Using Technology for Community-Based Advocacy and Environmental Change: The Community Park Audit Tool App (eCPAT)

Active Living Research– February 22, 2015

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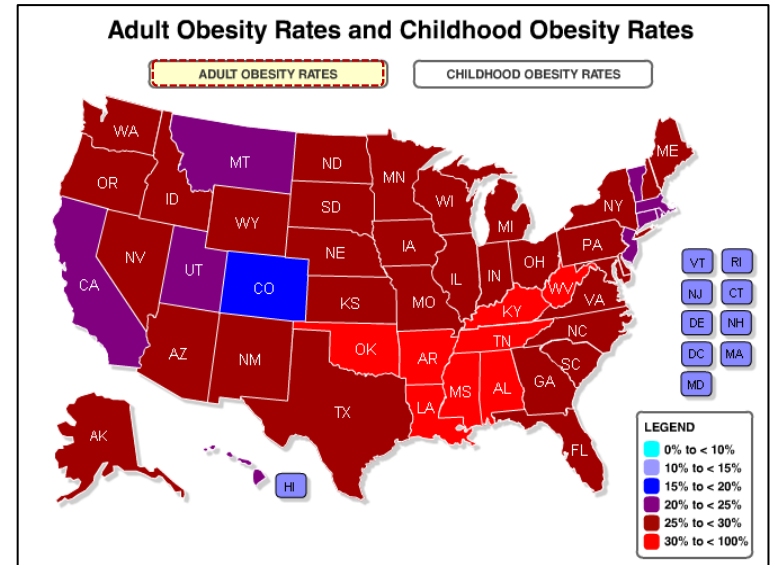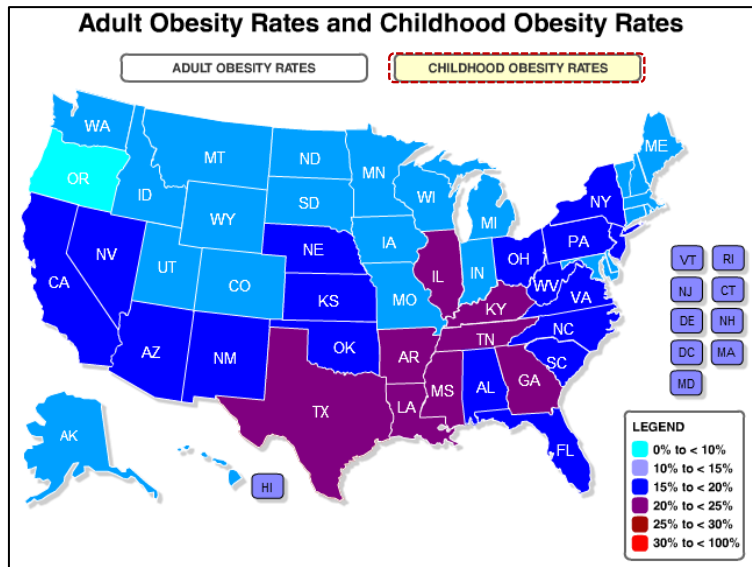Travis Smith, PhD, National Recreation and Park Association

Agenda

- Background and development

- eCPAT app demo

- Practice park audit

- Small group discussion

Background and Development

Obesity in America

- **32%** youth (2-19) in US overweight or obese
- **63%** adults in US overweight or obese

- Health-related issues (mental & physical)
- Staggering costs of medical care
- Overweight children are more likely to be overweight or obese as adults

Ogden et al., 2014; CDC, 2010; Ferraro et al., 2003; Franks et al., 2010; Yeung et al., 2010; Freedman et al., 2001

Physical Activity

- Physical activity (PA) can reduce risk of obesity and related diseases

- Only 48% of adults and 27% of youth meet PA guidelines

- PA declines with age

McGovern et al, 2013; Knuth & Hallal, 2009; CDC. 2015; Kann et al., 2013

Ecological Approach

- Multiple social and physical environmental variables influence PA
- Parks, in particular, are key intervention venues

Davison & Lawson, 2006; Ding et al., 2011; Bedimo-Rung et al., 2005; Moody et al., 2004

Parks and Physical Activity Research

- **Living closer to park space** is associated with increased physical activity among adults & youth

- **Park features & other characteristics** may be just as important as proximity in encouraging neighborhood & park-based physical activity

