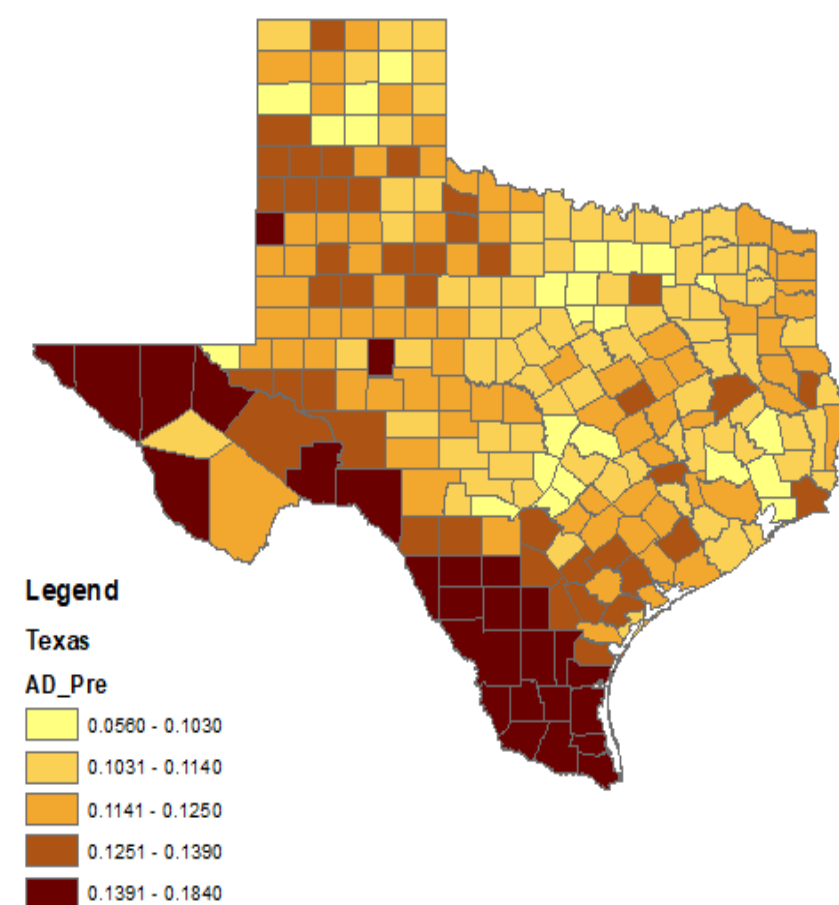
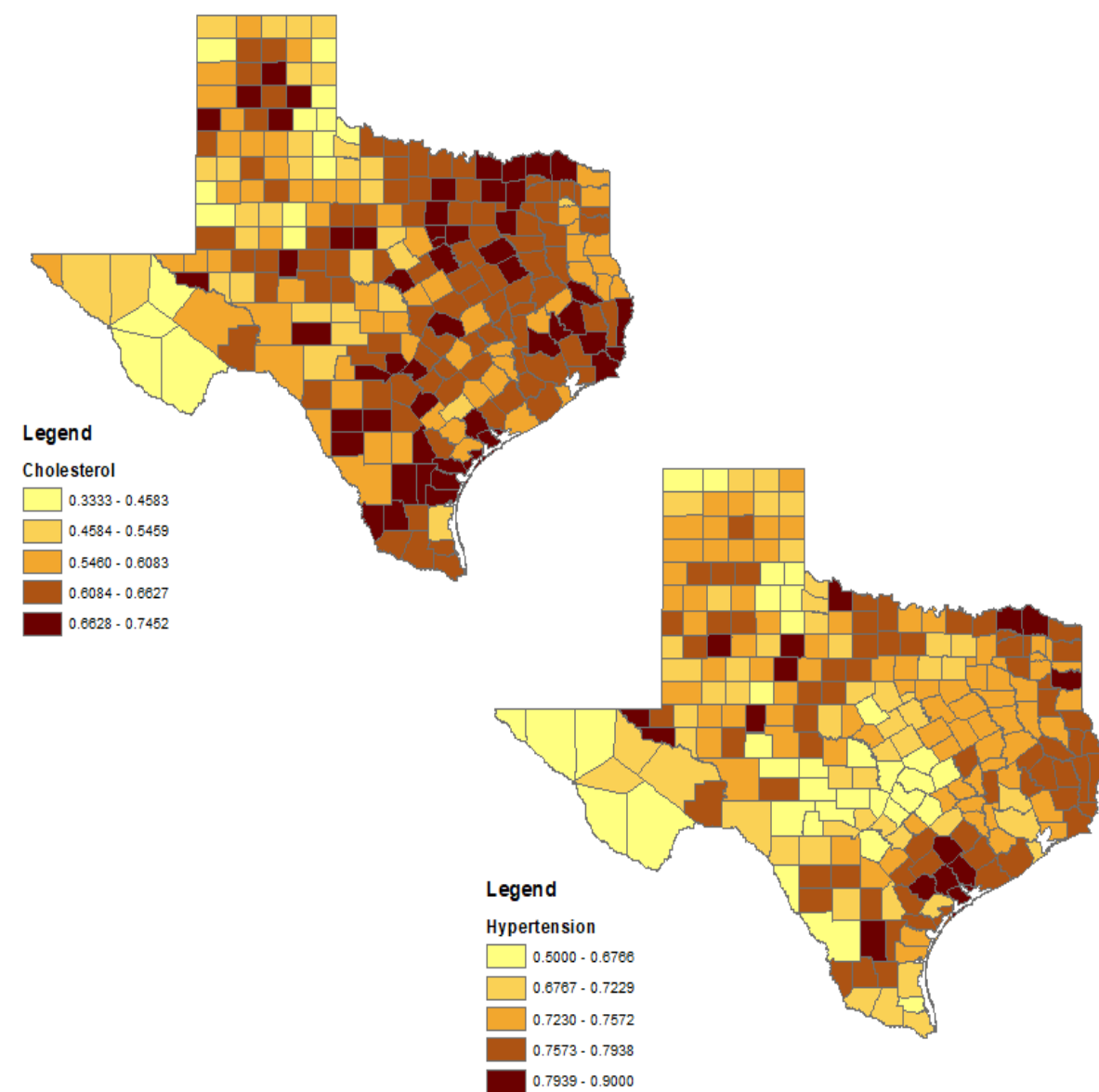
