

# **BUILDING HEALTHY COMMUNITIES IN THE SAN JOAQUIN VALLEY: PRELIMINARY BASELINE DATA REPORT**

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## **Purpose**

*This report is intended to support the ongoing planning efforts of The California Endowment Building Healthy Communities (BHC) sites in the San Joaquin Valley by beginning a regional conversation about currently available data and additional data needed to support planning and implementation of the BHC strategic initiatives. Because the planning process is ongoing, it is premature to discuss long-term evaluation of the efforts in the region or statewide. Rather this report is intended to help planners think more about the objectives, strategies, and indicators they are considering in their plans ---where our communities are now and how to conceptualize the impacts being sought. We encourage Building Health Communities planning initiative in the region to contact CVHPI to discuss how the data and issues we present or other ways we may be able to assist your community initiatives.*

## **Background**

The San Joaquin Valley (SJV) is home to three of The California Endowment's (TCE) fourteen Building Healthy Communities (BHC) sites: Central Fresno, South Kern, and South Merced. Community members and other stakeholders are now deeply engaged in developing initial phases of long-term plans for meeting the TCE "Four Big Results" and "10 Outcomes" over the next 10 years. In developing the BHC initiatives, TCE has sought authentic community engagement in understanding how the Four Big Results can be achieved and so the specific outcomes each community will pursue will be adapted to local contexts. In a similar way, the specific outcomes each site pursues will be shaped by local conditions, the broader outlines of their long-term plans, and how outcomes are linked to the Big Results. In this context, it is way too early to articulate the set of indicators that will be used for program accountability and evaluation. Nonetheless, as the three San Joaquin Valley BHC collaboratiévss develop long-term strategic plans, they are seeking ways to frame their objectives, strategies and indicators. Articulating indicators of community baseline performance, interim progress and demonstrable impact relative to the Big Results and specific outcomes is emerging as a key component of these discussions. Even while TCE continues to articulate a statewide framework for measuring the impact of the BHC program, it will be helpful for SJV BHC site planners and others in our region to engage in a more comprehensive discussion of how we can measure our current status and what we would propose as indicators of progress and achievement.

## **Data Measures**

The Central Valley Health Policy Institute, California State University, Fresno (CVHPI) is collaborating with other BHC participants in the region to assess the existing data capacity to measure the baseline and progress of the TCE "Four Big Results". CVHPI has sought to identify data elements to measure and approximate these "Four Big Results" and "10 Outcomes". We also collaborated with TCE's Office of Research and used data elements that they have been developing where possible. **Table 1** lists each of the "Four Big Results" and their 3-5 supporting Outcomes. Note that TCE has attributed multiple outcomes to each Big Result but some of these outcomes are associated with two or more of the Big Results. In order to avoid presenting an overly complicated and lengthy report, we present preliminary baseline measures for eight of the ten outcomes. We organize this presentation around the Big Results and we note how specific outcomes may be understood or measured differently in the context of each result with which it is associated. These preliminary baseline data sources are proposed here as starting points for future data conversations and to assist planners at each of the Valley sites conceptualize goals, strategies, and indicators.

While data measures were sought for all concepts, the following data are not intended to represent an exhaustive presentation of all appropriate data. **Table 2** provides potential indicators for each of the 10 Outcomes. Selected data measures were primarily identified based on geographic criteria (e.g., zip code). Therefore, we

excluded measures that were only available at the county level. The following data presented in this report were largely drawn from data sources readily identified and collected at the zip-code level and identified as acceptable measures for each Big Result and its associated outcomes. We defined the area included in each TCE place using the census boundaries, zip codes, and schools as identified by TCE. In addition, we draw on findings from a recent community telephone survey to indicate the kinds of measures that could potentially be drawn from targeted new data collection (**Table 3**) as well as through in-house analysis of existing data (**Table 4**). For more detail on the data sources used, please see **Appendix A**.

