Children, Obesity and COVID-19: Risks and recommendations for the most vulnerable populations
Friday 17 April 2020

Q&A
Our speakers have done their best to answer all those questions that were not able to be answered live during the webinar. Please note that these are rapid responses to those questions arising and don’t represent the organisational views of the speakers.

**Is obesity really a risk factor for COVID-19? Considering most people are overweight and obese, UK fatality shows only 30% of those are overweight and obese.**

It is a risk factor for worsening of complications due to COVID-19. There are a range of data sources indicating that people with obesity, especially more severe obesity, are over-represented among those hospitalized for COVID-19 or admitted to ICU. For example, see: [https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e3.htm](https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e3.htm)

Please also see the previous two World Obesity Federation webinars on this topic.

**Children with Down Syndrome are mentioned under the group of children at risk. Can you please explain how high is the risk compared to mainstream children and what is the background of the DS children at higher risk? All of them? Or just particular ones?**

We do not know how high this risk is but it is likely that children with Down Syndrome will not all have the same risk. It is more likely that those children with underlying breathing difficulties or cardiac difficulties may have greater risk compared to those without these conditions. Hopefully as research and reporting progresses we will learn more.

**Does Obesity work as risk factors for Older perople compared to Children? The lower physical activities during lockdown period seems to contribute in obesity. Can the expert comment on it.**

It is really important that physical activity is continued during lockdown. Activity is essential for health and development in all humans regardless of age.

For children 5-17 years the WHO recommendation is children and youth should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily; that amounts of physical activity greater than 60 minutes provide additional health benefits; most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

For adults 18-64 years, the WHO recommendations are for at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.

See: [https://www.who.int/dietphysicalactivity/factsheet_recommendations/en/](https://www.who.int/dietphysicalactivity/factsheet_recommendations/en/)

Several countries have recommendations for children under 5 years, and these include: 3 hours of activity per day, broken up into small blocks throughout the day.

Ideally activity should be moderate to vigorous in order to promote heart and lung health and
thankfully things like skipping, jumping, running on the spot or walking with knees up on the spot can be used in small areas to increase the intensity of activity.

Do we have any data on numbers of children infected with COVID-19 Worldwide?
As time passes we will see more data being published with breakdown provided by age. Some studies are reporting childhood cases as confirmed tests using laboratory testing and others are 'suspected cases' which may be a limitation to the data.

For people who are sedentary with obesity or overweight AND COVID, is physical activity recommended?
This will depend on the symptoms and severity of COVID19. If symptoms are very mild or indeed the person is asymptomatic, it will be important to increase physical activity in order to promote physical and mental health. For those with mild symptoms it is important to monitor how/if symptoms change. For those with more increased work of breathing or respiratory difficulties it will be key to focus on breathing exercises at rest and as the person recovers increasing 'pulmonary rehabilitation' including gradually increase activity. The challenge for a person who is sedentary is to understand what level of breathlessness to expect from increasing their activity versus what might be due to an infection with SARS CoV2

Grace O'Malley said that pandemic may result in progression of complications in children who already have obesity. Are you aware of any actions / policies aimed at reducing this risk?
Hi Anna, for those children with obesity already linked into health care services there are efforts to provide phone or video clinical consultations. For those children that are not yet linked to healthcare we will certainly need to prepare for a potential increase in patients being referred for treatment/support.

Are children in the pandemic scenario likely to face Growth hormone imbalance which leads to make them more prone to develop T2DM in near future?
Children and especially adolescents are more at risk of developing type 2 diabetes if they have more severe obesity, insulin resistance, high risk family history and higher risk ethnicity.

