

Public Health PBRN Monthly Virtual Meeting June 19, 2014

Research-in-Progress Presentation by
California Public Health Practice-Based Research Network

Public Health Delivery and Costs Studies
in the San Joaquin Valley of California

Presented by Van Do-Reynoso, MPH, Public Health Director, Madera, CA and
Paul Brown, PhD, Professor of Health Economics and Public Health, UC Merced

Please remember to mute your telephone/computer speakers during the presentation

*To mute your telephone press *6, to unmute #6*

Conference Phone: 877-394-0659

Conference Code: 7754838037#



at the University of Kentucky College of Public Health



Public Health Delivery and Cost Studies in the San Joaquin Valley

Van Do-Reynoso, MPH, UC Merced & Madera County PH
Paul Brown, PhD, UC Merced

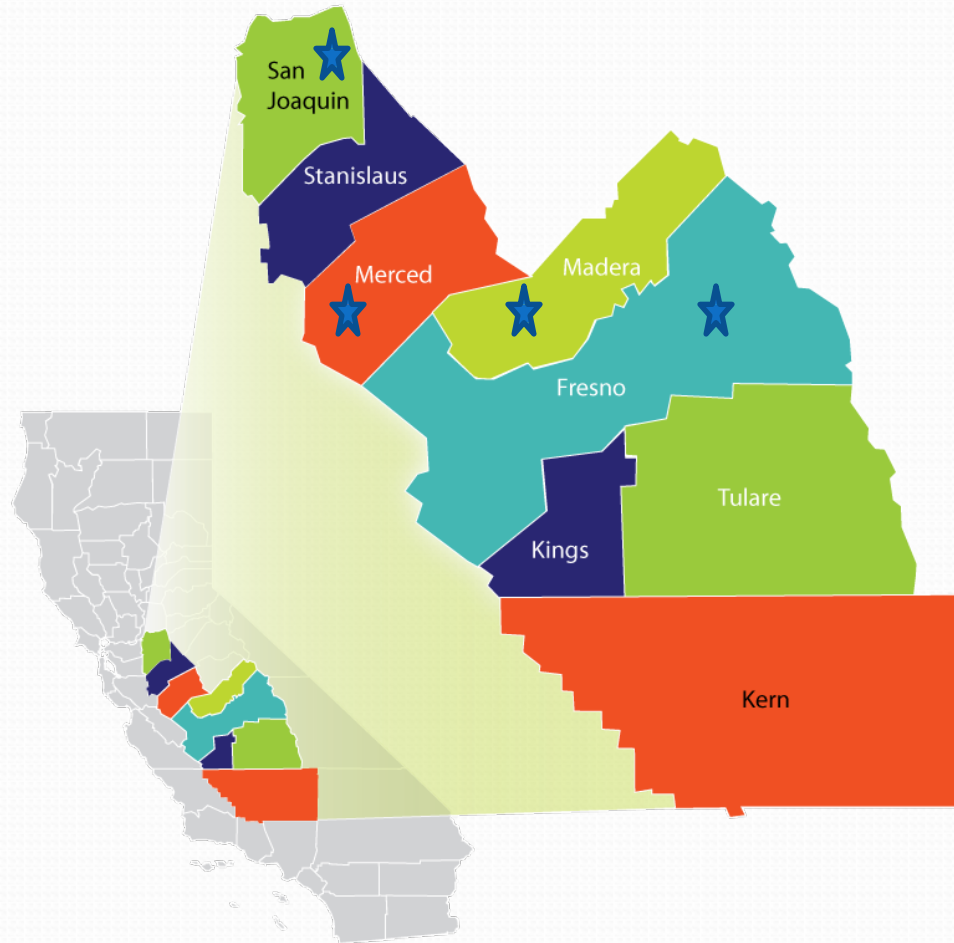
In collaboration with the Public Health Institute

