

# Del Norte & Adjacent Tribal Lands

## Selected Findings from the Community Health & Wellness Survey

### Middle-Aged Residents



by The California Center for Rural Policy, Humboldt State University

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# Executive Summary

The Community Health and Wellness Survey was conducted by the California Center for Rural Policy (CCRP) in 2013. The purpose of the survey was to assess community health indicators in the Del Norte and Adjacent Tribal Lands region.

The eight page written survey contained questions about wellness indicators pertaining to economics, education, health care, neighborhood built environment and social and community context.

This report contains selected findings for individuals who indicated that their age was between 50 and 64 years. The findings presented in this report are based on 621 responses from middle-aged respondents from the DNATL region.

## Income

Poverty is based on household income level adjusted from family size and age of family members. In 2013, for a single person over the age of 64, an annual income of \$11,173 was the threshold for poverty.

- Mean income was higher in the older middle-aged group than either the young or middle middle-aged groups (\$40,000 versus \$31,000 versus \$30,000)
- Children living in the home was more common for the younger middle-age groups than the older middle-aged group (21% versus 12% versus 5%)
- Poverty was more prevalent in the young and middle-aged group when compared to the older middle-aged group (30% versus 22% versus 16%)

## Employment

- Unemployment was more prevalent in the middle middle-aged group when compared to either the older or younger middle-aged group

## Food Security

Food security is a complex condition, with various levels of insecurity and multiple risk factors. There was clear connection of increased risk of food insecurity when household income fell below the Federal Poverty Limit.

- 1 in 4 households in poverty experience hunger
- Risk for anxiety about the supply of food was 5 times higher in households in poverty
- Over half of households in poverty could not afford to eat balanced meals
- 46% of households in poverty found that they could not afford to buy enough food to meet their family's needs
- 29% of households with income below the poverty limit used CalFresh a source for food

Del Norte County has been identified as a food desert by the USDA, qualifying the region for grant funding to support programs that increase accessibility of nutritious foods.

## Health

Many factors contribute to quality health care, including access, coordination of care and patient engagement.

- 78% of the middle-aged respondents indicated that they had a personal health care provider who knows their personal health history
- Only one-half of those uninsured had a personal health care provider
- 81% indicated that they had a source for medical care that was not an emergency room or urgent clinic
- Almost 1 in 4 middle-aged respondents who needed a referral to a medical specialist found it difficult to obtain the referral
- 92% indicated that they had health care that was family centered
- 49% of the survey respondents had healthcare that met the quality standards of Patient Centered Medical Home

# Introduction

## Background

Health starts where we live, learn, work and play. Health and wellness are affected by factors that are associated with place. Economic conditions in communities can influence health by affecting access to employment opportunities and health insurance. Social conditions in communities can influence health by providing resources for individuals in need, by controlling advertisement of behaviors that pose health risks like drinking and smoking and by creating programs to encourage healthy behaviors like daily physical activity. Physical conditions in communities can influence health by ensuring good quality of the air and water, by providing safe environments, and increasing access to healthy foods. The community in which we live affects our health status and even our longevity.<sup>1-4</sup>

Understanding the important role that place has in wellness, The California Endowment selected 14 communities in California to invest resources.<sup>5</sup> The criteria for selection included communities that have poor health outcomes but that also have potential for change. The California Endowment selected the 14 sites based partially on their social capital. Social capital is the collective forces of individuals, agencies and networks that can be mobilized to elicit change. Del Norte County and Adjacent Tribal Lands (DNATL) was selected as one of the 14 sites to invest resources because The California Endowment recognized that the community had the “potential to inspire policy change to create a healthy environment for all Californians.”<sup>5</sup> The California Endowment provided funding through the Building Healthy Communities Initiative to create avenues for change that promote health in those 14 communities.

During the initial stage of the Building Healthy Communities project in DNATL, it became apparent that there were many community health indicators that could be used to measure community health, but baseline data were not available for DNATL. Through a community engagement process, a list of health indicators were identified and it was determined that baseline data was needed. From this list, the Community Health & Wellness Survey (CHWS) was created. The CHWS included measures of social determinants of health including the built environment, neighborhood cohesiveness, education level, income level, employment, food security, and quality health care. The CHWS was designed to provide a baseline measurement of determinants of health that are associated with place. Accurate baseline information about community health and wellness is critical for understanding and improving upon conditions that impact health and wellness.

The survey was developed after engagement with the DNATL community and support for the survey was sought through community agencies. Efforts were made to encourage widespread participation with particular attention to populations that are generally underrepresented in survey research. Meetings with tribal council members provided an opportunity to introduce the survey and address questions and concerns. All tribal councils in the area, including Elk Valley Rancheria, Smith River Rancheria, Resighini Rancheria, Karuk Tribe, Yurok Tribe, and Hoopa Valley Tribe provided endorsement of the survey. The surveys were made available at each tribal office. The Hmong community was engaged through an elected clan representative. The survey was translated to Hmong and was distributed to Hmong families through the clan representative. The survey was also translated to Spanish. The survey was endorsed by many area agencies, including the County of Del Norte, First 5 Del Norte, Del Norte Community Health Center, Del Norte School District, Del Norte Health Care District, Coastal Connections, and United Indian Health Services. Efforts were made to engage the community in developing, distributing and supporting the survey. Community input and endorsement for the survey was sought and underrepresented groups were provided targeted recruitment to take the survey.

The CHWS was developed to provide baseline data regarding community health indicators in DNATL. The survey results can be used to prioritize development of programs to promote improvement in determinants with the poorest outcomes. Administration of the survey in the future will allow change in social determinants to be tracked. The ultimate goal of understanding the social determinants of a community of wellness is to reduce health inequities and to “create social and physical environments that promote good health for all.”<sup>6</sup>

1. Carlson, J.A., Sallis, J.F., Conway, T.L., Saelens, B.E., Frank, F.D., et al. (2012). Interactions between psychosocial and built environment factors in explaining older adults' physical activity. *Preventive Medicine*, 54(91), 68 – 73.
2. Meijer, M., Rohl, J., Bloomfield, K., and Grittne, U. (2012). Do neighborhoods affect individual mortality? A systematic review and meta-analysis of multilevel studies. *Social Science & Medicine*. 74 (8), 1204–12.
3. Pickett KE & Pearl M. (2001). Multilevel analyses of neighbourhood socioeconomic context and health outcomes: a critical review. *Journal of Epidemiology Community Health*. 55 (2), 111–2.
4. Renalds, A. Smith, T.H., and Hale, P.J. (2010). A systematic review of built environment and health. *Family Community health*, 33(1), 68-78.
5. The California Endowment. (2015). Selecting Sites. Retrieved from <http://www.calendow.org/places/>.
6. Healthy People 2020. (2015). Retrieved from <http://www.healthypeople.gov/>.

# Methods

## Survey Design and Sample

In the spring of 2013, a cross-sectional survey of a random sample of adults residing in Del Norte County and Adjacent Tribal Lands was conducted. An eight-page self-administered survey was developed by project administrators at the California Center for Rural Policy at Humboldt State University, in collaboration with the Building Healthy Communities Learning and Evaluation Advisory Committee in Del Norte County. The survey tool was designed to measure social determinants of health with questions about the neighborhood/built environment, social/community context, education, financial well-being, health/health care and services (including concepts of patient centered medical home and food security).

Many of the questions were based on existing surveys (National Survey of Children's Health, Behavioral Risk Factor Surveillance Survey, American Housing Survey, American Community Survey, National Health and Nutrition Examination Survey, National Center for Safe Routes to School, California Health Interview Survey, and Rural Health Information Survey) and new questions were developed as needed to inquire about social determinants of health not previously explored in this rural area of California.

The survey contained a combination of quantitative and qualitative responses. The first section of the survey contained questions specific to the adult completing the survey and their household. The second section contained questions specific to children in the household. Surveys were translated into Spanish and Hmong. Survey methods and questions were approved by the Humboldt State University Institutional Review Board.

Survey booklets with cover letters and questions in English and Spanish were mailed to all households and all post office box holders in Del Norte County and Adjacent Tribal Lands (including Hoopa, Orleans, Somes Bar, and Happy Camp). This was a bulk mailing through the U.S. Postal Service, so surveys were addressed to "residential customer" or "box holder." The cover letter requested someone in the household 18 or older to complete the survey and for only one survey to be completed per household. A self-addressed stamped envelope was included for returning the survey. Two weeks after sending the survey, a reminder post card in English, Spanish, and Hmong was sent. An incentive of a potential to win a \$250 cash prize was offered.

Efforts were made to encourage widespread participation with particular attention to populations that are generally underrepresented in survey research. Meetings with tribal council members provided an opportunity to introduce the survey and address questions and concerns. All tribal councils in the area (Elk Valley Rancheria, Smith River Rancheria, Resighini Rancheria, Karuk Tribe, Yurok Tribe, and Hoopa Valley Tribe) provided endorsement, and their endorsement was stated in the cover letter. Some tribes opted to take extra steps to encourage participation among tribal members. For example, Elk Valley Rancheria sent an advance letter to tribal members encouraging participation. Resighini Rancheria and the Yurok Tribe coordinated personal contact with households to provide any needed assistance with completing the survey. The survey was also endorsed by the County of Del Norte, First 5 Del Norte, Del Norte Community Health Center, Del Norte School District, Del Norte Health Care District, Coastal Connections, and United Indian Health Services.

The Hmong community was engaged through contact with the elected clan representative and his assistant. A meeting was called with the clan leaders and surveys translated into Hmong were hand delivered to the clan

leaders for distribution to the clan families. Hmong families could either complete the survey in Hmong or English (received in the mail).

In the weeks prior to mailing the survey, a community media campaign was initiated to raise awareness about the survey and encourage participation. This included radio announcements with local voices, newspaper articles, posters, and announcements via social media networks. The Del Norte County Unified School District also sent a letter home to parents encouraging their participation in the survey.

Survey assistants were available to provide assistance to anyone requesting it. Assistors were available in person or by phone and could provide assistance in English, Spanish, or Hmong.

## Analyses

### Categorical Variables

Categorical variables have a limited number of possible values. These values do not have an intrinsic order. Gender is an example of a categorical variable. Frequencies ( $p$ ) were calculated for categorical data. This provides the number of individuals in each category. Confidence intervals for frequency data were calculated and reported when possible. Confidence interval ( $CI$ ) provides information about the uncertainty associated with the frequency data. The  $CI$  provides the probability that the frequency reported in the study includes the true value of the frequency. A 95%  $CI$  was reported. This means that the probability of observing a frequency outside this reported range is less than five percent. Wide confidence intervals indicate that the frequency being reported is less accurate when compared to frequency data with narrow  $CI$ .

