J.A. SANFORD, F. HARRIS, H. YANG. Identifying inclusive design factors that contribute to community mobility and participation of older wheelchair users. Gerontechnology 2010;9(2):246; doi:10.4017/gt.2010.09.02.276.00 **Purpose** The community environment can be inclusive, that is act as a facilitator to activity and participation on the one hand (e.g., curb cuts), or exclusive, acting as a barrier on the other (e.g., curbs). While a large number of studies have established links between inclusive community design factors and the walkability of neighborhoods as well as the physical activity of adults[1-3], few studies have examined the impact of those factors on the mobility and participation of elderly wheelchair users. The purpose of this study was to examine how inclusive or exclusive various community design characteristics were in contributing to community mobility of older adults compared to younger wheelchair users. **Method** This paper reports results from 403 respondents (71% <60 years of age and 28% 60+ years old) to a web-based survey hosted by Survey Gizmo. The survey examined level of difficulty (from no difficulty to so difficult that the individual is prevented from going into the community) for 17 characteristics of sidewalks (e.g., width, surface condition, continuity), 17 characteristics of street crossings (timing of lights, length, location), 10 characteristics of curb cuts (surface condition, slope, location) and 6 characteristics of ramps (length, slope, railings). **Results & Discussion** Forty-two percent (42%) of the younger respondents compared to only 25% of the older sample used manual wheelchairs while 58% used powered devices compared to 75% of the older subjects. Although there were no significant differences in difficulty between older and younger power wheelchair users on any of the 50 environmental factors, 19 factors posed significantly greater barriers to older manual wheelchairs than younger ones, including 6 out of 17 sidewalk characteristics, 6 out of 17 street crossing characteristics, 6 out of 10 curb ramp characteristics and 1 out of 5 ramp characteristics. Some of the factors that impacted older adults are included in accessibility guidelines, such as curb cuts with flared sides (p=0.015), while others, such as intersections without curb cuts at all corners (p=0.018), crossings with no marked crosswalks (p=0.000), broken curb ramps (p=0.005), and narrow paths (p=0.000) are neither included nor well-regulated. These findings represent an important step in supporting better activity and participation outcomes of older wheelchair users. By identifying specific environmental characteristics that present barriers to these individuals, targeted interventions, such as more supportive designs and better maintenance programs, can be developed that will enhance community mobility and participation outcomes of older manual wheelchair users.

References

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