"The COVID-19 pandemic has brought unprecedented challenges to our society and disproportionately affected vulnerable populations. Part 1 of this project is a cross-sectional study of affordable housing residents in Austin, TX, that explored the impacts of living environments on residents’ physical activity and health, before and during the pandemic. Part 2 is a nationwide study of nursing homes that examined the extent of COVID-19 infections and mortality, and how facility attributes are associated with these outcomes. Part 1: Housing and neighborhood environments played significant roles in affordable housing residents’ physical activity and health. The pandemic has made housing stability and neighborhood amenities even more critical for this population. Part 2: For nursing homes, architectural design attributes have significant impacts on COVID-19 transmissions in NHs. To improve the safety and resilience of NHs against future health disasters, facility guidelines, and regulations should consider the need to increase private rooms and living areas."