



Center for  
Rural Health

<http://ruralhealth.und.edu>

## Identifying and Addressing Chronic Disease Among American Indian Elders

Twyla Baker-Demaray, MS, Daniel Fasteen, Mary Gattis,  
BS, Richard Ludtke, PhD, Leander R. McDonald, PhD, &  
Kim Ruliffson, BA

Prior Lake, MN  
April 29, 2008

Funded by the Administration on Aging



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



### Center for Rural Health

- Established in 1980, at the University of North Dakota School of Medicine and Health Sciences in Grand Forks, ND
- Focuses on:
  - Education, Training, & Resource Awareness
  - Community Development & Technical Assistance
  - Native American Health
  - Rural Health Workforce
  - Rural Health Research
  - Rural Health Policy
- Web site: <http://ruralhealth.und.edu>



## National Resource Center on Native American Aging



- Established in 1994, at the Center for Rural Health, University of North Dakota School of Medicine and Health Sciences
- Focuses on:
  - Education, Training, and Research
  - Community Development & Technical Assistance
  - Native Elder Health, Workforce, & Policy
- Web site: [www.nrcnaa.org](http://www.nrcnaa.org)

NRCNAA 2008

3



Center for  
Rural Health

<http://ruralhealth.und.edu>

## The National Native Elder Services Locator



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## Acknowledgements

### **Funder:**

This project is funded by Cooperative Agreement: 90-AM-3080-02 from the Administration on Aging.

### **Individual Contributors:**

Title VI Directors and individuals from tribal entities who provided information during the phone interview. Also, Daniel Fasteen, Brian Barclay, Kim Ruliffson, Richard Ludtke, Twyla Baker-Demaray, Pam Ness, and Kaylee Compton, from the NRCNAA and the Center for Rural Health.

### **Organizational Contributors:**

Administration on Aging, National Association of Area Agencies on Aging, specifically the Eldercare Locator, and Kauffman and Associates, Inc.



## Overview

### **The Native Elder Services Locator Project:**

- Serves as a **resource** to assist Native elders, families and service providers to locate services in specific communities.
- Provides a networking resource to tribes seeking **a model** for the provision of long – term care services.



## Background

- Title VI Directors were contacted by phone (July- August 2007) regarding the following questions:
  - Senior services, tribal management of services, site contact information, and interest in sharing information with the Eldercare Locator, NAA (National Association on Area Agencies on Aging).
- Data was merged into useable tables to map the results.
- Interactive mapping was created using a FLASH component and inserted into the NRCNAA website.



## Application

The Native Elder Service Locator can be used to:



- Find services in a tribal/village/homeland locations;
- Print the locations of all services located within each state;
- Print a list of information available at each tribal location;
- Print a list of all tribes participating in the project;
- Print a list of all tribes that have a specific service such as Emergency Medical Services; and
- Print a list of the service definitions as defined by the Administration on Aging



## Where is it located?

Go to our website at:

[www.nrcnaa.org](http://www.nrcnaa.org)

And click on the Service Locator on the Left!

We will show you how to use this....



## How to view all services



- General map showing the number of service centers in each state.
- Roll the mouse over each state to see exact numbers.



- Click on a state to see where services are located
- Click on the NRCNAA logo for more information pertaining to that service location



- The contact information along with the list of services are displayed when the NRCNAA logo is clicked for each location.



## How to view a service



- Select from the Service dropdown menu to display individual services on the map.



- The map updates to show just the states that have the service you selected.



- Click on a state to learn the tribal entities that have the selected service.



## Future Updates

This is a new project and we invite your feedback! Please feel free to share any comments about the project at:

**800-896-7628.**



Center for  
Rural Health

<http://ruralhealth.und.edu>

## Heroes Project



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## What is the Heroes Project?

An opportunity to honor Title VI workers  
or any individuals who you feel have  
impacted the lives of elders in your  
community.



NRCNAA 2008



## Background Information

- Collaborative Project with AoA's 30<sup>th</sup> anniversary celebration year.
- Developed by our late Director, Dr. Alan Allery.



NRCNAA 2008

15



## How to Nominate a Hero:

- Go to: [www.nrcnaa.org](http://www.nrcnaa.org)
- Click on the box labeled Heroes Project
- Click to get to our website.
- Then scroll down on the Heroes Project box for a quick link.

Home > Project > NRCNAA

**National Resource Center on Native American Aging (NRCNAA)**

The National Resource Center on Native American Aging serves the elderly Native American population of the United States. The Center is committed to increasing the awareness of issues affecting American Indian, Alaskan Native, and Native Hawaiian elders and being a voice and advocate for their concerns. Through education, training, technical assistance, and research, the center assists in developing community-based solutions to improve the quality of life and delivery of related support services to this aging population.

**Overview**

Native American elders often share needs that are taken for granted by other elder populations. Services to address these needs remain unavailable, underdeveloped or inaccessible. The elderly native people comprise a rapidly growing population in the United States. Dramatic changes in the health care system need to occur in order to empower, enhance and preserve the vital resources embraced by the Native American elders.

**Empowerment of Native American leaders and service providers is crucial to the elder's health and well-being.**

**Funding Opportunities**

**Elder Care Initiative Long Term Care Grant Program**  
**Letter of Intent Due:** May 2, 2008  
**Application Deadline:** June 20, 2008

View other funding opportunities for American Indians and Alaska Natives

**Heroes Project**  
**DEADLINE EXTENDED!**  
We are seeking nominations from Title VI directors and other program workers for individuals who have impacted the lives of elders in your community.

NRCNAA

16



## What will we do with this information?

- Collect nominees by **September 30<sup>th</sup>, 2008.**
- Awardees (and those who nominated them) notified by October 2008.
- Awards sent to Community for local celebration in October- November, 2008.
- Create a booklet of Elder Heroes in Native committees that will be dispersed by the NRCNAA and AoA, and made available on the website.
- National Ceremony – April, 2009.



NRCNAA 2008

17



## Bill Rossig Wiyot Tribe



- World War II veteran.
- He coached youth football and baseball teams for 45 years,
- Built homes, children's playgrounds
- Started his own Elder Wood Program
- Volunteering for the Blue Lake Rancheria Elder Nutrition Program (even while through cancer treatments).

NRCNAA 2008

18



## Claire Hughes Hawaii

- Dr. Hughes is a respected Native Hawaiian elder.
- She partnered in developing use of the traditional Native Hawaiian Diet (THD)
- After retirement, she has been working for American Cancer Society in the Hawaiian communities.

NRCNAA 2008



## Gregorita Chavarria Kha'p'oo Owinge (Santa Clara Pueblo)

- Testified before the New Mexico Legislature for "Gregorita's Dream", a Regional Adult Day Care Facility which began construction this year.
- Her coherent mind and willingness to share her cultural knowledge was a blessing to us and left lasting momentous memories

NRCNAA 2008





## Do you have anyone in mind?

- *Is there anyone in your community who has or continues to dedicate their time, talent, and energy to help our elders, to solve local problems, and to build stronger communities???*

*A tribal council member, a volunteer, a Title VI Director, a CHR????*



## Contact Information:

**Project Contact: Ann Miller**

Toll Free: (800) 896-7628

e-mail: [annmiller@medicine.nodak.edu](mailto:annmiller@medicine.nodak.edu)

URL: [www.nrcnaa.org](http://www.nrcnaa.org)



## Questions??



NRCNAA 2008

23



Center for  
Rural Health

<http://ruralhealth.und.edu>

## Identifying our Needs III: A Native Elders Needs Assessment



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## The Needs Assessment Team

- Leander “Russ” McDonald, Ph.D – Director
- Richard Ludtke, Ph.D.
- Kyle Muus, Ph.D.
- Twyla Baker-Demaray, Research Analyst
- Kim Ruliffson, NRCNAA Project Coord.
- Joelle Ruthig, PhD, Research Associate
- Mary Gattis, Graduate Research Assistant
  - Kaylee Compton, Student Assistant
  - C.W. Hall, Student Assistant
  - Danny Fasteen, Student Assistant/GIS Coord.



## Purpose of the Project

- Assist tribes in collecting data useful for building infrastructure in their communities.
- Multiple methods are used throughout the study, primary method of data collection is the survey instrument (administered face-to-face with the elders).
- Fulfills requirements for tribes’ Title VI Elder Nutrition program grant applications.