**Table 1: TCE-BHC Four Big Results and Associated Outcomes**

<b>Indicators of Achievement</b>	
<b>Big Result #1</b>	
<i>Provide A Health Home for All Children</i>	<p><b>Direct Outcomes</b></p> <ul style="list-style-type: none"> <li>» All children have health coverage (<b>Outcome 1</b>)</li> <li>» Families have improved access to a health home that supports healthy behaviors (<b>Outcome 2</b>)</li> <li>» Health and family-focused human services shift resources toward prevention (<b>Outcome 3</b>)</li> </ul> <p><b>Indirect Outcomes</b></p> <ul style="list-style-type: none"> <li>» Neighborhood and school environments support improved health and healthy behaviors (<b>Outcome 7</b>)</li> <li>» Health gaps for boys and young men of color are narrowed (<b>Outcome 9</b>)</li> <li>» California has a shared vision of community health (<b>Outcome 10</b>)</li> </ul>
<b>Big Result #2</b>	
<i>Reverse The Childhood Obesity Epidemic</i>	<p><b>Direct Outcomes</b></p> <ul style="list-style-type: none"> <li>» Neighborhood and school environments support improved health and healthy behaviors (<b>Outcome 7</b>)</li> <li>» Residents live in communities with health-promoting land use, transportation and community development (<b>Outcome 4</b>)</li> <li>» Health and family-focused human services shift resources toward prevention (<b>Outcome 3</b>)</li> </ul> <p><b>Indirect Outcomes</b></p> <ul style="list-style-type: none"> <li>» Communities support healthy youth development (<b>Outcome 6</b>)</li> <li>» Families have improved access to a health home that supports healthy behaviors (<b>Outcome 2</b>)</li> <li>» California has a shared vision of community health (<b>Outcome 10</b>)</li> </ul>
<b>Big Result #3</b>	
<i>Increase School Attendance</i>	<p><b>Direct Outcomes</b></p> <ul style="list-style-type: none"> <li>» Families have improved access to a health home that supports healthy behaviors (<b>Outcome 2</b>)</li> <li>» Neighborhood and school environments support improved health and healthy behaviors (<b>Outcome 7</b>)</li> <li>» Health gaps for boys and young men of color are narrowed (<b>Outcome 9</b>)</li> </ul> <p><b>Indirect Outcomes</b></p> <ul style="list-style-type: none"> <li>» Health and family-focused human services shift resources toward prevention (<b>Outcome 3</b>)</li> <li>» Residents live in communities with health-promoting land use, transportation and community development (<b>Outcome 4</b>)</li> <li>» Communities support healthy youth development (<b>Outcome 6</b>)</li> </ul>
<b>Big Result #4</b>	
<i>Reduce Youth Violence</i>	<p><b>Direct Outcomes</b></p> <ul style="list-style-type: none"> <li>» Children and their families are safe from violence in their homes and neighborhoods (<b>Outcome 5</b>)</li> <li>» Communities support healthy youth development (<b>Outcome 6</b>)</li> <li>» Community health improvements are linked to economic development (<b>Outcome 8</b>)</li> <li>» Health gaps for boys and young men of color are narrowed (<b>Outcome 9</b>)</li> <li>» Neighborhood and school environments support improved health and healthy behaviors (<b>Outcome 7</b>)</li> </ul> <p><b>Indirect Outcomes</b></p> <ul style="list-style-type: none"> <li>» Health and family-focused human services shift resources toward prevention (<b>Outcome 3</b>)</li> <li>» California has a shared vision of community health (<b>Outcome 10</b>)</li> <li>» Residents live in communities with health-promoting land use, transportation and community development (<b>Outcome 4</b>)</li> </ul>

**Table 2: Available Data Measuring TCE-BHC 10 Outcomes**

Big Results and Outcomes	Possible Data Sources
<p align="center"><b>Big Result #1</b></p> <p><i>Outcome 1 - All children have health coverage</i></p>	<p>Years of Potential Life Lost (YPLL) data</p>
<p align="center"><b>Big Results #1 &amp; #3</b></p> <p><i>Outcome 2 - Families have improved access to a health home that supports healthy behaviors</i></p>	<p>Avoidable hospitalizations - Adult &amp; Pediatric Community Survey - Self-Efficacy Community Survey - General Well-Being</p>
<p align="center"><b>Big Results #1 &amp; #2</b></p> <p><i>Outcome 3 - Health and family-focused human services shift resources toward prevention</i></p>	<p>Avoidable hospitalizations - Adult &amp; Pediatric Community Survey - Depression Community Survey - Diagnosed Chronic Conditions</p>
<p align="center"><b>Big Result #2</b></p> <p><i>Outcome 4 - Residents live in communities with health-promoting land-use, transportation, and community development</i></p>	<p>Community Survey - Civic Engagement Community Survey - Collective Efficacy</p>
<p align="center"><b>Big Result #4</b></p> <p><i>Outcome 5 - Children and their families are safe from violence in their homes and neighborhoods</i></p>	<p>Intentional violence - Adult &amp; Youth Community Survey - Neighborhood Disorder Community Survey - Neighborhood Quality</p>
<p align="center"><b>Big Result #4</b></p> <p><i>Outcome 6 - Communities support healthy youth development</i></p>	<p>Community Survey - Civic Engagement Community Survey - Collective Efficacy Community Survey - Neighborhood Disorder Community Survey - Neighborhood Quality Community Survey - Self-Efficacy Community Survey - General Well-Being</p>
<p align="center"><b>Big Results #2, #3, &amp; #4</b></p> <p><i>Outcome 7 - Neighborhood and school environments support improved health and healthy behaviors</i></p>	<p>Fitnessgram - % Healthy BMI High school/middle school annual drop outs by gender Community Survey - Depression Community Survey - Diagnosed Chronic Conditions Community Survey - Neighborhood Quality</p>
<p align="center"><b>Big Result #4</b></p> <p><i>Outcome 8 - Community health improvements are linked to economic development</i></p>	<p>Unemployment Rates Employment Opportunities</p>
<p align="center"><b>Big Results #3 &amp; #4</b></p> <p><i>Outcome 9 - Health gaps for boys and young men of color are narrowed</i></p>	
<p align="center"><b>Big Result #3</b></p> <p><i>Outcome 10 - California has a shared vision of community health</i></p>	

