



PLUMAS COUNTY COMMUNITY HEALTH PROFILE

NOVEMBER 2012

PREPARED BY

PLUMAS COUNTY PUBLIC HEALTH AGENCY

THE COMPLETE VERSION OF THE HEALTH
PROFILE WILL BE POSTED ON THE PLUMAS
COUNTY WEBSITE AT
WWW.COUNTYOFPLUMAS.COM

Plumas County Community Health Profile 2012

The Plumas County Community Health Profile 2012 is a project led by the Plumas County Public Health Agency, the county's Local Health Department (LHD) located in Quincy, California. The community health assessment and improvement process is a collaborative effort of Plumas District Hospital, Greenville Rancheria, Eastern Plumas Health Care, Seneca Healthcare District, and the Sierra Institute for Community and Environment. This partnership received funding from National Association of County and City Health Officials (NACCHO), through the Robert Wood Johnson Foundation.



Acknowledgements

Plumas County Residents

More than 200 residents participated in Town Hall Meetings in Fall 2011 and 2012

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And Special Thanks to the Supporting Work of:

Plumas Alcohol Tobacco and Other Drug Coalition

Plumas County Community Corrections Partnership

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Letter to the Community

Dear Plumas County Residents,

The 2012 Community Health Profile marks the beginning of an ongoing collaborative and comprehensive approach to improving the health of all Plumas County residents. Plumas County is home to dynamic, strong communities with unparalleled natural beauty. However, individuals, families and communities continue to experience serious health impacts linked to income and unemployment, housing, access to health care and health insurance coverage, and health behaviors related to nutrition, physical activity, and the use of alcohol, tobacco and other drugs.

Isolated, rural counties such as Plumas are challenged to make fiscal changes and program cutbacks while maintaining a focus on community priorities. At the same time, implementation of the Affordable Care Act will present more challenges for the Plumas County health system. It is imperative that Plumas County policymakers, stakeholders and community members make decisions based on an agreed upon framework and shared priorities.

Your hospitals, clinics and local health department are part of a larger local system of public, private, and voluntary entities striving to improve the health and well-being of our communities. We envision Plumas County as a place where everyone has access to health care and preventative services, where we're celebrated for embracing healthy lifestyles and where our communities and neighborhoods are safe and vibrant.

With this in mind, it is our intent and long-term vision that the Community Health Profile and resulting Community Health Improvement Plan will inform the local health system and community partners of our county's health status and provide direction to the local health system. In addition, it is hoped that this effort will also inform and stimulate collective action in sectors of the community that all play an important role in a healthy Plumas County such as businesses, employers, schools, faith based organizations, communit- based organization, neighborhoods, and community members.

We all strive to make Plumas County a healthier community. We can only achieve this through positive changes at the individual, school, workplace, and community level in addition to improvement in the local health system. The Community Health Improvement Plan will provide a vision, common language, direction, and systematic approach for local partners to carry out our work. More importantly, it is a foundation to stimulate strategic new partnerships towards a broad agenda to collectively influence a healthier Plumas County.

Implementation of the Community Health Improvement Plan strategies and activities will commence beginning in the spring of 2013. We invite you to visit our website at www.healthyplumas.org after May 1, 2013, where we will post regular updates and annual reports.

Please join us in this groundbreaking work as we embark on this exciting journey to better serve you.

Sincerely,

Dr. Margaret Alspaugh, Medical Director, Greenville Rancheria

Mimi Hall, Public Health Director, Plumas County

Tom Hayes, CEO, Eastern Plumas Health Care

Doug Lafferty, CEO, Plumas District Hospital

Jonathan Kusel, Executive Director, Sierra Institute

Linda Wagner, CEO, Seneca Healthcare District

Introduction

What is the Plumas County Community Health Profile?

The Community Health Profile is a comprehensive compilation of information about Plumas County. It is a living document that will be updated regularly as new information and resources become available and emergent issues need to be addressed.

Plumas County's Community Health Profile, a result of Community Health Assessment process conducted from October 2011 to November 2012 to, is a critical first step in identifying community health needs and problems and serves as the basis for development of a Community Health Improvement Plan (CHIP). The CHIP is an action-oriented, three year, county wide plan that identifies health priorities and specific goals and objectives, and measures for addressing these priorities. The ultimate purpose of the project is to engage health system partners and the community in improving the health of Plumas County residents.

Key partners in this project include the Plumas County Public Health Agency, Plumas District Hospital, Eastern Plumas Health Care, Greenville Rancheria, Seneca Healthcare District, and the Sierra Institute for Community and Environment. Collaborative planning to improve community health is envisioned to serve as a foundation for ongoing cooperation of multiple sectors of the community to meet health needs. Through use of a common assessment, non-profit hospital will be able to better coordinate and target their community benefit programs assuring that their community outreach efforts are aligned with identified needs in communities they serve. The identified needs, and their prioritization, will provide direction to Plumas County as it determines deployment of public health resources in the county. Furthermore, the Community Health Profile and Community Health Improvement Plan will serve to both inform and stimulate greater collaboration across multiple systems and stakeholders.

In November 2011, project partners came together for a strategic visioning and planning process in which the following vision statement for Plumas County was proposed:

A healthy Plumas County has a sustainable and equitable continuum of care, vibrant residents and communities that are connected through collaborations and partnerships.

Conducting the Plumas Community Health Assessment

The Plumas County Public Health Agency, the local health jurisdiction for all of Plumas County, supported by the Sierra Institute for Community and Environment, a local non-profit organization, assumed leadership for the assessment process and convened collaborative partners in ongoing monthly meetings on the 3rd Thursday of each month. The participation of the Greenville Rancheria Tribal Clinic, a non-traditional partner, ensured representation of the needs of Native American Maidu families and addressing the root causes of health inequities in their communities.

As a first step, a timeline was developed for the 18-month project and a press release to raise awareness among community residents. Partners agreed to implement Mobilizing for Action through Planning and Partnerships (MAPP) because of the integral involvement of community residents. Town Hall meetings were planned in each of the four population centers in Plumas

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County during fall of 2011 to get local residents' perspectives on health and quality of life, identification of services needs and health concerns. Complementary dinners were included in the Town Hall dialogues. These preliminary plans were discussed with partners in a Plumas County kick-off meeting in September 2011 attended by an Advisory Committee consisting of key administrative leadership from the three district hospitals, Greenville Rancheria, and Feather River College.

In the meeting, previous Plumas County assessments were discussed, data sources were identified as well the lack of relevant county data due to its relatively small population and rural setting. The last countywide health assessment, entitled Plumas Vision 2020, was completed in the year 2000. Compiled by an outside consultant, the report included useful data gathered from local agencies and contributed to a sharing of information. The visioning process involved agency and community members that grouped together thirteen areas of importance including arts and culture; business, economy and tourism; communications and technology; community organizations; education; environment; government; health; housing, infrastructure and transportation; natural resources; recreation and open space; and community safety and youth. The development of the report was funded by the County Board of Supervisors, the US Forest Service, and a Healthy Cities and Communities Grant. The county vision and strategic plan for the "next two decades" was not sustained nor funded and the project fell short.

The current Community Health Assessment or CHA has the buy-in from all the collaborative partners not only in goals and process but in a commitment to improving county health and outcomes. Listed below are agreed upon project goals and partner roles.

Project Goals

Project goals are to evaluate and prioritize health needs within Plumas County by conducting a countywide assessment that measures health status, as well as factors that influence health status, including:

- Collect and analyze health information for Plumas County
- Benchmark Plumas County Health Status with other counties, the state and the U.S.
- Engaging multiple sectors of the community to identify and prioritize local needs
- Create a system to inform the larger community of the CHA findings
- Inform organizational strategic planning
- Develop a Community Health Improvement Plan (CHIP)
- Monitor the impacts of action plans on community health outcomes

Partner Roles and Responsibilities

All partners committed to providing the following resources to support development of the Community Health Improvement Plan:

- Participate in training and technical assistance sessions consisting of one to two webinars or calls per month
- Assist in collecting quantitative and qualitative health status data specific to their organization
- Provide feedback with the project lead team on indicators and data sources to be considered in assessment

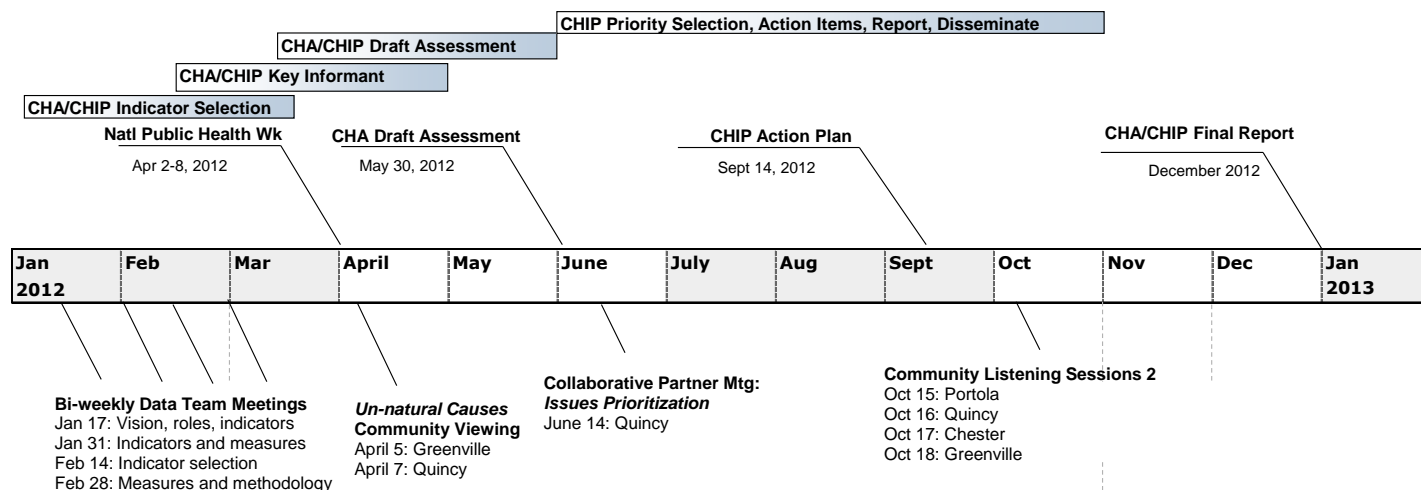
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- Provide feedback/assistance in choosing the Community Health Improvement process, model/framework
- Develop a list of community members and partners specific to their organization; help the project lead team identify and engage additional community partners who reflect the diversity of the community
- Assist in identifying individuals with expertise to serve as resources for the project
- Review with the project lead team past and current processes for engaging community members and discuss what has and has not worked in the past
- Provide feedback on drafting and finalizing the assessment report and disseminating the results throughout the county

Project Timeline

Phase 1 Assessment Activities focused on partner outreach and community engagement. Community Listening Sessions were conducted in Quincy, Chester, Portola and Greenville in October through early December 2011. More than 137 residents voiced their concerns about health, services and quality of life as described under the Community Themes and Strengths Section of this report. Indicators, measures and data sources were the focus of the next phase of activities starting in January 2012 as reflected in the timeline below. The data team met bi-weekly to select indicators and review existing assessments.

Plumas County Community Health Assessment and Community Health Improvement Plan CHA/CHIP Timeline



Educating partners and the community about the impact of the social determinants of health and establishing buy-in is a fundamental underpinning the Community Health Assessment process. To that end, PCPHA sponsored the public viewing of the award winning documentary, *Unnatural Causes*, in the communities of Quincy and Greenville during National Public Health Week in April 2012. Dinner and childcare services were provided, and the film was shown at a new community theater in Quincy and a new community center in Greenville. The Public Health team used its audience polling response system to survey residents after the event. More than 60 residents attended in Quincy and about 20 in Greenville and the overwhelming response was strong interest and appreciation.

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Key informant interviews were conducted with hospital executives and agency leadership in April. By May, the draft Community Health Assessment was completed and distributed to project partners for their review and input. On June 14, 2012, collaborative partners convened to discuss the key themes in the assessment, review the requirements and resources, and discuss the transition of the Community Health Assessment (CHA) to development of the Community Health Improvement Plan (CHIP). Faculty and staff from NACCHO made an on-site visit to provide facilitation and guidance with a focus on how to prioritize issues and needs identified in the draft CHA and ensuring community input in the CHIP development.

In October 2012, a second series of Town Hall meetings were conducted in all four Plumas communities. More than 110 residents participated in Community Listening Session 2 and provided feedback using the Audience Response and Polling system in ranking dimensions of high performance in a health system. The focus of Listening Session 2 included information on the social determinants of health and the Wisconsin Population Institute Model that attributes the impact of health to socio-economic factors (40%), health behaviors (30%), clinical health (20%) and built environment (10%).

The next Phase transitions the project from the Community Health Assessment to the Community Health Improvement process and involves meetings to develop the actionable activities, measures and establish accountability for the improvement plan priorities. Much like the Data Indicators Group that met bi-weekly in January and February 2012, the Improvement Measures Planning and Accountability Team or IMPACT group will meet 3-6 times in November 2012. The IMPACT team consists of representatives from all project partners and stakeholders.

Where do we go from here?

The CHA/CHIP project is using the *County Health Rankings Model* developed by the University of Wisconsin Population Health Institute as the basis for the Plumas County Health Profile. During the bi-weekly data meetings in January 2012, the project data team selected indicators and reviewed Healthy People 2020 goals, National Prevention Strategy goals, among others. The Wisconsin model will accommodate the integration of these Plumas-specific selected indicators into the framework. The model incorporates the impact of the social determinants of health and aligns with the Plumas project team's vision for improving quality and health outcomes using evidence-based and results-oriented approaches. The model is based on population health that emphasizes the many factors that, if improved, can help make communities healthier places to live, learn, work, and play. Through a series of scientific methods, the Wisconsin Institute assigns a weighting to factors and their associated impact on health outcomes as listed below.

- 40% to Social and Economic Factors (education, employment, income, family/social support, community safety)
- 30% to Health Behaviors (tobacco use, diet/exercise, alcohol use, sexual activity)
- 20% to Clinical Care (access to care, quality of care)
- 10% to Physical Environment (environmental quality, built environment)

The National Prevention Strategy goals, reducing health disparities, health equity and access, social determinants of health, and system change are the underlying themes in transitioning from the Community Health Assessment to the Community Health Improvement Plan. Community members voiced a number of health barriers including transportation, lack of primary care physicians and mental health professionals, and other specialists. Many of the

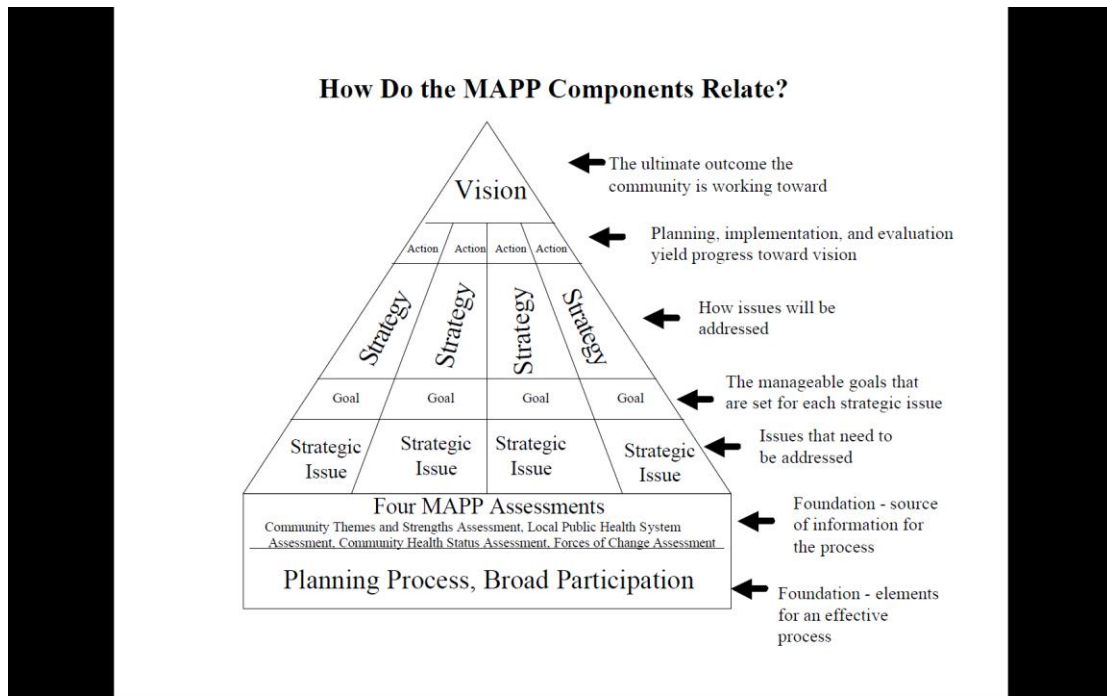
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health issues in our communities including obesity, diabetes, poor nutrition, lack of physical activity, smoking, and alcohol and substance abuse are preventable. The social determinants of health including poverty, employment, and housing, also disproportionately impact the health of low-income families. The rate of children's poverty, on average about 24%, exceeds the state average and is particularly alarming. These socio-economic factors shape the health outcomes of our residents and re-enforces the need for social supports and community collaboration. Health starts in our homes, schools, and jobs, and in the stores we shop in and the transportation we use.

The Wisconsin model was used to organize community feedback, key informant interviews, and county data into a format that Town Hall participants could weigh in on and prioritize. Based on our June meeting with NACCHO faculty, the end goal was to establish three to five priorities from the identified issues and develop actionable goals, establish ownership for accomplishing the goals, and tracking and ongoing monitoring of measures in a Community Health Improvement Plan. Hospitals will be able to develop Community Benefit Plans from the CHIP and Public Health will launch a Strategic Planning process based on the CHIP as portrayed in the diagram below.

