Assessment of Research Needs in Rural California

Environment

Community

Health

Children's Health

Assessment & Evaluation

By The California Center for Rural Policy at Humboldt State University
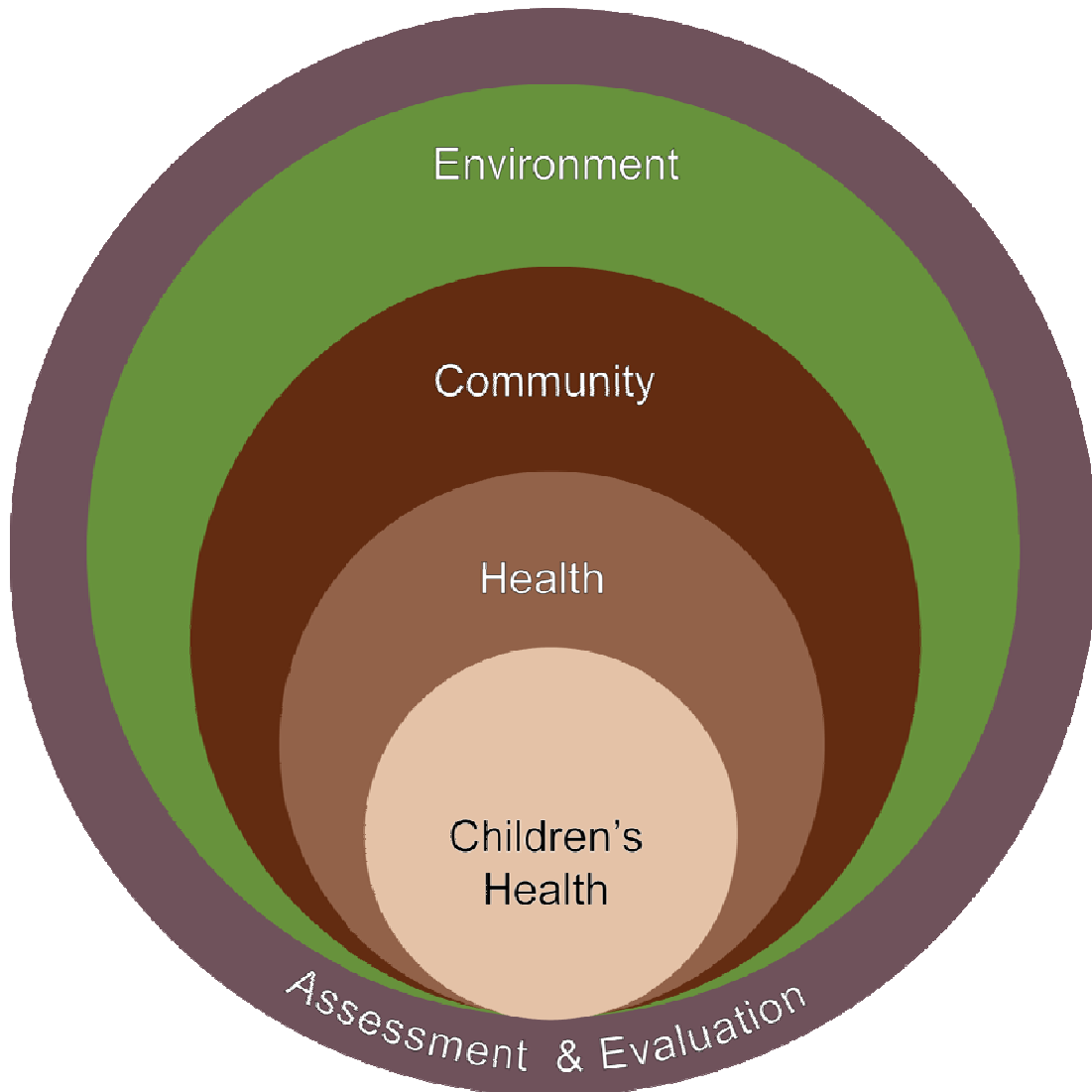
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Acknowledgements

The California Center for Rural Policy would like to acknowledge and thank:

- The California Endowment for supporting this work

- The individuals from numerous organizations who participated in this project by providing their views on data needs in rural California.

- Sheila L. Steinberg, PhD, Director of Community Research, CCRP

- Terry Uyeki, MSEd, Director of Evaluation & Community Services, CCRP

- CCRP Advisory Board: Gary Blatnick, Cathy Larsen, Ann Lindsay, Herrmann Spetzler, Santiago Simental, Terry Supahan, Phyllis Webb

- Rollin Richmond, PhD, Humboldt State University President & Denice Helwig, Special Assistant to the President

- Consultants Kathleen E. Moxon, CAO/Director of Programs, Humboldt Area Foundation and Connie Stewart

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Suggested Citation:
Van Arsdale, J. Assessment of Research Needs in Rural California. Humboldt State University: California Center for Rural Policy, 2008.

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Executive Summary

Overview

Good planning and policy decisions require accurate and accessible data. Local activists, nonprofits, county agencies and policy makers need good data for grassroots advocacy, planning, policy and action to improve community health. For a variety of reasons, rural areas are often lacking the necessary data for making informed policy and planning decisions. The California Center for Rural Policy (CCRP) at Humboldt State University was created to address the lack of meaningful rural data through conducting research that is responsive to community interest and need.

Over the past two years CCRP has been assessing existing health data and related data needs in rural California. CCRP staff has gathered input from approximately 100 individuals from health related organizations to ascertain community health issues and research needs in rural California.

This document contains the methods and outcomes of this process. It is clear that the research needs are vast and cover a wide range of topics ranging from health services research to environmental research. CCRP has already started conducting research to address some of the identified research needs and will continue to address these needs in our long-term research plan. It is our hope that this document will stimulate dialogue and encourage communities and researchers to collaborate on projects that will address identified needs.

Results

What is it about the available data that does not capture rural reality well?

There are three primary stages in research where rural areas are at risk for inadequate representation: (1) Developing the research question(s); (2) Sampling and data collection; and (3) Data analysis and presentation.
The ways in which research is designed and conducted can portray rural areas in ways that may not match with the experience of those who live and work in these areas. A commonly expressed concern among community leaders in rural areas is that the existing data paints a picture that makes conditions look better than they really are.

Health Related Data Needs in Rural California

The themes identified as needing more research were: children's health (39%), health (26%), community (20%), assessment & evaluation (10%) and environment (5%).

Children's Health:
The theme of children's health includes responses from participants in both rural and urban parts of California.
The sub-themes identified as areas of children's health needing more research were: Services and Programs (20%), Health Insurance (13%), GIS mapping needs (12%) Physical Activity, Nutrition and Obesity (11%), Poverty (8%), Prevention (7%), Environmental Health (7%), the Health Care Workforce (5%), Oral Health (5%), Drugs (5%), Screening and Assessment (3%), School Readiness (3%) and Anemia (1%). Participants from rural and urban counties reported similar topics as areas needing further research, with the following differences:

- The Healthcare Workforce, Screening & Assessment and Anemia were only mentioned by participants from rural counties, whereas School Readiness was only mentioned by participants from urban counties.

- Participants from rural counties had slightly more responses about Services & Programs, Poverty, Prevention and Drugs, whereas participants from urban counties had slightly more responses about Health Insurance, Physical Activity, Nutrition & Obesity, Environmental Health and GIS mapping needs. Responses about Oral Health were equally distributed between participants from rural and urban counties.

Health:
The health sub-themes identified as needing more research were: Health Care Delivery/Access (36%), Health Care Workforce (12%), Health Insurance (10%), Oral Health (10%), Health Disparities (8%), Health Information (8%), Physical Activity & Nutrition (6%), Mental Health (4%), General Health (4%) and Public Health (2%).

Community:
The community sub-themes identified as needing more research were: Economy and workforce (28%), Poverty (26%), Demographics (26%), Housing (8%), Transportation (8%) and Education (5%).

Environment:
The environment sub-themes identified as needing more research were: Environmental Health (50%) and the Rural Environment (50%).

Assessment & Evaluation:
Assessment and evaluation were commonly reported needs in rural communities. It is through regular assessments that rural communities will be able to determine if interventions, policies and systems changes are making a difference.

Additional Approaches to Rural Research & Rural Issues

Common themes included the importance of serving local communities, but at the same time placing rural issues in a national context. Collaboration, accessibility of data and a comprehensive approach were frequently mentioned. Innovative approaches to health care and a focus on prevention were also commonly mentioned.

Recommendations

1. Create a Data Warehouse for Rural California

If data were available in one place it would facilitate data sharing and collaboration and reduce redundancies. While there may be barriers to sharing raw data, the data warehouse could at least provide a description about the data with contact information.

2. Create a Rural Data Review Group

A Rural Data Review Group could create a systematic way to "Rural Proof" data. The group could develop criteria for reviewing research to determine if it is responsive to rural needs. The criteria could provide guidance to researchers in order to increase the chance that the data will capture rural reality.

3. Support Rural Research

Private and public foundations should support rural research. Educational institutions should encourage faculty and students to conduct research in rural areas. This document can serve as a guide for matching research plans with research needs.

