Policy at play: The implementation of Healthy Eating and Active Living Guidelines in municipal child care settings

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ABSTRACT

BACKGROUND: In 2012, Ottawa Public Health (OPH) partnered with the City of Ottawa Municipal Child Care (MCC) Services to develop Healthy Eating and Active Living (HEAL) Guidelines.

SETTING: The Guidelines aim to promote consistent standards of practice in child care settings related to healthy environments and food, physical activity, physical literacy, decreased sedentary behaviours, and positive role modeling by staff. The Guidelines targeted 498 children aged 18 months to 5 years, attending MCC centres. Resources and training were provided to 10 supervisors, 63 child care educators and 9 cooks.

INTERVENTION: Components of the Guidelines were piloted in 5 MCC sites prior to being launched in 10 MCC sites across Ottawa, Ontario. Two project Advisory Groups supported the development of the Guidelines. Staff training, resources, recipes and menus were provided. An evaluation was conducted and has informed the Guidelines’ subsequent community implementation. In 2015, accompanying web-based resources and e-modules were developed.

OUTCOMES: The evaluation demonstrated environmental and programming changes. Parent satisfaction was high and preliminary findings showed no real changes in food costs. Following implementation, the cooks reported high compliance to the 6-week menu plans provided, and the number of sites offering 120 minutes or more of daily physical activity increased.

IMPLICATIONS: Through novel intersectoral partnerships, OPH was able to implement and evaluate HEAL Guidelines in tandem. The interdisciplinary project Advisory Groups, training of cooks, and engagement of the Ontario Coaches Association were all innovative elements of this project and may influence future public health activity in this area.

KEY WORDS: Child care; child; preschool; nutrition policy; public health; health promotion

Current in Canada, one in five (21%) children ages two to five years of age is considered overweight or obese.1 With many children under the age of five spending most of their day in care, child care settings are an important venue for promoting physical activity and healthy eating in young children.2–4

Public Health policy interventions aimed at changing the programming, social and physical environment in child care are an important strategy to address the societal problems of unhealthy eating, sedentary practices and low physical activity. These approaches align with the Population Health Promotion Model5 and the Ottawa Charter on Health Promotion,6 which identifies Creating Supportive Environments and Building Healthy Public Policy as two key action strategies.

This article explores the novel experience of a municipal public health unit working with child care partners to implement and evaluate Healthy Eating and Active Living (HEAL) Guidelines in City of Ottawa Municipal Child Care (MCC) centres. Recognizing the current gap in documented evidence and evaluation methodology in this area, these findings and their related discussion may be of interest to the broader public health and child care communities.

INNOVATIONS IN POLICY AND PRACTICE

La traduction du résumé se trouve à la fin de l'article.

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SETTING

There are hundreds of licensed child care centres in Ottawa, Ontario regulated by the Ministry of Education under the Child Care and Early Years Act.7 This legislation provides minimal direction related to healthy eating and active living aside from stating that all meals, snacks and beverages must meet the recommendations set out in Eating Well with Canada’s Food Guide8; that child care must incorporate active play; and that children should have at least two hours a day outdoors.7 At the time of this project, the City of Ottawa operated 12 bilingual municipal child care programs serving children from six weeks to five years of age. These centres are located across the city, many of them in lower socio-economic status neighbourhoods. Each centre includes a mix of subsidized, partially

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subsidized and paid child care spots. Up to 75% of MCC spots are eligible for subsidies. MCC’s structure, governance and licensing requirements are comparable to those of other licensed, centre-based child care programs operating under a for-profit or not-for-profit centralized body.

Components of the Guidelines were piloted in 5 MCC sites in Ottawa prior to being adopted and evaluated as a policy directive for 10 MCC sites involving 498 children, 415 families, 10 supervisors, 63 child care educators and 9 cooks. Ottawa Public Health (OPH) is the local Public Health unit governed by the Ottawa Board of Health.