In view of the overwhelming evidence that has emerged which highlights the inefficacy and inadvertent harm associated with the current weight focused approach to obesity, could any of the speakers comment on any movement towards the health at every size approach? Moving away from weight to wellbeing to empower children to develop the ability to respond to their individual cues of hunger, fullness and satiety. The pandemic has highlighted the need to self-care and respond to internal cues.
The WOF, EASO and TOS communities recommend a holistic approach to obesity management in children and adolescents. We agree that people of all sizes should be encouraged to have healthy dietary intakes and patterns, healthy physical activity and screen routines, and healthy sleep patterns, and that obesity stigma must be countered. These may well be made more difficult during the COVID19 pandemic. For children and adolescents with moderate to severe obesity who seek treatment there is evidence that family-based behavioural lifestyle change, delivered by health professionals, can lead to improvements in weight status out to 5-10 y, and improvements in cardio-metabolic health in the medium-term. Recent systematic reviews suggest that professionally delivered obesity treatment in such patients can also lead to mild improvements in a range of psychosocial measures, including self-esteem, body image, depression, anxiety and eating disorder risk.

Is access to energy dense food products during lockdown similar to the availability of these products during typical school holidays?
This will vary from country to country. School holidays are different from lock-down in that they are of defined duration and are planned, with people often stocking up on special foods for specific celebrations, and having the opportunity to be active and visit friends and family. In some countries, lock-down occurred quickly and people haven’t had access to usual foods. Food availability may be extremely limited in some places as well. One thing we have to keep an eye on in the long run is the impact of food system disruptions directly related to Covid-19 on food availability and affordability for families. If fresh, unprocessed produce becomes harder to access, because of lack of availability or a hike in price, then people may shift to cheaper processed foods that have long shelf life. We also need to consider how the lockdown restrictions might affect access. If restrictions on mobility mean that it is more difficult for people to access markets or larger retailers, they may be limited to local shops that may not sell the most nutritious foods at affordable prices.

How strong is this evidence on obesity acting as individual risk factor for Covid-19? Bcoz, we could see there is extremely minimal Covid-19 incidence/severity in India while it has a very high population of obese children? (CAN THIS QUESTION BE RE-WORDED TO BE LESS INFORMAL?)

Unfortunately it is hard to know the actual spread of the disease in India as the number of tests in the country are still extremely low. You can check this website, which also reports number of tests per million people and compare how India is compared to other countries: [https://www.worldometers.info/coronavirus/#countries](https://www.worldometers.info/coronavirus/#countries)

Obesity as independent risk factor: These data are emerging. Please see the previous two WOF webinars for some discussion of this issue.

Is it possible an acute deficit in children due stopping scholar feeding programs?

This depends on the situation of the child. Some of the data referred to in this webinar reports a significant challenge for children in disadvantage who rely on school meals for their daily requirements.

In low- and middle-income countries, many children who benefit from school feeding programmes could already be nutrient deficient, vulnerable or at risk. These children rely heavily on such programmes: either it’s the only meal they consume in the day or contribute a significant part of their daily nutrient requirements. It is difficult to predict how long school closures will last, so the health, food security and nutrition of the most vulnerable children must be prioritized.

This brief from the World Food Programme, the Food and Agriculture Organization and UNICEF provides recommendations for mitigating the effects of the COVID-19 pandemic on food and nutrition of schoolchildren. [http://www.fao.org/3/ca8434en/CA8434EN.pdf](http://www.fao.org/3/ca8434en/CA8434EN.pdf)

Are there any guidelines for prevention /treatment of obesity among adolescents

A detailed response to this query is beyond the scope of the webinar. However, many countries and professional societies have developed clinical practice guidelines for the management of obesity in children and adolescents and hence we refer you to national departments of health and major professional societies for such information. WHO held an Ending Childhood Obesity (ECHO) Commission which has a report largely focusing on strategies to prevent obesity in children and adolescents, although it also highlights the need for treatment of children and adolescents with obesity. See: [https://www.who.int/end-childhood-obesity/en/](https://www.who.int/end-childhood-obesity/en/)

How successfully the strategies to limit screen time could be implemented during lockdown?

These are of course likely to be far more challenging if children and families are confined indoors.
When children have been COVID positive, usually asymptomatic, and they become immune, can we recommend them to go out to increase physical activity to prevent excessive weight gain? Children and families should follow local recommendations/rules re physical isolation. We anticipate that it may be some time before widespread antibody screening (and hence detection of possible immunity) is available.