Methods

Data Collection

Data for this project was collected through multiple methods. Input from approximately 100 individuals was included in this project. Participants included community leaders, health care providers and individuals working with health related organizations or community networks. Most participants are from rural areas of California or are associated with organizations focused on rural issues. Following is a list of the types of participants and their organizational affiliations.

California Center for Rural Policy- Community Advisory Board
Redwood Coast Rural Action
California State Rural Health Association- Board of Directors
National Children's Study Humboldt Work Group
First 5 Association of California
First 5 Humboldt
Humboldt Area Foundation
Humboldt Switchboard
Community Health Alliance
North Coast Clinics Network
California Rural Indian Health Board
Humboldt Del Norte Independent Practice Association
Humboldt Del-Norte Medical Society
County of Humboldt Department of Health and Human Services
Directors of rural community clinics
Health care providers practicing in rural areas
Planners

Data collection occurred in the following ways:

- In 2003 Redwood Coast Rural Action had a planning meeting where 42 participants reviewed existing data about the four counties of Del Norte, Trinity, Humboldt and Mendocino. They had in depth discussions about the data. Minutes from this meeting were reviewed for this project and responses to the following questions were included in the analysis:
  What are the 3-5 most critical questions that this beginning data scope raises for the region that we really need to explore further? Why is this question critical to explore for the region?

- In 2005 Dr. Sheila Steinberg conducted key informant interviews with the CCRP Community Advisory Board. Notes from these interviews were reviewed for this project and responses to the following question were included in the analysis:
  What are some questions that you would like to see answered?

- From August 2005 through November 2007, CCRP staff met with community leaders and individuals from health related organizations to gather feedback on community health issues and research needs in rural California. Most meetings were conducted

in small group settings of 2-5 people, but some meetings included up to 20 people. Responses were recorded through note taking. One or more of the following questions were asked:

What are the research/data needs in rural communities?
What rural community health issues are you most concerned about?
What information (that is not currently available) would help you serve your population better?
What is it about the available data that does not capture rural reality well?

- In September 2007, CCRP staff attended a First 5 Association of California meeting. The meeting participants engaged in an exercise to identify research needs around children's health. Twenty-three individuals from nineteen counties participated (Alpine, Butte, Contra Costa, Humboldt, Lake, Monterey, Orange, Riverside, Sacramento, San Francisco, San Mateo, Santa Barbara, Santa Clara, Shasta, Solano, Sonoma, Stanislaus, Trinity, Tuolumne). Respondents wrote their answers to the following question:
  What are the main issues around children's health that should be investigated/need further research?

- Throughout all of the meetings if people mentioned general approaches to improving rural community health this was also captured and summarized.

Analysis

Responses were grouped into common themes. The common themes were further categorized into sub-themes. Participants could provide multiple answers to each question, so responses are presented as a percentage of total responses. When possible, participant's own words are used; otherwise responses are summarized and paraphrased.

Results

Critique of Existing Data

What is it about the available data that does not capture rural reality well?

This section contains a discussion about existing data sources and the ways in which these data sources may not capture rural reality well. The purpose of trying to pinpoint these issues is to raise awareness of the existing problems and promote future data collection and research that addresses these problems so that rural areas are adequately represented. While this section contains a critique of existing data sources, the author wishes to acknowledge that data collection, analysis and presentation are complex and all data sources can provide valuable and useful information. It is important to recognize that no single data source can meet the needs of all stakeholders. A complete critique of all data sources is beyond the scope of this project.

Commonly used data sources for assessing community health issues in California are the U.S. Census, The California Health Interview Survey (CHIS), the Office of Statewide Health Planning and Development (OSHPD), and the County Health Status Profiles. These sources provide data and reports at various time intervals. In addition to these sources, there are other sources of data within rural communities that have been collected sporadically for various purposes. These sources are more difficult to locate as there is not a single location where the data resides. CCRP has been compiling a list of data sources and we invite additions to the list so it can become as comprehensive as possible (Appendix).

There are three primary stages in research where rural areas are at risk for inadequate representation: (1) Developing the research question(s); (2) Sampling and data collection; and (3) Data analysis and presentation.

Developing the Research Question(s)
Rural populations often have issues and concerns that are different from urban populations. If research is to capture these differences, the research questions should be developed with these potential differences in mind. For example, transportation may be limited in rural areas thus impacting access to health care, however if rural residents are not asked about this, the problem will go undocumented. Since rural areas tend to lack resources they are often left out when it comes to having input about what questions should be asked or how research is designed.

Sampling and Data Collection
Almost all research relies on obtaining a sample which is then used to make generalizations about the larger population. The methods used for obtaining the sample and the size of the sample can greatly impact the external validity or generalizability of the results. The method of data collection may limit the generalizability of the results. For example, the California Health Interview Survey obtains its sample from households with phones. The Rural Health Information Survey conducted by CCRP found that 14% of the poorest households in rural northern California do not have phones. Thus, a phone survey has the potential of excluding segments of the population who are living in the

poorest households. This is particularly relevant in rural areas such as the Redwood Coast Region (Del Norte, Humboldt, Trinity and Mendocino counties) where poverty rates are high. According to the U.S. Census 2000, 18.3% of the total population and nearly 40% of the certain ethnic groups in the Redwood Coast Region live below the Federal Poverty Level, compared to 14.2% of the total population in California.

Data Analysis and Presentation
Most rural counties are very large with diverse communities spread throughout the counties. In order to improve conditions within these counties it is important, not only to understand the issues impacting the whole County or region, but it is equally important to understand the issues on a sub-county level. Without this level of analysis it is nearly impossible to target areas with the highest need and appropriately match resources with need.

Nearly all large data sources present data on the county level, however, often in rural areas data is aggregated on a multi-county level. The geographic areas in which data are presented in rural areas are often very large making it difficult to see what is happening on a sub-county level. This is problematic when there is a need to compare individual counties or aggregate specific counties of interest to assess a particular region. For example, CHIS combines the counties of Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas and Sierra. The four counties of Humboldt, Trinity, Del Norte and Mendocino have been working together to function as a region. The way the CHIS data is aggregated does not provide rural counties the flexibility to assess and aggregate the data in ways that are geographically meaningful.

While the reasons for aggregating data make sense (lack of resources and small sample sizes) the reality is that rural areas are disadvantaged when it comes to available data for understanding and assessing population health. Small sample sizes in rural areas are a direct result of insufficient resources to obtain larger samples. When small samples are obtained the results are statistically unstable thus requiring aggregation.

The ways in which research is designed and conducted can portray rural areas in ways that may not match with the experience of those who live and work in these areas. A commonly expressed concern among community leaders in rural areas is that the existing data paints a picture that makes conditions look better than they really are. Documentation of need is important for obtaining resources and if the data does not adequately capture the true need, rural areas may miss opportunities for resources.

Following are some examples from rural community leaders who are attempting to improve conditions in rural communities, but find that existing data sources are not capturing the conditions they are seeing.

Children NOW *The California County Data Book*
First 5 Humboldt Evaluation Action Team members provided a synopsis of their concerns about this report. The Children NOW report is a compilation of county-level data on children's health, education, and economic well-being. The primary data sources for the report are the U.S. Census and California Health Interview Survey. First 5 Humboldt Evaluation Action Team members have expressed concern about data collection, data presentation and the implications of the results. They have raised the following questions which are not apparent in the report.

- Is the data weighted?
- Issues with sampling in rural counties (sampling, telephones [lack of], etc.)
- What is the n?
- How is the data gathered?

Examples where local experts feel the data in the Children NOW report is problematic:
- Dental data- CHIS data looks reasonably okay for this area; however, local Head Start data show a very different story. Additionally, those working with dental issues locally feel that the CHIS data is not an accurate reflection of what is actually occurring in Humboldt County
- Health Insurance Coverage by Age: CHIS data looks OK for this; however estimates of uninsured children from other sources paint a much different picture. (e.g. Insure the Uninsured Project estimates that 14% of Humboldt County children are uninsured—twice the percentage that comes from the CHIS data used in the Children NOW report)

The data sets that First 5 Humboldt and others are most interested in and most concerned about accurate representation for rural communities are:
- Mothers receiving early prenatal care
- Low birth weight infants
- Teen birth rate
- Children with regular access to a doctor
- Health Insurance Coverage
- Health Insurance Coverage by Family Income (Percentage of Federal Poverty Level)
- Children with dental insurance
- Children who visited a dentist in the last year
- Physically fit children
- Mode of transit to school
- Screen time (total time children spend watching T.V. & computer activity)
- Children who never exercise
- Children who ate fast food in the prior day
- Overweight children
- Children in preschool or nursery school
- Licensed Child Care Centers
    - Number of licensed child care centers
    - Center spaces for infants
    - Center spaces for children, ages 2-5
- Licensed Family Child Care Homes
    - Total number of homes
    - Total spaces in homes

Data Needs

This section contains an analysis of responses to the following questions.

What are the main issues around children's health that should be investigated/need further research?

What are the research/data needs in rural communities?

What rural community health issues are you most concerned about?

What information (that is not currently available) would help you serve your population better?

**What are some questions that you would like to see answered?**

What are the 3-5 most critical questions that this beginning data scope raises for the region that we really need to explore further? Why is this question critical to explore for the region?

