>
<td><em>Initial health assessments</em></td>
<td></td>
<td>3,750</td>
<td></td>
</tr>
<tr>
<td>Case Management and Care Coordination</td>
<td>$500,000</td>
<td>275</td>
<td>$1,818.18</td>
</tr>
</tbody>
</table>

The Title V Social Security Act aims, in brief, “To improve the health of all mothers and children consistent with the applicable health status goals and national health objectives established by the Secretary under the Public Health Service Act.” This aim includes assuring mothers and children, in particular those with low income or with limited availability of health services, “access to quality maternal and child health services.” It includes also, “to reduce infant mortality and the incidence of preventable diseases and handicapping conditions among children and otherwise to promote the health of mothers and infants by providing prenatal, delivery, and postpartum care for low income, at-risk pregnant women, and to promote the health of children by providing preventive and primary care services for low income children.” Title V grants offered by are offered through each state.

**Newborn Home Visiting Initiative**

In the District of Columbia, The Newborn Home Visiting Initiative enables new mothers to receive a nurse home visit within 48 hours of their discharge from the hospital. Women and infants living in the sections of the city that have the highest rates of neonatal mortality
receive first priority for these services. The Newborn Home Visiting Initiative includes Welcome Baby Packages and Initial Health Assessments.

Each Welcome Baby Package includes an invitation to schedule a nurse home visit, receive immediate case management services, and information on the Maternal and Family Health Administration’s HEALTHLINE and community-based providers.

Initial health assessments are provided by licensed community health nurses who also assist mothers in attaining a primary care physician and other family support services.

**Case Management and Care Coordination**

The Case Management and Care Coordination initiative provides targeted outreach and home visits to high-risk families. The home-based care begins during the prenatal period and continues through the child’s early preschool years. The focus of this initiative is to develop a community-based network of outreach services for mothers and infants that reduce infant morbidity and mortality. The initiative provides health and psycho-social support services as well as prevention of child abuse and neglect.

**Enhanced Benefits for Chronic conditions**

West Virginia is converting to a two plan benefit system for Medicaid enrollees called Mountain Health Choice. The benefit differentials include the expansion of coverage to chronic condition management programs, integrated chemical dependency and mental health services, and unlimited prescriptions. More detailed information on the benefit differentials can be found at http://www.wvdhhr.org/bms/oAdministration/Medicaid_Redesign/redesign_BenGlanceAdult20070126.pdf.

In discussions with Shannon Reilly, with the West Virginia Bureau of Medical Services (BMS) the additional cost and benefits of the benefit enhancements are too immature to estimate. She expected the chronic condition programs at least cost neutral possibly contribute savings to the overall program. In the conversion, they assumed the prescription drug benefit changes would be the main cost difference between the two benefit packages. West Virginia BMS was unwilling to release the specific assumptions behind their estimates.

Thus, the cost of this benefit was estimated from a survey of western state Medicaid programs. The beneficiary categories related to the Temporary Aid for Needy Families (TANF) program adjusted for the age gender distribution of the entire under 200% Federal Poverty Level population assumed for this study.
Appendix 4: Housing
Prepared by Yvonne Chueh, Central Washington University

Summary

The research \textsuperscript{xii, xiii} discovered that there is a relationship between the condition of people’s housing and their health. According to the study, Moving to Opportunity for Fair Housing Demonstration (MTO), conducted in by HUD in 1994, households that received housing vouchers to move to more affluent neighborhoods (the MTO treatment group) and households that received housing vouchers to pay for rent in privately owned residence instead of public housing (the Section 8 comparison group) both improved their health status more that expected. The Section 8 comparison group improved more than the MTO treatment group. Follow up studies showed that the better the neighborhood the greater the health improvement. Under the assumption that privately owned residence are higher quality or better maintained (which is supported by this study), this show that it is more beneficial to provide housing vouchers to low-income households to live in privately owned residence.

The U.S. government provides support for low-income households through the U.S. Department of Housing and Urban Development (HUD). These households include those with disabilities, young people at risk of homelessness, person with HIV/AIDS, and senior citizens. They are provided with housing assistance for homeownership, home renovation, rental assistance, and home assistance for the elderly. The purpose of this study is to estimate the average costs of these programs and average costs per household who fall on each category. Most of our sources were obtained through HUD, yet our study does not include all other programs provided by this institution. Other sources include The Center on Budget and Policy Priorities, and the Administration on Aging (AOA), all being interconnected with HUD.

Results

Table 4-1 presents the costs of HUD Housing Assistance Benefits, Table 4-1 presents the National Report on Low-Income Housing Assistance for 2005.

<table>
<thead>
<tr>
<th>Program name</th>
<th>Year</th>
<th>Total annual cost</th>
<th>Annual cost per household</th>
</tr>
</thead>
</table>
| Housing Choice Voucher Program (HCV) | 2000 | WA DC: $34,979,472
Nationwide: $6.88 billion | WA DC: $7344
Nationwide: $4704 |
| Youthbuild Program | 2006 | WA DC: $2,800,000
Nationwide: $45,460,000 | WA DC: n/a
National: $14,780 |
| Housing Opportunities for Persons with AIDS (HOPWA) Program | 2006 | WA DC: n/a
Nationwide: $27,484,189 | WA DC: n/a
Nationwide: $25,260 per household |
### Table 4 - National Report on Low-Income Housing Assistance in 2005

<table>
<thead>
<tr>
<th>Program name</th>
<th>Year</th>
<th>Total annual cost</th>
<th>Annual cost per household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Choice Voucher Program</td>
<td>2005</td>
<td>$14.8 billion</td>
<td>$6,990</td>
</tr>
<tr>
<td>Project-Based Section 8 Rental Assistance</td>
<td>2005</td>
<td>$5.3 billion</td>
<td>$4,098</td>
</tr>
<tr>
<td>Public Housing</td>
<td>2005</td>
<td>$5.2 billion</td>
<td>$4,475</td>
</tr>
<tr>
<td>Rural Rental Housing Program</td>
<td>2005</td>
<td>$692 million</td>
<td>$2,661</td>
</tr>
<tr>
<td>Average</td>
<td>2005</td>
<td>$26 billion</td>
<td>$5,300</td>
</tr>
</tbody>
</table>

Source: Center on Budget and Policy Priorities (CBPP) [http://www.cbpp.org](http://www.cbpp.org)

### Supplements for Home Ownership & Housing Repair

We list HUB housing assistance programs and people they serve (low-income, elderly and disabled) as follows:
Housing Choice Voucher Program (HCV)\textsuperscript{IV}

Through tenant-based vouchers, provides rental subsidies for standard-quality units that are chosen by the tenant in the private market. Households in this program have incomes below 30\% of the area median.