**Table 3: BHC Community Cluster Survey Analysis**

<b>Demographics</b>	<b>Fresno</b>	<b>Kern</b>	<b>SJV Average</b>
Average sample size (n)	120	120	1000
Age (yrs) - [mean (SD)]	37.2 (10.4)	37.9 (13.5)	39.5 (12.5)
Female (%)	71.0	71.0	72.8
Hispanic (%)	34.2	50.3	42.5
Income < \$20,000/household/year (%)	34.8	43.2	33.4
Education < 12 years (%)	17.7	28.9	23.6
<b>Social Connectedness</b>			
Married/Living with partner (%)	70.3	47.9	57.4
Socially isolated (%)	2.4	3.9	3.9
Civic engagement score (% Never attended)			
» Town or school meeting	61.9	62.3	65.3
» Club or organization (Not for work)	69.2	76.9	70.9
» Regional problem group	96.9	93.0	91.1
<b>Overall Health</b>			
<b>General well-being</b>			
Fair or Poor (%)	17.3	15.8	23
<b>No physical in past year (%)</b>	42.1	24.8	25.9
<b>Depression score (0 - 5 high depression score)</b>			
% High depression score (>= 3 / 5)	20	27.1	24.8
<b>Chronic conditions diagnosed</b>			
At least 1 (%)	84.8	80.6	81.9
2+ (%)	14.4	15.5	13.3
<b>Self-Efficacy Score</b>			
Low Self-Efficacy (%)	14.4	3.1	4.3
<b>Health Behaviors</b>			
<b>Obesity</b>			
≥ 25 BMI < 30 (%)	35	29.7	32.5
BMI ≥ 30 (%)	50	42.4	37.6
<b>Physical Activity</b>			
2 or fewer days of moderate physical activity in last week	59	54	56
<b>Fruit and Vegetable Intake</b>			
Fruits < 5/previous 7 days (%)	38.9	36.6	38
Vegetables < 5/previous 7 days (%)	24.8	37.2	32.1
<b>Neighborhood Environment</b>			
<b>Disadvantage Scale</b>			
0 (%)	9.8	10.2	13.9
1-3 (%)	64.1	42	50.8
4+ (%)	26.1	47.7	35.4
<b>Safety (1 - 5 most unsafe)</b>			
% Score: 2-5	20	34.4	24.8

**Table 4: CVHPI Data Warehouse – SJV BHC Sites**

Data Measures, years		Fresno		Kern		Merced		SJV	CA
		BHC	County	BHC	County	BHC	County		
<b>Demographics, 2009</b>	<i>Population</i>	95,648	926,508	66,156	821,705	61,725	254,726	3,963,149	37,074,881
	<i>% of County Pop</i>	10%		8%		24%			
	<i>Pop Density</i>	5393.0	151.0	678.0	97.0	442.0	127.0	1970.0	234.4
	<i>Median Income</i>	\$22,878	\$47,298	\$25,017	\$47,105	\$36,091	\$44,410	\$44,766	\$49,894
	<i>% Families below FPL</i>	43.5%	17.2%	23.1%	15.9%	29.0%	16.7%	16.3%	
	<i>% Non His</i>	30%	51%	21%	52%	38%	47%	52%	64%
	<i>% His</i>	70%	49%	79%	48%	62%	53%	48%	36%
	<i>% Pop &gt;55</i>	12.8%	18.8%	11.0%	17.2%	17.0%	17.9%	18.4%	19.7%
	<i>% House w/ child</i>	58.9%	45.9%	47.0%	47.0%	47.0%	50.5%	47.0%	38.0%
<b>High School Drop out %, (2007-08)</b>	<i>Male</i>	8%	5.2%	6%	7.9%	3%	4.7%	5.9%	4.4%
	<i>Female</i>	6%	4.9%	4%	5.6%	2%	3.7%	4.4%	3.3%
	<i>Total</i>	7%	5.0%	5%	6.8%	3%	4.2%	5.2%	3.9%
<b>Middle School Drop out %, (2007-08)</b>	<i>Male</i>	2%	1.3%	0%	3.3%	0%	0.9%	1.5%	0.9%
	<i>Female</i>	1%	1.0%	1%	2.9%	0%	0.7%	1.2%	0.9%
	<i>Total</i>	1%	1.1%	0.5%	3.1%	0%	0.8%	1.3%	0.9%
<b>% Healthy Zone BMI, 2006 for 5,7,9 grade children</b>		61.6%	66.2%	64.2%	65.2%	75.0%	66.0%		67.4%
<b>Unemployment rate, 2006 Payroll Establishments</b>	<i>Annual Average</i>	15.0%	8.0%	12.7%	7.6%	10.0%	9.4%	7.9%	4.9%
	<i>% of County total</i>	2552	16902	1339	11467	1321	3769	64385	
		15%		12%		35%			
<b>Death Count, (1999-2005)</b>	<i>YPLL (65)</i>	5,308	38,162	3,963	35,053	4,789	9,689	169,424	1,604,475
	<i>YPLL (25)</i>	58.16	41.44	57.02	44.80	45.86	40.95	42.47	29.26
	<i>LE (65)</i>	12.36	10.94	13.18	11.22	11.52	10.31	10.73	8.55
	<i>Intentional Mortality Age 0-24</i>	16.0	18.0	16.2	16.6	16.1	17.4	17.5	18.7
	<i>Intentional Mortality All</i>	15.9	9.7	12.2	9.4	14.1	10.5	9.6	10.1
		26.86	15.51	20.3	17.43	20.29	15.33	15.7	15.5
<b>Avoidable Hosp Rate, (98-06) Pediatric Avoidalbe Hosp Rate</b>	<i>per 10,000</i>	167.25	140.02	148.28	165.18	155.23	138.90	154.28	
	<i>per 10,000</i>	37.52	27.94	18.00	17.47	15.34	18.22	21.51	