Methodology

Project partners used components of Mobilizing for Action through Planning and Partnerships (MAPP), a strategic approach to community health improvement. The tool helps communities improve health and quality of life through community-wide and community-driven strategic planning. Through MAPP, communities seek to achieve optimal health by identifying and using their resources wisely, taking into account their unique circumstances and needs and forming effective partnerships for strategic action. The MAPP approach brings four assessments together to gather information and to drive the identification of strategic issues.



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The Community Themes and Strengths Assessment provides an understanding of the issues that residents feel are important by answering the questions: “What is important to our community?” “How is quality of life perceived in our community?” and “What assets do we have that can be used to improve community health?”

The Local Public Health System Assessment focuses on all of the organizations and entities that contribute to the public’s health and answers the questions: “What are the components, activities, competencies, and capacities of our local public health system?” and “How are the Essential Services being provided to our community?”

The Community Health Status Assessment identifies priority community health and quality of life issues. Questions answered include: “How healthy are our residents?” and “What does the health status of our community look like?”

The Forces of Change Assessment focuses on identifying forces such as legislation, technology, and other impending changes that affect the context in which the community and its public health system operate. This answers the questions: “What is occurring or might occur that affects the health of our community or the local public health system?” and “What specific threats or opportunities are generated by these occurrences?”

Summary of Major Findings

Project partners formed a data sub-committee called the Data Indicators Group (DIG) that met 6 times in January-February 2012. The role of the DIG was to review county data and community feedback, analyze available data and sources for identifying health inequities, and compare local data with state and national indicators and sources (see Appendix 1 sources).

A key goal was to examine and identify racial/ethnic disparities given the growing Latino population in the community of Portola and particular health issues for Native American/Maidu families in Greenville. Through focus groups and interviews, health issues of diabetes, obesity and depression/suicide have been identified; however, there is no local data or research to date that quantifies these disparities. Health disparities tied to cross-generational ties to poverty and ties to poorer health are acknowledged in key informant interviews with safety-net and housing agencies and point to a cross-generational culture of poverty for certain families. Particularly alarming are the high rate of children living in poverty (24%) and the number of single, female-headed households with children under 18 comprise almost 36% of the county's households. The team anticipates collecting new data and developing indicators to measure outcomes. The Plumas County CHA and related documents are available online at www.countyofplumas.com under Public Health/CHACHIP. Three major findings emerged as summarized below:

1. Socio-economic factors

- Plumas County has double the proportion of seniors as compared to the rest of California, the majority lives on social security
- Single female-headed households with children under 18 comprise almost 36% of the county's households
- Plumas County has a smaller proportion of children compared to the rest of California but the percentage of children living in poverty (24%) has steadily increased and exceeds the state rate
- Employment in Plumas County is timber-based and seasonal in nature. As a result, the unemployment ranges from about 11% to double that rate during winter months. This has a major impact on the social and economic landscape
- 43% of housing units in Plumas County are vacant, compared to 8% in California and 12.8% in the United States

2. Health Behaviors and Mental Well-Being

- Alcohol, tobacco and substance use rates are alarming in the County as evidenced in ATOD Needs Assessment conducted by Plumas County in November 2011 and in the California Healthy Kids Survey among high school students
- Self-inflicted intentional injuries and the suicide rate among Native Americans exceed state rates
- Diabetes and obesity are also concerns

3. Local Public Health System Infrastructure

- With less funding, county health and human services departments are operating in silos
- The county's three critical access hospitals are fiscally vulnerable and challenged to meet the requirements for electronic medical records, system and technological improvements, and leadership and management
- Health reform will require system improvements to broaden and deepen the involvement of multiple stakeholders on policy, service and assessment issues

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The secondary data for Plumas County summarized below provide a snapshot of the health of residents under the domains of Social and Economic Factors, Health Behaviors, Clinical Care, and Environment in the Wisconsin Population Institute Model. Resident feedback from the 2011 and 2012 Town Hall meetings in all four communities are also included under these domains in acknowledgement of the identified issues.

Social and Economic Factors

Education

- 90.7% have High School diploma
- 20.5% have Bachelor or higher
- 90.4% 9th graders graduate within 4 years

Employment

- 16.4% of labor force unemployed (2010)

Income

- 13.9% people living below poverty level (2008-2010)
- 9.4% families below poverty level
- 24.3% <18 years old below poverty level
- \$41,520/yr median household income
- \$47,019/yr median family income

Family & Social Support

- 35.7% households with children <18 led by a single parent.
- 32% of 7th graders reported feeling so sad or hopeless for 2 weeks or more that they stopped doing some usual activities
- Approximately 26 non-fatal ER visits for intentional self-harm (2009)

Community safety

- 2279 unintentional injury ER visits (2009)
- 9 deaths due to unintentional injuries (2009)

Community members expressed a need for Injury prevention (suicide, drug and alcohol related, elderly falls).

Health Behaviors

Tobacco Use

- 18.7% adults in county smoke
- 3.2% adults use smokeless
- 7th grade- 10% have smoked
- 9th grade- 31% have smoked
- 7th grade- 7% used smokeless
- 9th grade- 22% used smokeless

Community members expressed a desire to address alcohol, tobacco and other drug issues.

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Diet & Exercise

- 27% of preschoolers have untreated tooth decay
- 80.1% of new mothers exclusively breast fed at time of hospital discharge (2005-2007)
- 5th grade- 64.8% in the “healthy fitness zone” for body composition (2010-11)
- 7th grade- 62.3% in the “healthy fitness zone”
- 9th grade- 58% in the “healthy fitness zone”

Community members expressed a desire for increased education of available services in nutrition, exercise and reproductive health and for more activities for youth.

Alcohol Use

- In 2010- 243 arrests for DUI
- 7th grade- 32% have tried alcohol
- 9th grade- 65% have tried alcohol
- 7th grade- 11% have gotten sick or “drunk”
- 9th grade- 45% have gotten sick or “drunk”
- 135 non-fatal ER visits due to alcohol or other drugs (2009)
- 42 hospitalizations due to alcohol or other drugs (2009)

Sexual Activity

- 11% of live births were born to teens age 15-19 (2009)

Clinical Care

Access to Care

- 80.9% over 18 have insurance
- 19.1% over 18 have no insurance
- 9.7% < 19 have no insurance
- 7.9% people who paid out of pocket for ER visit (2010)
- 16.76% primary care providers per 20,000 people (2008)

Community members made the following suggestions in regard to access:

- Provide transportation within the county and to resources outside the county
- Increase health access
- A health “co-op” or bartering system for healthcare services
- There is a need for family planning services, teen pregnancy prevention (e.g. Planned Parenthood)
- Home based assessments for elderly and homebound (many do not qualify for IHSS)

Quality of Care

Community members made the following suggestions and identified gaps:

- Increase collaboration between hospital districts
- Share electronic medical records
- Long term care
- Lack of emergency medical services (no hospital or clinic emergency department in Indian Valley area)

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Physical Environment

Environment

- 1.1% of days over the CA standard for Air Quality in our county
- 9 days total exceeded the Air Quality Index of 100 (2008)
- 4 days unhealthy for sensitive groups
- 5 days unhealthy for general population
- 2 unhealthy air quality due to particulate matter
- 0 unhealthy air quality days due to ozone

Built Environment

- 43% of housing units are vacant
- 65.6% of occupied housing is owned

Community members expressed concern for clean water issues, concern of cancer causing substances, suggested incentives for seasonal residents to contribute and engage with the community.

Assets, Resources and Areas of Improvement

As part of the Community Health Assessment process, partners recognized that existing resources within the county could be maintained, leveraged and enhanced to better impact positive health outcomes for the Plumas County population. Local Public Health System partners acknowledge that building a partnership of key private and public community partners is a vital step in successfully addressing barriers to community wide health and wellness. Formal collaborations designed to address the specific issues of prevention, wellness, and access to health care would enable sustainable system wide changes across major community institutions.

In June of 2010, Plumas County Public Health Agency, Plumas County Department of Social Services and Plumas Unified School district signed a Memorandum of Understanding (MOU) to launch the Express Enrollment project. Express Enrollment (EE) expedites Medi-Cal and Healthy Families enrollment for uninsured children who receive free school meals, using the school lunch application to also serve as an Express Enrollment for Medi-Cal and Healthy Families, since the income eligibility guidelines for free and reduced school lunch are the same as those for Medi-Cal and Healthy Families, respectively.

These efforts were expanded when ten key stakeholders, including county health and human service agencies, law enforcement, local hospitals and clinics and local non-profits, signed the Local Health Connections MOU in February 2011. This was a natural expansion of the Express Enrollment effort and driven by the group's common vision to improve health outcomes for individuals with complex medical and/or social support issues.

In September 2011, the Plumas County Community Corrections Partnership (CCP) first convened. Members of the Executive Committee include the Superior Court Judges, District Attorney, Public Health Director, Probation Chief, Public Defender, and Sheriff. This group worked with county health and human service agencies, housing and community development,

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non-governmental organizations and the Career and Business Network (formerly Alliance for Work Force Development) to plan and implement activities targeting individuals in the criminal justice system with an overall goal of rehabilitation and reducing recidivism. These partners have leveraged funds from a variety of sources to provide health care, mental health and substance use disorder treatment services to inmates and individuals on post release community supervision. In addition, organizations work together to provide education, job training, Medi-Cal and County Medical Services Program enrollment assistance, and other ancillary services. The group developed the Plumas County Community Corrections Plan in January 2012, which marked the first major planning and implementation project to span across the criminal justice system, courts, health and human services, community organizations and the community at large.

Plumas County's three district hospitals joined Plumas County Public Health Agency and the Sierra Institute for Community and Environment formed the Northern Sierra Collaborative Health Network in the fall of 2010 and the Greenville Rancheria joined the group in the spring of 2011. This collaboration serves as a foundation for new and deeper partnerships to address health care delivery, access to and coordination of care, and quality of care while working towards a more integrated model of health care service delivery. Two major goals of the Collaborative are to improve community health outcomes and to increase the effectiveness of the local health care system through strengthened financial stability of our hospitals and clinics.

For the past 7 years, the Oral Health Coalition has worked with a broad group of partners to collaboratively reduce childhood tooth decay rates in all Plumas County communities. The Coalition members are partnering to implement county wide outreach, education and referral activities, Medi-Cal eligibility and enrollment assistance, school based screenings and preventative treatments, *pro bono* and sliding fee dentistry, and case manage children with urgent or severe decay or in need of hospitalized dentistry.

Community Themes and Strengths

The Community Themes and Strengths Assessment is part of the MAPP process to engage local residents in forming a community vision and common values for pursuing long-range community goals. During this phase, the community answers questions such as “What we would like our community to look like in 10 years?” Plumas County Public Health Agency and partners engaged community members for their thoughts, opinions, and concerns through a series of Town Hall Listening Sessions in fall 2011. Town Hall meetings were completed in Quincy, Chester, Portola and Greenville. Meetings included complementary dinner and refreshments and childcare was provided. Meetings were advertised in the newspapers and hospitals posted flyers and provided information to patients. Residents had opportunities to speak and voice their thoughts as well as write comments on index cards. There were a total of 137 children and adults who attended the four town meetings; individual town hall attendance was 25 in Quincy; 17 in Chester; 64 in Portola, and 31 in Greenville.

Community responses provided an important “portrait” of the community as seen through the eyes of its residents. The results support the idea that it’s time to move upstream from the doctor’s office in our perception of health and health care. We need to include the social determinants of health (poverty, employment, education) in the discussion as we develop policies, programs and plans. Transportation, access to health care and mental health needs resonate across all communities. Three key questions guided resident responses as summarized below.

1. What do you like about the healthcare system in Plumas County?
 - Visiting specialists
 - Personalized care
 - Choices in providers
 - Tele – health

2. What can we do to improve the healthcare system in Plumas County?
 - Provide transportation within, and out of the county
 - Health Access
 - Address Alcohol, Tobacco and other drug issues
 - Increase education of available services, nutrition, exercise and reproductive health
 - Increase collaboration between hospital districts
 - Share electronic medical records
 - Provide more activities for youth

3. What constitutes a healthy Plumas / what do we value?
 - Hope
 - Shopping locally
 - Vibrant economy
 - Good schools
 - Community Involvement
 - Caring people
 - Strong hospital infrastructure
 - Safety

In addition, there were a number of community-specific priorities and needs that residents voiced that are summarized below:

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Quincy

- A health “co-op” or bartering system for healthcare services
- Concern about cancer causing agents in our built environment

Chester

- Clean water issues
- Incentives for seasonal residents to contribute and engage with the community
- High rate of impoverished children

Portola

- Long-term care
- Collaboration between Eastern Plumas Health Care and Renown System
- Need for family planning services, teen pregnancy prevention (e.g., Planned Parenthood)
- Home based assessments for elderly and homebound (many do not qualify for IHSS)

Greenville

- Injury prevention (suicide, drug and alcohol related, elderly falls)
- Lack of emergency medical services (no hospital or clinic emergency department)

Key Informant Themes and Priorities

Key informant themes and priorities were compiled from Sierra Institute's 2008 report, *Re-visioning Rural Healthcare Service Delivery and Addressing the Needs of the Underserved in Plumas County*, and a November 2011 Strategic Planning meeting that involved the health partners collaborating in this Community Health Assessment. Recurring themes and priorities included access to primary care and behavioral health, development of a coordinated care continuum, electronic data, and infrastructure and system change.

The 2008 report, *Re-visioning Rural Healthcare Service Delivery and Addressing the Needs of the Underserved in Plumas County*, identified health needs and priorities for Plumas County. The Sierra Institute for Community and Environment conducted key informant interviews with school administrators, teachers, rural healthcare providers, parents, youth, and other key community members. One of the findings of this community engagement process was the identification of the most prevalent healthcare needs of children. Due to a shortage of pediatric specialists, families were driving hundreds of miles, missing work and school, to get care. Behavioral health was another identified need. Teachers lacked expertise to identify issues in the classroom, resources to conduct behavioral health assessments, and referrals were scarce. As a result, community members identified the need to improve children's behavioral services as a priority because of its impact on academic performance for the affected children and others in the classroom. There was also significant concern from the Limited English Proficient (LEP) population about the lack of language access and cultural competency offered by the local provider organizations. Community members in general supported the use of telehealth to coordinate resources and increase access.

Access and System Coordination are Priorities

Participants in the November 2011 Strategic Planning meeting for the Northern Sierra Collaborative Health Network included the Executive Director and Health Associate from the Sierra Institute for Community and Environment, the Director of the Public Health Agency and the Director of Nursing, the Chief Executive Officer and the Clinical Director of Plumas District Hospital, and the Family Nurse Practitioner of Greenville Rancheria.

Through a strategic planning process facilitated by outside technical assistance, the following priority themes and areas of focus emerged:

1. Medical Home
 - Continuity/Continuum of care through a system that is connected
 - Follow up care
 - Health Navigator
 - Leveraging information technology
 - Establishing EMR
 - Crosswalk Data Systems
 - Pharmacology cross reaction
2. Access to Care
 - OERU – outreach, enrollment, retention, and utilization
 - Express enrollment with schools
 - Express enrollment for WIC
 - Transportation

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3. Community Engagement
 - Engaging community members to access prevention/wellness
4. Health Literacy
 - “No wrong door approach”
5. Patient Activation Tool
6. Coordinating/Collaborating/Networking
 - Gatekeeper to social services
 - Private/Public partners and major employees for prevention/wellness
 - Increase inter-agency knowledge of what agencies do and how they do it
 - Northern Sierra Collaborative Health Network
7. Infrastructure/System Change
 - Research the policy landscape
 - Management/Leadership Training

Key Informant Interview

In spring 2012, key informant interviews were conducted with Elliott Smart, Director of Social Services; Dennis Thibeault, Executive Director of Plumas Crisis Intervention and Resource Center; Douglas Lafferty, CEO of Plumas District Hospital; Tom Hayes, CEO of Eastern Plumas Health Care. Conversations focused on key health issues for residents and for the health care system as outlined below:

Health Issues for Plumas County residents

1. Access to care
 - a. “No wrong door” philosophy
 - b. Elderly
 - c. Maternity services
 - d. Newly eligible for MediCal
 - i. enrollees in the Low Income Health Program will transition into MediCal
 - ii. does the current system have the capacity to serve them
 - e. Impact of managed care
2. Mental Health and Substance Use Concerns
 - a. Transportation needs – medical gas vouchers DUI requires 18 months of classes
 - b. Single poor or single homeless individuals with mental health needs
 - c. Transients – urban homeless escapees
 - d. Anxiety and stress is growing nationally and locally
 - i. do we have the tools to respond
 - ii. do we take children away from meth parents
3. Post release/re-integration needs for incarcerated persons
 - a. Not eligible for Section 8 housing
 - b. Probation rules
 - c. Convicted sex offenders

Hospital and System Concerns

1. Labor force
 - a. lack of trained, educated staff (e.g., new medical records, new coding)
 - b. need for management and leadership training
2. Construction costs and facility upgrades
3. Expand telehealth services for dermatology services, neurology, psychiatry
4. Chemotherapy services in conjunction with larger hospital centers
5. Collaboration
 - a. Telehealth contracts
 - b. Other services vendors
 - c. Fees and reimbursement
 - d. Ambulances services
 - e. Prevention - alcohol and drug prevention, mental health
6. System capacity for MediCal eligible population is in the system via FNP, PA

Plumas Health Care System

Socio-economic Factors

Plumas County has clean air, clean water, beautiful natural surroundings and geologic wonders. It has a long, rich history of Native Maidu families, ranchers, loggers, and residents who moved from urban environments to enjoy more peaceful, mountain settings to raise their families. Like other rural counties in California and the United States, however, Plumas County was struggling economically before the recession of 2008. The county's forest service- and timber-based

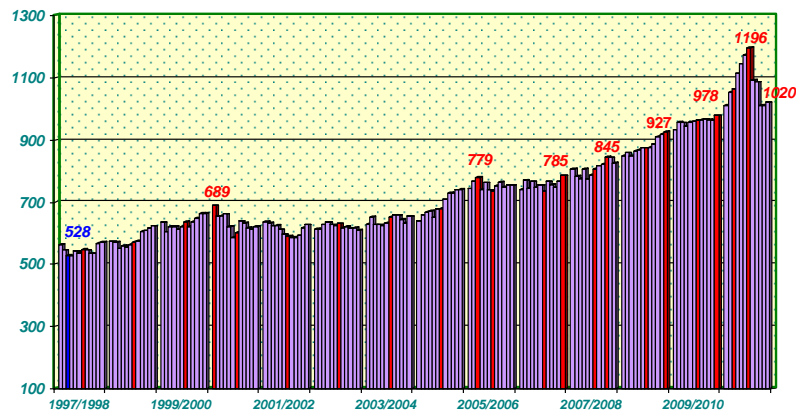
**Figure 1.
Plumas County Unemployment 2010-2011**

Year	Month	% Unemployed
2011	August	13.7
2011	July	14.2
2011	June	14.4
2011	May	14.9
2011	April	17.5
2011	March	19.9
2011	February	20.2
2011	January	19.9
2010	December	17.9
2010	November	16.2
2010	October	13.5
2010	September	13.1
2010	Annual Average	16.8

economy is seasonal and workers are traditionally laid off in winter due to snowy weather in the mountainous terrain. The usual fluctuation in unemployment rates has been more extreme in recent years, however. For the 12-month period ending in August 2011, the rate of unemployment fluctuated from a low of 13.1% in September 2010 to a high of 20.2% in February 2011 (see Figure 1). The 2010 annual average unemployment rate of 16.8% for Plumas County is greater than the rates for most counties in the state, as well as California and the United States, 12.4% and 10.8%, respectively.¹ Food stamp and cash assistance cases have increased over the last year. Data from Plumas County Social Services indicate the 2011 case counts for cash assistance and food stamps increased 25% and 80%, respectively, above the averages for the previous year. Job loss has contributed to increases in children and families without health insurance coverage who qualify for the

Medi-Cal program, California's Medicaid program. The average monthly case-load for Medi-Cal continued to increase and only started to slowdown in the first half of 2011 (see Fig 2).