## Population

- Native American elders residing primarily on reservations
- Individuals age 55 and over living on or around Indian areas.
  - Age 55 is considered comparable to 65 and over in the general population



## Data is collected on

- General health status
- Activities of Daily Living (ADL's)
- Instrumental Activities of Daily Living (IADL's)
- Indicators of chronic disease
- Cancer screenings
- Access to healthcare
- Indicators of vision and hearing
- Tobacco and alcohol use
- Nutrition and exercise
- Weight and weight control
- Social supports



## **National Resource Center Provides:**

- Survey instruments – a standardized tool
- Assistance with sampling
- Training on data collection
- Technical support
- Data entry
- Data analysis
- Statistical profiles of your elders
- Comparisons with national norms



## **Local Communities Provide:**

- A resolution from their tribal councils
- A list of names/subjects for the sample
- Data collection
- A repository for the findings and are responsible for getting them to the right people
- Local implementation and coordination



## Regional Variances

- One size does not fit all
- Variation in regard to life expectancy and chronic disease
  - Ex. California Area life expectancy is close to the nations; however, Aberdeen Area is 64.3, a difference of 12.5 years.
  - Ex. Alaska Area has diabetes rate close to the general population at 14%; whereas, the majority of other regions are at 37% or higher.
- Once you seen one tribe - you've only seen one tribe.



## Native Elder Issues

- Growing elder population with Boom generation
- Lower life expectancy
- Higher chronic disease rates
- Higher health risk factors
- Lack of screening
- Lack of long-term care services in Indian Country
- Changing family structure



## The Framework

- *Identifying Our Needs: A Survey of Elders I-III*, funded by the Administration on Aging, provides technical assistance and training opportunities to conduct a needs assessment using an established model.
- The NRCNAA model uses:
  - Academically accepted design and methodology
  - Random sampling ensures fair subject selection
  - The results are independent from political influence
  - Informed consent, tribal approval, and tribal ownership ensure tribal sovereignty is protected
  - The model developed with input from Native elders and Native elder providers ensures respect for Native elders.



## Status of Project

- **Cycle I**
  - 190 tribes from 87 different sites are represented in national file
  - 9,403 Native elder participants have filled out the survey
  - At least one tribe from 11 of the 12 I.H.S. Regional Areas is represented in the national file
- **Cycle II**
  - 254 tribes from 75 sites representing 10,521 Native elders have completed Cycle II
  - 17 tribes have resolutions on file and are now collecting data
  - All 12 I.H.S. Regional Areas are represented in the national file



## Current Status of Project

- **Cycle III**

- 298 Tribes/Alaska Native Villages/Hawaiian Homelands from 127 different sites are represented in national file
- 14,751 Native elder participants have filled out the NRCNAA survey, 774 have filled out the NSAIE survey, for a total of 15,565 AIANNH elders.
- All 12 I.H.S. Regional Areas are represented in the national file.



Center for  
Rural Health

<http://ruralhealth.und.edu>

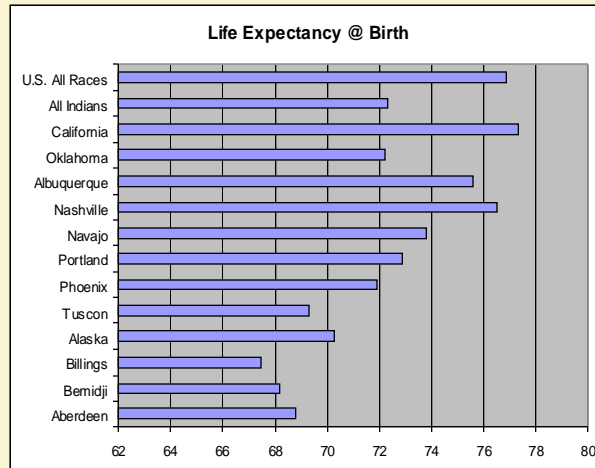
## Demographic Change, Indian Aging, & Life Expectancy



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## Life Expectancy at Birth: U.S., All Indians, and IHS Areas 2000

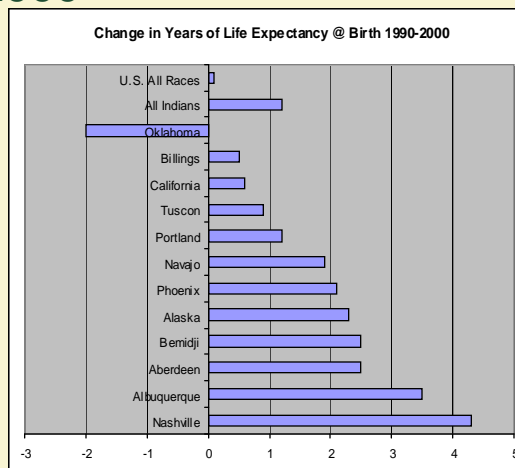


NRCNAA 2008

37



## Changes in Life Expectancy, 1990-2000

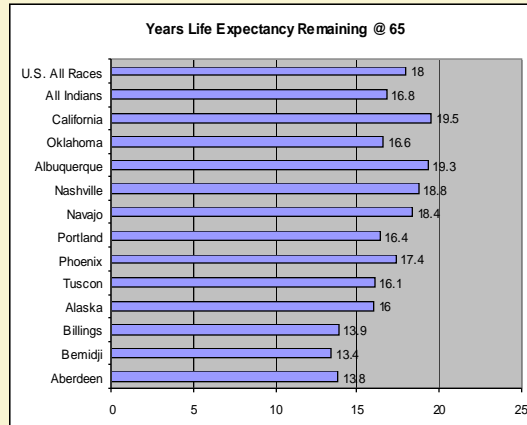


NRCNAA 2008

38



## Remaining Life Expectancy @ Age 65

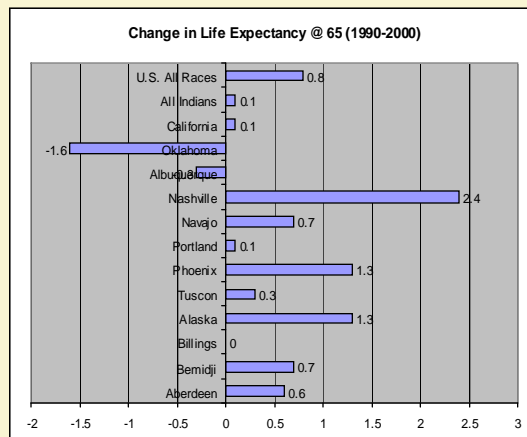


NRCNAA 2008

39



## Change in Remaining Life Expectancy at Age 65



NRCNAA 2008

40



Center for  
Rural Health

<http://ruralhealth.und.edu>

## Population Pyramids Administration on Aging Regions, 2000



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



### AoA Region I

Includes:

- Maine,
- Massachusetts,
- Connecticut,
- New Hampshire
- Rhode Island
- Vermont

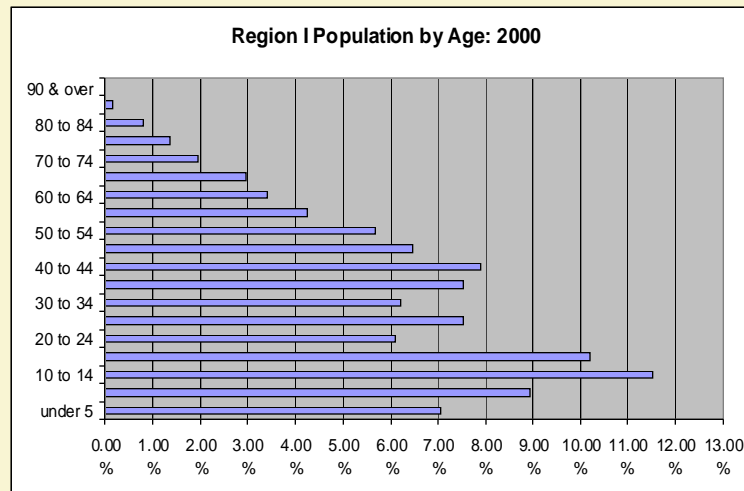
#### Region I



NRCNAA 2008



## AoA Region I



NRCNAA 2008

43



## AoA Region II and III

### Includes:

- New York,
- New Jersey,
- Puerto Rico,
- Virgin Islands,
- District of Columbia,
- Delaware,
- Maryland,
- Pennsylvania,
- Virginia, &
- West Virginia

