Kie Fujii, BA<sup>1,4</sup>; Katrina Ma<sup>2</sup>, Chu Li, MS<sup>2</sup>; Michael Saugstad<sup>2</sup>, Lisa Stolarz, MA<sup>3,4</sup>, Michael Starr, MBA<sup>4</sup>, Florian P. Thomas, MD, MA, MS, PhD<sup>1,3,4</sup>; Jon E. Froehlich, PhD<sup>2</sup>

<sup>1</sup>Department of Neurology, Hackensack Meridian School of Medicine, Nutley, NJ; <sup>2</sup>Makeability Lab, Allen School of Computer Science & Engineering, University of Washington, Seattle WA; <sup>3</sup>Hackensack University Medical Center, Hackensack, NJ; <sup>4</sup>NMSS – NJM Community Council, Bergen County, NJ

**Title:** Implementing a community-based virtual tool to characterize sidewalk accessibility in a Northern New Jersey (NJ) town

**Background:** Inaccessible sidewalks result from municipal ordinances ("no sidewalk or curb-cut requirement") and inadequate enforcement ("tree roots, snow removal, cracked sidewalks").

## Objective:

Employ a virtual tool, engage with community (NMSS Community Council, Girl Scout troop).

Quantify sidewalk deficiencies in NJ town Oradell.

Raise town leadership and community awareness.

Contribute to a plan remedying inaccessibility.

Promote inclusivity/disability awareness.

**Design:** Community-based implementation of "Project Sidewalk®", a Google-Street-View®-based custom assessment tool.

**Methods:** 35.9 street miles were examined:

- 1) 81 trained volunteers (Girl Scouts, NMSS community council) produced 11,135 labels of sidewalk characteristics, e.g. obstacles, curb-ramp, missing curb-ramp, surface problem, "no sidewalk", crosswalk, pedestrian signal.
- 2) Severity was graded: (1=passable; 5=impassable).
- 3) 14,919 validations of other users' labels showed >90% accuracy.

**Results:** 52.5% of streets lacked sidewalks. Surface problems included: height differences between panels (29%), cracks (25%), slanting (21%), curb ramps lacking tactile warnings (15%); others included brick/cobblestone pavements and inadequate width. For 42% of missing curb ramps, no alternative routes existed. Obstructions included vegetation (40%) and trash cans (17%). The business center evidenced fewer high-severity obstacles vs most residential areas.

**Conclusions:** With growing numbers of senior citizens and people with disabilities, the impact of sidewalks on mobility, QoL, community participation and access to work and exercise increases. Sidewalk problems affect also cycling children and people pushing strollers. Issues involve individual ("building owners") and societal awareness/responsibility, Urban Design and community investment. By permitting volunteer-based implementation with limited training, Project Sidewalk facilitates community action by producing actionable data and awareness. Our local success may serve as a model for nation-wide implementation.

**Keywords:** Sidewalk Accessibility, Project Sidewalk, Inclusivity, Oradell, Google Street View, Quality of Life, Disability, Pedestrian, National MS Society (NMSS)

## **Learning Objectives:**

List the types of inaccessible sidewalks faced by people with disabilities.

Describe how problematic sidewalks can be identified, quantitated, and validated.

Discuss opportunities to work with community and advocacy organizations to raise accessibility awareness.

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