I’d really like to see the evidence around increasing screen time and ad exposure that Dr O’Malley mentioned. Could we have a steer on that? This review by Thomas N Robinson and colleagues, published in Pediatrics 2017, addresses “Screen media exposure and obesity in children and adolescents” See: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5769928/

How are the tele health visits organised? Is there a hospital or clinic coordinator? Yes, this was an institutional effort as new resources and tech implementation was needed. Call center staff also called upcoming patients to “convert” in person visits into TeleHealth or Telephone visits. ADDITIONAL COMMENT: The capacity of clinics/hospitals/health centres to adapt to tele-health will vary between and within countries.

What symptoms are children with COVID exhibiting? In general children are usually either asymptomatic or have mild respiratory symptoms. However, our understanding of the natural history and epidemiology of COVID19 in children and adolescents is in evolution.

Would it not be more accurate and more beneficial to refer to ‘physical distancing’ as opposed to ‘social distancing’? I believe this is the phrase WHO are moving towards. You are right in that physical distancing is required while people try to remain socially connected.

How difficult has been to manage the low access to fresh foods (fruits and vegetables) in countries that have very high restrictions in quarantine? This was discussed to some degree in the webinar and varies across and within countries. For example, we learnt in the Caribbean that some islands are food importers, whereas others export fruit and vegetables, and that in Mexico some communities have very difficult access to fresh foods. We know that problems with food access/availability are likely to be major issues in low and middle income countries especially during COVID19 restrictions. Urban areas are likely to be particularly affected.

Examples of actions being taken include:

- Food distribution at neighbourhood level is being scaled up by public administrations and supported by community/non-governmental organizations
- Alternative means of distribution is being exploited such as e-commerce/digital to reach consumers, retailers, caterers and producers.
- Local governments are taking actions to ensure that food retail sites can remain open, while at the same time complying with sanitary provisions and food safety standard. These actions aim at enabling continuous flow and access to nutritious food for all, particularly for the more vulnerable.

See more here: http://www.fao.org/3/ca8600en/CA8600EN.pdf
In 2018 we completed a study to determine if severe obesity in children was an independent risk factor requiring targeted vaccination for influenza. In contrast to what you reported for COVID-19, we found that severe obesity was not an independent risk factor in our study population. At the time we were using BMI > 99% for age and gender to define severe obesity. Interestingly we found that 93% of cases had an already identified high risk condition for influenza complications. We also found that 100% of our study population with a BMI > 99% had a known high-risk condition for influenza. While doing this research I found the data on pregnancy very interesting. Do you think that the body habitus of patients with obesity (similar to pregnancy) might contribute to the risk of complications?

In adults, obesity, and especially severe obesity, is a risk factor for more severe COVID-19, including risk of hospitalisation and admission to ICU (please see the previous two WOF seminars for discussion on these issues). We do not have adequate data as yet on severity of COVID-19 and BMI in children and adolescents.

Hi, I have trouble getting the kids from the clinic and their parents to agree to our telemedicine service. Seems they prefer to continue their 'vacation'... yet they are obviously losing all we worked for... any tricks how to get them onboard?

Yes this can be a challenge. We have been calling first to ask consent as to whether they actually want a telemedical visit and allowing that choice. For some, they may prefer to avoid consultations but for others they just may prefer to wait for face-to-face contact.

What about the issue of food insecurity and stress in relationship with obesity development during this time? (Any data on children moving from the overweight to obese category)

Food insecurity - the lack of consistent access to enough nutritious food - is a well recognised contributor to obesity, as is stress. These risks are more likely in this time of COVID-19 pandemic. We are not aware of population level data as yet about changes in weight status of people undergoing physical isolation.

In developing countries, I imagine access to meals is an issue in some families and of course access to too much is a case in other families. We have a double burden of malnutrition, what do we do in this scenario. Some children will get wasted and some will be obese in the end of this pandemic!

The double burden of malnutrition is the co-existence of overnutrition/NCD risk with measures of undernutrition (stunting, underweight, micronutrient deficiencies) in the same country, community, household or even individual, and across the life course (see: https://www.who.int/nutrition/double-burden-malnutrition/en/).