### Regions II & III

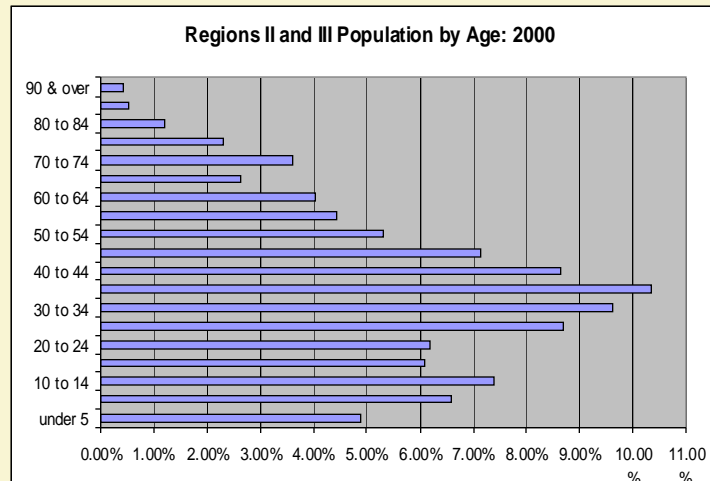


NRCNAA 2008

44



## Regions II and III:



NRCNAA 2008

45



## AoA Region IV

### Includes:

- Alabama,
- Florida,
- Georgia,
- Kentucky,
- Mississippi,
- North Carolina,
- South Carolina, &
- Tennessee

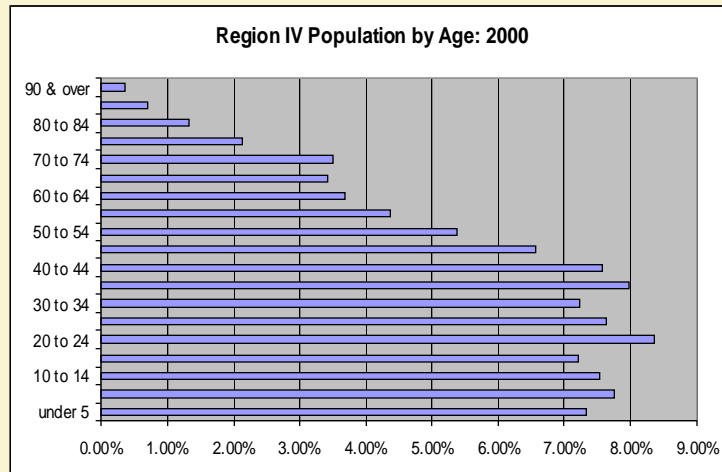


NRCNAA 2008

46



## Region IV



NRCNAA 2008

47



## AoA Region V

### Includes:

- Illinois,
- Indiana,
- Michigan,
- Minnesota,
- Ohio, &
- Wisconsin



NRCNAA 2008

48



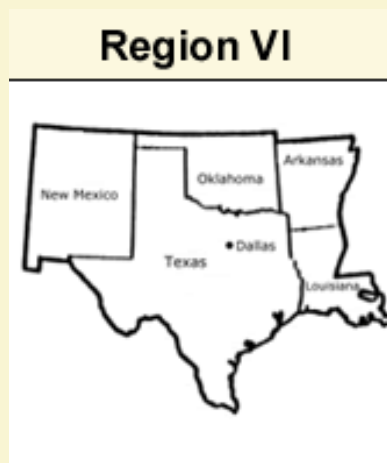
- Image not available in Microsoft 2007



## AoA Region VI

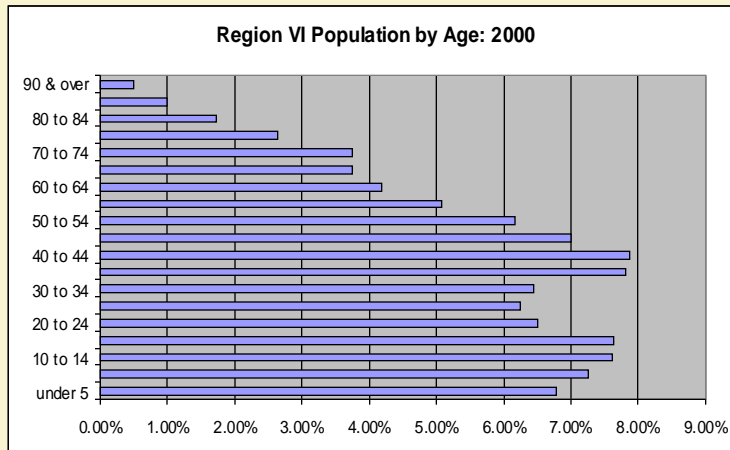
### Includes:

- Arkansas,
- Louisiana,
- Oklahoma,
- New Mexico,
- & Texas





## Region VI



NRCNAA 2008

51



## AoA Region VII

### Includes:

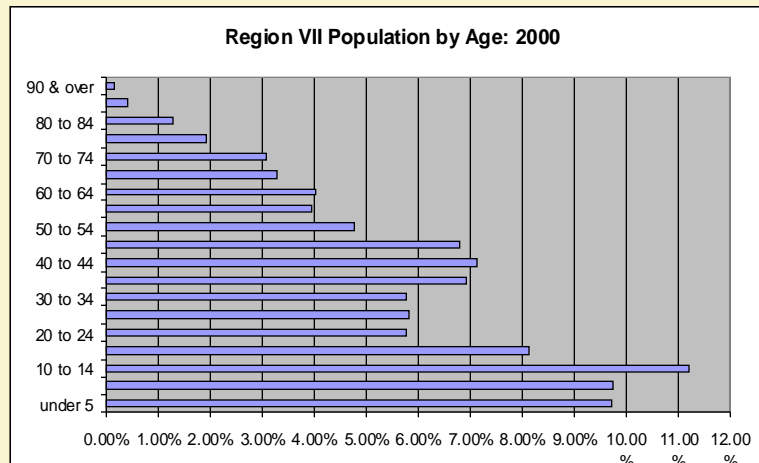
- Iowa,
- Kansas
- Missouri, &
- Nebraska

NRCNAA 2008

52



## Region VII



NRCNAA 2008

53



## AoA Region VIII

### Includes:

- Colorado,
- Montana
- Utah,
- Wyoming,
- North Dakota, &
- South Dakota

### Region VIII

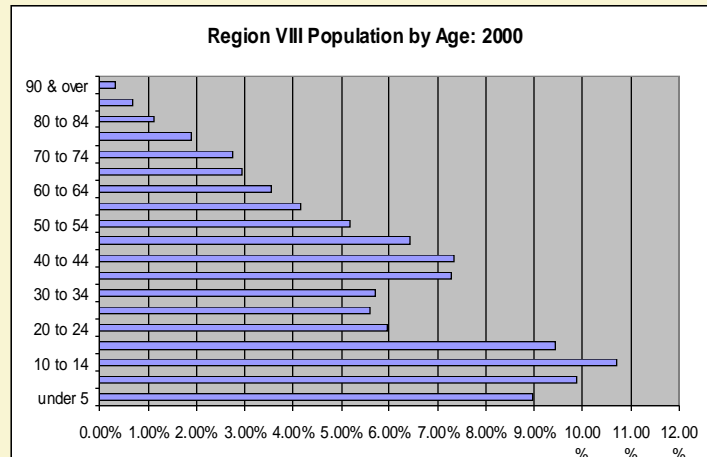


NRCNAA 2008

54



## Region VIII



NRCNAA 2008

55



## AoA Region IX

### Includes:

- California,
- Nevada,
- Arizona,
- Hawaii,
- Guam, (no image)
- Commonwealth of the Northern Mariana Islands, (no image)
- American Samoa (no image)

