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Jennifer E. Holland
Robert Larner College of Medicine at The University of Vermont

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Promoting Healthy Habits and Active Living for Children and Families at the Well-Child Visit

Jennifer E. Holland
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Brandon Medical Center, Brandon, VT
Mentor: Dr. George Fjeld
2A. Problem Identification

Healthcare providers at Brandon Medical Center need evidence-based, efficient ways to discuss and reinforce healthy habits for kids and families at the well-child visit.

“We are seeing the prevalence of obesity increase here in Brandon and it’s a problem that really worries us. We know that if we address these problems with kids and teens it will help them as adults.”

Dr. George Fjeld
Family Medicine Provider
Brandon Medical Center

- Currently, 1 in 5 school age children in the U.S. has obesity.¹
- Children with obesity are at higher risk of developing chronic health conditions and diseases that may affect their physical and emotional health, e.g. asthma, sleep apnea, bone and joint problems, type 2 diabetes, heart disease, social isolation, depression, lower self-esteem.¹
- Children with obesity are more likely to be obese in adulthood. Obese adults are at higher risk of developing heart disease, type 2 diabetes, metabolic syndrome, and several types of cancer.¹
- Brandon Medical Center providers have expressed interest in finding a standardized approach to addressing and managing obesity in their pediatric patients.
2B. Problem Identification: By the Numbers

Rutland Regional Medical Center 2019 Needs Assessment:2

- Adults:
  - Rutland County has the second highest obesity rate in VT: 30%
  - 13,000 in Rutland County are Overweight, 12,000 are obese

- Children & Teens:
  - 16% of high schoolers in Rutland Country are obese
  - 29% of Rutland students have 2+ fruits or vegetables a day
  - 33% of high schools eat breakfast 7 days a week

Brighter Futures Report 2018 - Rutland County:3

- Many families in Rutland County struggle with food insecurity, affordable housing, and transportation
- 42.2% of children under age 6 live in poverty
- 16.4% of children under age 9 are in DCF custody

State of Obesity – Vermont Overall Data:4

- 14% of 2-4 year old children on WIC in VT are obese (2014)
- 12.6% of high schoolers in VT are obese (2017)
3. Public Health Impact and Unique Considerations in Rutland County

- The Community Health Centers of the Rutland Region (CHCRR) have 70+ providers who serve over 33,000 patients in the Rutland region.

- Healthcare traditionally focuses on managing obesity and obesity-related diseases
  - It is estimated that obesity-related direct healthcare costs (i.e. medical expenses) as well as indirect costs (i.e. absenteeism and pre-absenteeism) in the U.S. cost $147 billion dollars per year.\(^5\)
  - Obesity-related expenses cost the state of Vermont between $615-718 million dollars per year.\(^6\)

- By focusing on a consistent, low-cost, preventive approach, we can encourage behavior changes for individuals and communities that will increase the overall health of the region, as well as eventually reduce some of the financial burden caused by obesity.

- Family Practices are the ideal place to implement a childhood obesity intervention because in one day, one week, or one month you may see each member of a family together or separately, giving providers numerous opportunities to reinforce the same message.
4A. Community Perspective and Support

Dr. Victoria Rogers is the Medical Director of Lets Go!, an obesity prevention, treatment, and management initiative that is based in the state of Maine and in Mount Washington Valley, New Hampshire. They also partner with organizations like YMCA and other healthcare sites throughout the country. They work to bring evidence-based healthy living strategies like the 5-2-1-0 message to child care providers, health care practices, schools and out-of-school programs, and workplaces.

“It’s a healthy eating and active living program, not an obesity program. We wanted to address this in a respectful way. We didn’t want to cause any eating disorders. We wanted a message that would be low-literacy, cross-cultural, and cross all barriers. We wanted to put everyone on the same playing field....It’s incredibly powerful to have a caregiver and child fill out the questionnaire together and see them start to ask each other about how often they really eat take out or have fruits and vegetables.”
4B. Community Perspective and Support

Dr. David Schneider is a pediatrician at a pediatric practice within the Community Health Centers of the Rutland Region. He saw the obesity epidemic in Rutland first hand at his clinic. He came across the 5-2-1-0 program several years ago and was involved in some of the early research studies testing the efficacy of the program. His practice uses the Healthy Habits Questionnaire and has diabetes educators as well as staff trained in the 5-2-1-0 program.

“We were watching the obesity epidemic and nothing was working. We were sending kids to UVM and other places, but they weren’t getting better. So we felt that we needed to do something. 5-2-1-0 is the simplest, most reasonable method for people to keep up healthy living. Every body remembers it. It’s the most cost effective thing in the obesity epidemic. It’s a simple mantra to get people talking...[At his office] a lot of what we do is motivational interviewing and just meeting patients where they’re at. Lecturing doesn’t work, telling them they’re going to have diabetes in 3 years doesn’t work. Some of them aren’t ready to talk about it. But talking about 5-2-1-0 is a step in the right direction.”
5A. Intervention and Methodology: Implementing 5-2-1-0

**Goal:** Use consistent, easy to remember messaging at every well-child visit to encourage discussion about healthy habits and active living.

**5210 Every Day!**

5 or more fruits & vegetables
2 hours or less recreational screen time*
1 hour or more of physical activity
0 sugary drinks, more water & low fat milk

*Keep TV/Computer out of the bedroom. No screen time under the age of 2.

