Transportation, Health, and the Built Environment

This issue represents the second in a series of Regional Spotlights to focus on the intersection of transportation, health, and the built environment. The Summer 2014 issue focused on Active Transportation funding and projects in San Joaquin County. This issue examines the state of public health in the county, determinants of health, and the potential impact of transportation on health outcomes, costs, and access. In addition, this issue examines the continuing role of transportation investments in creating synergy for public private partnerships.
Determinants of Public Health

Multiple factors determine individual and community health status; these factors are referred to as “determinants of health” by many health agencies. Data associated with these determinants is presented below. While not comprehensive, the data gives some insight into the San Joaquin County population and attempts to convey the interdependence between internal and external factors in shaping health outcomes. These are explored further in the pages to follow.

Higher levels of education are associated with behaviors such as healthy eating, engaging in regular physical activity, and refraining from smoking.\(^1\) According to 2013 American Community Survey (ACS) 3-Year data, 77.8% of County residents 25 years and over have at least a high school education, which is below the 81.5% share state-wide.

The physical environment impacts health. Water, air, workplaces, roads, and living spaces contribute to health status. Other factors that influence health include access to outdoor recreation, environmental pollutants, crime, and physical barriers for people with disabilities. The County’s air quality has improved over the past two decades: days with ozone levels above state standards have declined from an average of 17.2 days in 1989-93 to an average of 3.4 days in 2009-13.\(^2\)

Policymaking at the local, state, and federal level affects individual and population health. Policies ranging from complete streets to increasing taxes on tobacco sales are illustrative of these sorts of policies. Some policies affect entire populations over extended periods of time while helping to change individual behavior. Examples include seat belt laws, restrictions on smoking in public places, and health and safety standards.\(^3\)

Strong social support networks are linked to better health. Culture, customs/traditions, and the beliefs of the family and community all affect health.\(^4\) For example, life in a single parent household can be stressful for those families.\(^5\) According to 2013 ACS 3-Year data, single parent households make up 34% of the County, creating a challenge for support networks.

Where Does San Joaquin County Rank?

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<thead>
<tr>
<th>Mortality</th>
<th>Morbidity</th>
<th>Health Behaviors</th>
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<tr>
<td>41st of 57</td>
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<tr>
<th>Clinical Care</th>
<th>Social &amp; Economic Factors</th>
<th>Physical Environment</th>
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<tr>
<td>36th of 57</td>
<td>48th of 57</td>
<td>56th of 57</td>
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The County Health Rankings and Roadmaps initiative from the Robert Wood Johnson Foundation and the University of Wisconsin provides detailed County-level statistics and rankings on key measures of public health. This table provides a summary of where San Joaquin County ranks out of California 57 counties. For further info visit: www.countyhealthrankings.org
Biology and genetics can affect the health of some populations more than others. Factors include age, sex, HIV status, and inherited conditions. For example, sickle cell disease is a relatively common hereditary blood disorder associated with a number of acute and chronic health problems and is most common in people with sub-Saharan African ancestry.  

Access to and use of health services can prevent and treat disease. According to 2013 3-Year ACS data, 17.4% of the San Joaquin County population do not have health insurance. The Affordable Care Act has increased the number of people with health insurance; however, having insurance does not guarantee access to care and services.

Higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health. ACS 2013 3-Year data shows that 18.7% of San Joaquin County residents live below the poverty level, compared to 16.8% of the population state-wide.

Public health and health care interventions often focus on changing behavior, such as substance abuse, diet, and physical activity. However, environment, child development, education, and other factors also influence behavior. Recent county data suggests that 79% of County residents have access to exercise opportunities.

2 California Environmental Protection Agency, Air Resources Board, iADAM: Air Quality Data Statistics.

Help Create a Healthier San Joaquin County!

San Joaquin County Public Health Services is currently updating its Community Health Assessment, which identifies the health-related needs and resources across the county. The goal is to have a community-based process that seeks out and collects input from as many residents as possible.

To learn more, please contact Jamillah Jordan by phone at (510) 845-7549 or by email at jamillahj@mcgcom.com
Public Health: The Influence of Transportation Policy

Encouraging Healthier Communities

The interrelationship between transportation, land use and public health has become increasingly connected. For better or worse, transportation systems play a part in influencing behavior and health. Historically, transportation networks have been designed to accommodate automobiles, placing an emphasis on providing opportunities to travel alone by car. However, this convenience ushered in an era of suburban community design that separated many people and communities from the urban center, often placing them into pockets of remote residential developments. Many factors including distance and auto-oriented infrastructure design have altered peoples’ ability (and willingness) to walk or bike to common destinations such as work, school, shops and places of recreation. As a result, behaviors have changed as community members have become more reliant on the automobile. One research study determined that 25 percent of all trips are less than one mile, though 75 percent of those short trips are made by automobile.