The Housing Choice Voucher Program, formerly known as “Section 8”, provides assistance for very low-income households (single or family), the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market.

Participants who receive vouchers search for their own housing, which may include single-family homes, townhouses, and apartments, or even the family's present residence. Housing Choice Voucher assistance is portable anywhere in the United States, including Guam, Puerto Rico, Alaska, Hawaii, and the Virgin Islands.

Provided the housing they select meets the requirements of the program, the housing subsidy is paid to the landlord directly by the Housing Opportunities Commission on behalf of the family.

Washington DC—from 4,763 households (Reported in HCV in the District of Columbia) with an average family size of 3.0, the median unadjusted household income is $8,058, while the average monthly rent is $866. The average monthly subsidy provided by HCV for this area is $612 per month.

Washington, DC-MD-VA-WV (as one of the 50 largest metropolitan statistical areas) has 19,182 reported households being helped through HCV with an average family size of 2.9, the median unadjusted household income is $10,140, while the average monthly rent is $866. The average monthly subsidy provided by HCV for this area is $581 per month.

Nationally, 1,462,106 households are in the HCV program with the median unadjusted household income at $10,118, while the average monthly rent for the households in the program is $644. The average monthly subsidy provided by HCV for this area is $392 per month.

Youthbuild Program\textsuperscript{V,VI}

It provides economically disadvantaged young adults with opportunities to obtain education, employment skills, and meaningful on-site work experience and to expand the supply of affordable housing for homeless and low- and very low-income persons.

National Fiscal Year 2006 Youthbuild Grant Awards—$45,460,000 were awarded by HUD to help an estimated 3,075 young people earn their high school diplomas, to train them for a future in the construction trades while producing 702 homes for lower income families, many facing homelessness. An average of $14,780 per student will be invested to achieve this goal.

Washington, DC—Out of the $45,460,000 in grants, $2,800,000 was distributed among different associations to help youth in the Washington DC area.
An additional $3,075,200 was issued in technical assistance to construct affordable housing while training at-risk young people in the construction trades. The grantees provide young people between the ages of 16 and 24 with on-the-job training to acquire the construction skills necessary to build and renovate single-family homes and multi-family apartments. The homes are then sold at affordable prices to low and very low-income persons, as well as to homeless individuals and families.

**Housing Opportunities for Persons with AIDS (HOPWA) Program**

The HOPWA program provides formula allocations and competitively awarded grants to eligible states, cities, and nonprofit organizations to provide housing assistance and related supportive services to meet the housing needs of low-income persons and their families living with HIV/AIDS. These resources help clients maintain housing stability, avoid homelessness, and improve access to HIV/AIDS treatment and related care while placing a greater emphasis on permanent supportive housing.

HOPWA 2006 Grant. About $27,484,189 in funding was awarded by HUD to support 26 programs in 15 states to provide their clients with three years of permanent supportive housing. This award is projected to assist 1,088 households. Approximately $25,260 per household will be invested in order to achieve its purpose.

An additional technical assistance grant of $1,900,000 was provided by HUD to four associations in the states of MA, NC, VA, and WA. This grant is being used to train current and prospective grantees to design and implement comprehensive strategies to meet the complex housing and service needs of persons living with AIDS and their families.

**Community Development Block Grants (CDBG)**

Provides annual grants on a formula basis to entitled communities to carry out a wide range of community development activities directed toward neighborhood revitalization, economic development, and improved community facilities and services.

In 2006, a grand total of $939,000 was distributed among four cities: Washington, DC; Cambridge, MA; Laurinburg, NC; Fairfax, VA.

**The HOME Program (HOME Investment Partnerships)**

Grants to states and units of general local government to implement local housing strategies designed to increase homeownership and affordable housing opportunities for low- and very low-income Americans.

$7,006,529 was implemented in February 2006 to support 17 associations in 15 states, including Washington, DC.

**Continuum of Care Programs**
These awards will help existing grantees or potential applicants of HUD’s homeless assistance programs to plan for and implement strategies that result in more permanent housing solutions for persons and families without a home of their own.

In February of 2006, $9,099,606 was issued for this purpose to 19 states, including Washington, DC.

**Community Housing Development Organizations (CHDOs)**

This funding is provided to help community housing development organizations (CHDOs) to more effectively produce affordable housing at affordable levels.

In 2006, the amount conveyed for this purpose was of $6,910,000 among 25 organizations in 18 states, including Washington, DC.

**Family Self-Sufficiency (FSS) Program**

Promotes the development of local strategies to coordinate public and private resources that help housing choice voucher program participants and public housing tenants obtain employment that will enable participating families to achieve economic independence.

A grant of $47,494,003 was awarded by HUD aimed to help low-income people across the nation get job training, employment and homeownership counseling. Families benefiting from this program were required to sign a contract in order to insure an increase in their socioeconomic status. This contract stipulates that the head of the household will get a job and the family will no longer receive welfare assistance at the end of a five-year term. As the family’s income rises, a portion of that increased income is deposited in an interest-bearing escrow account. If the family completes the contract, the family receives the escrow funds. To date, more than 450 housing agencies have used the HCV Homeownership program to help nearly 5,000 low-income families become first-time homeowners. The average support per family approximates $9,500.

