A Weighty Challenge: Rochester’s Response to the Epidemic of Childhood Obesity

Stephen Cook, MD, MPH, Golisano Children’s Hospital at Strong, Heidi Burke, MPH, Senior Program Officer, Greater Rochester Health Foundation, and Carlos Cotto, Executive Director of Health, Physical Education & Athletics, Rochester City School District
One City’s “Communities of Solution”

Note: Political boundaries, shown in solid lines, often bear little relation to a community’s problem-sheds or its medical trade area.

Adopted from Folsom M. Health is a Community Affair: Report of the National Commission on Community Health Service, 1967
What are the modifiable risk factors?

- GENES
- METABOLISM
- BEHAVIOR
- ENVIRONMENT
- CULTURE
- POVERTY
### Parents estimation of child’s weight status vs. measured weight, 2-9yo

<table>
<thead>
<tr>
<th>Parent Description</th>
<th>Measured Weight Status, N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal Weight(^b)</td>
</tr>
<tr>
<td>Very underweight or a little underweight</td>
<td>32 (24)(^a)</td>
</tr>
<tr>
<td>About right</td>
<td>99 (74)</td>
</tr>
<tr>
<td>A little overweight or very overweight</td>
<td>3 (2)</td>
</tr>
</tbody>
</table>

Estimation of weight 193 parent/child dyads from Strong Pediatrics

Results

Monroe County, NY

Obesity by Neighborhood

- 5.0% - 10.0%
- 10.1% - 15.0%
- 15.1% - 20.0%
- 20.1% - 24.0%

Unhealthy Food Source

Healthy Food Source

RFEI =
Maps of Parks and Recreation Centers

Parks and Recreational Centers in Monroe County

- Hamlin
- Clarkson
- Sweden
- Ogden
- Riga
- Wheatland
- Chili
- Gates
- Henrietta
- Pittsford
- Mendon
- Rush
- East Rochester
- Genesee
- Irondequoit

Rec Centers
Parks
Evidence-based Behavioral Strategies

• Breastfeed
• Limit sugar-sweetened beverages
• Consume the recommended fruits and vegetables
• Eat daily breakfast
• Limit fast food
• Use appropriate portion size
• Eat meals together as a family
• Limit television and screen time and keep televisions out of children’s bedrooms
• Encourage moderately vigorous physical activity of 60 min/day or more
• Ensure adequate sleep; 1-3yr: 12hr, 3-5yr: 11hr, 5-12: 10hr and try to get teens after 8.5 hrs of sleep at night
GROC Breakthrough Series (12 Months)

Select Topic

Expert Meeting

Planning Group

Participants

Pre-work

Develop Framework & Changes

LS 1

Stages of Improvement

- test
- implement
- hold the gain
- spread

LS 2

Beyond LS 3

LS 3

Supports

- Emails
- Office Visits
- Phone Conferences
- Monthly Team Reports
- Assessments

How well do successful teams “hold the gains” after LS3?

Borrowed from IHI
Extent of Community Reach

Monroe County, NY – Estimated Birth Cohort = 1,015

- Cycle 1: 24.8% (n=9)
- Cycle 2: 46.3% (n = 17)
- Cycle 3: 56.0% (n = 26)
Some Results from Our Practices

Percentage of Charts With Counseling on Nutrition and Physical Activity

- Cycle 1
- Cycle 2
- Goal

Month 1 - Month 11

Goal: 95%
How much sugar are you eating for breakfast?

Try adding these to breakfast for MORE fiber:

- Trix
- Cheerios
- Cocoa Puffs
- Lucky Charms

The Winner!
Documentation at WCV of kids 2-18 yrs of age for 5 preventive behaviors at baseline, completion, 6 month and 12 months after learning collaborative.