Chi-square test of independence ( $\chi^2$ ) was used to determine whether two categorical variables were related. The assumptions for the Chi-square test ( $\chi^2$ ) were tested. The first assumption was that the variables were categorical, with two or more categories in each of the variables. For example, two categories exist for the categorical variable gender: male and female. Categorical data may have more than two categories, as in survey responses where several response options are offered (e.g. yes, no and maybe). The second assumption for the Chi-square test is that the minimum number of individuals that fall into the cross section of the categorical data must be five or more cases. For example, the number of males that answer “yes” versus “no” for a survey question, must be five or more.

When a comparison was made of two categorical variables, where each variable had only two categories, Yate’s Correction of Continuity was applied to the  $\chi^2$  value to correct the overestimation of the Chi-square value.

The  $\chi^2$  value was used to determine if there was a statistically significant relationship between the categorical variables. Fischer’s exact test ( $FET$ ) for significance level was reported. A significance level ( $p$ ) of .05 was selected for the acceptable error rate for the  $\chi^2$  tests. The  $p$  value represents the probability that chance could explain the result. A  $p$  of less than .05 indicates that there is less than a five percent chance of claiming there is a relationship between variables, when none really exists. This accepted chance of error exists for every comparison made. When multiple comparisons are made, the total risk of error increases. Since this study’s purpose was descriptive in nature, the  $p$  was not adjusted for the multiple comparisons performed.

Odds ratio ( $OR$ ) was reported for frequency data. The  $OR$  represents the odds that a particular outcome that occurred in one group, will also occur in another group. For instance,  $OR$  for the frequency of food insecurity in households that have incomes who live in poverty when compared to households that have higher incomes were reported. When  $OR$  are greater than one, the condition (e.g., poverty) is associated with higher odds of the outcome (e.g., hunger). Ninety-five percent  $CI$  were calculated and reported for  $OR$ . Odds ratios that had a 95%  $CI$  that spans zero were interpreted as lacking evidence for an association of the condition and the outcome.



# Demographics

Of the 1741 surveys returned, 35.7% (n = 621) of the respondents were middle-aged. This survey sampled a wider area than Del Norte County, as it included surrounding Tribal Lands (DNATL). Since no data exist that exactly overlaps the geographic area sampled, data from Del Norte County was used for comparative analysis. Since the middle-age group spans a time period in which many families' lives change, it was expected that the group would be heterogeneous in regards to many of the variables assessed through the survey. To evaluate for differences across the span of the middle-aged years, the middle-aged group was divided into three age groups for some of the subsequent analyses. These middle-age groups consisted of participants in their late middle-age years (age = 60 to 64), middle middle-age years (age = 55 to 59) and early middle-age years (age = 50 to 54). The sample size in each of the three middle-age subgroups were as follows: 248 for late middle-age, 244 for middle middle-aged and 154 for early middle-age. This survey sample represents 11.2% of the estimated population of middle-aged citizens in Del Norte County (14.2% of the late middle-aged, 12.4% of the middle middle-aged and 6.9% of the early middle-aged Del Norte County residents.)<sup>1</sup>

**Exhibit 1: Highest Education Level Attained**

Highest Education Level Attained	Percent (n = 565)
Did Not Complete High School	3.5%
High School Certificate	5.7%
High School Graduate	12.4%
Some College	46.4%
College Graduate	29.0%

Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands – 2013 This analysis was for the survey question, “What is the highest level of education that you have completed?”

More women than men returned completed surveys ( $p = 70.8\%$  females). The middle-aged respondents indicated that their ethnicity was Caucasian more often than any other ethnicity (99.4% Caucasian, 14.6% American Indian, 7.3% Hispanic/Latino/Spanish, and 1.0% Black/African American). Approximately 80% of the middle-aged respondents indicated that they had attended college or graduated from college. A minority of the middle-aged respondents indicated that they were high school graduates ( $p = 12.4\%$ ), obtained a high school equivalency credential (GED) ( $p = 5.7\%$ ), or did not complete high school ( $p = 3.5\%$ ). The middle-aged DNATL residents who returned this survey had higher than expected prevalence earning at least a bachelor's when compared to the U.S. Census data for residents in Del Norte County aged 45 to 64 years ( $p = 29.1\%$  versus  $p = 15.2\%$ ,  $z\ score > 1.96$ ).<sup>2</sup> The results from this survey may be biased as the survey sample was over representative of females and higher educated individuals when compared to the larger Del Norte County middle-aged population.

1. U.S. Census Bureau. (2013). 2009- 2013 American Community Survey 5-Year Estimates. State and County Quickfacts. Retrieved from <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

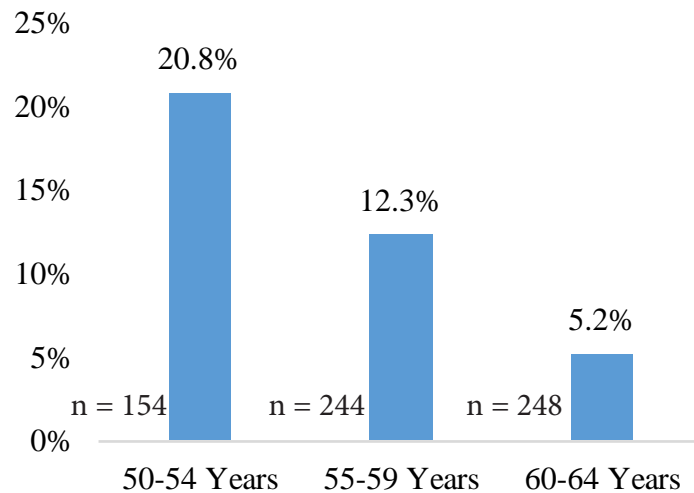
2. U.S. Census Bureau. (2013). Educational Attainment. 2009-2013 American Community Survey 5-year Estimates. Retrieved from <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

## Household Size and Composition

The majority of the middle-age respondents were from a two person household ( $p = 48.4\%$ ) or from a one person household ( $p = 28.8\%$ ). The average household size was 2.13 persons ( $SD \pm 0.05$ ). The U.S. Census Bureau has previously reported that the mean family size in Del Norte County to be 2.58 ( $SD \pm 2.94$ ).<sup>1</sup> The smaller family size in this study is likely due to the smaller family size of the older middle-aged group of this sample when compared to the U.S. Census Bureau data. Households with adults in the older middle-age range are likely to have adult-aged children who are no longer living with them, thereby reducing household size. In fact, only 75 of the 623 middle-aged respondents indicated that they had children under the age of 18 living in their home ( $p = 13.3\%$ ). The prevalence of having children under the age of 18 living in the home was different among the different middle-age groups ( $z$  scores  $< 1.96$  for all between group assessments).

1. U.S. Census Bureau. (2015). 2009 – 2013 American Community Survey, 5-year estimate. Retrieved from <http://factfinder.census.gov>

**Exhibit 2: Middle-Age Respondents with Children in the Home**

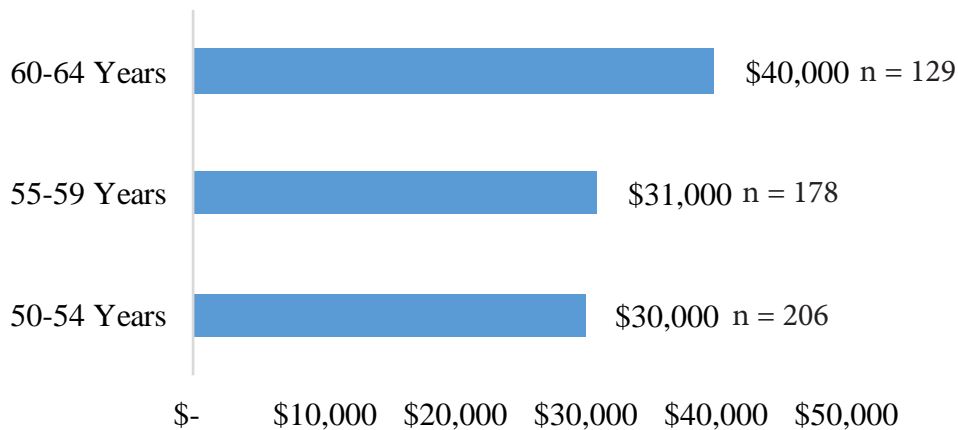


Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands – 2013. This analysis was for the survey question, “Of the people living in your household, how many are 0 – 5 years old, and how many are 6-17 years old?”

## Income

Respondents were asked about their household income. The average gross household income of the middle-aged respondents was \$47,971 per year ( $SE \pm \$1,982$ ). The mean income of Del Norte County residents of all ages found in the American Community Survey was \$53,185 ( $SD \pm \$2,861$ ).<sup>1</sup> There was a wide range of reported

**Exhibit 3: Median Income of Middle-Aged Respondents**



Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands – 2013. This analysis was for the survey question, “What is your best estimate of your household’s total income per year before taxes?”

gross income ranging from \$0 to \$250,000 per year in this study. The median ( $M$ ) reported income was \$36,000 per year. This value was lower than the median income found in the American Community Survey ( $M = \$37,909$ ,  $SD \pm \$4,058$ , one sample median test  $p = .025$ ).<sup>1</sup> The older middle-aged group of survey respondents had a higher median income when compared to either of the younger middle-aged groups in this study (one sample median test  $p < 0.001$ ).

1. U.S. Census Bureau. (2015). Income in the past 12 months: 2009 – 2013 American Community Survey 5-Year Estimates. Retrieved from <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

# Poverty

## Federal Poverty Limit

Poverty is based on household income level adjusted from family size and age of family members. As family size increases, the income level at which poverty is defined increases. In 2013, for a single person under the age of 64, an income of \$12,119 was the threshold for poverty. For a family of three children and one adult under the age of 64 years, an income of \$23,707 was set as the threshold for poverty.

The U.S. Census Bureau sets an income threshold to determine poverty level.<sup>1</sup> The threshold varies by family size and composition. This is known as the federal poverty limit (FPL).<sup>2</sup> For this study, the information for self-reported gross income, family size and composition was used to determine the FPL for each respondent. Of the 625 middle-aged respondents to this survey, 542 provided adequate data to determine FPL. The results of from this survey regarding poverty rate are in agreement with previous findings of the American Community Survey for Del Norte County. In Del Norte County, the prevalence of poverty in adults has been reported to be 21.4% and 20.5% of the middle-aged respondents in DNATL had household income under the poverty threshold.<sup>3</sup> Households whose income falls below 200% of the FPL are considered low income. Our findings indicate that an additional 27.9% of the middle-aged respondents lived in households that were low income (n = 151). There was a difference in household income, defined as percent of FPL, in the three middle-aged categories (*Kruskal-Wallis Test* = 9.12 (2),  $\rho = .01$ ). The late middle-aged group had the highest mean rank score for percent of FPL and the early middle-aged group had the lowest rank score (242 versus 266 versus 293, for early, middle and late middle-aged groups respectively). This means that the younger middle-aged adults were more likely to live in households considered to be low income or below the poverty level, when compared to older middle-age adults.

