Building for Health: The Case for Investment in Transit-Oriented Development

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The United States is at a crossroads in public health and community development. Record numbers of Americans are suffering from chronic diseases largely driven by environment and lifestyle, while the cost of health care continues to grow. Per-person health care expenditures in the United States more than quintupled from $1,106 per person in 1980 ($255 billion overall) to $6,280 per person in 2004 ($1.9 trillion overall). During this period, health care costs grew faster than the economy as a whole. As a consequence, health spending now accounts for 16% of Gross Domestic Product (GDP), compared to 9% in 1980. Direct health care costs for chronic disease, which account for 75% of health care spending, are correlated to socio-economic factors, with diabetes and heart disease twice as prevalent among poor adults as among upper-middle-class Americans.

At the same time, municipal, state, and federal governments are struggling to finance critically important investments in healthy neighborhoods, including infrastructure, transportation, affordable housing, and community facilities. In fiscal year (FY) ’11 and FY ’12, the U.S. Department of Housing and Urban Development’s (HUD) Community Development Block Grant (CDBG) program, one of the primary sources of funding for community capital improvement projects, was cut by 25%. In FY12, HUD’s HOME Investment Partnership budget was slashed by 25%. This loss of longstanding public funding, alongside a surge in vacant and abandoned properties due to foreclosure, has had a disproportionate impact on low- and moderate-income neighborhoods across the country. Existing systems and policies are not fully capable of addressing the current crisis.

Record numbers of Americans are suffering from chronic diseases largely driven by environment and lifestyle, while the cost of health care continues to grow. Fortunately, the scale and severity of the challenge is generating new interest in innovative solutions. Linking investments in community development with investments in health has the potential to improve lives while creating new opportunities for socially responsible investments that generate financial, social, and environmental returns.

Fortunately, the scale and severity of the challenge is generating new interest in innovative, cross-platform solutions that harness the strengths of the health and community development fields to create meaningful, cost-effective, and sustainable change. Linking investments in community development with investments in health has the potential to improve lives while creating new opportunities for socially responsible “triple bottom line” (TBL) investments that generate financial, social, and environmental returns. For example, the growing interest in social impact bonds (SIBs), in which private entities contract with government agencies to deliver targeted social outcomes (such as a reduction in recidivism) that reduce public expenditures, demonstrates that the public sector is willing to engage the private and non-profit sectors more deeply in solving complex social problems. In contrast to the health care system’s traditional focus on clinical treatment of illness, the Centers for Disease Control and Prevention’s Community Transformation Grants Program, authorized under the Affordable Care Act, is designed to prevent death and disability through policy, environmental, programmatic, and infrastructure changes. In the context of this rapidly evolving landscape, there is a tremendous opportunity to pioneer new approaches that create measurable improvements in public health and generate attractive returns for investors.

The Opportunity for Transit-Oriented Development

One of the most significant opportunities to impact community health at the neighborhood scale is through investments in transit-oriented development (TOD), defined as higher-density, mixed-use development within walking distance (a quarter mile to a half mile) of transit. TOD projects are uniquely positioned to deliver a host of triple bottom line benefits, many relating to community health. A recent report from the Center for Transit-Oriented Development (CTOD) offers the following summary of benefits of TOD projects:

- Improved mobility options, so people can walk and bike and take transit, and access multiple destinations in the region without a car;
- Increased transit ridership to support local and regional transit system operations and reduce traffic congestion;
- Quality neighborhoods with a rich mix of housing, shopping and transportation choices;
- Revenue generation for both the private and public sectors;
- Improved affordability for households through reduced transportation costs;
- Urban revitalization and economic development;
- Reduced infrastructure costs due to more efficient use of water systems, sewer systems and roads;
- Reduced energy consumption, greenhouse gas emissions and air pollution;
- Improved regional access to jobs; and
- Health benefits resulting from reduced auto dependence and healthier lifestyles.  

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Health Benefits of TOD

Improved health stands out as one of the greatest opportunities to link upfront project development costs with long-term benefits of TOD. This is particularly true for low-income neighborhoods, since they have disproportionately high rates of chronic disease and generate higher per-person health care expenditures. Reducing health care spending in these high-cost neighborhoods, even by a modest amount, can generate substantial savings. To the extent that TOD projects can improve health outcomes and reduce the cost of care over the long term, these gains can be reinvested in capital projects and programs that further improve neighborhood health.

