

Project 2030 Supporters

- Blue Cross/Blue Shield of Montana
- Montana Agricultural Experiment Station
- Montana Area Agencies on Aging Association
- Montana Association of Counties
- Montana Bankers Association
- Montana Chamber Foundation
- Montana State University
- Montana State University Extension
- NorthWestern Energy
- PPL Montana
- University of Montana
- Montana Council on Economic Education (MCEE)
- ONE MONTANA: Bridging the Rural-Urban Divide



Project 2030: Montana's Aging Population

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Department of Agricultural Economics and Economics

Montana Academy of Nutrition and Dietetics

May 28, 2015 (8:45 – 9:45 am)

Great Northern Hotel - Helena

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Mountains & Minds



Project 2030 Topics

1. Demographics
2. Migration
3. Fiscal Impacts of Aging
4. Consumption (income/expenditures)
5. Summary, Conclusions, & Implications



Impacts of Aging

- Demand
 - What nutrition-related services to the elderly demand from you?
- Supply
 - What will you be willing to supply?

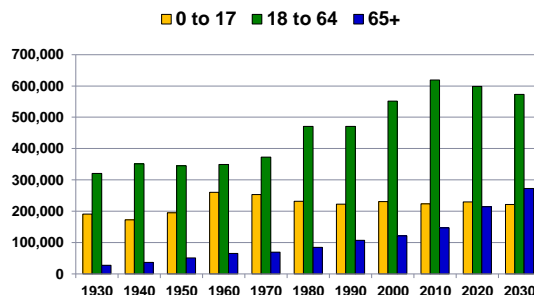


Demographics

- Population
- Age Dependency Ratios
 - TDR
 - YDR
 - EDR
- Age Dependency Ratios by County

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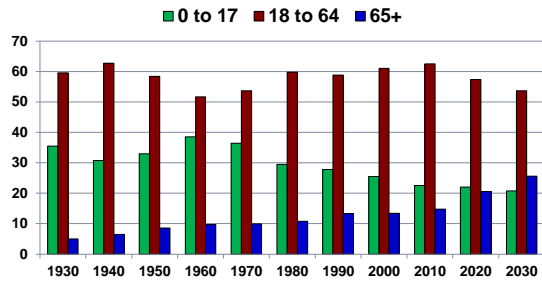
Montana Population by Age Group



Source: U.S. Census. Years 2020 and 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data

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Montana Age Groups as a Percent of Total Montana Population



Source: U.S. Census. Years 2020 and 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data

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Age Dependency Ratios

- Total Age Dependency Ratio (TDR)
 - $TDR = \text{Non-Working Age} \div \text{Working Age}$
- Non-Working Age Population
 - 0 to 17 years of age (youth)
 - 65+ years of age (elder)
- Working Age Population
 - 18 to 64 years of age

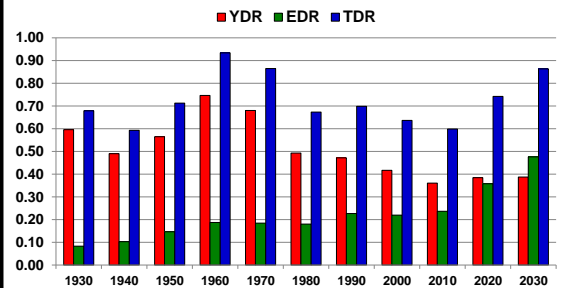
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Age Dependency Ratios

- Youth Dependency Ratio (YDR)
 - $YDR = 0 \text{ to } 17 \text{ Age} \div \text{Working Age}$
- Elder Dependency Ratio (EDR)
 - $EDR = 65+ \text{ Age} \div \text{Working Age}$

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Montana Age Dependency Ratios



Source: U.S. Census. Years 2020 and 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data