Medi-Cal Open Cases at End of Month



¹ California Employment Development Department: <http://www.labormarketinfo.edd.ca.gov/?pageid=130>

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As case counts for public benefits have been increasing, children's eligibility for the school's free and reduced lunch program remains high. In the Plumas Unified School District, the percentage of students eligible for free or reduced school lunch regularly averages around 50%. In the community of Greenville, one of the more impoverished communities, the elementary school free and reduced lunch program eligibility was 56% in October 2010, down from 61% in 2009 and 67% in 2008. According to recent Census data, children's poverty rate, persons 17 years or younger living below poverty level, is 24.3%, higher than the state average of 20.3%.² Furthermore, as the population has been decreasing over the past decade, the housing vacancy rate has been increasing from 32% in 1990 to 33% in 2000 and 43% in 2010 as a result of joblessness and foreclosures. In 2010, single parent households comprised 35.7% of households in Plumas County as compared to 29.1% in California. Median household income in Plumas County was \$42,684 in 2009, which is only 73% of the comparable statewide income.

System Strains

In addition to poor socio-economic conditions, Plumas County residents have poor health outcomes and experience a fragmented health care continuum. Only 58.6% of Plumas County residents have job-based or other health coverage year round.³ A total of 21.6% of residents have Medi-Cal coverage or Healthy Families insurance, exceeding the state average of 16.3%.⁴ In 2009, 29.7% of the county's population was uninsured for part or all of the year, exceeding the state average by 5.4%. A pre-recession assessment completed by the Sierra Institute in 2007 found that approximately 25% of patients visiting emergency rooms and clinics were without private or public insurance, and providers stated this total was increasing.⁵ Although county public hospitals provide some charity care, no community clinics serve the uninsured. As a result, emergency rooms become the health access point for uninsured residents. Once under the care of a provider in an emergency room, insurance status or impoverishment ostensibly makes no difference in care. However, providers recognize that uninsured patients typically receive inadequate preventative care and lack a relationship with a provider who maintains their medical history, including all-important allergy and immunization records, which results in some receiving unnecessary immunizations. Several providers reported there appears to be a new group accessing the emergency room, including those who already have a primary care provider. They are seeing middle-income individuals using the emergency room to access services because primary care providers do not have the capacity to meet the everyday surges in health care needs. One provider said, "People are being steered to the ER. It is the easiest point of access."

Poor health outcomes are directly related to a lack of preventative services, lack of access and to numbers of uninsured, underinsured, and those eligible but not enrolled in public benefit programs. The uninsured consistently encounter the most barriers to care, have the worst health outcomes compared to other groups, and are most likely to be without a medical home.⁶

² 2008-2010 American Community Survey, U.S. Census

³ UCLA CHIS 2009 data

⁴ *Ibid.*

⁵ Kusel, Jonathan. 2008. Re-visioning Rural Healthcare Service Delivery and Addressing the Needs of the Underserved in Plumas County, Sierra Institute for Community and Environment (May), <http://www.sierrainstitute.us/Researchpapers.html>

⁶ A. C. Beal, M. M. Doty, S. E. Hernandez, K. K. Shea, and K. Davis, Closing the Divide: How Medical Homes Promote Equity in Health Care: Results From The Commonwealth Fund 2006 Health Care Quality Survey, The Commonwealth Fund, June 2007; L. Ku, M. Lin, and M. Broaddus, Improving Children's Health: A Chartbook

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Access problems have been most acute in Greenville and Indian Valley as a result of the clinic and hospital closure in 2006. Over-full medical practices elsewhere in the county have resulted in patients having to wait or seek care elsewhere. Until the re-opening of the clinic in Indian Valley by Eastern Plumas Health Care in November of 2007, access issues disproportionately affected seniors, disabled, and patients lacking reliable transportation. Indian Valley residents no longer have local emergency medical services and have to travel at least 25 miles to the nearest public hospital.

The high rate of uninsured residents poses challenges for individuals seeking care and for the health system itself. Patients without insurance typically do not seek care until absolutely necessary or forego follow-up care, and limit their and their children's care. In many instances, delaying needed care results in patients requiring more intervention or more expensive interventions than if they sought care sooner. One provider said, "Every time I find someone without coverage, it's a significant issue for their care. By the time they come in, they desperately need it." While many patients without insurance pay their bills, unpaid bills threaten district fiscal health. All three districts reported unpaid debt that totaled 12 to 16% of their net annual revenue in 2006.⁷

Health Reform Demands

Workforce recruitment and retention, electronic health records, and quality improvement are some of the growing challenges for local districts as they attempt to meet requirements under the Patient Protection and Affordable Care Act. As other rural counties, Plumas County has far fewer physicians per capita than urban counties. In 2008, there were 24 active patient care MD physicians engaging in at least 20 hours per week of patient care for a population of 21,668.⁸ In terms of age distribution, 42.6% were 56 years of age or older compared with one-third of physicians in that age group in the state as a whole. As aging physicians retire, Plumas is at risk for losing local physician infrastructure. Indeed, local officials repeatedly voice the concern about the difficulties they face with provider recruitment. There also are too few specialists. For example, it is difficult for pregnant mothers to receive prenatal care. According to *The 2010 California County Scorecard of Children's Well-Being*, Plumas County ranks in the bottom third of California counties for women who receive prenatal care by the end of their first trimester, a decrease of 8% from 2009.⁹ Almost one in three adults living in rural America is in poor to fair health and almost half have at least one major chronic illness. Yet, rural residents average fewer physician contacts per year than those in urban communities. Traumatic injuries are more common and emergency medical personnel lack advanced life support training. Identifying these factors may help shape solutions.

Alcoholism and drug abuse are growing problems in rural areas. Plumas County ranks in the bottom third of the 58 California counties on the *adolescents who are substance free* indicator in

about the Roles of Medicaid and SCHIP, Center on Budget and Policy Priorities, 2007 pp. 25-35
<http://www.cbpp.org/schip-chartbook.htm>

⁷Data obtained from California Office of Statewide Health Planning and Development:

<http://www.oshpd.state.ca.us/HQAD/Hospital/financial/annualSDData/hospAFdata.htm>

⁸ *Fewer and More Specialized: A New Assessment of Physician Supply in California*, California Health Care Foundation, June 2009

⁹ *The 2010 California County Scorecard of Children's Well-Being*:

http://www.childrennow.org/subsites/publications/invest/scorecard10/scorecard10_plumas.htm

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The 2010 California County Scorecard of Children's Well-Being. Only 46% of Plumas County adolescents are substance free.¹⁰ As of July 2011, the Plumas County Public Health Agency implemented a strategic planning process as part of its effort to implement alcohol, tobacco and other drug program services and replace the interim system that had been cobbled together by several county departments, private entities, and the Plumas Superior Court.

Demographics

Roughly the size of Delaware, Plumas County is sparsely populated and has been designated as one of the fifteen "frontier counties" of California due to its small population, self-sufficient pioneer attitudes, and geographic isolation. The majority of the county's 20,007 residents live in or near the four small communities of Portola, the county's only incorporated city; Quincy, the county seat; Greenville; and Chester. The county population is 86.2% Caucasian, 5.7% Hispanic/Latino, 2.5% Native American, 0.6% Black, 0.5% Asian, 0.1% Hawaiian/ Pacific Islander, 1.8% identified as members of other ethnicities, and 2.6% multiracial (US Census). Although the county is ethnically less diverse than the state as a whole, the Latino population is growing and nearly doubled over the past 20 years. The school district's Hispanic/Latino population is nearing 10%, with a higher concentration in eastern portions of the county. The Native American student population is 3%, with most of these students living in the poorer Greenville and Indian Valley communities (US Census).

Plumas County is divided into five Medical Service Study Areas with four of the five MSSAs designated as frontier areas and the fifth area designated as rural. In May 2010, all five MSSAs were designated as Primary Care and Mental Health Professional Shortage Areas (HPSAs).

Health Services Facilities

Plumas County has three nonprofit, public hospitals located in Portola, Quincy, and Chester. Greenville, the fourth community has one family practice clinic operated by Eastern Plumas Health Care, located 55 miles away. There is no hospital and the clinic is staffed with one full-time nurse practitioner and a physician once a month. The Greenville Rancheria is a tribal health clinic staffed by a part-time physician who travels from Red Bluff, about 90 miles away, once a week, a full-time family nurse practitioner, and a full-time psychologist. The Rancheria operates a dental clinic staffed by one dentist; there are no private practice dentists in Greenville. There is a 24-hour ambulance service located in Greenville with a single ambulance. When that ambulance is transporting a patient to Quincy or Chester hospitals, emergency service is available only through the local volunteer fire department that does not transport patients, and with many of the firefighters holding only CPR certifications.

Portola, the only incorporated city in the county, has a hospital run by Eastern Plumas Health Care. The hospital provides 24-hour emergency care; has nine beds available for surgery and acute care; a cardiac specialist who visits the clinics; three physicians and four mid-level providers. The hospital has a fully functioning Telemedicine program and provides out-patient services at four clinics. In addition, EPHC has five ambulances, two of which are on duty 24 hours a day, 7 days a week. EPHC also has a dental clinic and two skilled nursing facilities (SNF) with a total of 66 beds.

¹⁰ Ibid.

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Quincy has a hospital with 24-hour emergency room physician coverage, and two ambulances, two family practice groups with seven physicians and five Physician Assistants/Nurse Practitioners and no solo medical providers. There are five private dentists and a hospital-based dental clinic with three dentists. There is one private psychologist in Quincy and six marriage and family counselors with Plumas County Mental Health Services for all of Plumas County.

Chester has a hospital run by Seneca Healthcare District that provides 24-hour emergency room care staffed with a physician on call at all times. Seneca hospital has 10 acute care beds and 16 skilled nursing/long-term care beds. Other services provided by the District include outpatient laboratory and x-ray services including mammography, sonography, and CT scanning including bone density, in-house pharmacy, hospice, anesthesia, inpatient and outpatient surgical services, stress testing, respiratory care, nutritional counseling, EKG, and patient education. In 1996, a hospital-based outpatient clinic including family practice physicians, surgeons, and consulting specialists was established.

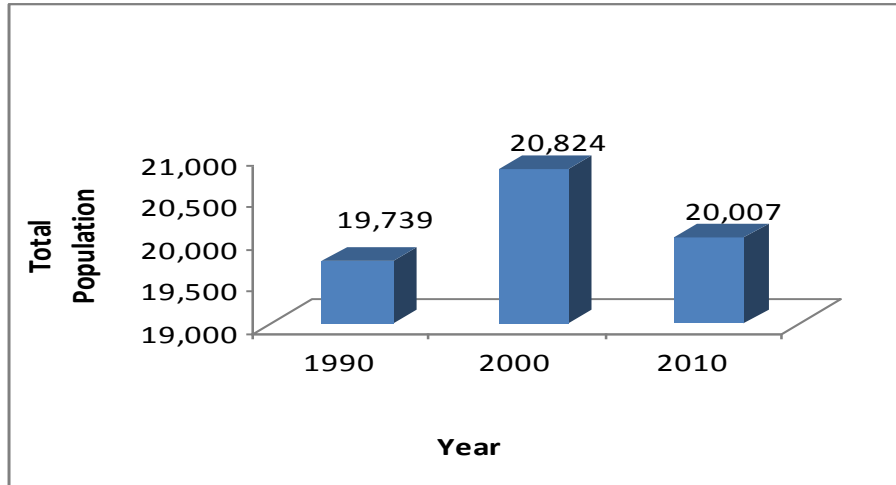
Plumas County Public Health Agency runs a clinic in Quincy, the county seat, that provides nursing services including HIV antibody testing and counseling; immunizations; Maternal, Child, and Adolescent Health Program; perinatal outreach education; pregnancy testing, counseling, and referrals; sexually transmitted infection clinic; TB skin testing and follow-up; Women, Infant and Children (WIC) assessments and evaluations; California children's services; Child Health and Disability Prevention Program; childhood lead screening and prevention; communicable disease control; contraceptive methods provided; correctional facility medical unit; employee health screenings; and family planning counseling. Public Health skilled nursing services are available at clinic locations in Greenville and Chester once a month and in Portola three times a month.

Plumas Data

Demographic Information:

I. Population (Figure 1) total: 20,007

Figure 1: Plumas County Population Changes 1990-2010



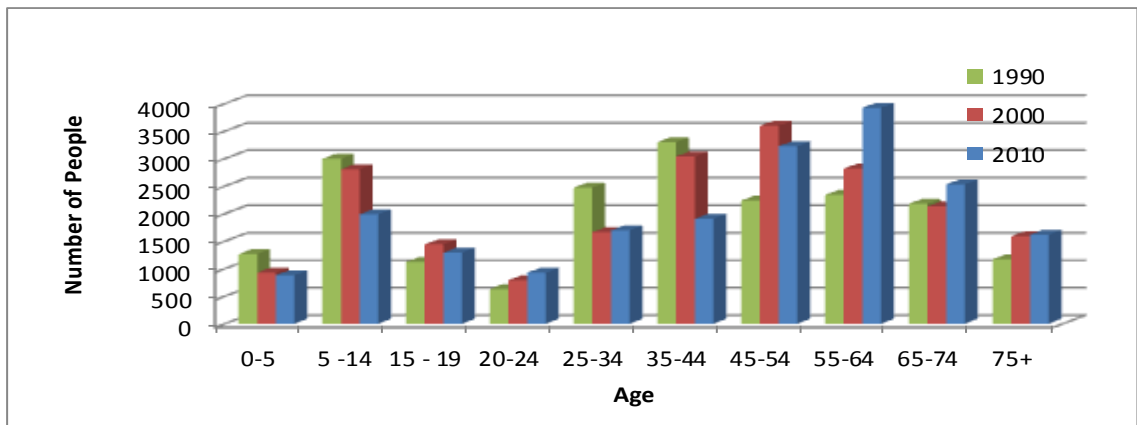
Source: U.S. Census

- A. Population change since 2000: Decreased by 3.9%
- B. Population density: 7.8 persons per square mile
- C. Geographic distribution of the population (see map)

II. Age

A. Change in age distribution (Figure 2)

Figure 2: Plumas County Changes in age distribution 1990 - 2010



Source: US Census Bureau, California Department of Finance

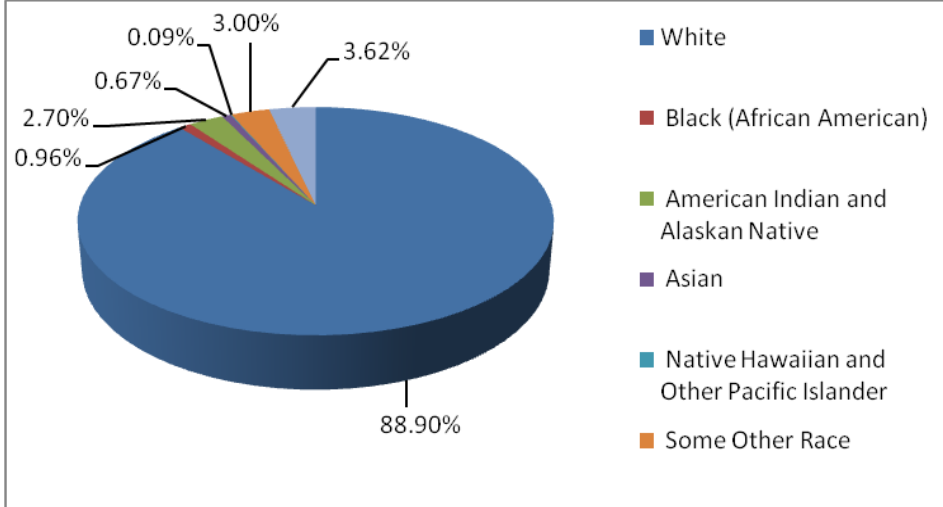
- The population of people 65 years of age and older increased by 3.3%
- The population of people 18 years of age or younger decreased by 7.5% from 1990 - 2010

