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# Avant-propos

**Meghan McGee** Rédactrice en chef

La plupart d'entre nous tiennent notre santé pour acquise, et ce, jusqu'à ce qu'elle soit menacée. Alors que cliniciens, chercheurs et décideurs luttent contre les nombreux facteurs qui risquent de compromettre la santé et le bien-être, la nécessité de la collaboration et des études interdisciplinaires devient de plus en plus évidente. La Revue interdisciplinaire des sciences de la santé joue un rôle important dans cette lutte en favorisant la collaboration et en transmettant des connaissances scientifiques multidisciplinaires. Le présent numéro est un recueil d'articles d'étudiants portant sur un éventail de sujets. En réponse au contexte dynamique de la santé et à l'augmentation du nombre de personnes atteintes de maladies en grande partie évitables, comme l'obésité ou le diabète de type 2, un grand nombre d'articles dans ce numéro soulignent l'importance d'une alimentation saine et de l'activité physique. Si la médecine préventive gagnait en importance, serions-nous plus nombreux à apprécier notre santé?

Ce numéro n'aurait pu être publié sans l'appui et l'engagement de notre remarquable équipe. D'abord, je remercie notre conseiller, le professeur Raywat Deonandan, dont le dévouement et le soutien indéfectibles sont essentiels à la prospérité de la revue. Je remercie également les éditeurs dévoués qui donnent généreusement leur temps et leur expertise. Au nom de l'équipe de rédaction, je remercie notre diligente réviseure, Kassandre Rita Messier, notre indispensable traductrice, Jessica Simoneau, et nos ingénieuses graphistes, Lorena et Mariana Lopez-Dominguez, qui ont joué un rôle déterminant dans la publication de ce numéro. Enfin, je souhaite transmettre mes plus sincères remerciements à tous les réviseurs chargés de l'évaluation par les pairs pour leurs examens rigoureux et réfléchis et leur engagement à l'égard de l'intégrité scientifique.

Surtout, je remercie les auteurs d'avoir fait part de leurs points de vue et de leurs analyses de la documentation scientifique. Vous faites partie de la prochaine génération de chercheurs, de fournisseurs de soins et de décideurs en matière de santé, et possédez une profonde compréhension de l'importance des déterminants sociaux de la santé et une capacité sans limites d'invoquer des changements au sein du système de santé.

C'est un honneur et un réel plaisir d'avoir collaboré à la revue à plusieurs titres au cours des cinq dernières années. Pendant cette période, j'ai travaillé auprès d'une équipe incroyable, observé la revue évoluer et fructifier, et je suis grandement enthousiaste à l'idée de connaître ce que réserve l'avenir.

Meghan McGee, Ph. D.
Rédactrice en chef

# Foreword

**Meghan McGee** Editor-in-Chief

Our health is something most of us underappreciate until it is threatened. As clinicians, researchers, and policymakers strive to combat the multitude of factors threatening our health and well-being, it is becoming increasingly clear that collaboration and interdisciplinary study are crucial to ensure success. The Interdisciplinary Journal of Health Sciences has and continues to be instrumental in this fight by fostering collaboration and sharing the science across disciplines. The collection of articles presented herein represent the compilation of students' work on a diverse range of topics. In response to the dynamic healthcare landscape and the rise of largely preventable diseases like obesity and type 2 diabetes, a significant portion of articles in this issue showcase the importance of healthy eating and physical activity. With greater dedication to preventative medicine, will more of us learn to appreciate our health?

This issue could not have been completed without the support and commitment from our fantastic team. First and foremost, I must thank our Faculty Advisor, Dr. Raywat Deonandan, whose unwavering dedication and support has been instrumental in ensuring the continued success of this journal. To all the dedicated editors, who continue to selflessly volunteer their time and expertise, I thank each and every one of you. On behalf of our editorial team, thank you to our dedicated copyeditor, Kassandre Rita Messier, our invaluable translator, Jessica Simoneau, and our creative graphic designers, Lorena and Mariana Lopez-Dominguez, who were all instrumental in bringing this issue to life. Finally, I would like to extend our sincerest gratitude to all peer reviewers for their thoughtful and rigorous review and commitment to scientific integrity.

Above all, thank you to all the authors for sharing your perspectives and review of the scientific literature. You represent the next generation of healthcare researchers, providers, and policymakers and have a deep understanding of the importance of the social determinants of health and an unbridled capacity to invoke change in our healthcare system.

It has been an honour and a pleasure to have been with the journal in various capacities for the past 5 years. Over my tenure, I have worked with an incredible team, watched the journal grow and develop, and I am incredibly excited to see what the future holds.

Meghan McGee, PhD
Editor-in-Chief

# A Qualitative Study Exploring Healthy Eating and Physical Activity in Families with Young Children

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**Abstract:**

Overweight and obesity in childhood affects health long-term. Parent attitudes and behaviours play major roles in their child's weight despite no consensus on appropriate and effective family-focused interventions to successfully tackle childhood obesity. This research aims to explore caregiver perceptions, attitudes, and behaviours around children's diet, exercise, and weight in East Sussex. In-depth qualitative interviews with mothers, fathers, and grandparents of children aged 2-11 years were conducted. Caregivers wanted to influence their children's diet and exercise habits but were unable due to perceived and actual barriers. Barriers included cost, time, and a lack of control over food choices as children aged. Moreover, caregivers admitted to providing unhealthy sweets and snacks to please their children. While caregivers openly discussed their own weight concerns, they were less likely to discuss concerns about their children's or grandchildren's weight. When asked about the ideal amount of exercise, caregivers found it easy to describe a regime for adults but did not know the ideal amount of exercise for children. Many caregivers found it difficult to quantify exercise when it came to their children because children naturally played in ways that could be considered exercise. Family-based interventions should begin in early childhood and promote walking and dog-walking as forms of exercise, parental education on childhood exercise guidelines, and preparing and eating healthy home-cooked meals in the home.

**Keywords:** Childhood obesity, pediatric nutrition, qualitative research

**Résumé :**
(traduction)

Le surpoids et l'obésité infantile affectent la santé à long terme. Les attitudes et les comportements parentaux ont des répercussions importantes sur le poids des enfants, mais il n'existe aucun consensus sur les interventions familiales appropriées et efficaces servant à combattre l'obésité infantile. Ce travail de recherche vise à explorer les perceptions, les attitudes et les comportements des fournisseurs de soins à East Sussex liés à la diète, à l'exercice et au poids des enfants. Des entrevues qualitatives approfondies ont été menées auprès de mères, de pères et de grands-parents d'enfants âgés de 2 à 11 ans. Les fournisseurs de soins souhaitent influencer les habitudes alimentaires et en matière d'exercice des enfants, mais ne sont pas en mesure de le faire en raison d'obstacles réels et perçus, notamment le coût, le temps et le manque de contrôle sur le choix des aliments à mesure que les enfants vieillissent. De plus, les fournisseurs de soins ont avoué offrir aux enfants des sucreries et des collations pour leur faire plaisir. Les fournisseurs de soins ont ouvertement exprimé leurs préoccupations concernant leur propre poids, mais ont moins ouvertement discuté de leurs préoccupations liées au poids des enfants. En ce qui concerne la quantité idéale d'exercice, les fournisseurs de soins pouvaient facilement décrire un programme d'exercice pour adultes, mais ne connaissaient pas la quantité idéale d'exercice pour les enfants. Plusieurs fournisseurs de soins avaient de la difficulté à quantifier l'exercice chez les enfants, car ces derniers jouent naturellement de manière active. Les interventions familiales devraient commencer dès la jeune enfance et promouvoir la marche et la promenade de chiens comme forme d'exercice, la formation des parents sur les lignes directrices en matière d'exercice chez les enfants, ainsi que la préparation et la consommation de repas sains préparés à la maison.