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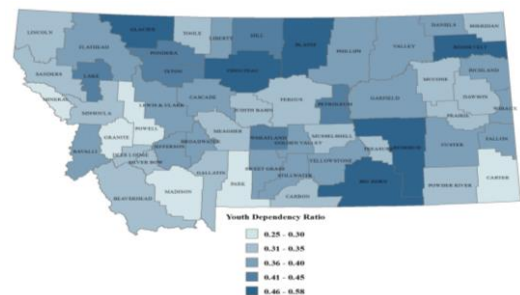
Montana Age Dependency Ratios

Year	YDR	EDR	TDR
1930	0.60	0.08	0.68
1940	0.49	0.10	0.59
1950	0.56	0.15	0.71
1960	0.75	0.19	0.94
1970	0.68	0.18	0.86
1980	0.49	0.18	0.67
1990	0.47	0.23	0.70
2000	0.42	0.22	0.64
2010	0.36	0.24	0.60
2020	0.38	0.36	0.74
2030	0.39	0.48	0.87

Sources: U.S. Census. Years 2020 and 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data

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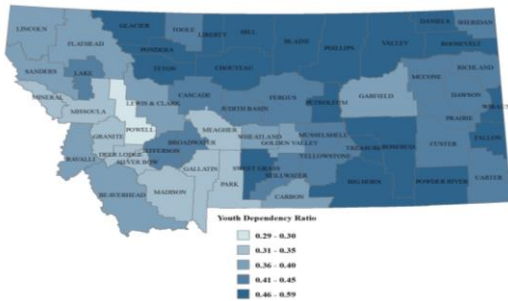
2010 YDR Montana Counties Distribution Map



Source: U.S. 2010 Decennial Census

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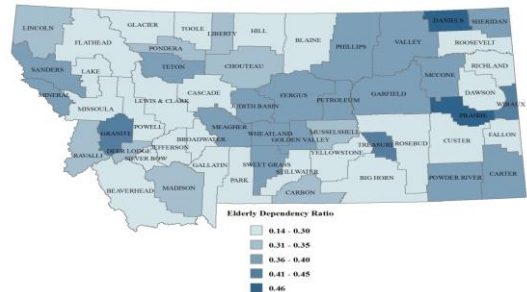
2030 YDR Montana Counties Distribution Map



Source: NPA, Inc. Population Projections revised with the 2010 Census

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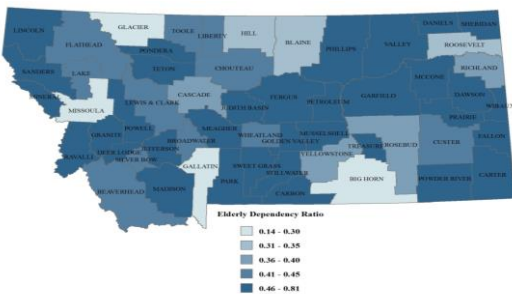
2010 EDR Montana Counties Distribution Map



Source: U.S. 2010 Decennial Census

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2030 EDR Montana Counties Distribution Map



Source: NPA, Inc. Population Projections revised with the 2010 Census

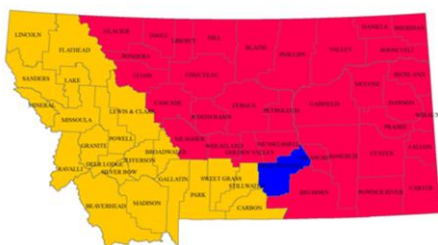
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Migration

- Net Migration in Montana 2000 to 2010
- Net Migration in Western/Southern Montana 2000 to 2010
- Net Migration to Yellowstone County 2000 to 2010
- Net Migration to Eastern/Northern Montana 2000 to 2010

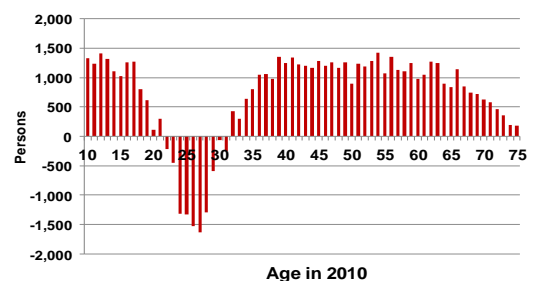
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Migration Regions