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B. Median Age: 49.6 years of age

III. Race /Ethnicity Distribution

Figure 3: Plumas County Distribution of Race 2010



Source: California department of Finance (2010 Census Data)

IV. Households:

➤ Key Findings:

- As of the 2010 census, there are 8,977 households in Plumas County
- Of those households 11.3% of the householders are individuals 65 years of age or older living alone.
- As of the 2010 Census 42.3% of all housing units are vacant
- Single Parent Households

▪ 2010: Plumas County	Mariposa County	California
35.7	29.3	29.1

	Indicator	1990	2000	2010
	Total number of Households	8,125	9,000	8,977
A.	Total number of families	5,822	6,051	5,661
B.	Married couple families	4,913	4,990	4,554
C.	Householder 65yrs or older living alone	833	911	1,014
D.	% households with at least 1 person 18 or younger led by a single parent	27%	32%	35.7%

Plumas County Community Health Profile 2012

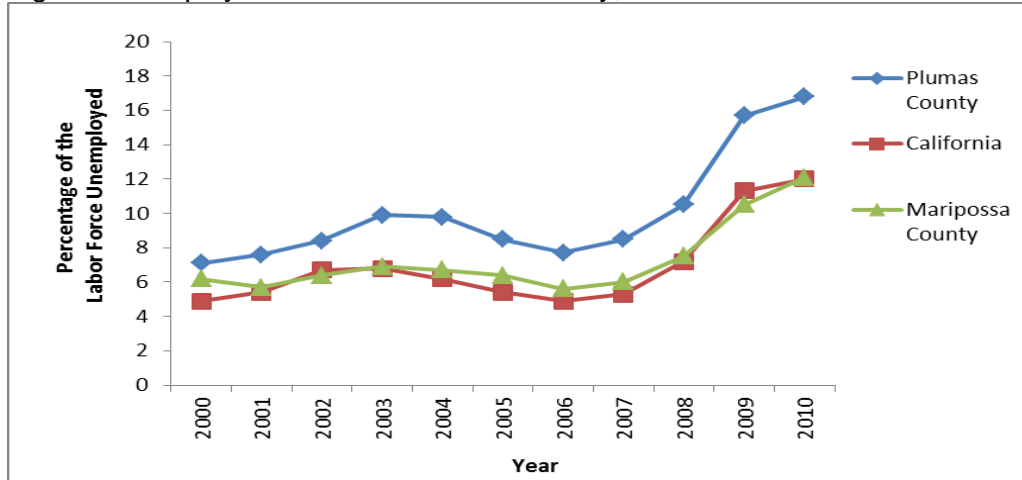
Socio-Economic Well-Being:

I. Employment:

A. Unemployment rate (Figure)

- The unemployment rate has increased by 9.7% since 2000, which translates to 720 fewer people working
- 2010: 16.4%
- Most Current: August 2011, 13.7%

Figure: Unemployment Rate of Plumas County, other similar counties and California



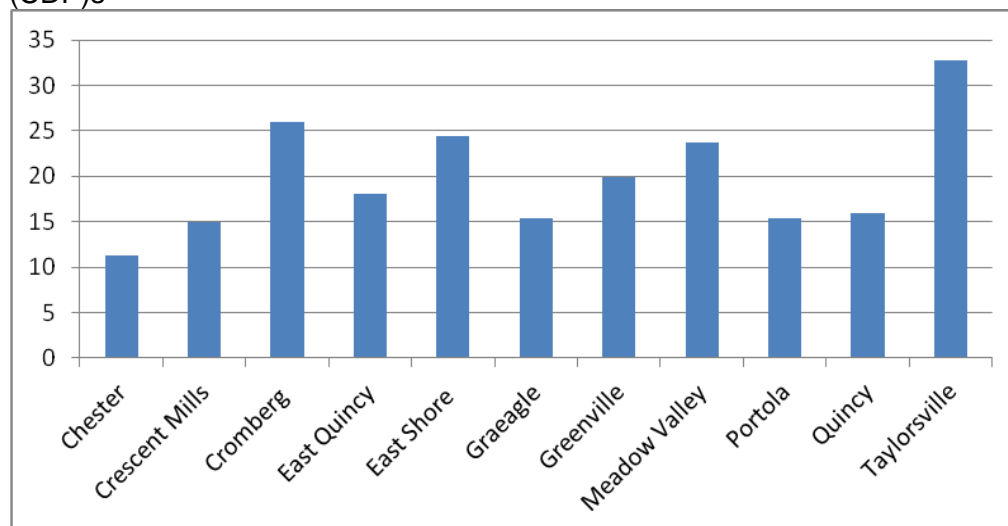
Source: State of California Employment Development Department

Unemployment by Census Designated Place within Plumas County 2010

Area	Unemployment Rate
Chester	11.3%
Crescent Mills	15%
Cromberg	26%
East Quincy	18%
East Shore	24.4%
Graeagle	15.4%
Greenville	19.9%
Meadow Valley	23.7%
Portola	15.4%
Quincy	15.9%
Taylorville	32.8%

Plumas County Community Health Profile 2012

Figure: 2010 Unemployment Rates of Plumas County Census Designated Places (CDP)s



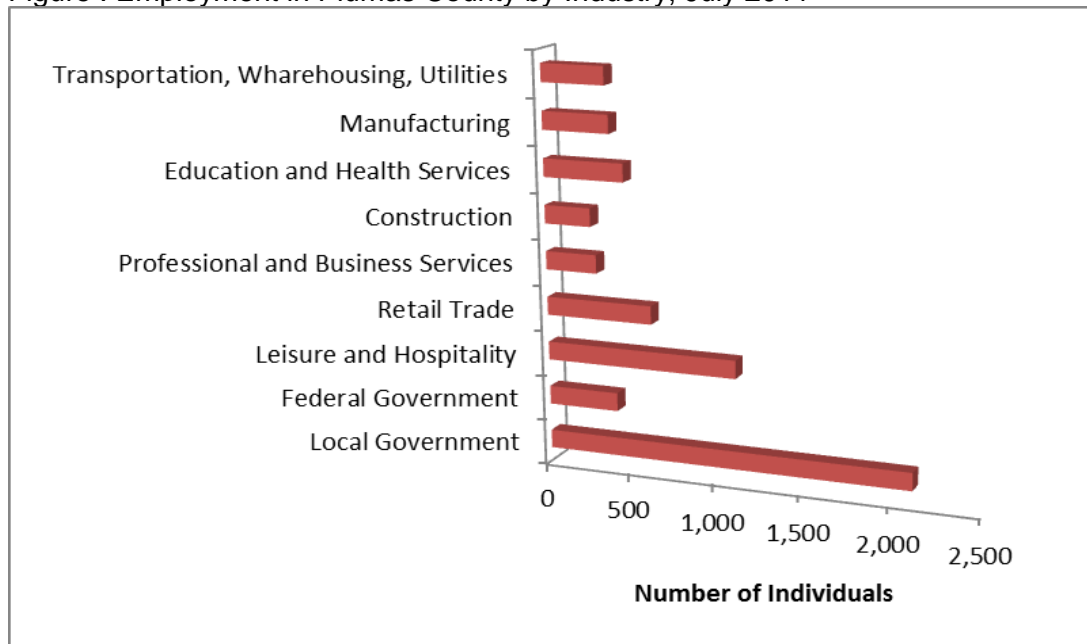
Source: State of California Employment Development Department, 2010

B. Sectors of employment

Place of Employment	2004	2005	2006	2007	2008	2009	2010
Farm employment	171	171	158	171	140	136	
Nonfarm employment	11,152	11,116	11,036	10,796	10,487	9,836	
Private employment	8,576	8,601	8,531	8,424	8,060	7,477	
Forestry, fishing, and related activities	193	(D)	(D)	(D)	(D)	161	
Mining	31	(D)	(D)	(D)	(D)	48	
Utilities	168	174	180	171	168	166	
Construction	1,181	1,228	1,320	1,265	1,112	851	270
Manufacturing	744	756	707	719	676	518	430
Wholesale trade	116	120	113	118	101	99	
Retail trade	1,143	1,117	1,051	987	945	869	600
Transportation and Warehousing	263	273	276	271	259	239	340
Health care and social assistance	721	703	721	723	717	734	510*
*2010 Includes Education Services							
Accommodation and food services	999	856	843	841	824	808	820
Federal Government	429	432	420	397	421	456	390
State and local Government	2,110	2,048	2,051	1,942	1,973	1,870	2200

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Figure : Employment in Plumas County by Industry, July 2011



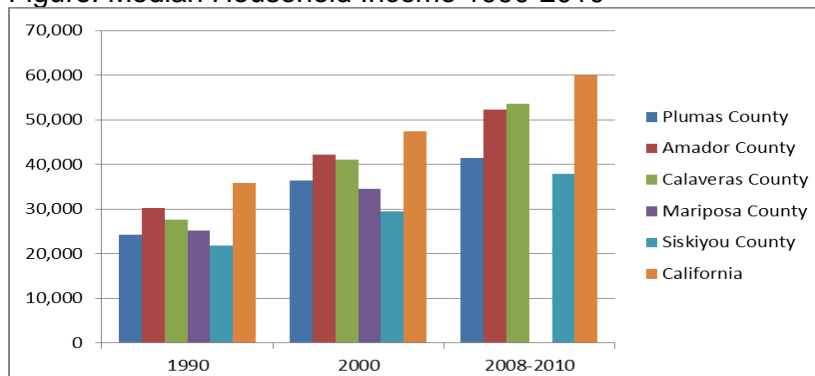
Source: State of California Employment Development Department

II. Income Level

A. Median Household Income

Area	1990	2000	2008 - 2010
Plumas	24,299	36,35	\$41,520
Amador	30,265	42,280	\$52,370
Calaveras	27,645	41,022	\$53,698
Mariposa	25,272	34,626	
Siskiyou	21,921	29,530	\$37,858
California	35,798	47,493	\$60,016

Figure: Median Household Income 1990-2010



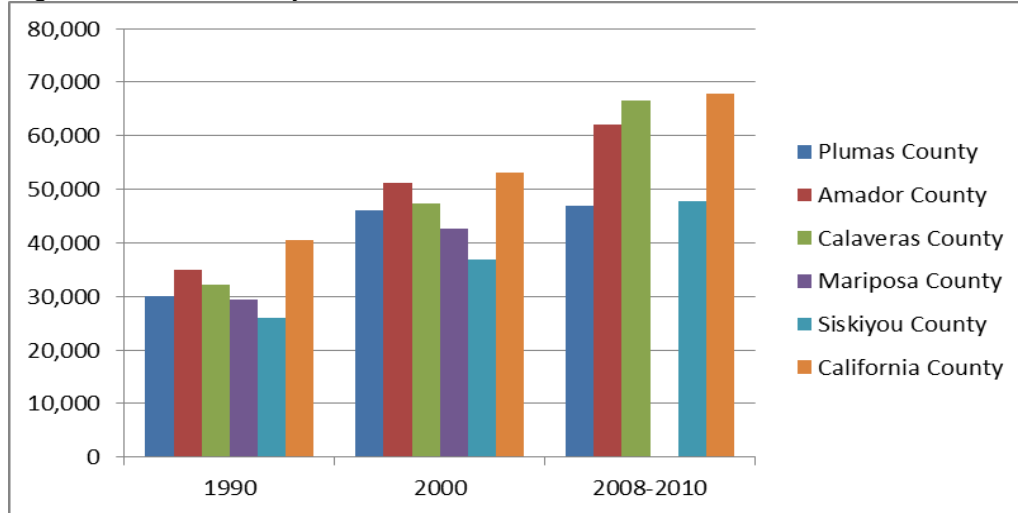
Source: California Department of Finance, US Census Bureau

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B. Median Family Income

Area	1990	2000	2008-2010
Plumas	29,967	46,119	\$47,019
Amador	35,062	51,226	\$62,166
Calaveras	32,211	47,379	\$66,652
Mariposa	29,468	42,655	
Siskiyou	26,073	36,890	\$47,741
California	40,559	53,025	\$67,874

Figure : Median Family Income 1990-2010



Source: California Department of Finance, US Census Bureau

C. Median Non-Family Income

Area	1990	2000	2008-2010
Plumas	13,559	18,387	
Amador	16,304	24,474	
Calaveras	14,797	22,801	
Mariposa	13,121	20,815	
Siskiyou	12,202	16,647	
California	24,052	32,024	

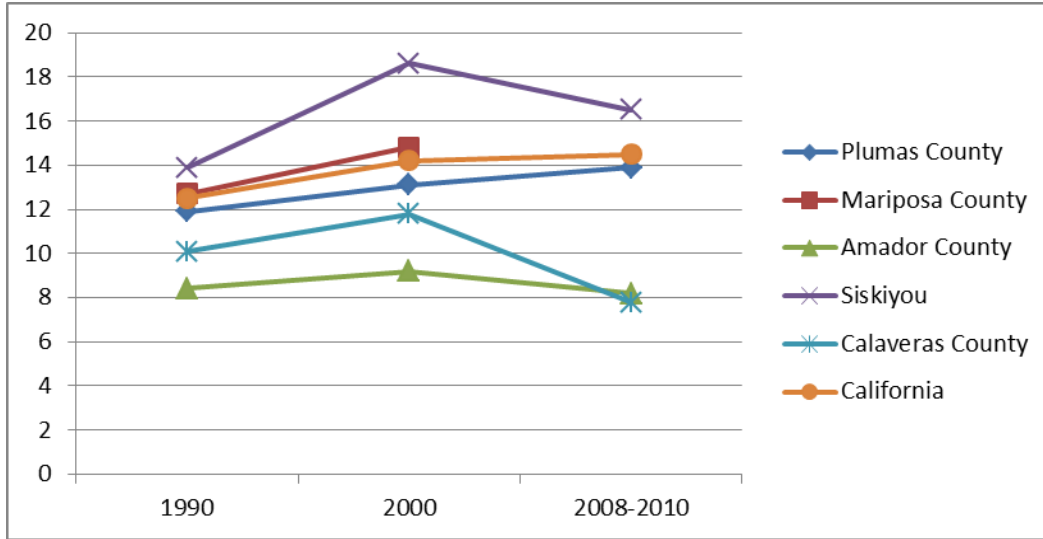
III. Poverty Level

A. Percent of persons below the federal poverty level

Plumas County	1990	2000	2008-2010
All People	11.9	13.1	13.9
Families	9.8	9	9.4
Married Couple families		6.3	3.6
Families with female householders	48.5	27.6	25.2
Persons under 18 years of age	19.2	17.2	24.3

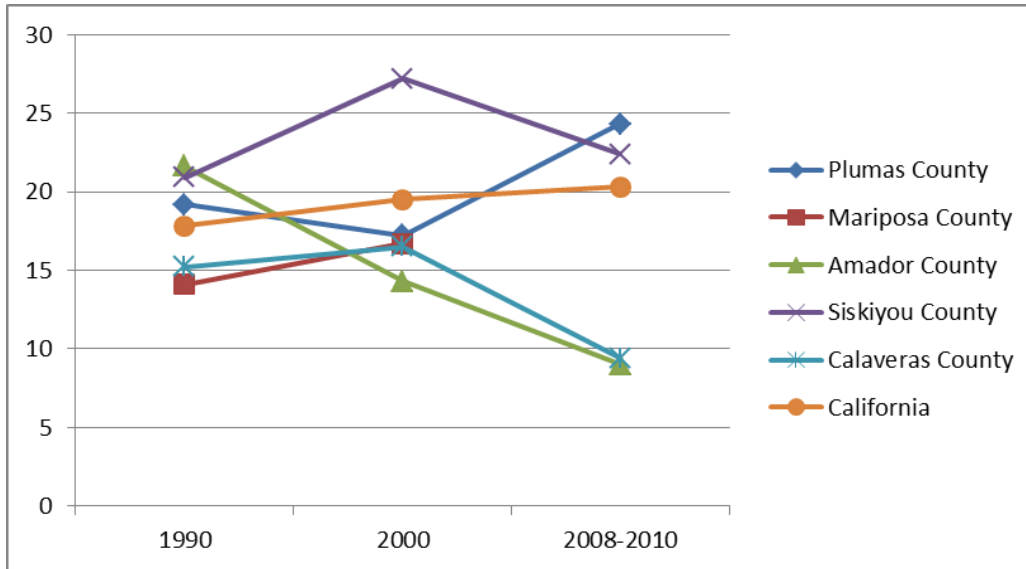
Plumas County Community Health Profile 2012

Figure: Percent of all people living who reported living below the federal poverty level within the last 12 months 1990 - 2008



Source: US Census Bureau

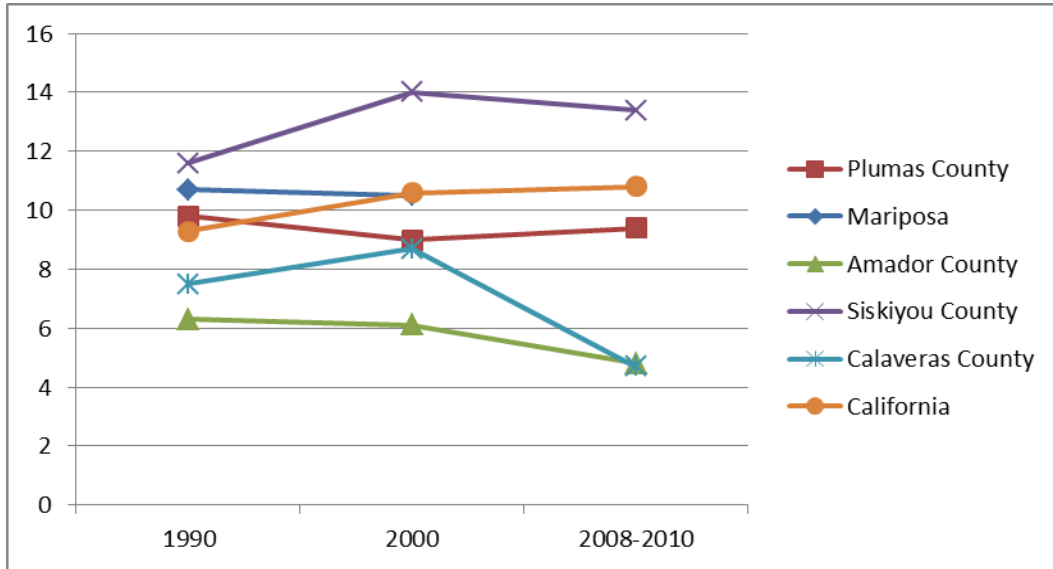
Figure: Percent of people 18 years or younger who reported living below the federal poverty level within the last 12 months 1990-2008