AIMS

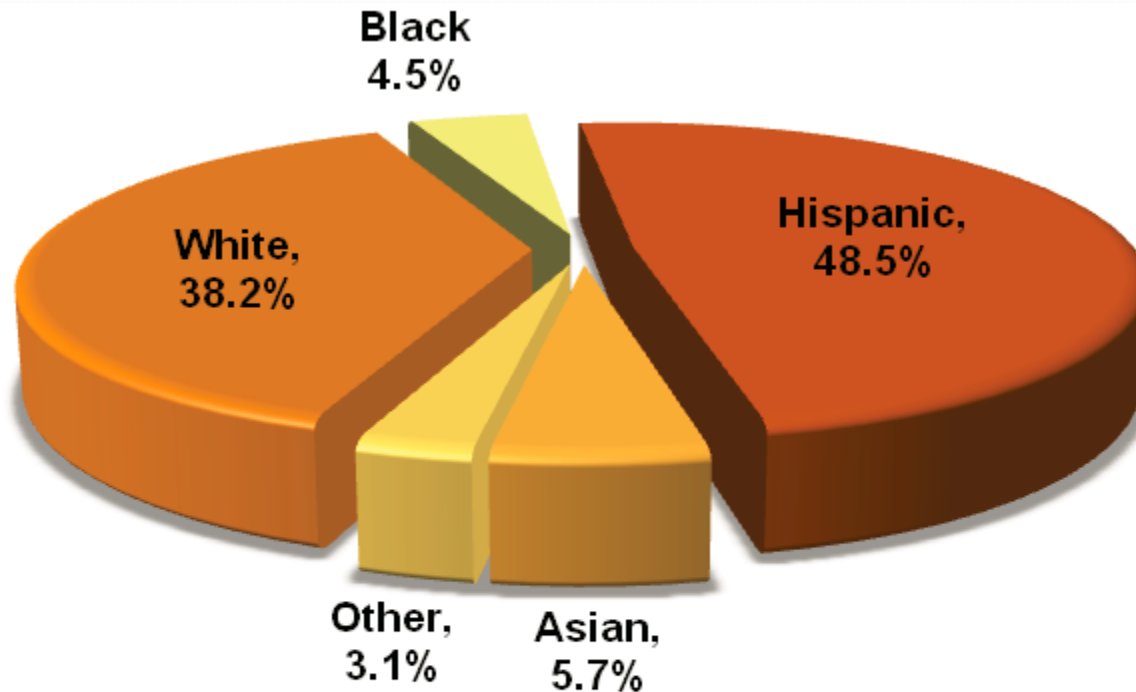
To compare the methods and costs of delivering three public health services in four rural LHDs in the SJV, and disseminate the information to LHDs throughout the SJV.