**Mots-clés :** Obésité infantile, alimentation pédiatrique, recherche qualitative

## Introduction

It is estimated that 42 million children worldwide under the age of five were overweight or obese in 2013 (World Health Organization, 2015). Overweight and obesity in children and adolescents is defined using body mass index (BMI, weight [kg]/height[m]$^2$) and is associated with long-term negative health consequences including hypertension and type 2 diabetes (Biro & Wien, 2010; Deckelbaum & Williams, 2001). Moreover, childhood obesity is a strong predictor of adult obesity and premature death (Franks et al., 2010; Reilly & Kelly, 2011; Whitaker, Wright, Pepe, Seidel, & Dietz, 1997). Behavioural factors such as diet and physical activity play integral roles in weight management in childhood (Roblin, 2007; Steinbeck, 2001). Caregivers influence the diet and exercise habits of their children; they serve as role models and often dictate their child's schedule and lifestyle (Moore, Harris, & Bradlyn, 2012).

Cross-sectional studies have demonstrated important relationships between parenting behaviours and the dietary intake and physical activity levels of their children. First, children eat more when dining in restaurants compared to eating at home (Zoumas-Morse et al., 2001). Second, children whose families eat together have better diet qualities and watch less television (Wiecha et al., 2001). Third, children who receive social support from parents, peers, siblings, or teachers have higher levels of physical activity (Sallis, Prochaska, & Taylor, 2000). Moreover, parents of children with overweight or obesity largely fail to identify their child as having overweight or obesity (Etelson et al., 2003) despite worrying their child will develop obesity in the future (Carnell et al., 2005). Despite the known associations between parenting behaviours and dietary intake and physical activity levels in children, caregivers' attitudes and behaviours towards their child's weight are not well understood. Moreover, there is no consensus on an appropriate and effective family-focused dietary and physical activity intervention for decreasing childhood overweight and obesity. Therefore, this research aims to explore perceptions, attitudes, and behaviours surrounding diet, exercise, and body weight in families with children aged 2-11 years.

## Methodology

*Caregivers*

In this qualitative formative research study, caregivers were selected using purposive sampling and were recruited through local children's centres as well as through a market research company, Plus4, from six wards with the highest combined prevalence of overweight and obesity in East Sussex, UK. Caregivers were eligible if they had at least one child or grandchild aged between 2-11 years. The research team recruited from areas where a good percentage of the population had overweight/obesity but did not ask caregivers to report BMI to avoid stigmatization. After obtaining consent from mothers, fathers, and grandparents, researchers interviewed caregivers individually. Interviews were semi-structured using a topic guide (Appendix I) and took place between June and August 2015. Caregivers were offered the opportunity to be interviewed in their own home, over the telephone, or in a community venue of their choice. They were compensated £25 for their time.

*Data Analysis*

Interviews were audio-recorded and transcribed verbatim using NVivo (QSR International Pty Ltd, 2012). Interview transcripts were coded into main themes and subthemes by two independent researchers. The results were categorized into four main themes: 1) current family diet and exercise behaviours; 2) perceptions of weight; 3) barriers to healthy eating; and 4) barriers to exercising. These themes were drawn from the data once it was collected and analyzed using Grounded Theory (Glaser & Strauss, 1967).

## Results

*Caregivers*

Thirty-six in-depth qualitative interviews were conducted with 30 mothers, three fathers, and three grandparents of low-to-middle socioeconomic status. Caregivers were, on average, 36-years-old (range: 23 to 55 years). Six caregivers had only one child or grandchild, while 30 caregivers (83%) had more than one child or grandchild. Of those who had more than one child, 18 caregivers (50%) had two children or grandchildren. Twenty-eight of the 36 caregivers (78%) were employed (full or part-time). The median length of the interview was 44 minutes. Ten interviews were conducted face-to-face and the rest were conducted over the phone.

*Dietary Practices*

While caregivers said both they and their children preferred comfort foods, they often fed their children different meals from what they ate themselves. Caregivers cited comfort foods (e.g. curry, spaghetti Bolognese, jacket potatoes, and roast dinners) as being their own favourite foods and, similarly, their child's favourite foods. Caregivers said they ate healthy breakfasts (e.g. yogurt with fruit or muesli) or no breakfast at all. However, they often fed their children different foods including unhealthy, sugary cereals for breakfast. Even though a few caregivers skipped breakfast, all provided breakfast for their children.

*"I normally have either grapefruit or strawberries and fat free yogurt or I mix myself up a mixed berry shake or a banana and strawberry shake. My daughter on the other hand I normally give her coco pops or Weetabix." (Mother of one, 28 years old)*

Children ate different foods at lunchtime depending on whether they were at school or home. If they went to school, parents discussed giving them packed lunches with sandwiches, crisps, and fruit, or letting them eat the lunch provided by the school cafeteria. At home, children ate hot

meals such as pastas or baked beans. Dinner was the largest and most varied meal amongst all caregivers. Neither parents nor children skipped dinner. A few of the caregivers expressed frustration that their children did not like to eat fruit and vegetables, or that their children seemed to go through phases of liking or not liking certain foods. To mitigate the nutritional imbalance caused by fussiness, one parent added vegetables to meals by disguising them or blending them into soup.

*"Yeah, they're a bit funny with the veg[etables].... But I do disguise it, like I say, if I'm making food.... I just sort of blend it up and get veg[etables] in their food that way." (Father of three, 45 years old)*

*"Mealtimes are a battle. Food is a big issue in my house for me as I don't want my children to grow up and turn out the way he [overweight husband] has.... And for me meal times are very important and I sit down with them. But I have a four-year-old who would live on spaghetti Bolognese if he could. He's just got picky from the age of three-years-old; he is just so fussy. I have to try...where I feel he misses out at dinner...I have to try and make up with other things, like fruit. He gets a cooked dinner at school but I don't know what he is actually eating as he is so picky." (Mother of one, 36 years old)*

Overall, it was clear that caregivers and children did not share the same diets or food preferences. Caregivers felt their children should not and would not eat the same way they did. For instance, caregivers who followed a vegetarian diet did not believe this diet was suitable for their children. Moreover, caregivers reported higher avoidance and refusal to eat certain foods (e.g. spicy foods) among their children. Finally, caregivers regarded certain foods as specifically formulated for children (i.e. breaded chicken and sugary cereals).

