



Center for
Rural Health

University of North Dakota
School of Medicine & Health Sciences

<http://medicine.nodak.edu/crh>

Feasibility Analysis for Assisted Living – A Model for Assessment

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

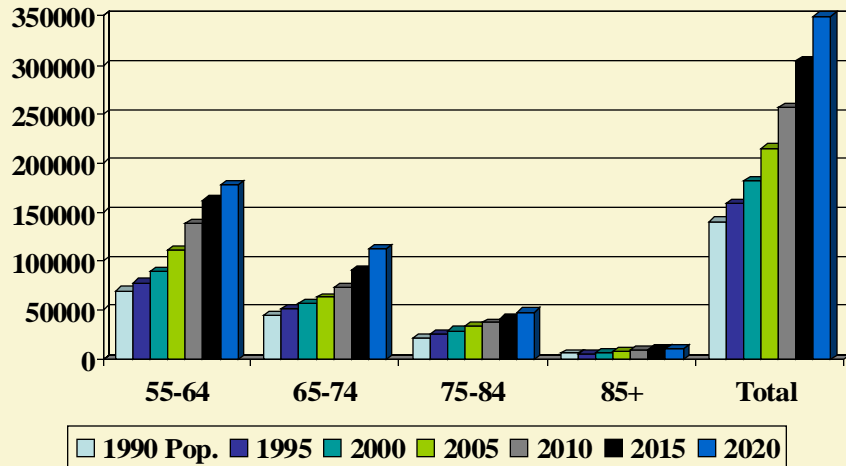


National Resource Center on Native American Aging

- 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: <http://medicine.nodak.edu/crh/nrcnaa>



Native Elder Population Projections 1990-2020



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Life Expectancy at Birth, ages 55, 65 and 75 by IHS Area

IHS Area	At Birth	At Age 55	At Age 65	At Age 75
Aberdeen	64.3	189	13.2	85
Benidji	65.7	187	12.7	10.1
Billings	67.0	202	13.9	89
Alaska	68.0	213	14.7	92
Tucson	68.4	222	15.8	10.0
Phoenix	69.8	226	16.1	10.6
Portland	71.7	231	16.0	10.1
Navajo	71.9	249	17.7	11.7
Nashville	72.2	228	16.3	10.5
Albuquerque	72.7	254	19.6	12.2
Oklahoma	74.2	257	18.2	13.1
California	76.3	269	19.4	13.3
All Indians	71.1	235	16.7	11.2
U.S. All Races	76.8			

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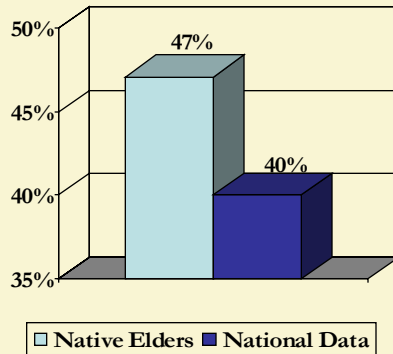


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Chronic Diseases – Arthritis (N=9,403)

Arthritis

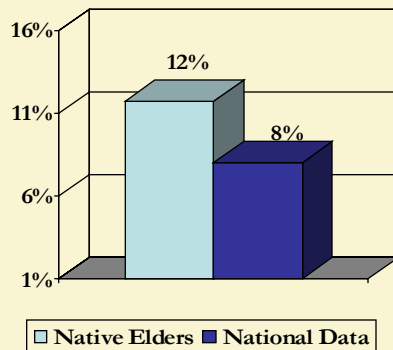


- Native elders were 18% more likely to experience arthritis than the U.S. general population.



Chronic Diseases – Congestive Heart Failure (N=9,403)

Congestive Heart Failure

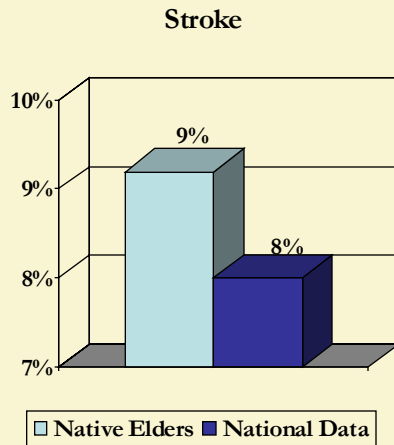


- Native elders were 46% more likely to experience congestive heart failure than the general U.S. population.





Chronic Diseases – Stroke (N=9,403)



- Native elders were 15% more likely to experience a stroke than the general population.