1. **Staff:** Present the program to all of BMC staff and provide them with 5-2-1-0 talking points.

2. **Environment:** Hang a 5-2-1-0 poster in every exam room and in the BMC waiting room.

3. **Providers:** Give providers American Academy of Pediatrics algorithm for addressing and managing childhood obesity.

4. **Patients:** Every family presenting for a well-child visit will be asked to fill out a Healthy Habits Questionnaire.
   - Rooming nurse to hand age-appropriate Healthy Habits Questionnaire to each family presenting for a well-child visit
   - Family instructed to fill it out as they wait for their provider
   - Provider reviews the answers on questionnaire with the family in the room and signs it
   - Family takes the questionnaire to the check-out desk to have their answers scanned to their chart
   - Family takes home their completed questionnaire with tips for healthy habits on the back

5. **Tracking:** BMI measured at each visit and tracked over time.
5B. Intervention & Methodology

“I’m putting this on the fridge to remind myself.”  
12 year old patient after looking at the tips page

5-2-1-0 Healthy Habits  
AGES 2 – 9

We want to know how your child is doing! Please take a moment to answer these questions.

Child’s Name: ___________________________  
Age: ___________________________  
Today’s Date: ___________________________

1. How many servings of fruits and vegetables does your child have a day?  
   (One serving is 1/2 cup of fresh or frozen (the size of a fruit cup), 1 cup of leafy greens (a small salad), or a piece of fruit the size of a tennis ball.)

2. How many times a week does your child eat dinner at the table with the family?

3. How many times a week does your child eat breakfast?

4. How many times a week does your child eat takeout or fast food?

5. How much screen time does your child have each day? Don’t include school work.

6. Does your child have a TV or keep a tablet or smartphone in their bedroom?

7. How many hours does your child sleep each night?

8. How much time each day does your child spend being active?
   (This means they are breathing harder and their heart is beating faster.)

9. How many 8-ounce servings of these does your child drink a day?
   - Juice
   - Water
   - Fruit or sports drinks
   - Whole milk
   - Soda or punch
   - Nonfat (skim), low-fat (1%) or reduced-fat (2%) milk

10. Based on your answers, is there ONE thing you would like to help your child change now?
   - Eat more fruits and vegetables
   - Eat with your family more often
   - Eat less fast food/takeout
   - Drink less soda, juice, or punch
   - Drink more water
   - Be more active – get more exercise
   - Spend less time watching TV or using a tablet/smartphone
   - Get more sleep

Please share this form with your provider, then take it home with you. Thank you!  
Turn this over for tips to get started.
6A. Measuring Success: Present and Future Data

**Preliminary findings:**

- Administered both versions of the Healthy Habits Questionnaire (Ages 2-9, Ages 10+) to 5 families at well-child visits ranging from 2 years old to 13 years old.
- Families found it easy to fill out the questionnaire while waiting for their provider.
- It quickly facilitated conversation about diet and exercise between family and provider.
- Providers are interested and excited to use the questionnaire.
- Need to train all rooming nurses and medical assistants to be able to find the form and know when to provide it to families.
- Need to train front office staff to scan the completed form back to the patient's chart when booking their next appointment at check out.
Future Data:

- **Quantitative Data**
  - Number of Healthy Habits Questionnaires completed and scanned back to patient charts
  - Number of well-child visits that document discussion of 5-2-1-0 in EMR

- **Qualitative Data**
  - Feedback from children and families about their experiences using the 5-2-1-0 information at subsequent visits
  - Lifestyle changes reported by families at subsequent well-child visits

- **Healthcare Outcomes Data**
  - BMI tracking of all children and adolescents, particularly those who are overweight (≥85th percentile) or obese (≥95th percentile) and have received education about the 5-2-1-0 program
7. Evaluation of Effectiveness and Limitations

**Evaluation of Effectiveness:**

- BMI decrease in children whose BMI is $\geq 85^{\text{th}}$ percentile (clinical criteria for childhood overweight).
- More healthy habits recorded on Healthy Habits Questionnaires when compared across visits, e.g. endorsing eating more vegetables, getting more exercise, reducing screen time compared to the year before.
- While we may not see immediate changes, the goal of this intervention is to provide internal consistency for providers at each visit and to promote positive messaging for patients to encourage incremental behavior change.

**Limitations:**

- Behavior change is extremely hard and often takes time.
- There are many factors that contribute to childhood obesity such as genetics, environment, and socioeconomic status. A major limitation is that we are not able to change any of the other factors that may be playing a large role in a child's weight.
8. Future Directions

- Brandon Medical Center to be the CHCRR Pilot Site with the goal of incorporating the 5-2-1-0 Healthy Habits Questionnaire into all CHCRR site well-child visits
- Working with local schools and school lunch programs to reinforce and implement the 5-2-1-0 message
- Hanging 5-2-1-0 posters in local community centers, grocery stores, extracurricular and after-school program locations, and even cafeterias of local businesses
- Working with RISE VT\textsuperscript{9} to promote the 5-2-1-0 message as well as healthy habits and active living initiatives across the county
- Incorporate the \textbf{Small Steps Intervention}\textsuperscript{10} into adult wellness exams to address and manage adult obesity as well
References