*"They like what I call 'beige foods', burgers and chips, pizza, that type of thing." (Grandparent, 55 years old)*

*"My wife cooks her slimming club meals, my kids always say is that your fat club food? They don't eat that and I wouldn't want them to, I don't really want to eat it either! I wouldn't want them to think about diet and weight at their age." (Father of one, 27 years old)*

*Physical Activity Behaviours*

Most caregivers mentioned walking, both alone and with their children, multiple times a week. They walked in parks, on nature trails, around their local neighbourhoods, and to and from shops. Walks were said to last anywhere from 15 minutes to four hours, but the average was roughly one hour. Most caregivers owned a pet and mentioned walking the dog as a popular family pursuit. For some families, walking was their main form of transportation. Caregivers discussed other sports and activities that their children engaged in as well; however, none were as popular as walking. For primary school-aged children, the next most popular form of physical exercise was playing on local sport teams. Other physical activities mentioned for their children included swimming, cycling, dancing, roller blading, martial arts, and jumping on the trampoline, but these were not as popular as walking.

*"Just lots of walking. Like we do like to go out obviously where we are like right by the coast and we've got the downs and stuff like that so a fair amount of walking." (Mother of three, 36 years old)*

*"But we quite like to go on bike rides... She has a* swimming lesson once a week." (Mother of one, 28 years old)

*"I do pay for swimming lessons for [grandson's name] as I am not a good swimmer. In fact, I did not learn until I was a teenager and still I am a bit scared to go under [the water]. So I didn't want my kids or grandkids to be the same as me. I see that as important." (Grandparent, 55 years old)*

*Caregivers' Perceptions of Self and Child's Body Weight*

Many caregivers regarded their own weight as slightly higher than ideal, but were not concerned health-wise. When asked what a child of healthy weight looked like, many caregivers emphasized being neither too thin nor fat, but having a little tummy or 'puppy fat' if prepubescent.

*"A healthy child should have, like you say, glowing cheeks but a little bit of weight on them. I don't think a skinny baby is... it's not right, that's not right for a child to be skinny. Not at all." (Mother of three, 36 years old)*

Most caregivers who expressed concern about their child's weight were concerned their child was too thin.

*"I have been a bit concerned but intermittently throughout her whole life that she's so slim and in her younger days when she was like probably between four and ten months, I'd feel like I was [visiting] the health visitor drop-in clinic like every other week getting her weighed like, 'Are you sure this is normal?'" (Mother of one, 25 years old)*

One parent alluded to being worried that her daughter was overweight, but no caregivers expressed concern outright.

*"It's funny because at her dancing lesson they all wear leotards and they all line up next to each other and you can see they're all such different shapes and I have worried 'God is she fat?' She's not at all and she really isn't but kids are built differently." (Mother of one, 28 years old)*

Overall, caregivers openly discussed their own weight concerns but were less likely to report concerns about their children's weight. They feared this may cause their children to worry and become obsessed with their weight.

*"To be honest, I'm very aware of, I do not want to be too careful with healthy eating as my older daughter had ano-*

*rexia and bulimia. So I am conscious not to say too much about eating healthily…yeah, I focus on balance as opposed to health." (Mother of two, 42 years old)*

*"I know I'm not alone, I know there are lots of mothers like me. If I say you are not going to leave the table till you eat this he will eat it then throw up all over the floor so it's about giving them a balance, a mix of foods they like and new foods to try." (Mother of one, 26 years old)*

*Barriers to Healthy Eating*

Caregivers said the major barriers to making sure their children were eating healthily were cost, time, and a lack of control over food choices as their children got older and more independent. Knowledge was not identified as a barrier to eating healthily as all caregivers described an ideal, healthy diet as one with fruits and vegetables, lean proteins, and water as the drink of choice. Diets high in carbohydrates, fats, and sugars were viewed as unhealthy. Almost all caregivers considered maintaining a healthy diet as more expensive than buying less nutritious foods. As most caregivers worked full-time, insufficient time and convenience were major barriers to feeding healthy meals. Despite knowing home-cooked meals were healthier, caregivers felt they did not have the time to cook on several days and, therefore, chose quicker and less nutritious options to feed their children.

*"There are so many things against mothers these days; time, cost. I know how to cook from scratch, I'm lucky as my mother taught me, but it is tough for working mothers these days." (Mother of two, 31 years old)*

As the children aged, caregivers felt they had decreasing control over their children's eating and one caregiver reported frustration over his inability to regulate his son's unhealthy dietary choices.

*"If they've got £1 in their pocket I can't stop them [from] buying a packet of crisps and a chocolate bar when they want it if they've got the money. I just try and say to them that there's better things to [eat?]…" (Father of three, 45 years old)*

Other barriers to feeding their children healthy food including marketing of unhealthy foods to children (i.e. colourful packaging with familiar cartoons) and a lack of healthy food delivery options.

*"I know people can go out and get lettuce and salad and god knows what and make their salads and get their healthy food but I think that…I don't think that there's such a thing as someone getting a delivery of a salad or something as healthy." (Father of four, 33 years old)*

*Barriers to Physical Activity*

When asked about the ideal amount of exercise, caregivers found it easy to describe a regime for adults but did not know the ideal amount of exercise for children. Many caregivers said adults should exercise about thirty minutes to an hour per day, five to seven days a week. A few caregivers said they simply did not know how much a child should exercise, while some estimated anywhere from ten minutes to two hours every day. As most children were constantly on the move, some caregivers found it difficult to quantify physical activity in children.

*"So they're constantly on the go. You know, like we went to Peppa Pig World yesterday and I don't think he actually walked anywhere; like he was skipping and jumping and everything so you don't know, is that exercise?"*

*"My daughter, being a girl, I'm not sure if she would be different than my son." (Father of two, 28 years old)*

Caregivers did not view physical activity as a priority and, therefore, did not motivate their children to exercise. Some caregivers reported insufficient time and energy to exercise with their children and caregivers of toddlers felt especially challenged given their child could not run, bike, or swim at their age.

*"There's no kind of family activities. I mean not with him at this age. I know that they do quite a few cycling things around here but he's not at that age where he can cycle. … you know, there's been nothing that the three of us would go oh what should we do today? Let's go and do that." (Mother of one, 30 years old)*

Even though some caregivers mentioned walking outdoors with their pets as a common form of exercise, a few caregivers said they thought their physical environment was a barrier to exercising for both themselves and their children. They discussed environmental barriers including being stuck in their apartment with the lack of a car to go to the gym or the park. Similarly, caregivers reported recent technological advances have led to increased convenience and inactivity.

*"Motivation is not there because it's all been handed to us on a plate - I believe that anyway, you know, apart from activities like let's say for instance snowboarding where you have to get off your butt and do something. It's the same with working in my opinion: people are using computers, everyone can get their information on YouTube, everyone can watch films." (Father of four, 33 years old)*

## Discussion

Caregivers wanted to influence their children's diet and exercise habits but were unable due to perceived and actual barriers. Past family-based interventions have at times been successful in changing behaviours but not in reducing children's BMI and overweight or obesity risk (Ebbeling et al., 2002). In a study that compared an experimental, parent-centered intervention to a control, child-centered intervention, the parent-centered approach was significantly more

successful in reducing the mean weight of children with obesity (Golan, 2006). This study supports the idea that family-centered interventions should focus on parents as the change agents for the entire family. Family exercise programmes should include less intensive and more sustainable physical activities like walking, which was a popular activity among our caregivers.

One common recommendation in the literature is that interventions should focus on providing parents with the tools to translate knowledge into behaviours when it comes to reducing childhood overweight and obesity (Zehle et al., 2007). This is important given that the caregivers in our study were largely unaware of national physical activity guidelines for children and were unable to define exercise in their children. However, increasing knowledge appears less necessary for dietary interventions as caregivers understood that fruits, vegetables, and water represented components of a healthy diet. In this case, to improve healthy eating practices, programmes should focus on eliminating barriers instead of increasing knowledge.