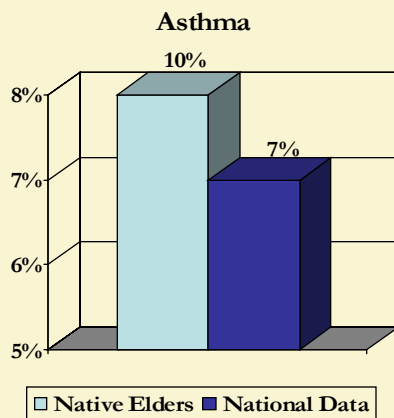
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Chronic Diseases – Asthma (N=9,403)



- Native elders were 43% more likely to experience asthma than the U.S. general population.

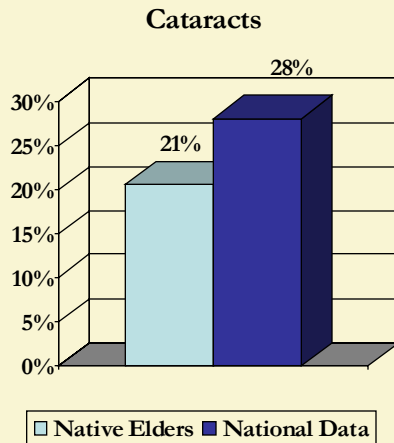
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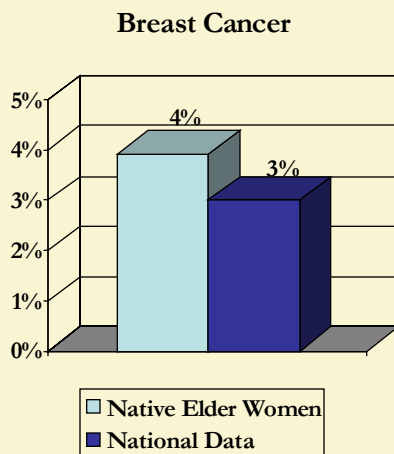
Chronic Diseases – Cataracts (N=9,403)



- Native elders were 27% less likely to experience cataracts than the general population.



Chronic Diseases – Breast Cancer (N=5,525)

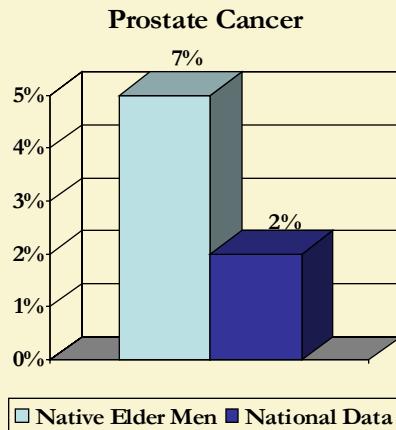


- Native elder women were 30% more likely to experience breast cancer than the U.S. general population.





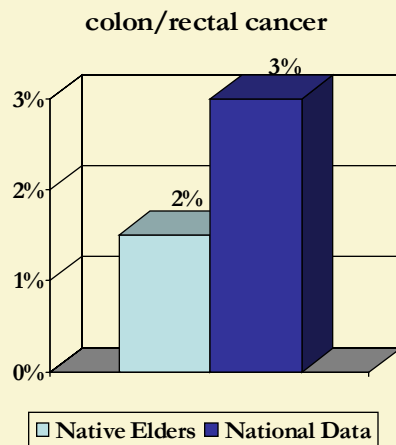
Chronic Diseases – Prostate Cancer (N=3,595)



- Native elder men were 245% more likely to experience prostate cancer than the U.S. general population.



Chronic Diseases – Colon/Rectal Cancer (N=9,403)



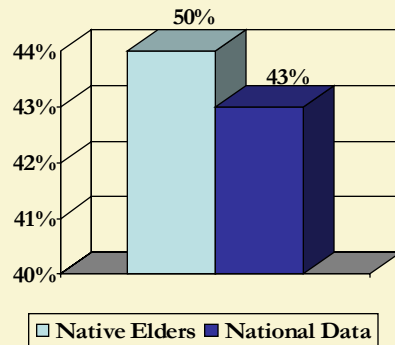
- Native elders were 50% less likely to experience colon/rectal cancer than the U.S. general population.





Chronic Diseases – High Blood Pressure (N=9,403)

High Blood Pressure

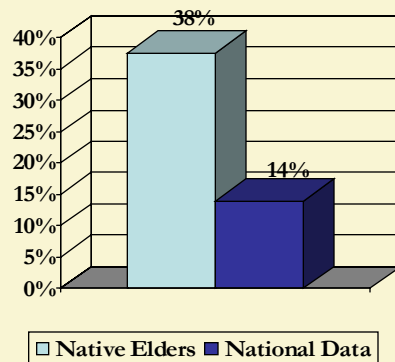


- Native elders were 17% more likely to experience high blood pressure than the U.S. general population.