**INTERVENTION**

In 2012, OPH partnered with the MCC to develop evidence-informed Child Care HEAL Guidelines for children up to five years of age.9 These Guidelines set consistent standards of practice and recommend that:

- All children are provided with healthy food and a positive eating environment while in care. This includes: making mealtime a positive, social and learning experience; involving children in meal time preparation; allowing children adequate time to eat; and applying a division of responsibility model where the child care provider is responsible for what/when/where food is served, and the child decides which foods and how much they want to eat.
- All children spend less time sitting and more time learning basic movement skills through active play while in care.
- All children have a wide range of opportunities to be active while in care. This includes adult-led activities and time for active free play indoors and out.
- Child care staff act as role models for healthy eating and physical activity.

The development and implementation of the HEAL Guidelines was informed by two project Advisory Groups consisting of an OPH registered dietitian, public health nurses, MCC supervisors, cooks and child care educators.* Components of the HEAL Guidelines were piloted over three months in five MCC sites. The pilot evaluation informed program revisions needed prior to fully launching the Guidelines.

Implementation of the Guidelines consisted of:

- The provision of the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC).10 This tool assisted sites in assessing their baseline status prior to Guidelines implementation.
- One healthy eating training session for supervisors, child care educators and cooks.
- One workshop for cooks and ongoing consultations with a Registered Dietitian around menu plans, recipe preparation and serving sizes.
- Two training sessions for supervisors and child care educators around promoting physical activity, physical literacy and active play ideas for young children.
- National Coaching Certification Program (NCCP) Fundamental Movement Skills Training Certification through the Coaches Association of Ontario (CAO) for one child care educator from each site.
- The provision of resources such as six-week menus, recipes, and key messages for parent newsletters.

**Evaluation methodology**

An evaluation plan was developed in consultation with MCC management and the project Advisory Groups. Ten MCC sites were included in the full evaluation. Four of these sites had piloted subcomponents of the Guidelines. The inclusion of these pilot sites did limit the evaluation, as each of these sites had some prior exposure to components of the Guidelines. Two MCC sites were excluded due to their extensive involvement in the pilot and or their concurrent participation in another research study. The evaluation included both process and outcome questions. It assessed how well the Guidelines were implemented and the utility of the accompanying training and resources. Environmental and programming changes that occurred following implementation were also assessed. The data collection tools used to inform the evaluation included:

- Pre and Post Implementation Staff Surveys to assess changes in staff awareness, attitudes and knowledge.
- The NAP SACC adapted Pre and Post Assessment Tool to assess programming and environmental changes occurring at MCC sites.10 This tool was completed by the supervisor and cook at each site before and after implementation of the Guidelines. It allowed sites to self-report any observed changes related to the type/amount of physical activity being provided at their centre, menu changes, and changes made to the physical and social environments.
- Post Training Staff Surveys to assess staff satisfaction, knowledge, confidence and intent to act following the training provided.
- Project Logs to capture anecdotal stories and changes made at sites. Supervisors collected and documented stories and observations from staff following implementation of the Guidelines. These qualitative data were collated and then analyzed for themes.
- Cook Interviews to assess cooks’ self-reported compliance to the menus and recipes at one year post-implementation.
- The Annual MCC Parent Satisfaction Survey to assess parent satisfaction and awareness regarding the Guidelines.
- Food Costs Comparisons to review MCC centres’ projected and actual food costs for 2010–2014. It was not possible to evaluate food costs by individual centre, so the overall cost per child across all MCC sites was examined. The food costs were adjusted per child, per year using the Ontario retail food component of the Consumer Price Index and accounting for inflation between years.11

**OUTCOMES**

**Training and resources**

MCC child care educators self-identified as having high knowledge around healthy eating and active living prior to the
implementation of the Guidelines. Upon completion of the training, however, the majority of staff expressed that they had a better understanding of the content and would use the resources provided in their work. In post-training surveys, child care educators expressed appreciation and ongoing need for both hands-on professional development and networking/sharing opportunities with others in their field.

Child care educators from each of the MCC sites participated in the National Coaching Certification Program’s (NCCP’s) Fundamental Movement Skills Certification Course. This training was provided by the CAO with the support of the City of Ottawa’s Parks, Recreation and Cultural Services (PRCS) Department. Attendees received certification on how to support the development of fundamental movement skills in children and were then encouraged to mentor their colleagues. As a result of this training, 100% of participating staff (n = 13):

- Felt they could incorporate what they learned into their daily programming.
- Indicated they had a better understanding of how they could help children to develop fundamental movement skills.
- Felt that this kind of advanced physical literacy training is useful for all child care educators.