**Exhibit 4: Middle-Age Respondents by Federal Poverty Limit**

Income	Age Group		
	50 – 54 years (n = 125)	55 – 59 years (n = 177)	60 – 64 years (n = 202)
Percent of Federal Poverty Limit			
< 100%	30.4%	22.0%	15.8%
100 – 199%	28.0%	26.0%	28.2%
200 – 299%	8.8%	14.1%	12.4%
≥ 300%	32.8%	37.9%	43.6%

Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands – 2013. The analysis is from survey questions regarding respondent's household income, age and number of household members, and respondent's age.

1. U.S. Census Bureau. (2013). Preliminary Estimates of Weighted Average Poverty Thresholds for 2013. Retrieved from <http://www.census.gov/hhes/www/poverty/data/threshld/>.
2. U.S. Department of health & Human Services. (2013). 2013 Poverty Guidelines. Retrieved from <http://aspe.hhs.gov/poverty/13poverty.cfm>.
3. U.S. Census Bureau. (2015). Income in the past 12 months: 2009 – 2013 American Community Survey 5-Year Estimates. Retrieved from <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

# Employment Status

## Men

In this study, 163 males between the ages of 50 and 64 responded to the survey. In this group of respondents, 41.7% of the men indicated they were either self-employed or working for a business. An additional 9.2% of the middle-aged men considered themselves unemployed. The Bureau of Labor Statistics (BLS) indicated that the unemployment rate in Del Norte County in 2013 was 11.8%.<sup>1</sup>

The difference in our findings

when compared to the BLS may be due to the age of this group of survey respondents. The BLS calculates unemployment rates by evaluating the portion of the population that is actively seeking employment and the portion of the population that is currently employed. Using this method to assess unemployment rate in the DNATL respondents, a 19% rate was found. DNATL middle-aged males appear to have a higher rate of unemployment than seen in Del Norte County residents of all ages. There was a difference in prevalence of employment status by middle-aged group categories. As expected, a larger portion of the older middle-aged group was retired. Additionally, a larger portion of the middle middle-aged group were unemployed when compared to the younger and older middle-age group males.

## Women

### Exhibit 6: Employment Status of Middle-Aged Women

Employment Status	Age Group		
	50 – 54 years (n = 110)	55 – 59 years (n = 153)	60 – 64 years (n = 140)
Retired	6.4%	13.7%	17.6%
Disabled	19.1%	20.9%	11.4%
Employed	60.0%	50.9%	53.6%
Unemployed	9.0%	7.9%	6.5%
Homemaker	5.5%	5.9%	5.0%

Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands – 2013. This analysis is for the survey question, “Which of the following best describes your current employment situation?”

due to the age of this group of survey responders. The lower unemployment rates in the middle-aged survey responders may be due to a portion of the group was no longer participating in the work force. In fact, 17.6% of the group indicated that they were retired, 5.0% indicated that they were homemakers, and 17.1% percent of the middle-aged indicated that they were disabled. The BLS calculates unemployment rate by using the number of individuals who are unemployed and looking for work in the numerator and the number of people who are employed in the denominator. Using the BLS method to calculate unemployment rate in the survey respondents, there is a 9.3% unemployment rate (20 unemployed who are looking for work ÷ 216 employed). There was a difference in prevalence of employment status by middle-aged group categories. Unemployment rate was different among the middle-age groups (middle-age groups: Early  $p = 9.4\%$ , Middle  $p = 18.4\%$ , and late  $p = 6.3\%$ ). The highest rate of unemployment was in the 55-59 year age group. Lack of employment opportunities may contribute to the high rates of poverty/low-income households in DNATL.

1. U.S. Bureau of Labor Statistics. (2015). Local Area Unemployment Statistics Map. Retrieved at <http://data.bls.gov/map/MapToolServlet>  
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### Exhibit 5: Employment Status of Middle-Aged Men

Employment Status	Age Group		
	50 – 54 years (n = 34)	55 – 59 years (n = 49)	60 – 64 years (n = 80)
Retired	8.8%	10.2%	41.3%
Disabled	23.5%	20.4%	25.0%
Employed	55.9%	51.0%	30.1%
Unemployed	8.8%	18.3%	3.8%

Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands – 2013. This analysis is for the survey question, “Which of the following best describes your current employment situation?”

In this study, 413 females between the ages of 50 and 64 responded to the survey. In this group of respondents, 53.6% of the women indicated they were either self-employed or working for a business. An additional 6.5% of the middle-aged women considered themselves unemployed. The BLS indicates that the unemployment rate in Del Norte County in 2013 was 11.8%.<sup>1</sup>

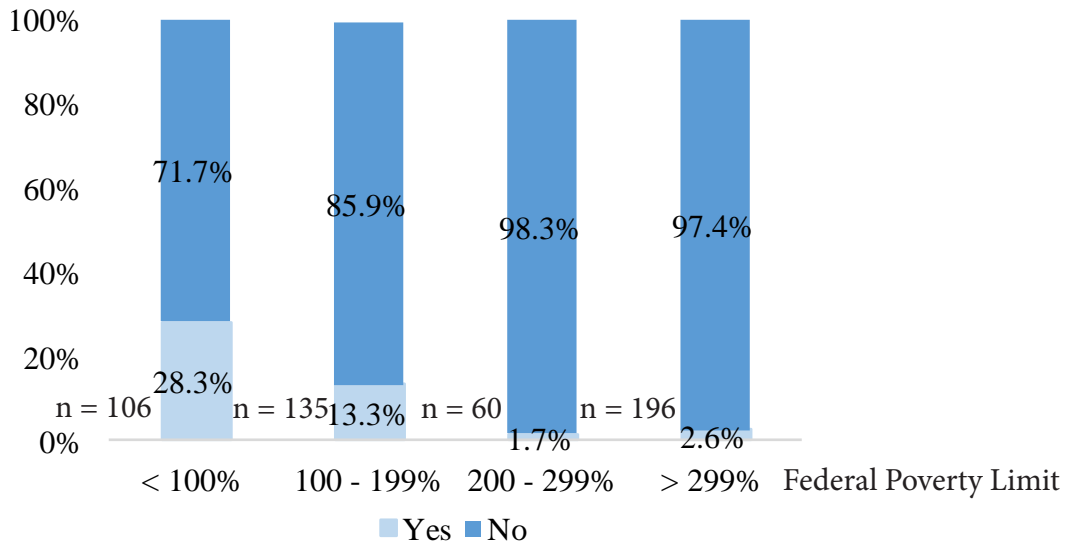
The difference in our findings when compared to the BLS may be

# Food Security

## Hunger in the House

Food security was assessed using a number of survey questions. These questions queried respondents about their family's food situation in the past 12 months. A question included in the survey was used to identify the highest risk level, Very Low Food Security.<sup>1</sup> This question evaluated hunger. Fifty-four of the 496 of the middle-aged respondents provided an affirmative response, indicating there were individuals in their household that experienced hunger in the past 12 months (10.9%). As expected, there was a difference in frequency of hunger in households by income level ( $\chi^2 = 53.3 (3), p < .001$ ).

**Exhibit 7: Hunger in Middle-Aged Residents by Household Income**



Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands - 2013. This analysis was for the question, "In the last 12 months were you or people living in your household hungry because you couldn't afford enough food?". The analysis was restricted to respondents who answered "yes" or "no" to the question in addition to providing information necessary for determining poverty status.

There was a difference in frequency of hunger in household between the young middle-aged group ( $p = 13.5%$ ) and the middle middle-aged group ( $p = 14.2%$ ) when compared to the older middle-aged group ( $p = 6.2%$ ,  $z$  scores  $> 1.96$ ). The higher risk of hunger and food insecurity in lower income households have been reported by others.<sup>1</sup> Our findings of greater prevalence of hunger in households of the young and middle middle-aged adults, may also be due to the lower median income in these middle-age categories when compared to the older middle-age category. Logistic regression was used to evaluate the relationship between age and income and hunger. The evaluation revealed that income expressed as a percent of FPL was a significant predictor of hunger ( $\text{Exp}(B) = 1.007, p < .001$ ), but age was not ( $\text{Exp}(B) = 1.049, p = .2$ ). The logistic regression results indicated that for every 10% increase in FPL, there is a 7% reduction in risk of experiencing hunger in the household.

**Why Evaluate Food Security?**

Food-insecure persons have significantly lower intakes of energy and macronutrients such as proteins, carbohydrates, and saturated fats. Food-insecure persons also have a lower intake of essential micronutrients like niacin, riboflavin, vitamins B-6 and B-12, magnesium, iron and zinc. Food-insecure persons are more likely to report poor health status when compared to food-secure individuals.

## Anxiety about Supply of Food

One survey question was used to discriminate between individuals with some level of food insecurity from individuals with a high level of food security. The survey statement that the participants responded to was as follows: “We worried whether our food would run out before we got money to buy more.” Response choices included often “true”, “sometimes true”, “never true”, and “don’t know”. A response of “never true” would indicate that the respondent had a high level of food security.<sup>2</sup> Most of the respondents who were middle-aged responded that they “never worried” that food would run out ( $p = 73.9\%$ ). One-quarter of the respondents indicated that they “sometimes worried” or “often worried” about food running out ( $p = 26.1\%$ ). Thus, one in four middle-aged respondents who responded to this survey indicated they had some worry about food. Worry about food running out was more likely in middle-age respondents who had a household income below the FPL when compared to middle-aged respondents who had a household income above the FPL ( $\chi^2 = 58.3 (1), \rho < .001$ ). Our data indicates that the risk of having anxiety about food is over 5 times higher for the middle-age respondents with income below the FPL when compared to the middle-aged respondents with income above the FPL ( $OR = 5.5, CI = 3.5 - 8.7$ ).