Responses are organized into the following common themes:
1. Assessment and Evaluation
2. Children's Health
3. Health, Community and Environment
   a. Health
   b. Community
   c. Environment

Of all responses the most common theme identified was children's health (39%), followed by health (26%), community (20%), assessment & evaluation (10%) and environment (5%) (Exhibit 1). Each theme is presented in detail in this section.

Exhibit 1: Identified Research Needs in Rural California
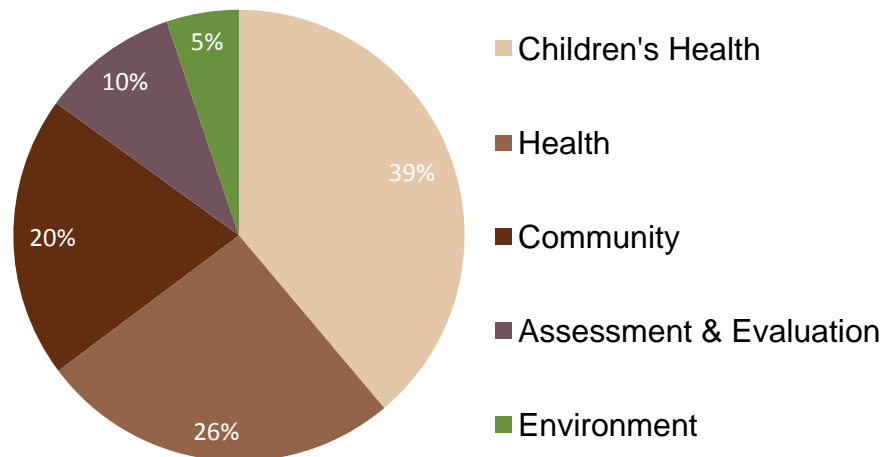
Note: Results are presented as a percentage of the total number of responses. Each participant may have had more than one response.
Source: California Center for Rural Policy

1. Assessment and Evaluation

Assessment and evaluation were commonly reported needs in rural communities. As rural communities work towards improving conditions they recognize the importance of regular assessments to gauge progress. It is through regular assessments that rural communities will be able to determine if interventions, policies and systems changes are making a difference. In order to make meaningful assessments it is necessary to have a set of indicators that measure community health and well-being and are relevant to rural communities.

Actual responses:

"We need indicators for community health."

"What are the top 5 issues we could measure/monitor over time?"

"We need baseline measurements that will allow us to monitor the effect of interventions over time."

"We need a set of benchmarks (repeating assessment of the benchmarks every 5 years)."

"It is important for the community to help define what the indicators are."

"Continuous monitoring is important."

"How can we compare ourselves to other communities?"

"Identification of best practices (important when there are limited resources)."

"What are the most efficacious practices?"

"Are there practices that we could regionalize? (Traveling "team" or nurse among 4 counties; regional team working on same project in different counties). Need to eliminate some of the isolation effect. "

"What are those evidence based practices?"

"What are the benchmark communities/regions? (Gives us a model)."

"How do we know if we are doing the right thing? Need the science for this."

"The demand is to assess programs- How do we assess the outcomes of what we do?"

"Need a combination of statistical data and wellness survey."

"We want feedback and consultation."

"Without data we don't know where we are."

"Having good data will have a huge impact on the development of the community."

"Having good data will help focus services more effectively."

2. Children's Health

This section contains responses specifically about children's health. The majority of responses were obtained from the First 5 Association of California and additional responses were obtained from the other community leaders and individuals from health related organizations in rural California.

The First 5 Association of California held an annual meeting in Eureka, California in September 2007. This is an Association of the 58 First 5 Commissions and the representatives at the meetings are usually the Executive Directors. The meeting participants engaged in an exercise to identify research needs around children's health. Twenty three individuals from nineteen counties participated (Alpine, Butte, Contra Costa, Humboldt, Lake, Monterey, Orange, Riverside, Sacramento, San Francisco, San Mateo, Santa Barbara, Santa Clara, Shasta, Solano, Sonoma, Stanislaus, Trinity, Tuolumne). Respondents wrote their answers to the following question: *What are the main issues around children's health that should be investigated/need further research?*

Since the participants of the First 5 Association meeting were from both rural and urban counties the responses are presented accordingly. The counties were classified as rural or urban using the Office of Statewide Health Planning and Development Urban/Rural/Frontier classification (2000). While it is often difficult to classify an entire county as rural or urban, for the purposes of this analysis if a county was predominately urban it was classified as urban and if it was predominately rural or frontier it was classified as rural as follows:
Urban counties- Contra Costa, Monterey, Orange, Riverside, Sacramento, San Francisco, San Mateo, Santa Barbara, Santa Clara, Solano, Sonoma.
Rural counties-Alpine, Butte, Humboldt, Lake, Shasta, Stanislaus, Trinity, Tuolumne.

The following analysis includes the participants at the First 5 Association meeting and other community leaders and individuals from health related organizations in rural California.

The predominate theme identified as an area of children's health needing more research was Services and Programs (20%), followed by Health Insurance (13%), GIS mapping needs (12%) and Physical Activity, Nutrition and Obesity (11%). Other themes identified less frequently were Poverty (8%), Prevention (7%), Environmental Health (7%), the Health Care Workforce (5%), Oral Health (5%), Drugs (5%), Screening and Assessment (3%), School Readiness (3%) and Anemia (1%) (Exhibits 2 & 3).

Participants from rural and urban counties reported similar topics as areas needing further research, with the following differences:
The Healthcare Workforce, Screening & Assessment and Anemia were only mentioned by participants from rural counties, whereas School Readiness was only mentioned by participants from urban counties.

Participants from rural counties had slightly more responses about Services & Programs, Poverty, Prevention and Drugs, whereas participants from urban counties had slightly more responses about Health Insurance, Physical Activity, Nutrition & Obesity, Environmental Health and GIS mapping needs. Responses about Oral Health were equally distributed between participants from rural and urban counties.

Exhibit 2: Common Sub-themes Identified as Areas Affecting Children's Health that should be Investigated/Researched Further
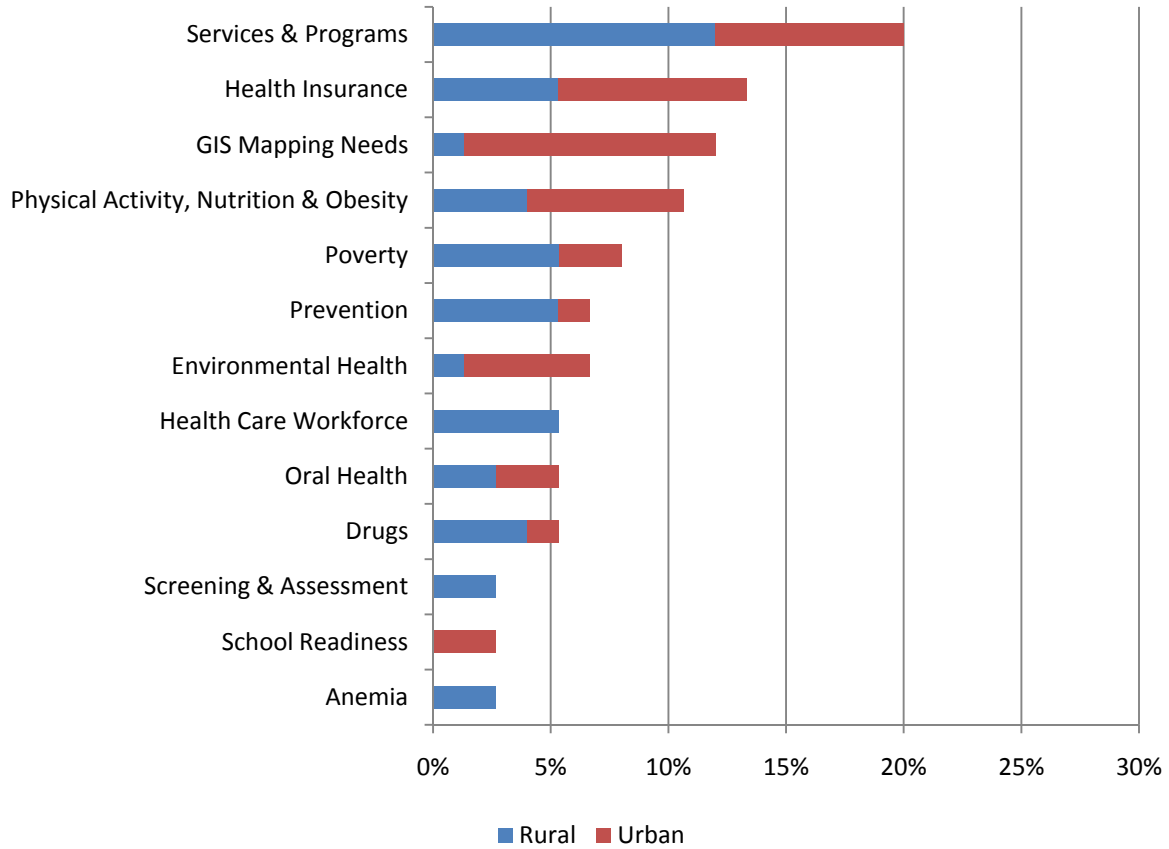
Note: Results are presented as a percentage of the total number of responses. Each participant may have had more than one response. Source: California Center for Rural Policy

Exhibit 3: Common Sub-themes Identified as Areas Affecting Children's Health that Should Be Investigated/Researched Further (frequency of responses)

Sub-theme	Number of Responses		
	Rural	Urban	Total
Services & Programs	9	6	15
Health Insurance	4	6	10
Physical Activity, Nutrition & Obesity	3	5	8
GIS Mapping Needs	1	8	9
Poverty	4	2	6
Environmental Health	1	4	5
Prevention	4	1	5
Health Care Workforce	4	0	4
Oral Health	2	2	4
Drugs	3	1	4
School Readiness	0	2	2
Screening & Assessment	2	0	2
Anemia	1	0	1
Total	38	37	75

Source: California Center for Rural Policy

Actual responses within each common sub-theme:

Participants from rural counties:

"Impact of CHDP (Child Health and Disability Prevention Program) services on children's health status."