Chronic Diseases – Diabetes (N=9,403)

Diabetes



- Native elders were 169% more likely to experience diabetes than the U.S. general population.



Combining Data with Population Projections

- 38% of Native Elders in the nation currently have diabetes
- 2000 Native Elders = 182,057
 $.38 \times 182,057 = \mathbf{69,182}$
- 2020 Native Elders = 349,109
 $.38 \times 349,109 = \mathbf{132,661}$



Other Data Uses

- Documentation of need for health promotion, home and community based services, and assisted living
- Renewal of Title VI Native Elder Nutrition and Caregiving Grants
- Strengthening of grant proposals
- Advocacy efforts at the tribal, state, and national levels
- Development of policy related to long-term care



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Is Assisted Living Feasible to Your Community?

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Task 1 – Population Projections: A Basis for All Estimates of Present and Future Need



Simulation Tribal Community Current & Future Population: 55 and over

	2000	2005	2010	2015	2020
55-64	630	798	981	1041	1104
65-74	387	406	485	618	760
75 +	239	281	298	315	360
Total	1256	1485	1764	1974	2224



Data Used in This Analysis

- Two Cycles of Matched Survey Data
- 38 IHS Service Areas have collected data in both cycles. These survey results are employed as replication studies.
- 4,148 Respondents in Cycle I
- 4,008 Respondents in Cycle II



The Times – They are A Changing: Demographic Shifts

- Baby Boomers are changing the age distribution for elders
- Length of last residence is shorter
- Educational levels are improving
- More people age within marriages
- Incomes are gradually improving



Task 2 – How many in the Projected Population will have Functional Limitations at a Level Consistent with Assisted Living?



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



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



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* •Home maker 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





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

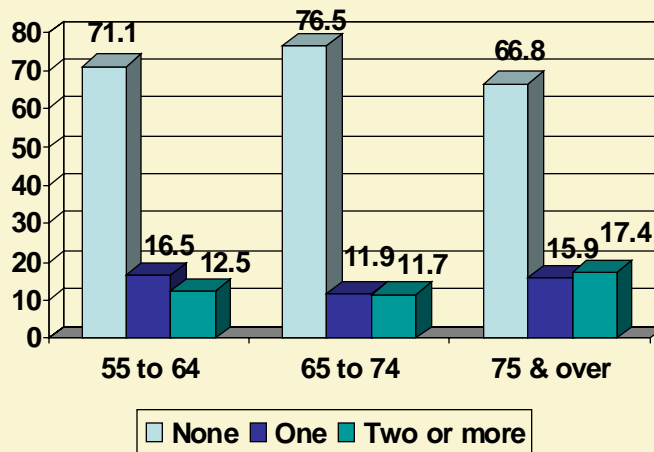
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Rates of Functional Limitation: Simulation Tribal Community Indian Service Area



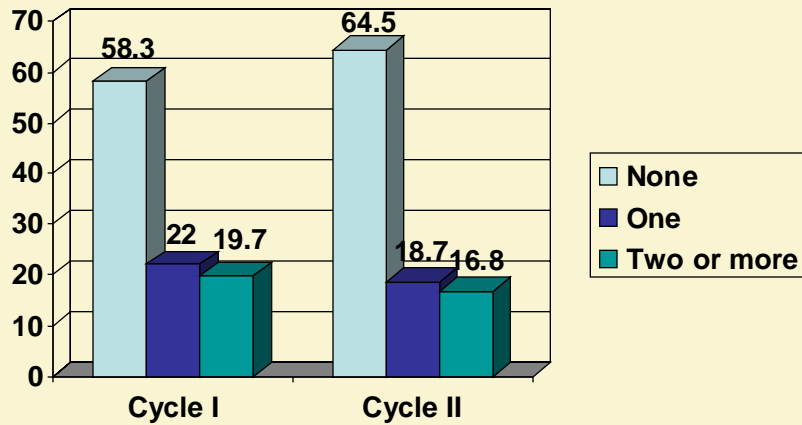
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Rates of Functional Limitation: Cycle I and Cycle II



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Component Changes in Functional Limitations: IADLs AND ADLs

- IADLs declined significantly for all age groups – an across the board gain
- ADLs declined significantly **only** for the 65-74 cohort

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Persons with Functional Limitations by Age Simulation Tribal Community