One issue identified by our research was the feeling that as their children aged, caregivers had less control over their children's eating choices. Starting healthy feeding habits in early life could mitigate these issues as children mature (Gardner et al., 2009; Moss & Yeaton, 2014). These habits can be promoted during antenatal visits and when community health workers visit homes. Health workers visit homes before the baby is born then take over from the midwife when the baby is around 10-14 days old. They stay engaged with the child until around five years old, once the child is in school. Our research and the work by others suggest that caregivers are uncomfortable discussing overweight or obesity with their children (Pocock, Trivedi, Wills, Bunn, & Magnusson, 2010). Caregivers fear this may instill self-consciousness, weight stigmatization, and judgement (Pocock et al., 2010; Toftemo, Glavin, & Lagerløv, 2013; Wansink, Latimer, & Pope, 2017). Ultimately, caregivers do not want their children to be concerned about their weight the way parents are with their own weight (Pocock et al., 2010). Family-centered interventions should emphasize the importance of living a healthy lifestyle by consuming a healthy diet and engaging in physical activity as opposed to implementing rules and restrictions in behaviours.

*Limitations*

This research is not presented without limitation. Limitations include self-reporting of all data, including dietary intakes and physical activity, which may have been influenced by social desirability bias. Moreover, we did not measure BMI in caregivers and, therefore, could not determine overweight or obesity. Although we included fathers and grandparents, the majority of our sample was mothers and, thus, we could not stratify our sample to detect differences amongst caregivers. Although dietary intake and physical activity are known to differ amongst males and females and in different age groups, we did not assess caregivers' perceptions for these groups independently.

## Conclusion

There has yet to be consensus on the most effective family-based intervention to decrease childhood overweight and obesity. Family-based intervention programmes should start in early life and should feature walking and dog-walking as forms of exercise, parental education on childhood exercise guidelines, and preparing and eating healthy meals in the home. Our findings may inform the future commissioning of programmes that promote positive and sustainable changes in healthy eating and physical activity behaviours.

## Acknowledgements

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## References

Biro, F. M., & Wien, M. (2010). Childhood obesity and adult morbidities. *The American Journal of Clinical Nutrition*, *91*(5), 1499S–1505S. http://doi.org/10.3945/ajcn.2010.28701B

Carnell, S., Edwards, C., Croker, H., Boniface, D., & Wardle, J. (2005). Parental perceptions of overweight in 3-5 y olds. *International Journal of Obesity*, *29*(4), 353–355. http://doi.org/10.1038/sj.ijo.0802889

Deckelbaum, R. J., & Williams, C. L. (2001). Childhood obesity: the health issue. *Obesity Research*, *9*(Suppl 4), 239S–243S. http://doi.org/10.1038/oby.2001.125

Dietz, W. H. (1998). Health consequences of obesity in youth: childhood predictors of adult disease. *Pediatrics*, *101*(3 Pt 2), 518–525. http://doi.org/10.1007/s12098-011-0489-7

Ebbeling, C. B., Pawlak, D. B., & Ludwig, D. S. (2002). Childhood obesity: public-health crisis, common sense cure. *Lancet*, *360*(9331), 473–82. http://doi.org/10.1016/S0140-6736(02)09678-2

Etelson, D., Brand, D. a, Patrick, P. a, & Shirali, A. (2003). Childhood obesity: do parents recognize this health risk? *Obesity Research*, *11*(11), 1362–1368. http://doi.org/10.1038/oby.2003.184

Franks, P. W., Hanson, R. L., Knowler, W. C., Sievers, M. L., Bennett, P. H., & Looker, H. C. (2010). Childhood Obesity, Other Cardiovascular Risk Factors, and Premature Death. *New England Journal of Medicine*, *362*(6), 485–493. http://doi.org/10.1056/NEJMoa0904130

Gardner, D. S. L., Hosking, J., Metcalf, B. S., Jeffery, A. N., Voss, L. D., & Wilkin, T. J. (2009). Contribution of early weight gain to childhood overweight and metabolic health: a longitudinal study (EarlyBird 36). *Pediatrics*, *123*(1), e67–e73. http://doi.org/10.1542/peds.2008-1292

Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory. *International Journal of Qualitative Methods*, *5*, 1–10. http://doi.org/10.2307/588533

Golan, M. (2006). Parents as agents of change in childhood obesity--from research to practice. *International Journal of Pediatric Obesity: An Official Journal of the International Association for the Study of Obesity*, *1*(December 2005), 66–76. http://doi.org/10.1080/17477160600644272

Gruber, K. J., & Haldeman, L. A. (2009). Using the family to combat childhood and adult obesity. *Prev Chronic Dis*, *6*(3), A106. http://www.cdc.gov/pcd/issues/2009/jul/08_0191.htm

Moore, L. C., Harris, C. V., & Bradlyn, A. S. (2012). Exploring the relationship between parental concern and the management of childhood obesity. *Maternal and Child Health Journal*, *16*(4), 902–908. http://doi.org/10.1007/s10995-011-0813-x

Moss, B., & Yeaton, W. (2014). Early Childhood Healthy and Obese Weight Status: Potentially Protective Benefits of Breastfeeding and Delaying Solid Foods. *Maternal and Child Health Journal*, *18*(5), 1224–1232. http://doi.org/10.1007/s10995-013-1357-z

Pocock, M., Trivedi, D., Wills, W., Bunn, F., & Magnusson, J. (2010). Parental perceptions regarding healthy behaviours for preventing overweight and obesity in young children: A systematic review of qualitative studies. *Obesity Reviews*, *11*(5), 338–353. http://doi.org/10.1111/j.1467-789X.2009.00648.x

QSR International Pty Ltd. (2012). Nvivo. Retrieved from http://www.qsrinternational.com/

Reilly, J. J., & Kelly, J. (2011). Long-term impact of overweight and obesity in childhood and adolescence on morbidity and premature mortality in adulthood: systematic review. *International Journal of Obesity (2005)*, *35*(7), 891–898. http://doi.org/10.1038/ijo.2010.222

Roblin, L. (2007). Childhood obesity: food, nutrient, and eating-habit trends and influences. *Applied Physiology, Nutrition, and Metabolism*, *32*(4), 635–645. http://doi.org/10.1139/H07-046

Sallis, J. F., Prochaska, J. J., & Taylor, W. C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine and Science in Sports and Exercise*, *32*(5), 963–975. Retrieved from http://www.scopus.com/inward/record.url?eid=2-s2.0-0034056937&partnerID=tZOtx3y1

Steinbeck, K. S. (2001). The importance of physical activity in the prevention of overweight and obesity in childhood: a review and an opinion. *Obesity Reviews: An Official Journal of the International Association for the Study of Obesity*, *2*(2), 117–130. http://doi.org/10.1046/j.1467-789x.2001.00033.x

Toftemo, I., Glavin, K., & Lagerløv, P. (2013). Parents' views and experiences when their preschool child is identified as overweight: A qualitative study in primary care. *Family Practice*, *30*(6), 719–723. http://doi.org/10.1093/fampra/cmt056