**Supportive Housing for the Elderly (Section 202 Grants)**

Provides assistance to expand the supply of housing with supportive services for the elderly. It provides very low-income elderly with options that allow them to live independently but in an environment that provides support activities such as cleaning, cooking, and transportation. For eligibility, households must be classified as “very low-income”. This classification is based on the 50% of the national median family income, for which a one-person household would need to have an income equal to or less than $20,820 a year.

In September of 2006, HUD awarded $14 million in grants to help expedite the development of 62 rental housing projects for very low-income senior citizens to assist elderly housing projects in 26 states.

$511.9 million nationwide were granted to assist very low-income elderly in October, 2006.
In October of 2006, California, Connecticut, New Jersey, New York and Pennsylvania received a total of $7,849,336 in grants to upgrade apartments equipped to meet the elderly physical needs.

**Resident Opportunities and Self-Sufficiency (ROSS) Program**

Grants for supportive services and resident empowerment activities.

In January of 2007, HUD awarded $8,796,564 in grants to 32 public housing agencies and non-profit organizations across the country for supportive services that help elderly and disabled public housing residents. The grants enable these entities to hire project coordinators to work with elderly residents and those with disabilities to link them with supportive services available in their communities, such as transportation, health and wellness programs, and nutritious meal services.

**Supportive Housing for Persons with Disabilities (Section 811 Grants)**

Provides assistance to expand the supply of housing with the availability of supportive services for persons with disabilities.

In October of 2006, HUD awarded $121.3 million nationwide to assist very low-income people with disabilities. The housing consists of mostly newly constructed small apartment buildings. Residents will pay 30 percent of their adjusted income for rent and the federal government will pay the rest. A household income cannot exceed 50 percent of the area median income to be classified as “very-low income”; nevertheless, most households receiving Section 811 assistance have an income less than 30% of the area median, meaning that a one-person household will have an annual income of about $12,550.

**Center on Budget and Policy Priorities**

Has a report on low-income housing assistance and shows data from FY 05.

This report presents a budget for four different housing assistance programs, which provide help for low-income families to ease the burden for housing expense to about 30% of their income.

For Housing Choice Voucher Program, 2,116,850 housing units have been provided with a funding of about $14.8 billion, which averages $6,990 per household assisted. This program provides families with vouchers they use to help pay for rental housing in the private market.

Project-Based Section 8 Rental Assistance provided 1,293,000 housing units with a funding amount of $5.3 billion, averaging $4,098 per household. This program helps cover the operating costs of privately owned housing in order to make it affordable for low-income families.

Public Housing provided 1,162,000 housing units with a budget of $5.2 billion, which amounts to $4,475 per household. It provides affordable housing to nearly 1.2 million of the nation’s poorest families.
Rural Rental Housing Program provided 260,000 housing units with a fund of $692 million, giving up $2,661 per household. It makes housing units affordable for low-income and very low-income households.

On average, it costs $26 billion to help 4,831,850 households, which averages approximately $5,300 per household.

**Aggregate Cost Estimation**

Providing rental assistance for low-income and very-low-income families and households is intended to lower the percent of the households income spent on housing expense through vouchers and subsidies. These programs cost approximately $7,000 - $7,350 per household annually in the Washington D.C. area. Other programs that not only provide housing assistance, but job training as well, are more in the area of $9,500 - $15,000 per household in the program yearly on a national scale. There are also programs that cost approximately between $2,600 and $5,000 per household per year, once again nationally. These programs provide affordable housing rather than subsidizing the low-income households so they can find their own public housing.

According to a study performed by the Joint Center for Housing Studies of Harvard University on housing titled “The State of the Nation’s Housing,” federal assistance to very low-income households reaches only about one quarter of eligible renters and virtually no homeowners in 2005. It mentions that despite about $38 billion in annual appropriations for housing and community development, the federal government has been unable to improve on this issue. The study also makes reference to housing cost-burden, which is defined as the household’s spending on housing accounting to more than 50% of their income. It states that nearly half of low-income households—a total of 8.2 million renters and 5.0 million homeowners—have severe cost-burdens. One out of eight of these households works at least full-time, a fifth are elderly, and an additional fifth are non-elderly but disabled.
Appendix 5: Mobility and Transportation

Prepared by Yvonne Chueh, Central Washington University

Summary
The Washington DC area has a variety of public transportation options: Metrobus, Metrorail, Maryland Area Railroad Commuter (MARC), and Virginia Railway Express (VRE). The annual cost per capita was not adjusted for the possibility that low income individuals may have different commuting patterns than the average Washington D.C. commuter. The final cost per capita ranges from $528 to $3,500, with the Metro System (Bus & Rail) costing $2,088.

Results

<table>
<thead>
<tr>
<th>Options</th>
<th>Year</th>
<th>Annual cost per capita</th>
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</thead>
<tbody>
<tr>
<td>Metrobus only</td>
<td>2007</td>
<td>$528</td>
</tr>
<tr>
<td>Metrorail only</td>
<td>2007</td>
<td>$1,560</td>
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<tr>
<td>Metro system</td>
<td>2007</td>
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<tr>
<td>Commuter train MARC only</td>
<td>2007</td>
<td>$1,200-$3,000 (by zones)</td>
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<tr>
<td>Commuter train MARC with Metro system</td>
<td>2007</td>
<td>$1,980-$3,780 (by zones)</td>
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<tr>
<td>Commuter train VRE only</td>
<td>2007</td>
<td>$1,500-$2,916 (by zones)</td>
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<tr>
<td>Commuter train VRE with Metro system</td>
<td>2007</td>
<td>$2,688-$3,576 (by zones)</td>
</tr>
<tr>
<td>Commuter bus</td>
<td>2007</td>
<td>$600-$2,400 (by zones)</td>
</tr>
</tbody>
</table>

Calculations based on the information from: https://www.commuterpage.com/

Federal Tax-Free Benefit

Federal legislation allows employers to provide employees with a tax-free or pre-tax transit benefit of up to $110 per month and a parking benefit up to $215 per month in calendar year 2007.