For millions of children, women and families, food systems and nutrition services are disrupted or have broken down as a result of Covid-19, which is contributing to an immediate negative impact on the quality of diets and nutrition practices. The impacts of the COVID-19 pandemic on the nutritional status of children and women are expected to include: significant undermining of the current efforts on breastfeeding due to inaccurate information about mother-to-child viral transmission; a significant impact on the quality of children’s and women’s diets (frequency, quantity and diversity) due to disrupted food systems (access to food) and a hike in food prices; and an increase in the number of undernourished children in need of therapeutic feeding and care due to poorer breastfeeding practices, poorer diets, increased morbidity, and disrupted primary health care systems.

Many routine programs to protect, promote and support adequate nutrition in young children, school-age children and women are disrupted or suspended as a result of the COVID-19 crisis, as
are community programs for the early detection and treatment of undernourished children and women. The closure of schools eliminates access to school-based nutrition programs for many millions of children. The disruption of food markets reduces access to and the affordability of healthy diets, which translates into poorer, less frequent, and less diverse meals particularly among children, adolescents and women from poorer households, thereby driving undernutrition, micronutrient deficiencies and obesity rates upwards.

WHO has a report on double duty actions to address the double burden of malnutrition - see https://www.who.int/nutrition/publications/double-duty-actions-nutrition-policybrief/en/. These include protection/promotion of breastfeeding, actions to optimise early nutrition, maternal nutrition and antenatal care programs, school food policies & programs, and food marketing regulations. These become even more important during the period of COVID19 pandemic.

In the context of COVID-19, UNICEF will prioritize support to policies and programs in three areas to address the double burden of malnutrition: (i) ensure evidence-based guidance, counselling and support on infant and young child feeding and related maternal and child nutrition, including monitoring the use of breastmilk substitutes (which is expected to increase during the COVID-19 crisis) and supporting the use of multiple micronutrient supplementation, home-based fortification, and deworming prophylaxis for children and women; (ii) working with the World Food Programme (WFP) to provide access to nutritious food for children and women and through cash-based and other safety-net programs; and (iii) ensure facility and (primarily) community-based programs for the early detection and treatment of wasted children, through alternate service delivery platforms and approaches when required, including the use of simplified protocols and therapeutic foods for the treatment of child wasting.

How do we cope with the availability of food in these times?
This will vary between and within countries. We heard in the webinar that some Caribbean islands are food importers and others are exporters, that people in some parts of Mexico and other LMICs may have access only to long-shelf-life, energy dense, nutrient-poor foods, or indeed little food. The panellists discussed some of these issues in the webinar.

How to counsel parents to accept that the child has obesity?
The focus should always be on first understanding whether the child’s body size is causing health difficulties. If a child is large but after assessment has no complications (e.g impaired aerobic fitness; endocrine dysfunction, emotional difficulties etc) then a parent should not be concerned. Offering a holistic assessment is really important and often when a parent sees that you are interested in the child as a whole (rather than just their shape or weight) they are more willing to engage with health professionals.

What about Vit D and less sun exposition?
Obesity is associated with lower vitamin D levels, a finding that occurs across age groups, ethnicities and regions. The clinical significance is somewhat uncertain. Prolonged physical indoors may be associated with less vitamin D exposure.

parents sometimes don't accept that they have a child with high BMI. Kindly explain the steps for counselling parents & child.
A detailed response to this is beyond the scope of the webinar. We refer people to national level or professional society clinical practice guidelines for the management of paediatric obesity, many of which address these issues.

How do you focus on obesity complications or chronic cardiometabolic aspects by telemedicine?
This is of course difficult. Tele-health allows the clinician to take a history and provide counselling, but detailed clinical examinations (other than clinical observation, assuming there is a video-link) is not possible.

**KINDLY EXPLAIN PATTERN OF EXERCISES, PHYSICAL & MENTAL FOR CHILDREN DURING LOCKDOWN PERIOD?**

The pattern is individual to each patient. I work with the patient and the family to set goals which work for them and their family - within their home context.