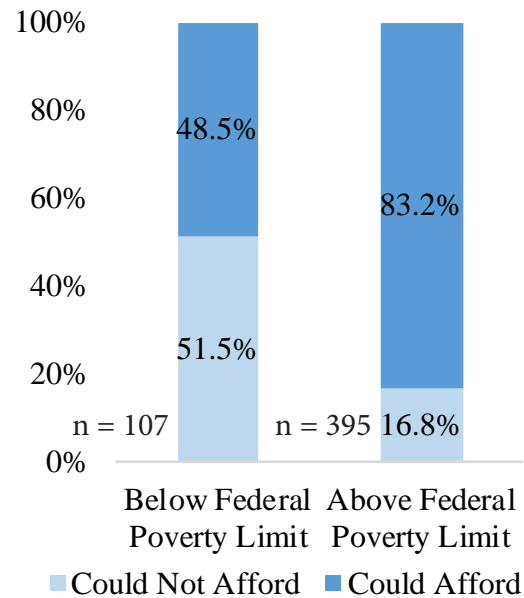
The prevalence of worry about food among the three different middle-age groups was evaluated. There was a difference in prevalence in worry about food between the young middle-age group and the middle middle-age group when compared to the older middle-aged group ( $\chi^2 = 8.25 (2), \rho = .02$ ). The difference between the middle-age groups was expected as there was a difference in income level between the older middle-aged group and the young middle-aged groups. Logistic regression was used to evaluate the relationship between age and income and worry about food. The evaluation revealed that income expressed as a percent of FPL was a significant predictor of hunger ( $Exp(B) = 1.008, \rho < .001$ ), but age was not ( $Exp(B) = 1.036, \rho = .2$ ). The logistic regression results indicated for every 10% increase in FPL, there was an 8% reduction in risk of experiencing worry about food. In those who live in poverty, there was no difference in frequency of worry about food among the three middle-aged groups ( $\chi^2 = 2.06 (2), \rho > .05$ ). Our findings are different from others who have reported an increased risk of food insecurity in age groups younger than 55 years old.<sup>2</sup> Our data indicate that income level, not age is an important risk factor for worry about food in middle-aged adults in DNATL.

The United States Department of Agriculture (USDA) developed a schemata that describes categories of food security status of households.<sup>1</sup> Households that do not have problems with accessing adequate food, do not reduce quality or desirability of food, and do not have any worries or anxiety about food are classified as having High Food Security. Households that have worry or anxiety about food, but have adequate resources to buy food and do not reduce the quality of the food they eat are classified as having Marginal Food Security. Households that worry about food and have to alter the quality or desirability of food are classified as having Low Food Security. Households that have hunger or lack the resources to purchase enough food are classified as having Very Low Food Security.

## Balanced Meals

Food security was also assessed using a survey question that evaluated the quality of food availability. The statement on the survey was as follows: “We couldn’t afford to eat balanced meals.” A significantly higher portion of the middle-aged respondents whose income was below the FPL indicated that this was “often true” or “sometimes true” when compared to the middle-aged respondents whose income was above the FPL (51.5% versus 16.8%) ( $\chi^2 = 75.35 (1)$ ,  $FET p < 0.001$ ). Middle-aged adults whose income level was below the FPL were over 6 times more likely to be unable to afford to eat balanced meals ( $OR = 6.5$ ,  $C.I. = 4.1 - 10.2$ ). There was no difference among the middle-aged groups for this variable if income level was taken into account. Middle-aged adults of all ages were at increased risk of not eating balanced meals if their household income was below the FPL. Logistic regression was used to evaluate the relationship between age and income and hunger. The evaluation revealed that income expressed as a percent of FPL was a significant predictor of not being able to serve balanced meals ( $Exp(B) = 1.008$ ,  $\rho < .001$ ), but age was not ( $Exp(B) = 1.026$ ,  $\rho = .3$ ). The logistic regression results indicated for every 10% decrease in FPL there is an 8% increase in risk of not having balanced meals available.

**Exhibit 8: Ability to Afford to Eat Balanced Meals by Household Income**



Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands - 2013. This analysis was for the question, “In the past 12 months how often did the following statement describe your family’s food situation: We could not afford to eat balanced meals?”. The analysis was restricted to respondents who answered “never true”, coded as Could Afford, “often true” coded as Could Not Afford, and “sometimes true” coded as Could Not Afford.

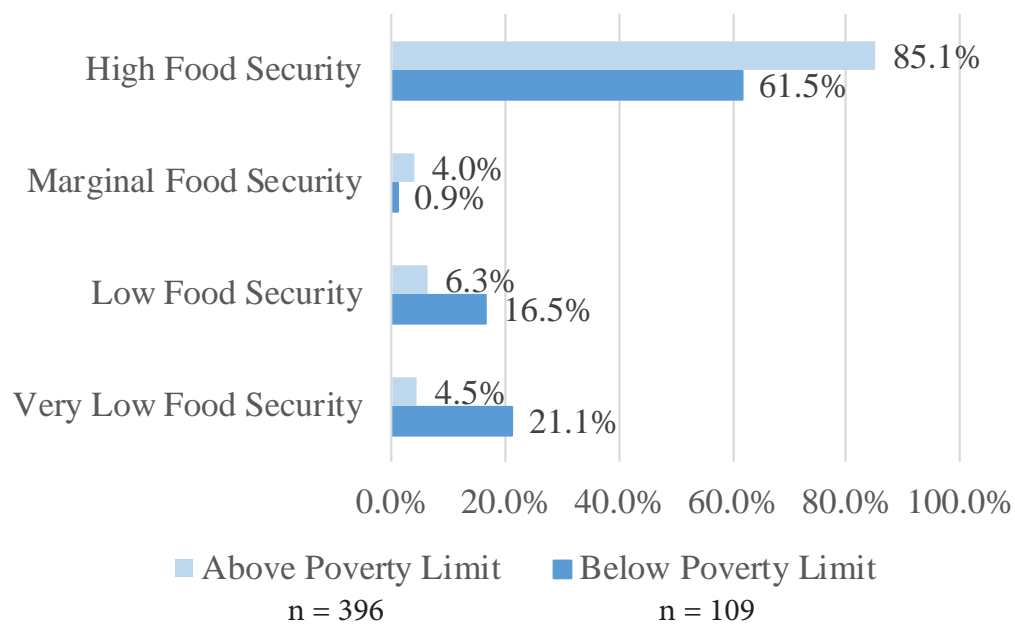
## Quantity of Food

Food security was also assessed by evaluating adequate access to food. Access to food was assessed by having the participants respond to the following statement: “The food that we bought just didn’t last, and we didn’t have enough money to get more food.” Over 20% of the middle-aged respondents indicated that food did not last and they did not have enough money to get more ( $p = 20.8\%$ ). This means almost one in five middle-aged respondents experience food shortage in their household. The survey results revealed that food shortage is more common in households with income below the FPL when compared to households with income above the FPL ( $\chi^2 = 48.28 (1), \rho < .001$ ). Almost one-half of the middle-aged adults whose household income was below FPL indicated that the food that they bought just didn’t last, and they didn’t have enough money to get more food ( $p = 45.8\%$ ). Middle-aged adults whose income placed them below the poverty were 5 times more likely to indicate that the food they bought just did not last ( $OR = 5.0, C.I. = 3.1 - 8.1$ ). Logistic regression was used to evaluate the relationship between age and income and running out of food. The evaluation revealed that income expressed as a percent of FPL was a significant predictor of running out of food ( $Exp(B) = 1.001, \rho < .001$ ), but age was not ( $Exp(B) = 1.042, \rho = .2$ ). The logistic regression results indicated for every 10% increase in FPL there is a 10% reduction in risk of experiencing having food not last in a household.

The distribution of middle-aged respondents into the various food security categories as defined by the USDA was assessed. Almost 20% of the middle-aged respondents lived in households that experienced some level of food insecurity ( $p = 19.9\%$ ). There was a different distribution pattern of level of food security between middle-aged respondents who lived in households above the poverty limit when compared to middle-aged respondents who lived in households below the FPL ( $\chi^2 = 47.7 (3), \rho < .001$ ). Middle-aged respondents with a household income below the FPL were less likely to have high food security when compared middle-aged respondents with a household income above the FPL.

1. USDA. (2014). Food Security of U.S. Households in 2014. Retrieved at <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx#householdtype>.
2. USDA. (2014). Measurement. Retrieved at <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx#security>.
3. Ziliak, J.P. & Gunderson, C. (2011). Food Insecurity among older adults. AARP Foundation. Retrieved from [http://www.aarp.org/content/dam/aarp/aarp\\_foundation/pdf\\_2011/AARPFoundation\\_HungerReport\\_2011.pdf](http://www.aarp.org/content/dam/aarp/aarp_foundation/pdf_2011/AARPFoundation_HungerReport_2011.pdf)USDA.

### Exhibit 9: Food Security in Middle-Aged Respondents by Household Income



Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands - 2013. This analysis was for the questions regarding the family’s food situation in the past 12 months.



## Home Factors Related to Food

The majority of the middle-aged adults who responded to this survey indicated that they had the following features that are related to food storage or preparation in their home: hot and cold running water (98%), a sink with a faucet (99%), a stove or range (98.6%), and a refrigerator (99%) in their home. The majority of middle-aged respondents appear not to lack resources in their home that are associated with food storage and preparation. The survey may not have been accessible to the most vulnerable of the population, as it was mailed to residences and post office boxes. Data for those without a home address were not captured in this study.

## Funding Sources for Food

The survey asked respondents to indicate which types of funding sources were used to purchase or obtain food. There was no difference in frequency of funding source among the three middle-age groups. There was however a difference in frequency of funding sources for food across the two income groups, above and below the FPL. Utilization of CalFresh and Food Pantries were accessed more often in middle-aged adults whose income was below the FPL when compared to those middle-aged adults whose income was above the FPL. The middle-aged adults who lived in poverty used cash less often and used supplemental sources

for food acquisition (i.e., CalFresh and Food Pantries) more often when compared to middle-aged adults who had an income level above the FPL (*z score* > 1.96). Only 21% of middle-aged adults who lived in poverty and did not use either SSI or SSDI benefits indicated that they did use CalFresh to purchase food.

**Exhibit 10: Funding Sources used to Purchase Food by Household Income**

Below Federal Poverty Limit (n = 108)		Above Federal Poverty Limit (n = 396)	
Funding Source	Percent	Funding Source	Percent
Cash	37.0%	Cash	87.1%
CalFresh	28.7%	CalFresh	4.8%
WIC	11.1%	WIC	3.4%
CalWorks/TANF	1.9%	CalWorks/TANF	1.0%
Food Bank	26.9%	Food Bank	1.5%
SSI/SSDI Benefits	58.3%	SSI/SSDI Benefits	20.5%

Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands - 2013. This analysis was for the questions regarding funding sources used to purchase food. More than one response could be selected.

## Access to Food

Sixty-eight percent of the respondents indicated that access to fresh fruits and vegetables were available to them in their neighborhood or community. There was no difference in access to fresh fruits and vegetables across income levels or among middle-age categories. The average time to get to a grocery store was 19 minutes (*SD* ± 26 minutes). The average travel time found in this study agrees with others who have found an 18 minutes travel time in rural Iowa.<sup>1</sup> The range of time that participants indicated that it took them to get to a grocery store was between 0 – 300 minutes, with a median time of 10 minutes. Although some Del Norte residents have a long journey to the nearest grocery store, half of the middle-aged respondents indicated that their travel time to the grocery store was less than 10 minutes.