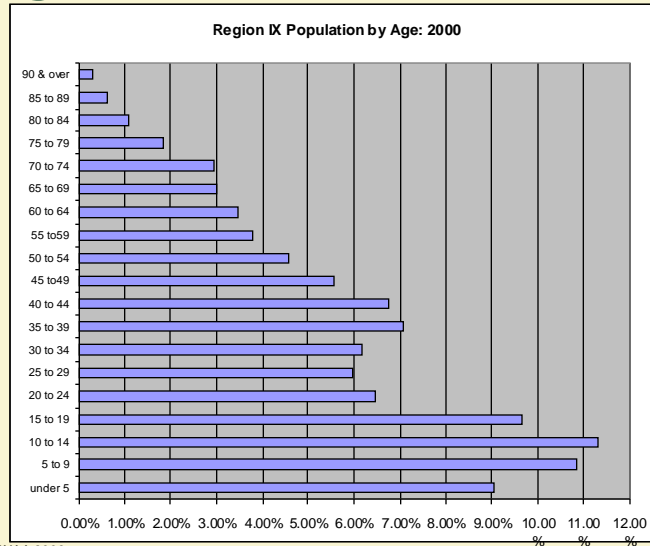


NRCNAA 2008

56



## Region IX



57



## AoA Region X

### Includes:

- Alaska
- Idaho
- Oregon
- Washington

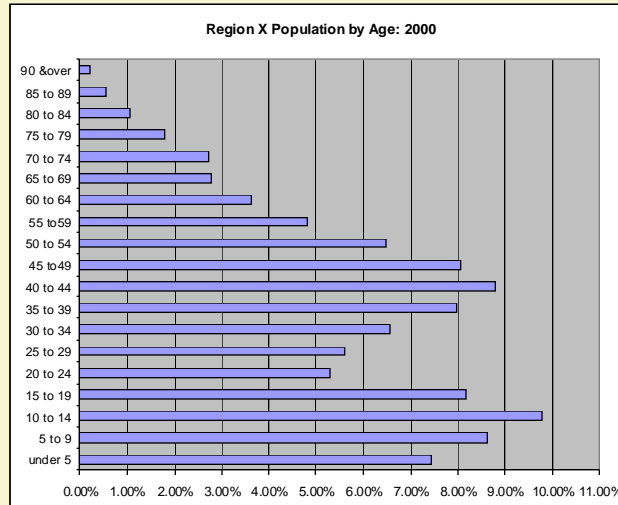


NRCNAA 2008

58



## Region X



NRCNAA 2008

59



Center for  
Rural Health

<http://ruralhealth.und.edu>

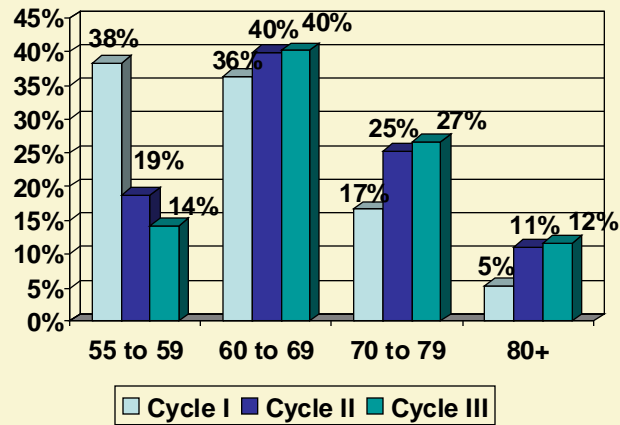
## Changing Demographics: Survey Results



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## Age Distributions: Cycle I through Cycle III