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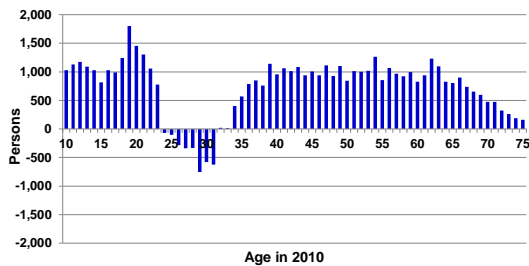
Net Migration Montana 2000 to 2010



Sources: U.S. Census and CDC

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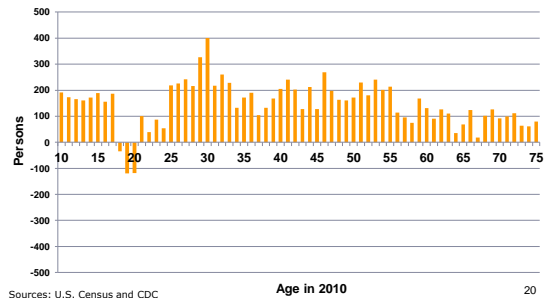
Net Migration Western/Southern Montana 2000 to 2010



Sources: U.S. Census and CDC

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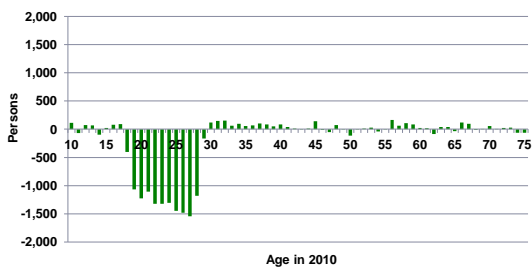
Net Migration Yellowstone County 2000 to 2010



Sources: U.S. Census and CDC

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Net Migration Eastern/Northern Montana 2000 to 2010



Sources: U.S. Census and CDC

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Fiscal Impacts of Aging

- **Aging Impacts on Expenditure**
 - K-12 and Higher Education
 - Corrections
 - Medicaid
- **Aging Impacts on Revenue**
 - See the website



Fiscal Impacts on Expenditure K-12 AND HIGHER EDUCATION

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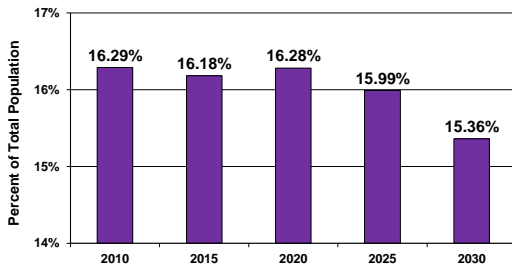
K-12 Education Expenditure in Fiscal Year 2009

Total Expenditure	\$ 1,492,885,133
Public School Enrollment Fall 2009	141,807
Participation Rate: Enrollment/Population 5 to 17	88.0%
Expenditure per Student	\$ 10,528
Expenditure per Montanan	\$ 1,509

Sources: Montana Office of Public Instruction, Expenditures by Function by Enrollment Category FY2010
http://opi.mt.gov/pub/index.php?dir=School%20Finance/OPICoreDataFiles/PerPupil/8file=PerPupil1991_2011.xls Use Tab: 10obj_NO_ARRA_NO_SF5F
 Montana Legislative Fiscal Division, OPI summary, Base Fiscal 2010 - Total Costs
http://leg.mt.gov/content/Publications/fiscal/fr_2013/Volume%204/section%20E/OPI.pdf - Pg 10
 Montana Office of Public Instruction, Montana Public School Enrollment Data October 4, 2010
www.opi.mt.gov/pdf/Measurement/EnrollBook2010.pdf - Pg 2
 U.S. Census 2010 population data

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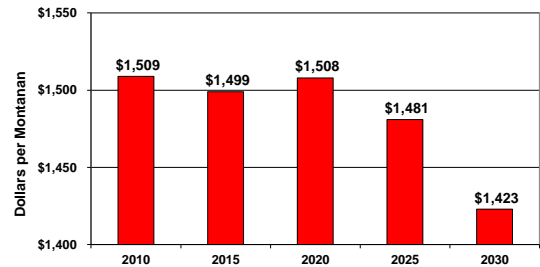
Percent of Montana Population Age 5 to 17



Source: 2010 U.S. Census. Years 2015 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data.