1. Bitto, E., Morton, L.W., Oakland, M.J., & Sand, M. (2003). Grocery store access patterns in rural food deserts. *Journal for the Study of Food and Society*, 6, (2), 35-48.

# Health Care

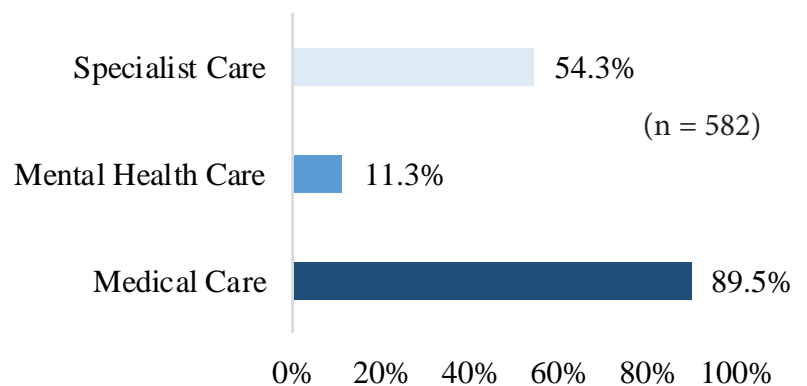
## Meeting Health Care Needs

Most of the respondents indicated that they did not need healthcare in the previous 12 months ( $p = 76.1\%$ ). A portion of the middle-aged adults indicated that they were not able to get the care that they needed ( $p = 9.4\%$ ). The 14 comments regarding the reasons why respondents were not able to obtain the healthcare they needed were evaluated. These responses could be grouped into two topics, cost of care (due to co-pay or due to no insurance coverage for primary care, dental care, or eye care), and access to care (due to insufficient primary care providers in the community, no local specialist health care, and remote location of respondent).

## Health Encounters

The survey posed questions regarding health encounters. Respondents provided information regarding health encounters with primary care medical providers, specialists, mental health providers and dental care providers. Most of the middle-aged respondents indicated that they had seen their primary care provider for either sick or preventive healthcare in the past 12 months ( $p = 89.5\%$ ). There was no statistical difference in prevalence of seeing a medical provider in the past year when respondents whose income placed them above the poverty limit were compared to respondents whose income placed them below the poverty limit ( $p > .05$ ). There was also no difference in frequency of seeking medical care among the three middle-age categories ( $p > .05$ ).

**Exhibit 12: Types of Health Care received in the Past 12 Months in Middle-Aged Residents**



Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands - 2013. This analysis was for the questions regarding types of medical care received in the past 12 months.

A small minority of the respondents indicated that they had seen a mental health specialist in the past year ( $p = 11.3\%$ ). Of those receiving mental health care, 64.7% indicated that they were either very satisfied or somewhat satisfied with the services received.

Over one-half of the middle-aged respondents indicated that they were seen by a specialist in the past 12 months ( $p = 54.3\%$ ). The middle-aged respondents to this survey indicated a high prevalence of at least annual access to primary medical care and specialty medical care, but utilization of mental health care was much lower.

## Oral Health

Access to dental health care was evaluated using a number of questions on the survey. Only 64.4% of the middle-aged respondents indicated that they had seen a dentist for any reason in the past 12 months. The CDC reports similar results, with 61.6% of adults between 18 and 64 years having seen a dentist in the previous year.<sup>2</sup> The majority of the middle-aged respondents indicated that they had a particular dentist or dental clinic that they usually went to get dental care ( $p = 75.6\%$ ). Despite recommendations for twice a year dental cleaning, over one-third of the middle-aged respondents indicated that they had no dental health care in the past 12 months ( $p = 35.6\%$ ). Only 54.4% of the middle-aged respondents indicated that their last dental cleaning was within the last year. Dental cleaning, oral exams and care of dental caries are not covered by medical insurance and may account for the lower frequency of dental care encounters when compared to the medical care encounters (64.4% versus 89.5%). Supplemental insurance packages to provide dental coverage can be purchased, but these plans may not be affordable to all. The results from this study did reveal a statistical difference in the percentage of middle-aged respondents who had a dental care encounter in the past year when comparing income levels of above ( $p = 71.8\%$ ) and below ( $p = 48.1\%$ ) the FPL ( $\chi^2 = 20.20 (1), p < 0.001$ ). The CDC has also reported an income level related difference in dental care use.<sup>2</sup> Low household income appears to be a barrier to accessing dental care.

Dental disease can impact the ability to chew foods and can limit food selection, leading to poor nutrition. Oral health can influence overall health as dental decay and periodontal disease create a portal for entry of infections. Tooth loss can create psychological distress due to body image disturbance.<sup>1</sup>

1. Department of Health and Human Services. (2000). Oral Health in America: A Report of the Surgeon General- executive Summary. Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health. Retrieved from <http://www.nidcr.nih.gov/DataStatistics/SurgeonGeneral/Report/ExecutiveSummary.htm#challenge>
2. CDC. (2014). Oral and Dental Health. Retrieved at <http://www.cdc.gov/nchs/fastats/dental.htm>.

## Travel Time

The distance to medical care or dental care can represent a barrier to receiving timely services for individuals who live in rural areas. National travel data indicates that the average distance travelled for a medical or dental visits is longer for rural residents when compared to urban residents.<sup>1</sup> Others have found that 24% of rural residents travel 13 to 50 miles for medical care.<sup>2</sup> Our data shows that 41.3% of the middle-aged respondents travel outside the county for health services on a regular basis. Fifteen percent of middle-aged respondents indicated that they travelled at least 1 hour to get to medical appointments. The range of indicated travel time to medical appointments was from 1 minute to 6 hours. The median travel time to medical appointments was 15 minutes. Data from the 2001 National Household Travel Survey indicates that the average trip for medical or dental care was 22 minutes for rural residents.<sup>1</sup> Twelve percent of the middle-aged respondents in this study indicated that transportation was an issue in meeting their health care needs. The frequency of transportation being a barrier to meeting health care needs was no different in those who indicated that their average driving time to medical appointments was 1 hour or greater, when compared to those who indicated that their average driving time to medical appointments was less than 1 hour. There was however a difference in prevalence of transportation barriers to health care when a comparison was made based on income level below or above poverty level ( $\chi^2 = 32.21 (1), p < 0.001$ ). These findings indicate that middle-aged adults in DNATL travel a greater distance to obtain medical care when compared to national data for urban residents. Further, for a minority of middle-aged DNATL residents, transportation represents a barrier to obtaining needed medical care. These findings indicate that transportation issues in obtaining medical care was more common for those who live in poverty when compared to those with an income level higher than the FPL.

1. Probst, J.S., Laditka, S.B, Wang, J., Johnson, A. O. (2006). Mode of Travel and actual Distance traveled for medical or Dental Care by Rural and Urban Residents. South Carolina Rural Health Research Center. Retrieved at [http://rhr.sph.sc.edu/report/SCRHRC\\_ModeofTravel\\_Exec\\_Sum.pdf](http://rhr.sph.sc.edu/report/SCRHRC_ModeofTravel_Exec_Sum.pdf).
2. Edelman, M.A. and Menz, B.L. (1996). Selected comparisons and implication of a national rural and urban survey of health care access, demographics, and policy issues. *Journal of Rural Health* 12 (93), 197-205.

## Medical Insurance

Of the 500 individuals that responded to the insurance questions, 17.0% indicated that they did not have insurance. Others have found similar rates of being uninsured in near-elder individuals.<sup>1</sup> The largest portion of middle-aged respondents in this survey had private medical insurance (51.5%). Smaller portions of the middle-aged respondents had Medicare insurance (8.5%) or Medi-Cal insurance (26.1%).

1. Kaiser Family Foundation (2014). The Uninsured: An Interactive Tool. Retrieved from <http://kff.org/interactive/the-uninsured-an-interactive-tool/>.

## Medical Home

Quality of medical care has been linked to a number of variables. These variables have been clustered into a concept known as patient centered medical home (PCMH). The National Survey of Children's Health (NSCH) has created a PCMH measure that is a composite of five components.<sup>1</sup> These components include the following:

1. There is a personal care provider
2. There is a usual source of care
3. Referrals are obtained when needed
4. There is care coordination when needed.
5. Care is family-centered

The medical home concept was originally devised to improve the quality of care of special needs children. The use of the concept to evaluate quality of care has been expanded to include all children, adults, and families. A PCMH is envisioned as a cultivated partnership between the patient and the personal health care provider with collaboration from specialists and the community.<sup>2</sup> A collaboration of national medical associations have agreed that the crucial components of a PCMH are as follows: health care should be accessible, family-centered, continuous, comprehensive, coordinated, compassionate and culturally effective.<sup>3</sup>

1. The Child and Adolescent Health measurement Initiative Oregon Health & Science University. (2012). Measuring Medical Home for Children and Youth. Retrieved from [http://www.childhealthdata.org/docs/medical-home/mhmanual\\_withappendices-updated-12-7-10-pdf.pdf](http://www.childhealthdata.org/docs/medical-home/mhmanual_withappendices-updated-12-7-10-pdf.pdf).
2. U.S. Department of Health and Human Services. (2013). What is a medical home? Why is it important? HRSA. Retrieved from <http://www.hrsa.gov/healthit/toolbox/Childrenstoolbox/BuildingMedicalHome>.
3. Patient-Centered Primary care Collaborative. (2014). Defining the medical home. Retrieved from <https://www.pcpc.org/about/medical-home>

## Personal Care Provider

The Rural Healthy People rated access to quality health services as the top ranking rural health priority.<sup>1-3</sup> Having a personal care provider is seen as a vital component to the concept of medical home. A personal care provider was defined by American Academy of Pediatrics as a health provider who is familiar with the patient's health history.<sup>4</sup> Of the middle-aged respondents 78.2% indicated that they had a personal care provider. This finding agrees with others who have also found that 78% of rural residents have a usual primary care provider.<sup>2</sup> Access to a personal care provider was not different between middle-aged respondents that had an income level below the FPL when compared to middle-aged adults with an income above the FPL. However, middle-aged adults without insurance were less likely to have a personal care provider ( $p = 51.0\%$ ) when compared to middle-aged adults with any kind of insurance ( $p = 83.8\%$ ) ( $\chi^2 = 48.478$  (1),  $p < .001$ ). Middle-aged adults without insurance were five times less likely to have a personal care provider when compared to age matched peers who had medical insurance ( $OR = 5.0$ ,  $CI = 3.1 - 8.0$ ). There was no statistical difference in frequency of having a personal care provider in the middle-aged adults who had Medi-Cal insurance ( $p = 84.0\%$ ) when compared to middle-aged adults with any private medical insurance ( $p = 84.7\%$ ) or Medicare insurance ( $p = 82.1\%$ ). This data indicates that middle-aged adults who do not have any insurance are less likely to have a personal care provider when compared to middle-aged adults who have either private or public medical insurance.