How people travel has impacts that go far beyond the seemingly simple and mundane acts of getting from one place to another. For many, walking and bicycling provide the easiest and most cost efficient forms of travel and means of physical activity. When opportunities for these travel options are not provided, it hampers the ability to live healthy active lifestyles.

As dependence on the automobile has increased, American waistlines have also during the past 30 years - obesity rates in both children and adults have more than doubled since the 1970s. This has become a serious growing public health concern, as obesity serves as a primary precursor to many serious chronic diseases including diabetes, hypertension, heart disease and stroke. Many transportation planning agencies are actively pursuing ways to encourage healthier and better connected community environments that provide opportunities for individuals to get out of cars and become more physically active.

The role of the built environment, which includes the land use patterns, transportation systems, and design features found in communities, has been identified by practitioners in both urban planning and public health fields as a major influence on peoples’ behavior.

Physically active lifestyles, among other benefits, can help regulate weight, reduce rates of chronic and preventable diseases, raise lung capacity, improve mental well-being and increase life expectancy.

In 1996, the U.S. Surgeon General published its foundational Report on Physical Activity and Health, which concluded that people of all age groups living inactive lifestyles could improve their health and well-being by becoming even moderately active on a regular basis. In the past two decades since the release of that report, subsequent studies have further established that consistent physical activity serves as the best method to reduce the risk of adverse health conditions.
Chronic disease not only impacts personal health, but has economic consequences as well. Poor health increases direct medical costs such as those spent to cover emergency room visits, hospitalizations, testing, treatment, and other medical services. It also has indirect costs such as lowered productivity due to missed workdays.

**The Price of Health**

The economic burden of chronic disease

More than two-thirds of all County residents are considered overweight or obese. This may be a contributing factor as to why San Joaquin County residents have some of the highest rates of diabetes, heart disease, and stroke, as well as deaths attributed to these chronic diseases in the state.

**Co-Benefits: Safety and Cost**

Transportation investments can support walking and bicycling in neighborhoods, schools, and downtowns. For example, street-scale improvements such as sidewalks, safer street crossing configurations, multi-use pathways and bike lanes can dramatically increase rates of physical activity and reduce injury risk. As noted in the Centers for Disease Control and Prevention’s Guide to Community Preventive Services, street-scale improvements such as these have resulted in a median increase in some aspects of physical activity of 35 percent.

When these types of projects are funded and built, they create healthy living environments that serve all age groups, enhancing communities. Pedestrian-friendly areas allow for low-impact exercise for the elderly; accommodate daily walking routines; allow safe travel pathways for children; and invite window-shopping and increased consumer traffic for businesses. The resulting increase in opportunities for social interaction can foster neighborly connections and feelings of community - all of which may have a contributing beneficial affect on mental wellness.

**When More Means Less**

Although not intuitive, research indicates that areas with higher rates of bicycle usage have correspondingly lower rates of auto-related collisions

A 2003 peer-reviewed study published in the journal Injury Prevention analyzed five separate large data sets taken from locations found in the United Kingdom, Netherlands and the United States. The study looked at the measure of injuries to people walking or bicycling in relation to the number of people participating in these activities. Based on the data, the researchers concluded where, or when, more people walk or bicycle, the less likely they are to be injured by motorists. The researchers concluded there is safety in numbers - drivers are more cognizant of their surroundings.

Despite the many benefits of active living, an increasing number of people are living less active, sedentary lifestyles. Research analysis performed by the Active Living Research found that from 1977 to 1995, the rate of people walking or bicycling for daily transportation declined by 32 percent. Less active living behaviors contributes to weight gain.

This health trend is reflected with residents living in San Joaquin County, as obesity rates have steadily increased this past decade. Recent data taken from the California Health Interview Survey indicates that 34.7 percent of all county adults are obese, a percentage that outpaces the state (24.8 percent) by a wide-margin.
Shaping the Built Environment

Throughout California and the nation, greater emphasis has begun to be placed on transportation projects that provide infrastructure not only for vehicles, but also enhance conditions for bicyclists, pedestrians, and transit users. One of the funding sources for such projects is the new Active Transportation Program (ATP) which provides funding for bicycle, pedestrian, and Safe Routes to School Infrastructure.

In 2014 jurisdictions throughout San Joaquin County competed statewide for approximately $180 million in ATP funding that was available for projects that support biking, walking, and Safe Routes to School. During the statewide portion of the program, four projects from the City of Stockton were awarded approximately $3 million in ATP funds. In October, the SJCOG Board approved allocating an additional $4.47 million to eight more projects from the cities of Lathrop, Lodi, Ripon, Stockton, Tracy, and the County of San Joaquin.