**Are there any data about sports and Telehealth like the database of a wii.**

I recommend use of physical activity Wii and comparable technologies if available. It think it is a good way to increase indoor physical activity. I do not know of data collected but I think it would be very interesting to know!

**Policies that empower children to develop healthy relationships with food and their bodies and minds are crucial. Adaptive and autonomous eating behaviours such as intuitive eating. Children developing trust and autonomy and caregivers letting go of control. Guide children to nurture and preserve healthy eating behaviours and shared responsibility in meal and snack time. Empowering children to respond to their internal cues and eat for physical rather than emotional reasons etc.**

We agree with this. However, the COVID19 restrictions have created additional stresses and restrictions for families and children, making this approach more difficult, especially in those experiencing social disadvantage or poverty.

**How can food industry can help in this crisis?**

The food and beverage sector will play an important role in maintaining the movement of nutritious, safe, affordable and sustainable food along the food chain, from farm production to the communities that need it; a protracted pandemic could quickly put a strain on the food supply chains. However, it is also important to acknowledge that some parts of the food and beverage sector have significant harmful impacts due to the foods they manufacture, promote and sell. The focus should be on promoting access to nutritious foods and limiting highly processed foods high in fats, sugar and salt. Any engagements with the food and beverage sector at this time should take a risk-informed approach.

**What is the effect of the marketing regulation in the child’s consumption?**

There is unequivocal evidence that the marketing of foods high in fat, sugars and salt influences children’s preferences, attitudes, requests, purchasing and consumption of these products and is associated with increased risk of overweight and obesity.

https://www.who.int/elena/titles/food_marketing_children/en/

There is some good evidence from the experience in Chile: “Purchases of high-in beverages significantly declined following implementation of Chile’s Law of Food Labeling and Advertising” - I recommend the following article to expand on the topic: https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003015

**What is the guidance on children with difficult to treat/manage obesity and where there is a genetic cause and also children with syndromic obesity?**

A detailed response to this is beyond the scope of the webinar. We refer people to national level or professional society clinical practice guidelines for the management of paediatric obesity, many of which address these issues.

When we as pediatricians recommend all mothers to breastfeed their children over the two years then we will have a healthier children community.
In Switzerland, childcare centers and primary schools are not totally closed during the lockdown. Vulnerable children (low SES, at risk of violence or child abuse) and those of parents who have to work (HCP, security, food production and distribution,...) can attend school. Do you know if this is the case in other countries?

Best regards,
Nathalie Farpour-Lambert

Thank you for your comment. This varies greatly from country to country. At the time of the webinar, they were somewhat open in Australia as well but totally shut in nearby New Zealand; children in Spain could not leave their homes/ flats, whereas in Dublin they could walk within a 2km radius of home. Policies vary quite dramatically between countries dependent upon local epidemiology, modelling and other considerations.

Which type of indoor physical activity more acceptable by adolescent? How to convince them?

The most ‘acceptable’ activity for an adolescent or any of us indeed is one which we find enjoyable and fun. As adolescents are in a period of developing their own autonomy, some may be more interested in being active with a friend or sibling compared to with their parent/s. For those who are very sedentary it is important to start gradually with activities that can be achieved and enjoyed using short bursts of exercise/play. Convincing an adolescent to engage in physical activity can be achieved through support and curiosity. Try not to badger the adolescent into doing some activity but instead first ask what types of things they might like to do, or remind them about the games/activities they liked to play in the past. Once there is a seed of interest, it’s important to try out lots of different options in order to find something that the adolescent enjoys. Enjoyment can come from being able to achieve an activity (by starting gradually) and then building up skill and performance.