Fifteen MCC cooks received training to support them in adjusting their menus and recipes according to Canada’s Food Guide. The majority (93%) expressed satisfaction with the session:

- 87% felt the training had increased their understanding of the Healthy Eating Guidelines.
- 93% felt more confident in their ability to make appropriate adjustments to approved recipes and menus.

Environmental and programming changes
The Guidelines and their related six-week menus were developed based on the assumption that three quarters of a child’s daily nutritional needs would be provided by child care. At one year follow-up, the cooks self-reported an average score of 4.7 on a Likert scale of 0 (not using) to 5 (using consistently) for their level of compliance to the six-week menu plans provided. The most common change that cooks reported (following implementation of the Guidelines) was that they cooked more meals from scratch. As the menus and recipes were standardized to meet the Canada Food Guide recommendations, compliance to the menus and recipes suggest the children in MCC sites are being exposed to healthier foods.

Programming changes self-reported by supervisors following implementation of the Guidelines were collected (see Figure 1). These changes included:

- The number of sites offering 120 minutes or more of daily indoor/outdoor physical activity increased for toddlers (57% pre to 88% post) and pre-schoolers (50% pre to 100% post). Many factors (aside from the Guidelines) may have contributed to this change, however sites also reported increased daily amounts of adult-led physical activity (33% pre to 60% post) following implementation of the Guidelines.

- More sites allowed the children to decide which foods to eat out of the foods offered (57% pre to 90% post).
- More sites reported not hosting events where foods not meeting the Guidelines (example: cake) would be served (30% pre to 67% post).
- More sites reported having no screens (67% pre to 80% post). The Guidelines focus on reducing children’s sedentary time spent watching screens. Screens were defined as televisions, desktops, laptops, tablet computers and smart phones.

Anecdotal stories were collected from seven sites through project logs. Emerging themes included the creative use of indoor and outdoor space for movement activities; more adult-led programming; strong engagement in physical literacy activities by special needs children; improved behaviour in children; positive feedback from parents; and parents requesting access to the centres’ healthy recipes for use at home.

Context
This intervention was intended to be universal in nature, so the evaluation did not identify any variations in uptake or implementation of the Guidelines in relation to contextual factors such as the socio-economic or cultural status of children. The unique situation of each child was recognized, thus the focus was placed on addressing systemic barriers and creating inclusive environments for all children to be healthy. Recognizing, however, that a significant portion of the children were in subsidized child care spaces, staff did comment anecdotally that they felt children in need benefited most from the increased access to healthy foods and daily physical activity. These are considerations for future research.

Parent engagement was addressed, but the contextual factors in children’s home settings were beyond the scope of the evaluation. MCC sites operate within a centralized food procurement system, which may have influenced food costs. The Guidelines however, allow flexibility related to menu planning and ingredient substitutions, which would enable them to be relevant in other contexts.

Parent engagement
The Guidelines were positively received by parents, as demonstrated through the MCC Annual Parent Satisfaction
Survey \((n = 205)\). This survey had a 49% response rate among the 415 families surveyed.

- 97.6% of parents were satisfied with the healthy meals/snacks being served at their child’s MCC centre.
- 96% of parents were satisfied that sufficient amounts of physical activity were being offered at their child’s centre.

### Food costs

Preliminary analysis of food costs, as shown in Figure 2, suggests there were no important changes noted in food costs at MCC centres upon implementation of the Guidelines. MCC centres were able to stay within their food budgets and the actual food costs (adjusted using the Ontario Consumer Price Index)\(^{11}\) per child remained stable. In 2015, one child care site identified anecdotally that they had seen an actual decrease in their food costs since implementation of the Guidelines. This is noteworthy as there is a perception that serving healthy food increases costs.

In 2013, MCC Services revised their food ordering processes to deal directly with food suppliers rather than individual grocery stores. This change of practice may also have had an influence on the food costs. Further evaluation of food costs and confounding factors is needed to explore these preliminary findings.