## Results and Findings

### **Big Result #1: Provide a Health Home for All Children** **Related Outcomes and Preliminary Baseline Measures**

#### **Outcome 1: All children have health coverage**

In the context of child access to a health home, a specific measure of whether or not all children in the Valley BHC places have health coverage is not currently available. Through TCE efforts, California Health Interview Survey data for the BHC places will be available in the future. Institutional data on population enrollment or survey data on individuals' perceived coverage and access may be required. Indirect measures of adequate access to health care were sought.

**YPLL (25) rate** – Years of potential life lost up to age 25 per 1000 population. This is an alternate version of the YPLL 65 indicator. YPLL 25 highlights deaths that occur between 0-25 years old. In this way it can be seen if an area has issues with young people dying versus that of an older population dying that is captured in the YPLL 65 indicator. YPLL25 is perhaps most impacted by perinatal mortality and intentional mortality, yet it does provide an important summary of the health of children. High rates of mortality for persons age 25 and younger may indicate the adequacy of their health care access.

- *All three BHC sites have higher YPLL (25) than their respective counties.*

#### **Outcome 2: Families have improved access to a health home that supports healthy behaviors**

In the context of child access to a health home, a specific measure of whether or not all families have improved access to a health home that supports healthy behavior is not available. Both institutional data on policies of health providers and utilization of preventive services along with survey data on perceived access to prevention and perceived support for healthy behaviors may be required. Indirect measures of adequate access to preventive health care were sought. We also identified possible survey indicators of access to preventive care and perceived support for healthy behaviors.

**Pediatric avoidable hospitalization rate** – The number of pediatric (0-19 age) avoidable hospitalizations per 10,000 persons. A pediatric avoidable hospitalization is categorized as a hospitalization that could have been avoided if age-appropriate primary and preventative care had been accessible to patient in the period prior to the hospitalization. (A full list of conditions used in this indicator is available in Appendix B.) The rate of avoidable hospitalizations in an area is one way to determine if the population in that area has reasonable access to preventative care. Improving access a family has to preventative care, or a health home, will support healthy behaviors and ultimately lower the rate of avoidable hospitalizations.

- *Fresno and Kern BHC sites have higher rates of pediatric avoidable hospitalizations than their respective counties while Merced BHC site has a lower rate.*

**Self-efficacy** – This survey scale measures the degree to which the respondents believe they are capable of performing in a certain manner to attain certain goals. The data table reports the percentage of those respondents indicating **low** self-efficacy.

- *Kern BHC respondents report a small percentage of community respondents indicating low self-efficacy (3.1%) and is comparable to the SJV average. On the other hand, Fresno BHC respondents report much greater percentage of community residents feeling low self-efficacy*

(14.4%). The greater the percentage of household members reporting low self-efficacy is troubling and counter-productive to achieving Outcome 2.

**General well-being** – Community respondents were asked to rate their overall health status as: Excellent, good, fair, or poor.

- *Fresno and Kern BHC had similar percentages of ‘fair or poor’ general well-being. Both BHC sites reported less negatively than the aggregate clusters.*

**Physical in last year** – Community respondents were asked if they had an annual medical physical examination in the past year was asked

- *Nearly half of Fresno BHC respondents report NOT having had a physical examination in the past year compared to one quarter of Kern BHC respondents.*

<b>Outcome 3: Health and family-focused human services shift resources toward prevention</b>
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In the context of child access to a health home, a specific measure of whether or not health and family-focused human services shift resources toward pre-vention was not available. Institutional data on policies, resource allocation and utilization may be required. Survey measures of perceived access to preventive services may be required as well. Indirect measures of adequate access to preventive health care were sought. We also identified possible survey indicators of access to preventive care and perceived support for healthy behaviors.

**Avoidable hospitalization rate** – The number of avoidable hospitalizations per 10,000 population. An avoidable hospitalization is categorized as a hospitalization that could have been avoided if proper preventative care had been administered prior to the hospitalization. (For a full list of conditions that were used in this indicator refer to **Appendix B**)

- *Both Fresno and Merced BHC sites have much higher rates of avoidable hospitalizations than their respective counties while the Kern BHC site has a much lower rate of avoidable hospitalization than the county.*

**LE (65)** – Life expectancy for a person at age 65. This is an alternate version of the overall life expectancy health indicator. LE (65) captures how much longer a person who is 65 can reasonably expect to live. LE can be analyzed by sex to indicate potential disparities between males and females

- *The Kern BHC site has similar LE (65) than its county, while both the Fresno and Merced BHC sites have lower LE (65) than their respective counties.*

**YPLL (65) rate** – Years of potential life lost up to 65 per 1000 population. Even though life expectancy is slowly increasing YPLL 65 is used as a health indicator, instead of YPLL 75, because the 65 cutoff has been the standard for many years and allows for not only comparison to past data but also emphasizes deaths that occur during productive years of life.