Creating home challenges suitable for small spaces can be useful such as:

- learning how to skip using a skipping rope or other piece of rope,
- counting how many wall or floor press-ups he/she can do,
- learning ball skills for soccer or other ball sports
- jogging on the spot for 30 seconds,
- taking up yoga,
- dancing to their favorite music or learning dance routines from favorite artists
- Learning/practicing a martial art
- There are a range of online resources, tutorials and challenges that can be used eg: [http://w82go.ie/obesity-and-covid-19-resources/](http://w82go.ie/obesity-and-covid-19-resources/)
- [https://www.youtube.com/channel/UCAxW1XT0iEJo0TYIRfn6rYQ](https://www.youtube.com/channel/UCAxW1XT0iEJo0TYIRfn6rYQ)
- [https://www.youtube.com/playlist?list=PLui6Eyny-UzzWwB4h9y7jAzLbeuCUczAI](https://www.youtube.com/playlist?list=PLui6Eyny-UzzWwB4h9y7jAzLbeuCUczAI)
- [https://youtu.be/cF7DKvGWZ1s](https://youtu.be/cF7DKvGWZ1s)
- [https://www.theguardian.com/lifeandstyle/2020/mar/15/from-yoga-to-crossfit-the-10-best-online-home-workouts](https://www.theguardian.com/lifeandstyle/2020/mar/15/from-yoga-to-crossfit-the-10-best-online-home-workouts)
- [https://www.youtube.com/watch?v=vXv6uvrUjKo](https://www.youtube.com/watch?v=vXv6uvrUjKo)
- [https://www.youtube.com/watch?time_continue=4&v=uFJSSYECov4&feature=emb_logo](https://www.youtube.com/watch?time_continue=4&v=uFJSSYECov4&feature=emb_logo)
- [https://www.youtube.com/watch?v=L_xrDAtykMI&feature=emb_logo](https://www.youtube.com/watch?v=L_xrDAtykMI&feature=emb_logo)

Children and families who practice intuitive eating may possess the personal strategies to continue eating in a healthy, balanced and nutritious manner and adapting to crisis such as COVID-19
This may well be the case. However, this may be extremely difficult for families living in disadvantaged communities and in many LMICs where restrictions may be especially challenging and food availability very restricted.

The post-effect of Covid outbreak especially for overweight children, what need to be prepared. Any recommendation?
For those who are treatment seeking: clinics may have longer waiting lists; existing patients may need co-morbidities monitored more closely (eg type 2 diabetes, obstructive sleep apnoea, blood pressure, CVD risk); psychosocial complications of isolation may need to be monitored. This is an area for further consideration.

Empowerment of children through apps or online classes of cooking, physical activity etc. are required for those who can access this technology to reduce the reliance on parents to dictate physical activity and unhealthy meals as a more efficient way to engage with a healthier lifestyle during isolation. Also a way for children to occupy their time whilst parents are working
These may certainly be one of the strategies to support children, adolescents and families at this time. Families and young people will need some form of guidance in choosing appropriate apps.

What’s your opinion about intuitive eating in this pandemic?
This may be extremely difficult in families living in disadvantaged communities and in many LMICs where isolation/lock-down may be especially challenging and food availability very restricted.

Breastfeeding for two or more years to make the world healthier. Ioannis dimitrakopoulos pediatrician greece
Thank you. We agree.

Have you seen any relation between children development and the lockdown period, specially in und 2 years old children. Empirically I have this perception, that the children have a faster development.
We are not aware of any such data. It may depend upon how much time parents have to spend with their young children and the level of family stress. These circumstances will vary considerably.

Is there any guidelines/solid references for health providers mainly dietians to support their clinical mangement of obesity in the community?
A detailed response to this is beyond the scope of the webinar. We refer people to national level or professional society clinical practice guidelines for the management of paediatric obesity, many of which address these issues.

A child’s microbiota can be affected by stress?
The gut microbiota has been implicated in a variety of stress related conditions - in animal studies, as well as observational studies in adults and children.

In Uruguay we have a very good internet access for children education, then this is the opportunity we are using to support adequate an additional information.
Thanks. draadelagb@gmail.com
Thank you for this information.

If Corona Virus prolongs, Food Security is going to be an issue.
We agree. See other responses re questions regarding food insecurity.
To ensure access and availability of fresh fruits and vegetables the Jordan government stopped giving permission for export of locally produced vegetables and fruits to ensure availability at home.