- TB control
- Childhood immunization
- Community health assessment

The San Joaquin Valley

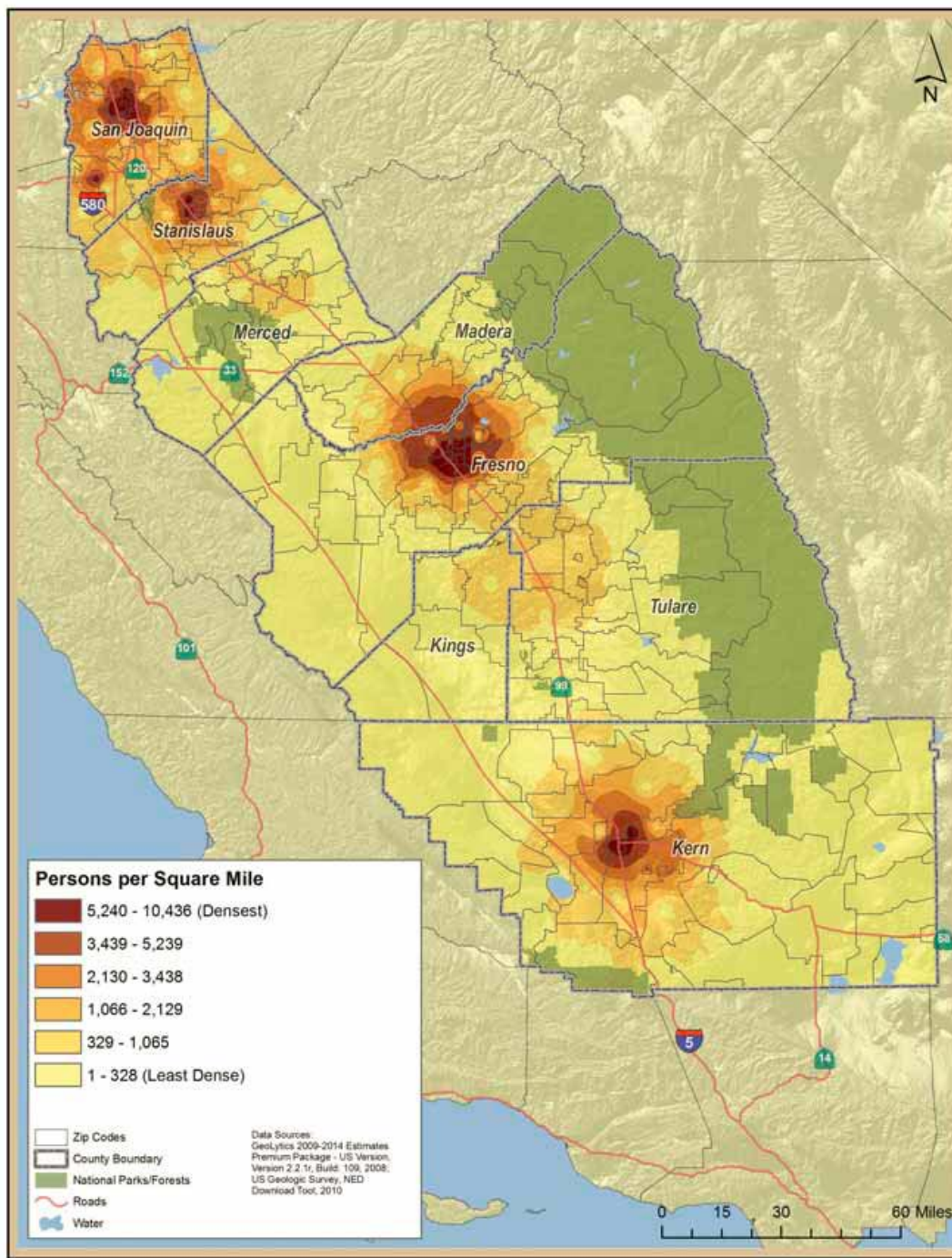


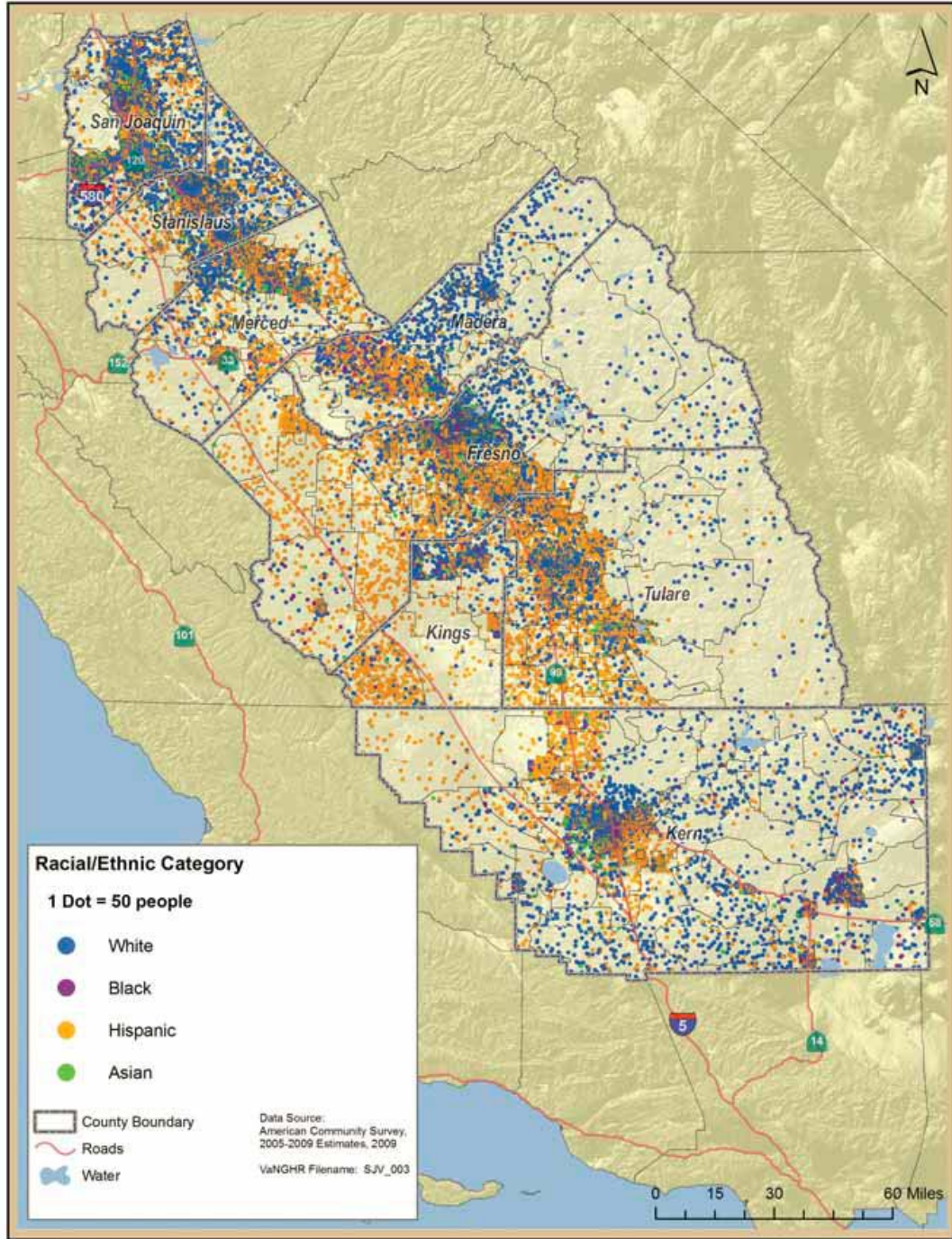
San Joaquin Valley



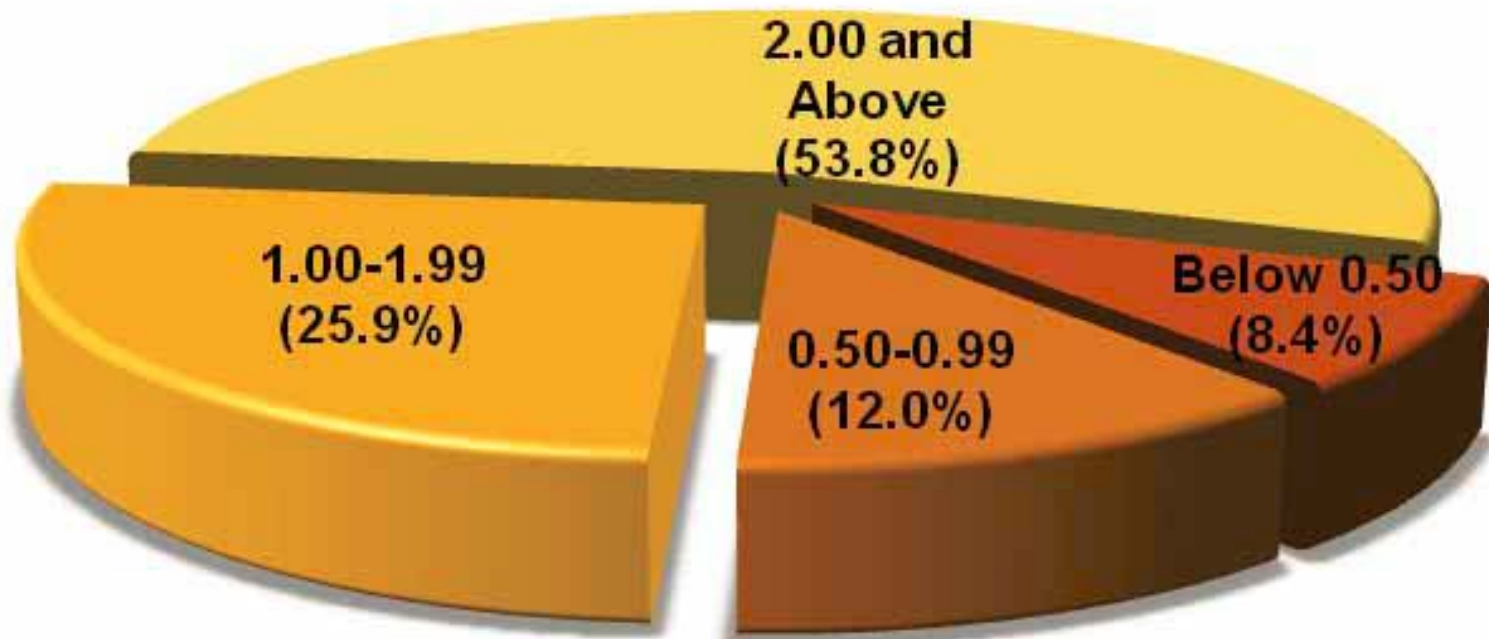
Source: U.S. Census Bureau, 2009 American Community Survey

Note: "Other" includes American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and those who identified themselves as some other race or two or more races. Racial groups include Non-Hispanic population only; Hispanic can include any racial group.