Source: US Census Bureau

Plumas County Community Health Profile 2012

Figure: Percentage of families who reported living at or below the federal poverty level within the last 12 months

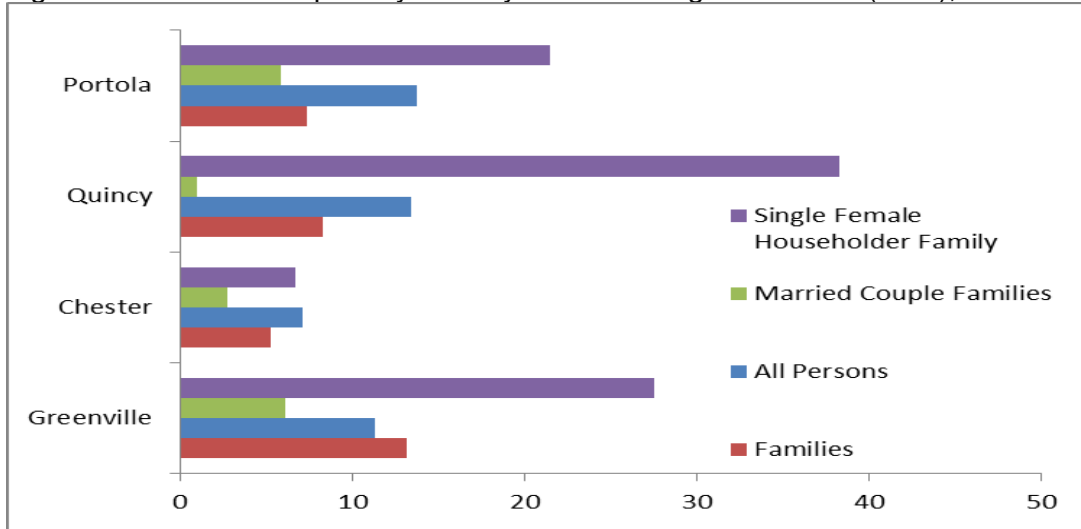


Source: US Census Bureau

Poverty Distribution of Communities within Plumas County (US Census 2005-2009)

Area	Percent of Persons living below Federal Poverty Level
Greenville	11.3
Chester	7.1
Quincy	13.4
Portola	13.8

Figure : Persons below poverty level by Census designated Place (CDP), 2005- 2009



Source: US Census, American Community Survey 2005- 2009

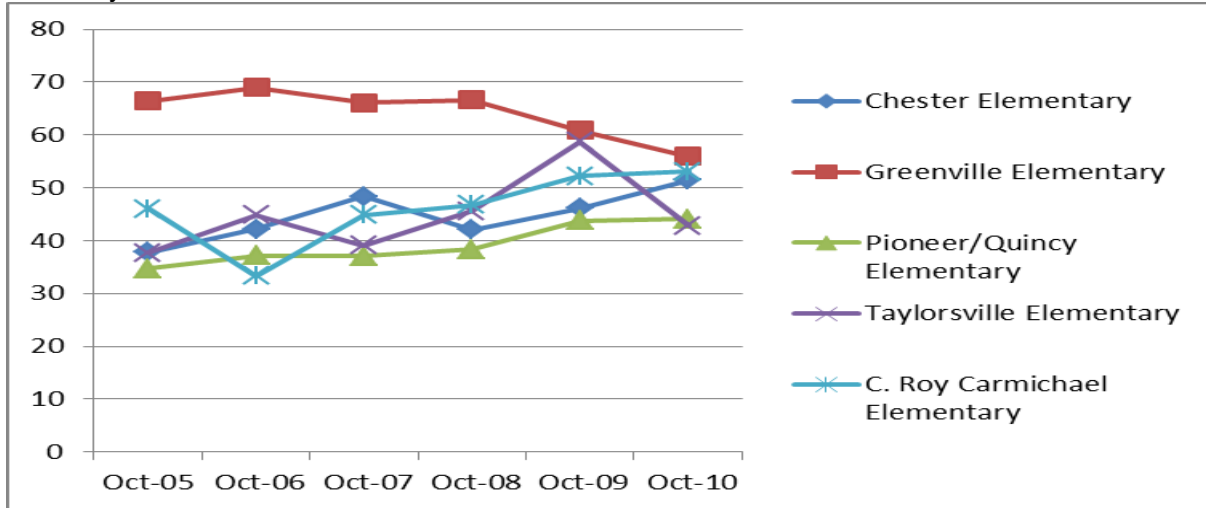
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A. Students **eligible** for free and reduced lunches - (October 2010)

○ Total: Plumas County : **42.5%**

School	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10
Chester Elementary	37.84	42.14	48.4	42.11	46.15	51.43
Greenville Elementary	66.39	69	66.09	66.67	60.87	55.93
Pioneer/Quincy Elementary	34.66	37.12	37.06	38.32	43.75	44.14
Taylorville Elementary	37.7	44.8	39.12	45.65	58.7	42.86
C Roy Carmichael	45.98	33.27	44.81	46.8	52.27	53.09

Figure: Plumas County Elementary School Students Eligible for Free and Reduced Priced Meals by school



So

Source: California Department of Education

IV. Housing

A. Vacancy Rate

Region	1990	2000	2010
Plumas	32%	33%	43%
Mariposa	28%	25%	25%
Amador	18%	16%	20%
Siskiyou	14%	16%	19%
California	8%	6%	8%

V. Education:

A. Total Enrollment:

B. High school graduation rate

a. Plumas County (ACS, 2009) – 90.4%, 88% in 2000

b. California (ACS, 2009) – 80.5%

C. College Graduation rate (Bachelor's Degree or higher)

c. Plumas County (ACS, 2009) – 20.8%, 17.5%

d. California (ACS, 2009) – 29.7%

D. High School Completion

e. Plumas County (National Center for Educational Statistics 2008-2009): 80%

f. Dropout rates (9th-12th grade)

i. Plumas County (2009-2010) – 3.7%

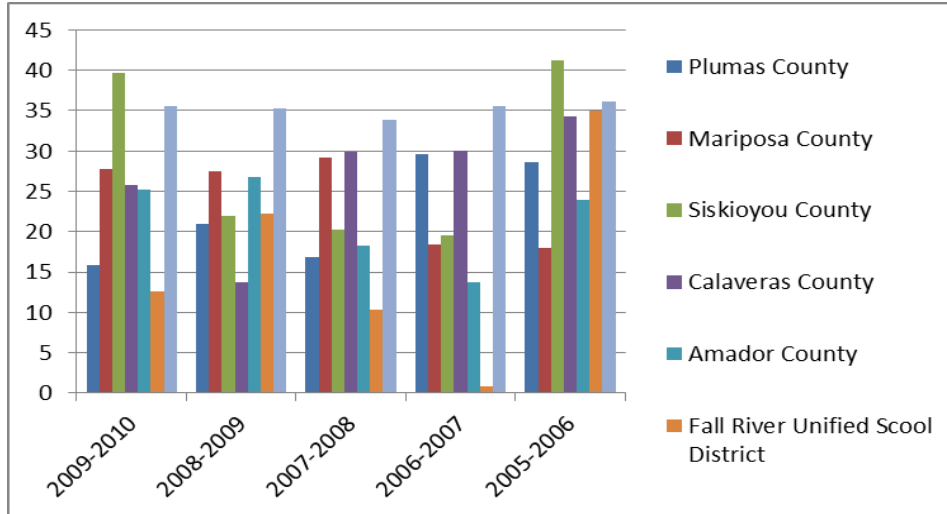
ii. California (2009-2010) – 3.4%

Plumas County Community Health Profile 2012

E. High School Students Prepared for College

	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Plumas	15.9	20.9	16.8	29.6	28.6

Figure: Percentage of High School Students with the required UC/CSU admission Coursework



Source: California Department of education

F. Special Education Students

g. 2010 -2011 Plumas County – 270, 11.7% of total enrollment

i. Leading conditions:

1. Specific Learning disabilities – 108, 40%
2. Speech and Language disabilities – 108, 40%
3. Other Health Implications – 18, 6.7%
4. Mental Retardation – 13, 4.8%
5. Autism – 13, 4.8%
6. Deaf – 2, 0.7%

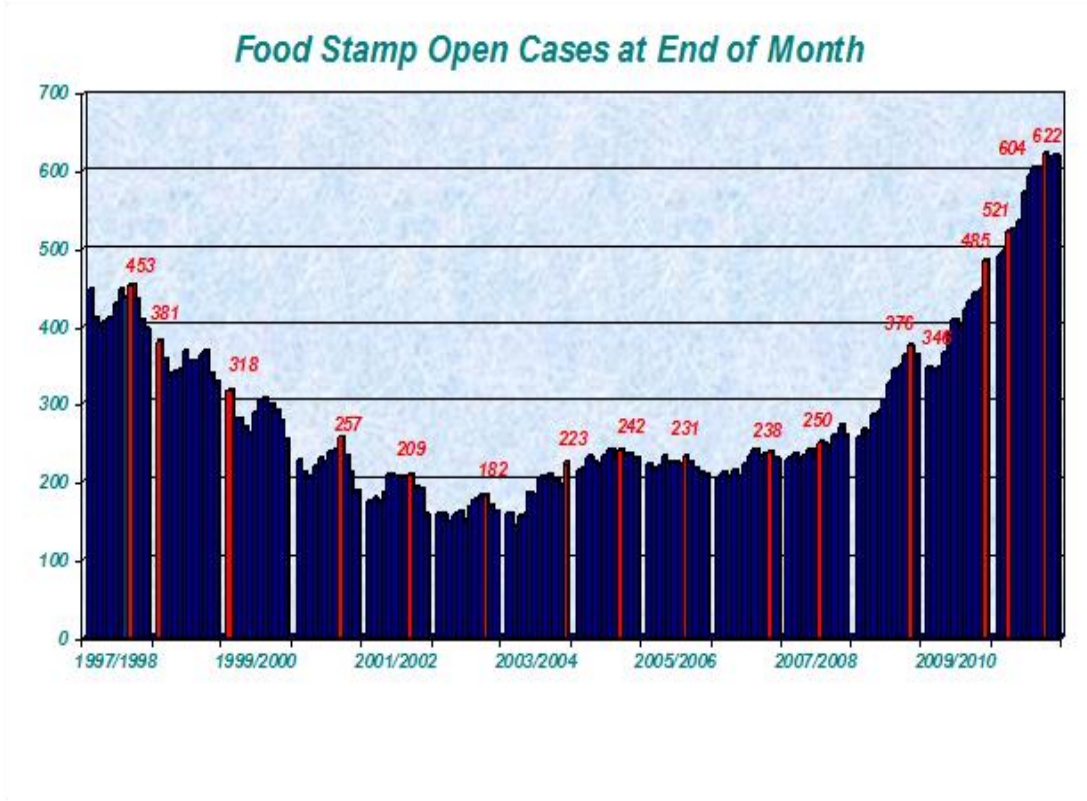
h. 2010 – 2011 California – 10.9% of total enrollment

VI. Food Stamps

A. Average Monthly Caseload:

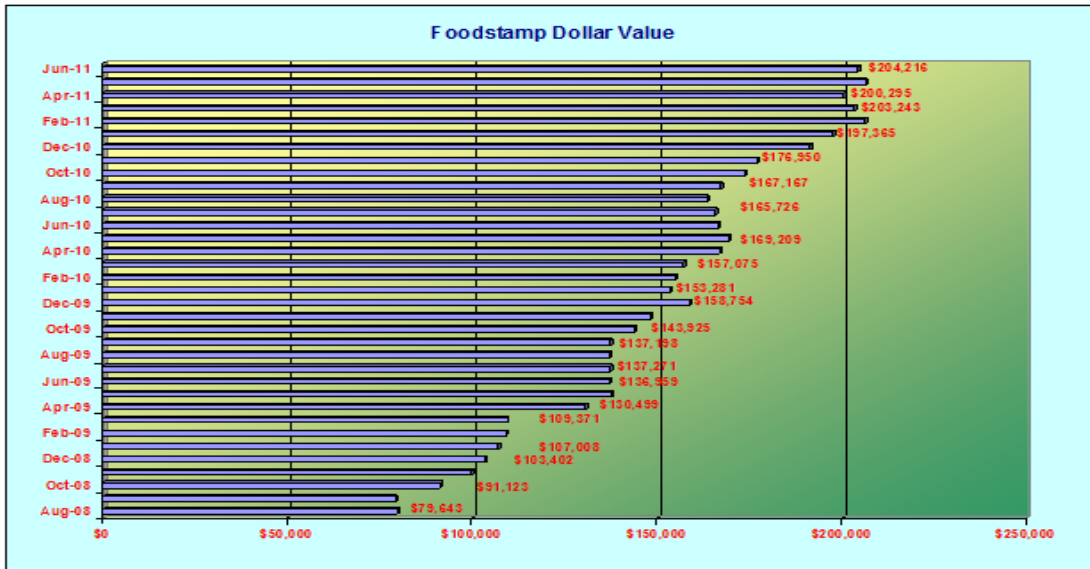
- 2008/2009 316
- 2009/2010 402
- 2010/2011 567

Plumas County Community Health Profile 2012



Source: Plumas County Social Services Quarterly Trend Report June 2011

B. Food Stamp Dollar Value



Source: Plumas County Social Services Quarterly Trends Report June 2011

Plumas County Community Health Profile 2012

VII. Health Insurance

A. Job-based coverage year round (UCLA CHIS 2009 data)

- Plumas County (with others): 50.1%
- California: 40.1%
- Mariposa and others: 51.6%

B. All other coverage Year round (UCLA CHIS 2009 data):

- Plumas and other counties: 8.6%
- California: 9.3%
- Mariposa and other counties: 10.0%

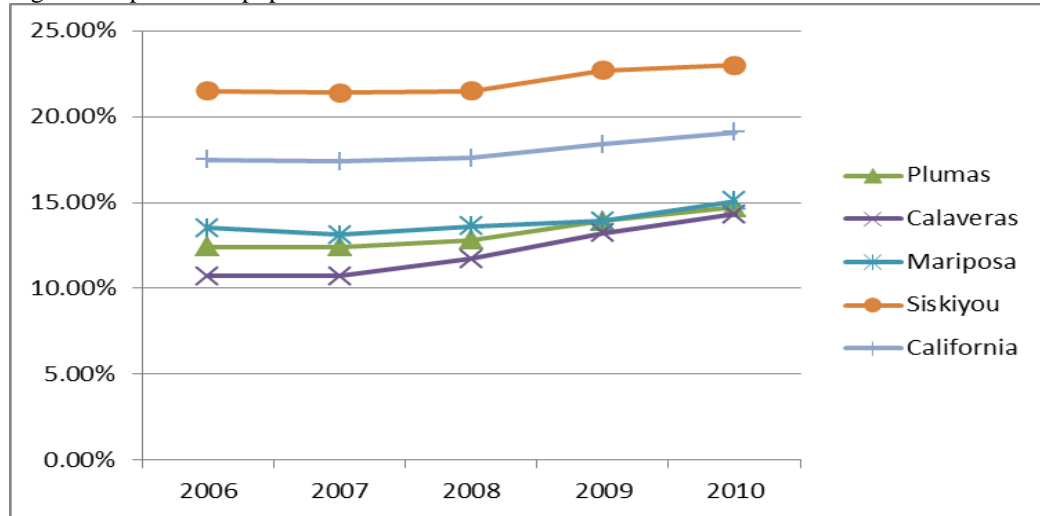
C. Medicare (HRSA area resource file 2008)

- a. Elderly (age 65 +): 3,848
- b. Disabled : 780

D. Medi-Cal (Figure)

- HSRA area resource file (2008): 4,689
- UCLA CHIS (2009 – this includes Healthy Families and insurance is year round):
 - Plumas County (with others): 21.6%
 - California: 16.3%
 - Mariposa, and others lumped with it: 10.5

Figure: Proportion of population enrolled in Medi-Cal 2006-2010



Source: California Department of Health Care Services

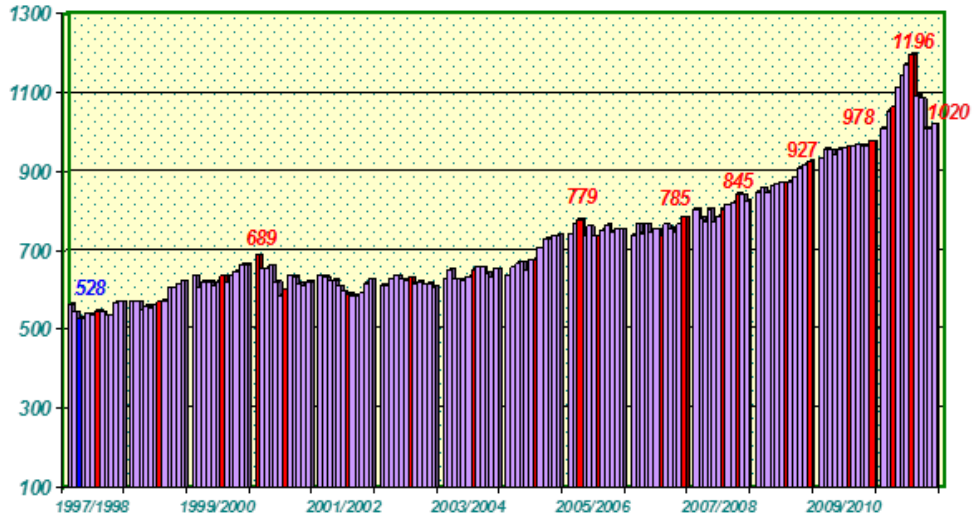
Local Medi-Cal Data:

Average Monthly Caseload:

- 2008/2009 879
- 2009/2010 958
- 2010/2011 1081

Plumas County Community Health Profile 2012

Medi-Cal Open Cases at End of Month

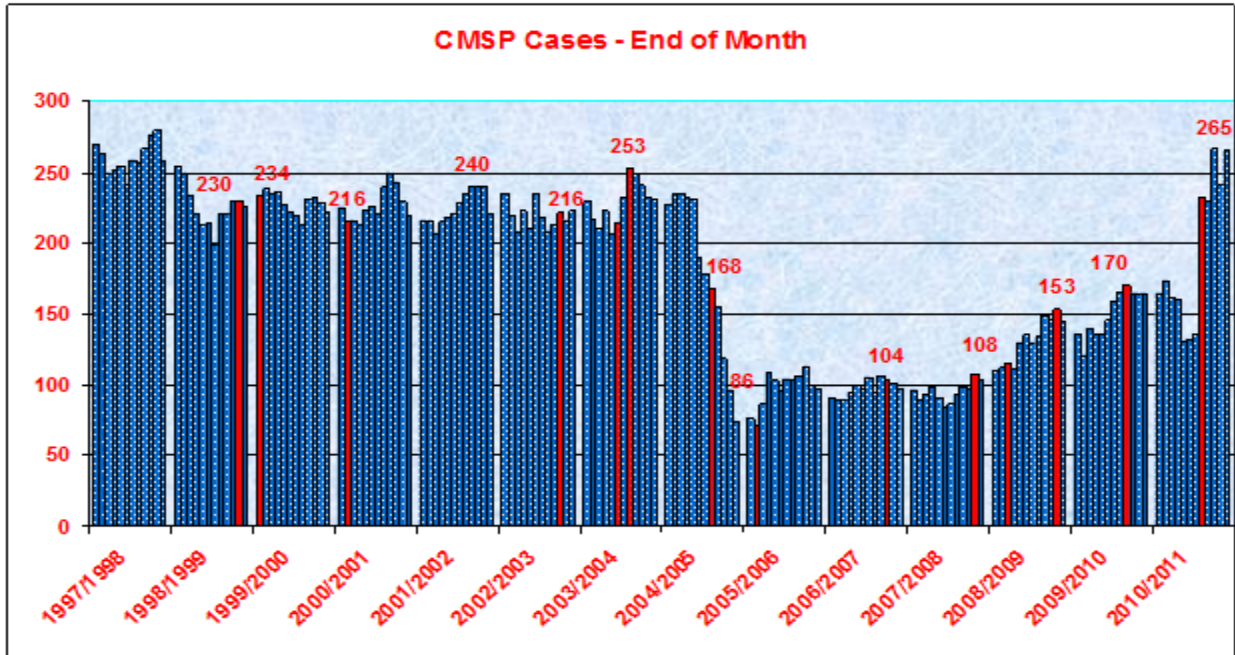


Source: Plumas County Social Services Quarterly Report June 2011

E. CMSP:

Average Monthly Caseload:

- 2008/2009 95
- 2009/2010 131
- 2010/2011 191



Source: Plumas County Social Services Quarterly Report June 2011

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- F. Uninsured
- VIII. Total Uninsured (All year, or part of the year):
 - o HRSA area resource file (originally from the small area estimates from census 2006): 3, 264
 - a. CHIS 2009 data (multiple counties: Plumas, Sierra, Modoc, Siskiyou, Lassen, Trinity and Del Norte: 29.7% of population for these 3 regions
 - b. California (CHIS 2009): 24.3%

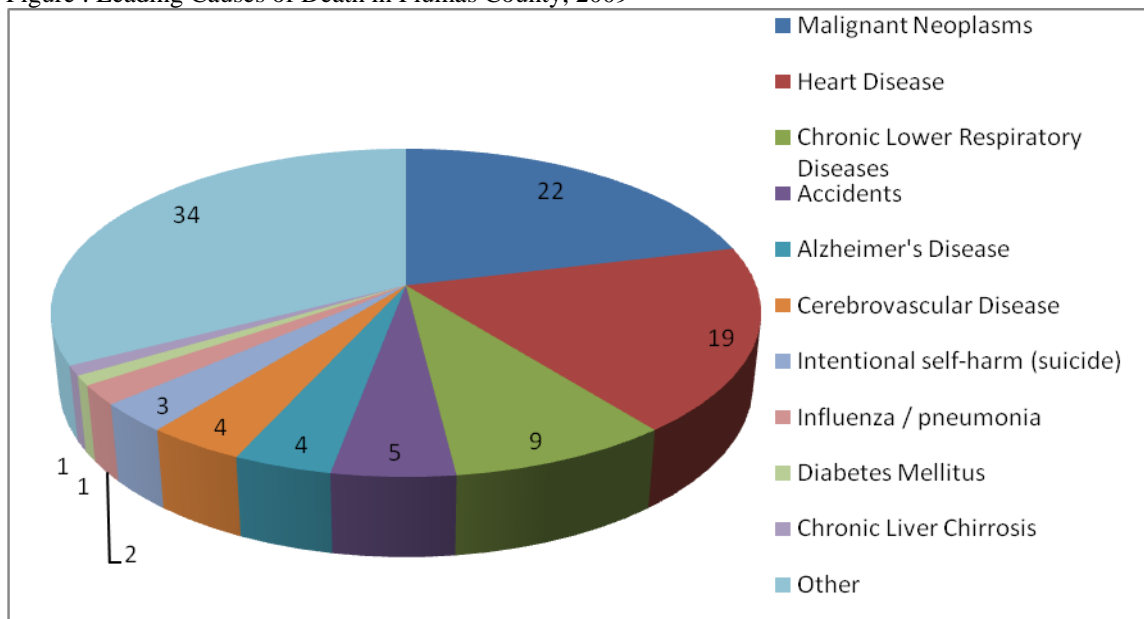
Clinical Care:

- II. Ratio of Providers to Patients
- III. Individual hospital information
 - o Average length of hospital stay
 - Plumas County: 17.5 days
 - California: 5.1 days
- IV. Senior Services
 - 3 Skilled Nursing Facilities:
 - Country Villa Quincy Healthcare Facility – 57 beds
 - Seneca Skilled Nursing Facility – 16 beds
 - Eastern Plumas Health Care Skilled Nursing Facility – 66 beds

Mortality:

I. All Causes of Death

Figure : Leading Causes of Death in Plumas County, 2009



Source: California Department of Public health

Plumas County Community Health Profile 2012

Health Behaviors

I. Tobacco use / abuse

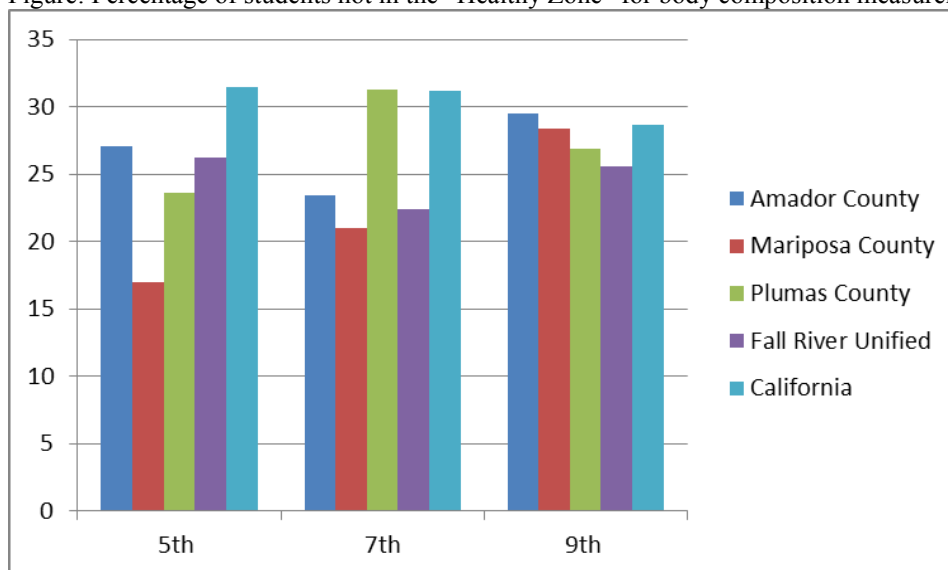
A. Adolescent Alcohol Use

Plumas County Healthy Kids Survey 2008

	7th Grade % Plumas CA		9th Grade % Plumas CA		11th Grade % Plumas CA	
During your life did you ever						
smoke a cigarette?	10	7	31	20	44	34
drink alcohol?	32	24	65	47	77	66
use inhalants?	10	11	13	14	16	15
smoke marijuana?	11	9	35	25	50	49
During the Past 30, days did you						
smoke a cigarette?	5	6	15	11	21	17
drink alcohol?	19	15	37	24	52	42
use inhalants?	1	5	2	7	3	7
smoke marijuana?	3	7	19	15	29	24

A. Body composition of students (Those not in “Healthy Zone”)

Figure: Percentage of students not in the “Healthy Zone” for body composition measurements



Source: California Department of Education, Physical Fitness Testing 2009-2010

B. Population with BMI > 30

Plumas County Community Health Profile 2012

I. Physical Activity

A. Students who passed the aerobic endurance standards for physical fitness

- 5th: 76.2%
- 7th: 70.2%
- 9th: 73.3%

B. Percentage of students who passed all physical fitness standards

- 5th: 31.7%
- 7th: 34.2%
- 9th: 50.0%

II. Healthy Eating

III. High Blood Pressure

IV. High Cholesterol

V. Sexually Transmitted Infections

A. Chlamydia (2010 –PCPHA) – 55 cases

B. HIV /AIDS Caseload (2010 – PCPHA): 14 total cases

Maternal and Infant Health:

I. Noteworthy medical characteristics of all live births 2009

A. Percentage of births, in which mothers received late or no prenatal care: 4.8% of all pre-natal births

B. Percentage of all live births that are pre-term: 4.3% of all live births

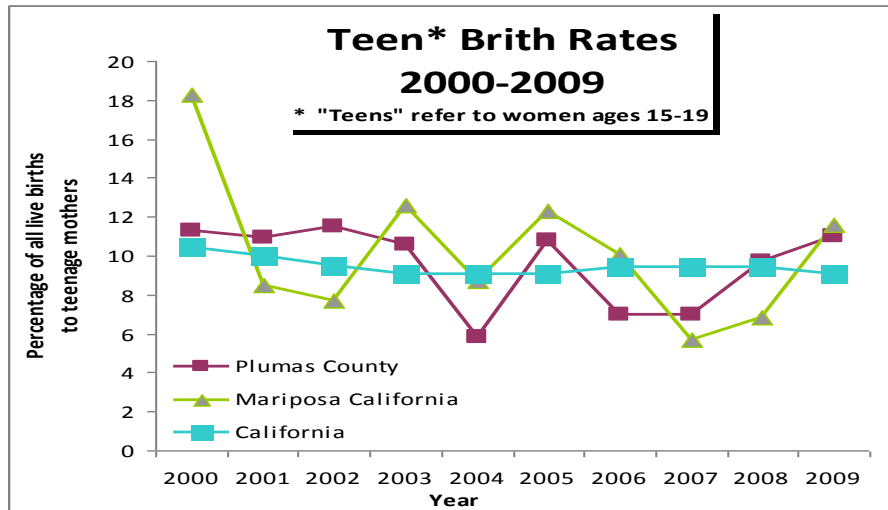
C. Percentage of births delivered via cesarean section:

D. Rate of low-birth weight

- 4.8% of all prenatal births for 2009 received late or no prenatal care in 2009
- 4.3% of all live births in Plumas County were pre-term births
- 22.1% of all live births were delivered via cesarean section delivery
- The rate of teen (Ages 15-19) births was higher than the rate of teen births in California

II. Teen Birth Rate

Figure: Teen (women ages 15-19) birth rate 2000 - 2009



Source: State of California, Department of Public Health, Birth Records

Oral Health:

- I. Number of Dentists in the county – 3 Locations
 - A. Providers who accept Medi-Cal / Denti-Cal (2)
 - Plumas District Hospital Dental Clinic, Quincy
 - Hildebrand, Derry Lee in Portola
 - Rancheria, Greenville, CA

Appendix 1: Plumas County Health Indicators

INDICATORS		MEASURES	DATA	SOURCE
Behaviors and Physical and Mental Condition	Health Behaviors	Alcohol Use	1. The percentage of adolescents who report ever using alcohol <i>Plumas:</i> <i>7th Grade:</i> 32% <i>9th Grade:</i> 65% <i>11th Grade:</i> 77%	California Healthy Kids Survey, California Department of Education, 2008
			<i>California:</i> <i>7th Grade:</i> 24% <i>9th Grade:</i> 47% <i>11th Grade:</i> 66%	
			2. The percentage of adolescents who report drinking alcohol in the past 30 days <i>Plumas:</i> <i>7th Grade:</i> 19% <i>9th Grade:</i> 37% <i>11th Grade:</i> 52%	
			<i>California:</i> <i>7th Grade:</i> 15% <i>9th Grade:</i> 24% <i>11th Grade:</i> 42%	
			3. The percentage of adolescents who report ever being sick or "drunk" from drinking <i>Plumas:</i> <i>7th Grade:</i> 11% <i>9th Grade:</i> 45% <i>11th Grade:</i> 60%	
			4. Number of driving under the influence (DUI) arrests <i>Plumas:</i> 243 DUIs for drugs or alcohol	Plumas County Sheriff's Department, 2010
	Oral Health	1. The proportion of young children aged 3-5 with untreated dental decay in primary and permanent teeth	<i>Plumas:</i> 27% of preschoolers	Plumas County Public Health Oral Health Screenings
			<i>USA:</i> 23.8% of children ages 3-5	National Health and Nutrition Exam. Survey (NHANES), CDC, NCHS, 1999-2004
	Fitness	1. The percentage of students who were in the "Healthy Fitness Zone" for body composition during physical fitness testing	<i>Plumas:</i> <i>5th Grade:</i> 64.8% <i>7th Grade:</i> 62.3% <i>9th Grade:</i> 58.0%	California Department of Education
			<i>California:</i> <i>5th Grade:</i> 52.1% <i>7th Grade:</i> 55.5% <i>9th Grade:</i> 59.4%	

Plumas County Community Health Profile 2012

INDICATORS		MEASURES	DATA	SOURCE	
Behaviors and Physical and Mental Condition	Health Behaviors	Tobacco Use	1. The percentage of adults who are current smokers	Plumas: 18.7% California: 13.2%	The California County and statewide archive of tobacco statistics, The California Tobacco Survey, 2008
			2. The percentage of adults who are daily smokers	Plumas: 14.1% California: 9.2%	
			3. The percentage of adults who use smokeless tobacco	Plumas: 3.2% California: 1.7%	
			4. The percentage of adolescents who report ever smoking a cigarette in their lifetime	Plumas: 7th Grade: 10% 9th Grade: 31% 11th Grade: 44%	California Healthy Kids Survey, the California Department of Education, 2008
			5. The percentage of adolescents who report smoking a cigarette in the past 30 days	California: 7th Grade: 7% 9th Grade: 20% 11th Grade: 34%	
				Plumas: 7th Grade: 5% 9th Grade: 15% 11th Grade: 21%	
				California: 7th Grade: 6% 9th Grade: 11% 11th Grade: 17%	
6. The percentage of adolescents who report ever using chew or snuff	Plumas: 7th Grade: 7% 9th Grade: 22% 11th Grade: 41%				
7. The percentage of adolescents who report using chew or snuff in the past 30 days	Plumas: 7th Grade: 4% 9th Grade: 12% 11th Grade: 16%				

Plumas County Community Health Profile 2012

INDICATORS		MEASURES	DATA	SOURCE	
Behaviors and Physical and Mental Condition	Clinical Care	Access to Care	1. The proportion of the population with health insurance	Plumas: 80.9% of people 18 years and older have health insurance	American Community Survey, US Census Bureau, 2008-2010 estimates
			California: 85.5% of Californians 18-65 have health insurance	California Health Information Survey, UCLA, 2009	
			USA: 83.2% of people under 65 years old have health insurance	National Health Information Survey, CDC, 2008	
			2. The proportion of children under 19 years old who have no health insurance	Plumas: 9.7%	Small Area Health Insurance Estimates, US Census Bureau, 2009
			California: 10%		
			USA: 9.7% of people under 18 years old have no health insurance	US Census Bureau, 2009	
			3. The proportion of Emergency Room visits which are self-pay	Plumas: 7.9% paid out-of-pocket in 2010	OSHDP 2010
			4. Number of Primary Care Providers per 100,000 population	Plumas: 84 (approx. 37 total PCPs)	HRSA Area resource file, 2008
			California: 116	HRSA Area resource file, 2009	
			5. The rate of Emergency Room visits due to non-fatal, unintentional injuries per 100,000 population	Plumas: 10,481 (2,279 total incidents)	The California Department of Public Health, California Injury Data Online, 2009
			California: 5,143		
			USA: 9,219.3 in 2008 (age adjusted to the year 2000 standard population)		