Wansink, B., Latimer, L. A., & Pope, L. (2017). "Don't eat so much:" how parent comments relate to female weight satisfaction. *Eating and Weight Disorders*, *22*(3), 475–481. http://doi.org/10.1007/s40519-016-0292-6

Whitaker, R. C., Wright, J. A., Pepe, M. S., Seidel, K. D., & Dietz, W. H. (1997). Predicting Obesity in Young Adulthood from Childhood and Parental Obesity. *New England Journal of Medicine*, *337*(13), 869–873. http://doi.org/10.1056/NEJM199709253371301

Wiecha, J. L., Sobol, A. M., Peterson, K. E., & Gortmaker, S. L. (2001). Household television access: Associations with screen time, reading, and homework among youth. *Ambulatory Pediatrics*, *1*(5), 244–251. https://doi.org/10.1367/1539-4409(2001)001<0244:HTAAWS>2.0.CO;2

World Health Organization (WHO). (2015). Factsheet: Obesity and overweight. Retrieved December 2, 2015, from http://www.who.int/mediacentre/factsheets/fs311/en/

Zehle, K., Wen, L. M., Orr, N., & Rissel, C. (2007). "It's not an issue at the moment": a qualitative study of mothers about childhood obesity. *MCN. The American Journal of Maternal Child Nursing*, *32*(1), 36–41. http://doi.org/10.1097/00005721-200701000-00008

Zoumas-Morse, C., Rock, C. L., Sobo, E. J., & Neuhouser, M. L. (2001). Children's patterns of macronutrient intake and associations with restaurant and home eating. *Journal of the American Dietetic Association*, *101*(8), 923–925. http://doi.org/10.1016/S0002-8223(01)00228-0

# Expériences de préposées aux bénéficiaires sur l'utilisation d'un système informatisé de gestion des soins en résidences pour personnes âgées

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**Abstract:**

(translation)

Despite the increasing use of computerized care management systems in residences for older adults, there is very little evidence on the perceptions of caregivers regarding this technology, specifically the perceptions of orderlies. The purpose of this qualitative study is to explore the experiences of 17 orderlies vis-à-vis the use of the software "Soins Organisation Facilité Intérêt" (SOFI) in two senior residences in Quebec. Transcripts from four focus groups were analyzed using an inductive approach. All attendants agreed that the software was a positive asset that allowed them to better organize their tasks and documentation. In addition, they expressed the desire to use SOFI in their workflow to improve communication between themselves and with other professionals within the institution to participate in decision-making around quality of care. Finally, they insisted on the absolute necessity of having this technology be adapted to the working environment, both in its digital presentation and in its physical form, in order for it to be easy to access and use. The presence of software meeting the identified criteria enabled them to improve their performance through increased autonomy and

**Keywords:**

Orderlies, information systems, informatics, elderly care residences, work environment

**Résumé :**

Malgré l'augmentation de l'utilisation des systèmes informatisés de gestion des soins dans les résidences pour personnes âgées, il existe très peu d'évidences sur les perceptions des professionnels, spécifiquement des préposées aux bénéficiaires. Le but de cette étude qualitative est d'explorer les expériences de 17 préposées aux bénéficiaires sur l'utilisation d'un logiciel Soins Organisation Facilité Intérêt (SOFI) dans deux résidences au Québec. Les transcriptions de quatre groupes de discussion ont été analysées selon une approche inductive. Toutes les préposées percevaient le logiciel comme un atout positif majeur qui leur permettait de mieux organiser leurs tâches et leurs documentations. En outre, elles ont exprimé le souhait d'utiliser SOFI dans leur flux de travail pour améliorer la communication entre elles, mais aussi avec toutes les sphères de l'établissement dans le but de participer au processus décisionnel sur la qualité des soins. Enfin, elles ont insisté sur la nécessité absolue de disposer d'une technologie adaptée à l'environnement de travail aussi bien dans sa présentation digitale que dans sa disposition physique afin qu'il soit d'accès et d'utilisation facile. Il apparait clairement que la présence d'un logiciel répondant aux critères de choix des préposées, leur permettra facilement de devenir meilleures avec une perception accrue de leur

**Mots-clés :**

Préposés aux bénéficiaires, environnement de travail, systèmes informatisés, logiciel, résidence pour personnes âgées

## Introduction

Au Québec, la proportion d'aînés âgés de 65 ans et plus est en augmentation constante avec 15.7% en 2011, 18.1% en 2016 et une projection qui pourrait atteindre 28.5% en 2061 (Aubé et Souffez, 2016; Institut de la statistique du Québec, 2014). Dans ce contexte, offrir des services de soins efficients, efficaces et de meilleure qualité constitue un déterminant social clé dans les milieux d'hébergement. Un nombre croissant de résidences pour personnes âgées ont commencé à explorer comment l'utilisation des systèmes informatisés de gestion des soins pourrait répondre aux besoins de leurs clients afin d'améliorer leur milieu et plus précisément leur qualité de vie (Little, Rantz, et Lynn, 2016). Peu de données probantes portant sur ces résidences et sur l'utilisation, l'évaluation des systèmes informatisés de gestion des soins dans le domaine de la santé (Spinelli-Moraski et Richards, 2013), et leur impact sur l'amélioration de la qualité de vie des résidents (Pillemer et al., 2011) existent dans la littérature. Aux États-Unis, ces systèmes informatisés comprennent les dossiers médicaux électroniques (DME) qui contiennent des documents et des images cliniques sous forme électronique, mais sont principalement utilisés pour la facturation et pour la mesure des indicateurs de la qualité des soins (Bjarnadottir, Herzig, Travers et Stone, 2017; Resnick, Manard, Stone et Alwan, 2009). Les résidences pour personnes âgées qui ont implanté avec succès des DME ou des éléments de celui-ci, par exemple une saisie informatisée des ordonnances médicales, ont présenté les avantages suivants pour les professionnels de soins: accès rapide aux renseignements sur les résidents, exactitude de la documentation, amélioration de la qualité des soins, et réduction des erreurs et des doublures (double saisie de l'information) (Frisse, Röhrig, Franklin, Polidori et Schulz, 2016; O'Mahony, Wright, Yogeswaran et Govere, 2014). Les avantages des DME dans les résidences pour les résidents et les familles comprenaient une communication plus fluide avec le personnel et l'amélioration de la qualité de leurs dossiers de santé (Zhang, Yu et Shen, 2012). En plus des avantages ci-dessus, la rétention, l'autonomisation et la satisfaction des employés ont augmenté (Zhang et coll., 2012), grâce à l'utilisation du système et à la réduction de la documentation papier (Cherry, Ford et Peterson, 2009). Malgré les bénéfices des DME pour les parties prenantes dans les résidences, les appréciations des préposées aux bénéficiaires (ci-après préposées) quant à l'utilisation des différents systèmes informatisés ne sont pas disponibles dans la littérature. Cette situation est problématique puisque les préposées sont responsables d'environ 90% des soins directs fournis aux résidents du Canada (Berta, Laporte, Deber et al., 2013). Ainsi, la présente étude descriptive qualitative vise à mieux comprendre les expériences sur l'utilisation du système informatisé de gestion des soins SOFI (Soins Organisation Facilité Intérêt) du Groupe Maurice dans deux résidences pour personnes âgées.