	2000	2005	2010	2015	2020
55-64	78	99	122	130	137
65-74	45	47	57	72	89
75&up	42	49	52	55	63
Total	165	196	230	256	289

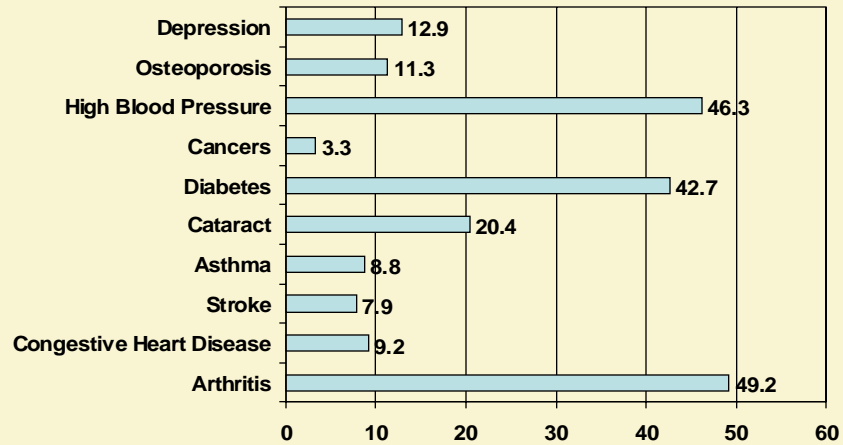


Task 3 – What is the future Likely to be with respect to health conditions that lead to functional limitations? Is there a basis for assuming any patterned change?





Percent of Simulation Tribal Community Indian Service Area Elders With Chronic Conditions



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Chronic Disease: Change from Cycle I to Cycle II

- Hypertension****(Higher)
- Arthritis****(Higher)
- Asthma****(Higher)
- Cataract****(Higher)
- Prostate Cancer****(Down!) BUT When age was controlled there was no difference

All represent statistically significant changes.

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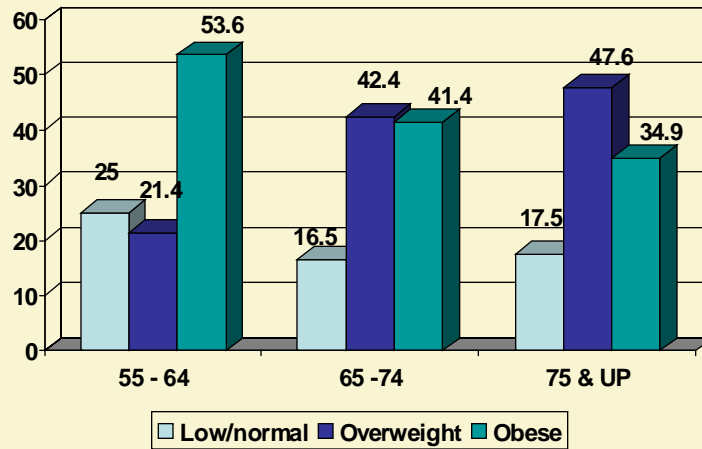


Chronic Diseases: No Change from Cycle I to Cycle II

- Diabetes
- Cataract
- CHF
- Stroke
- Cancers (other than Prostate)



Body Mass Index by Age: Simulation Tribal Community



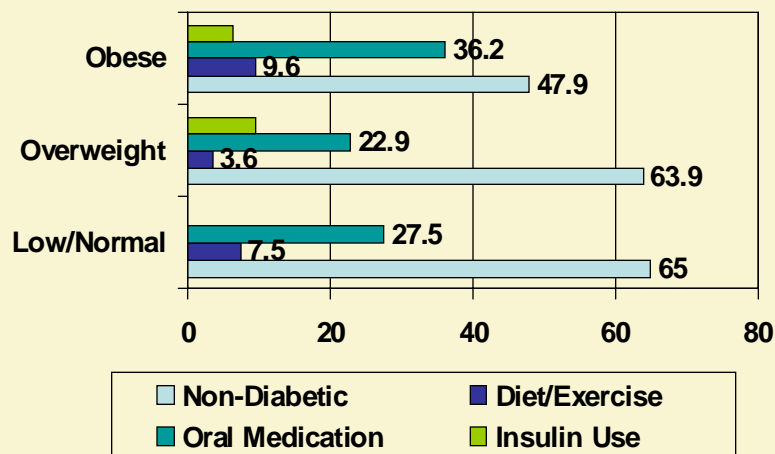


Growing Problem of Weight

- The average BMI score increased from 29.1 to 29.6 from cycle I to cycle II
- Age is related to BMI with the younger elders having the highest BMI scores – the average for those 55-64 is in the obese category and this is point at which risks for chronic disease rises most rapidly