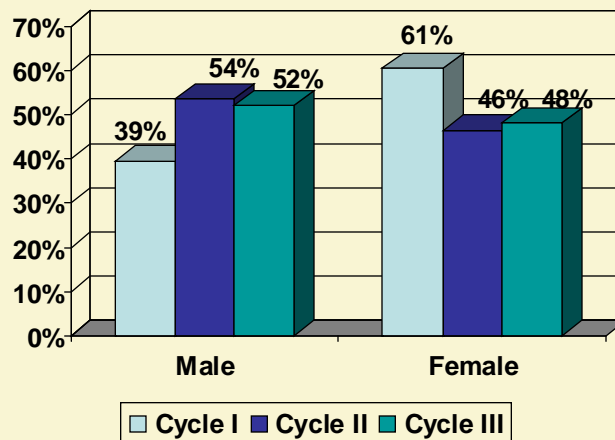


NRCNAA 2008

61



## Gender Distributions: Cycle I through Cycle III

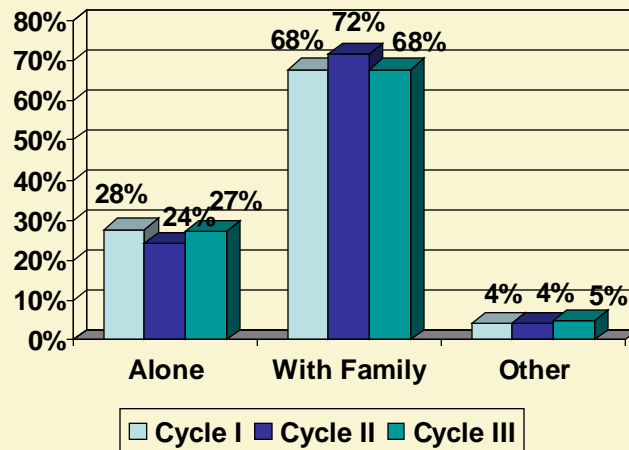


NRCNAA 2008

62



## Living Arrangements: Cycle I through Cycle III

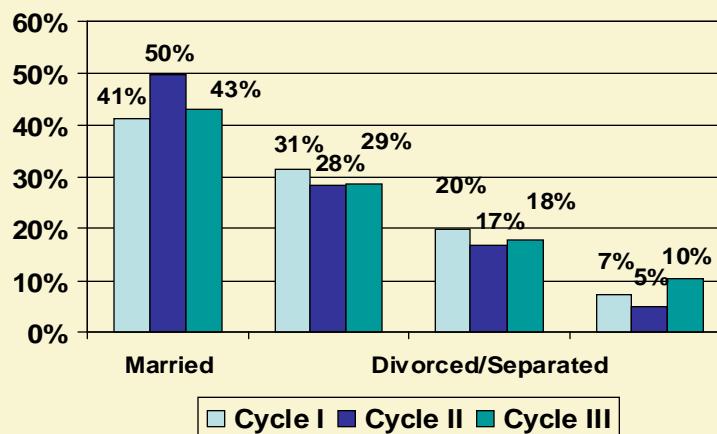


NRCNAA 2008

63



## Marital Status: Cycle I through Cycle III

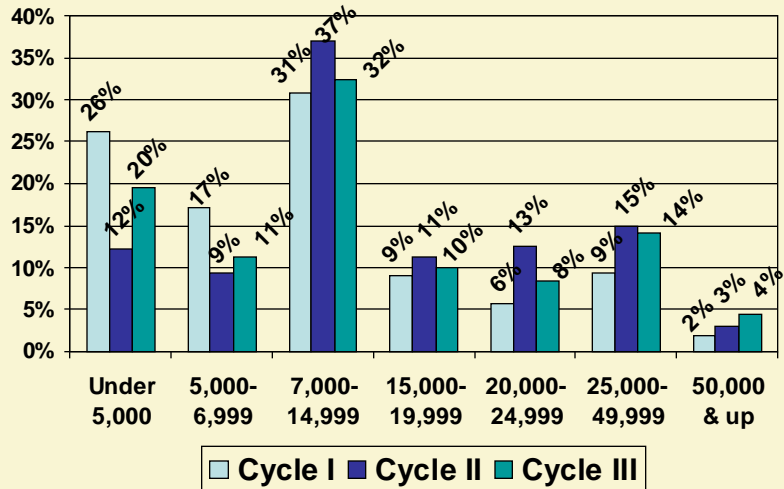


NRCNAA 2008

64



## Income: Cycle I through Cycle III

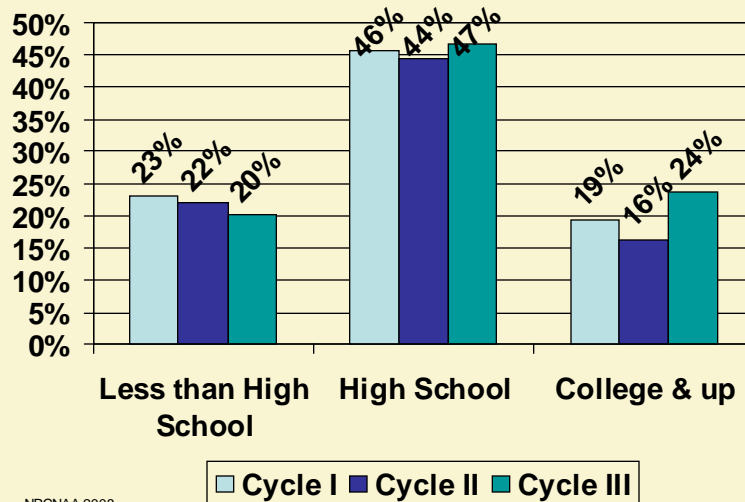


NRCNAA 2008

65



## Education: Cycle I through Cycle III

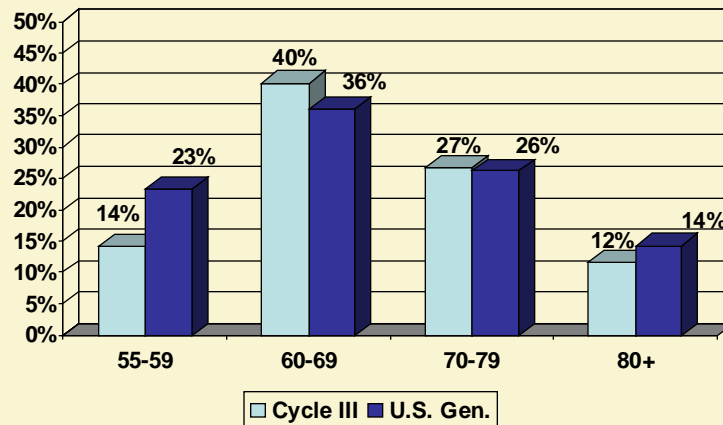


NRCNAA 2008

66



## Age Distributions: Cycle III and National

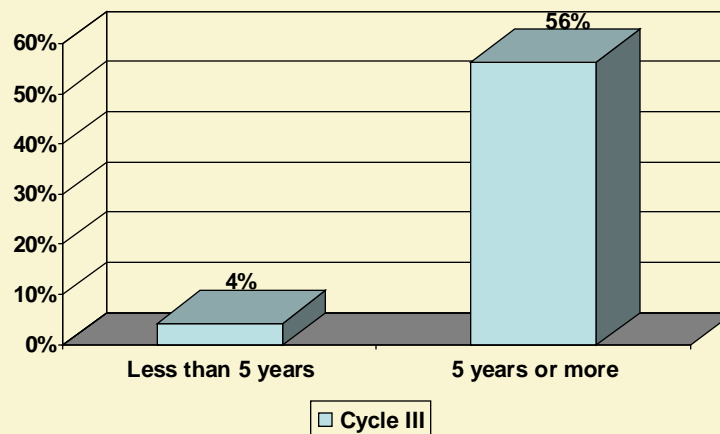


NRCNAA 2008

67



## Length of Current Residence: Cycle III

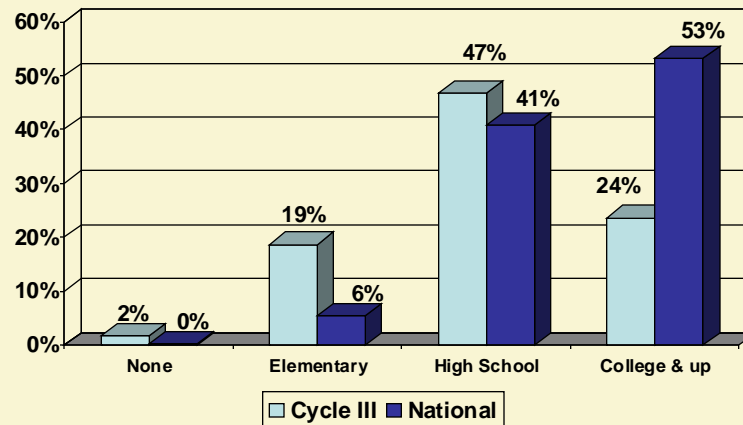


NRCNAA 2008

68



## Education: Cycle III and National

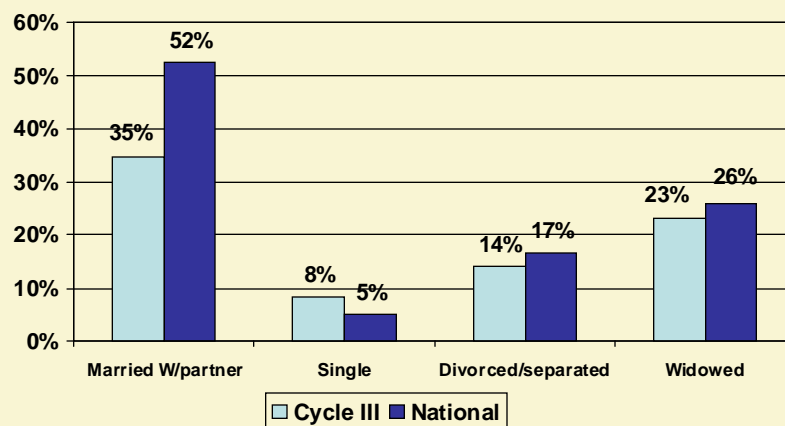


NRCNAA 2008

69



## Marital Status: Cycle III and National

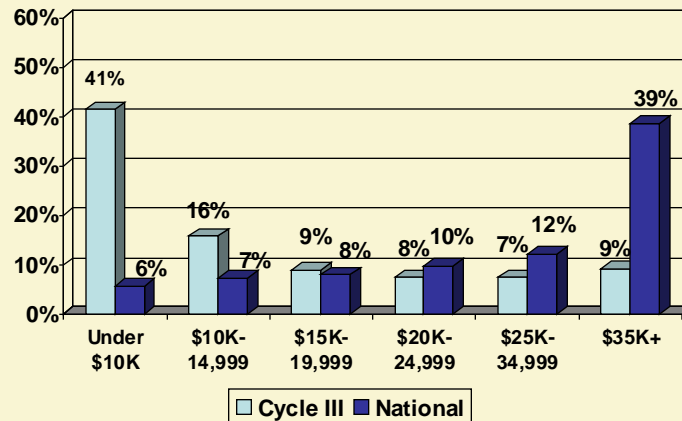


NRCNAA 2008

70



## Income Levels: Cycle III and National



NRCNAA 2008

71



Center for  
Rural Health

<http://ruralhealth.und.edu>

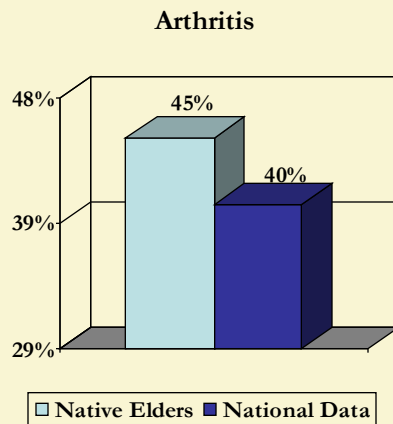
## The Health of America's Indian Elders: Chronic Diseases



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## Chronic Diseases – Arthritis (N=14,751)



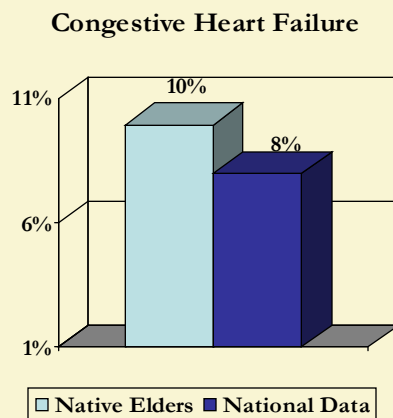
NRCNAA 2008

- Native elders were 13% more likely to experience arthritis than the U.S. general population.

73



## Chronic Diseases – Congestive Heart Failure (N=14,751)



NRCNAA 2008

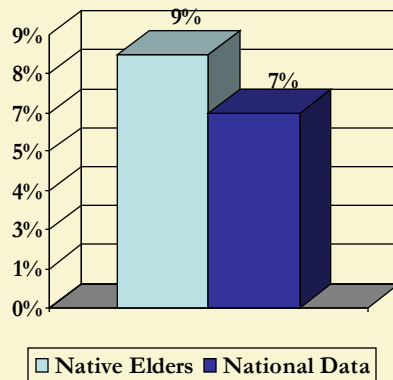
- Native elders were 25% more likely to experience congestive heart failure than the general U.S. population.

74



## Chronic Diseases – Stroke (N=14,751)

Stroke



NRCNAA 2008

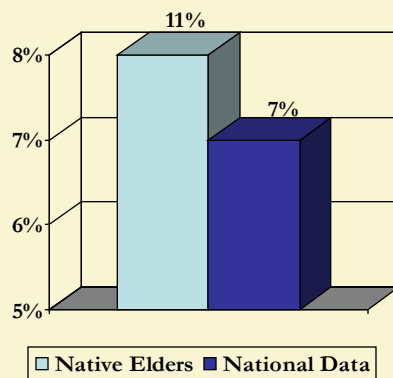
- Native elders were 29% more likely to experience a stroke than the general population.

75



## Chronic Diseases – Asthma (N=14,751)

Asthma



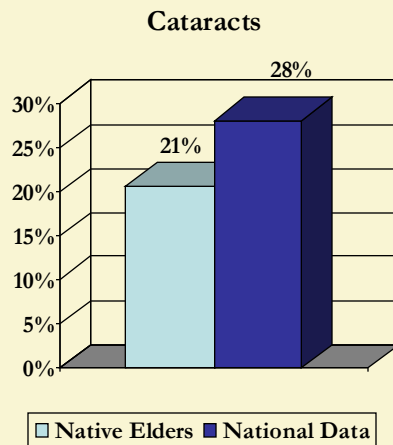
NRCNAA 2008

- Native elders were 57% more likely to experience asthma than the U.S. general population.