<table>
<thead>
<tr>
<th>Metric</th>
<th>No. (%) of Visits Baseline (N = 175)</th>
<th>No. (%) of Visits Completion (N = 299)</th>
<th>No. (%) of Visits 6-month (N = 377)</th>
<th>N. (%) of Visits 12-month (N = 378)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI Plotted</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>123 (72)</td>
<td>280 (96)*</td>
<td>300 (84)*</td>
<td>308 (84)*</td>
</tr>
<tr>
<td>No</td>
<td>47 (28)</td>
<td>12 (4)</td>
<td>59 (16)</td>
<td>57 (16)</td>
</tr>
<tr>
<td>Lifestyle Survey Completed</td>
<td>N/A</td>
<td>134 (47)</td>
<td>64 (18)*</td>
<td>88 (24)*</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>153 (53)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>295 (82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counseling Provided</td>
<td>Nutrition 57 (37)</td>
<td>17 (6)</td>
<td>111 (30)</td>
<td>85 (23)</td>
</tr>
<tr>
<td>Physical Activity 1 (1)</td>
<td></td>
<td>0 (0)</td>
<td>8 (2)</td>
<td>22 (6)</td>
</tr>
<tr>
<td>Both 70 (45)</td>
<td></td>
<td>218 (78)*</td>
<td>235 (64)*</td>
<td>236 (64)*</td>
</tr>
<tr>
<td>Neither 27 (17)</td>
<td></td>
<td>46 (16)</td>
<td>14 (4)</td>
<td>25 (7)</td>
</tr>
<tr>
<td>Weight Status Documented</td>
<td>Yes 174 (42)</td>
<td>268 (90)*</td>
<td>246 (66)*</td>
<td>254 (67)*</td>
</tr>
<tr>
<td>No</td>
<td>101 (58)</td>
<td>31 (10)</td>
<td>129 (34)</td>
<td>123 (33)</td>
</tr>
<tr>
<td>Weight Status Discussed</td>
<td>Yes 89 (58)</td>
<td>229 (79)*</td>
<td>150 (41)</td>
<td>162 (45)</td>
</tr>
<tr>
<td>No</td>
<td>65 (42)</td>
<td>60 (21)</td>
<td>218 (59)</td>
<td>202 (55)</td>
</tr>
</tbody>
</table>
Comparison of rates of documentation at Well-Child Visits of kids 2-18 yrs of age for 5 preventive behaviors between non-collaborative providers and collaborative providers

<table>
<thead>
<tr>
<th>Metric</th>
<th># (%) of Visits Non-Collaborative Providers (N = 412)</th>
<th># (%) of Visits Collaborative Providers (N = 205)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI Plotted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>326 (83)</td>
<td>169 (83)</td>
</tr>
<tr>
<td>No</td>
<td>68 (17)</td>
<td>34 (17)</td>
</tr>
<tr>
<td>Lifestyle Survey Completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>82 (21)</td>
<td>47 (23)</td>
</tr>
<tr>
<td>No</td>
<td>318 (80)</td>
<td>154 (77)</td>
</tr>
<tr>
<td>Counseling Provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>121 (30)</td>
<td>49 (25)</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>10 (2)</td>
<td>18 (9)</td>
</tr>
<tr>
<td>Both</td>
<td>254 (63)</td>
<td>113 (57)</td>
</tr>
<tr>
<td>Neither</td>
<td>16 (4)</td>
<td>19 (10)</td>
</tr>
<tr>
<td>Weight Status Documented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>243 (59)*</td>
<td>134 (66)</td>
</tr>
<tr>
<td>No</td>
<td>167 (41)</td>
<td>70 (34)</td>
</tr>
<tr>
<td>Weight Status Discussed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>152 (38)</td>
<td>65 (33)</td>
</tr>
<tr>
<td>No</td>
<td>249 (62)</td>
<td>130 (67)</td>
</tr>
</tbody>
</table>
Dr. Colpoys at Genesee Pediatrics
Penfield Pediatrics
Unity Pediatrics
More Unity Pediatric Pics
Pt NW, first seen at 3yrs and noted to be obese

PNP informed pt in ‘Red zone’ as unhealthy. Can we discuss?

### Patient Vitals

<table>
<thead>
<tr>
<th>Age</th>
<th>Height</th>
<th>Weight</th>
<th>BMI</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.07 years</td>
<td>37.36 in.</td>
<td>37.48 lbs.</td>
<td>18.87</td>
<td>&gt;97%</td>
</tr>
<tr>
<td>4.04 years</td>
<td>40.12 in.</td>
<td>43.21 lbs.</td>
<td>18.87</td>
<td>&gt;97%</td>
</tr>
<tr>
<td>5.00 years</td>
<td>42.64 in.</td>
<td>46.08 lbs.</td>
<td>17.82</td>
<td>93.92%</td>
</tr>
<tr>
<td>5.99 years</td>
<td>45.08 in.</td>
<td>50.93 lbs.</td>
<td>17.62</td>
<td>89.58%</td>
</tr>
<tr>
<td>6.29 years</td>
<td>45.47 in.</td>
<td>50.71 lbs.</td>
<td>17.24</td>
<td>85.99%</td>
</tr>
<tr>
<td>6.52 years</td>
<td>46.46 in.</td>
<td>49.82 lbs.</td>
<td>16.23</td>
<td>69.15%</td>
</tr>
</tbody>
</table>

