



# Community Engagement through Powered Mobility for Young Children with Special Needs: Go Baby Go! Milwaukee

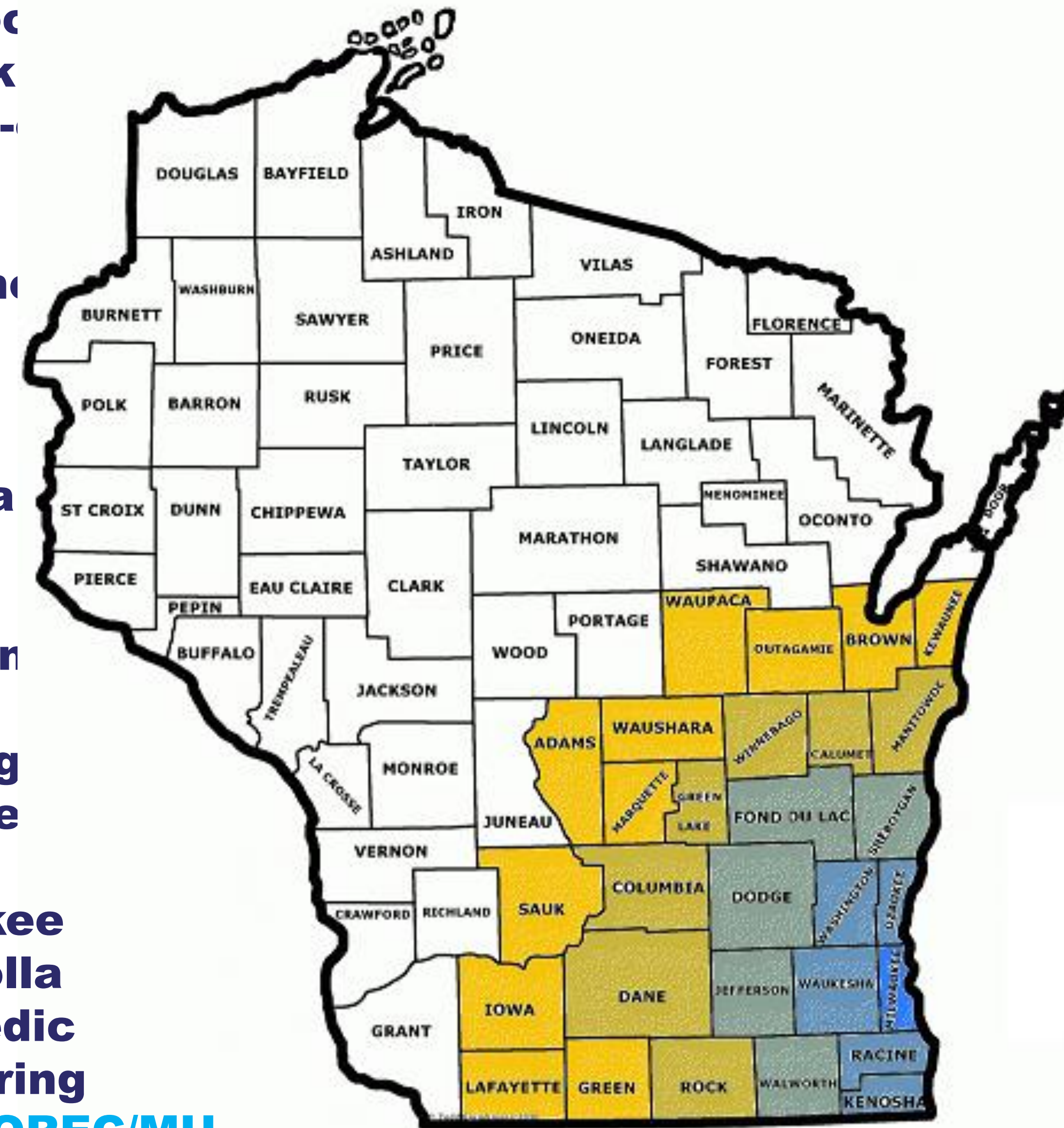
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## Program Overview

This program provides modified ride-on cars to young children with disabilities in Southeastern Wisconsin (ages 9 months to 5 years) so that they can move about independently. The program participates in the national opensource "Go Baby Go" initiative to provide and expand these services.

Research has shown that independent mobility leads to an increase in a child's cognitive, and motor skills. In this project, toy ride-cars are modified technically and therapeutically to fit the specialized needs of each child. Examples include a therapy switch in the place of a gas pedal, joystick control instead of a steering wheel, head and body support, custom harnesses, and padding ensure a stable posture.



Go Baby Go! Milwaukee started in 2016 as a collaboration between The Orthopaedic Rehabilitation Engineering Marquette University (OREC/MU) and Children's Wisconsin (CW), to bring independent mobility to the children of Southeastern Wisconsin. Each month therapists from CW select families to receive a custom modified ride-on car. Children in the program then attend a "fitting" where the therapists, engineers and parents select a car. Once the therapist has identified the specific modifications necessary the engineers at OREC/MU,MCW modify the car, drive system and controls to fit the needs of the child. The car is then delivered to the family at no cost. So far, the program has provided over 150 cars which are constantly evolving to better suit the needs of the children in the program.



## Method

1. Therapists at CW identify children who can benefit from the program.
2. The family, therapists, and Biomedical Engineers at OREC/MU,MCW work together to select an appropriate vehicle based on the child's rehabilitative needs and required technical modifications.
3. The Biomedical Engineer then modifies, assembles, and tests the vehicle.
4. The vehicle is given to the family for home use.
5. Parents are surveyed annually on use and satisfaction of their GBG! MKE car



## Acknowledgements

The GBG! MKE team would like to extend a special thank you to Jay Blankenship from the Children's Foundation who has provided support and funds to continue growing our program and Don Wyllie, a Children's engineer who was instrumental in our first build. We also sincerely thank OREC/MU,MCW for ongoing financial and technical support of the program.

We would also like to recognize our many generous donors, because without their support we would not be able to provide this large number of cars at no cost to the families of Southeast WI.

## Results

- The program has grown from 1 vehicle per month in 2016 to the current production of 5 per month.



- With ongoing input from the therapists, engineers, and families in the GBG! MKE program, significant growth and expansion have resulted with an innovative cascade of therapeutic advances and technical improvements, including remotely controlled cars, the addition of a microprocessor controller that supports programmable acceleration, and a joystick control.

Joystick Controlled Vehicle

Microprocessor Control System