- *All three BHC sites have a higher rate of YPLL 65 than their counties.*

**Depression scale** – Community Cluster Survey residents responded to a standard 5-point Depression Scale. The results were analyzed to produce a depression scale ranging from 0 to 5 (a score of 5 indicating the highest depression score). Scores of 3 (mid-range) and higher were analyzed for the Fresno and Kern BHC sites.

- *Kern BHC (27.1%) had a higher score than Fresno BHC (20.0%) and was also higher than the SJV aggregate score of 24.8%*

**Diagnosed chronic conditions** - Community Cluster Survey residents reported whether a physician had diagnosed them with the following chronic conditions: heart disease, high blood pressure, diabetes, cancer, asthma, arthritis, and or depression. Analysis focused on the total number of chronic diseases a person was diagnosed with.

- *The majority (84.8% and 80.6% respectively) of both Fresno and Kern BHC residents responded that they had been diagnosed with at minimum one of the listed chronic conditions. Fresno had a higher reported percentage of BHC residents with at least one chronic condition than both Kern BHC and the aggregate cluster communities.*
- *Overall, the remainder of respondents indicated two or more chronic conditions*

**Big Result #2: Reverse the Childhood Obesity Epidemic**  
**Related Outcomes and Preliminary Baseline Measures**

In measuring reversal of the childhood obesity epidemic, some specific indicators health status such as BMI as well as nutritional and physical activity may be most relevant. . Through TCE efforts, California Health Interview Survey data for the BHC places will be available in the future. While more comprehensive data sources may be identified, available secondary data on measures of fitness for children in selected grades provide an important perspective on obesity rates in the BHC communities.

**Fitnessgram**– Healthy Zone BMI was calculated by looking at 2006 Fitnessgram data for children in grades 5, 7 and 9 in the schools TCE identified as serving each Valley BHC. Appendix C lists the schools identified by TCE for which we had Fitnessgram data available. More recent data and data that include more schools may be available. The percentage of children who had age appropriate body composition scores were population weighted from all schools within the BHC areas or known to serve primarily students living in the BHC area. This is a direct relationship indicator; as the childhood obesity epidemic is reversed more children will have body composition scores that are age appropriate.

- *The Fresno and Kern BHC sites have Healthy Zone BMI rates that are slightly worse than their counties and also slightly worse than the state number. However, the Merced BHC site has Healthy Zone BMI much higher than the county as a whole.*

<b>Outcome 7: Neighborhood and school environments support improved health and healthy behaviors</b>
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In the context of obesity prevention, no specific approach to measuring the extent to which neighborhoods and school environments support improved health and health behaviors has been identified. Institutional data on efforts to create and sustain health promoting environments, direct measures of neighborhood environments (walkability assessment, CX3 measures) and survey measures of perceived environmental support for improved health and healthy behaviors may be needed. Indirect measures were sought, including available data on child fitness, and survey data on perceived neighborhood environment. Indicators examined in the context of children’s access to a health home, depression and diagnosed chronic conditions, were also considered as possible baseline factors that planners might explore.

**Neighborhood Environment** – Two measures of neighborhood environment were analyzed from the Community Cluster Survey. The first measure indicates neighborhood disadvantage and the second indicates neighborhood safety. The respondents reported on various instances of neighborhood “disadvantage” and a scale was created to report a scale of increasing disadvantage. Neighborhood

safety was assessed in a similar manner and reported on a scale of 1 – 5 (a score of 5 indicating the most unsafe neighborhoods). Indicators of perceived neighborhood environment and safety may be particularly useful as community seek to understand how built environment and public safety policies are interacting with local conditions.

- *Fresno BHC reported the majority (64%) of its neighborhood disadvantage in the medium range of the scale (between 1-3 indicators of disadvantage). Unfortunately, Kern BHC reported its neighborhood disorder (47.7%) on the highest end of the scale with 4 or more indicators of neighborhood disorder. Both BHC sites reported higher are higher than the SJV aggregate clusters.*
- *Similar to the Neighborhood Disorder findings, Kern reported worse scores on the safety scale (34.4%) compared to Fresno BHC (20.0%) and the Cluster aggregate (24.8%)*

**Depression scale** – (see above description)

**Diagnosed chronic conditions** – (see above description)

**Outcome 4:** *Residents live in communities with health-promoting land use, transportation and community development*

BHC planners may develop objectives and strategies that shape land-use, transportation and community development as a central approach in overcoming the obesity epidemic. Direct indicators of health promoting land-use, transportation and community development were not identified. Such measures could be based on institutional data on policies and patterns of investment and survey data exploring both behavior patterns and perceptions around policy making and community environments. We sought indirect measures that speak to family behavior patterns around nutrition and physical activity. We also examined a measure of civic engagement, seeking an approach to assessing the degree to which community members experienced opportunities to shape land-use, transportation and community development efforts to meet their goals around obesity reduction, public safety, schools and other features.