76



## Chronic Diseases – Cataracts (N=14,751)



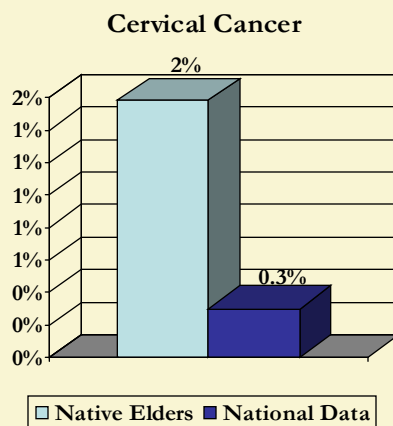
NRCNAA 2008

- Native elders were 25% less likely to experience cataracts than the general population.

77



## Chronic Diseases – Cervical Cancer (N=14,751)



NRCNAA 2008

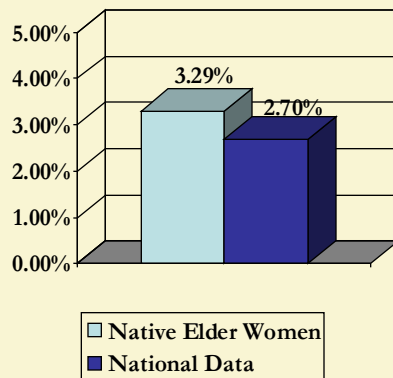
- Native elders were 85% more likely to experience cervical cancer than the U.S. general population.

78



## Chronic Diseases – Breast Cancer (N=14,751)

Breast Cancer



NRCNAA 2008

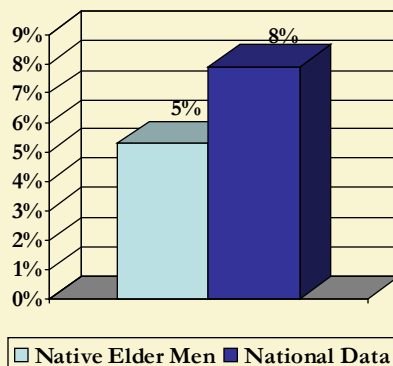
- Native elder women were 22% more likely to experience breast cancer than the U.S. general population.

79



## Chronic Diseases – Prostate Cancer (N=14,751)

Prostate Cancer



NRCNAA 2008

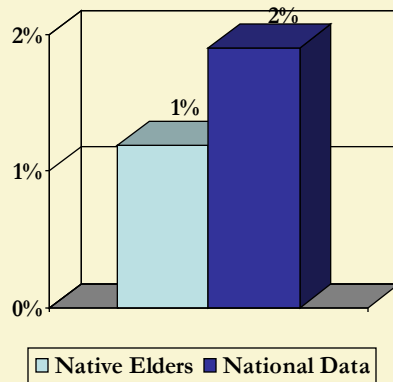
- Native elder men were 40% less likely to experience prostate cancer than the U.S. general population.

80



## Chronic Diseases – Colon/Rectal Cancer (N=14,751)

Colon/Rectal Cancer



NRCNAA 2008

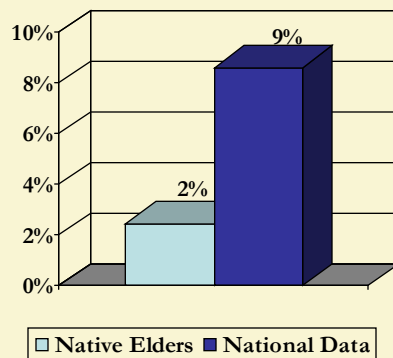
- Native elders were 50% less likely to experience colon/rectal cancer than the U.S. general population.

81



## Chronic Diseases – Other Cancer (N=14,751)

Other Cancer



NRCNAA 2008

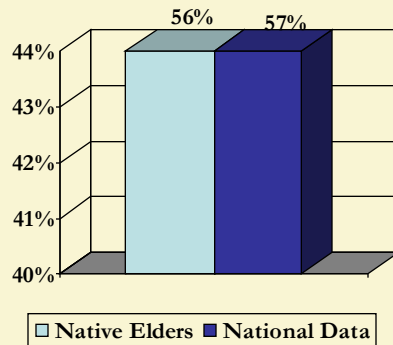
- Native elders were less likely to experience other cancer than the U.S. general population.

82



## Chronic Diseases – High Blood Pressure (N=14,751)

High Blood Pressure



NRCNAA 2008

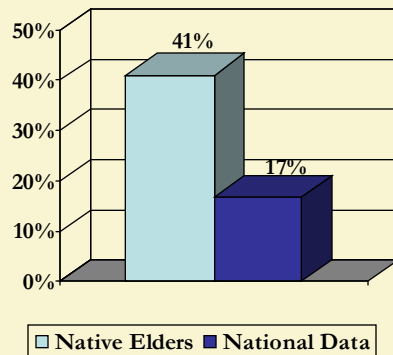
- Native elders were equally as likely to experience high blood pressure as the U.S. general population.

83



## Chronic Diseases – Diabetes (N=14,751)

Diabetes



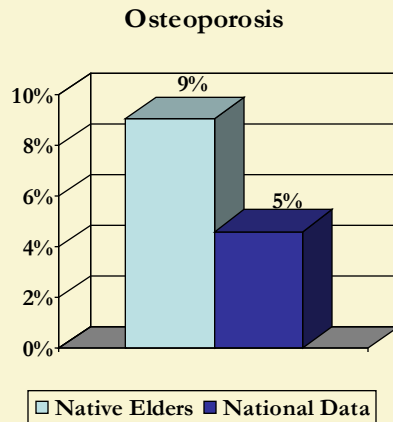
NRCNAA 2008

- Native elders were 141% more likely to experience diabetes than the U.S. general population.

84



## Chronic Diseases – Osteoporosis (N=14,751)



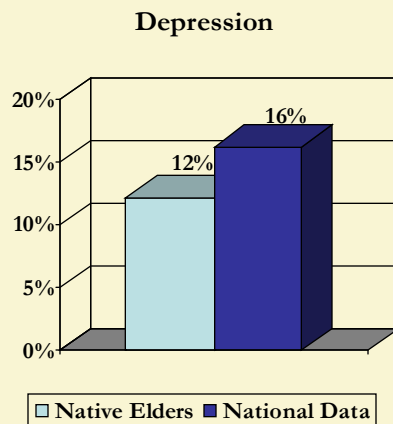
NRCNAA 2008

- Native elders were 44% more likely to experience diabetes than the U.S. general population.

85



## Chronic Diseases – Depression (N=14,751)



NRCNAA 2008

- Native elders indicated 33% less depression than the U.S. general population.

86



Center for  
Rural Health

<http://ruralhealth.und.edu>

## Changes Over Time



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*



## Functional Limitations

- The majority of definitions concerning functional limitations or disability refer to activities of daily living (ADL's) and instrumental activities of daily living (IADL's) as indicators of functionality.



