Obesity & Cancer Webinar Series

Accelerating the Development of Pediatric Physical Activity Interventions
December 6, 2021, 2:00 p.m. – 3:30 p.m., ET

Webinar Questions and Answers

Moderator:

Heather Bowles, Ph.D.
National Cancer Institute

Panelists:

Joyce Obeid, Ph.D.
McMaster University

Nina S. Kadan-Lottick, M.D., M.S.P.H.
Georgetown Lombardi Comprehensive Cancer Center

David A. Dzewaltowski, Ph.D.
University of Nebraska Medical Center

1. **For your ALL patients, were these pre- or post-pubertal patients? Did you standardize for time since last chemo/where patients are at in treatment cycle?**

   Joyce Obeid, Ph.D.: We had an even split, by chance: 2 pre- and 2 post-pubertal children. Unfortunately, we weren't able to standardize weeks in treatment because of the small number of eligible children, but we did our best to align timing. For the data I showed, the range was 68 - 82 weeks into maintenance.

2. **Any thoughts on whether strengthening exercises are likely to have similar or different effects on NK cells?**

   Joyce Obeid, Ph.D.: There isn't a ton of information in children. From the acute perspective—nothing that I'm aware of. But with chronic/exercise training, the available studies have a combination of strengthening and aerobic exercise and show a positive effect of the combined training on NK number and function. In adults, the acute studies focus mostly on endurance vs.

resistance training and consistently show endurance has larger effects on NK number/function than resistance. A recent systematic review showed the same for exercise training.

3. **What are your thoughts on expanding the outcome matrices to include psychosocial outcomes along with the biological outcomes?**

   Joyce Obeid, Ph.D.: I think it's absolutely critical.

4. **In your cross-sectional study on barriers, was there any assessment of support for physical activity offered to these children by the clinical team?**

   Nina S. Kadan-Lottick, M.D., M.S.P.H.: I only asked if their doctors and nurses had discussed physical activity with them (yes/no), and 90% said yes. I did not ask follow-up questions regarding the discussions, including what supports were offered.

5. **What are your thoughts to move towards PA assessment being incorporated as a standard of care (included in the EHR)?**

   Nina S. Kadan-Lottick, M.D., M.S.P.H.: I would like to see physical activity incorporated into standards of care for on-therapy and post-therapy patients. I think, though, this will be a long process that will involve investigating best practices (by whom, where, etc.) and health care delivery (dissemination and implementation), as well as minimal DOSE necessary and type of activity, etc.

6. **What are your thoughts on how best to measure baseline PA at the commencement of treatment?**

   Nina S. Kadan-Lottick, M.D., M.S.P.H.: I would advise some sort of wearable, if possible.

7. **What specifically are you measuring in your Fasting Blood Spot Assays?**

   Nina S. Kadan-Lottick, M.D., M.S.P.H.: Fasting lipids, glucose, insulin, hgb A1C, and high-sensitivity CRP.

8. **To what degree are children with cancer (or other health conditions) in your studies engaging in school-based programs (e.g., P.E.)? Is policy (and/or involvement of cancer centers in their communities) a lever for accelerating PA research and practice in pediatric cancer survivors?**

   David A. Dzewaltowski, Ph.D.: We've tried targeted interventions, and they work very well on a small group level, but I think we need to start to move into the whole idea of inclusion. And inclusion, meaning, a universal approach. That involves people of all characteristics, because if we move the health outcome of a population, we're going to move the subgroup outcome as well if we do it in an inclusive way. We've started this line of research, looking at how does the health system integrate with the community system. And I think that's a large question—are our health systems equipped or designed to reach out to the community. And right now, it's a barrier. Especially in the

rural areas I deal with, there isn't a connection between the health system and what's going on in the community. There are attempts. But we haven't solved that problem yet.

Nina S. Kadan-Lottick, M.D., M.S.P.H.: I totally agree in involving the community. We treat children in the cancer center for only a small fraction of their lives. They then live their lives in the community. Most people don't end up living near a cancer center or attending survivorship clinics or other cancer follow-up after tumor recurrence monitoring ends. We need this research and these services in the community.

Joyce Obeid, Ph.D.: I completely agree with what both speakers said. The only thing I would add is emphasizing the importance of, not just the medical treatment, but also all of these other things that help you get back to your regular life. Actually, showing them that they can do this. So, whether that means having a guided session where there is a healthcare professional available, [where patients can] test things out and see how it feels really to come to this realization that they are able to do a lot more than [they might have thought]. People might gain that confidence of, “Okay, I tried this; there was a healthcare professional around; nothing went wrong; now let me try it.” Outside, at home, in the community with my friends. Having that support in place, I think will be really critical to make that community approach more feasible for these kids.