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K-12 Expenditures per Montanan



Source: 2010 U.S. Census. Years 2015 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data.

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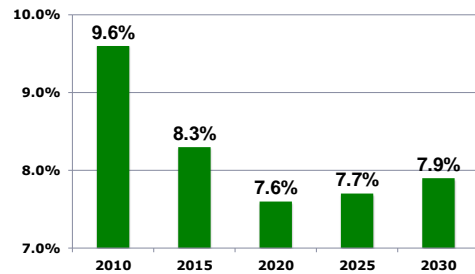
University System Instructional Expenditure Year 2010

Total Appropriations	\$ 160,052,417
State Appropriation	\$ 151,947,492
Local Appropriations	\$ 8,104,925
FTE Resident Enrollment	31,222
Participation Rate (Enrollment/Population 18 to 24)	33%
Expenditure per Student	\$ 5,126
Expenditure per Montanan	\$162

Source: Montana State University System

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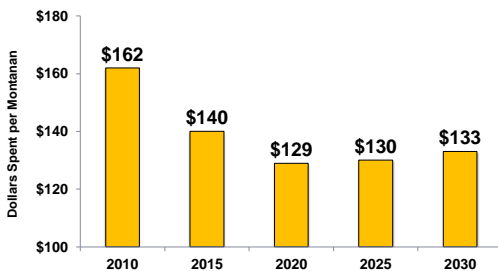
Percent of Montana Population Ages 18 to 24



Source: 2010 U.S. Census. Years 2015 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data.

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Higher Education Expenditure Per Montanan



Instruction only. Excludes MAES, ES, Fire school, Bureau of Mines, Grants and Contracts, etc.
Sources: MUIS OCHE, Population Data: Year 2010 Census. Years 2015 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data.

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Fiscal Impacts on Expenditure CORRECTIONS

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Participation and Daily Expenditures for Corrections

Category	Number (2012)	Expenditure (2010)
Inmates (Excluding County Jails)	2,524	\$ 89.81
Department of Corrections		
Probation/Parole	8,419	\$5.92
Youth Services	133	\$230.90
Department of Justice (2010)		
Youth Courts	5,185	\$2.84
Other Adult Services	1,882	\$68.45

Sources: D. Hall, Montana Department of Corrections for participants by age. B. Peake, Montana Department of Justice for youth court participants. Costs from Montana Department of Corrections 2011 Biennial Report and Montana Judicial Branch Youth Court At-A-Glance 2010

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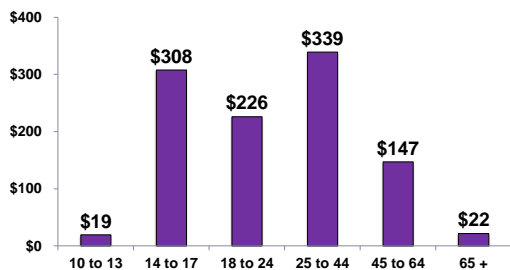
Participation in Montana Correctional System (2012)

Category / Age Group	10 to 13	14 to 17	18 to 24	25 to 44	45 to 64	65+
Inmate	0.0%	0.0%	0.32%	0.55%	0.28%	0.05%
Department of Corrections						
Probation/Parole	0.0%	0.0%	1.11%	1.90%	0.90%	0.11%
Youth Services	0.0%	0.27%	0.00%	0.00%	0.00%	0.00%
Department of Justice (2010)						
Youth Courts	1.86%	8.26%	0.01%	0.00%	0.00%	0.00%
Other Services	0.0%	0.0%	0.36%	0.46%	0.14%	0.01%
Total	1.86%	8.53%	1.79%	2.91%	1.32%	0.17%