Washington DC Public Transit

The monthly cost of using public transit of Washington DC per passenger ranging from a low of $44 (using Metrobus only) to a high of $174 (using both Metrobus and Metrorail) is estimated based on the following fare structure without the parking cost considered. There is an employer fare program named SmartBenefits offered by WMATA (Washington Metropolitan Area Transit Authority) whose participants can use their SmarTrip® card for Metrobus, Metrorail, parking at Metro operated facilities, and participating van pools. SmartBenefits is a web-based program that lets employers conveniently load the dollar value of an employee’s Metrocheck transit, Van Pool and Metro station parking benefits directly to an employee’s SmarTrip® card. The employees who use:

- Metrobus
- Metrorail
Metro station parking services will be provided with the serial number of their registered SmarTrip® card. The employers simply load their employees’ benefit via a secure web site on a SmarTrip® card – and it’s done. By reducing or eliminating the purchase and distribution of paper Metrocheks, SmartBenefits saves the time, reduces administrative costs and streamlines the entire process of providing employees with benefits for transit, van pools, and parking at Metro stations. SmartBenefits® is rapidly gaining favor among employers and employees, close to 70,000 employees now receive their monthly commuting benefit through SmartBenefits®.

The Metro System

The Metro System is comprised of the regional bus (Metrobus) and rail (Metrorail) public transit systems in the Washington, D.C. area, operating in D.C., Virginia, and Maryland. Cities and counties in the area contribute to the cost of operation. The Metro System is administered by The Washington Metropolitan Area Transit Authority (WMATA).

Metrobus

Metrobus is the area's regional bus service and the fifth largest bus system in the United States, with a fleet of over 1,450 buses operating on approximately 350 routes. Local jurisdictions also have their own local bus systems to supplement Metrobus.

Metrorail

Metrorail is the regional subway system, often referred to simply as "Metro." The Metrorail system comprises five color-coded lines: blue, green, orange, red and yellow. The lines intersect at various points, making it possible for passengers to change trains and travel anywhere on the system. Service frequency varies according to day and time from a low of 15 minutes between trains on weekend evenings to a high of 3 minutes between trains in the peak of the rush hour period.

MetroAccess

Is Metro's curb-to-curb paratransit service, complementing Metrorail, Metrobus and local bus service for people with disabilities.

The Metro system accepts Metrochek, a farecard voucher provided as an employee benefit by many Washington, D.C. area employers, including the federal government.
Contributions to Health

In 2000, Americans used public transportation 9.4 billion times, representing the highest transit ridership in 40 years. 81% of people polled link public transportation to improved quality of life, believing that increased public investment in public transportation strengthens the economy, creates jobs, and reduces traffic congestion and air pollution, and saves energy.xxiv

In 2006 – the first time in 49 years, 10.1 billion trips on local public transportation were made by Americans. Over the last decade, public transportation’s growth rate outpaced the growth rate of the population and the growth rate of vehicle miles traveled on our nation’s highways.xxv

A recent studyxxvi revealed that households that are likely to use public transportation on a given day save over $6,200 every year – more than the average household pays for food in a year, compared to a household with no access to public transportation service. These households have two workers, one car and are within three-quarters of a mile of public transportation.

Low-income urban residents are more reliant on public transportation than non-low income residents for their works, visiting medical center and other daily activities. Following statistics show that majority passengers in the public transportation are from low-income families:
Appendix 6: Nutrition

Prepared by Amy Tiedemann, Rutgers University

Summary

We turned to the US Department of Agriculture, Food and Nutrition Service division, as well as US Department of Housing and Urban Development for cost information on nutrition programs. Due to limited direct federal level activity in the area of supermarkets, we also did a thorough web-search for further information on state efforts to open supermarkets in low-income areas. The average annual per capita cost across the programs where per capita numbers were available or we were able to calculate is $513.75.

Results

Table 6-1 Nutrition

<table>
<thead>
<tr>
<th>Description</th>
<th>Year</th>
<th>Per Capita cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and Supplement programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Stamp Program</td>
<td>2006</td>
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<tr>
<td>Women-Infants-Children (WIC)</td>
<td>2006</td>
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<tr>
<td>Child/Adult Care Food Program</td>
<td>2006</td>
<td>$1.18 (per meal)</td>
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<tr>
<td>Summer Food Service Program</td>
<td>2006</td>
<td>$2.36 (per meal)</td>
</tr>
<tr>
<td>Nutrition at school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National School Lunch Program</td>
<td>2006</td>
<td>$271</td>
</tr>
<tr>
<td>School Breakfast Program</td>
<td>2006</td>
<td>$209</td>
</tr>
<tr>
<td>Special Milk Program</td>
<td>2006</td>
<td>$0.15 (per half-pint)</td>
</tr>
<tr>
<td>Access to grocery stores programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh Food Financing Initiative (PA)</td>
<td>2006</td>
<td>$27</td>
</tr>
<tr>
<td>Federal Empowerment Zone/Enterprise Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>1994-2004</td>
<td>NA – see text</td>
</tr>
<tr>
<td>Community Development Block Grant</td>
<td>2006</td>
<td>NA – see text</td>
</tr>
</tbody>
</table>

Food and Supplemental Programs

Description

The Food Stamp Program serves as the first line of defense against hunger. It enables low-income families to buy nutritious food with Electronic Benefits Transfer (EBT) cards. Food stamp recipients spend their benefits to buy eligible food in authorized retail food stores. The Program is the cornerstone of the Federal food assistance programs, and provides crucial support to needy households and to those making the transition from welfare to work.

The Special Supplemental Nutrition Program for Women, Infants, and Children - better known as the WIC Program - serves to safeguard the health of low-income women, infants, & children up to age 5 who are at nutritional risk by providing nutritious foods to supplement diets, information on healthy eating, and referrals to health care.

