Physical Activity Level in School-aged Children during COVID-19

Tran Phuong

Follow this and additional works at: https://scholarworks.uvm.edu/fmclerk

Part of the Medical Education Commons, and the Primary Care Commons

Recommended Citation
https://scholarworks.uvm.edu/fmclerk/668
Physical Activity Level in School-aged Children during COVID-19

PJ Tran, Abby Belser
Milton Family Practice
November 2020
Problem and Need

- Due to COVID-19 restrictions, school-aged kids are not engaging in normal physical activities per usual, such as physical education class and team sports.

- The Physical Activity Guidelines for Americans recommend that children and adolescents (6-17 years) engage in 60 minutes or more of physical activity daily.

- In the study “Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the U.S”, parents were given surveys to report physical activity and sedentary behaviors of their children during COVID. It was found older children vs younger children perceived greater decreases in physical activity and greater increases in sedentary behavior from pre to early COVID periods. Most common physical activities however, were free play/unstructured activity such as running around, tag. About 1/3 of children used remote/streaming services for activity classes (Dunton).

- Short-term changes in physical activity and sedentary behavior in reaction to COVID-19 may become permanent, which can lead to increased risk of obesity, diabetes, and cardiovascular disease in children (Dunton).

Current Vermont COVID Guidelines for recreational sports (Youth League, Laroche)

- Suspension of ice rink activities

- Spectators permitted in attendance at indoor sports events but cannot exceed 50% of fire safety capacity or 1 person per 100 square feet with max of 75 people for indoor events
  - No spectators can attend adult sporting events or games
  - Masks required 6 feet apart

- Travel policy changes for youth and recreation Leagues
  - Youth and adult recreational sports teams programs and athletes may only practice, scrimmage or participate in “pick up games” or formal competition WITHIN Vermont
  - If you do leave, must quarantine via state guidelines when you come back before returning to work or school

- Indoor track and wrestling unable to compete this year

<table>
<thead>
<tr>
<th>Middle childhood, adolescence, and young adulthood (5–21 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Children, adolescents, and young adults should engage in ≥60 minutes of physical activity each day.</td>
</tr>
<tr>
<td>- Most of the ≥60 minutes of physical activity each day should be either moderate- or vigorous-intensity aerobic physical activity.</td>
</tr>
<tr>
<td>- As part of their daily activity, children and adolescents should engage in vigorous activity on at least 3 days per week. They also should engage in muscle-strengthening and bone-strengthening activity on at least 3 days per week.</td>
</tr>
<tr>
<td>- It is important to encourage young people to participate in physical activities that are appropriate for their age, are enjoyable, and offer variety.</td>
</tr>
</tbody>
</table>
Public Health Costs

Vermont Statistics 2012 (CDC)

• children 2-5 years: 15.6 % were overweight (85th to <95th percentile BMI for age), 12.2 % were obese (>95th percentile BMI for age)

• Adolescent: 14.6 % overweight, 12.2 % obese

• adult: 57.7% overweight (BMI 25 or greater), 23.2 % obese (BMI 30 or greater)

Meta-analysis from Obesity Reviews in 2011

• obesity was estimated to account for between 0.7% and 2.8% of a country’s total healthcare expenditures (Withrow)

• obese individuals were found to have medical costs that were approximately 30% greater than their normal weight peers (Withrow)
Community Perspective

Dr. Mel Gibson

• School aged children get their physical activity from PE class, after school sports and activities, playing in the neighborhood with families and friends.

• Since COVID, physical activity have decreased, especially initially in the lockdown. We had to discourage kids from play dates. This is a moderately severe problem!

• “The information that would be most helpful to the community to prevent the risks of decreased activity is making sure patients understand that they don’t need to exert themselves to get exercise. They don’t need to join a gym, they just need to walk at least 30 minutes a day. Start small and make it a family event.”

Dr. Kelly Brooks

• “I think there is significant risk / severe potential for the impact this will have on forming “new habits” of further sedentary time, in a culture that was already trending toward more screen time and less emphasis on outdoor/active time in families and at school”

• Doctors need to “Continue funding and promotion of protected time for physical activity in public schools. b. Providing practical advice and tangible examples. For example: encouraging families / providing ideas for how to incorporate daily physical activity (both outdoor time: e.g., walks, playing tag, taking walk to community playground or indoor physical activity: free YouTube yoga videos or family cardio work outs to do together) on days of remote learning.”