## Description du Logiciel SOFI

Le Groupe Maurice, un réseau de résidences privées pour aînés au Québec, a intégré SOFI dont l'objectif principal est d'automatiser les plans de soins individualisés des résidents pour faciliter leur consultation par les employés, contribuant à l'amélioration de la qualité des services offerts, l'efficacité organisationnelle et la reddition de comptes. Tous les intervenants impliqués dans les soins ont des profils de connexion sécurisé par des mots de passe individuels. La structure de l'interface du système change en fonction du niveau d'accès qui leur a été accordé. SOFI intègre plusieurs fonctionnalités tel le profil du résident, les évaluations de l'autonomie et autres évaluations cliniques requises par le résident, la planification des soins, les routines de travail, l'histoire de vie du résident, le dossier médical, la documentation juridique et plusieurs alertes cliniques. Les préposés peuvent accéder au logiciel par l'entremise d'écrans tactiles fixés sur les murs des corridors. Une série d'icônes permet aux préposés d'accéder au profil des résidents et aux plans de travail.

## Méthodes

Après avoir reçu l'approbation du comité d'éthique de l'Université McGill en 2017, un échantillon de 17 préposées avaient été recrutés dans deux résidences privées pour personnes âgées. L'âge des participantes était en moyenne de 44 ans et l'expérience moyenne comme préposée dans l'institution était de 5,5 ans avec 19 mois pour l'utilisation du logiciel. Pour le recrutement, un courriel contenant une copie du consentement avait été envoyé par l'entremise de SOFI à toutes les préposées. Quatre groupes de discussion d'environ 120 minutes avaient été organisés et un guide d'entretien semi-structuré a été utilisé. Au début des groupes de discussion, le but de l'étude était réexpliqué, les consentements éclairés obtenus et quelques données sociodémographiques des participantes étaient recueillies à des fins d'analyse en utilisant une méthode de statistique descriptive. Une approche inductive par Elo et Kyngäs (2008) a été utilisée pour l'analyse qualitative des données. Les transcriptions ont été complétées avec des notes de terrain afin de commencer le processus de codage. Les codes capturant des concepts similaires étaient catégorisés et des énoncés descriptifs ont été élaborés. Ce processus a été répété jusqu'à ce qu'un consensus soit atteint entre les chercheurs. Ainsi, ils ont arrêté le processus de recrutement lorsque les données sont devenues redondantes. Des mesures appropriées ont été prises pour améliorer la fiabilité de l'étude. La crédibilité a été établie grâce à un processus de vérification des membres. Afin de traiter de la confirmabilité, de la fiabilité et de la transférabilité, les chercheurs ont rédigé des notes réflexives immédiatement après chaque entretien, documentant les sentiments personnels, les pensées, les possibles préjugés et les idées préconçues et ils ont procédé à une description détaillée du milieu de recherche, des méthodes et des différentes participantes. Pour préserver la confidentialité des participantes dans les deux résidences, aucune méthode d'identification n'a été utilisée.

## Résultats

Les résultats montrent que cinq thèmes majeurs se dégagement de l'expérience des préposées quant à l'utilisation de SOFI: 1) Facilitation de l'organisation des tâches journalières, 2) Incohérence dans la validation électronique des tâches, 3) Frustration avec la communication unidirectionnelle, 4) Accès restreint aux profils des résidents, et 5) Problèmes ergonomiques avec les écrans muraux. Malgré les

niveaux de confort variables des préposées sur l'utilisation des technologies numériques dans leurs interactions quotidiennes, toutes les participantes étaient positives quant à la nécessité de passer aux systèmes informatisés de gestion des soins, car elles ont reconnu que ceux-ci transformaient positivement les soins de santé. De plus, elles ont compris que la prestation des soins de santé est basée sur l'information du résident dont l'accès accru est crucial pour améliorer la qualité des soins aux résidents âgés. Dans leur contexte de travail, l'accès à SOFI permettait aux participantes de mieux organiser leurs tâches afin de fournir des soins de base et assister les résidents dans leurs activités quotidiennes, et simultanément il leur permettait de se protéger, car toutes les activités étaient documentées et ne pouvaient être contestées. D'autre part, les préposées ont exprimé le souhait d'utiliser SOFI dans leur flux de travail actuel pour améliorer la communication entre elles, mais aussi entre les différents niveaux de gestion de l'établissement et surtout pour valider leurs tâches; le tout dans le but de participer au processus décisionnel pour améliorer la qualité des soins. Outre la nécessité d'améliorer l'accès à l'information, les préposées ont souligné l'importance de l'ergonomie afin de fournir des soins sûrs et efficaces; plus précisément le besoin d'une interface logicielle conviviale et facile à naviguer, et d'écrans muraux bien positionnés.

*Facilitation de l'organisation des tâches journalières*

Les participantes étaient toutes d'accord que le logiciel leur donnait un meilleur accès aux informations sur les résidents, améliorait la communication et facilitait l'orientation de leurs tâches. Une participante a affirmé: « L'objectif de SOFI est de nous faciliter la vie ». Elles ont apprécié qu'elles puissent voir les tâches journalières requises pour les résidents : « Je sais ce que je dois faire du début à la fin ». En outre, elles ont reconnu que cela leur permettait d'organiser leur travail, comme l'expliquait une participante : « Je pense que cela facilite les choses parce qu'il y a tellement à faire. Tout est marqué pour nous ». Un des principaux avantages mentionnés par les participantes est que SOFI rend les choses organisées : « dans le passé, la paperasse était ridicule, nous passions une heure à remplir des papiers, à mettre nos initiales partout, à nous perdre, à déchirer, etc., maintenant l'information est claire et compréhensible, il faut juste quelques minutes pour compléter ». À ce sujet, une autre participante précise que: « cela nous aide à trouver nos plans de travail et nous sommes capables de gagner du temps, ainsi les choses sont sauvées ». Le suivi des soins dans le système permettait de prévenir les fausses allégations quant aux soins, comme l'a expliqué une préposée, « par exemple, si la famille arrivait et que la résidente disait qu'elle n'avait pas eu sa douche, on pouvait prouver le contraire, à travers SOFI, qu'elle l'avait effectivement reçu et à quel moment ». Au niveau du suivi, les préposées savent que l'administration surveille leurs activités qui sont accomplies ou non, « cela ne me dérange pas et ne me stress pas. Je préfère que ce soit transparent. Ils regardent si les tâches sont terminées et ils nous laissent seules pour faire notre travail ».