All Height and Weight data points containing non-numeric data have been removed from the BMI Report. If you feel that a data point is missing, please verify vital data in Allscripts Enterprise.
NYS DOH Obesity Collaborative
Obesity Prevention in Pediatric Health Care
Settings Awardees - 2011

[Map of New York state with counties highlighted and labeled.]
<table>
<thead>
<tr>
<th>Community Resources and Policies</th>
<th>Health Care Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage patients to participate in effective programs</td>
<td>Promote effective improvement strategies aimed at comprehensive system change</td>
</tr>
<tr>
<td>Form partnerships with community organizations to support or develop programs</td>
<td></td>
</tr>
<tr>
<td>Advocate for policies to improve care</td>
<td>Encourage open and systematic handling of problems</td>
</tr>
<tr>
<td>Visibly support improvement at all levels, starting with senior leaders</td>
<td>Development of agreements for care coordination</td>
</tr>
<tr>
<td>Provide incentives based on quality of care</td>
<td></td>
</tr>
<tr>
<td><strong>Self Management Support</strong></td>
<td><strong>Decision Support</strong></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Emphasize the patient’s central role</td>
<td>Embed evidence-based guidelines into daily clinical practice</td>
</tr>
<tr>
<td>Organize resources to provide support</td>
<td>Integrate specialist expertise and primary care</td>
</tr>
<tr>
<td>Use effective self-management strategies that include assessment, goal setting, action planning, problem solving, &amp; follow up</td>
<td>Use proven provider education methods</td>
</tr>
<tr>
<td></td>
<td>Share guidelines and information with patients</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Percentage of Charts with Weight Status Was Discussed

- **95%**
- **73%**
- **87%**
- **53%**
- **60%**
- **80%**
- **100%**
- **93%**
- **80%**

**Frame: 0% to 100%**

**Y-axis: Percentage**

**X-axis: Months**

- **13%**
- **14%**
- **20%**
- **2012 Jan**
- **Feb**
- **March**
- **April**
- **June**
- **July**
- **Aug**
- **Sept**
- **Oct**
- **Nov**

**Legend:**
- **Yellow** = Strong
- **Red** = Goal (95%)
Percentage of Charts with Weight Status Was Discussed

- **Goal (95%)**
- **Strong**

- **July:** 95%
- **Aug:** 100%
- **Sept:** 100%
- **Oct:** 93%
- **Nov:** 100%
- **Dec:** 100%
- **2013 Jan:** 100%
- **Feb:** 80%
- **March:** 80%
- **April:** 87%
- **May:** 90%
- **June:** 87%
“Rec on the Move” comes to the Doc Office
Additional Partners / Tools
YMCA: State and Regional Activities

YMCA of the USA partnered with RWJF to reduce the prevalence of childhood obesity

- Awarded 14 State Alliances to work on policy, systems and environmental changes

- The Alliance of NYS YMCAs was one / partnering with DASH-NY on this work

- The YMCA priority areas include:
  1. healthy eating and physical activity standards into OCFS’s regulations
  2. healthy food procurement
  3. including public health in NYS’s economic development
  4. making childhood obesity a priority for the NYS legislature

- 6 YMCAs to act as our regional centers and create a grassroots network within their region, Rochester being one.
DASH-NY is New York’s Obesity Prevention Coalition and Policy Center

Coalition and Policy Center

Policy Analysis, Surveillance & Evaluation
- Increase information available about effective policy change

Training
- Increase awareness of policy options and strategies

Technical Assistance
- Help local communities overcome barriers to implementing policy change

Coalition
- Convene groups with overlapping interests to advance policy change
The Prevention Agenda

Section 9007 of The Affordable Care Act

Among new requirements, every three years a hospital must complete:

Community Health Needs Assessments (CHNA)

Implementation Strategy
The Prevention Agenda

A recent study published in the New England Journal of Medicine calculated that in 2009, hospitals spent:

- 7.5% of total expenses on community benefit investments;
- Approximately 6.4% of all expenses (85% of community benefit) involved financial assistance and expenditures associated with Medicaid participation (which pays less than the cost of care);
- Less than one half percent (0.4%) of total hospital expenditures were devoted to community health improvement activities.
Next steps from the AAP
Structured Weight Management

AAP & Academy of Nutrition and Dietetics (former ADA):

- Set of visits with PCP and RD
- Based on motivation at start
- Self monitoring and uses tracking forms

### Suggested Pediatric Weight Management Protocols

**DEFINING VISIT SCHEDULE OVER A CALENDAR YEAR**

The following care paths are a possible framework for pediatric weight management care (prevention plus) between primary care providers and registered dietitians participating in the Alliance Healthcare Initiative. These paths are not meant to be prescriptive, but provide a possible schedule of visits throughout the year after a problem is identified. In general, if you have a patient with a BMI > 85th percentile, the goal should be to work with the patient and family on behavior change. To support this behavior change, it would be ideal for the patient and family to have 8-12 touchpoints with a provider. There is flexibility in how these touchpoints can be structured (i.e., with whom PCP, RD, other, and via various mechanisms via office visit, phone, or other mechanism). As a provider, you will need to identify what is best for the patient and family.