These projects range from sidewalk and traffic signal improvements around schools to major streetscape improvements and railroad overcrossings. All of the projects have the common goals of increasing the number of trips people take using bicycles or walking, increasing the safety and mobility of non-motorized users, and improving public health through benefitting areas with populations that have high risk factors for obesity, physical inactivity, asthma, or other health issues.

**BENEFITS OF INVESTING IN ACTIVE LIVING**

- Research has shown areas with higher rates of walking and bicycling have lower per capita traffic death rates, and individual longevity (i.e. lifespan) tends to increase in those who participate in these physical activities.

- Studies have indicated decreasing automobile use by increasing walking and bicycling can improve air quality and reduce the emission of toxic air pollutants and greenhouse gases which are linked to increased incidences of asthma.

- One study estimated the substitution of cycling for short-trip driving has the potential to reduce gasoline demand by 34.9% of current domestic oil consumption.

- According to the California Bicycle Coalition, for every $1 million invested in bikeways between $1.2 - $3.8 million is returned in health care cost savings.

- According to a study by the Victoria Policy Institute, investing in public transit and transit-oriented development can reduce transportation costs, which potentially gives households more money for housing, healthy food, and medical care.

Active transportation investments can provide access to opportunities for residents to incorporate physical activity into everyday activities. These investments can encourage means of travel which provide added benefits that impact not only health but personal safety, finances and the natural environment as well. High quality transit and transit oriented development can also improve access to economic, social and recreational opportunities, which are also recognized as determinants of public health. The proposed projects on the following page illustrate ways that public and private investments can influence access to health living opportunities.
Domus Development is proposing to redevelop a vacant infill site in downtown Stockton into a vibrant high density supportive housing project named Anchor Village. The development is designed to serve low income veterans and individuals with mental illness with wrap around on-site services and is located within convenient walking distance of high quality transit service. Anchor Village is a four-story building comprised of 51 units, 39 one-bedroom and 12 two-bedroom units and approximately 8000 square feet of ground floor community serving space and 23 onsite parking spaces. The community area is designed for social functions and will be a primary location to provide social programs to the tenants. In addition to the community room, there will be a suite of offices that will house support services for tenants and private rooms for counseling and meetings.

Visionary Home Builders is proposing a mixed-use, affordable housing project in Downtown Stockton. This $31 million development, known as Grand View Village, will provide ground floor commercial space for a grocery store and a small café. The upper floors will provide 108 housing units with a mix of studio, one, two, three and four bedroom units. The development will include a rooftop garden, play area, and community center for tenants.

The proximity of the project to Stockton’s main bus station and the Cabral Rail Station will provide residents access to high quality transit service, allowing them to not have to rely on automobiles for transportation. In addition to providing much needed housing and basic commercial uses which are lacking in downtown Stockton, the project has several unique features, including offering employment opportunities for its residents. The grocery store is proposed to be a cooperative based model which will employ tenants of the building. The café will use produce grown on the development’s rooftop garden, and solar panels and other green building infrastructure will be incorporated into the building.

Visionary is also proposing to construct one block of the nine-block Miner Avenue Streetscape improvements between Hunter Street and San Joaquin Street. These improvements consist of reducing the number of vehicle lanes from four to two, adding landscaped medians, and a separately striped bicycle lane. The reduction in lanes will allow for wider sidewalks, curbside planters, and designated sidewalk areas for potential café seating in the future, providing balanced transportation opportunities for cars, pedestrians, and bicyclists.

After years long bipartisan effort by local elected officials, President Obama’s proposed Fiscal Year 2016 budget includes funding for the Stockton Community-Based Outpatient Clinic. The Department of Veterans Affairs has been planning for many years to construct a 158,000 square foot clinic on a 52-acre site located in French Camp just north of San Joaquin General Hospital. The fate of the $139 million in funding proposed in the President’s budget is currently uncertain; local House and Senate representatives are lobbying to retain the funding. Construction was expected to start in 2016 and be completed by 2020. If ultimately constructed, the facility will allow the estimated 87,000 veterans in and around the County to receive local health care instead of traveling to facilities as far away as Palo Alto.
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The San Joaquin Council of Government serves as the federally-designated Metropolitan Planning Organization for San Joaquin County. Under that umbrella, SJCOG also serves as the Census Data Center for the county and partners with the University of the Pacific’s Center for Business and Policy Research to provide data and analysis of a variety of socio-economic issues relevant to the San Joaquin region.

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FOR QUESTIONS OR COMMENTS

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