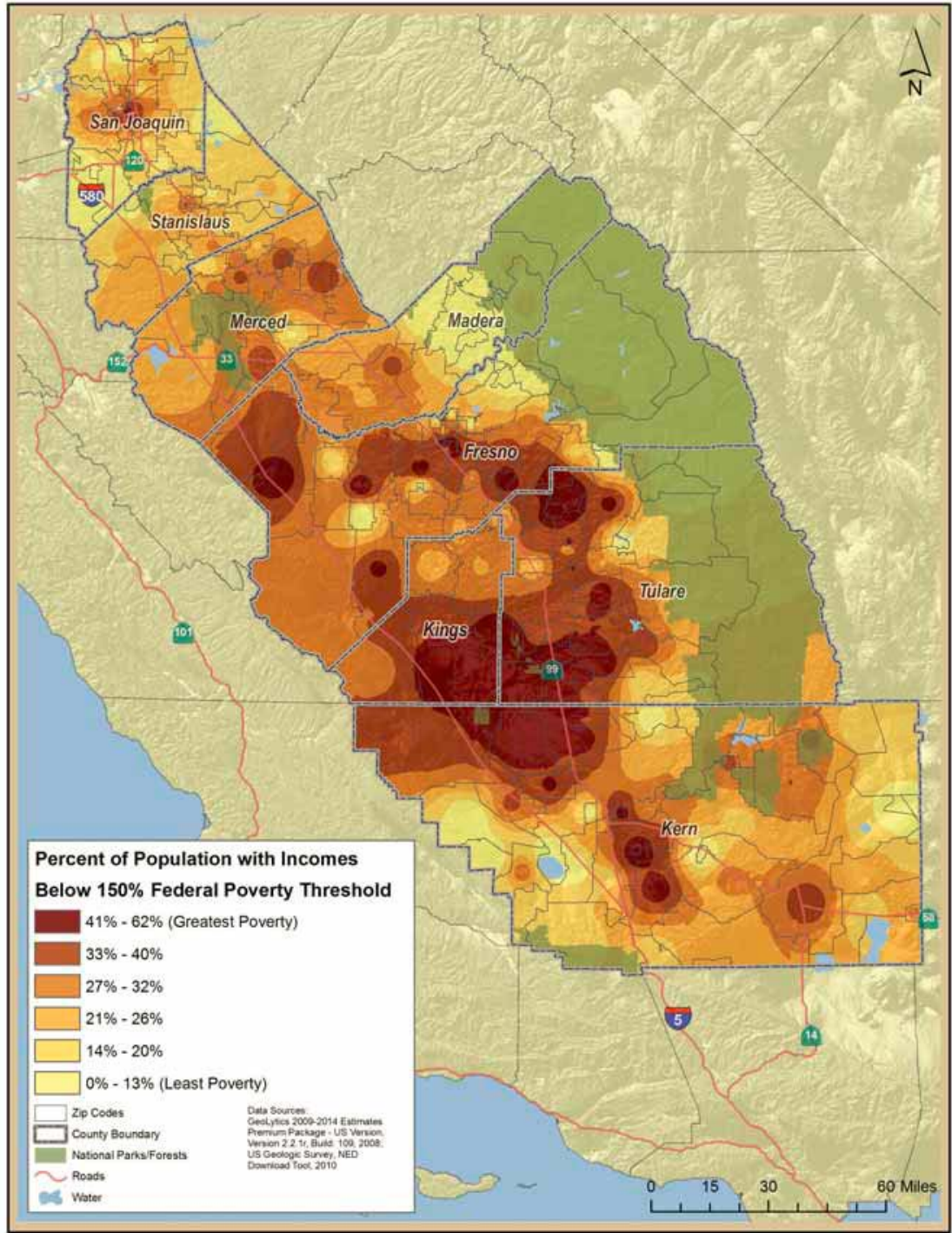
Income to poverty ratio

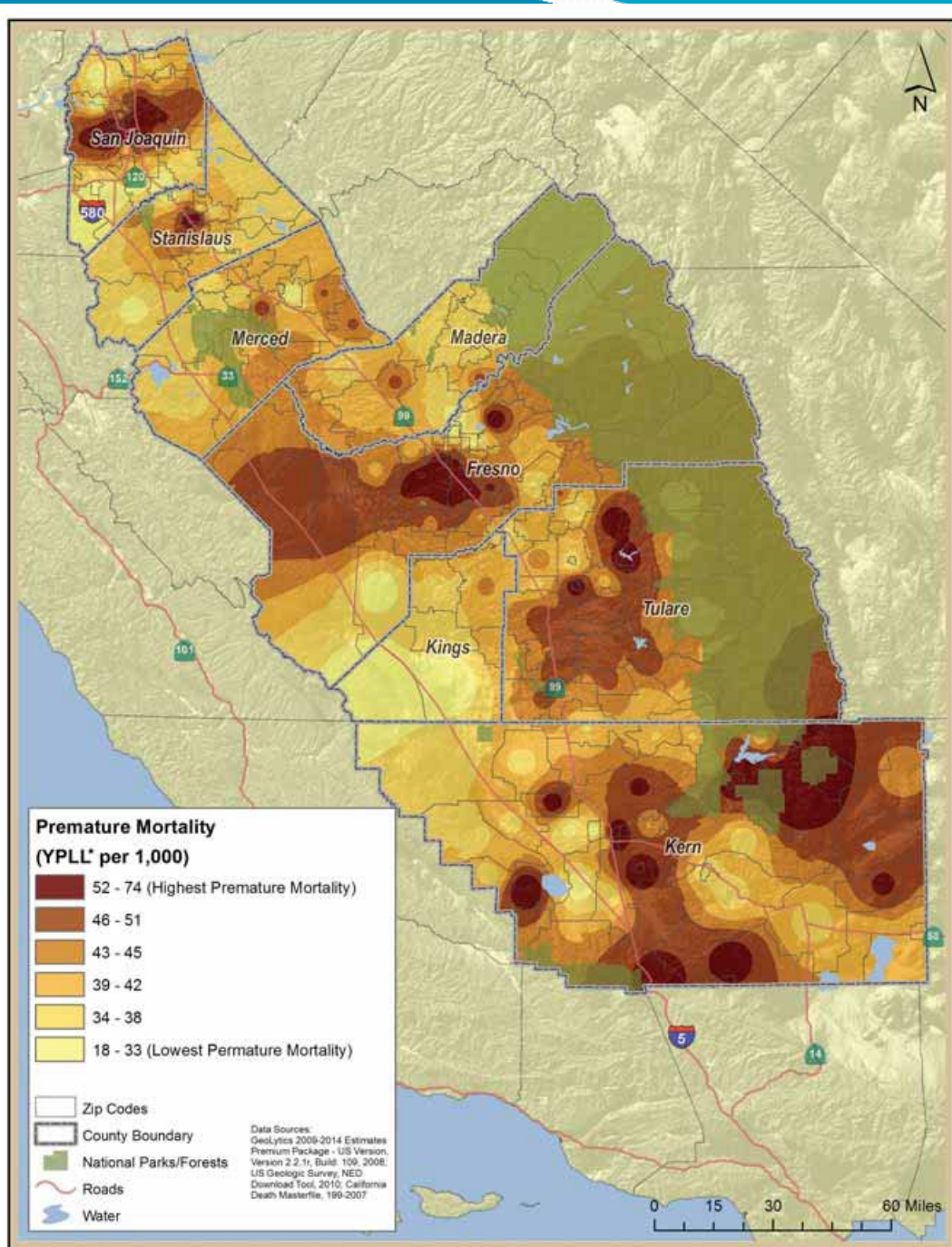


Source: U.S. Census Bureau, 2009 American Community Survey

Compared to US...

<u>Education</u>	<u>San Joaquin Valley</u>	<u>California</u>	<u>United States</u>
Less than High School	29%	19%	15%
High School Only	25%	21%	29%
Some college	24%	30%	29%
BA or higher	15%	30%	28%
<u>Poverty rate</u>			
Below 50% of poverty rate	8%	6%	6%
50% to 99% of poverty rate	12%	8%	8%
100% to 200% of poverty rate	26%	20%	18%
Over 200% of poverty rate	54%	66%	67%





Implications for LHDs

- Traditionally offered safety net, including immunization and TB testing
- ACA will expand enrolment in MediCal, but unclear how undocumented individuals will receive healthcare
- Questions facing Local Health Departments regarding TB and IZ?
 - Should LHDs still provide safety net services such as TB and IZ, or should they just refer to FQHCs and other providers?

Current study

- Overall aim:
 - *Compare the methods and costs of delivering three public health services*
- Questions:
 - *What are the current activities with regards to IZ and TB testing?*
 - *What is the cost of those activities?*
 - *Are they effective in delivering services?*
 - *Should they continue with these activities in the future?*

Methodology

- Select 4 LHDs in the San Joaquin Valley
- Examine the process by which they:
 - Provide childhood IZ services
 - Provide TB testing and treatment
 - Conduct community health assessment
- Estimate cost of services
- Examine available information on number of people immunized or tested & treated for latent TB infection
- Estimate the return to investment from the activities

Costing Methodology

- Resource-based costing approach
 1. *Semi-structure interviews*
 - a. First with PH Director, then staff
 - b. Snowball sampling
 2. *Develop process maps*
 - a. Transcribe interviews
 - b. Identify resources used during each stage of delivery
 - c. Develop maps
 - d. Verify with individuals
 3. *Resource Analysis*
 - a. Assign unit costs for each resource
 - b. Assign common overhead

Interviews – TB Example

- For each way of testing, please describe:
 - *How do people find out about your testing?*
 - *How would you characterize the type of reasons people come to be tested?*
- Are people referred to you for testing? If so, who refers them?
 - *What type of testing is performed?*
 - *How are the clinic fees collected?*
- Walk me through, from beginning to end, the steps that are performed to test for TB.
- Who are the people in the Public Health Department involved with the testing? What are each of their roles?
- What happens after the client leaves the clinic? (Exam room recovery? Data entry? Filing?)
- When does the client come back for the reading?
- How are results conveyed to the clients?