Plumas County Community Health Profile 2012

INDICATORS		MEASURES	DATA	SOURCE
Behaviors and Physical and Mental Condition	Mental Condition	1. <i>Rate</i> of suicides per 100,000 population	Plumas: 18.4 between 2005-2007	National Vital Statistics System (NVSS), CDC, NCHS, 2007, The California Department of Public Health, 2007-2009
			California: 9.4 in 2007	
			USA: 11.3 in 2007	
		2. The percentage of adolescents who <i>in the past 12 months</i> felt so sad or hopeless every day for two weeks or more that they stopped doing some usual activities	Plumas: 7th Grade: 32% 9th Grade: 30% 11th Grade: 26%	California Healthy Kids Survey, the California Department of Education, 2008
			California: 7th Grade: 29% 9th Grade: 32% 11th Grade: 33%	
	3. The <i>rate</i> of non-fatal Emergency Room visits due to self-inflicted injury per 100,000 population	Plumas: 128.8 for non-fatal intentional self-harm	The California Department of Public Health, 2009	
		California: 72.0 for non-fatal intentional self harm		
		USA: 125.3 for nonfatal intentional self-harm injuries per 100,000 in 2008 in the US (age adjusted to the year 2000 standard population)	National Electronic Injury Surveillance System—All Injury Program (NEISS-AIP), CDC, NCIPC, US Consumer Product Safety Commission (CPSC)	
	Substance Abuse	1. The <i>rate</i> of non-fatal Emergency Room visits due to alcohol or other drugs per 100,000 population	Plumas: 620.9 ER visits per 100,000 (135 total events)	California Department of Public Health, Safe and Active Communities Branch with assistance from California Department of Alcohol and Drug Programs, Office of Applied Research and Analysis, 2009 and 2010
California: 335.9 ER visits per 100,000				
2. The <i>rate</i> of non-fatal hospitalizations due to alcohol or other drugs per 100,000 population		Plumas: 193.2 hospitalizations per 100,000 (42 total events)		
		California: 145.8 hospitalizations per 100,000		

Plumas County Community Health Profile 2012

INDICATORS		MEASURES	DATA	SOURCE	
Social, Economic, and Environmental Factors	Social and Economic Factors	Education	1. Educational attainment of persons 25 years and older	Plumas: 90.7% have at least a high school diploma, and 20.5% have a bachelor's degree or higher	The California Department of Finance (Originally American Community Survey, US census bureau, estimates, 2008 - 2010)
			California: 80.6% have at least a high school diploma, and 30% have a bachelor's degree or higher		
			USA: 84.6% have at least a high school diploma and 27.9% have a bachelor's degree or higher	The US Census Bureau, 2012	
		Employment	2. High school graduation rate (the percentage of ninth graders who graduate in four years)	Plumas: 90.4%	The American Community Survey, 2009 and 2010
				California: 80.5%	
			1. Unemployment rate	Plumas: 16.4%	The State of California Employment Development Department, EDD, 2010
				California: 12%	
		Poverty	1. The percentage of all people living below the federal poverty level	Plumas: 13.9%	The California Department of Finance (Originally American Community Survey, US Census Bureau, estimates, 2008 -2010)
				California: 14.5%	
				USA: 15.1%	
	2. The percentage of families living below the federal poverty level		Plumas: 9.4%	The California Department of Fiance (Originally American Community Survey, US census bureau, estimates, 2008- 2010)	
			State: 10.8%		
			USA: 13.2%		The US Census Bureau, 2010
	3. The percentage of Individuals 18 years of age or younger living below the federal poverty level		Plumas: 24.3%	The California Department of Fiance (Originally American Community Survey, US census bureau, estimates, 2008- 2010)	
			California: 20.3%		
			USA: 22%		The US Census Bureau, 2012
	Income	1. The annual median household income	Plumas: \$41,520	The California Department of Finance, 2010	
			California: \$54,459		
			USA: \$49,445		The US Census Bureau 2010
		2. The annual median family income	Plumas: \$47,019	The California Department of Finance, 2010	
California: \$67,874					
USA: \$60,395			The US Census Bureau 2010		
1 Parent Households	1. The percentage of single parent households with children under 18 years old	Plumas: 35.7%	The California Department of Finance (Originally from the American Community Survey 3 year estimates 2008-2010)		
		California: 29.1%			

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INDICATORS		MEASURES	DATA	SOURCE	
Social, Economic, and Environmental Factors	Environmental Factors	Air Quality	1. The number of days during the year which the air quality was unhealthy for sensitive groups, generally unhealthy or very unhealthy (Air Quality Index or AQI >100)	Plumas: 9 days exceeded the AQI of 100 in in 2008 (4 days unhealthy for sensitive groups and 5 days unhealthy for the general public)	Air Quality System (formerly the Aerometric Information Retrieval System), EPA, 2008 http://www.epa.gov/airdata/
				USA: 11 days in 2008	
			2. Air pollution particulate matter days	Plumas: 2 unhealthy air quality days due to particulate matter annually	
			California: 16 unhealthy air quality days due to particulate matter annually		
		3. Air pollution ozone days	Plumas: 0 unhealthy air quality days due to ozone annually	County Health Rankings (originally the US EPA)	
			California: 51 unhealthy air quality days due to ozone annually		
	Built Environment	1. The percentage of housing units which are vacant		Plumas: 43%	The California Department of Fiance (Originally American Community Survey, US census bureau, estimates, 2008 - 2010)
				California: 8%	
				USA: 12.8%	
		2. Housing ownership rate of occupied housing units	Plumas: 65.6%	US Census Bureau 2006 - 2011	
	California: 57.4%				
	USA: 66.6%				

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INDICATORS		MEASURES	DATA	SOURCE	
Health Outcomes	Morbidity	Cancer	1. Age adjusted <i>rate</i> of all cancers per 100,000 population	Plumas: 428.8 persons per 100,000	California Health Collaborative 2005-2009
				California: 474.7 persons per 100,000	
			2. Age adjusted <i>rate</i> of lung cancer per 100,000 population	Plumas: 62.9 persons per 100,000	
			California: 52.5 persons per 100,000		
		3. Age adjusted <i>rate</i> of other respiratory cancers per 100,000 population	Plumas: 66 persons per 100,000		
			California: 56.2 persons per 100,000		
	Asthma	1. The age adjusted <i>rate</i> per 100,000 population of hospitalizations due to asthma		Plumas: 6.94 hospitalizations per 100,000 in 2009 (17 total events)	The California Department of Public Health Environmental Health Tracking Program, 2009 and 2010
				California: 9.42 hospitalizations per 100,000 in 2009	
				USA: 11.1 hospitalizations of persons 5-64 years old per 100,000 in 2007	
		2. The age adjusted <i>rate</i> per 100,000 population of Emergency Room visits due to asthma		Plumas: 56.61 ER visits per 100,000 in 2009 (110 total events)	The California Department of Public Health Environmental Health Tracking Program, 2010
			California: 47.99 ER visits per 100,000 in 2009		
			USA: 57 ER visits of persons 5-64 years old per 100,000 population in 2007		

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INDICATORS		MEASURES	DATA	SOURCE	
Health Outcomes	Morbidity	Teenage Mothers	i. The <i>rate</i> of births to females 15-19 years old per 1,000 teens	Plumas: 22.7 births per 1,000 (confidence Interval: 18.5-26.8)	Bridged-Race Population Estimates for Census 2000 (CDC, Census) NVSS-N (CDC, NCHS), 2001-2009
			California: 38.8 births per 1,000 in 2005		
			USA: 40.5 per 1,000 in 2005		
		Maternal and Child Health	2. The percentage of all live births to teenage mothers 15-19 years old	Plumas: 11%	The California Department of Public Health, 2009-2010
				California: 9.1%	
			1. The percentage of babies weighing less than 2500 grams (5lbs 8 oz) at birth	Plumas: 4.5%	
	California: 6.8%				
	USA: 8.2%				
	2. The percentage of mothers who received care in 3rd trimester or no prenatal care at all		Plumas: 4.8%	The California Department of Public Health, 2009	
		California: 3.2%			
		3. The percentage of babies born before 37 weeks gestation (pre-term)	Plumas: 4.3%		The National Vital Statistics System (NVSS), CDC, 2007, The California Department of Public Health, 2009-2010
	California: 10.4%				
USA: 12.7%					
4. The percentage of new mothers exclusively breast feeding at the time of hospital discharge	Plumas: 80.1% in 2005-2007 (approximately 45-50 breast feeding mothers monthly)	PCPHA MCAH report 2005-2007, Local WIC office			
	California: 42.6% in 2005-2007				
	USA: 33.6% for a three-month period after hospital discharge in 2006		The National Immunization Survey http://www.healthindicators.gov/Resources/DataSources/NIS_96/Profile		

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INDICATORS		MEASURES	DATA	SOURCE	
Health Outcomes	Mortality	Causes of Death	1. The <i>rate</i> of deaths due to cancer per 100,000 population (age - adjusted rate)	Plumas: 131.14 per 100,000 in Plumas, Lassen and Modoc counties in 2007 (48 total deaths due to cancer in 2009; deaths due to cancer were the number one cause of death in 2009)	The California Cancer Registry, 2007
				California: 164 per 100,000 in 2007	National Vital Statistics System (NVSS), CDC, NCHS
				USA: 178.4 per 100,000 in 2007	
			2. The <i>rate</i> of deaths due to digestive system cancers per 100,000 population (age-adjusted rate)	Plumas: 43.69 in 2009 (39.67 for the period 2005-2009)	The California Cancer Registry 2009, 2005-2010
				California: 42.02 in 2009 (42.66 for the period 2005-2009)	
			3. The <i>rate</i> of deaths due to respiratory cancers per 100,000 population	Plumas: 30.94, in 2009 (42.69 for the period 2005-2009)	
				California: 38.98 in 2009 (40.95 for the period 2005-2009)	National Vital Statistics System (NVSS), CDC, NCHS
			4. The <i>rate</i> of deaths due to lung cancers per 100,000 population	Plumas: 30.94 in 2009 (42.25 for the period 2005-2009; 53.9 in 2007)	
				California: 37.81 in 2009 (39.76 for the period 2005-2009; 39.4 in 2007)	
				USA: 50.6 in 2007 (age-adjusted to the 2000 population)	National Vital Statistics Surveillance - Mortality NVSS-M (CDC, NCHS), 2007-2009
			5. <i>Rate</i> of deaths due to coronary heart disease per 100,000 population	Plumas: 73.6	
				California: 136.2	
				USA: 135.5	

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			6. The <i>rate</i> of deaths due to motor vehicle crashes per 100,000 population	Plumas: 19.9 (12.6 - 27.1 Confidence Interval)	Bridged-Race Population Estimates for Census 2000 (CDC, Census) , NVSS-M (CDC, NCHS) 2001-2009
			California: 12.2 (12-12.3 Confidence Interval)		
			USA: 15.3 (15.2-15.3 Confidence Interval)		
			7. The <i>rate</i> of deaths due to unintentional injury per 100,000 population	Plumas: 41.1 in 2009 (9 total events)	The California Department of Public Health, California Injury Data Online, 2009-2010
			California: 26.8 in 2009		
			USA: 40.0 in 2007 (age-adjusted to the year 2000 population)	National Vital Statistics System–Mortality (NVSS–M), CDC, NCHS	

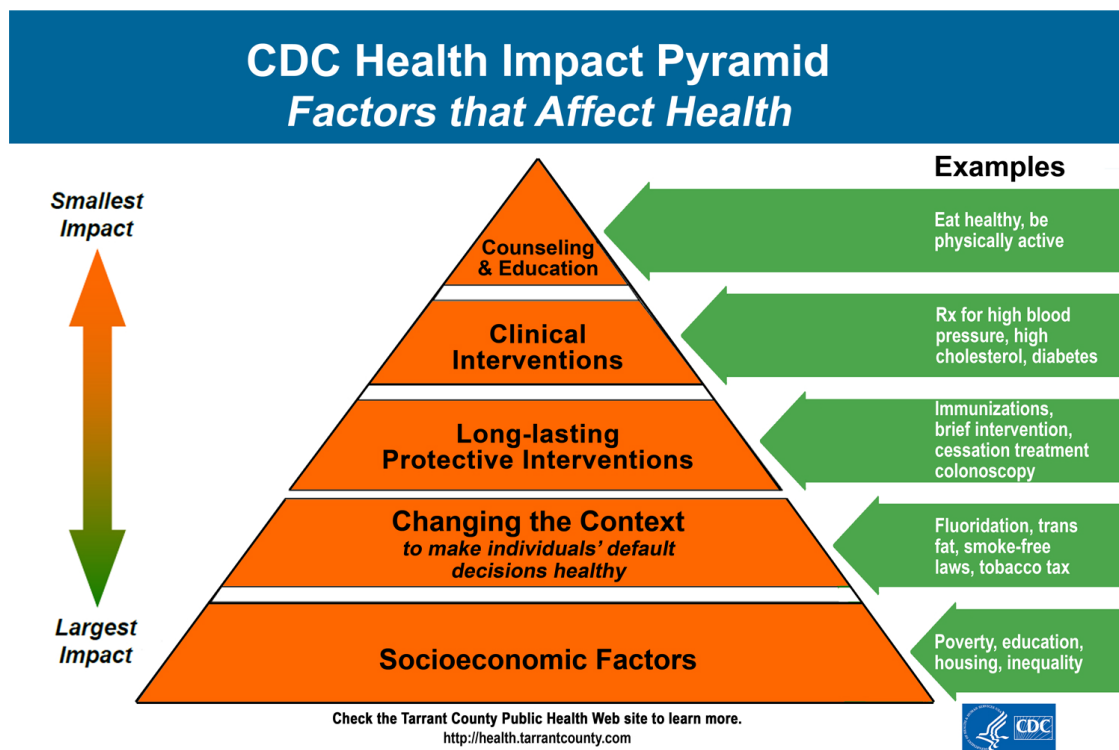
Appendix 2: Impact of the PPACA of 2010 on Counties

The Patient Protection and Affordable Care Act of 2010 will expand coverage for millions of people. In particular, millions of low-income uninsured people with incomes up to 133 percent federal poverty level (FPL) will be eligible for Medicaid (the Federal program referred to as Medi-Cal in California), and new subsidized coverage through the Health Insurance Exchange (Exchange) for those with incomes between 133 to 400 percent FPL. This will present major opportunities and challenges. Counties that provide medical care services will be called upon to operate more like private health care providers and health plans, and to compete with private systems for both enrollment and scarce provider resources, but will still maintain their core mission of serving and supporting the poorest and most vulnerable populations. With dramatic increases in the number of covered people, and the creation of the Exchange as a new market, the potential impact on county delivery systems and local markets remains uncertain but will likely be transformational. County public health services may need to be refocused to support system-wide efforts to improve health outcomes across the population as contemplated in federal reform.

Health care reform also represents a major shift in the incentives and expectations for health care delivery by all providers, with the potential to radically alter existing county delivery systems. Reform not only underscores the need and presents an opportunity for improved “customer service” to ensure that county-operated facilities and programs are desirable from a consumer choice perspective, but also creates new opportunities and imperatives for integration, payment system reform, and expansion of county-level managed care plans. The medical home approach underlying the new federal reform presents an opportunity to get to health problems sooner with improved access to primary care and increased patient satisfaction. The challenge for counties will be in organizing care and services locally, and in developing the relationships and systems needed to create effective medical homes that meet the needs of diverse populations.¹¹

¹¹ Kelch, Deborah Reidy, M.P.P.A., *The Crucial Role of Counties in the Health of Californians: An Overview*, California Health Care Foundation 2011

Appendix 3: Factors that Affect Health



While everyone knows that more funds are needed, more money is not coming. Therefore, we have to be better about how we focus what we do. The above chart developed by Thomas Frieden, M.D., head of the Centers for Disease Control and Prevention, describes a five-tiered pyramid as a framework for public health action. At the base of Frieden's pyramid are those interventions that have the greatest impact on *populations* and, at the top, those that require the greatest *individual* efforts. In this model, addressing **social determinants of health** such as poverty would have the greatest impact. Above that are changes to the environment to make health decisions easier such as policies on tobacco use or *trans fat* in foods. Next are long-lasting, one-time clinical interventions such as immunizations, followed by regular medical care from doctors, and at the very top with the least impact on populations, health education such as programs in schools or physician advice.

Interestingly, the focus of many public health actions is almost the inverse of this pyramid. We tend to spend a lot of time and dollars trying to teach people how to be healthy through school education on drug abuse or media campaigns to encourage walking when these are in fact the least effective ways to change behavior. This is likely because these types of interventions are more easily understood to be related to health and are the least likely to be politically

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controversial. This is not to say that these efforts are entirely wasted. Individual education may indeed have an impact on a limited number of people and like the sweets at the top of the food guide pyramid might be found in moderation. But to be most effective, we need to move towards the “upstream” causes of health found at the base of this health impact pyramid. So how can we shift the focus of public health actions to changing socioeconomic factors? One way is to figure out how to better talk about the “social determinants”¹²

The 21st Century brings with it new challenges, as well as new opportunities. These 21st Century threats begin with the basics of health and include the problems people face every day such as health disparities, tobacco use, poor nutrition / lack of physical fitness, overweight and obesity, drug and excessive alcohol use, poor mental health, chronic diseases (e.g., cardiovascular disease, cancer, diabetes, lung disease, kidney disease, and other chronic conditions), non-intentional and intentional injuries, premature birth, birth defects, disabilities, and unsafe environments. Many of these threats are preventable, but are still increasing in communities across the US. More and more people are not able to enjoy the best possible quality of health as a result. Dr. Frieden’s pyramid challenges us to change the mindset that some ailments are simply part of living, and instead think about a different reality in which hypertension, for example, is not a part of the way we are supposed to live and that there is a choice to do things differently. Business as usual is not enough. We must do more and do it faster, smarter, and better in order to make an impact. In the midst of thinking about chronic conditions and illnesses that can be prevented, we must also be prepared, able, and willing to respond to critical urgent matters of the day.

¹² *Turning Public Health on Its Head: A five-tiered health impact pyramid*, Laura Cody, May 28, 2010 Mount Auburn Hospital Center for Community Health Blog

Appendix 4: Mobilizing for Action through Planning and Partnerships

The Plumas County Community Health Assessment process used components of Mobilizing for Action through Planning and Partnerships (MAPP), a strategic approach to community health improvement. The tool helps communities improve health and quality of life through community-wide and community-driven strategic planning. Through MAPP, communities seek to achieve optimal health by identifying and using their resources wisely, taking into account their unique circumstances and needs and forming effective partnerships for strategic action.