* For full interview notes, look in index
Intervention and Methodology

• Create pamphlet to give out to all patients (preteens, teens) at Milton Family Practice
  • Encourage preteens and teens 60 minutes of moderate-vigorous activity per day
  • Recommend different ways to stay active during COVID such as dancing, hiking, walking as a family
  • Providing CDC recommendations
  • Explain the physical and mental benefits of exercise, and the risks if there is a lack of
• Discuss pamphlet goals with patients
• Distribute pamphlets to physicians and residents to make copies for patients
• Email physicians a copy of pamphlet at Milton Family Practice for extra prints if needed
• Follow up with patients to track progress
• Connecting with Rise VT to discuss initiatives
Developed a pamphlet (right) for preteens and teens with physical activity recommendations, and ways to remain active during COVID

Discussed and reviewed with physicians and residents at Milton Family Practice

Distribute pamphlet to Milton Family Practice nurses, physicians and residents, and patients

Response was great!

“This looks great! This will be so helpful for our patients”
Evaluation of Effectiveness and Limitations

**Quantitative:** Record amount of time school aged children are having moderate to vigorous physical activity per day; or report how many days of the week does your children reach the recommended at least 60 minutes of activity per day of moderate to vigorous physical activity. Compare during COVID-19 times to after intervention.

OR **qualitative:** where parents can fill out surveys to report whether children are reaching 60 mins of activity each day

*Note in chart that you gave out pamphlet, monitor whether changes were made

*Proposed follow up at next visit (record in their note to follow up with survey)

**Limitations:**
- self reported surveys
- compounding factors
- data may change as guidelines change
- English only pamphlet
- Limited amount of available pamphlet
Recommendations for Future Projects

• Assess which specific activity (tae kwon do, yoga, family walks, etc) was most effective in motivating children to obtain their physical activity a day through surveys.

• Assess physical activity of adults during COVID. Provide recommendations for adults to stay active as well.
References


Index
In your experience with school aged children, what are their main source of daily physical activity? Dr. Gibson: PE class, after school activities and sports, or playing in the neighborhood.

If school is a source of daily physical exercise, what are some of the activities that children tend to do/talk about? Dr. Gibson: Before middle school, there are no school arranged sports, they have to go through the rec department, such as soccer baseball field hockey lacrosse through the town. Only thing allowed right now to be opened however is school sports team.

How has COVID affected the amount of physical activity in school aged children? Dr Gibson: It has gone down. It is now starting to get better, however, initially during lock down, it was especially worse. We had to tell patients to even not leave their home. Discouraging play dates. And it was still cold mid march. Kids started to watch TV more, and now they continue to do that.

What do you think are some of the risks of these changes? Dr. Gibson: Obesity, worsening mental health, cardiovascular disease, diabetes, Too much screen time can decrease intelligence. Study shows that the more screen time you have the less vocabulary.

How serious do you think this problems is? Mild moderate, severe? Dr. Gibson: Moderate - moderately severe. We are already an obese nation. It is going to be so much worse, My kids still do PE, but the activities they’re doing is less intense (Walking, no basketball because no touching. No dodgeball).

What do you think your role as a doctor is? Dr. Gibson: Encourage family activity Walk as a family → bike ride 30 min walk as family. Advocate for patients.

What type of information would be helpful to the community to help prevent some of the risks you mentioned above? Dr. Gibson: Basic recommendations that send the message that we will meet patients where they are, everyone can do a daily walk, don’t need to run or join a gym. Start small so it doesn’t feel so overwhelming.
In your experience with school aged children, what are their main source of daily physical activity? **Dr. Brooks:** Recess / outdoor time provided at school

If school is a source of daily physical exercise, what are some of the activities that children tend to do/talk about? **Dr. Brooks:** Playground time: running, soccer, playground equipment

How has COVID affected the amount of physical activity in school aged children? **Dr. Brooks:** Unsure, but I imagine yes, especially if children are at home more, participating in remote learning

What do you think are some of the risks of these changes? **Dr. Brooks:** More screen time / sedentary time, less time outside, less active time

How serious do you think this problems is? Mild moderate, severe? **Dr. Brooks:** I think there is significant risk / severe potential for the impact this will have on forming “new habits” of further sedentary time, in a culture that was already trending toward more screen time and less emphasis on outdoor/active time in families and at school

What do you think your role as a doctor is? **Dr. Brooks:** Emphasizing the importance of physical activity for both physical and mental / emotional health, especially in times of social isolation, rising mental health stressors among children and their families. This can actually be a captive time to harness the benefits of physical exercise / time outside.

What type of information would be helpful to the community to help prevent some of the risks you mentioned above? **Dr. Brooks:** Continued funding and promotion of protected time for physical activity in public schools. b. Providing practical advice and tangible examples. For example: encouraging families / providing ideas for how to incorporate daily physical activity (both outdoor time: e.g., walks, playing tag, taking walk to community playground or indoor physical activity: free YouTube yoga videos or family cardio work outs to do together) on days of remote learning.