Sources: MT DOC and DOJ

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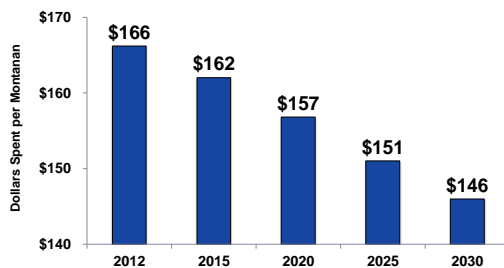
Corrections Expenditure per Montanan by Age



Sources: MT DOC and DOJ Population: Year 2010 U.S. Census

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Corrections Expenditure per Montanan



Sources: MT DOC and DOJ Population: Year 2010 U.S. Census. Years 2012 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data (included in 2012 are the 2010 Youth Court Numbers)

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Fiscal Impacts on Expenditure MEDICAID

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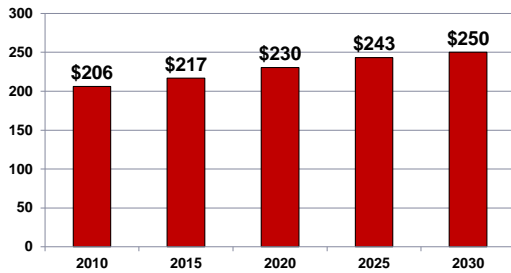
Montana Medicaid Expenditures in Fiscal Year 2009 - 2010

Description	Total	Elderly	Blind and Disabled	Adults	Children
Federal and State Expenditures for Medicaid	\$915,129,130	\$177,535,051	\$430,110,691	\$121,712,174	\$184,856,084
State Expenditures for Medicaid (22.35%)	\$204,531,361	39,679,084	\$96,129,739	\$27,202,671	\$41,315,335
Number of participants	81,597	6,126	19,059	11,433	44,979
Participation Rate	8.2%	4.2%	14.6%	1.9%	18.9%
Expenditure per Participant	\$2,507	\$6,477	\$5,044	\$2,379	\$919
Expenditure per Montanan (\$89,415)	\$207	\$40	\$97	\$27	\$42

Sources: Montana Medicaid Program, State Fiscal Years 2009/2010, Report for the 2011 Legislature, page 9 and Summary of Public Assistance and Medical Care, State Fiscal Year 2010. Montana Department of Public Health and Human Services. www.dohhs.mt.gov/statistics/information/healthstatus/2010/table1.pdf

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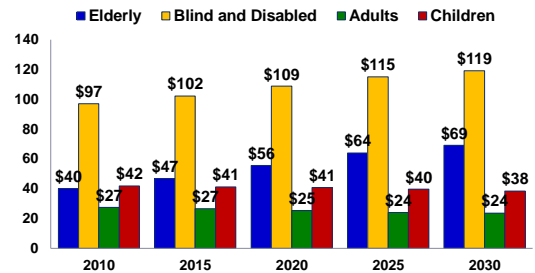
Medicaid Expenditures per Montanan, 2010 to 2030



Sources: Bureau of Census and Montana Medicaid Program, State Fiscal Years 2009/2010, Report for the 2011 Legislature

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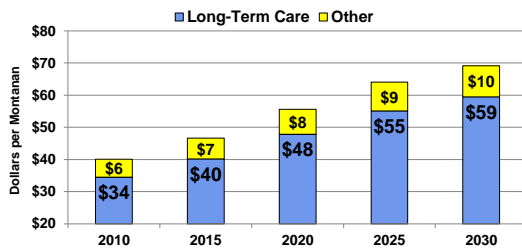
Medicaid Expenditures per Montanan by Medicaid Group, 2010 to 2030



Sources: Bureau of Census and Montana Medicaid Program, State Fiscal Years 2009/2010, Report for the 2011 Legislature