**Obesity and Fruit & Vegetable Intake** – BMI scores were calculated from community residents reported height and weight. Respondents were also asked to recall their consumption of fruits and vegetables in the previous week.

- *Both Fresno and Kern BHC have higher rates of overweight and obesity than the Valley as a whole and both show relatively low rates of weekly vegetable and fruit intake. Kern BHC reports lower consumption of vegetables than the Valley as a whole*

**Physical activity** – Physical activity was measured from community residents’ self-reported participation in moderate physical activity during the past week and the frequency of physical activity

- *Both Fresno and Kern BHC sites have similar proportions of residents who report participating in moderate physical activity less than 3 times in the prior week compared to the Valley as a whole.*

**Civic engagement** – Community Cluster Survey respondents answered questions pertaining to their involvement in community meetings to address school, local, and or regional decisions in the past year (not including work-related meetings).

- *The vast majority of people in both Fresno and Kern BHC sites did not participate in any type of community, town or school, club or organization, nor regional problem-solving meeting.*

**Big Result #3: Increase School Attendance**  
***Related Outcomes and Preliminary Baseline Measures***

The third big result, increase school attendance, may be measured directly and it is also linked to outcomes about health and human service provider focus on prevention, neighborhood development, safety and other factors. Measures of neighborhood land-use, transportation, and community development, access to preventive services, and other aspects of a supportive community environment may be measured in somewhat different ways in the context of increasing school attendance. Secondary data from the California Department of Education provides important measures of school attendance, but do not provide detail of outcomes based on the child’s home location and do not provide qualitative information on the health and development related policies and practices that may be among the causes of school completion rates.

**Education Data** – Dropout and enrollment data were obtained from the California Department of Education website [www.cde.ca.gov/index.asp](http://www.cde.ca.gov/index.asp). School district enrollment and dropout raw counts by sex and rates for 2007-08 were calculated from raw data for both middle and high schools within the BHC areas or known to serve students living in the BHC area. The drop-out percentage reported here is the number of middle or high-school students who drop out that year compared with total enrollment at each school serving the place. This was selected instead of the CDE four-year cumulative drop-out rates to allow comparisons of middle and high school. While this is a direct indicator of school engagement, with higher school attendance associated with lower dropout percentages, it is at best an indirect indicator of whether or not schools are creating health promoting environments that support regular attendance.

- *Kern and Merced BHC sites have slightly lower high school dropout rates than their counties with Fresno BHC having a higher high school dropout rate than Fresno county. Moreover, all three BHC sites also have high school dropout rates higher than the state with the Kern BHC site being quite a bit higher.*
- *Fresno BHC male middle school dropout rates are higher than both the county and state. While, Kern and Merced BHC sites show middle school dropout rates lower than the county and state.*

<b>Outcome 9: <i>Health gaps for boys and young men of color are narrowed</i></b>
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Reducing health gaps for boys and men of color may be a crucial component of a strategy to increase school attendance, reduce obesity, promote neighborhood safety and other key results in the BHC initiative. Measuring reductions in health gaps by race/ethnicity and gender within the BHC places is not supported by currently available data. Institutional measures of policies and practices linked to reducing race/ethnicity and gender linked health inequities have also not been articulated to this point. Improved survey data for the BHC places may be needed on a longitudinal basis to address baseline and progress around this objective.

**Big Result #4: Reduce Youth Violence**  
*Related Outcomes and Preliminary Baseline Measures*

**Outcome 5: Children and their families are safe from violence in their homes and neighborhoods**

Both objective and perceived safety from violence at home and in the neighborhood are cited as key components of strategies to improve youth engagement in prevention-focused health care, reduce youth obesity, and improve academic outcomes. As a big result, reducing youth violence has been linked to many of the outcomes discussed, although measures of prevention access or other factors may need to be modified to reflect attention to violence prevention. While direct measures of safety were hard to identify from available secondary data, several indirect indicators that may be of use to planners have been identified.

**Intentional Mortality rate Age All** – The number of intentional mortalities per 100,000 population. Intentional mortalities are categorized as both homicides and suicides. The number/rate of intentional mortalities such as homicides and suicides in an area is one way to measure how safe a neighborhood is from violence and how safe children and their families are in their homes.

- *All three BHC sites have higher intentional mortality rates for all ages than their respective counties.*

**Intentional Mortality rate Age 0-24** – The number of intentional mortalities per 100,000 people ages 0-24. Intentional mortalities are categorized as both homicides and suicides.

- *All three BHC sites have higher intentional mortality rates for age 0-24 than their respective counties.*

**Outcome 6: Communities support healthy youth development**

No specific indicators of community support for healthy youth development were identified, either in the context of promoting youth safety or other Big Results. Direct measures of the activities of community organizations and informal relationships and activities may be needed to more accurately assess community performance. An indirect measure, that we discussed already, provides some indication of whether or not health care access and community conditions are adequate to avoid prevention-sensitive acute illnesses and associate hospital use among young people.

**Avoidable pediatric hospitalization rate** – *(see Outcome 2 description above)*

**Outcome 8: Community health improvements are linked to economic development**

No direct indicators of how and how much of community economic development is linked to health improvements have been identified in the context of violence reduction or other outcomes. Direct indicators might reflect the incorporation of health language in general plans, assessments of health focus in ongoing economic development initiatives, and direct observation of the impacts of economic development projects on health promoting built environments. Despite the difficulties in identifying these indicators, it appeared that for baseline discussions, having sense of unemployment rates and employment potentials within the BHC communities could be a starting place for planning.