*Incohérence dans la validation électronique des tâches*

Pour l'instant, la validation électronique des tâches accomplies dans SOFI reste à la discrétion des préposées. Au lieu de saisir des données dans SOFI, les préposées ont toutes décrit comment elles préféraient accorder la priorité aux soins aux résidents : « lorsqu'elles entendaient une cloche qui sonnait, il leur était important de placer la priorité au bon endroit. Elles oubliaient SOFI ». Cependant, quelques participantes étaient embêtées par les entrées fréquentes qu'exige la validation électronique des tâches (par exemple, trouver son nom dans le système, etc.). De ce fait, certaines préféraient collecter toutes les informations sur un bout de papier pour les introduire électroniquement à la fin de leur quart de travail. D'autres choisissaient de cocher leurs tâches une ou plusieurs fois par jour, comme l'expliquait une participante: « parfois, vous le faisiez une, deux ou trois fois, parce que vous avez toute la journée ». Exceptionnellement, l'une d'entre elles a décrit « avoir coché de façon anticipée » les tâches à réaliser pour gagner du temps, mais elle a reconnu que cela pouvait être problématique : « le système restait valide même si elle n'avait pas fait la tâche ». Plusieurs préposées ont souligné qu'elles pouvaient oublier parfois de cocher certaines tâches : « cela arrivait surtout après un double quart de travail ». Il était préférable de cocher une par une pour s'assurer que tout a été fait correctement afin « d'éviter de tomber dans l'automatisme », comme le soulignait une préposée. Un autre élément de discussion entre elles était la disparition de certaines tâches sur l'écran d'affichage après un temps prévu. En effet, certaines préposées ont constaté que des activités disparaissaient après le temps imparti, même si elles ne les ont pas cochées. Elles n'arrivaient pas à comprendre cette particularité technique du système, et surtout, qui était responsable des tâches non cochées. Il y avait aussi une attitude collégiale au sein du groupe lorsqu'une d'entre elles ne cochait pas ses tâches régulièrement, comme l'a expliqué une préposée : « pourquoi ne suivait-elle pas la répartition des tâches? Plusieurs sautaient facilement à la conclusion que la personne ne connaissait pas SOFI. Si ce cas arrivait, il fallait avoir une communication et une discussion pour comprendre les raisons ».

*Frustration avec la communication unidirectionnelle*

La principale source de frustration des préposées était la communication unidirectionnelle actuellement configurée dans SOFI, car elles étaient incapables de répondre à tous les messages venant de l'administration ou d'envoyer des courriels, mais aussi d'écrire des notes. En plus, cette situation peut engendrer un manque de communication entre les préposées. Par exemple, une participante rapporte que si elle ne rencontrait pas sa collègue au changement de quart, elle n'avait pas de moyen de lui transmettre un message sur un résident, « J'ai fini à 22 h et le quart de nuit commençait à 23 h 30, donc je ne pouvais pas parler à quelqu'un qui ne venait que le soir, et même pendant notre quart de travail, ce n'était pas facile de se parler parce que nous étions avec des résidents différents et stationnés dans des endroits différents ». Les préposées ont décrit plusieurs situations de soins dans lesquelles il serait utile de communiquer avec leurs collègues :

« Quand je travaille et que ma résidente ne veut pas prendre de douche, je devrais pouvoir laisser une note qui le stipule clairement 'Essaie de voir si tu peux réussir à faire prendre une douche à Mme X, peut-être que nous pourrions

voir si la douche ne devrait plus être donnée le matin, peut-être que c'est mieux le soir ».

« J'ai mentionné à l'infirmière que la famille aurait besoin d'acheter des couches, parfois les infirmières sont occupées et débordées, mais le lendemain, la dame est mouillée parce qu'elle n'a pas eu de couches du jour au lendemain. Ce n'est peut-être pas quelque chose d'important pour les infirmières, mais c'est essentiel pour les soins. Si c'était écrit, il serait plus facile de faire un suivi ».

Pour résoudre les problèmes de communication, les participantes ont suggéré l'intégration d'une fonction dans SOFI où elles pourraient laisser des notes à leurs collègues et aux infirmières. La méthode actuelle de laisser une note à la réception est jugée inefficace, car les préposées étaient convaincues que personne ne la lirait.

*Accès restreint aux profils des résidents*

Les préposées ont deux façons de recueillir des informations par rapport à un résident : 1) directement via SOFI ou 2) par une communication verbale venant de l'infirmière auxiliaire. Au niveau du logiciel, les préposées ont accès à certaines sections dans lesquelles elles peuvent trouver des informations limitées sur les résidents, comme l'expliquait une participante, « nous n'avons pas accès au profil des résidents, nous n'avons pas accès aux renseignements personnels des gens, nous avons seulement des informations sur les soins et l'hygiène »; ce qui souligne l'importance de la communication tous les matins ou au début d'un nouveau quart de travail avec l'infirmière. Pour quelques minutes, comme le soulignait une participante, les préposées rencontraient l'infirmière afin qu'elle leur transmette les dernières informations et revoir ce qui s'est passé pendant la nuit ou pendant le quart de travail précédent. En effet, au-delà des tâches immédiates, les préposées ont déclaré qu'elles dépendaient du rapport verbal de l'infirmière pour obtenir des renseignements sur un éventuel changement de plan, car cet aspect n'était pas accessible dans SOFI :

« Dans SOFI, nous avons de l'information en général, mais nous ne savons pas ce qui s'est passé la veille. Tout ce que nous voyons, c'est le profil du résident et les tâches que nous devons accomplir quotidiennement. Si une personne n'a pas bien dormi ou est tombée, et l'infirmière oublie de le mentionner, on ne le voit pas dans SOFI, donc on ne peut pas le savoir ».

Pour améliorer l'accès aux informations et procurer des soins de qualité aux résidents, les préposées ont suggéré d'améliorer le système par l'ajout d'icônes supplémentaires pour indiquer certaines spécificités relatives aux résidents : « par exemple, si un résident était admis à l'hôpital ou s'il y avait un anniversaire, la présence d'une petite icône avec un lit ou un gâteau dans le système pourrait clairement nous orienter ». Une autre suggestion était d'incorporer une fonction d'édition afin d'avoir la possibilité de revenir en arrière et corriger les erreurs sur les tâches rapportées, ce qui n'est pas possible actuellement avec SOFI. Comme l'a expliqué une préposée, il serait également utile de voir les tâches de soins déjà effectuées au cours des quarts précédents, car parfois il y a des résidents qui nous disent que « leur bain a été fait dans la journée et nous n'avions aucun moyen de vérifier la véracité. Nous ne savions alors pas quoi faire ».

Problèmes ergonomiques avec les écrans muraux

Il existe dans les couloirs trois tablettes murales contenant SOFI, d'accès faciles par étage comme l'a expliqué une des participantes: « si une était occupée, on pouvait aller ailleurs, ou attendre, si elles étaient toutes occupées, on faisait autre chose en attendant qu'une se libère ». Il y avait une observation générale principalement pour les personnes petites de tailles. En effet, la position des portails fixés au mur n'était pas idéale pour leur taille car elles étaient perçues comme trop hautes. Aussi, elles suggéraient d'avoir des portails plus mobiles où il serait possible de les déplacer de haut en bas. Pour résoudre ce problème statique des portails muraux, les préposées avaient recours à d'autres méthodes telles que : « se trouver une chaise et se mettre un pied dessus comme un appui pour soulager leur dos ». Certaines préposées ont déclaré qu'elles retournaient au travail après un accident du travail et qu'elles devaient s'arrêter trois fois lorsqu'elles entraient leurs informations dans le système. Une autre préposée rapportait : « il était épuisant de regarder l'écran, il fallait incliner le cou pour vérifier les tâches, cela faisait mal à l'épaule et au poignet ». De plus, la taille de l'écran était problématique, car elle était très petite et non réglable, comme le soulignait une autre participante : « Je trouvais cela fatigant pour les yeux, je les forçais à lire et cela m'étourdissait ».