1. Bolin, J.N., Bellamy, G. (2010). Rural Healthy People 2020. Retrieved from <http://sph.tamhsc.edu/srhc/docs/rhp2020.pdf>.
2. Gamm, L. Hutchinson, Bellamy, G. et al. (2002). Rural Healthy People 2010: Identifying rural health priorities and modes of practice. *Journal of Rural Health* 18 (1), 9-14.
3. Gamm, L.D., Hutchinson, L.L., Dabney, B. J. and Dorsey, A. M. eds. (2003) Rural Health People 2010: A Companion Document to Healthy People 2010. Volume 1. College Station, Texas: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health research Center.
4. American Academy of Pediatrics. (2002). The Medical Home. *Pediatrics*. 110 (10), 184-186.

## Usual Place of Care

Another component of medical home pertains to access to usual source of care. The majority of middle-aged respondents in the survey indicated that they had a usual source of care that was not the emergency department, urgent care center, or a retail clinic (81.4%). The prevalence of having a usual source of care was lower than others have reported for rural residents ( $p = 89\%$ ).<sup>1</sup> Over 19% of the middle-aged adults in this study lacked a usual source of care that met the criteria for having a PCMH. Middle-aged adults without insurance were less likely to have a usual source of care when compared to the middle-age adults who had medical insurance ( $p = 72.6\%$  versus  $p = 83.2\%$ ) ( $\chi^2 = 5.15$  (1),  $p = .014$ ). Middle-aged adults with Medi-Cal insurance were slightly likely to have a usual source of care as those with either private insurance or Medicare insurance (72.5% versus 86.2% and 81.3%, respectively). This difference was not statistically significant ( $p > .05$ ). Those middle-aged adults with income level below the FPL were less likely to have a usual source of care when compared to middle-aged adults with income level above the FPL ( $\chi^2 = 5.70$  (1),  $p = .010$ ). Both poverty and lacking medical insurance reduced the likelihood that middle-aged adults in DNATL had a usual source for medical care. Access to care may have had an impact on the ability of some DNATL residents to establish a single medical practice as a medical home. When asked how often they were able to access care that they needed right away, only 26.0% indicated that needed care was 'always' available, and 27.9% indicated that urgent care was 'never' or only 'sometimes' received as soon as they needed it. Timely access to care was delayed in routine care as well. Only 38.9% of the middle-aged adults indicated that they were 'always' able to get appointments for check-up as soon as they thought one was needed. The response to these questions indicate that the primary care providers in the community may not be adequate to meet the routine and urgent care needs of residents in Del Norte County and Adjacent Tribal Lands.

1. Gamm, L. Hutchinson, Bellamy, G. et al. (2002). Rural Healthy People 2010: Identifying rural health priorities and modes of practice. *Journal of Rural Health* 18 (1), 9-14.

## Referrals

The third component of medical home addresses the ability to obtain needed referrals. Over one-half of the middle-aged adults needed a referral to a medical specialist in the past 12 months ( $p = 56.8\%$ ). There was a difference in frequency of need for specialist care among those with and without insurance, with higher indicated need for referral to specialist medical care for those with insurance ( $p = 60.9\%$ ) when compared to those without insurance ( $p = 36.2\%$ ) ( $\chi^2 = 19.86$  (1),  $p < .001$ ). The middle-aged adults who lived in poverty had a greater frequency of need for specialist care (72.1%) when compared to those middle-aged adults who had an income level above the FPL (54.9%) ( $\chi^2 = 10.17$  (1),  $p = .001$ ). These results indicate that both insurance status and poverty influence the need for specialty medical care.

Access to needed specialist services is an essential component of quality healthcare. For this reason the concept of PCMH has access to referrals as a component in the construct. For individuals who needed a referral and did not find that it was difficult to obtain, their health care quality met the standards as defined by the construct of PCMH. For individuals who needed a referral and found it slightly or very difficult to obtain, their healthcare did not meet the requirements of PCMH. Of the middle-aged adults that needed medical specialty services, 85% had no difficulty obtaining a referral. For these individuals, their health care met the standard for having a PCMH. The healthcare quality of the remaining portion of adults, which needed a referral and found that it was difficult to obtain, failed to meet the criteria for PCMH.

There was no statistical difference in experiencing difficulty in obtaining a needed referral between those without insurance (26.6%) when compared to those with insurance ( $p = 21.6\%$ ) ( $p > .05$ ). There was no statistical difference in frequency of experiencing difficulty in obtaining a referral between middle-aged adults among the three age categories or between income level of above or below the FPL. Middle-aged adults with Medi-Cal were more likely to experience difficulty obtaining a needed referral when compared to those middle-aged adults with Medicare or private insurance ( $\chi^2 = 8.23$  (3),  $p = .04$ ).

1. Gamm, L. Castillo, G. and Pittman, S. (2003). Access to quality health services in rural areas – primary care: a literature review. *Rural Healthy People 2010*. Retrieved at <http://sph.tamhsc.edu/centers/rhp2010/03Volume2accessprimarycare.pdf>.

## Family Centered Care

The fourth component of a medical home addresses the concept of family centered care (FCC). This component consists of questions that ask the respondent about their relationship with their personal care provider. The questions ask if their provider makes them feel like a partner in care, if their provider listens to them carefully, if their provider spends enough time with them, if provider gives them enough information about their health condition, and if their provider is sensitive to their values and customs. A person was deemed as having family centered care if they felt that these actions 'always' or 'usually' occur. For those middle-aged adults who sought care in the past 12 months, only 7.3% had not experienced these family center ideals 'always' or 'usually' with their healthcare provider. There was no difference in frequency of meeting the FCC criteria for those middle-aged adults without medical insurance when compared to those middle-aged adults with medical insurance ( $p > .05$ ). There was no difference in prevalence of receiving FCC by income level defined as above and below FPL ( $p > .05$ ). The majority of middle-aged adults who sought medical care in the past 12 months had received medical care that met the standards of PCMH, regardless of income level or being uninsured, or type of insurance.

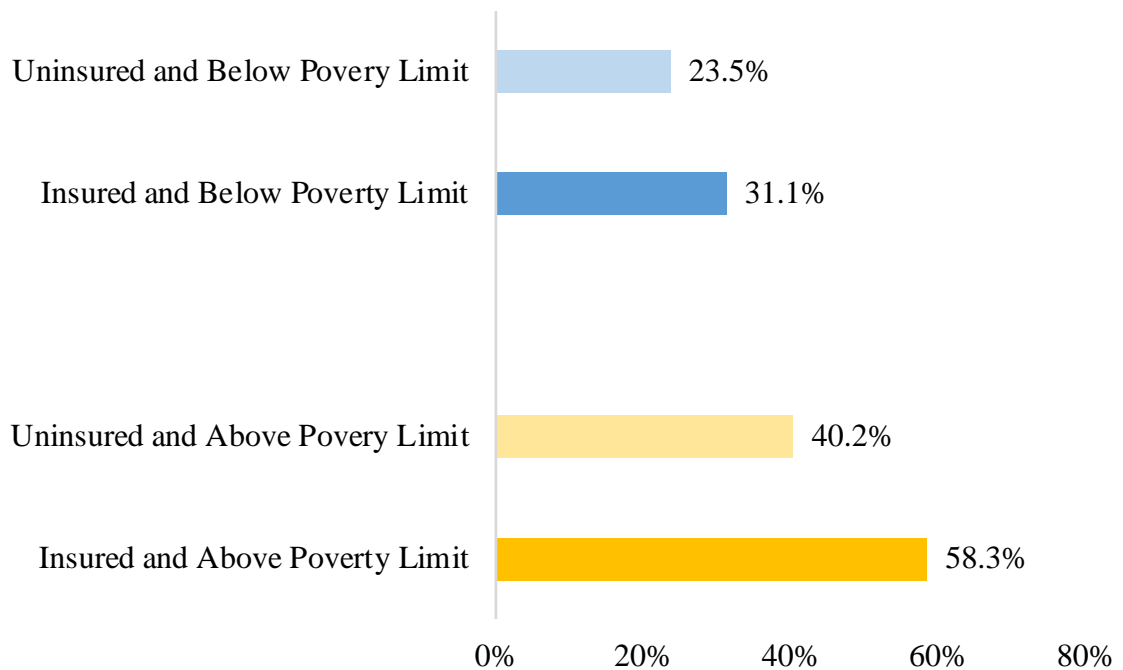
## Effective Care Coordination

The fifth component of a medical home evaluates effective care coordination (ECC). Care coordination was assessed in individuals who had seen both a primary care provider and at least one specialist in the past 12 months. Over one-half of the middle-aged adults had seen their primary health care provider and at least one specialist in the past 12 months ( $n = 296$ ). The minority of middle-aged adults who needed care coordination were not able to easily obtain the support that they needed ( $p = 22.6\%$ ). For these individuals, the health care they received did not meet the standards of PCMH as having ECC. Middle-aged adults who have an income below the FPL had lower frequency of having effective care coordination when compared to the middle-aged adults with income levels above the FPL ( $\chi^2 = 6.26 (1), p = .007$ ). There was a difference in failing to meet the criteria for ECC based on insurance type (no insurance = 14.3%, private insurance = 18.3%, Medicare = 30.1% and Medi-Cal = 34.4%) ( $\chi^2 = 8.08 (3), p = .04$ ).

## Medical Home

In the middle-aged adults who returned the survey, 49.4% had health care that met the NCHS criteria of having a medical home in all five components of this construct. Middle-aged adults who had an income below the FPL were less likely to have a PCMH ( $p = 37.5\%$ ) when compared to middle-aged adults with an income above the FPL ( $p = 53.6\%$ ) ( $\chi^2 = 7.81$  (1),  $p = .003$ ). Middle-aged adults who were uninsured were less likely to have a PCMH ( $p = 29.2\%$ ) when compared to those middle-aged adults who had medical insurance ( $p = 53.6\%$ ) ( $\chi^2 = 16.65$  (1),  $p < .001$ ). The middle-aged adults who have an income level below the FPL and had no insurance were even less likely to have PCMH ( $p = 23.5\%$ ). Income level had an influence on prevalence of having a PCMH even in those middle-aged adults who had medical insurance. Those with medical insurance who lived in poverty had lower prevalence of having a PCMH than middle-aged adults with medical who had household income levels above the FPL ( $\chi^2 = 15.35$  (1),  $p < .001$ ). Both income level and medical insurance seem to be a factor in receiving healthcare that meets the tenets of a patient centered medical home. Logistic regression was conducted to determine if both income and insurance status influence whether individuals have a PCMH. Both income, expressed a percent of FPL, and insurance status were significant predictors of PCMH (percent FPL – Exp(B) = 1.007,  $p < .001$  and insurance status Exp(B) = 1.002,  $p = .003$ ). Hence, individuals who are low income and are uninsured are less likely to have PCMH when compared to individuals who are insured or have income above the FPL. Exhibit 13 demonstrates the additive nature that the two variables, income and insurance, has on PCMH.