USDA’s Child and Adult Care Food Program plays a vital role in improving the quality of day care and making it more affordable for many low-income families. Each day, 2.9 million children receive nutritious meals and snacks through CACFP. The program also provides
meals and snacks to 86,000 adults who receive care in nonresidential adult day care centers. CACFP reaches even further to provide meals to children residing in emergency shelters, and snacks and suppers to youths participating in eligible after school care programs.

The Summer Food Service Program (SFSP) was created to ensure that children in lower-income areas could continue to receive nutritious meals during long school vacations, when they do not have access to school lunch or breakfast. But, although millions of children depend on nutritious free and reduced-price meals and snacks at school for 9 months out of the year, just a fraction of that receive the free meals provided by the SFSP during the summer months. The SFSP is the single largest Federal resource available for local sponsors who want to combine a feeding program with a summer activity program.

**Nutrition at School Programs**

**Description**

The National School Lunch Program (NSLP) is a federally assisted meal program operating in over 101,000 public and non-profit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to more than 30 million children each school day. In 1998, Congress expanded the NSLP to include reimbursement for snacks served to children in after school educational and enrichment programs to include children through 18 years of age.

The Food and Nutrition Service (FNS) administers the program at the Federal level. At the State level, the NSLP is usually administered by State education agencies, which operate the program through agreements with school food authorities.

The School Breakfast Program (SBP) provides cash assistance to States to operate nonprofit breakfast programs in schools and residential childcare institutions. The program operates in more than 72,000 schools and institutions, serving a daily average of approximately 8.4 million children. It is administered at the Federal level by FNS. State education agencies administer the SBP at the State level, and local school food authorities operate it in schools.

The Special Milk Program (SMP) provides milk to children in schools and childcare institutions who do not participate in other Federal meal service programs. The program reimburses schools for the milk they serve. Schools in the NSLP or SBP may also participate in the SMP to provide milk to children in half-day pre-kindergarten and kindergarten programs where children do not have access to the school meal programs.

Descriptions of all the above food and nutrition programs can be found at the USDA’s Food and Nutrition Service Department website: [http://www.fns.usda.gov/fns/default.htm](http://www.fns.usda.gov/fns/default.htm)

**Access to Grocery Stores Program**

**Description**

The Pennsylvania Fresh Food Financing Initiative (FFFI) is an innovative program that works to increase the number of supermarkets or other grocery stores in under-served communities
across Pennsylvania. The initiative serves the financing needs of supermarket operators that plan to operate in these under-served communities where infrastructure costs and credit needs cannot be filled solely by conventional financial institutions. The Food Trust, the Greater Philadelphia Urban Affairs Coalition (GPUAC), and The Reinvestment Fund (TRF) have formed a public-private partnership to support the Pennsylvania Fresh Food Financing Initiative, working with the Commonwealth of Pennsylvania. The State has appropriated over $20 million for this initiative and TRF is leveraging this funding with an additional $60 million to form an $80 million multi-faceted pool that will be a one-stop-shop for financing fresh food retailers in under-served areas. The matching $60 million will come from private sources as well as TRF’s New Markets Tax Credits allocation.

http://www.thefoodtrust.org/php/programs/supermarket.campaign.php#1

The Empowerment Zone (EZ) /Enterprise Communities (EC) programs are one of the most recent large-scale federal effort intended to revitalize impoverished urban and rural communities. There have been three rounds of EZ and two rounds of EC, all of which are scheduled to end no later than December 2009. Round I EZ and EC implemented a variety of activities using $1 billion in federal grant funding from the Department of Health and Human Services (HHS), and as of March 2006, the designated communities had expended all but 15% of this funding. Most of the activities that the grant recipients put in place were community development projects, such as projects supporting education and housing. Other activities included economic opportunity initiatives such as job training and loan programs.


The Community Development Block Grant (CDBG) program is a flexible program that provides communities with resources to address a wide range of unique community development needs. Beginning in 1974, the CDBG program is one of the longest continuously run programs at HUD. The CDBG program provides annual grants on a formula basis to 1,180 general units of local government and States.

http://www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm

Several states and communities have used EZ/EC and CDBG funding to finance the building of supermarkets in impoverished areas. For example, Rochester, New York formed a public-private coalition and used EZ/EC and CDBG funds along with other funding to open or expand 5 stores in the city.

http://www.preventioninstitute.org/CHI_supermarkets.html#nine
Appendix 7: Community Center Programs
Prepared by Yvonne Chueh, Central Washington University

Summary

Through computerized search, the Central Washington University research team found a list of exemplary local community centers in the U.S. providing programs that meet community needs, enhance the quality of life and promote community involvement through the provision of recreation, cultural activities, education, health, wellness and fitness activities, and family life activities in facilities that are well maintained, accessible and safe. However, we were not able to find any document from these community centers that summarize the costs for specific programs including violence reduction, health promotion, and cognitive behavior therapies to be addressed in this report. We researched published documents of nationwide major cities’ departments of human services, there were no costs/funding information directly linked to community center programs except for Seattle’s Community Facilities Loan Funds in her 2005-2008 Consolidated Plan. As a result, we proceed by extending our scope of “community center” to a broader yet well defined meaning as in “community settings”.

Although risk factor and morbidity and mortality outcome research is viewed by some authorities as an essential component for a community program to be considered “big league”, community-based outcome research that is done properly is very expensive and difficult. Because of a plethora of problems, such as changing secular trends, few analysis units, sampling problems, and changes in the economic climate which can influence variables such as migration patterns and the amount of community resources to support intervention, even the best-endowed research programs have great difficulty detecting statistically significant effects. Nevertheless, we have summarized existing prevention/intervention programs we can find in these community settings. Various strategies and key components contributing the success of the intervention programs in community settings are summarized in this report.

Description

Community settings are the places, networks, events, communications channels, and combinations of these settings that, together, comprise the matrix within which a community’s enterprise takes place. Common settings for prevention programs are work places, places of worship, the health care system, and schools.

