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# GoKids Boston Youth Fitness, Training, and Research Center

Meghan Feeley

*University of Massachusetts Boston, meghan.feeley@umb.edu*

Sarah Camhi


*University of Massachusetts Boston, sarah.camhi@umb.edu*

Dana Comnesso

*University of Massachusetts Boston, dana.comnesso@umb.edu*

GoKids Boston, University of Massachusetts Boston

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# GoKids Boston Youth Fitness, Training, and Research Center

## Mission



*GoKids Boston embodies innovation and leadership in youth health through life-changing programs, groundbreaking research, exceptional training opportunities, and dedication to the community with a focus on eliminating health disparities.*

## Community Fitness Center



**SUMMARY:** GoKids Boston was founded at UMass Boston in 2006 in collaboration with Children's Hospital Boston to advance the science relating exercise to youth health and wellness and to become a local leader in combating the obesity epidemic. Since opening its doors, GoKids has empowered over 1,200 youth to take control of their health.

- GOALS:**
1. Reduce the impact of obesity on children, families and communities through service research partnerships
  2. Improve children's lives through fitness
  3. Provide a safe space with caring adult where youth can build self-confidence, and form friendships



**APPROACH:** GoKids provides low income, multi-ethnic youth with engaging physical activity and nutrition education programs aimed at preventing and treating obesity and chronic disease in our safe and supportive environment.

GoKids embraces UMass Boston's urban mission and focuses on reducing health disparities in underserved families. GoKids targets Boston youth at high risk for obesity and chronic disease. We have successfully targeted our programming, with annual statistics indicating that about 80% of participants are Hispanic, African American, or Asian, 67% are eligible for free or reduced price lunch, and 100% of referred students in 2011 have a BMI that puts them in the obese category (>95<sup>th</sup> percentile.)

Participants experience supervised physical activity and exercise that includes interactive electronic games and traditional equipment, periodic fitness assessment, homework support, nutrition education, and coordination with primary care providers and families.

In the 2010-2011 school year, GoKids was able to provide free or reduced priced programming to 96% of participating youth. These scholarships allow participants to attend GoKids up to 4 days a week for 2 hours at a time. While at GoKids, participants have a professional support team that provides homework help, individual exercise instruction, nutrition education, and closely tracks their progress.



### CURRENT COMMUNITY PARTNERS Schools:

- Dorchester Academy
- Dever McCormack K-8
- Quincy Public Schools
- Roger Clap Innovation School

### Community Health Centers and Hospitals:

- Bowdoin Street Community Health Center
- Dimock Community Health Center
- Southern Jamaica Plain Health Center
- Upham's Corner Health Center
- Whittier Street Health Center
- Marsha Eliot Health Center
- Children's Hospital Boston
- Boston Medical Center
- Geiger Gibson Health Center
- Neponset Community Health Center

- Community Organizations:**
- UMass Cooperative Extension SNAP-Ed
  - Harbor Point Community Action Committee

### NEXT STEPS:

1. Continue to recruit low-income and multi-ethnic youth who are obese or are at great risk of obesity and chronic disease
2. Foster and increase partnerships with local schools, community health centers, hospitals, and youth serving organizations
3. Serve special need populations during the day by providing adapted physical education sessions
4. Become a strong resource to sport-based nonprofit organization by providing training and health based evaluation
5. Reach youth through social media platforms like Facebook, Twitter, YouTube, and the GoKids website.

## Training Center



**SUMMARY:** GoKids prides itself on being a strong training resource for UMass Boston students and Boston Public School students and empowers young adults to be health ambassadors. Every semester, GoKids hosts student employees, interns, teaching assistants, and volunteers that help with various programs. GoKids has also created the Health Ambassadors Program (HAP) which trains Exercise Health Sciences (EHS) students within the GoKids center and places students in exciting service-learning opportunities at Boston Public Schools.