## Activities of Daily Living (ADL's)

- Eating
- Walking
- Using the toilet
- Dressing
- Bathing
- Getting in/out of bed

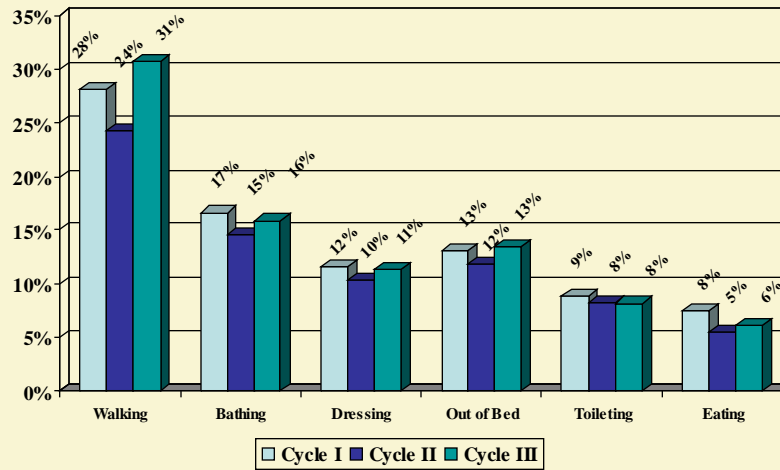


## Instrumental Activities of Daily Living (IADL's)

- Cooking
- Shopping
- Managing money
- Using a telephone
- Light housework
- Heavy housework
- Getting outside



## ADLs by Cycles I-III

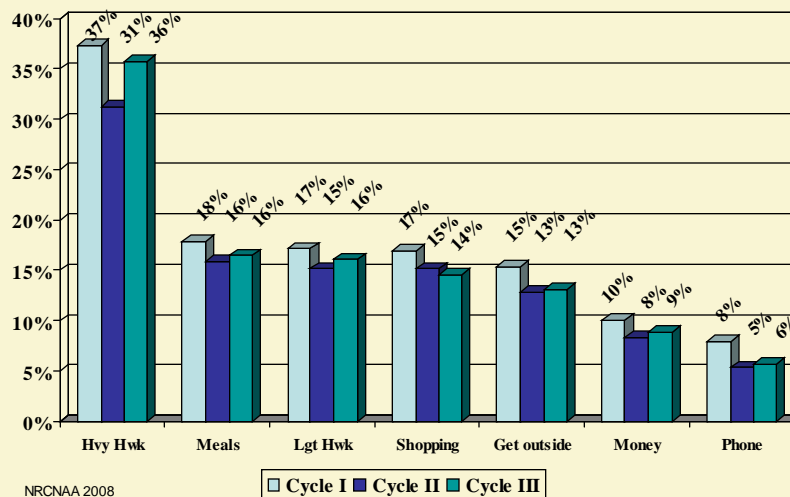


NRCNAA 2008

91



## IADLs by Cycles I-III

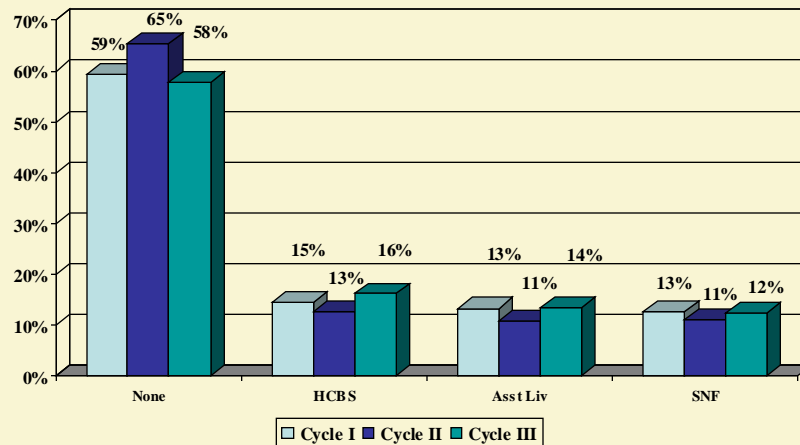


NRCNAA 2008

92



## LTC Measure by Cycles I-III



NRCNAA 2008

93



## Functional Limitation Categories

Categories	Limitations	Recommended Services
Little or none	No ADL limitations, up to one IADL limitation	No Services Required
Moderate	One ADL limitation with fewer than 2 IADLs	Home and Community Based Services
Moderately Severe	2 ADL limitations	Assisted Living
Severe	3 or more ADL limitations	Skilled Nursing Facility

NRCNAA 2008

94



## Functional Limitation Levels Applied to Services and Personnel

Level Functional Limitation	Service Goals	Services with best fit	Personnel required
Little or none (59%)	Health promotion, preventive care, maintaining vitality	No caregiver services required Health Promotion/Prevention	Health educators, physical trainers, therapists
Moderate (21%) This category represents entry level functional limitations and requires assistance usually consistent with remaining in one's home.	Supportive services to aid persons in remaining in own domicile. Train and support informal providers and buffer them with respite and contact services for a range of possible tasks.	Informal care – w/supports Chronic Disease Management Home & community based •Day/night care* •Durable medical* equipment •Home health care* •Homemaker services* •Physical therapy •Occupational therapy •Medication assistance* •Speech therapy •Mental health services •Transportation services* •Nutritional services* •Personal care* •Respite care* * Require local providers	Family and friends Trainer for skills Facility staff– LPN/CNA Rental source RN, LPN, CNA, PT, OT... Cleaning and chore assts. PT, PT aides, tele-health OT, OT aids, tele-health Medication aide Speech therapist Psychologist, Psychiatrist, Psych. Social Worker, Van driver Dietician, aide Trained attendants Trained respite providers or institutional site

NRCNAA 2008

95



## Functional Limitation Levels Applied to Services and Personnel Cont...

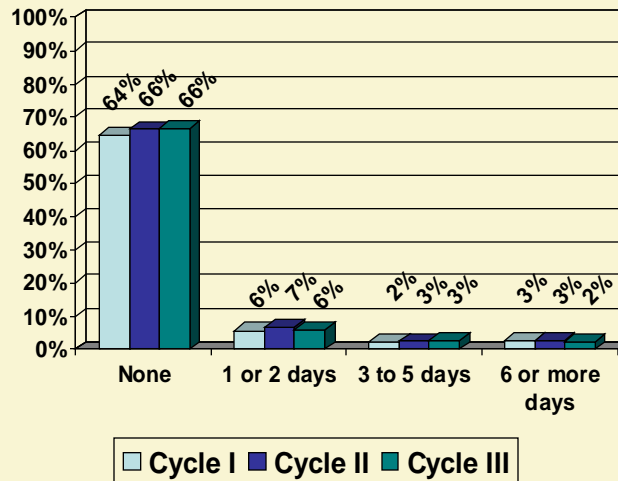
Level Functional Limitation	Service Goals	Services with best fit	Personnel required
Moderately Severe (7%)	The goal for this level of care is to provide housekeeping and meals along with a modest level of oversight. People may contact for services from the home and community based services in addition to the basic services found in these settings. Assisted living establishes the goal for this cluster in that it seeks to maintain resident control over services.	Congregate care Basic care facilities Assisted Living	Institutional staff as required by state regulations
Severe (13%) With 3 or more ADLs, this level tends to become prime candidates for skilled nursing care. They represent care needs with relatively high levels of acuity.	Skilled nursing care is the most fully institutional and is reserved for those with medical needs necessitating this level of care.	Skilled Nursing Care	Institutional staff as required by state regulations
Terminal as special category	End of life care occurs at all points on the above continuum, but is concentrated at the higher levels of limitation. The goal is physical and emotional comfort.	Hospice Care	*Hospice volunteers and coordinator