"How is parent knowledge on health issues affecting the use of services in our county? Where are the areas, geographically as well as topically, this is most prevalent?"

"What is the most effective way to reach them [parents] on the important issues?"

"The impact of home visiting services on long-term health and wellness of children and families. Home visitation is expensive and difficult to sustain - is it worth it in terms of outcomes achieved over time?"

"How to build service delivery models that empower families. How to include childcare as a hub in the above."

"Role of parents in securing services for their children."

"Role of early childhood educators & child care providers in securing services for children."

"How to promote services for children."

"It is important to think about how to support families in outlying areas and look at relationship between health and community."

Participants from urban counties:

"What are parent education/support programs that have the strongest evidence for success? What are the outcomes?"

"How does health information/education affect behavior change – usage?"

"Under what circumstances do families access health care for their children: emergency care, prevention, developmental?"

"To what degree does health provider location, hours and days of operation, location along lines of public transportation impact families' utilization of services?"

"Demonstrate the impact of any decisions on all involved (e.g. families, providers, employers- holistic view/approach."

"How can providers best engage with the hardest to reach families?"

Health Insurance

Participants from rural counties:

"Accurate data on children without health insurance segmented by location, age groups and income."

"Percentage eligible for but not enrolled in Medi-Cal, Healthy Families and why - barriers."

"Why parents will choose ER visits as an easier option than Medi-Cal or Healthy Families enrollment"

"If children have insurance they are more likely to have a primary medical home, which is important for prevention and early identification of problems."

Participants from urban counties:

"Connection between health insurance enrollment, and usage, and better health outcomes."

"Disparity in reimbursement rates (county/states)."

"Eligibility levels (% of poverty)."

"Utilization and Impact- Does provision of health insurance increase well-baby checkups, immunization, etc. and decrease number of inappropriate ER visits?"

"Utilization and Impact- Can increases in school performance be identified and quantified?"

"Utilization and Impact- Can cost savings of utilization be identified and quantified?"

Physical Activity, Nutrition and Obesity

Participants from rural counties:

"Obesity-eating patterns"

"Correlation between obesity (possibly cancer) and the use of high-fructose corn syrup."

"We need longitudinal data to see what happens to people who grow up undernourished."

Participants from urban counties:

"How to improve children's nutrition/healthy eating and physical activity"

"Most effective strategies for improving children's nutrition and activity lifestyle including age and target audiences (i.e. targeting pregnant moms, parents of 0-2 or 3-5 or 6-8 etc.)."

"What are ways to change family eating habits to foster better child nutrition (and lifelong eating habits)?"

"The connection between fast food locations and health"

"Obesity epidemic based on ethnicity"

GIS Mapping Needs

Participants from rural counties:

"It would be great to have a GIS map of mental health services for children & families."

Participants from urban counties expressed a desire to have GIS maps showing the following:
- Number of streetlights, buses, grocery stores in low-income neighborhoods
- Street lighting, parks within walking distance
- Lead based paint exposure comparison groups
- Access to health care
- Utilization of health care, Including follow-up appointments
- Public Transportation to health care and child care
- Oral health access for 0-5 children
- Access to grocery outlets in low socio-economic areas; access to fast food

Poverty

Participants from rural counties:

"Impact of food insecurity on physical/cognitive health."

"Outreach to the homeless and isolated."

"What are the outcomes of childhood poverty? Knowing this could move policy."

"What are the conditions/data on child health? This gives us a much better cut on poverty/working poor conditions."

Participants from urban counties:

"Impact of poverty on children's health."

"What are common issues that low-income rural and urban populations share in the health access arena?"

Children's Environmental Health

Participants from rural counties:

"What is the prevalence of childhood lead poisoning in rural areas?"

Participants from urban counties:

"Lead"
"Food additives"
"Pesticides"
"Pollution"

Prevention

Participants from rural counties:

"Optimal age of positive impact."

"Preventive care for children."

"Uninsured children do not get regular preventive health care or dental care."

"Who is getting dental care, immunizations? What are the attitudes about immunizations?"

Participants from urban counties:

"How to reduce the number of parents opting not to vaccinate their children."

Health Care Workforce Issues

Participants from rural counties expressed the following about health care workforce issues as it relates to children's health in rural areas:

"Fewer individuals entering the medical field (recruitment/retention issue)."

"Rural areas are lacking Pediatric Dentists, Pediatricians, and Pediatric Psychiatrists."

"Where are med-grads settling in?"

"Sustainability"

Children's Oral Health

Participants from rural counties:

"Relationship between poor early oral health and cognitive/social development."

"Having a primary dental home is just as important as having a primary medical home."

Participants from urban counties:

"Oral health impact on ability to learn."

"Oral health: impact on overall health and school attendance & success."

Drugs

Participants from rural counties:

"Drug prevalence at birth (maternal use)."

"Statistical impact of prenatal substance abuse screening and intervention on birth outcomes."

"How many teenagers are using methamphetamines?"

Participants from urban counties:

"Impact of drugs/alcohol/tobacco exposure on early brain development."

School Readiness

Participants from urban counties:
- The connection between health and grades at school
- The connection between school readiness and health

Screening and Assessment

Participants from rural counties expressed the following about screening and assessment of children's health:

"Impact of early screening and intervention on children's health status."

"Early identification of autism by primary medical providers."

Anemia

Participants from rural counties expressed:

"Childhood anemia- what is the extent of the problem in rural areas"

3. Health, Community and Environment

The themes of Health, Community and Environment were identified as areas needing more research in rural California. Each of these themes had several sub-themes. Within each theme the percentages are derived from the total number of responses for the theme (Exhibit 4).