Additional information

- Direct observation
 - For areas either important or where uncertainty
 - Self-reported time-studies
- Administrative data sources
 - Logs of service provision
 - Records of employee time

Types of resources

- Types of staffing
- Level of staffing
- Time spent to deliver service
- Clinical supplies
- Clerical supplies
- Indirect county costs
- Indirect department costs

Cost of service

- Apply known market prices to each resource to determine unit price/cost of each resource
- Substitute actual local prices for unknown market prices
- Develop total cost associated for service delivery
- Develop cost per outcome

Results (to date)

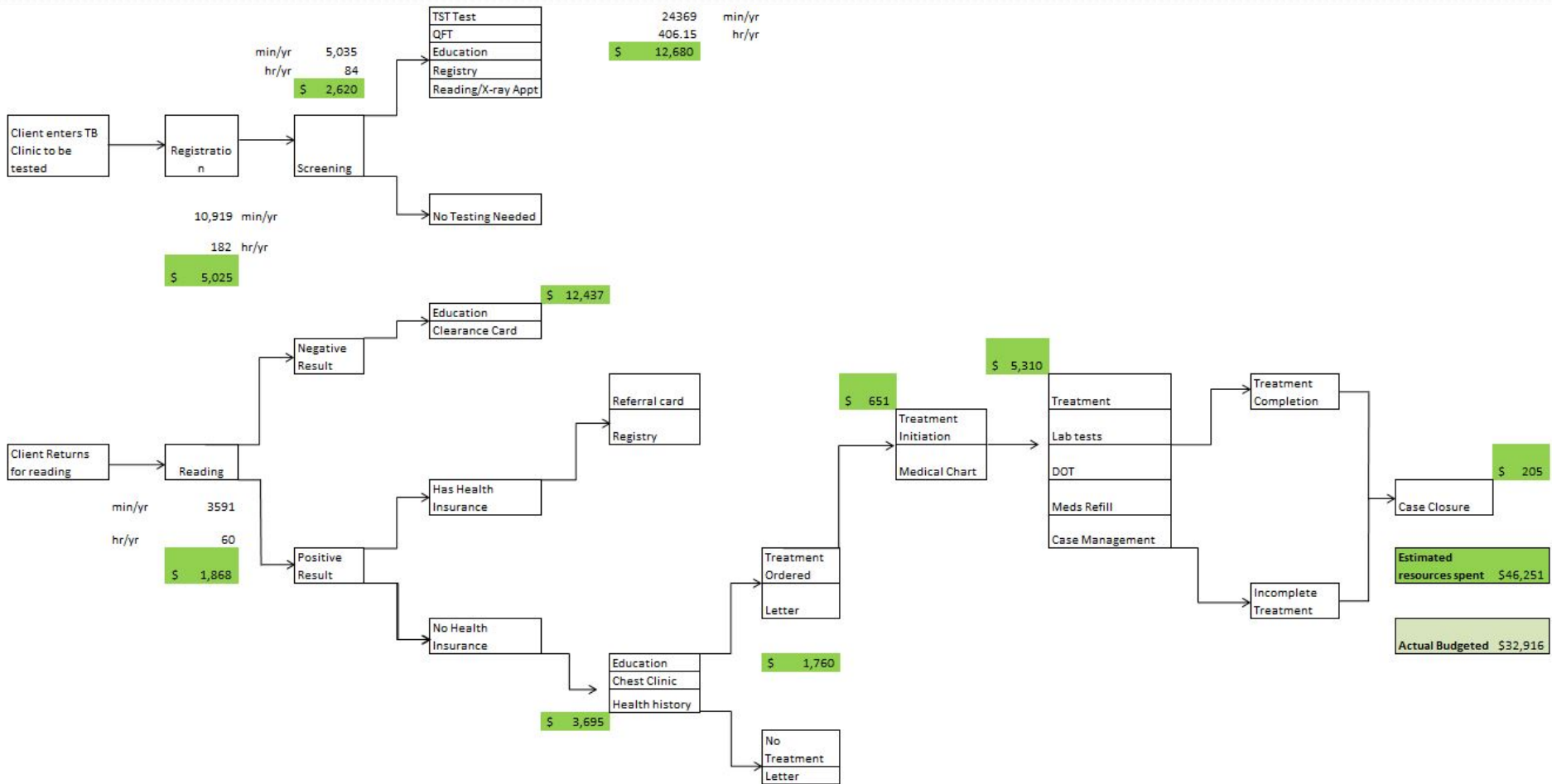
- Data collected for 3 LHDs
 - 4th LHDs agreed to provide data, but issues have arisen
- Interviews:
 - County A – 3
 - County B – 9
 - County C – 3
 - County D - 3
- Data collection: # time studies, clinical, & fiscal data
 - County A – 9 ts; clinic & fiscal data
 - County B – 9 ts; clinic & fiscal data
 - County C – 11 ts; clinic & fiscal data

TB Clinic: Time Study

(in minutes)