NRCNAA 2008

96



## Five or more drinks in the past 30 days by Cycles I-III

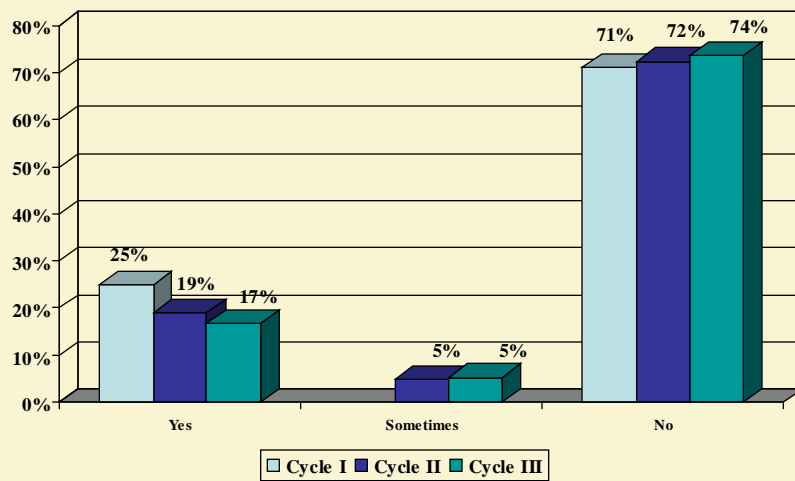


NRCNAA 2008

97



## Smoking by Cycles I-III

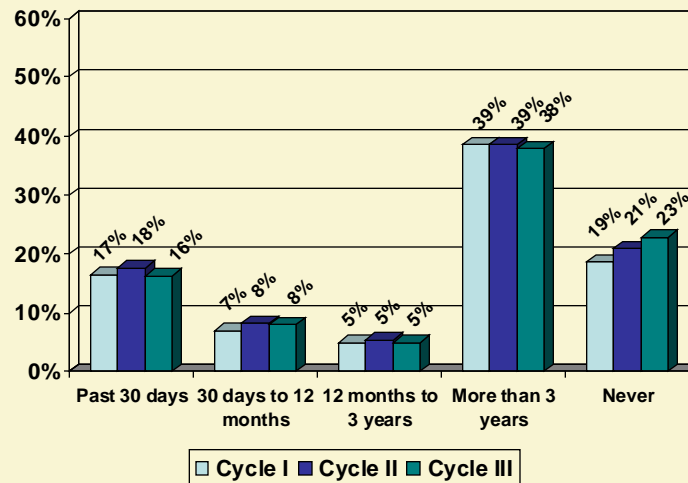


NRCNAA 2008

98



## Last Drank Alcohol by Cycles I-III

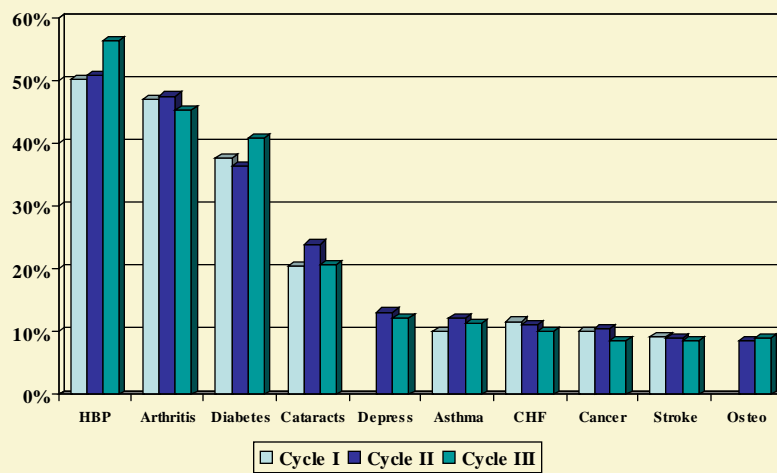


NRCNAA 2008

99



## Chronic Disease by Cycles I-III

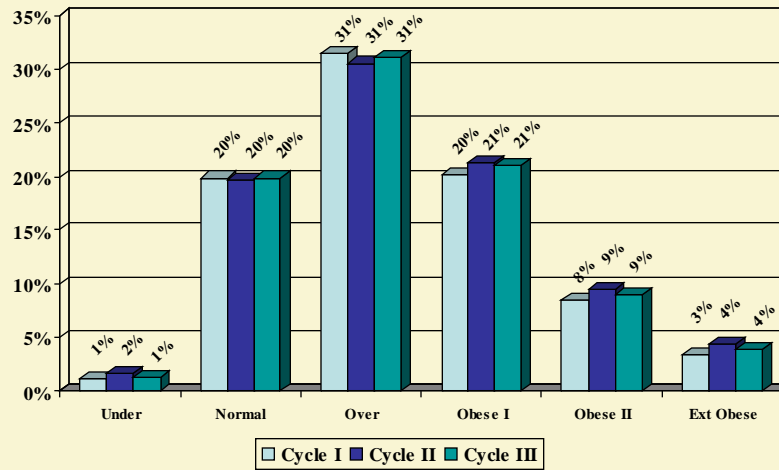


NRCNAA 2008

100



## Body Mass Index by Cycles I-III

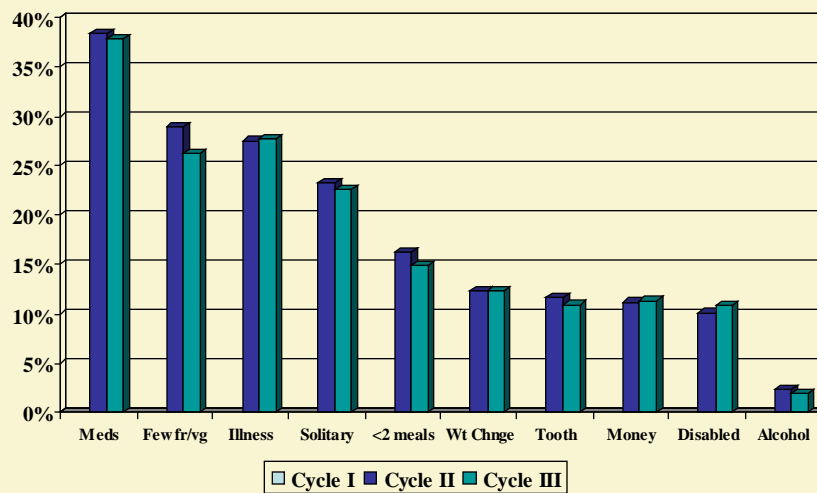


NRCNAA 2008

101



## Problems Affecting Nutrition by Cycles I-III

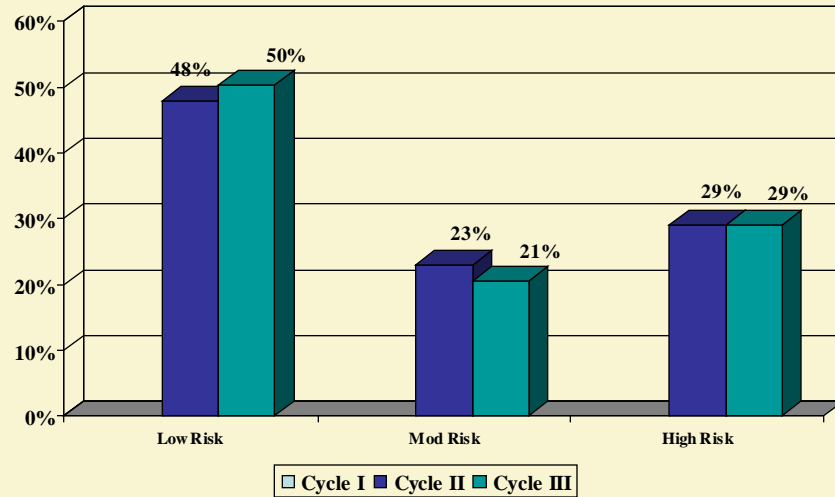


NRCNAA 2008

102



## Nutritional Score by Cycles II-III

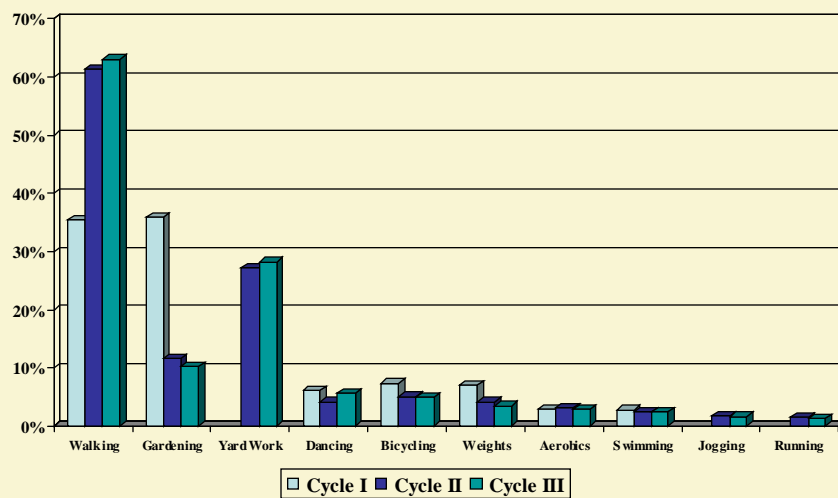


NRCNAA 2008

103



## Exercises by Cycles I-III



NRCNAA 2008

104



## Conclusions

- Native elder populations are dramatically growing.
- Tribal recognition of age 55 for elder status includes those elders from the baby boom generation.



## Conclusions cont.

- Chronic diseases prevalence is mixed with several increasing and others steady.
- Increases may well relate to risk factors.
  - Exercise – Walking increased dramatically in Cycles I to II, but nearly all other exercises decreased. The same trend is hinted at in Cycle III preliminary study.
  - Weight issues increased – young old are heaviest.



## Recommendations

- Lifestyle modification continues to merit attention. Positive results for walking provide a major source of encouragement.
- Chronic disease self management will be essential to avoiding future functional limitations as this population grows older.

NRCNA 2008

107



Center for  
Rural Health



<http://ruralhealth.und.edu>

For more information contact:

Leander "Russ" McDonald, Ph.D.  
Center for Rural Health  
University of North Dakota  
School of Medicine and Health Sciences  
Grand Forks, ND 58202-9037



Tel: (800) 896-7628  
Fax: (701) 777-6779

<http://ruralhealth.und.edu>  
[www.nrcnaa.org](http://www.nrcnaa.org)



*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*