



Disclosures

Brittany Denzer and Janet Meredith have no conflicts of interest to disclose

Background

- Hotter temperature due to climate change is one of the greatest emerging threats to human health, especially in Colorado¹
- Significant morbidity and mortality is associated with extreme heat events²
- Older adults (65 and older) are at increased risk for adverse health effects due to heat due to impaired compensatory physiology³
- Physicians are poorly equipped to address heatrelated risks in their patients, which requires an individualized approach⁴

Research Questions

- 1. What vulnerabilities predominate in adults 65 and older in Colorado?
- 2. What other risk considerations related to heat are important for Colorado's local climate and population?
- 3. What medication classes may compound the risk of heat-related illnesses?

Methods

- 2019 US Census Bureau data for Colorado was filtered by age, disability, housing tenure, and family types
- Literature review using keywords "medications," "heat," "risk," and "elderly"
- Internet search using keywords "climate," "health," "Colorado," "heat," "vulnerability," and "older adults, elderly" to identify local organization reports and media releases on heat and health in Colorado
- Literature review using "medications," "heat," "risk," "elderly" to develop medication resource

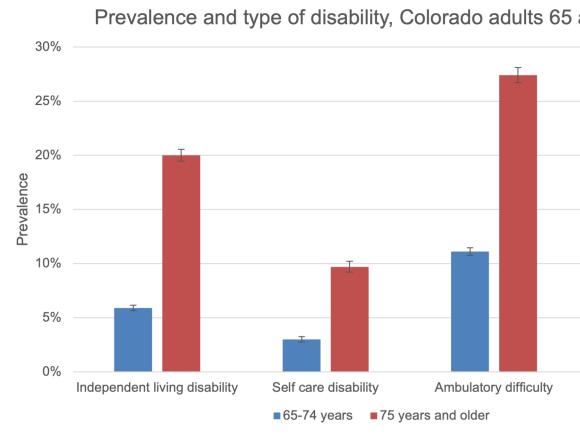
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 Colorado has a population of about 40,000 farm workers, about three-quarters of whom are from Mexico and Central America on seasonal or temporary visas 12 Colorado has 37,000 farms and ranches.⁷ 2013 study in one health facility in Colorado found the likelihood of migrant farmworkers seeking health care increased 88% on hot days⁸ 	Colorado farmworkers have high heat vulnerability due to multiple risk factors of poverty and strenuous working conditions.	30% 25% 20% 20% 15% 10% 5%	Ţ			I		Т.		
Colorado rates 46th out of 50 states for humidity and dew point. ⁵ Dry heat has a similar effect as humid heat on mortality in older adults ³	Excess fluid loss from sweat evaporation may make Coloradans, especially older adults, more susceptible to dehydration and hypovolemia ³	Figure 1: Preval	 65-74 years = 75 years and older 1: Prevalence and type of disability of Colorado adults 65 							
61% of residents engage in 150 minutes of moderate aerobic activity/week (compared with under 51% nationally) ⁸	Activity during heat is a risk factor for heat-related illness. This risk is increased with age ¹⁸	at a 90% confide	ence lev Kidney Injury,	el.	Hyperthermia / increased	Impaired	Impaired		Cognitiv	
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		NSAIDs Anticholinergics Antidepressants	•	•	•	•	•		•	
26% of Colorado adults 65 and older live alone ²⁷ During the Chicago heat wave, living	Individuals who live alone are at higher risk for heat-related death.	Antipsychotics Benzodiazepines Anticonvulsants			•	•			•	
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population. See handout for additional references.

Considerations for physicians: Mitigating the adverse health effects of heat in older Colorado adults

Brittany Denzer, MS4, Janet Meredith, MBA

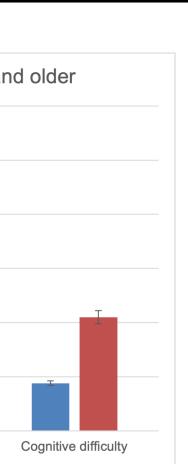
Results



Acknowledgements

Thank you to Janet Meredith, Maya Katz, MS3, and the Colorado Health Institute for their support and contributions to this project.





Conclusions

- Colorado's population and climate have several distinct considerations that may influence climate change-informed patient care.
- A physician education resource summarizing the effects of common medications on physiologic responses to heat was created to help inform medication management strategies.
- Principles of risk mitigation align with current patient-centered care including education on risks and preventative measures, assessing functional status, and medication review and reconciliation

Limitations and Implications

- Limitations: Lack of information on baseline perceptions of physicians and older adults about heat risk. The vulnerabilities addressed are not comprehensive. Several significant vulnerabilities were not able to be assessed such as lack of air conditioning.
- Adaptation to more frequent and severe heat requires physician knowledge of region specific and individual risks of heatvulnerable populations as well as relevant medication profiles.

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