1. Workplace interventions

   Worksites are excellent locations for comprehensive and focused risk reduction programs, including those focusing on physical activity, smoking, hypertension, diet and weight control. An emerging literature suggests that worksites can be effective and efficient sites and can even result in significant cost savings. State Health Agencies can help link smaller worksites where independent in-house programs are not feasible.
2. **Interventions at places of worship**

   The appeal of intervention at places of worship, with a high level of volunteer involvement, is substantial. Many religious organizations are receptive to health-related programming, they have access to large numbers of people, they have effective communication channels and adequate meeting facilities, and they are oriented to volunteerism. Assuming that staff with the requisite skills and church-based experience is available, such programs seem highly transferable.

3. **Health provider interventions**

   A vital role for the health provider community is to provide endorsement of the program and stimulate the participation of other community leaders. It is clear that a community turns first to its medical leaders when questions about new health promotion programs arise. In many communities, nurse practitioner, physician assistants, chiropractors, podiatrists, dietitians, and others are in daily contact with patients and many are leaders of community organizations. This group of providers is an excellent channel for presentation of health information and direct behavior change efforts.

4. **School-based interventions**

   All the exemplar programs have emphasized school-based programs for children and adolescents. Part of the rationale for intervening with youth is the opportunity to engage their parents in health promotion activities.

5. **Contests and competitions**

6. **Self-help programs**

7. **Mass media**

8. **Screening**

---

**Program Success**

Balanced intervention strategies promote health behavior at the individual level and create a supportive social and physical environment. The following strategies are often used to change individual behavior.

- **Contests and competitions**: have been used to promote smoking cessation and weight loss; considerably less expensive than taking classes or traditional methods.

- **Self-help programs**: easy to deliver and inexpensive for smoking control, weight control, and physical activity.

- **Mass media**: small programs with limited budgets and expertise for objectives other than behavior change; to supplement interventions; most effective in conjunction with
complementary messages delivered through other channels, such as school programs, adult education programs, and self-help programs; free or very inexpensive media channels such as inserts in utility bills, grocery bag flyers, community newsletters.

- Screening: for the purpose of mass education and referral for medical evaluation.

The core of a successful program is the community organization process. Practical outcomes of the community organization process are many: the identification of key community leaders; the activation of those leaders on behalf of the project; the stimulation of citizens and organizations to volunteer time and offer resources; the adoption of prevention as a theme in the workplace, in schools, and in churches. In this manner, the community organization process extends and leverages scarce core resources, and at the same time develops in the community the pride and sense of ownership that is critical to a community program’s success.

**Programs to Reduce Violence**

**Description**

**Violence and Public Health**

A vision for how Americans can work together to prevent the epidemic of violence now raging in our society has emerged from the public health community. This vision arises from the recognition that, by any measure, violence is a major contributor to premature death, disability, and injury. On an average day in the United States, 65 people die from and over 6,000 people are physically injured by interpersonal violence. The average annual financial costs of medical and mental health treatment, emergency response, productivity losses, and administration of health insurance and disability payments for the victims of assaultive injuries occurring from 1987 to 1990 were estimated at $34 billion, with lost of quality of life costing another 145 billion.

**Blueprint Programs to Reduce/Prevent Violence**

Table 7-1 on the next page summarizes the 11 model programs, or Blueprints, have been proven to be effective in reducing adolescent violent crime, aggregation, delinquency, and substance abuse and predelinquent childhood aggression and conduct disorder. The Blueprints for Violence Prevention Initiative is a comprehensive effort to provide communities with a set of programs whose effectiveness has been scientifically demonstrated. With the Office of Juvenile Justice and Delinquency Prevention’s (OJJDP’s) support, the Initiative also provides the information necessary for communities to begin replicating programs locally.
### Table 7-1 Blueprint Programs to Reduce Violence

<table>
<thead>
<tr>
<th>Program</th>
<th>Year</th>
<th>Cost per participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multidimensional treatment foster care</td>
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<tr>
<td>Multisystemic therapy</td>
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<tr>
<td>Functional family therapy</td>
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<tr>
<td>Big brother big sisters</td>
<td>1999</td>
<td>$1,009</td>
</tr>
<tr>
<td>Nurse home visitation</td>
<td>1999</td>
<td>$7,403</td>
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<tr>
<td>Quantum opportunities</td>
<td>1999</td>
<td>$18,292</td>
</tr>
</tbody>
</table>

### Promising Programs Identified by Blueprints

- Baltimore Mastery Learning (ML)
- CASA START (Striving Together To Achieve Rewarding Tomorrows, from the National Center on Addiction and Substance Abuse)
- FAST (Families and Schools Together)
- I Can Problem Solve
- Intensive Protective Supervision Project (IPSP)
- LIFT (Linking the Interests of Families and Teachers)
- Parent Child Development Center
- Perry Preschool Program
- Preparing for the Drug-Free Years
- Preventive Intervention
- Project Northland
- Project PATHE (Positive Action Through Holistic Education)
- Project (STATUS) Student Training Through Urban Strategies
- School Transitional Environmental Program (STEP)
- Seattle Social Development Project
- Strengthening Families Program
- Syracuse Family Development Research Program (FDRP)
- Yale Child Welfare Project

11 Programs (out of over 500) Meeting Rigorous Standards: evidence of deterrent effect when using a strong research design, sustained effects, multiple site replication, analysis of mediating factors, costs versus benefit

- The Midwestern Prevention
- Big Brothers Big Sisters of America
- Functional Family Therapy
- The Quantum Opportunities Program
- Life Skills Training
- Multisystemic Therapy
- Prenatal and Infancy Home Visitations by Nurses
- Multidimensional Treatment Foster Care
The Impact of Violence on the Poor

Consistent and compelling evidence indicates that poor people bear a disproportionate share of the public health burden of violence in our society. Homicide victimization rates consistently have been found to be highest in those parts of cities where poverty is most prevalent.