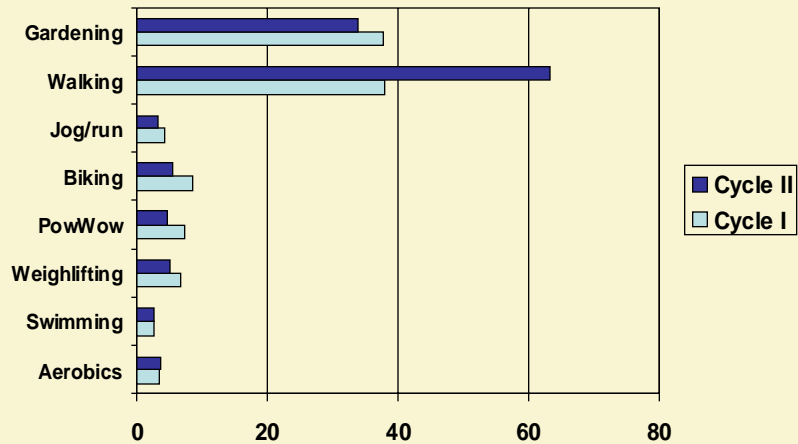


Diabetes by Weight Class: Simulation Tribal Community Service Area





Exercise: Cycle I & Cycle II



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Exercise Change and Age

- Weight Lifting – Down only for 55–64 age groups
- Powwow – Down for 55-64 and 65-74 age groups
- Biking - Down for 55-64 and 65-74 age groups
- Jogging - Down for 55-64 and 65-74 age groups
- Walking – **Up dramatically for all ages!!**
- Gardening – Down for 55-64 and 65-74 age groups

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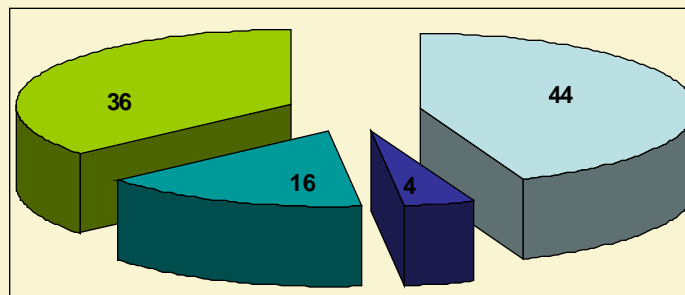
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Task 4 – Are there social conditions that might play a role in the decision to use formal care?



Marital Status of Simulation Tribal Community Elders w/Functional Limitations



Married Single Divorced/Separated Widowed





Simulation Tribal Community Elders Reporting Home and Community Based Services Available

Service	Percentage
Dietary and nutritional services	43.3%
Meals on wheels	46.3%
Transportation	44.6%
Occupational/vocational therapy	17.9%
Speech/audiology therapy	13.3%
Respite care (temporary)	21.3%
Personal care (e.g. bathing)	26.3%
Skilled nursing services	30.8%
Physician services	41.3%
Social services	31.3%
Physical therapy	27.9%
Home health services	33.3%
Adult day care	11.3%



Task 5 – How receptive is the population to assisted living? If we build it, will they come?





Elders Reports of Use & Willingness to Use Services

	Now Using	Would Use
Dietary and nutritional services	6.7%	36.3%
Meals on wheels	4.2%	51.3%
Transportation	9.6%	49.2%
Occupational/vocational therapy	0.8%	22.5%
Speech/audiology therapy	0.4%	21.3%
Respite care (temporary)	2.1%	25.8%
Personal care (e.g. bathing)	0.8%	31.7%
Skilled nursing services	4.6%	34.2%
Physician services	10.4%	36.7%
Social services	3.8%	25.4%
Physical therapy	0.8%	34.2%
Home health services	4.6%	38.3%
Adult day care	0.4%	20.0%
Assisted living	0.0%	36.3%
Nursing home	0.0%	22.1%



Task 6 – Final recommendations with respect to the feasibility of building an assisted living facility.

- If yes, how large should it be?
- What should the “capture” rate be?
- Is there a buffering effect in the growth of population?





Projected Number of Users

	2000	2005	2010	2015	2020
At 10%	17	20	23	26	29
At 15%	25	29	35	38	43
At 20%	33	39	46	51	58



Talking Points

- What other factors affect one's choice?
- Is this a helpful tool for planning?
- Is this useful for communities that have decided to apply for authorization to build assisted living?
- Which scenario should one choose?



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