MAPP uses the 10 Essential Public Health Services to define public health activities. The 10 Essential Public Health Services provide a useful framework for determining who is responsible for the community's health and well-being. The services reflect core processes used in public health to promote health and prevent disease.

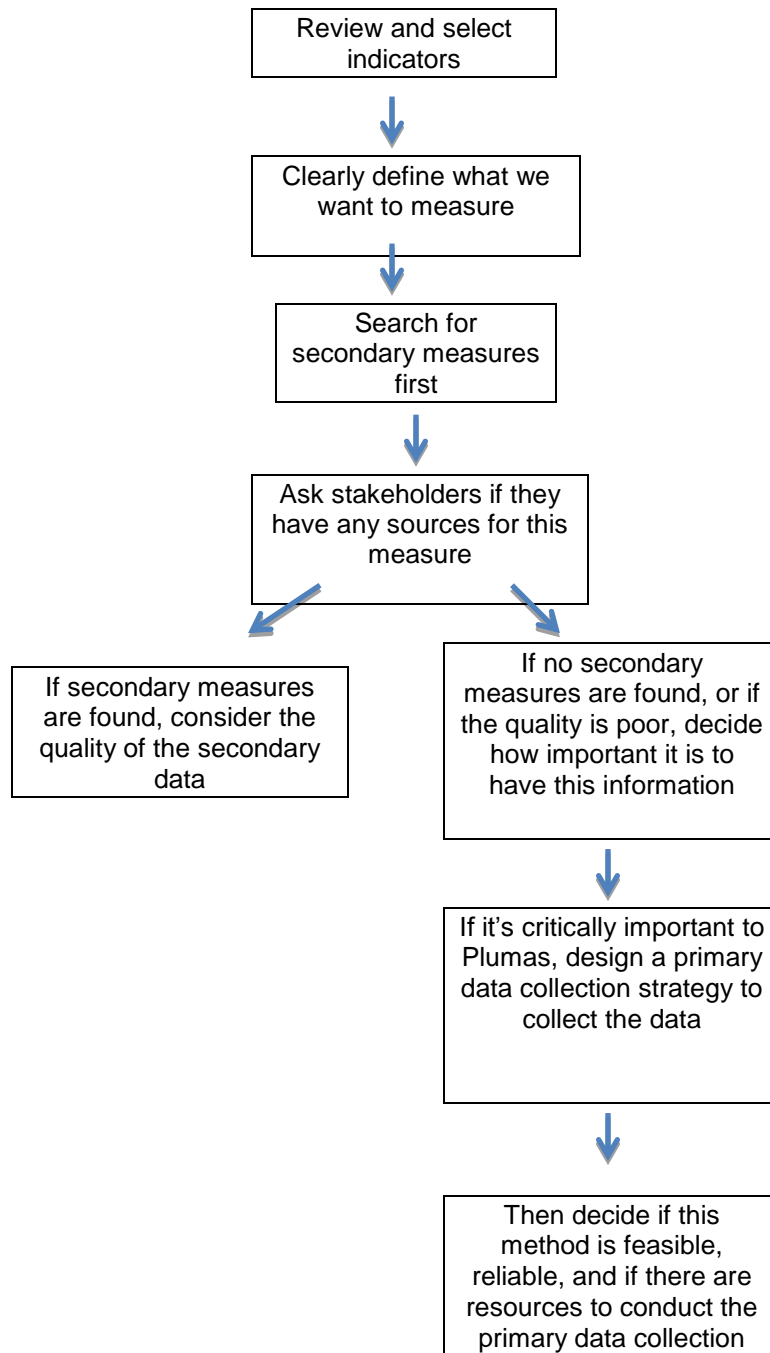
The 10 Essential Public Health Services are:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community
3. Inform, educate and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure a competent public health and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

The following principles and elements are integral to the successful implementation of MAPP:

- MAPP uses traditional strategic planning concepts within its model
- MAPP is focused on systems thinking
- MAPP creates opportunities for public health leadership
- MAPP helps to develop a shared vision
- MAPP uses data
- MAPP builds on previous experiences and lessons learned
- MAPP helps to develop partnerships and collaboration
- MAPP uses dialogue
- MAPP encourages the celebration of successes

Appendix 5: Indicator Decision Tree and Issue Prioritization



Vision for Healthy Plumas: A healthy Plumas County has a sustainable and equitable continuum of care, vibrant residents and communities that are connected through collaborations and partnerships.

Process and Resources for Selecting Indicators

The project engaged community members and partners to identify relevant and meaningful indicators that address the social determinants of health. More than 200 community residents engaged in Town Hall meetings in all four Plumas communities in fall 2011 and 2012 and identified issues. In January and February 2012, partners convened in bi-weekly meetings as the Data Indicators Group (the DIG team) to research leading health indicators and measures, review criteria for selecting indicators, review Plumas County data, review community identified-issues and select indicators. The list below provides a partial list of indicators and resources:

- Healthy People 2020 Leading Health Indicators www.healthypeople.gov/2020/LHI
- County Health Rankings www.countyhealthrankings.org
- Health Indicators Warehouse www.healthindicators.gov
- Community Health Status Indicators www.communityhealth.hhs.gov
- California Department of Finance
- California Department of Education
- California Department of Health Care Services/OSHPD
- California Healthy Kids Survey
- American
- Census Data
- Plumas County Data
- National Prevention Strategy

Criteria for Issue Prioritization

Project partners and stakeholders participated in a June 2012 meeting on Issue Prioritization and planning. In fall 2012, the Improvement, Measures, Planning and Accountability Team (IMPACT team) established priorities by focusing on the social determinants of health, and using the Plan-Do-Study-Act for quality improvement. The IMPACT team proposed three Issue Priorities of community, county, and health care providers. Actionable areas of improvement include Alcohol, Tobacco, and Other Drugs (ATOD), Coordination of Resources, and Access. Important considerations include socioeconomic status, employment, and lifestyle choices unique to Plumas County. Realistic actions must be proposed, and appropriate timeframes must be established. Impact and feasibility are important criteria as defined below:

Impact – the idea that the priority will have a strong effect, improve health outcomes, save lives. Consider:

- Greatest number of people affected
- Greatest improvement in care and mortality
- Saves money

Feasibility – the idea that the priority can be carried out. Considerations include:

- Resources available
- Perceived level of support
- Leaders are identified
- Partners will take ownership
- Time frame

Community residents participated in the prioritization process in fall 2012 in five Town Hall meetings. Residents rated the importance of health system dimensions including healthy lives, quality, access, efficiency equity based on The Commonwealth Fund's National Scorecard on U.S. Health System Performance, 2011. Community prioritization results are summarized in the table that follows.

Plumas County Community Health Profile 2012

DIMENSION OF A HEALTH SYSTEM:											
Equity		<u>Greenville</u>		<u>Chester</u>		<u>Quincy</u>		<u>Portola A</u>		<u>Portola B</u>	
1%	Not important at all	3%	1	0%	0	0%	0	0%	0	0%	0
0%	Not important	0%	0	0%	0	0%	0	0%	0	0%	0
2%	Neither important or Unimportant	0%	0	0%	0	2%	1	0%	0	3%	1
26%	Somewhat important	25%	8	17%	2	27%	12	30%	3	28%	8
72%	Very important	72%	23	83%	10	70%	31	70%	7	69%	20
127			32		12		44		10		29
Access											
1%	Not important at all	0%	0	0%	0	2%	1	0%	0	0%	0
0%	Not important	0%	0	0%	0	0%	0	0%	0	0%	0
2%	Neither important or Unimportant	0%	0	0%	0	2%	1	0%	0	3%	1
8%	Somewhat important	3%	1	0%	0	11%	5	10%	1	10%	3
90%	Very important	97%	29	100%	10	85%	40	90%	9	87%	26
127			30		10		47		10		30
Effective, Quality Care											
2%	Not important at all	0%	0	0%	0	4%	2	0%	0	3%	1
0%	Not important	0%	0	0%	0	0%	0	0%	0	0%	0
0%	Neither important or Unimportant	0%	0	0%	0	0%	0	0%	0	0%	0
10%	Somewhat important	17%	5	9%	1	2%	1	10%	1	14%	4
88%	Very important	83%	25	91%	10	93%	42	90%	9	83%	24
125			30		11		45		10		29
Addressing AOD & Mental Well-being											
1%	Not important at all	0%	0	0%	0	0%	0	0%	0	3%	1
0%	Not important	0%	0	0%	0	0%	0	0%	0	0%	0
1%	Neither important or Unimportant	0%	0	0%	0	0%	0	0%	0	3%	1
12%	Somewhat important	7%	2	0%	0	13%	6	10%	1	20%	6
87%	Very important	93%	28	100%	10	87%	41	90%	9	73%	22
127			30		10		47		10		30
Tobacco use and related disease											
1%	Not important at all	0%	0	0%	0	2%	1	0%	0	0%	0
2%	Not important	0%	0	0%	0	2%	1	0%	0	3%	1
4%	Neither important or Unimportant	13%	4	0%	0	0%	0	0%	0	3%	1
19%	Somewhat important	31%	10	0%	0	14%	6	10%	1	20%	6
75%	Very important	56%	18	100%	9	81%	35	90%	9	73%	22
124			32		9		43		10		30
Poverty & Households											
1%	Not important at all	0%	0	0%	0	2%	1	0%	0	0%	0
2%	Not important	0%	0	0%	0	4%	2	10%	1	0%	0
5%	Neither important or Unimportant	0%	0	0%	0	2%	1	0%	0	16%	5
20%	Somewhat important	24%	8	0%	0	11%	5	50%	5	26%	8
73%	Very important	76%	26	100%	9	81%	38	40%	4	58%	18
131			34		9		47		10		31
Quality of Care											
0%	Not important at all	0%	0	0%	0	0%	0	0%	0	0%	0
1%	Not important	3%	1	0%	0	0%	0	0%	0	0%	0
3%	Neither important or Unimportant	3%	1	0%	0	2%	1	0%	0	6%	2
13%	Somewhat important	18%	6	0%	0	2%	1	30%	3	23%	7
83%	Very important	76%	26	100%	12	96%	43	70%	7	71%	22
132			34		12		45		10		31
Healthy Lives											
1%	Not important at all	3%	1	0%	0	0%	0	0%	0	0%	0
0%	Not important	0%	0	0%	0	0%	0	0%	0	0%	0
4%	Neither important or Unimportant	6%	2	0%	0	2%	1	0%	0	6%	2
18%	Somewhat important	18%	6	0%	0	16%	7	20%	2	26%	8
77%	Very important	73%	24	100%	10	82%	36	80%	8	68%	21
128			33		10		44		10		31

Stakeholders:		
County (Prevention) – Business/Community (Engagement) – Providers (Resources)		
Three Issue Priorities		
1	2	3
Access	Health Behaviors	Optimization of Current Resources
Focus: Insurance	Focus: Non-Self Inflicted Injury	Focus: Multi-System Planning
Percent covered by MediCare/Medicaid Non Poverty/Uninsured	Safety in the work place	Mental Health Participants Law Enforcement Emergency Departments Mental Health Department
	Focus: Sexuality/Reproductive Health	
	Focus: Teen Pregnancy	
	Focus: Alcohol/Tobacco/Other Drugs	
Focus: Clinical Services	Focus: Tobacco	Focus: Aligning Outreach and Community Education Effort
Medical home Continuity of care Timely Preventive Care		
	Focus: Mental Health	
	Focus: Adolescents Specific-Suicide	
Focus: Social/Economic Barriers		
Culture Income Social Support network		

Plumas County Community Health Profile 2012

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Appendix 6: CHA New Brief - Information for General Public

CHA / CHIP NEWS BRIEF

Healthy Plumas County

January 2012
Volume 1, Issue 1

Residents ID Transportation as a Health Barrier

In December 2011, Plumas County Public Health Agency (PCPHA) and partners completed Town Hall meetings in Quincy, Chester, Portola and Greenville to gather resident thoughts and opinions. These activities are part of the countywide health needs assessment and provide an important "portrait" of the community as seen through the eyes of its residents. The results support the idea that it's time to move upstream from the doctor's office in our perception of health and health care. We need to include the social determinants of health (poverty, employment, education) in the discussion as we develop policies, programs and plans. Transportation, access to health care and mental health needs resonated across all communities. PCPHA, Eastern Plumas Health Care, Plumas District Hospital, Greenville Rancheria, Seneca Healthcare District and the Sierra Institute for Community and Environment are working together on the health assessment. The findings will form the basis for creating a countywide Improvement Action Plan. The plan will provide a promising framework for decision-making by county officials and stakeholders. To read the results from the Town Hall meetings and more about the Plumas community health assessment, go to www.sierrainstitute.us.

Three key questions guided resident responses as summarized below.

1. What do you like about the healthcare system in Plumas County?
 - Visiting specialists
 - Personalized care
 - Choices in providers
 - Tele – health
2. What can we do to improve the healthcare system in Plumas County?
 - Provide transportation within, and out of the county
 - Health Access
 - Address Alcohol, Tobacco and other drug issues
 - Increase education of available services, nutrition, exercise and reproductive health
 - Increase collaboration between hospital districts
 - Share electronic medical records
 - Provide more activities for youth
3. What constitutes a healthy Plumas / what do we value?
 - Hope
 - Shopping locally
 - Vibrant economy
 - Good schools
 - Community Involvement
 - Caring people
 - Strong hospital infrastructure
 - Safety
 - Healthy families

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Upcoming Timeline:

- January: Community Engagement results
- February: Indicator and measure selection
- March: Finalize data collection
- April: Draft Assessment available by National Public Health Week, April 2-8

Phase II will focus on Healthy Plumas indicators

The next phase of the Community Health Assessment and Community Health Improvement Plan, or Cha/Chip will be data. Each partner is represented on the Data Indicators Group (DIG) whose first task is to review past assessments

and indicators including Plumas Vision 2020, Healthy People 2020, Institute of Medicine, and America's Health Rankings. DIG will select measures, review secondary data and decide on primary data collection. DIG's activities will result in creation of a

Table of Indicators for ongoing tracking and monitoring. Results from the community engagement activities and the Data Indicators Group activities will be compiled into the Community Health Assessment report by April.

Introduction to Community Health Assessments

In the early part of the 20th century, the public health community developed successive iterations of an appraisal form to be used as a self-assessment tool by local health officers. By 1945, the Emerson Report recommended six basic services, including the collection and interpretation of vital statistics. In 1974, Congress made an effort to organize a comprehensive national health planning system informed by assessment through PL 93-641, the National Health Planning and Resources Development Act. The Act, which created a complex network of local, regional, and State planning agencies with significant responsibility for assessment activities, was allowed to lapse in 1986. In a landmark report near the close of the century, the Institute of Medicine (IOM) recommended that:

Every public health agency regularly and systematically collect, assemble, analyze and make available information on the health of the community, including statistics on health status, community health needs, and epidemiologic and other studies of health problems. Not every agency is large enough to conduct these activities directly; intergovernmental and interagency cooperation is essential. Nevertheless each agency bears the responsibility for seeing that the assessment function is fulfilled. This basic function of public health cannot be delegated.

The IOM's three core functions of public health (assessment, policy development, and assurance) were subsequently developed into 10 essential public health services. Two other recent developments have increased the interest in assessment activities. First, the 2010 Patient Protection and Affordable Care Act (ACA) requires nonprofit hospitals to conduct community health needs assessments (CHNAs) every three years and to adopt implementation strategies to meet the needs identified in the assessments. The law stipulates that CHNAs should consider the broad interests of the community, including those with special knowledge of, or expertise in, public health. Second, in 2011, a voluntary national accreditation program for local health departments (LHD) was launched; among the accreditation standards is the requirement that LHDs participate in or conduct a collaborative process resulting in a comprehensive CHA and community

health improvement plan.

Requirements of the Affordable Care Act

The Affordable Care Act provides specific details about conducting and using a community health needs assessment. Section 9007 of the Affordable Care Act requires that 501(c)3 hospitals:

- conduct a CHNA every three years; and
- adopt an implementation strategy to meet the community health needs identified.

The assessment must:

- take into account input from persons who represent the broad interests of the community served by the hospital, including those with special knowledge of or expertise in public health; and
- be made widely available to the public.

The assessment may:

- be based on information collected by other organizations, such as a public health agency or nonprofit organization; and
- be conducted in collaboration with other organizations, including related organizations, other hospitals, and state and local agencies, such as public health departments.

There is a \$50,000 excise tax for failing to meet the CHNA requirements for any taxable year and noncompliance with this, or other new requirements, may result in loss of exemption. Hospitals report on these activities using the IRS's Form 990, Schedule H.

Source: Patient Protection and Affordable Care Act, Sec. 9007, pp. 802-806, and "Technical Explanation of the Revenue Provisions of the Reconciliation Act of 2010," as amended, in combination with the "Patient Protection and Affordable Care Act," p. 81

THE HEALTHY PLUMAS COMMUNITY HEALTH ASSESSMENT AND COMMUNITY HEALTH IMPROVEMENT PLAN (CHACHIP) IS A PROJECT OF THE NORTHERN SIERRA COLLABORATIVE HEALTH NETWORK. HEALTHY PLUMAS CHACHIP IS ONE OF 12 NATIONAL DEMONSTRATION SITES FUNDED BY THE ROBERT WOOD JOHNSON FOUNDATION WITH TECHNICAL ASSISTANCE FROM NACCHO. FOR MORE INFORMATION, PLEASE VISIT WWW.SIERRAINSTITUTE.US OR CONTACT LSTEENKAMP@SIERRAINSTITUTE.US OR CALL 530-284-1022.

Healthy Plumas Vision

A healthy Plumas County has a sustainable and equitable health care continuum for vibrant residents and communities that are connected through collaborations and partnerships.