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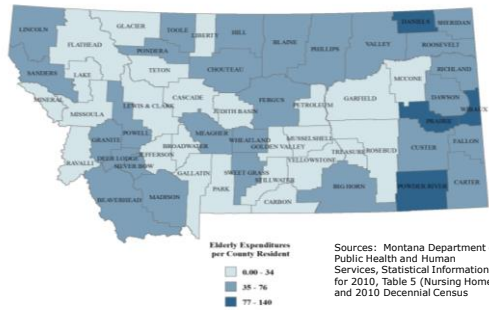
State Medicaid Physical Health Expenditure per Montanan for Long-Term Care and Other Expenditure for Elderly, 2010 to 2030 (no trend)



Sources: Bureau of Census and Montana Medicaid Program, State Fiscal Years 2009/2010, Report for the 2011 Legislature; and Kaiser Commission on Medicaid and the Uninsured, the Henry J. Kaiser Family Foundation

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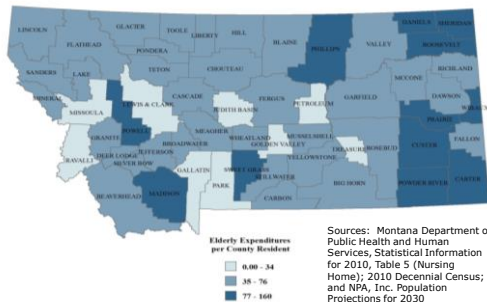
State Medicaid Expenditure for the Elderly per County Resident 2010 (no trend)



Sources: Montana Department of Public Health and Human Services, Statistical Information for 2010, Table 5 (Nursing Home) and 2010 Decennial Census

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State Medicaid Expenditure for the Elderly per County Resident 2030 (no trend)



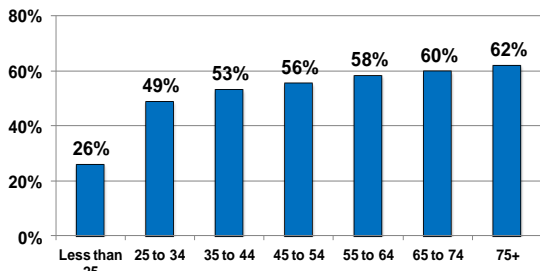
Sources: Montana Department of Public Health and Human Services, Statistical Information for 2010, Table 5 (Nursing Home); 2010 Decennial Census; and NPA, Inc. Population Projections for 2030

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Fiscal Impacts on Revenue RESIDENTIAL PROPERTY TAXES

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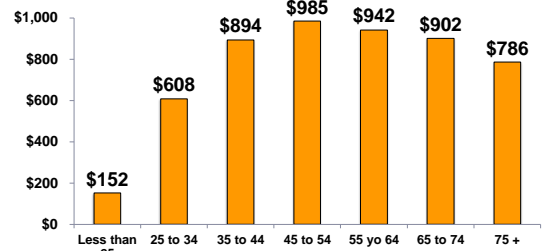
Percentage of Persons in Each Age Group who are Head of Household



Source: U.S. Census

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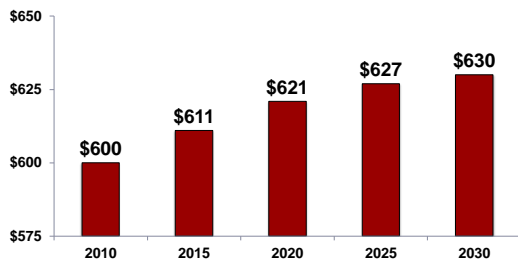
Montana Residential Property Taxes by Age



Sources: MDOR, BLS, Year 2010 U.S. Census. Years 2015 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data

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Residential Property Taxes per Montanan



Sources: MDOR, BLS, Year 2010 U.S. Census. Years 2015 to 2030 are estimates using the U.S. Census projections re-weighted with 2010 U.S. Census Data

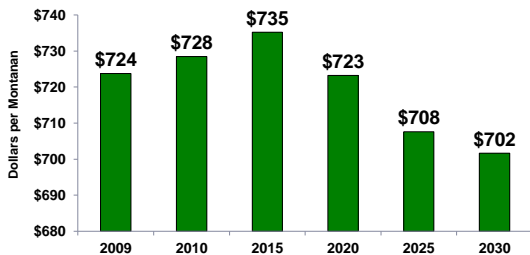
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Fiscal Impacts on Revenue INDIVIDUAL RESIDENT INCOME TAXES