**IMPLICATIONS**

Research has shown that a child’s earliest years of life set the stage for later development, and are foundational to the child’s success in school and his or her overall well-being into adulthood.\(^{12,13}\) Across Canada, there is a strong appetite for public health interventions that target the early years. To date, however, there is very little evaluation and or research literature available on interventions that integrate healthy eating and active living policy in the early years. OPH’s experience implementing the HEAL Guidelines can contribute to the current body of knowledge in this area. A summary of OPH’s key learnings can be found in Table 1.

There were many innovative elements related to this project. Three City departments (Public Health, PRCS and MCC) collaborated to implement the Guidelines. The formation of interdisciplinary Project Advisory Groups was instrumental for connecting the partners and ensured the engagement and input of cooks, early child care educators, supervisors, public health nurses and dietitians throughout the project. The PRCS Department provided input into the project and engaged the CAO to provide the advanced physical literacy training and certification. Aligning child care with coaching certification opportunities was a novel strategy that was well received by both child care educators and the involved sport and recreation partners. This innovative blending of disciplines was a first for the CAO and shows promise for future projects.

### Table 1. Key learnings

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<th>Key learning</th>
<th>Description</th>
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<td>Child care champions are critical to success.</td>
<td>The project was initiated by a MCC program manager. Her leadership and ability to engage organizational commitment enabled participation of the child care centres and their adoption of the Guidelines. The Advisory Group included MCC staff (child care supervisors, program managers, cooks, child care educators) and OPH staff (registered dietitian, public health nurse). This forum advanced the integration of healthy eating with physical activity and ensured stakeholder engagement related to program planning, implementation and evaluation. Special attention was made to have peer-to-peer training for cooks, hands-on workshops for child care educators and ongoing support for administrators. Child care educators reported that the NCCP Fundamental Movement Skills Training Certification through the CAO was very useful. Practical tools such as: 6-week menu plans, recipes tailored to large groups, physical activity ideas/equipment and parent newsletter articles were well received. Recreation staff expertise was secured related to physical literacy. In addition, staff and families had increased awareness of available recreational programming and related subsidies. This mitigated potential resistance to the Guidelines. Parents received information and tips that they could use for meals and activities at home. Strong parental satisfaction was reported related to the Guidelines. There are logistical barriers that impede ongoing training and support for centre staff. Online e-modules can address some of these barriers. The Ontario College of Early Childhood Educators recently implemented a continuous Professional Learning Program. This may facilitate future training related to healthy eating and active living.</td>
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<td>A multi-disciplinary project Advisory Committee provided insight into barriers and opportunities for implementation.</td>
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<td>Tailored training improved buy-in and relevance.</td>
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<td>Complementary resources helped reinforce training and facilitate implementation.</td>
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<td>Integration with other community partners had reciprocal benefits.</td>
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<td>Parent engagement helped sustain organizational commitment to the Guidelines.</td>
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<td>Ongoing professional development is needed to sustain implementation of the Guidelines.</td>
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**Figure 2.** MCC food costs per child, 2011–2014

* Adjusted to 2014 dollars using median yearly retail food consumer price index for Ontario.\(^{11}\)
There is a perception that healthy eating will cost more in an institutional setting. The stable food costs observed in the project challenge this assumption but require further study, as does a stronger accounting of the overall resource burden of implementation. The evaluation conducted identified changes following implementation of the Guidelines, however examination of the effects of the HEAL Guidelines on behaviour, food wastage, cost/benefits, measured physical activity and eating practices is needed. The impacts on food procurement, health equity and school readiness could also be further studied.

The importance of reaching out to child care cooks to address healthy eating was recognized at the onset of the program. Child care cooks reported, via surveys, that they receive limited training specific to food preparation for children and have little to no professional development opportunities once they are working. Surprisingly, this group, who have strong influence on what young children eat, are rarely the focus of public health interventions. OPH’s innovative approach embedded the child care cooks in all training and development plans.

During implementation of the HEAL Guidelines, OPH did encounter expected and unexpected challenges and results. Space, limited time and staff turnover are intrinsic factors within the child care setting. Cultural norms related to physical activity, outdoor play and healthy eating must be considered for both staff and children. While implementing the Guidelines, OPH found that community and staff readiness to adopt screen-free environments and celebrations without unhealthy foods varied unexpectedly. Parents value computer literacy, so not all parents welcome a screen-free environment for children. Some parents and the local media questioned whether healthy eating was being taken too far when birthdays were celebrated without cake.