### 1st PCP VISIT  Well Child Visit: Problem Identified

At the Well Child visit, primary care provider (PCP) should determine appropriate treatment track based on patient and family readiness and confidence to change.

- **Track 1**: For patients and families who are engaged and ready to begin weight management with a registered dietitian (RD) after the initial visit.
- **Track 2**: For patients and families who are not fully engaged and need more time to learn about overweight and obesity and the associated risk factors as well as the value of seeing a registered dietitian (RD) and importance of follow-up.

<table>
<thead>
<tr>
<th>TRACK 1</th>
<th>TRACK 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st RD VISIT</strong></td>
<td><strong>2nd PCP VISIT</strong></td>
</tr>
<tr>
<td>2-4 weeks following 1st PCP Visit (Well Child Visit)</td>
<td>2-4 weeks following 1st PCP Visit (Well Child Visit)</td>
</tr>
<tr>
<td><strong>2nd RD VISIT</strong></td>
<td><strong>1st RD VISIT</strong></td>
</tr>
<tr>
<td>2-4 weeks following 1st RD visit</td>
<td>2-4 weeks following 2nd PCP Visit</td>
</tr>
<tr>
<td><strong>2nd PCP VISIT</strong></td>
<td><strong>2nd RD VISIT</strong></td>
</tr>
<tr>
<td>2-4 weeks following 2nd RD visit</td>
<td>2-4 weeks following 1st RD visit</td>
</tr>
<tr>
<td><strong>3rd RD VISIT</strong></td>
<td><strong>3rd PCP VISIT</strong></td>
</tr>
<tr>
<td>4-6 weeks following 2nd RD visit</td>
<td>6 weeks following 2nd RD visit</td>
</tr>
<tr>
<td><strong>3rd PCP VISIT</strong></td>
<td><strong>3rd RD VISIT</strong></td>
</tr>
<tr>
<td>6 weeks following 3rd RD visit</td>
<td>4-6 weeks following 3rd PCP Visit</td>
</tr>
</tbody>
</table>
Healthy Active Living for Families

Healthy Active Living for Families
Start today: Help your child stay at a healthy weight for life.
Good health habits start early in life. Get tips on breastfeeding, dealing with picky eaters, getting the whole family moving, and much more!

Food & Feeding
Good eating habits begin early.

Physical Activity
Even small children need to get moving.

Tips for Parents
Being a parent is an important job!
Announcing the launch of the American Academy of Pediatrics Institute for Healthy Childhood Weight

The American Academy of Pediatrics is thrilled to announce the launch of the AAP Institute for Healthy Childhood Weight. The Institute will serve as a translational engine for pediatric obesity prevention, assessment, management and treatment, and will move policy and research from theory into practice in American healthcare, communities, and homes. Governed by an expert Advisory Board and Steering Committee, the Institute will have a small staff and a budget for operations that will allow a broader portfolio of obesity project and programs.

Please visit our booth in the Academy Resource Center (#1443) at the National Conference and Exhibition to learn more about the Institute and our current projects! At the booth we will be featuring two premier projects launching this fall.

- The Healthy Active Living for Families project: HALF incorporates parent feedback and expert recommendations into extensive web-based healthy active...
Next steps

• Pediatric Primary Care Practices and using EMR
  • Writing reports for data collection
  • CDC piloting EMR templates for surveillance

• Linking Resources in Community with Patient Centered Medical Home
  • STRONG Pediatrics has medical home designation
  • RGH completing pediatric medical home
  • Highland FM and Anthony Jordan

• STOP Obesity Alliance: Community Health Benefit

• Children’s Hospital Association: Focus on a Fitter Future

• Robert Wood Johnson Foundation
Stigma of Childhood Obesity

“The lot of fat children is a sad one. They are bashful and ashamed of their shapeless figures, yet unable to conceal them. Wherever they go they attract attention…..Obesity is a serious handicap in the social life of a child, even more so of a teenager. Obesity does not have the dignity of other diseases…”

Bruch H. Pediatric Annals: 1975
Thank you

Department of Pediatrics, GCH@URMC