Exhibit 4: Common Themes and Sub-themes Identified as Research Needs in Rural California
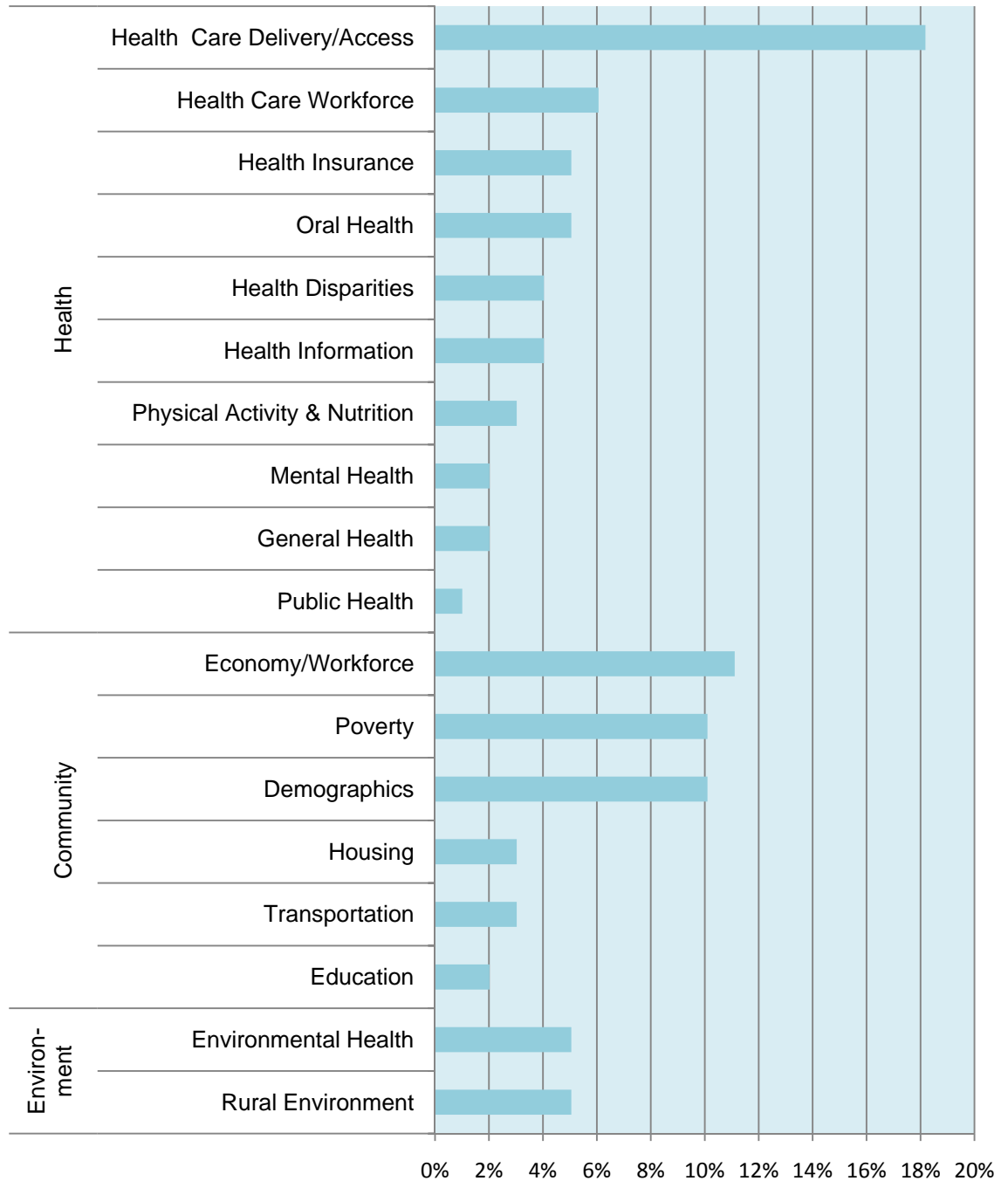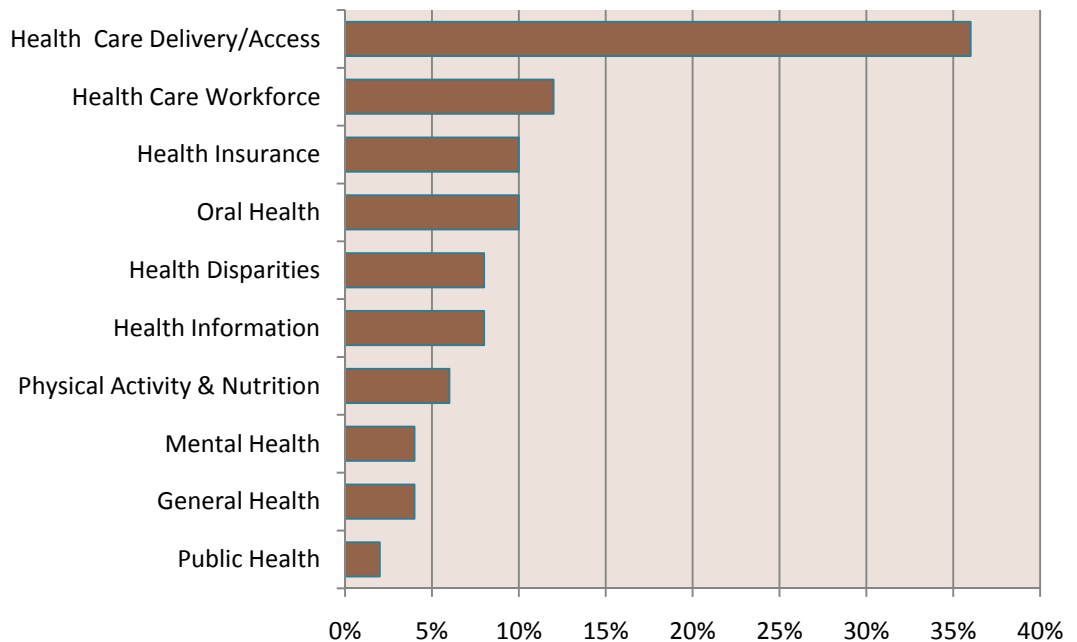

Note: Results are presented as a percentage of the total number of responses within each common theme of Health, Community and Environment. Each participant may have had more than one response.
Source: California Center for Rural Policy

3a. Health

Numerous health topics were identified as areas where more research would be useful in rural California. The topics range from nutrition to the health care work force.

The predominant health related theme identified as needing more research in rural California was Health Care Delivery/Access (36%), followed by Health Care Workforce (12%), Health Insurance (10%) and Oral Health (10%). Other themes identified less frequently were Health Disparities (8%), Health Information (8%), Physical Activity & Nutrition (6%), Mental Health (4%), General Health (4%) and Public Health (2%) (Exhibits 5 & 6).

Exhibit 5: Identified Health Related Research Needs in Rural California

Note: Results are presented as a percentage of the total number of responses in the common theme of Health. Each participant may have had more than one response.
Source: California Center for Rural Policy

Exhibit 6: Identified Health Related Research Needs in Rural California (frequency of responses)

Sub-theme	Number of Responses	Percent
Health Care Delivery/Access	18	36
Health Care Workforce	6	12
Oral Health	5	10
Health Insurance	5	10
Health Disparities	4	8
Health Information	4	8
Physical Activity & Nutrition	3	6
Mental Health	2	4
General Health	2	4
Public Health	1	2
Total	50	100

Note: Results are presented as a percentage of the total number of responses in the common theme of Health. Each participant may have had more than one response.
Source: California Center for Rural Policy

Actual responses within each common sub-theme:

Health Care Workforce

Existing Health Care Workforce:

"Need the stories and statistics on health care workforce."

"There is no data-base that has information on how long providers have been practicing, FTE's of current health care workforce, how long they plan to continue practicing, and why they are stopping their practice."

"Put statistics behind stories of workforce leaving to give more credibility and to help build a story that shows significance."

Future Health Care Workforce:

"Need to bridge healthcare industry needs and college programs-California Community Colleges are interested in strategic planning to assess the healthcare workforce needs of medical organizations so training programs can be developed to meet the needs. "

"Incentive programs for healthcare providers-State and Federal incentive programs: which ones work the best for encouraging providers to practice in rural areas? This has not been evaluated."

Rural Prison Systems in Rural Areas:

"The prison system can offer much better packages to rural providers, so there are fewer providers available to work in rural clinics."

Access and utilization of services:

"What are the health risks of the people who are disconnected from support structures and from their families/communities and health system?"

"Who are the people that live in this service area that are not using our services? Why aren't they using our services? Where are they?"

"How can we do a better job of taking care of people that we serve?"

"Is there really an access problem? There is the perception that is widely believed that there is an access problem in Humboldt County. We know there are lots of uninsured people and the assumption is that they are not getting care. Some people are starting to question that assumption. If you drill down available data, such as OSHPD it appears that uninsured people are getting care (uninsured may not be getting as much care as insured, but it is only a slight difference). Where if anywhere do access gaps exits? Dentistry? Are there geographic or income issues around access?"

Distribution of money in the health care system and clinical outcomes:

"The need for basic information on the distribution of money in the healthcare system and the clinical outcomes. e.g. How much money comes into Humboldt County for healthcare and where does it go? (Medicare/Medi-Cal/Commercial Insurance)(Clinicians, Hospitals, Primary Care, Specialty Care)."

"How do we get numbers for private insurance?"

"What are the clinical outcomes? (e.g. C-section rate, Neonatal death rate, Hysterectomies, End of life care)? How does it compare to other communities? Rural/Rural and Rural/Urban Comparisons?"

Migration across county or state lines for healthcare:

"How often does this occur? Are there any agencies collecting this information?"

"How much of an issue is it (financially, continuity of care, health outcomes) that patients go between California and Oregon (or Nevada or Arizona) for care? Are Oregon patients getting primary care in California (Brookings/Crescent City)? To what extent do Californians receive care at the Medford hospital? How does this affect patient follow-up? Information could be used to drive policy and procedures or to develop a 'Jefferson State Health Initiative'."

Mobility of the rural poor:

"Where do they come from? Where do they go? How is it possible that the Open Door Clinic generates 550 new charts per month?"

"Continuity of care is a problem. People go to the emergency room and then get sent to the open door clinics. It is a continuous and expensive cycle."

"Can we help to define the population of people who move around a lot and learn how to work and support them?"

Quality of Medical Care:

"What are people's perceptions about quality of medical care?"

Technology and Healthcare Delivery

"What is adequate re-imbursement for tele-medicine?"

"Maps of service areas would be good."

"How can you surmount the large geographic distance with the transportation problems as well as inadequate technology? Humboldt as a county has a problem with Internet and technology."

"Transportation and technology affect our health and future of our health system and we're not positioned to deal with this."

"Use of GIS to see how telemedicine can help overcome geographic barriers."

Health Insurance

"What percent of residents have health insurance and of those who do, what percent of income is required to pay for it? This is a work-force issue and a community health indicator."

"Is the issue of health insurance really that important?"

"With the underground economy what is the true ability to pay for care? Many clinics have sliding scale for those who have no insurance, but there is a mismatch between what people pay and what their resources appear to be."

"Is it possible that independent of the federal government, that doctors and others could combine, focus and provide universal coverage? Some doctor's offices have a plan for their patients, are there ideas out there?"

"Four Walls- clinic services are currently paid for when they occur within the 4 walls of the clinic, but often services take place outside the clinic. How can these be billed for appropriately?"

Health Information

"How to get reimbursed for health education."

"Problems with populations who have low literacy."

"What is the true rate of illiteracy in the rural patient population?"

"Are there good teaching models for people with low literacy?"

Health Disparities

"Increased infant mortality in African American population- why?"

"American Indian life expectancy is much less than the general population- why is this?"

"Access and health disparities exist in white poor rural populations as well as ethnic groups."

Oral Health

"Need better assessment of oral health among rural residents. Rudimentary data exists, but we don't have good information on oral health for ethnic groups and dental disease based on income level. Assessments that have been done may show a rosier picture than really exists (assessment of school age children looked at Pacific Union School, which does not have high poverty). CHIS also shows oral health is not so bad."