Cooks identified that they would benefit from more education about serving sizes for young children; food allergy information; general cooking information; and food/beverage recommendations. The cooks involved stated that improvements were needed to the recipes provided and that lack of preparation time and limited fridge/storage space were real challenges. At one year follow-up, many cooks (60%) were not able to identify the food serving recommendations for young children.

Some child care educators felt that promoting physical activity was difficult due to indoor and outdoor space constraints, and physical literacy terminology was not always embraced. All staff trained in this project identified the need for ongoing professional development and networking with colleagues. Sustainable training in the child care setting is challenging, however, as staff have minimal access to computers during the work day and it is difficult to schedule on-site training. Recently, the Ontario College of Early Childhood Educators implemented a continuous Professional Learning Program (CPL) requiring all Early Childhood Educators (ECEs) to participate in ongoing professional development. This could be a timely opportunity to develop and centralize provincial learning, networking and sharing to this professional body.

The NAP SACC Self Assessment was adapted and used to assess any changes in the physical and social environments at the involved sites. This tool has good validity as a self-assessment tool but posed challenges with its use for evaluation. The tool is lengthy and its accuracy relies on the subjective assessment of the cook and supervisor at each site.

CONCLUSION

This article summarizes OPH’s experience applying HEAL Guidelines in collaboration with MCC. This partnership has since expanded to complementary areas such as immunization and joint research around the impact of healthy eating on food costs. There has been substantial interest from the public health and child care communities around this project and OPH is currently offering the Guidelines to the broader Ottawa child care community, including licensed home child care providers. The local momentum has drawn the attention of a sporting company, resulting in a private/public partnership to produce training e-modules for child care educators and cooks. These tools are available at: http://ottawa.ca/2/en/residents/public-health/healthy-eating-and-active-living-for-child-care.

Parents want their children in care that promotes healthy lifestyles. The MCC HEAL Guidelines evaluation shows promise that collaborative public health policy can improve programming as well as social and physical environments in child care. By communicating these findings, Public Health can further engage decision makers and the child care sector.

REFERENCES

RÉSUMÉ

CONTEXTE : En 2012, Santé publique Ottawa (SPO) s’est associée aux Services de garde municipaux de la Ville d’Ottawa afin d’élaborer les Lignes directrices pour une saine alimentation et une vie active dans les garderies.

MILIEU VISÉ : Les Lignes directrices visent à uniformiser les normes de pratique dans les services de garde d’enfants en ce qui concerne la salubrité de l’environnement, la saine alimentation, l’activité physique, le savoir-faire physique, la réduction des comportements sédentaires et le rôle de modèle joué par le personnel. Elles ciblaient 498 enfants de 18 mois à 5 ans fréquentant une garderie municipale; 10 superviseurs, 63 éducateurs et 9 cuisiniers en garderie ont reçu des ressources et une formation.

INTERVENTION : Des éléments des Lignes directrices ont fait l’objet d’un projet pilote dans 5 garderies municipales, puis ont été implantés dans 10.

RÉSULTATS : L’évaluation a montré des changements dans le milieu et les programmes. La satisfaction des parents était élevée, et les résultats préliminaires n’ont montré aucun changement réel des coûts alimentaires. Après la mise en œuvre, l’adhésion des cuisiniers aux menus de 6 semaines fournis était forte, et le nombre de garderies offrant quotidiennement 120 minutes d’activité physique ou plus avait augmenté.

IMPLICATIONS : Grâce à des partenariats intersectoriels inédits, SPO a pu instaurer et évaluer les Lignes directrices pour une saine alimentation et une vie active dans les garderies en tandem. La participation de groupes consultatifs interdisciplinaires sur les projets, la formation des cuisiniers et le concours de Coaches Association of Ontario, trois éléments novateurs de ce projet, pourraient avoir une incidence sur les prochaines activités de santé publique dans le domaine.

MOTS CLÉS : services de garde; enfant; préscolaire; politique sur la nutrition; santé publique; promotion de la santé