**Exhibit 13: Patient-Centered Medical Home in the Past 12 Months by Insurance Status and Poverty Status**



Source: California Center for Rural Policy. (2015). Community Health and Wellness Survey Del Norte and Adjacent Tribal Lands - 2013. This analysis was for the questions regarding types of medical care received in the past 12 months.

1. Agency for Healthcare Research and Quality. Usual Source of Healthcare and Selected Population Characteristics, United States, 2012. Medical Expenditure Panel Survey Household Component Data.

# Appendix



## Del Norte & Adjacent Tribal Lands Community Health & Wellness Survey



*Dele vuelta a la hoja para espanol*

**Thank you for completing this important survey to help us understand and improve health and healthcare in your community.** Participation in this survey is voluntary, anonymous, and confidential. Please have an adult (18 or older) in your household complete the survey and return it in the postage paid envelope by **May 30, 2013**. **Only complete one survey per household.** Answer the following questions about yourself. If you have children, please also complete the child section.

- 1) Within the past 12 months, were you able to get the healthcare (including mental healthcare) you needed?  
 Healthcare not needed       Yes       No → If No, please explain why \_\_\_\_\_  
\_\_\_\_\_
  
- 2) What types of health insurance do you have? *Please check all that apply.*  
 None       Other government plans such as: Healthy Families,  
 Private insurance      Family Planning Access Care and Treatment (PACT),  
 Medicare      County Medical Service Program (CMSP).  
 Medi-Cal       Other (please explain) \_\_\_\_\_
  
- 3) A personal doctor or nurse is a health professional who knows you well and is familiar with your health history. This can be a general doctor, a specialist doctor, a nurse practitioner, or a physician's assistant. Do you have one or more persons you think of as your personal doctor or nurse?  
 Yes       No       Don't Know
  
- 4) Is there a place that you USUALLY go to when you are sick or you need advice about your health?  
 No       Don't Know  
 Yes → **If Yes, What kind of place do you go to most often? Please check one.**  
 Doctor's Office/Health Center/Clinic/Indian Clinic       Mexico/Other Locations out Of United States  
 Hospital Outpatient Department       Oregon  
 Hospital Emergency Room or Urgent Care       Some Other Place \_\_\_\_\_  
 Retail Store Clinic or "Minute Clinic"       Do Not Go to One Place Most Often  
 School (Nurse, Athletic Trainer, Etc.)       Don't Know  
 Friend/Relative
  
- 5) During the past 12 months did you see a doctor, nurse, or other health care professional for any kind of medical care, including sick care, well-check-ups, physical exams, and hospitalizations?  
 Yes       No       Don't Know  
**↓**  
**If No or Don't Know skip to question #12**
  
- 6) During the past 12 months, when you phoned to get an appointment for care you needed **right away**, how often did you get an appointment as soon as you thought you needed?  
 Always       Usually       Sometimes       Never       Don't Know       Does Not Apply
  
- 7) During the past 12 months, when you phoned to get an appointment for a **check-up or routine care**, how often did you get an appointment as soon as you thought you needed?  
 Always       Usually       Sometimes       Never       Don't Know       Does Not Apply
  
- 8) During the past 12 months, how often did your doctors or other health care providers help you feel like a partner in your care?  
 Always       Usually       Sometimes       Never       Don't Know



- 9) During the past 12 months, how often did your doctors or other health care providers listen carefully to you?  
 Always     Usually     Sometimes     Never     Don't Know
- 10) During the past 12 months, how often did your doctors or other health care providers spend enough time with you?  
 Always     Usually     Sometimes     Never     Don't Know
- 11) Information about your health or health care can include things such as the causes of any health problems, how to care for yourself now, and what changes to expect in the future. During the past 12 months, how often did you get the specific information you needed from your doctors or other health care providers?  
 Always     Usually     Sometimes     Never     Don't Know
- 12) When you are seen by doctors or other health care providers (including mental health), how often are they sensitive to your family's values and customs?  
 Always     Usually     Sometimes     Never     Don't Know     Does Not Apply
- 13) During the past 12 months, did you need a referral to see any doctors or receive any services?  
 No     Don't Know  
 Yes → **If Yes**, How difficult was it to get the referral? *Please check one.*  
 Not difficult     Slightly difficult     Very difficult     Don't Know
- 14) Mental health professionals include psychiatrists, psychologists, psychiatric nurses, clinical social workers, and therapists/counselors. During the past 12 months, have you received any treatment or counseling from a mental health professional?  
 Yes     No     Don't Know
- 15) Overall, how satisfied are you with the mental health services in your community?  
 Very Satisfied     Somewhat Satisfied     Somewhat Dissatisfied     Very Dissatisfied  
 Don't Know
- 16) Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and others who specialize in one area of health care. During the past 12 months, did you see a specialist (other than a mental health professional)?  
 Yes     No     Don't Know
- 17) Does anyone help you arrange or coordinate your care among the different doctors or services that you use?  
 Yes     No     Don't Know     Does Not Apply
- 18) During the past 12 months, how often did you get as much help as you wanted with arranging or coordinating your care?  
 Always     Usually     Sometimes     Never     Don't Know     Does Not Apply
- 19) Overall, how satisfied are you with the communication among your doctors and other health care providers?  
 Very Satisfied     Somewhat Satisfied     Somewhat Dissatisfied     Very Dissatisfied  
 Don't Know     No Communication Needed or Wanted
- 20) Do you regularly go outside your county for health services?  
 Yes     No
- 21) During the past 12 months, did you see a dentist for any kind of dental care, including check-ups, dental cleanings, x-rays, or filling cavities?  
 Yes     No
- 22) Is there a particular dentist or dental clinic that you usually go to if you need dental care or dental advice?  
 Yes     No     Do Not Go to One Place Most Often
- 23) To the best of your knowledge when did you last have your teeth cleaned at a dentist's office?  
 Within the past year     1-2 years ago     2-5 years     5 or more years ago  
 Don't Know     Never

24) What county do you live in?  Del Norte  Humboldt  Siskiyou  Other \_\_\_\_\_

25) What town or community/village do you live in? \_\_\_\_\_

26) What zip code do you live in? \_\_\_\_\_

27) What type of building/structure do you live in? **Please check one.**

- House  Duplex  Building with 3 or more units  
 Mobile home/trailer  Other \_\_\_\_\_

28) Do you own or rent your home? **Please check one.**

- Owned or being bought by someone in household  Rent  Other arrangement

29) In your home, do you currently have Internet access?

- No  Yes → **If Yes, what type(s) of Internet access? Please check all that apply.**
- Cable modem from Charter Communications  Satellite  
 DSL from Frontier, AT&T or Verizon  Cellular broadband  
 Tsunami or other wireless company  Don't Know  
 Dial-up  Other \_\_\_\_\_

30) In your home, do you currently have phone access?

- No  Yes → **If Yes, what type(s) of phone access? Please check all that apply.**
- Land line from Frontier, AT&T or Verizon  VoIP  
 Charter Communications  Don't Know  
 Cellular  Other \_\_\_\_\_

31) What is your primary mode of transportation? **Please check one.**

- Walk  Bicycle  Public Transportation  Car/Truck  Other \_\_\_\_\_

32) Approximately how long does it usually take to get to the following places from your home?

- The store where you usually buy food? \_\_\_\_\_ (specify minutes or hours)  
 The place you usually go for healthcare (if applicable)? \_\_\_\_\_ (specify minutes or hours)  
 The place you usually go for dental care (if applicable)? \_\_\_\_\_ (specify minutes or hours)

33) How many automobiles, vans, and trucks are kept at home for use by members of your household?

- None  1  2  3  4  5 or more

34) Is transportation a problem in meeting the health needs of you or your family?

- No  Yes → If Yes, please explain why \_\_\_\_\_

35) Please indicate how much you agree with the following statements:

	Mostly True	Mostly False	Don't Know
a) My neighbors and I talk about community problems and how to solve them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) The sidewalks, trails, and crosswalks in my neighborhood/community are in good condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) During bad weather, there are public indoor facilities my neighbors and I can use close by.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) There are clean parks, playgrounds or green spaces that I feel safe going to in my neighborhood/community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) There are places in my neighborhood/community where I can get fresh fruits and vegetables year-round.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36) In your home do you currently have:

	Yes	No	Don't Know
a) A computer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Hot and cold running water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A flush toilet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A bathtub or shower?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) A sink with a faucet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) A stove or range?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) A refrigerator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) A washing machine?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) A clothes dryer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) A source of electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) A working electrical outlet or wall plug in every room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l) Exposed wiring?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m) Holes in the floor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n) Open cracks or holes in the inside walls or ceilings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o) Holes or open cracks or crumbling in the foundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p) Water leaks (from inside or outside)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q) Broken windows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r) Mold on an area greater than the size of a dollar bill?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

37) In the last 12 months were you or people living in your household ever hungry because you couldn't afford enough food?  
 Yes       No       Don't Know

38) Please indicate how often the following statements describe your/your family's food situation.

In the last 12 months:	Often True	Sometimes True	Never True	Don't Know
a) We worried whether our food would run out before we got money to buy more.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) The food that we bought just didn't last, and we didn't have enough money to get more food.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) We couldn't afford to eat balanced meals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

39) In the last 12 months, which of the following resources did members of your household use to purchase or obtain food?

**Please check all that apply**

- Cash from employment or savings
- Cash or benefits from SSI/SSDI
- WIC coupons
- Cash or benefits from TANF or CalWORKS
- CalFresh (formerly called food stamps)
- Local Food Bank
- Other \_\_\_\_\_

40) Please indicate how often the following statements describe your situation this past year.