"Access to dental care is a major problem"

"Insurance problems and lack of dentists."

"Difficult to get appointments (Mobile dental clinic is booked 3 years out)."

"Fluoride in water is important, but this is a controversial topic. What are the attitudes about fluoride? Certain vocal groups tend to dominate the discussion about fluoride, but what does the general population really think?"

Mental Health

"Same day visits- If patients are being seen for primary care or dental and they were able to get seen the same day for mental health if needed, what would be the cost/benefit? How often would people need a same day visit? How are they currently accessing mental health services?"

"Post-Partum Depression. In Latina population it is reported to be a problem, but not much is known about it.

Health Problems- General

"What are the critical health issues facing the region? This will affect workforce and economic burden on the regional economy."

"What is the true prevalence of chronic diseases in rural areas? Does CHIS capture the true prevalence of chronic diseases?"

Physical Activity & Nutrition

"How can rural communities promote physical activity?"

"How can we get the community engaged in their own health and wellness?"

"The connection between the loss of traditional diets and the increase in chronic diseases. Many chronic diseases are likely due to poor nutritional intake, which could be improved by returning to traditional wholesome foods. Unfortunately, insurance doesn't cover a nutritional approach to health. The combination of low nutrient intake with environmental exposures can lead to poor health (example: fertilizing with petrochemicals decreases the alkaline minerals in our fruits and vegetables, which are essential for good health)."

Public Health

"Tribal Public Health and Local Public Health Departments have no communication or coordination. They are two completely separate infrastructures. Need to get these groups together, particularly for emergency planning."

3b. Community

Many of the topics identified as important areas for research in rural California included community level data. The topics ranged from demographics to poverty, economy and housing.

The main community themes identified as needing more research in rural California were Economy and workforce (28%), Poverty (26%) and Demographics (26%).Other themes identified less frequently were Housing (8%), Transportation (8%) and Education (5%) (Exhibits 7 & 8).

Exhibit 7: Identified Community Research Needs in Rural California
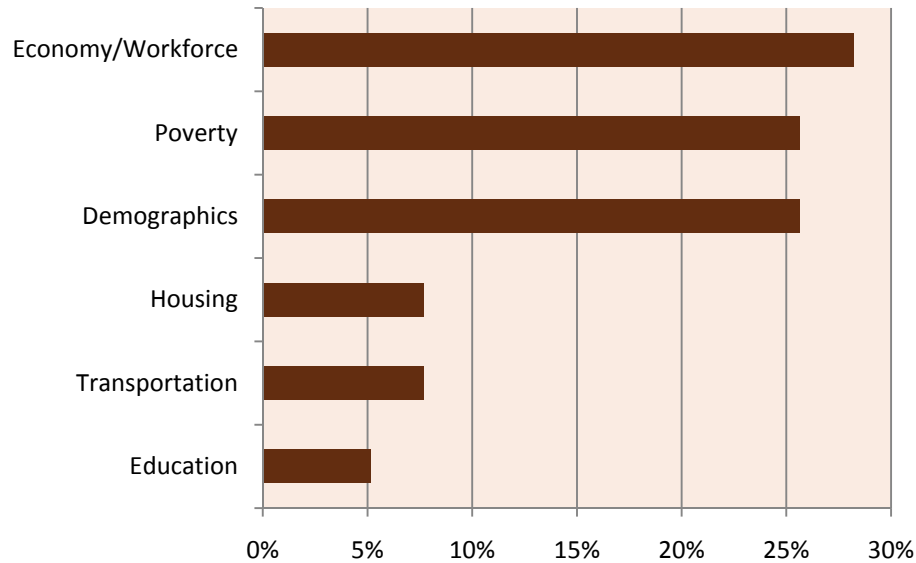
Note: Results are presented as a percentage of the total number of responses in the common theme of Community. Each participant may have had more than one response.
Source: California Center for Rural Policy

Exhibit 8: Identified Community Research Needs in Rural California (frequency of responses)

Sub-theme	Number of Responses	Percent
Economy/Workforce	11	28
Poverty	10	26
Demographics	10	26
Housing	3	8
Transportation	3	8
Education	2	5
Total	39	101

Note: Results are presented as a percentage of the total number of responses in the common theme of Community. Each participant may have had more than one response.
Total percent does not equal 100 due to rounding.
Source: California Center for Rural Policy

Actual responses within each common sub-theme:

"Need better census and demographics for rural towns and surrounding areas. This is essential for planning services."

"Need better information on minority populations. It is hard to tell what the numbers really are because of the way they are reported to OSHPD. (e.g. Humboldt County doesn't think Latino access to care is a problem because they are not documenting it). OSHPD data under-represents Hispanics and Native Americans in hospital discharges."

"Information about the utilization of medical services by Hispanics/Latinos/Native Americans is lacking."

"Basic demographics on Latinos"

"Need better demographics about the growing Latino population. Demographically, who are they? Where are they? Unemployment, monolingual, age, sex"

"How can we get the balance of our communities to embrace and support the groups working with the minorities-Native American and Hmong? How can we make them understand how important it is for them to embrace the Latinos? "

"The aging population. Where and how is the retirement growth happening? What effect is that having on the rest of us? Why is it going on?"

"Use data to get a clear sense of living wage requirements and to realistically plan services."

"Is the retiree population a myth or reality? Knowing this would help plan services and housing."

"What would better data on the age distribution of our population tell us? This has implications on workforce/services/education.?"

Poverty

"What is the true cost of poverty?"

"Where does the poverty come from?"

"Is it true that our economy is in transition? Is that accurate?"

"How to express and give an academic face to rural poverty. It is not just about race."

"What does poverty look like on the North Coast?"

"What is the best description of people without resources?"

"What are the major health issues for those in poverty? Who is experiencing it? What are they experiencing?"

"What are the contributing factors of poverty? How can we focus on solving the problems?"

"Why is the poverty rate increasing? Poorer people moving in? Lack of jobs?"

"What are the factors influencing increases in poverty? Is poverty linked to other bad outcomes?"

Economy /General Workforce

"What kinds of jobs are included in self employed and what are the financial conditions? We have to understand the role of entrepreneurship in public policy."

"What is the real economic/social impact of the marijuana economy? It's a huge reality."

"How do we disaggregate the definition for services/government? It is critical to understand economic base- need common definitions."

"In what ways are social economic crime rates rooted in the underground economy? It's the biggest influence nobody talks about."

"What are categories of jobs (geographic/population/socio-economic) that are the best paying (ranking them) jobs? This will help us focus our economic development efforts. It will help us identify career pathways and jobs."

"What is the living wage/cost of living in the region? This is important so we can know how much to raise the bar."

"What will the statistics framing the 1970's tell us about the economic and social trends leading up to today? This informs strategy."

"What are constraints on economic development and how does that affect businesses willingness to come here?"

"The problem with minimum wage is that it's not a living wage."

"Timber jobs used to be good pay but they are being replaced by a service economy."

"How to make a better environment where people feel like starting businesses."

Transportation

"Transportation seems to be a huge issue, but we don't have the data to back it up. For how many people is transportation a barrier to meeting health needs?"

"How many people don't get healthcare due to transportation problems?"

"Public transportation is a big issue in rural areas."

Housing

"The growth in the cost of living. Need more current housing data (Realtor Association would have data)."

"What kind of housing do we have now and what do we need in the future? This is important for planning and bringing jobs to the area."

"What are the issues surrounding housing affordability in the region? Adequate, affordable, decent housing stabilizes communities (ownership and rental). Housing stock is critical to economy. Housing is usually biggest expense/asset to a family or individual."

Education

"What are the key educational issues facing youth in the region? They are our future workforce/economy."

"Health information technology programs are needed."

3c. Environment

Environmental Health and the Rural Environment were equally identified as areas needing more research in rural California (Exhibits 9 & 10).

Exhibit 9: Identified Environmental Research Needs in Rural California
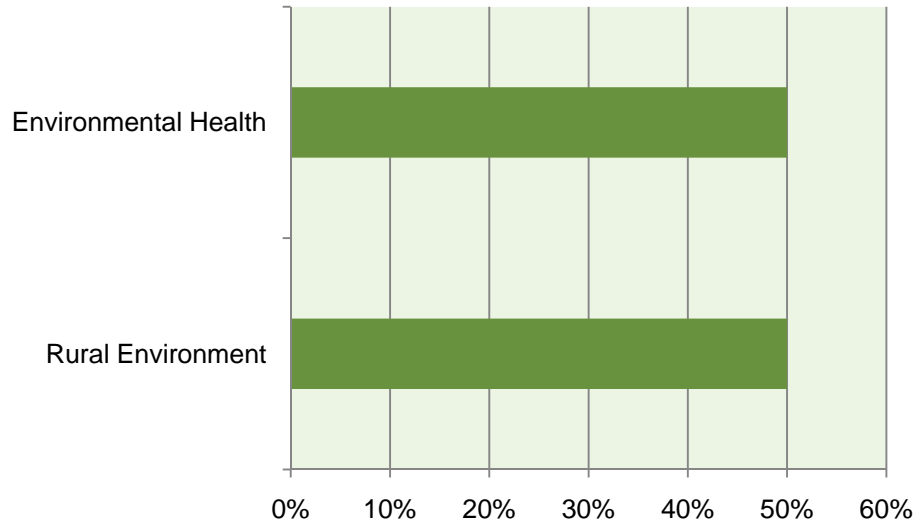
Note: Results are presented as a percentage of the total number of responses in the common theme of Environment. Each participant may have had more than one response.
Source: California Center for Rural Policy

Exhibit 10: Identified Environmental Research Needs in Rural California (frequency of responses)

Sub-theme	Number of Responses	Percent
Environmental Health	5	50
Rural Environment	5	50
Total	10	100

Note: Results are presented as a percentage of the total number of responses in the common theme of Environment. Each participant may have had more than one response.
Source: California Center for Rural Policy

Actual responses within each common sub-theme:

How is rural different from urban?