Public Health Contributions to Violence Prevention

- **Focus on Prevention** The Perry Preschool Project, an educational program directed at the intellectual and social development of preschool, has been credited with reducing the cost of delinquency and crime, including violence, by $1,400 per child.

- **Public Health Science in Action** Public health model of a scientific approach to prevention consists of 4 steps: Define the problem, data collection/surveillance → Identify causes, risk factor identification → Develop and test inventions, evaluation research → Implement interventions and measure prevention effectiveness, community intervention/demonstration programs, training, public awareness.

- **Integrating the Efforts of Diverse Disciplines, Organizations, and Communities** Public health brings a tradition of integrative leadership, by which we can organize a broad array of scientific disciplines, organizations, and communities to work together creatively on solving the problem of violence. Public health is establishing links with each of the sectors that figures in violence prevention: education, labor, public housing, media, business, medicine, and criminal justice. They are being encouraged to organize and coordinate their involvement in federal, state, and local prevention programs.

- **Centers for Disease Control and Prevention (CDC)** Implemented an initiative to prevent violence against women.

- **American Medical Association (AMA)** Has undertaken an important initiative to prevent family violence. AMA launched a major media campaign, a national coalition of physicians against violence, and a medical resource center to collect, evaluate, and disseminate information about family violence.

Programs to Promote Exercise & Other Healthy Behaviors

*Description*

*Importance*
Sedentary behavior has been identified as one of the leading preventable causes of death, and an inverse linear relationship exists between volume of physical activity behavior and all-cause mortality. Moreover, participation in regular physical activity decreases the risk of cardiovascular disease, type 2 diabetes mellitus, osteoporosis, depression, obesity, breast cancer, colon cancer, and falls in older adults.

Finding

In a large effort studying physical activity intervention (using mass media, print media, and information technology), the researchers screened over 200 studies and selected 28 studies by using social cognitive theory, the transtheoretical (stages-of-change) model, and social marketing theories. Of these well selected, 7 were mass media campaigns at the state or national level; 4 were delivered through health care; 6 utilized the workplace as the channel for delivery; and 11 were in other community settings listed above. Of the 28 studies reviewed, 16 utilized a media-based intervention in combination with face-to-face counseling and 12 entailed no face-to-face contact. For most of the studies reviewed, cost information is not included. No conclusions about cost-effectiveness are able to be reached.

Cost Estimate

Contests and competitions have been used to promote smoking cessation and weight loss. Lotteries with prizes for participation (rather than reward for behavior change) are a good way to recruit people into more intensive behavior change programs. A contest can provide short-term smoking quit rates that are at least twice that which are typically found in the general population. Extrapolating very roughly from MHHP (Minnesota Heart Health Program) data, costs of a well-endowed quit-smoking contest can be expected to be about $650 per 10,000 population (1993 data). Less is known about the effectiveness of competition for weight control than for smoking control. At least one analysis showed that the cost per pound lost using a competition format is considerably less than the cost of using more traditional methods. CHIP’s (Community Health Improvement Program, in Lycoming County, Pennsylvania) experience with weight-control competitions at the worksites said “recruitment was high, attrition low, weight loss was substantial, and cost-effectiveness was favorable. The PHHP (Pawtucket Heart Health Program) experience with weigh-in was so positive that the community instituted monthly weigh-in.

Cost Effective

Self-help programs are low-intensity interventions that have been developed primarily for smoking control but also for weight control and physical activity. These programs are appealing because they are easy to deliver and inexpensive. The Stanford project (SFCP Stanford Five City Project) compared the cost effectiveness of three smoking control interventions. The short-term quit rates (1-3 months) were 35% for the class, 22% for the contest, and 21% for the self-help program. The cost per quitter in 1981 dollar was estimated at between $235 to $399 for the class, $129 to $236 for the contest, and $22 to $144 for the self-help program. Sensitivity analyses among the three interventions concluded that cost effectiveness would favor the self-help program. The very popular no-incentive version of the self-help program (a correspondence behavior change program call Invest in Your Health IYH) produced an estimated total weight loss of 5,950 pounds, whereas its much less popular
program that required an incentive deposit of $60 produced an estimated weight loss of 912 pounds.

**MHHP (Minnesota Heart Health Program)**

In MHHP, screening was not focused on “case-finding” but on providing education to every person who attended. The concept is that all persons, regardless of level of risks, can learn ways to improve lifestyle and reduce risk. The MHHP group has studied the effectiveness of educational screening and found that one year after screening, program participants had significantly lower blood pressure, total blood cholesterol, and heart rates, and significantly improved eating patterns, compared to randomly selected controls (1986-1988). These effects were not replicated in the Bloomington screening program. The MHHP model cost about $20 per person.

**Cardiovascular Disease (CVD) Prevention Programs**

It is premature to comment conclusively on the effectiveness of community-based CVD prevention programs in reducing population risk factor levels. However, it has been demonstrated that a broad range of intervention strategies can favorably modify the health behaviors and specific groups in communities such as employees and school children.

**Environmental and Policy Intervention**

Environmental and policy interventions are based on ecological models of behavior and have the potential to influence entire populations. Cross-sectional data indicate that environmental and policy variables are associated with physical activity behaviors of young people and adults. Correlational findings that children need appropriate environments in which to be active suggest the necessity of an intervention effort to make such environments more widely accessible. Seven published evaluations of environmental and policy interventions to increase physical activities were reviewed. No relevant data were found regarding cost-effectiveness. The studies showed that interventions may have effects, but all the effects appeared to be modest.

**Conclusion**

In the area of evaluation, health program participation rates are appropriate primary outcome measures in most community-oriented prevention programs. Other program evaluation priorities include community analysis and formative evaluation, providing data to fine-tune interventions and define the needs and preference of the community.