Thank you for this information. There are different responses from different countries. Many countries are prioritising local food security.

Social distancing may be required for some time, even after children return to school. This will affect opportunities for sport and play - are there any innovative ways that these impending changes to children’s physical activity could be addressed?

Physical distancing may well affect the way children play or exercise together over the coming months but often in physical education classes children work on structured activities that do not require them to be within 2m of one another (e.g. soccer games, games building fundamental motor skills, dodgeball, relays, running games, skipping games, dance classes, yoga classes, aerobics classes etc). More challenging may be the unstructured play time at breaks or in the schoolyard where (depending on the age) children are more likely to play in smaller groups, tell stories, chat or play games closer together (chasing/tag). The way children play or the types of games may be affected, but with solid planning, innovative/creatives games and clear instruction there is no need for the level of fun or activity intensity to be reduced.

For school environments without enough space to facilitate appropriate physical distancing, schools may need to consider staggering physical education classes for smaller groups running throughout the day or to focus on activities that can be undertaken in small bursts in small spaces throughout the day (e.g Bounce at the Bell). For the after-school period sports clubs, dance clubs and martial arts clubs etc will play a very strong role for the full community in keeping children active and socially connected but may also need to re-think how they offer or manage activities and games for smaller groups more frequently.

In the home environment some schools may also be able to offer live or recorded video physical education classes or competitions for the class. For those children with access to the Internet or with video game consoles they may also be able to use physical activity games with the family or indeed linked up with their friends.

Hi Jo, nice to see you. Nice presentation. I share with you the same thoughts on ensuring that food systems should be supported in order to make food available for all. Beside ensuring low prices could you tell us how can we mitigate all the other risks, you talked about?

Here are some suggestions action:

Ensuring that the local markets, shops and stores remain open and deliver fresh foods for children, women and families.
- These markets/shops/stores should follow recommended hygiene/physical distancing practices.
  - Consider also the vital role of food delivery services.
  - Think how transformations could connect smallholder farmers and local producers to large retailers or direct to consumers.

Encourage retailers to ensure that fresh fruits and vegetables are positioned prominently and sold at reasonable prices.

Guarantee continuity of school feeding programs, using alternative delivery mechanisms (vouchers; food baskets).
Provide targeted support to vulnerable communities that are most likely to be the most affected by food systems disruptions and income shocks and need support to eat healthily
- Expand social protection to reach more and provide great support
- Ensure that any food offered is nutritious and limit HFSS foods
- Consider if the delivery mechanism social protection programs needs to be adapted - but try to use existing programs rather than create new

Strengthen nutrition education and messaging to protect breastfeeding and promote nutritious foods, dispel myths, encourage healthy cooking techniques

**When we could prove that food insecurity affected the homes of families going through this global lockdown? When it would be appropriate to measure food insecurity?**

This is definitely something that we want to be keeping an eye on over time, but it needs to be done at the appropriate time, perhaps using alternative data collection methods and respecting physical distancing rules. Some questions that might arise include:

- What is the impact of Covid19 on household purchasing power for food?
- How is household access to nutritious foods affected by Covid19, particularly fruits and vegetables?
- What is the change in consumption of nutritious foods, particularly fruits and vegetables?
- What is the change in consumption of ultra-processed foods?
- What is the change in relative affordability of nutritious foods versus ultra-processed foods?
- How are changes to retail as a result of Covid19 - such as closure of fresh markets - affecting household purchasing patterns for nutritious foods?
- What is the nutritional quality of food relief/food banks being provided?

See this brief on nutrition information management, surveillance and monitoring in context of COVID-19:
[https://www.nutritioncluster.net/sites/default/files/2020-04/Nutrition-Information-COVID-Brief%201_0.pdf?mc_cid=0987ae3f4c&mc_eid=a8fedd48a4](https://www.nutritioncluster.net/sites/default/files/2020-04/Nutrition-Information-COVID-Brief%201_0.pdf?mc_cid=0987ae3f4c&mc_eid=a8fedd48a4)