"Need to measure the topography and geography of rural California."

"Need to look at both the agricultural rural and non-agricultural rural."

"How can we make data more meaningful for rural regions? Data needs to reflect reality and will be needed to make good decisions."

"What are the markers of a healthy environment? (i.e. rivers and landscapes) necessary to support a reasonable economy and quality of life? This gives us a way to defend and advocate."

"What would a situation analysis tell us about these sectors: water, economy, private land management, public land management, working forests, recreation? This tells us potential or what the loss would mean."

Environmental Health

"What are the environmental exposures among tribes? They may be at increased risk due to dietary and cultural practices."

"Backyard Burning. How often does it occur and what are the risks?

"Industrial Sites. What is the truth about the levels of contamination and toxicity in the old industrial sites? What is the best way to address those concerns?"

"Mold. What is the effect of mold in people's living environments on their health?

"Heavy Metals. What is the prevalence of heavy metal exposure and toxicity in rural people? It is important to screen for these things before people get sick."

Additional Approaches to Rural Research & Rural Issues

Throughout the data collection process whenever there was mention of a general approach to rural research or rural issues this was captured. Common themes included the importance of serving local communities, but at the same time placing rural issues in a national context. Collaboration, accessibility of data and a comprehensive approach were frequently mentioned. Innovative approaches to health care and a focus on prevention were also commonly mentioned.

Since rural health tends to be understudied in general and "without a concerted effort rural areas tend to get marginalized" it is important to place rural issues in a larger context. As one participant stated, "It is important to show the interdependence between urban and rural policy." Another participant emphasized the importance of "placing ourselves within the national context." California is often thought of as an urban state, but as one participant stated, "As the 3nd largest rural state, California should be a leader in rural policy."

On the other hand, it is equally important to serve and collaborate with the local community. As participant's stated, "collaboration with community is key" and it is important to "serve the needs of the local population." Bringing together diverse groups who are working on common issues was frequently mentioned. One participant stated the importance of "multiple parties coming together, bringing our thinking together and allowing all of us to move outside the box and put the bigger issues on the table."

Other participants stated the need to "build on social capital in the local communities by meeting with community groups who are working on health and dental issues" and the importance of "linking academic resources, clinics and the community." Others expressed that "rural areas can learn from each other, share ideas and models" and the "need to move from competition to collaboration", which may involve "identification of unlikely connections, unlikely allies."

Accessibility of data was an important theme. One participant stated, "We need cross organizational data that can be shared across the board." Another participant expressed the need to "make information accessible- have a site where people can go to get information about the local/regional community."

Geographic isolation in rural areas often creates silos of information and can inhibit collaboration. One participant noted, "There is a benefit to knowing what diverse groups are working on the same things."

A comprehensive approach to research in rural areas was commonly mentioned. One participant noted the importance of "focusing on assets and strengths." Another participant stated, "It is important to take a comprehensive approach and look at the whole picture." The importance of applied research was emphasized by another participant: "make sure that it is applied (program development, program evaluation)". Another participant stated the "need to be continuous in examination of rural issues. Don't want to develop research based on the latest topic. Issues of importance to rural people may not be receiving funding."

Innovation and prevention were also common themes. Participants expressed "the need to be more creative in providing insurance because relying on businesses doesn't work" and "access to health care needs to be separate from employment". Another participant noted the "need to increase use of non-physician providers" as a means to increase access to health care in rural areas. Several participants noted the "need to focus on primary prevention and self management" and the "need to teach people basic concepts of health at an early age."

Discussion and Recommendations: Filling the Data Gaps in Rural California

There are clearly many data needs in rural California. Most of the identified needs are not being met by existing data sources. A search was conducted to identify existing data sources for rural California. The Appendix lists the identified data sources. Many of the data sources provide useful information on a national or state level, but do not necessarily provide the level of detail needed on a county or sub-county level in rural areas.

Filling the data gaps in rural California will require a concerted effort and collaboration between researchers, community, government and non-government organizations.

Several projects have been taking place over the past few years that address some of the data needs:

- In 2006, The California Center for Rural Policy conducted a large survey (Rural Health Information Survey) in the four counties of Del Norte, Humboldt, Trinity and Mendocino Counties. Several of the questions on the survey were informed by the assessment of data needs, particularly the impact of rural poverty on health and the extent of transportation problems impacting access to health care. The California Center for Rural Policy has also conducted a Rural Latino Project to help assess health care needs of rural Latinos in Northern California. Reports from the Rural Health Information Survey and Rural Latino Project will be available at http://www.humboldt.edu/~ccrp.

- Humboldt County has been involved in a General Plan Update and has conducted a Health Impact Assessment. The report contains information about transportation, housing, environmental stewardship, economy, public infrastructure and safety and potential health impacts for three plan alternatives being considered in the Humboldt County General Plan Update. The report is available at http://www.nrsrcaa.org/humpal/resources.htm.

- Humboldt Del Norte Medical Society has been maintaining a database of physicians in Humboldt & Del Norte counties including FTE data, age and changes in practice location. They usually hear why physicians are leaving the area or changing their mode of practice. http://www.humboldt1.com/~medsoc/

Several potential upcoming projects will contribute to filling the data gaps:

- The National Children's Study will examine the effects of environmental influences on the health and development of more than 100,000 children across the United States, following them from before birth until age 21. The study is being directed by NIH and the goal of the study is to improve the health and well-being of children. Humboldt County was selected as one of the 26 rural locations, but funding has not been secured. The California Center for Rural Policy will be collaborating with DHHS and other interested organizations to plan for submitting a proposal when the next RFP is announced.

- The California Center for Rural Policy will be conducting research on successful rural development experiences and develop tools for communities and economic development planners.

- The Yurok Tribe Environmental Program in Klamath, California is conducting a project to understand the cumulative effects of environmental and psycho-social stressors on Yurok tribal member's health.

Please contact CCRP if you are aware of any current or future projects that will contribute to filling the data gaps in rural California.

Recommendations

1. Create a Data Warehouse for Rural California

   If data were available in one place it would facilitate data sharing and collaboration and reduce redundancies. While there may be barriers to sharing raw data, the data warehouse could at least provide a description about the data with contact information.

2. Create a Rural Data Review Group

   A Rural Data Review Group could create a systematic way to "Rural Proof" data. The group could develop criteria for reviewing research to determine if it is responsive to rural needs. The criteria could provide guidance to researchers in order to increase the chance that the data will capture rural reality.

3. Support Rural Research

   Private and public foundations should support rural research. Educational institutions should encourage faculty and students to conduct research in rural areas. This document can serve as a guide for matching research plans with research needs.

Limitations

The data needs presented in this report represent the opinions of the people who participated in this project. An attempt was made to include a broad range of people from health related organizations who are likely to rely on data for the work they do and who understand the essential role data can play in planning and policy development.

This document is intended to be a living document, changing over time as research needs are filled and new needs emerge. The list of existing data sources includes the sources CCRP is aware of. We plan to expand this list, but it will require assistance from our rural communities. If you are aware of data sources please let us know so we can add them to the list.

It is our hope that this document will stimulate dialogue and encourage communities and researchers to collaborate on projects that will address identified needs.

Final Thoughts

The CCRP Community Advisory Board has reviewed this report and would like to highlight two important areas:

1) The senior population is growing in rural areas and communities need to plan for the impact of this growing population.

2) There are populations in rural areas that tend to be mobile and poor, which puts them at risk for adverse outcomes and social isolation. This is particularly concerning when children are involved. It is important for rural communities to understand this and develop ways to meet the needs of these populations.

This list was compiled after an extensive search for rural health related data sources. If you are aware of other data sources, please let us know so we can add them to the list.