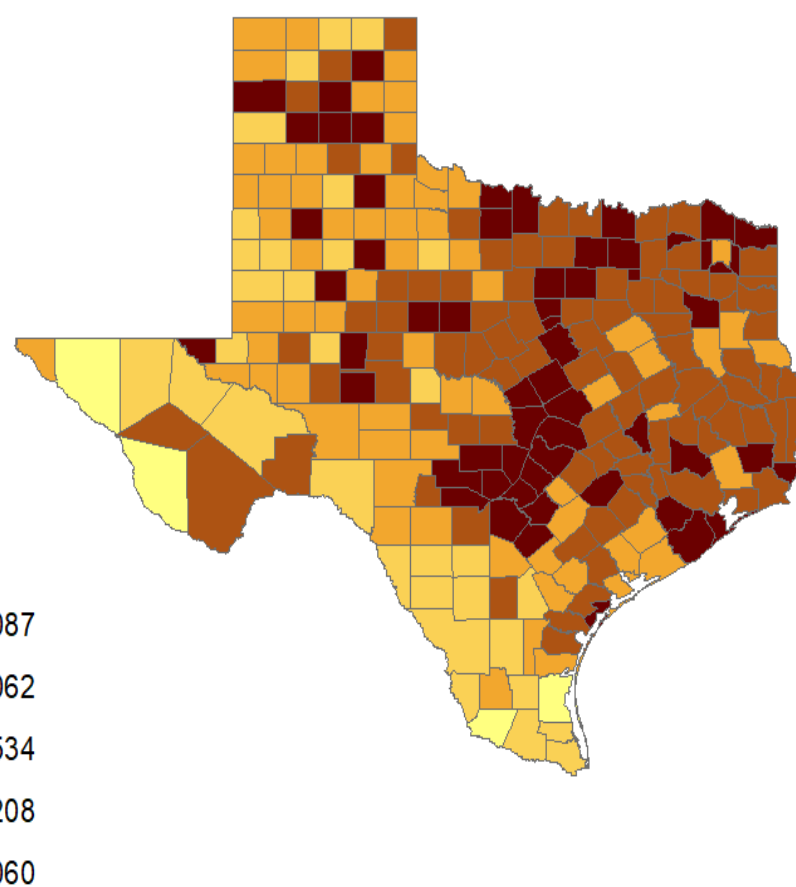