To understand the potential impact of TOD investments on health, it is important to look at the underlying conditions that are affecting health care costs. The most significant driver of chronic disease is obesity. With more than one-third of its adult population obese, the U.S. is facing an issue of epidemic proportions. Current health care costs associated with obesity are estimated at nearly 10% of all U.S. medical expenses; they could reach 16-18% by 2030 if current trends continue. At the individual level, obesity adds $19.39 per overweight pound in annual health care expenses. This conservative estimate accounts only for direct health care costs, and does not include the additional burden of lost wages, absenteeism, disability, and reduced productivity at work. In my state of Massachusetts, obesity has been steadily on the rise in recent years, and nearly doubled between 2000 and 2010. The Massachusetts Department of Public Health estimates that $1.82 billion per year in medical expenses in the Bay State are directly attributable to adult obesity, and the impacts cannot be underestimated. Hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, osteoarthritis, respiratory problems, and certain cancers, including endometrial, breast, and colon cancer, are among the known correlates to obesity.

How can TOD projects help fight obesity, reduce chronic disease, and contribute to community health? Multiple research studies have demonstrated a clear relationship among the design of the built environment, walkability, and health. These studies have found that residents of TOD neighborhoods drive less and walk more as part of their daily activities. An Active Living Research study of residents in 33 California cities revealed that the obesity rate among adults who drove the most was 27%, which is about three times higher than the obesity rate among those who drove the least (9.5%). In another study, researchers compared two groups of randomly selected commuters in Charlotte, North Carolina, where a new light rail system was built. After one year, commuters who regularly took the new train were, on average, 6.45 pounds lighter than those who continued driving to work. In addition to the impact on obesity and chronic disease, more walking and less driving produces a number of ancillary benefits, including reduced stress and greater neighborhood sociability.

TOD projects can also contribute to community health by creating new outlets for production, processing, distribution, and sale of healthy foods. A recent study sponsored by the Massachusetts Public Health Association and The Food Trust found that Massachusetts has fewer supermarkets per capita than almost any other state, despite being one of the most affluent states in the nation. Not surprisingly, lack of access to fresh, healthy food is strongly correlated with household income, and lower-income neighborhoods are the most underserved. This finding has been reinforced by other research efforts across the country. For example, a nationwide study of over 28,000 ZIP codes found that low-income ZIP codes have 25% fewer per capita supermarkets than middle-income ZIP codes. Although there is still more work to be done in understanding the complex relationships between income, obesity, and food access, improved access to healthy food is an important part of addressing health disparities in poor neighborhoods.

**Environmental Benefits of TOD**

In addition to community health benefits, TOD represents one of the most effective strategies for reducing greenhouse gas emissions and improving both the local and global environment. TOD is correlated with a number of environmental benefits, including higher rates of transit ridership, lower rates of car ownership, fewer annual vehicle miles traveled, lower greenhouse gas emissions per capita, and improved air quality. Comparative studies of commuting patterns between residents of TOD neighborhoods and those living in less transit-accessible neighborhoods have consistently found higher rates of transit ridership among TOD residents. Researchers at CTOD similarly found that the average household in a transit zone owned 0.9 cars, while the average regional household owned 1.6 cars.

In addition to using transit more and owning fewer cars, residents of TOD neighborhoods also drive fewer miles each year than their peers in other types of neighborhoods. Studies from both the Victoria Transport Policy Institute and the Urban Land Institute have found that residents of densely populated neighborhoods drive between 20% and 40% less than the average person. As a result of reduced VMT, greenhouse gas emissions in TOD neighborhoods are lower than non-TOD neighborhood. In a 2009 study, CTOD found that households in the areas best served by transit produced 78% fewer transportation emissions. This data has particular significance for the metro Boston area, where transportation-related emissions rose by 19% from 1990 to 2000 and an additional 7% from 2000 to 2005.

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Community Benefits of TOD

TOD projects can bring substantial benefits to low- and moderate-income households that are most sensitive to the costs of housing and transportation. The Brookings Institution, for example, notes, “The combined costs of commuting and housing make up a larger portion of the household budgets of the working poor than other households.... For households in the lowest one-fifth of the income distribution, spending on housing, transportation, and food jumps to 71 cents of every dollar.”15 By locating more affordable housing in job centers and by improving access to transit in affordable neighborhoods, TOD can be an effective strategy for fighting poverty and supporting economic mobility among low- and moderate-income households.

Additionally, TOD neighborhoods contribute to economic development by creating jobs, shoring up local real estate values, and helping increase the municipal tax base. According to a 2006 study by the International Economic Development Council, the desirability for office space in mixed-use settings with access to transportation choices is reflected in higher occupancy rates, property values, and lease premiums.16 Decreased reliance on automobiles also has a number of important safety implications for residents. Research demonstrates that TOD neighborhoods have a significantly lower rate of traffic fatalities,17 and often have lower rates of violent crime due to the presence of pedestrians and cyclists whose “eyes on the street” increase overall security.18

