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Heidi A. Berger* (heidi.berger@simpson.edu), 701 N C Street, Indianola, IA 50125, and
Emma C. Christensen, Nick J. Joslyn and **Madeline M. Kersten**. *Optimization of Down Syndrome Specialty Care Clinic Locations using Operations Research*. Preliminary report.

As the field of healthcare continues to grow and evolve, specialized and coordinated care for extraordinary conditions becomes more and more necessary. Down syndrome, one of these extraordinary conditions, is a chromosomal disorder that is often accompanied by other severe medical conditions that affect an individual's overall health. Currently, there are 71 Down syndrome specialty care clinics in 34 states in the U.S. that serve less than 10% of the eligible population. Using operations research, specifically p -median and maximal covering models, we found that the current placement of these 71 clinics adds to the problem of inaccessibility. Our research presents the optimal locations for Down syndrome specialty care clinics in the continental United States and offers potential future clinic locations given the current placement. (Received August 04, 2016)