**Cognitive Behavioral Therapy in Community Settings**

**Description**

**Challenges to Adoption**

It is now widely acknowledged that the gap that exists between research-proven treatments and clinical practice in many fields is particularly apparent in drug abuse treatment because substance counselors and scientists differ in their training, professional identifications, and treatment philosophies. Another obstacle to the widespread adoption of empirically supported
treatment is the need for intensive training and ongoing supervision. Only a sustained effort can ensure that the trainee becomes capable of delivering the new intervention completely. Further, even well trained practitioners who become competent in a new treatment require the establishment of a system of quality control mechanisms to ensure an adequate level of treatment fidelity in community settings. The inability to identify real obstacles to implementation and ongoing fidelity leads to misdiagnosis of provider agencies as lacking interest and motivation to change.

Greg Aubol at Central Washington Comprehensive Mental Health gives an estimate of the typical number of visits and cost per visit of someone with a problem they treat with cognitive-behavioral therapy. He says that the average course of cognitive behavioral therapy is about 15 sessions, with a range of 12 to 20 sessions, depending on the person's problems. The cost of a single session is $85.

<table>
<thead>
<tr>
<th>General Cognitive Behavioral Therapy</th>
</tr>
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<tbody>
<tr>
<td># sessions needed</td>
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<tr>
<td>12-20</td>
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**Adolescent Alcohol and Drug Abuse**

Cognitive-behavioral interventions for adolescent alcohol and drug abuse, long neglected in treatment outcome research, have gained considerable empirical support in recent years. By contrast, research evaluating CBT (Cognitive-Behavioral Therapies) for other behavioral problems and disorders associated with adolescent substance abuse, such as conduct problems, depression and anxiety for adult substance abuse and dependence, and behavioral approaches for preventing substance use in high-risk youths is established. The findings from the randomized trials reviewed represent significant developments in treatment outcome research and lay the foundation for validating CBT for adolescent substance use disorders.

**Substance Abuse Treatment**

Studies of the burden of substance abuse (SA) real that direct costs associated with treatment of substance use disorders in the United States comprises a small fraction of the total social costs of illness. In 1997, the estimated social costs of SA is the U.S. exceeded $294 billion. Only $11.9 billion of the total social cost was spent on the treatment of SA problems. Some evidence suggests that interventions can have significant effects on work-related outcomes, but the impact varies across industries and populations. Drug-free work-place programs which promote education, assessment, counseling and referral significantly reduce work-place injury, especially for workers in the construction and service industries. A study suggests that large amounts of support to methadone-maintained clients are not cost-effective, but also demonstrates that moderate amounts of support are better than minimal amounts. It reaffirmed the preliminary findings that the methadone plus counseling level provided the most-cost-effective implementation of the treatment program. The annual cost per abstinent client was $16,485, $9,804, and $11,818 for low, intermediate, and high levels of support, respectively. Although the study demonstrates that large amounts of support to methadone
maintained clients are not cost-effective, given time-limited interventions, it also
demonstrates that moderate amounts are better than minimal amount. Reductions in funding
are false economies. More efficiency can be gained by funding these programs at a level
sufficient to sustain the counseling plus methadone level of services.

**Treatment of Outpatient Alcoholics**

Motivated individuals with moderate alcohol dependence can be treated with greater
effectiveness when naltrexone is used in conjunction with weekly outpatient cognitive
behavioral therapy. Naltrexone increases control over alcohol urges and improves cognitive
resistance to thoughts about drinking. Thus, the therapeutic effects of cognitive behavioral
therapy and naltrexone may be synergistic.

**Panic Disorder**

The Panic Center is an interactive website dedicated to helping those who suffer from panic
disorder and agoraphobia. The goal is to promote interaction between people who suffer from
panic disorder and their health care professionals. People who visit the Panic Center are a
self-selected sample of people who choose to use the Internet to access information and to
seek self-help for panic disorder and agoraphobia. Features (tools) of the Panic Center
include educational content, a moderated support group, a validated screening test for mood
and anxiety disorders, a panic symptom diary, and a 12-session self-help CBT program (the
Panic Program). Visitors to the Panic Center can use any one of the individual tools either on
their own or in collaboration with a health care professional. However, the components of the
Panic Program include a combination of the tools described above designed to provide a
comprehensive program for the assessment, treatment and maintenance of improvement of the
symptoms of panic disorder and agoraphobia. The efficacy of Web-based self-help
approaches for anxiety disorders has been demonstrated in a number of controlled trials.
However, there is little data regarding the patterns of use and effectiveness of freely available
Web-based interventions outside the context of controlled trials.

**Family Therapy**

The severe shortage of empirically supported treatments for Hispanics with substance abuse
problems is bound to result in poor treatment for Hispanics. Some may decide to use
empirically supported treatments that have not been adequately tested with Hispanics, while
others may choose to shy away from treating Hispanics altogether, using the misguided
reasoning that empirically supported treatments are nonexistent. A study in which 122
African American and Hispanic youth received BSFT produced findings suggesting that
BSFT showed promise as an indicated prevention intervention (TSantisteban et al., 1997T).
Although far from conclusive because of the study’s one-group design (not a randomized
trial), the data suggest that child behavior problems and poor family functioning were
statistically significant predictors of substance use initiation 9 months later, and that BSFT
could effectively impact both risk factors for later use. By targeting behavior problems and
family problems early (prior to initiation of use), BSFT was in effect a treatment of existing
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This article addresses the importance of culture within the context of domestic violence. It takes the position that to work more effectively with diverse cultural groups, the development of a full continuum of services that includes eliminating the violence and keeping families together is required. The authors believe that intervention models developed in the fields of HIV/AIDS may provide important examples for future work.

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Home Visits for Elderly to Reduce Isolation, Improve Access to Benefit Entitlements, Check on Health
In the past two decades a substantial number of randomized controlled trials examining the effects of preventive home visits to elderly people living in the community have been performed. On p H754H van Haastregt et al present the results of a recent systematic review of these trials and show that there is no clear evidence in favor of positive effects from preventive home visits. The authors conclude that if substantial improvements in the effectiveness of such a program cannot be achieved in the near future, then perhaps such visits should be discontinued.


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