	Registration	Screening	TST placement	QFT Blood draw and processing	Education	CAIR Data Entry & Filing	Sched Next Appt	TST Reading	Hth History: TB Clearance	Clearance card	Ed for negs	Client Ed for LTBI	Sched Chest Clinic Appt	Health History: CXR	Chest Clinic	Chest Clinic Dictation	Letter sent: Tx; Flu; or No further action needed	Tx initiation: ed re tx options; baseline labs	Medical Chart creation	Health History; prophylaxis	Prophylaxis activities	Tx initiation: DOT for 3 mos; meds for 6 mos; or 9 mos	Lab work	DOT	DOT Travel	Meds Refills	Tx case mgt (letters sent, phone calls)	Medical Chart Case closure
County A N=273	4	2	2	0	3	2	0	1	5	2	1	10	0	10	1	10	0	0	10	0	17	10	5	7	26	4	13	3
County B N=187	4	6	4	13	5	21	1	2	0	0	0	6	0	0	25	17	10	0	10	0	0	8	4	0	0	6	3	4
County C N= 314	10	0	3	0	9	2	7	3	0	6	7	15	8	0	18	0	22	15	16	0	0	27	18	5	60	15	40	15
AVERAGE	6	3	3	4	6	8	3	2	2	3	3	10	3	3	14	9	11	5	12	0	6	15	9	4	29	8	18	7
Subtotals of blocks																												
County A	4	8						1	8			21			10		10				82							3
County B	4	51						2	0			31			27		10				20							4
County C	10	31						3	13			40			22		31				165							15
Average	6	30						2	7			31			20		17				89							7

TB Clinic: S & B for County A



TB Clinic: Data (2012)

	COUNTY A	COUNTY B	COUNTY C	TOTAL
Number of people screened for TB Testing	2,903	5,409	1,841	10,153
Number of people offered TB testing	2,555	5,409	1,485	9,449
Number of people who received TST	2,555	5,135	1,344	9,034
Number of people who had a positive TST result	74	601	89	764
Number of people who had chest x-ray	134	601	428	1,163
Number of people who had confirmatory lab tests (ie QFT)	0	0	NA	0
Number of people who had positive QFT result	0	0	NA	0
Number of people with baseline lab tests	NA	138	85	223
Number of people with who were referred for treatment to outside provider	NA	0	1	1
Number of people who were treated by the Public Health Department	77	134	65	276
Number of people who completed treatment plan	21	125	48	194

TB Clinic: Summary of costs

	County A	County B	County C
Reported Revenues	\$305,822	\$101,835	\$1,656,707
Stated Expenses	\$32,916	\$101,835	\$1,564,017
Difference: Revenues - Stated expenses	\$272,906	\$0	\$92,690
Estimated Expenses	TBV	TBV	TBV
Difference: Revenues - Estimated expenses			

TB Clinic: Summary of outcomes

	County A	County B	County C
Number tested	2,555	5,135	1,344
Number treated	77	134	65
Number completed treatment	21	125	48
Cost per tested	\$13	\$20	\$1,164
Cost per treated	\$427	\$760	\$24,062
Cost per completed treatment	\$1,567	\$1,455	\$32,584

In progress

- Validation of treatment completion
- Validation of reported fiscal data
- Clinical & fiscal data from additional 5 counties

Conclusion & Caveats

- Variance in process & recorded data
- Unavailability of fiscal data for specific clinics
- Questionable quality of available data
- Gap between program and fiscal staff
- Size and location
- Positive changes:
 - Quality improvement initiatives
 - Community engagement scholarship

Questions & Feedback



Other Meeting Agenda Items

PBRN Research Updates

- **DIRECTIVE** recommendations to RWJF
- Quick Strike final reviews
- Please submit AcademyHealth Presentations as grant products
- **SAVE THE DATE: MPROVE “Analysis and Interpretation” call: tentative July 1-3**
- **SAVE THE DATE: Grantee Meeting in Lexington, KY August 11-12,2014 (Monday-Tuesday)**
- **AcademyHealth Scholarship recipients teach-back July-August**
To view the teach-back presentations from last year recipient’s please view the following, presentations start at the 50:50 timeline, advance at the bottom of the screen.
<https://connect.uky.edu/p4kh2ptrnrw/?launcher=false&fcsContent=true&pbMode=normal>

Other Announcements

Dissemination Opportunities

- *Frontiers*
- Please let us know of any upcoming presentations at NACCHO

Funding Opportunities

- [RWJF PHSSR 2014 Solicitation](#): Closes July 23, 2014
- [The William T. Grant Foundation Scholars Program](#): Closes July 9, 2014

Next Month's Virtual Meeting: Connecticut Public Health PBRN-July 17

Presentation schedule

Presentation Schedule for 2014

January 16 Tennessee PBRN

February 20 Nebraska PBRN

March 20 North Carolina PRBN

May 15 New York PBRN

June 19 California PBRN

July 17 Connecticut PBRN

August 21 Ohio PBRN

September 18 Colorado PBRN

October 16 New Jersey PBRN

November 20 Washington PBRN

December 18 New Hampshire PBRN

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