Existing Data Sources for Children's Health

National Level Data:

The Health and Well-Being of Children in Rural Areas 2005
Department of Health and Human Services
This chartbook is based on data from the National Survey of Children's Health. It makes rural and urban comparisons.
www.mchb.hrsa.gov/ruralhealth/neighborhood/20cc.htm

National Survey of Children's Health
Telephone survey conducted every 4 years. Data available on a national or state level.
http://nschdata.org/Content/#

Child Trends DataBank
Summaries of national trends and research on over 100 key indicators of child and youth well-being.
www.childtrendsdatabank.org/index.cfm

State & County Level Data:

Investigating Very Low Food Security in the Redwood Coast Region
California Center for Rural Policy, Humboldt State University
A Research Brief with data from the Rural Health Information Survey.
www.humboldt.edu/~ccrp/?q=node/518

From the Redwoods to the Vineyards: Northcoast Children on the Brink of a Health Crisis
The Northcoast Nutrition & Fitness Collaborative
A Brief on children's nutrition & fitness in Northern California.
www.northcoastnutrition.org/Documents/PolicyBrief.pdf

California Health Interview Survey
UCLA Center for Health Policy Research
A telephone survey conducted every 2 years. Includes a broad range of health topics. Data is available on a state or county level, however many counties are grouped into regions.
www.chis.ucla.edu/main/default.asp

The Healthy Kids Survey
A youth self-report survey of 5th-12th graders. Collects data about drug use, violence, crime, and physical and mental health. Data available for school districts, and communities.
www.wested.org/cs/chks/print/docs/chks_home.html

Overweight Children in California
California Center for Public Health Advocacy
An analysis and summary of the California Physical Fitness Test of 5th, 7th and 9th graders.
Data is available on a state or county level.
www.publichealthadvocacy.org/countyfactsheet.html

County Profiles of Hunger, Nutrition, and Health in California
California Food Policy Advocates
www.cfpa.net/2008%20County%20Profiles/2008CountyProfileMap.htm

School Food Programs
California Department of Education
Child nutrition programs data and statistics, including county profiles, free and reduced price
data, school meal nutrition analysis, and summer meal service sites.
www.cde.ca.gov/ds/sh/sn/
Data files include public school enrollment, number of CalWORKS children residing in the
attendance area, number of students eligible for free or reduced price meal programs, percent
CalWORKS children, and percent free and reduced price meal eligibility in the program.
www.cde.ca.gov/ds/sh/cw/filesafdc.asp

Kids Count Data Center
The Annie E. Casey Foundation
State and city level data for over 100 measures of child well-being.
www.kidscount.org/datacenter/index.jsp

Children Now
The California County Data Book
A compilation of county-level data on children's health, education, and economic well-being. The
primary data sources for the book are the U.S. Census and California Health Interview Survey.
http://publications.childrennow.org/publications/invest/cdb07/databook_2007.cfm

Existing Data Sources for Health, Community & Environment

National Level Data:

Community Tracking Study (CTS), Center for Studying Health System Change
Periodic national surveys of households, physicians and employers.
www.hschange.com/index.cgi?data=12

State & County Level Data:

American Fact Finder
US Census site for population, housing, economic and geographic data.
factfinder.census.gov/home/saff/main.html?_lang=en

California Department of Finance
Selected economic, social, and demographic data at the state and county level.
www.dof.ca.gov/HTML/FS_DATA/profiles/pf_home.php

Labor Market Information
State of California Employment Development Department
Data includes unemployment and industry information at the state, county and city level.
www.labormarketinfo.edd.ca.gov/?pageid=170

Office of Statewide Health Planning and Development (OSHPD)
Data includes diagnoses and financial information from hospitals, primary care/specialty clinics, long term care facilities, home health and hospice. OSHPD also has information about Healthcare Workforce Development, Health Professional Shortage Area Designations and Medical Service Study Areas.
www.oshpd.ca.gov/HID/DataFlow/index.html

The California County Profiles, California Department of Finance
A compilation of selected economic, social, and demographic data for California and its 58 counties.
www.dof.ca.gov/HTML/FS_DATA/profiles/pf_home.php

Race and Ethnicity in California: Demographics Report Series, Stanford University
The Center for Comparative Studies in Race and Ethnicity (CCSRE) uses Census data to document the current socioeconomic, educational, and demographic status of ethnic and racial minority populations in California
http://ccsre.stanford.edu/PUBL_demRep.htm

Insure the Uninsured Project
Information about the uninsured by county. Data on the number of uninsured is obtained from the California Health Interview Survey.
www.itup.org/index.html

Medi-Cal Beneficiaries by Zip Code
Department of Health Care Services
Beneficiaries by Zip Code:
http://www.dhcs.ca.gov/dataandstats/statistics/Pages/MediCalBeneficiariesbyZipCode.aspx
Statewide and county level data for the Medi-Cal beneficiary population by age, ethnicity, language, aid code and health care plan type:
www.dhcs.ca.gov/dataandstats/statistics/Pages/MCSSHomePage.aspx

County Medical Services Program (CMSP)
Summaries of claims and costs by county.
cmspcounties.org/data/county_specific.html

Healthy Families Enrollment Data
Enrollment and disenrollment figures for Healthy Families' children by age, county or health plan.
www.mrmib.ca.gov/MRMIB/HFP/HFPReports.shtml

Vital Statistics Data (birth, death, fetal death, infant death and marriage)
California Department of Public Health
http://ww2.cdph.ca.gov/programs/OHIR/Pages/default.aspx
Vital Statistics Query System
www.applications.dhs.ca.gov/vsq/default.asp

County Health Status Profiles and Health Data Summaries for California Counties
Contains county data for selected health indicators as recommended by the Centers for Disease
Control and Prevention (CDC) and the National Center for Health Statistics (NCHS)
and modified by the California Department of Public Health (CDPH) in collaboration with the
California Conference of Local Health Officers (CCLHO).
www.cdph.ca.gov/programs/OHIR/Pages/CHSP.aspx

The California Women's Health Survey
Department of Health Care Services
An annual telephone survey that collects information from a sample of approximately 4,000
randomly selected adult women aged 18 years or older on a wide variety of health indicators
and health-related knowledge, behaviors, and attitudes. This survey began in March 1997 as a
collaborative effort between the California Departments of Health Services, Mental Health,
Alcohol and Drug Programs, and Social Services, and the Public Health Institute (PHI). PHI's
Survey Research Group administered the survey while California Medical Review, Inc. (CMRI)
provided technical assistance.
www.dhcs.ca.gov/dataandstats/statistics/Pages/cwhs.aspx

EPICenter
California Department of Public Health
Fatal & nonfatal injury and violence data tables at state & county levels
www.applications.dhs.ca.gov/epicdata/

State Cancer Profiles
National Cancer Institute
Cancer statistics on a national, state and county level.
http://statecancerprofiles.cancer.gov/

The California Tobacco Survey
California Department of Public Health
A telephone survey of adults aged 18 and older conducted triennially by the University of
California San Diego for the California Department of Health Services, Tobacco Control Section.
Includes a broad range of tobacco-related indicators. Data is available on a state or county
level, however many counties are grouped into regions.
www.cstats.info/

California Health Interview Survey
UCLA Center for Health Policy Research
A telephone survey conducted every 2 years. Includes a broad range of health topics. Data is
available on a state or county level, however many counties are grouped into regions.
www.chis.ucla.edu/main/default.asp

Family Health Outcomes Project, UC San Francisco
Extensive list of data sources
www.ucsf.edu/fhop/_htm/pub_health_data/gen_ph_data.htm#ghs

Maternal and Child Health Resources, UC Berkeley
Extensive list of data sources
www.lib.berkeley.edu/PUBL/mch.html

Data sources specific to the Redwood Coast Region (Del Norte, Humboldt, Trinity & Mendocino Counties):

Rural Health Information Survey
A survey conducted by the California Center for Rural Policy in 2006 assessing health disparities, access to health care and other determinants of health among residents in the Redwood Coast Region.
Reports and data available at www.humboldt.edu/~ccrp/

Rural Latino Project
Interviews conducted by the California Center for Rural Policy assessing health care needs of rural Latinos in Northern California.
www.humboldt.edu/~ccrp/

Del Norte County Health Care Provider Recruitment & Retention Plan
California Center for Rural Policy, Humboldt State University
www.humboldt.edu/~ccrp/?q=node/524

Economic Impact Report: Health Care in Humboldt County, California
www.stjosepheureka.org/CommunityReports/HumboldtHealthcareEconomicImpactReport.pdf

The Impact of Tobacco in Humboldt County, 2002
Humboldt County Department of Health and Human Services

Humboldt County Children's Oral Health Report, 2001

Assessing the Self-Perceived Status of Oral Health, Access to Dental Health Care, and Insurance Status of Pregnant Women in Humboldt County.
Humboldt County Department of Health and Human Services

Student Body Mass Index (BMI) Survey of Humboldt County Schools, 2006-2007
Humboldt County DHHS-Public Health Branch (707) 441-5081

Humboldt County Community Needs Assessment, 2005
Area One Agency on Aging, Humboldt Area Foundation, McLean Foundation, St. Vincent de Paul and St. Joseph Health System-Humboldt County.
Report available on CCRP website: www.humboldt.edu/~ccrp/?q=resources

Humboldt Diabetes Project
Humboldt Del-Norte Independent Practice Association
www.hdnfmc.com/hdp/indexhdp.php

Humboldt General Plan Update Health Impact Assessment
Humboldt County Public Health Branch, Humboldt Partnership for Active Living, Human Impact Partners.
Contains information about transportation, housing, environmental stewardship, economy, public infrastructure and safety and potential health impacts for three plan alternatives being considered in the Humboldt County General Plan Update.
www.nrsrcaa.org/humpal/resources.htm

Humboldt County Transportation-Disadvantaged Populations Report, May 2006
Natural Resources Services, Redwood Community Action Agency
http://www.nrsrcaa.org/path/TDPReport.htm

Community Health Status Report, 2008
Mendocino County Department of Public Health
www.co.mendocino.ca.us/ph/chsr.htm