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Individual Resident Income Tax Liability per Montanan



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Summary of Revenue and Expenditure Projections (Dollars per Montana Resident)

	2010	2030	Change	Percent Change
Tax Revenue	\$1,328	\$1,332	\$4	0.3%
Expenditure	\$2,043	\$1,952	-\$91	-4.5%

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Consumption Patterns

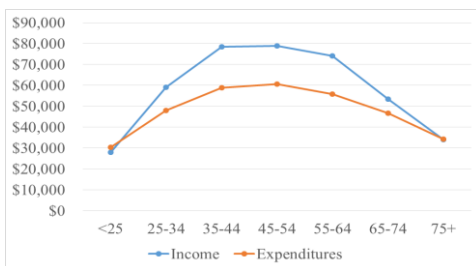
- Life-cycle and permanent income hypotheses (true/false)
 - Maintain lifetime consumption patterns by . . .
 - ❖ Saving while earning income
 - ❖ Dissaving in retirement

Elderly – spend less; little evidence of lifetime consumption patterns; maintain wealth by consuming less

Unknowns for the Elderly

- Health
- Life Expectancy
- Household Independence

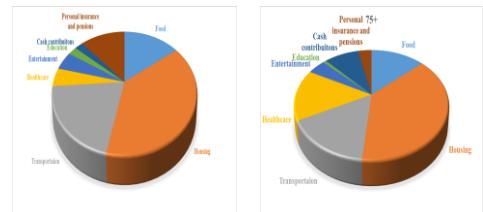
Income and Expenditures



Source: Consumer Expenditure Survey, 2013

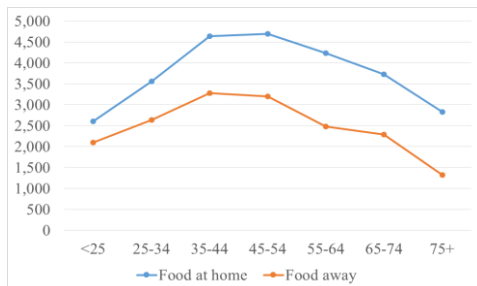
Expenditures by age

- 25-34 years old
- 75+ years

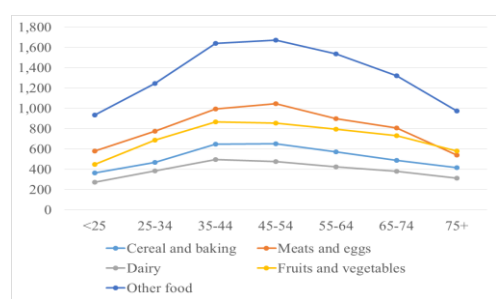


52 Story: food – 14 to 9%; housing 36 to 26%; trans 19 to 11%; health 5 to 11%;

Food “at home” and “away”



Food “at home”



Summary and Conclusion

Summary & Conclusion

- Aging will occur **most rapidly** in many of the rural areas of Eastern and Northern Montana.
- Aging will occur **least rapidly** in the more urbanized areas and on Native American reservations.

Summary & Conclusion

- Aging alone **modest impacts** on budgets of state and local governments.
- While expenditures on the elderly for **Medicaid** and other services will rise, they will be offset by lower **educational and correctional** costs.

Summary & Conclusion

- And while aging may reduce **income tax revenues**, these declines are likely to be offset by increased **residential property taxes**.

Summary & Conclusion

The next two decades are likely to be significantly different than the last four, because there will be a smaller “**demographic dividend**.”

Summary & Conclusion

- **Income Impacts**
 - On the income side, the Baby Boomers will retire and **women's labor force participation rates** are not expected to rise.

Implications for You

- **Demand**
 - **What nutrition-related services to the elderly demand from you?**
- **Supply**
 - **What will you be willing to supply?**

Questions