<b>In the last 12 months:</b>	<b>Always</b>	<b>Usually</b>	<b>Sometimes</b>	<b>Never</b>	<b>Does Not Apply</b>
a) How often did you feel lonely or isolated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) How often did you get the social and emotional support you needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) How often did <b>you</b> feel safe from violence (physical, verbal or sexual) in <b>your home</b> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) How often did you feel <b>your family</b> was safe from violence (physical, verbal or sexual) in <b>your home</b> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) How often did <b>you</b> feel safe from violence (physical, verbal or sexual) in your <b>neighborhood/community</b> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) How often did you feel <b>your family</b> was safe from violence (physical, verbal or sexual) in your <b>neighborhood/community</b> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) How often were you worried or stressed about having enough money to pay your rent/mortgage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) How often were you worried or stressed about having enough money to buy nutritious meals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

41) In the last 12 months how often did you participate in cultural activities (such as festivals, ceremonies, music, dance)?  
 None       1-4 times       5-11 times       12 or more times       Don't know

42) In the past 12 months, how often did you do any unpaid volunteer work or community service?  
 None       1-4 times       5-11 times       12 or more times       Don't know

43) In what year were you born? \_\_\_\_\_

44) What is your gender?       Male       Female       Other \_\_\_\_\_

45) Are you of Hispanic, Latino, or Spanish origin?       Yes       No

46) What is your race? **Please check all that apply.**  
 White       Black/African American       Asian → describe \_\_\_\_\_  
 American Indian → print name of enrolled tribe \_\_\_\_\_  
 Other \_\_\_\_\_

47) Which of the following best describes your current employment situation? **Please check one.**

<input type="checkbox"/> Employed by an organization/company/business	<input type="checkbox"/> Unemployed, looking for work	<input type="checkbox"/> Disabled
<input type="checkbox"/> Self-employed	<input type="checkbox"/> Unemployed, not looking for work	<input type="checkbox"/> Homemaker
<input type="checkbox"/> Retired	<input type="checkbox"/> Student	<input type="checkbox"/> Other _____

- 48) What is your best estimate of your household's total income **per year** before taxes? \_\_\_\_\_
- 49) Including yourself, how many people are supported by the household income reported in the previous question?  
Number of people \_\_\_\_\_
- 50) How many people total (including yourself) currently live in your household? \_\_\_\_\_ *people*
- 51) Of the people living in your household, how many are:      0-5 years old? \_\_\_\_\_      25 to 64 years old? \_\_\_\_\_  
6 to 17 years old? \_\_\_\_\_      65 years or older? \_\_\_\_\_  
18 to 24 years old? \_\_\_\_\_
- 52) What is the highest level of education that you have completed? **Please check one.**
- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Did not complete high school | <input type="checkbox"/> Vocational training      | <input type="checkbox"/> Master's Degree   |
| <input type="checkbox"/> GED/ High School certificate | <input type="checkbox"/> Some college (no degree) | <input type="checkbox"/> Graduate or professional training beyond Master's Degree. |
| <input type="checkbox"/> High school graduate         | <input type="checkbox"/> Associate degree         | <input type="checkbox"/> Other _____   |
|   | <input type="checkbox"/> Bachelor's Degree        |  |

**Thank you for your time. Please complete the child section if you have children under 18 in your household.**

### Child Section

If you have a child under 18 years of age living in your household,  
please answer the following questions to help us better understand their needs.

**If you have more than one child please complete this for the child that had the most recent birthday.**

- C1) How old is the child that you are answering these questions for? \_\_\_\_\_ Years \_\_\_\_\_ Months
- C2) Within the past 12 months, were you able to get your child the healthcare (including mental healthcare) they needed?  
 Healthcare not needed       Yes       No → If No, please explain why \_\_\_\_\_  
 \_\_\_\_\_
- C3) What types of health insurance does your child have? **Please check all that apply.**
- |  |                                   |   |
|--|-----------------------------------|---|
| <input type="checkbox"/> None              | <input type="checkbox"/> Medicare | <input type="checkbox"/> Other government plans such as: Healthy Families, Family Planning Access Care and Treatment (PACT), County Medical Service Program (CMSP). |
| <input type="checkbox"/> Private insurance | <input type="checkbox"/> Medi-Cal | <input type="checkbox"/> Other (please explain) _____   |
- C4) A personal doctor or nurse is a health professional who knows you well and is familiar with your health history. This can be a general doctor, a specialist doctor, a nurse practitioner, or a physician's assistant. Does your child have one or more persons you think of as their personal doctor or nurse?  
 Yes       No       Don't Know
- C5) Is there a place that your child USUALLY goes when he/she is sick or you need advice about his/her health?  
 No       Don't Know
- Yes → **If Yes, What kind of place does he/she go to most often? Please check one.**
- |   |  |
|---|--|
| <input type="checkbox"/> Doctor's Office/Health Center/Clinic/Indian Clinic | <input type="checkbox"/> Mexico/Other Locations out Of United States |
| <input type="checkbox"/> Hospital Outpatient Department                     | <input type="checkbox"/> Oregon                                      |
| <input type="checkbox"/> Hospital Emergency Room or Urgent Care             | <input type="checkbox"/> Some Other Place _____                      |
| <input type="checkbox"/> Retail Store Clinic or "Minute Clinic"             | <input type="checkbox"/> Does Not Go to One Place Most Often         |
| <input type="checkbox"/> School (Nurse, Athletic Trainer, Etc.)             | <input type="checkbox"/> Don't Know                                  |
| <input type="checkbox"/> Friend/Relative                                    |  |

C6) During the past 12 months did your child see a doctor, nurse, or other health care professional for any kind of medical care, including sick-child care, well-child check-ups, physical exams, and hospitalizations?

- Yes       No       Don't Know

**If No or Don't Know skip to question #C12**

C7) During the past 12 months, how many times did your child see a doctor, nurse, or other health care provider for preventive medical care such as a physical exam or well-child checkup? \_\_\_\_\_ times     Don't Know

C8) During the past 12 months, how often did your child's doctors or other health care providers help you feel like a partner in his/her care?

- Always     Usually     Sometimes     Never     Don't Know

C9) During the past 12 months, how often did your child's doctors or other health care providers listen carefully to you?

- Always     Usually     Sometimes     Never     Don't Know

C10) During the past 12 months, how often did your child's doctors or other health care providers spend enough time with him/her?

- Always     Usually     Sometimes     Never     Don't Know

C11) Information about a child's health or health care can include things such as the causes of any health problems, how to care for a child now, and what changes to expect in the future. During the past 12 months, how often did you get the specific information you needed from your child's doctors or other health care providers?

- Always     Usually     Sometimes     Never     Don't Know

C12) When your child is seen by doctors or other health care providers (including mental health), how often are they sensitive to your family's values and customs?

- Always     Usually     Sometimes     Never     Don't Know     Does Not Apply

C13) During the past 12 months, did your child need a referral to see any doctors or receive any services?

- No       Don't Know

Yes → **If Yes, How difficult was it to get the referral? *Please check one.***

- Not difficult     Slightly difficult     Very difficult     Don't Know

C14) Mental health professionals include psychiatrists, psychologists, psychiatric nurses, clinical social workers, and therapists/counselors. During the past 12 months, has your child received any treatment or counseling from a mental health professional?

- Yes     No     Don't Know

C15) Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and others who specialize in one area of health care. During the past 12 months, did your child see a specialist (other than a mental health professional)?

- Yes     No     Don't Know

C16) Does anyone help you arrange or coordinate your child's care among the different doctors or services that he/she uses?

- Yes     No     Don't Know     Does Not Apply

C17) During the past 12 months, how often did you get as much help as you wanted with arranging or coordinating your child's care?

- Always     Usually     Sometimes     Never     Don't Know     Does Not Apply

C18) Overall, how satisfied are you with the communication among your child's doctors and other health care providers?  
 Very Satisfied       Somewhat Satisfied       Somewhat Dissatisfied       Very Dissatisfied  
 Don't Know       No Communication needed or wanted

C19) Do your child's doctors or other health care providers need to communicate with his/her child care providers/early intervention program, school, or special education program?

No       Don't Know

Yes → **If Yes**, Overall, how satisfied are you with that communication? *Please check one.*

Very Satisfied       Somewhat Satisfied       Somewhat Dissatisfied       Very Dissatisfied  
 Don't Know       No Communication needed or wanted

C20) During the past 12 months, did your child have a toothache, decayed teeth, or unfilled cavities?

Yes       No       Don't Know

C21) Is there a particular dentist or dental clinic that your child USUALLY goes to if he/she needs dental care or dental advice?

Yes       No       Does Not Go To One Place Most Often

C22) During the past 12 months, did your child see a dentist for any kind of dental care, including check-ups, dental cleanings, x-rays, or filling cavities?

Yes       No       Don't Know

C23) During the past 12 months, how many times did your child see a dentist for *preventive* dental care, such as check-ups and dental cleanings? \_\_\_\_\_ times       Don't Know

C24) Has your child received dental care through the Mobile Dental Van at their school?

Yes       No       Does not apply (child not in school)       Don't Know

C25) Does your child attend school?

Yes → **If Yes, what school?** \_\_\_\_\_       No → **If No, you are finished with the survey.**

C26) On most days, how does your child **arrive** at school?

Walk       Family vehicle (only children in your family)  
 Bike or Skate       Carpool (children from other families)  
 School Bus       Other \_\_\_\_\_

C27) On most days, how does your child **leave** from school?

Walk       Family vehicle (only children in your family)  
 Bike or Skate       Carpool (children from other families)  
 School Bus       Other \_\_\_\_\_

C28) How far does your child live from school?

Less than ¼ mile       1 mile up to 2 miles  
 ¼ mile up to ½ mile       More than 2 miles → about how many miles? \_\_\_\_\_  
 ½ mile up to 1 mile       Don't know

C29) How long does it normally take your child to get to school?

Less than 5 minutes       11-20 minutes  
 5-10 minutes       More than 20 minutes → about how many minutes? \_\_\_\_\_  
 Don't know

***End of survey. Thank you for your time.  
Please return the survey in the enclosed postage paid envelope with your raffle entry.***



**Join us online...**

Please join us in an on-line discussion about middle-aged health in Del Norte and Adjacent Tribal Lands. Contribute to the living document by commenting on the research findings, sharing innovative programs and discussing policy implications. To read comments and post your own, please visit our website, [www.humboldt.edu/ccrp](http://www.humboldt.edu/ccrp).

**Join us in the community...**

The California Center for Rural Policy will continue to share research results with the community through briefs, reports and meetings. We plan to engage the community in dialogue about potential solutions and policy recommendations to address identified problem areas. We hope you will join us as we work together to improve health in our region. If you would like to receive information from CCRP please contact us to get on our mailing list: (707) 826-3400 or [ccrp@humboldt.edu](mailto:ccrp@humboldt.edu)

**Join us in collaboration...**

CCRCP welcomes opportunities to collaborate with community partners for more in-depth research on this topic.

The California Center for Rural Policy at Humboldt State University is a research center committed to informing policy, building community, and promoting the health and well-being of rural people and environments.

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