  - Number & types of features (e.g., playgrounds, trails)
  - Quality of park and features (e.g., renovations)
  - Ease of accessing the park from surrounding neighborhood (e.g., street connectivity, traffic, crossings, public transportation)

- Park availability & park features and quality are generally **worse in low income and/or high-minority areas**

Kaczynski & Henderson, 2007; Roemmich et al., 2006; Kaczynski et al., 2008; Cohen et al., 2006; Colabianchi et al., 2008; Crawford et al., 2008

Community Advocacy for Parks

- Modifying or improving parks a promising solution

- Will require the interest of multiple constituencies

- **Participatory action research (PAR**) emphasizes community participation through collective inquiry, data collection, and action to address community based issues

- Citizens often do not have the knowledge or preparation to make meaningful contribution.

American Academy of Pediatrics, 2009; Institute of Medicine, 2005; Sallis et al., 2006; Baum et al., 2006; Bozlak et al., 2014; Shandas & Messer; 2008

Community Park Audit Tool (CPAT)

- Comprehensive yet user-friendly
- Developed with and for community members through RWJF ALR grant
- 6 pages with 4 sections:
  - Park information
  - Access and surrounding neighborhood
  - Park activity areas
  - Park quality and safety
- Concerned with presence/absence and 'usability' and 'condition' of most park elements
- Quick method with demonstrated high reliability for auditing parks for their potential to promote PA

Kaczynski et al., 2012

Getting Youth Involved

- Youth can and should be involved in healthy community PAR
  - Youth voices especially powerful
  - Positive youth development
  - Future public health leaders

- Youth advocacy for obesity prevention the next wave of social change for health

- Often an under represented group

Checkoway et al., 2005; Ribisl et al., 2004; Millstein & Sallis, 2011

Youth PAR Empowerment through Technology

- 47% of teens 12-17 years have a smartphone
- 23% of teens have a tablet
- 75% can access internet on mobile devices
- 58% have downloaded apps
- 81% use social networking sites

Madden et al., 2013a; Madden et al., 2013b

Youth PAR Empowerment through Technology

- Summary of benefits of technology within youth PAR frameworks
  - Increases self-efficacy
  - Fights apathy/improves motivation
  - Facilitates youth expression
  - Provides meaningful participation
  - Increases youth voice within the community
  - Improves youth-adult communication
  - Promotes equitable power-sharing (increased youth control)
  - Provides political or social agency
  - Improves access to resources
  - Improves research capabilities
  - Increases civic engagement

Bell, 2005; Purcell et al., 2012; Valaitis, 2005; Santo et al., 2010; Livingstone, 2003; London et al., 2010; Shank & Cotton, 2014; Findholt et al, 2011; Al-Kodmany et al., 2012

eCPAT Application

- An electronic version of the Community Park Audit Tool (eCPAT) for use on mobile devices was developed and tested with youth

- Addresses the current need:
  - Few audit tools developed specifically for youth
  - Youth PAR technology needed
  - Unique opportunity to combine multiple technologies (photography, GIS, mobile interface) into a single user-friendly tool
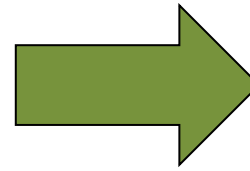
eCPAT Development

- Literature review

- Key informant interviews

- Systems requirement analysis

- Application software design

- Program coding

- Alpha (capacity) testing

- Database development

Data collection on Mobile Device + App

Server for data analysis

eCPAT App Demo

Contact

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Acknowledgements

- We thank Dr. Benjamin Schooley, Paul Diehl, and Mark Parrott for their technical assistance with eCPAT application development and testing

- We thank the City of Greenville Parks and Recreation Department, Greenville County Parks, Recreation, and Tourism, and LiveWell Greenville for their assistance with this project

- eCPAT development was partially supported by grants from the South Carolina Clinical and Translational Research Institute, the University of South Carolina SPARC Graduate Research Program, the University of Missouri Research Council, and the National Recreation and Park Association

Practice Park Audit

Ski Beach Park Audit

- Pair up (2 per tablet)

- Make sure your tablet is logged in and you can see the eCPAT home screen

- Select start new audit

- Short walk to Ski Beach

- Complete park audit

- Discussion in the park