**Unemployment Rate** – 2006 data were gathered from the California Employment Development Department (EDD) Labor Market Information Division. Unemployment data was calculated by applying each area ratio for zip codes (2000 Census) to the County labor force data. It is an estimate only and assumes levels of employment and unemployment remain constant. A lower unemployment rate for an area will usually correlate to a higher degree of infrastructure, transportation and community development being present.

- *All three BHC sites have higher unemployment rates compared to their respective counties.*
- *All three BHC sites have a higher percentage of county payroll establishments than they have a percentage of county population.*

**Payroll Establishments** – 2006 data sets were gathered from the California Employment Development Department (EDD) Labor Market Information Division. Payroll establishments were used as a proxy for businesses that could potentially be hiring employees.

- *Both Kern and Fresno have far fewer employment opportunities within the BHC communities as approximated by the very low percentage of payroll establishments compared to the respective County total percentage and overall SJV percentage.*

## Conclusions

This preliminary report identifies some possible baseline indicators from existing data sources that can be used to measure the “Four Big Results” and associated outcomes for the San Joaquin Valley BHC sites. This is intended to begin the conversation on whether and how currently collected and readily available data sources could be used and exemplify the kinds of additional measures that might be derived from new data collection in the BHC places. This preliminary report identifies a number of issues that may need to be considered in during the planning process.

- (1) Geographic Identification:** Most of the relevant secondary data sources that we could identify to measure key BHC outcomes were available by zip code and not by census block. Since the BHC places are defined by census blocks and include portions of multiple zip codes, it is not possible to exactly link most measures to the place. There will need to be problem-solving about whether or not indicators that reference a larger area are acceptable to monitor progress on BHC goals. TCE has developed a method for zip-code approximations of the places that will be useful as more data are identified and explored.
- (2) Additional Secondary Data:** Additional data sources of data may exist for some indicators. For example, the Healthy Kids Survey may be a good data source to augment the obesity and fruit and vegetable consumption findings with fitness and physical activity data, but may be difficult to use without obtaining school level data. This source also includes other indicators of youth health that may be relevant such as use of alcohol, drugs, and tobacco. It does not include more detailed data on insurance status, access to care, or receipt of preventative services.
- (3) Difficult to Access Secondary Data:** Collaboration with other institutions may be required to obtain additional data measures to address obvious gaps in this report (i.e., violence, crime, Healthy Kids, Medi-Cal, and CHI enrollment data). Many of the most relevant indicators would require special, potentially time-consuming and expensive, analyses of larger data sets maintained by state or county governments. Crime data specifically at the BHC place level would require special analyses by county public safety officials, while Medi-Cal enrollment within the BHC place may require special analyses of existing state data.

- (4) Importance of Perception and Understanding:** For many of the Outcomes, it may be necessary to obtain supplementary subjective and individual-level perception and behavior data from surveys or service use to meaningfully reflect the baseline and subsequent progress. For example, having access to a health home is in part about residents' perceptions and experiences as about data indicating coverage. Similarly, objective crime indicators may not accurately reflect the experiences of safety. Some of these perception measures (safety, access) will be available in the future from CHIS for the Valley places through the planned over-sampling of these areas.
- (5) Obvious Available Data Indicators Did Not Exist:** For at least two of the Outcomes, we could not identify existing data or the most appropriate indicators. For Outcome 9, we did not identify secondary data sources at the BHC place level, that also offered a range of health status measures broken out by both race/ethnicity and age. Similarly for Outcome 10, we did not identify an objective or subjective indicator for statewide consensus on a vision for healthy communities. Again it is possible that the expanded CHIS data will permit this. The Healthycities web-site does include some approximations for these measures, based on combining multiple years of CHIS data, but small original samples and the high standard errors in the approximated data make comparisons between places or between race/ethnicity and gender groups within places hard to interpret.
- (6) Long-term and Interim Outcomes Indicators:** Many of the indicators appear to refer as much to a change in policy and practice by governments, agencies, and community members as a change in quantitative indicators of community performance. Particularly in domains such as childhood obesity and school attendance, there may be a significant time delay between changing policies, practices and environments, as well as changing overall community performance. This suggests the need to achieve consensus on interim measures to reflect capacity building, development of model programs that are not-to-scale, and policy and systems changes that lead to outcomes.

In conclusion, we sought to assist the Valley BHC planners by offering new ways to think about the Big Results and the objectives, strategies, and indicators that are being developed. While examining these preliminary data collection and ongoing organizational efforts to conceptualize the TCE Four Big Results and associated outcomes, we recognize many measures proposed and data found raise as many questions as they answered. We would like to engage other interested stakeholders in the SJV BHC sites and other regional organizations in ongoing discussions to determine what it would look like to achieve these results in our region and how we should go about measuring our successes in our policy and systems change efforts.