Financial Benefits of TOD: Connecting the First, Second, and Third Bottom Lines

The social benefits generated by investments in TOD need not come at the expense of financial returns. In fact, just the opposite is true. A recent study by Chris Leinberger and Mariela Alfonso sponsored by the Brookings Institution found that more walkable neighborhoods, including those that are close to transit, have higher commercial and residential rents, retail revenues, and for-sale housing values than less walkable places.19 Based on five levels of walkability, ranging from poor to very good, a one-level increase in walkability translates, on average, 18.5% higher residential rents, 21% higher retail rents, 28% higher for-sale home values per square foot, 27% higher office rents, and 80% higher retail revenues. Before the recession (2000-2007), places with very good to good walkability had a 23% premium per square foot valuation on average. During the recession (2008 to 2010), that premium nearly doubled to 44.3%. This analysis controlled for household income, meaning that the increase in value as neighborhoods become more walkable is not explained by the presence of higher-income residents and workers in the

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17 Ewing, Schieber, and Zegeer (2003) rated 240 U.S. counties according to a sprawl index that considered land use density, mix, and transport diversity. The ten smartest growth counties had about a quarter the per-capita traffic fatality rate as the ten most sprawled counties.
area. This is a key finding in the context of TOD and health, where the greatest gains can be made in low- and moderate-income neighborhoods.

In addition, the current gap between supply and demand for TOD neighborhoods creates an attractive opportunity for investors to lock in the value of long-term price appreciation in these areas. Acknowledging this opportunity, real estate advisory firms are encouraging their clients to invest in transit-rich locations. For example, the Urban Land Institute’s 2011 “Best Bets” list recommends that investors “favor infill over fringe” and consider buying land, which “will not get any cheaper than it is now.”20 In a newly released study, the U.S. Conference Board notes that walkable neighborhoods will lead the recovery of the housing market. According to the study, “house prices in these locations fell by less than the national average between 2006 and 2011, in some cases by much less. The same is true of local employment…. These localities will be the first to recover. We expect house prices here to rise by an average of 3 percent in 2013, and by up to 5 percent a year between 2014 and 2017.”21

Alongside increased real estate values, the financial benefits associated with even incremental improvements in public health are substantial. According to an analysis in the American Journal of Public Health, as little as a 5% reduction in the prevalence of diabetes and hypertension—conditions that are measurably improved by increased exercise and weight —would save almost $25 billion annually in medium-term health care costs.22 In sum, TOD projects that create healthy and walkable neighborhoods hold great promise for delivering triple bottom line benefits to investors and the community.

Proposal for TOD Investment in the Metro Boston Region

Based on our research at CLF Ventures, we believe there is an important role for equity investment in TOD projects that will measurably improve community health in Massachusetts. Plans are underway to expand transit access along several key corridors in greater Boston over the next decade, including the Fairmount Line, Orange Line, and Green Line, which will improve the connections between downtown Boston, adjacent neighborhoods, and surrounding cities. Multiple undeveloped and underdeveloped sites near transit are awaiting new construction or renovation for a mix of uses that will dramatically alter the existing landscape and provide new opportunities for healthy living. A recent analysis by the Metropolitan Area Planning Council found that TOD neighborhoods in greater Boston have the potential to accommodate 76,000 new housing units and 133,000 new jobs over the next 25 years.23 Targeted investment in TOD projects can help unlock the social and economic potential of these neighborhoods while improving health outcomes for thousands of people who live and work in Massachusetts.

One of the key challenges in developing a new private equity fund that supports community health lies in the measurement and evaluation of outcomes. Most real estate evaluation and

screening tools, including the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system and Health Impact Assessments, can be costly to perform and typically focus on the design and construction phase of the project. In many cases, there is very little post-construction monitoring to determine whether projects have performed as expected in terms of either energy and environmental performance or health. This creates challenges in terms of validating the benefits of these projects, as well as evaluating the efficacy of the screening tools. Fortunately, health data, while difficult to assemble, abounds, and local health practitioners have deep expertise in rigorous measurement and evaluation.

In the context of these measurement challenges, CLF Ventures is developing neighborhood and project-level screening criteria for the Healthy Neighborhoods Equity Fund that will correspond with post-construction monitoring and evaluation tools. We are also working to identify a research partner to assist with longitudinal measurement of health outcomes, an area that is rapidly evolving with the increased use of Electronic Medical Records (EMR) and the growing capabilities of “big data” analytics. In practice, this could mean partnering with large employers and health insurance providers to gather and analyze data for people living and working in TOD areas, and mapping changes in health status over time as projects are completed and occupied. Employers and insurance providers may also be convinced to participate in the fund as direct investors, particularly if they are the beneficiaries of health care savings generated partly by TOD projects. This “build and learn” model can also be aligned with employer-supported programs that encourage the use of neighborhood assets that lead to greater health, such as parks, bike paths, and farmer’s markets. Over time, this approach has great potential to improve community health, produce lasting value for investors, and build strong and sustainable communities.

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