Examining the 2024 Lancet Commission Dementia-Related Factors Among Texas Medicare Beneficiaries

10626

Mukaila Raji, MD, Yong Shan, PhD, Sadaf Arefi Milani, PhD, Huey-Ming Tzeng, PhD, Yong-Fang Kuo, PhD
University of Texas Medical Branch, Galveston, TX, USA

The 14 dementia risk factors identified by the 2024 Lancet Commission account for ~60% of the county-level variation in ADRD prevalence across Texas, though the prevalence of individual factors shows wide geographic variation.

INTRODUCTION	METHODS	RESULTS																																		
- The 2024 Lancet Commission Report identified 14 potentially modifiable risk factors accounting for 45% of dementia cases globally. - These estimates were largely derived from high-income countries and predominantly White European populations, limiting their generalizability to more diverse demographics. - The degree of contribution of each risk factor likely differs in Texas, a rapidly growing state with high dementia prevalence and large populations of older Hispanic and Black residents with high rates of cardiometabolic syndrome. - This study examined the prevalence of these 14 risk factors across Texas and assessed their relative contributions to county-level variation in the prevalence of Alzheimer’s disease and related dementias (ADRD).	- Included data from community-dwelling Texas Medicare beneficiaries (n=897,232) aged ≥68 in 2023 with continuous Medicare Parts A and B coverage and no HMO enrollment from 2020 to 2023 (or until death), excluding individuals with a prior ADRD or MCI diagnosis between 2020 and 2022. - Estimated the prevalence of ADRD and 10 dementia-related factors using claims data; physical inactivity, social isolation, and air pollution at the county level; and education based on zip code-level high school graduation rates. - Analyzed county-level variation in ADRD prevalence and risk factors, assessing the extent to which these risk factors contributed to the observed county-level variation in ADRD prevalence.	Figure 1. ADRD prevalence varies across Texas counties  Overall ADRD Prevalence: 11.7% (County range: 8%–18.4%) Variance Explanation: 14 factors account for ~60% of county-level variation in ADRD prevalence Key Risk Factors: HTN (71.5%), HLD (63.5%), DM (27.1%), obesity (18.7%), and depression (12.6%) Geographic variation: substantial range observed in DM (13.8%–48.0%) and obesity (5.9%–32.1%)	Table 1. County-level stepwise linear model of the 2024 Lancet Commission dementia risk factors <table><tr><th>Parameter</th><th>Estimate</th><th>Partial R-Square</th><th>p-value</th></tr><tr><td>Education</td><td>-0.0008</td><td>0.4316</td><td><.0001</td></tr><tr><td>Diabetes</td><td>0.1154</td><td>0.0826</td><td><.0001</td></tr><tr><td>Tobacco</td><td>-0.0688</td><td>0.0437</td><td>0.0004</td></tr><tr><td>Depression</td><td>-0.0534</td><td>0.0197</td><td>0.0237</td></tr><tr><td>Pollution</td><td>-0.0023</td><td>0.0086</td><td>0.0067</td></tr><tr><td>Hypertension</td><td>-0.0435</td><td>0.0104</td><td>0.0062</td></tr><tr><td>Brain damage</td><td>0.7523</td><td>0.0070</td><td>0.0377</td></tr></table> Figure 2. County-level variation in hyperlipidemia (top) and HTN (bottom) prevalence 	Parameter	Estimate	Partial R-Square	p-value	Education	-0.0008	0.4316	<.0001	Diabetes	0.1154	0.0826	<.0001	Tobacco	-0.0688	0.0437	0.0004	Depression	-0.0534	0.0197	0.0237	Pollution	-0.0023	0.0086	0.0067	Hypertension	-0.0435	0.0104	0.0062	Brain damage	0.7523	0.0070	0.0377	Figure 3. Variation in education (high school graduation rates)  CONCLUSIONS - The 2024 Lancet Commission dementia risk factors account for ~60% of county-level variation in ADRD prevalence in Texas. - Identifying these variations helps guide region-specific public health interventions, optimize resource allocation, and strengthen clinical recommendations for brain health.  ALZHEIMER'S ASSOCIATION AAIC 26
Parameter	Estimate	Partial R-Square	p-value																																	
Education	-0.0008	0.4316	<.0001																																	
Diabetes	0.1154	0.0826	<.0001																																	
Tobacco	-0.0688	0.0437	0.0004																																	
Depression	-0.0534	0.0197	0.0237																																	
Pollution	-0.0023	0.0086	0.0067																																	
Hypertension	-0.0435	0.0104	0.0062																																	
Brain damage	0.7523	0.0070	0.0377																																	