- GOALS:**
1. Enlist youth and professionals as health ambassadors
  2. Provide insight that UMB and BPS students can share with their community on leading healthy lives
  3. Build leaders that are trained and educated on exercise facilitation and healthy eating
  4. Provide UMB and BPS students with mentorship opportunities and service-learning opportunities that greatly impact their community



### APPROACH:

**Fit 2 Lead** Currently GoKids offers a Fit2Lead Program which empowers high school students who are at risk of academic failure to become mentors to overweight and obese teens in our summer program. Fit2Lead participants are trained every spring on anatomy, cardiovascular health, strength training, and nutrition. After significant training and leadership workshops, Fit2Lead students help to mentor and train GoKids participants. Fit2Lead members become advocates of healthy living.

**Health Ambassadors Program (HAP)** The Health Ambassadors Program is built on partnerships between GoKids, Exercise Health Sciences faculty and students, and Boston Public Schools. EHS students are trained within GoKids Boston on incorporating anatomy, cardiovascular health, and strength training into physical education sessions and then observe and lead actual physical education classes at local Boston Public Schools. HAP provides EHS students with exciting service learning projects and allows GoKids ideology to reach more youth.

**Resource for Nursing and Exercise Health Sciences Students** In addition to employing and providing service opportunities to students, GoKids also welcomes classes like Research Methods and Pediatric Exercise to our center often to perform research studies, use the OXa machine, and observe GoKids Programming.



*"GoKids allowed me to be a mentor to the kids in our summer program. We were able to teach kids how to exercise while we got fit ourselves. The games at GoKids are great because we can have fun with the kids and get healthy. Advice I'd give to a kid coming to GoKids would be to go hard, if you want to lose weight just go hard and don't stop."*  
-Fit2Lead Participant Age 17

### NEXT STEPS:

1. Continue to offer Fit2Lead Program in partnership with Dorchester Academy
2. Strengthen and grow the HAP to include more College of Nursing and Exercise Health Sciences students (CNHS) and Boston Public Schools
3. Continue to build opportunities for EHS and Nursing students
4. Provide more opportunities for UMass students outside of CNHS
5. Train representatives from local youth-serving organization on healthy living

## Research Center



**SUMMARY:** GoKids faculty and staff participate in scholarly activities aimed at enhancing the science of relating youth physical activity to health. Studies at GoKids have resulted in progressively more effective program development, publications in peer-reviewed journals, and presentations at scientific conferences. We've hosted various studies with funding from diverse sources including National Institutes of Health and the New Balance Foundation. We have state-of-the-art measurement capabilities for assessing the impact of our programs on children's activity levels, fitness, and body composition. Our research approach combines community based participatory methods with state-of-the-art assessment measures to maximize the value of our findings to both scholars and the community.

- GOALS:**
1. Create replicable exercise protocols that can be used by GoKids and community partners
  2. Establish evidence for the role of fitness training in adiposity reduction in children and youth
  3. Identify effective partnership structures with schools and primary care providers that facilitate obesity treatment for urban children and youth



### APPROACH:

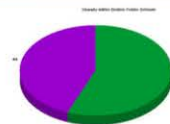
Recent research activity is summarized below:

1. **Overweight and obese high school youth showed health-promoting and statistically significant increases in their "good" cholesterol levels** (High Density Lipoprotein) as a consequence of participating in Fit2Lead, our fitness, leadership, and academic programming project. *Nancy OT, Wacha L, Kim A, Saha C, Murray K, et al. Effects of a Multi-Component Wellness Intervention on Dyslipidemia in an overweight adolescent population. (Accepted for Publication, J Pediatr Endocrinology and Metabolism)*
2. **Innovative school-aged children participating in an intervention of adapted soccer techniques and nutrition education decreased time spent in sedentary activity and increased time spent in light physical activity.** *Balfanz, SO, Smith, SK, Gaudin, SE, Kim, A, DiGianni, S, Williams, JH, Williams, H, Norman, LL. Increasing Physical Activity in Inner-City Youth Using Novel Instructional Gaming. Presented at the American Academy of Pediatrics, Poster 21 Conference, Boston, MA, Oct 14, 2011.*
3. **Prescription of national and international guidelines decrease the GoKids Boston model and assess the "Power of Play" in increasing energy expenditure and engaging children and youth in physical activity.** *Aguiar, JJ. Prevention of Obesity. Presentation at the European Society of Cardiology, Paris, France, August 2011*  
*Wacha L, Norman LL, Saha C, Kim A. GoKids Boston: Innovative Ideas for Fostering Children's Health in Community Programs. Workshop at the Healthy Behavior Conference, San Diego, CA, December 2011.*
4. **Research at GoKids has shown that interactive video games can help children obtain moderate and vigorous physical activity, and can therefore make important contributions to youth exercise programs. A research article on this topic received considerable national press coverage and appeared in a March 2012 issue of Time magazine.** *Kimura A, Norman, M, Crocker, S. The Power of Learning for Obtaining Moderate and Vigorous Physical Activity in Children. Slide Presentation: American College of Sports Medicine, New England Regional Meeting, Providence, RI, Boston*  
*Balfanz SO, Murray K. Energy cost of exergaming: A comparison of energy cost of forms of exergaming. Arch of Pediatrics and Adolescent Medicine. Online publication March 7, 2011. doi:10.1093/pep/kar013*
5. **Children attending GoKids to help with weight management improve their eating and physical activity knowledge, intentions and behavior, and show measurable improvements in body composition, strength, and cardiorespiratory fitness.** *Saha C, Kim A, Crocker S, Wacha L. Improvement in fitness and body composition among youth participating in a fitness center intervention for obesity treatment. Presentation at New England Academic College of Sports Medicine Annual Meeting, November 2011*  
*Wacha L. Presentation to the Vermont and Public and Policy Research Forum, U Mass Boston, October 2011.*
6. **Innovative research combining exercise with math lessons at GoKids was effective in improving time spent in moderate and vigorous physical activity and student performance on classroom math and language arts assignments.** *Norman A, Crocker S, Marmorek, R, Saha, S, Palmer, S, Mollenauer, K, and Williams, K. Differences in Physical Activity Level Between Tutoring and Learning in Middle School Students. Slide Presentation American College of Sports Medicine, New England Regional Meeting, Providence, RI, September 2008*
7. **Research at GoKids is laying the groundwork for investigating how energy expenditure and physical activity level are measured in children and adolescents.** *Crocker, SJ, Norman, M, and Barrett, GB. Use of a Regression Model for Estimating Energy Expenditure in Children. In review at MedStar and Science in Sports and Exercise*  
*Crocker SJ, Norman M, Barrett GB, and Barrett GB. Use of a 2 regression model for estimating energy expenditure in children. Medicine and Science in Sports and Exercise. 43: 2011, 2011.*  
*Murray K, Norman M, Barrett GB, and Crocker S. Validity of Actical accelerometer algorithms for estimating energy expenditure in children (Abstract). Medicine and Science in Sports and Exercise. 43: 1483, 2011.*  
*Norman M, Barrett GB, Murray K, and Crocker S. Validity of Actical prediction equations for estimating energy expenditure in children (Abstract). Medicine and Science in Sports and Exercise. 43: 1483, 2011.*

### NEXT STEPS:

1. Foster interdisciplinary collaborations with research and clinical faculty from a range of discipline
2. Continue to analyze and report on existing data
3. Pursue research funding through federal and philanthropic sources
4. Continue to accrue evidence on the effectiveness of our protocols through ongoing enrollment of new participants

## Need



There is a general dearth of effective, replicable community-based approaches to obesity and chronic disease prevention and treatment for youth and families. At a societal level, obesity, inactivity, and poor diet contribute to widespread chronic disease, but disparities in disease rates implicate additional social determinants including poverty, ethnicity, neighborhood resources, public safety, availability of healthy food, and educational attainment. To move forward, the National Heart Lung and Blood Institute recently called for innovative efforts that engage community organizations, schools and primary care and move away from overall low-impact intervention. In addition, the United States Department of Health and Human Services has called for more research on the role of exercise in reducing adiposity among children and youth. While Massachusetts public schools are required to screen children for obesity, there are few referral resources that meet families' needs for effective, safe, fun interventions, and schools are hard-pressed to provide physical activity in amounts sufficient to improve health. School-based BMI screening has recently revealed that about 44% of Boston Public schoolchildren are obese or overweight and that racial disparities exist; while 7.6% of white high school students are obese, 14.6% of blacks are (all data, Boston Public Schools.)