## Appendix A – Methods and Data

### BHC Areas defined

The SJV BHC sites contain all or part of the following zip codes:

1. Fresno (93701, 93702, 93706, 93721)
2. Kern (93203, 93307, 93241)
3. Merced (95333, 95340, 95341, 95365)

All demographics and health indicators presented in the data tables (Tables 2 & 3) are reported at the BHC zip code level. These zip code data are the closest match to the BHC places, which are defined by census blocks as many of the available data elements are at the zip code level and overlap considerably with the SJV BHC sites. Additionally, data from a Community Cluster household telephone survey (n=1,100) was conducted in 2009 covering Fresno (n=120) and Kern (n=120) BHC sites.

### Demographics

The following two demographic data sources were used in this report:

1. ***Nielson Claritas*** – U.S. Census-based and annually adjusted demographic data are presented in **Table 4**. 2009 demographic data for the SJV BHC sites in this report were acquired from The California Endowment ([maps.calendow.org](http://maps.calendow.org))

- *Claritas data suggest that the percentage of county population contained in the BHC sites is similar for Fresno and Kern and almost twice as much for Merced. It is noteworthy to point out that the Fresno and Kern BHC sites represent smaller and more concentrated proportion of the county, while the Merced BHC site is comparatively larger making up almost 25% of the county. Population density is also extremely high in the three BHC sites compared to the rest of their respective counties due to the large amount of rural and mountainous areas that make up much of the three San Joaquin Valley counties in this report.*
- *Fresno and Kern BHC sites have a lower median household income, a higher percentage of Hispanic population, a younger population and more households with children than their respective counties.*
- *The Merced BHC site has a lower median household income, a higher percentage of Hispanic population and a similar age of population and households with children than Merced County.*
- *Overall both the BHC and County data compares poorly with State data in that the BHC sites and the Counties are poorer, with a higher percentage of Hispanics, a younger population and have a higher number of households with children than when compared to State numbers.*

2. ***San Joaquin Valley Community Cluster Survey*** - The Social Research Lab of the California State University, Fresno administered a CVHPI-designed Community Assessment telephone survey in 2009.

Data from approximately 120 residents from each cluster were collected. Collected cluster data addressed:

- Community demographics
  - Social connectedness
  - Overall health (i.e., general well-being, depression, diagnosed chronic diseases, and self-efficacy)
  - Chronic disease indicators (i.e., obesity, fruit and vegetable intake), and neighborhood environment (i.e., disadvantage scale and safety)
- *Survey demographics indicate a parallel relationship of poverty with the Census-derived data among the BHC sites. Median household income ranged from \$24,386 to a high of \$43,040*
- *The community survey data indicate a slightly different demographic finding that may be attributed to selection bias of those surveyed. The survey shows that nearly three fourths of the BHC clusters responded were females and predominantly Hispanic in Kern.*

### **Health indicators**

All SJV health indicator data were obtained from the CVHPI-maintained data warehouse. This data warehouse contains all county vital statistics (births, deaths, hospitalizations) data sets for the SJV counties:

- Birth Statistical Masterfiles (*not used in this report*) – (1998-2006)
- Death Statistical Masterfiles - (1999-2005)

Office of Statewide Health Planning and Development (OSHPD) hospitalization data were obtained and include:

- Hospitalization discharge data – (1998-2006)

Just about all health indicator data in **Table 4** are expressed as population-adjusted rates. All vital statistics data were obtained from the California Public Health Department Office of Vital Statistics.

## **Appendix B - Avoidable Hospital Conditions**

### **Adults (ages 20+ years)**

- Diabetes short-term complication admissions
- Perforated appendix admissions
- Chronic obstructive pulmonary disease admissions
- Diabetes long-term complication admissions
- Hypertension admissions
- Congestive heart failure admissions
- Low birth weight
- Dehydration admissions
- Bacterial pneumonia admissions
- Urinary tract infection admissions
- Angina without procedure admissions
- Uncontrolled diabetes admissions
- Adult asthma admissions
- Lower-extremity amputation among patients with diabetes
- Foreign body left in during procedure
- Iatrogenic pneumothorax
- Selected infections due to medical care
- Post-operative wound dehiscence
- Accidental puncture or laceration
- Transfusion reaction
- Post-operative hemorrhage or hematoma
- Laminectomy
- Hysterectomy

### **Pediatric (0-19 years)**

- Asthma
- Short-term complications of diabetes
- Gastroenteritis
- Urinary tract infection
- Perforated appendix

## **Appendix C – Schools Serving BHC places included in Fitnessgram Data**

- Academy Charter
- Arvin High
- Buhach Colony High
- Cambridge Continuation High
- Carver Academy
- Cesar Chavez Middle
- Design Science Early College High
- Dewolf Continuation High
- Edison Computech
- Elizabeth Terronez Middle
- Golden Valley High
- Greenfield Middle
- Haven Drive middle
- Herbert Hoover Middle
- J.E. Young Academic Center
- Kings Canyon Middle
- Le Grand Union High
- Leon H. Ollivier Middle
- McKee Middle
- McLane High
- Merced High
- Mountain View Middle
- Roosevelt High
- School of Unlimited Learning
- South High
- Sunnyside High
- Sunset
- Tenaya Middle
- Weaver Middle
- Yosemite Middle