## Discussion

Les résultats de cette étude indiquaient clairement que la présence d'un logiciel répondant aux critères de choix des préposées, leur permettra facilement de devenir meilleures avec une perception accrue de leur autonomie et de leur engagement dans leur pratique quotidienne. En tenant compte de ces aspects, deux points de discussion sont justifiés: 1) la forte volonté des préposées de vouloir fournir des soins de haute qualité; et 2) le rapport interprofessionnel entre les infirmiers, les autorités et les préposées.

La satisfaction de l'environnement de travail dans les résidences de personnes âgées reste une préoccupation majeure pour les préposées aux bénéficiaires, un groupe de dispensatrices de soins à prédominance féminine (Muramatsu, Yin et Lin, 2017), qui sont souvent invisibles dans le parcours des soins (Cooper et al., 2006). Elles assument une énorme responsabilité en répondant aux besoins physiques et émotionnels des résidents et déclarent se sentir sous pression lorsqu'elles tentent de fournir les soins nécessaires (Chamerlain, Hoben, Squires et Estabrooks, 2016; Knopp-Sihota, Niehaus, Squires, Norton et Estabrooks, 2015). Selon nos résultats, les préposées veulent fournir des soins de haute qualité et faire partie du processus de prise de décision dans les soins aux résidents. Cela ne pourra se faire que s'il y a un accès possible aux informations qui leurs sont nécessaires. En effet, l'information est une des ressources énergétiques les plus importantes

dans chaque organisation (Public Health England, 2014). Par conséquent, son acquisition peut aider à construire une base de pouvoir et d'influence dans un milieu de travail. Les personnes qui reçoivent des informations appropriées et essentielles par rapport à leurs tâches quotidiennes peuvent se sentir capables et plus susceptibles de travailler avec productivité et prospérité en même temps qu'elles respectent les exigences de gestion (Ajami et Arab-Chadegani, 2014). Selon la théorie de l'autonomisation structurelle de Kanter, les employés qui perçoivent que leur lieu de travail possède certaines qualités dans la diffusion d'informations pertinentes sont plus susceptibles d'avoir un sentiment d'autonomie face aux défis rencontrés (Laschinger, Gilber, Smith et Leslie, 2010). À notre avis, SOFI fournit ces qualités et, en tant que tel, peut contribuer à la création d'un milieu de travail habilitant. Dans notre étude, les préposées reconnaissent très bien qu'un système informatisé peut améliorer leur condition de travail par un meilleur accès aux informations et une plus grande communication entre tous les intervenants de l'établissement, mais la limitation de certaines accès demeure une préoccupation qui doit être adressée par les institutions si elles veulent avoir une collaboration efficace de leur travailleurs.

Au niveau de la hiérarchie des soins, les préposées sont sous la supervision des infirmiers qui sont responsables de la santé et de la condition physique des résidents. Toutefois, ces proposées demeurent essentielles dans l'application des consignes concernant l'exécution des tâches permettant d'atteindre les objectifs de soins et de bien-être des résidents (Bande-Winterstein, Doron, Zisberg, Shulyaev, et Zisber, 2018). En pratique, il existe des inquiétudes différentes et des ambiguïtés quant aux attentes professionnelles entre les deux rôles (Perry, Carpenter, Challis, et Hope, 2003; Sieger, Young, Mitchell, et Shannon, 2008; Siegel et Young, 2010). En effet, dans cette étude les proposées sentaient que leurs contributions étaient souvent méconnues à cause de la communication unidirectionnelle venant toujours de la hiérarchie (Lancoster, Kolakowsky-Hayner, Kovacich et Greer-Williams, 2015), alors qu'une bonne relation de partenariat entre les autorités, les infirmiers et elles permettrait de partager un point commun dans les soins aux résidents permettant ainsi d'agir en temps opportun lorsqu'un résident nécessiterait une intervention immédiate (Potter et Grant, 2004). L'ouverture de leur esprit sur l'utilisation des technologies apparait comme une opportunité de pouvoir bien systématiser leurs responsabilités et le degré de confiance et d'inclusion dont elles ont besoin. Cela permettra une claire collaboration entre les partenaires impliqués dans les soins aux résidents.

## Conclusion

En conclusion, le but de cette étude était de mieux comprendre les expériences des préposées sur l'utilisation du système informatisé de gestion des soins dans des résidences pour personnes âgées. Les résultats démontrent que la recherche concernant l'utilisation des systèmes informatisés dans les résidences auprès des personnes âgées constitue un domaine très vaste et pas encore correctement exploré au niveau de chaque intervenant et au niveau des personnes âgées elle-même. Ces résultats constituent une étape préliminaire pour évaluer dans le futur l'efficacité de ces systèmes sur l'amélioration des déterminants sociaux de la santé; la qualité de vie des résidents, la qualité de leur milieu de vie et la qualité des soins et services. Nous vivons actuellement dans un monde numérique en croissance rapide et les résidences doivent s'adapter en tenant compte des préoccupations de toutes les parties impliquées si elles décidaient d'utiliser ces différents programmes informatiques.

## Références

Aubé, D. et Souffez, K. (2016). Le vieilliseement au Québec. Institut National de Santé Public du Québec. Récupéré de https://www.inspq.qc.ca/sites/default/files/publications/028-le-vieillissement-au-quebec.pdf

Ajami, S. et Arab-Chadegani, R. (2014). The effects of applying information technology on job empowerment dimensions. Journal of Education and Health Promotion, 3, 84. https://doi.org/10.4103/2277-9531.139250

Al-Dweik, G., Al Daken, L., Snieneh, A. et Ahmad, M. (2015). Work-related empowerment among nurses: Literature Review. Récupéré de https://www.researchgate.net/profile/Muayyad_Ahmad/publication/272161204_Work-_Related_Empowerment_among_Nurses_Literature_Review/links/56dd889a08ae628f2d24a0d9/Work-Related-Empowerment-among-Nurses-Literature-Review.pdf

Bande-Winterstein, T., Doron, I., Zisberg, L., Shulyaev, K. et Zisber, A. (2019). The meaning of unlicensed assistive personnel role in nursing homes : A triadic job analysis perspective. Journal of Nursing Management, 27, 575-583.

Beatty, L. (2006). Empowering the CNA. Récupéré de https://www.iadvanceseniorcare.com/article/empowering-cna

Berta, W., Laporte, A., Deber, R., Baurmann, A. et Gamble, B. (2013). The evolving role of health care Aides in the long-term care and home and community care sectors in Canada. Human Resources for Health, 14, 25. https//doi.org/10.1186/1478-4491-11-25.

Bjarnadottir, R.I., Herzig, C., Travers, J.L. et Stone, P.W. (2017). Implementation of electronic health records in US nursing homes. CIN: Computers, Informatics, Nursing, 35 (8), 417-424. https//doi.org/10.1097/CIN.0000000000000344

Bowles, K.H., Dykes, P. et Demiris, G. (2015). The use of health information technology to improve care and outcomes for older adults. Research in Gerontological Nursing, 8(1), 5-10. https//doi.org/10.3928/19404921-20121222-01

Chamberlain, S.A., Hoben, M., Squires, J.E. et Estabrooks, C.A. (2016). Individual and organizational predictors of health care aide job satisfaction in long term care. BMC Health Services Research, 16, 577. https://doi.org/10.1186/s12913-016-1815-6

Chaudhuri, T. et Yeatts, D.E. (2013). Nurse aide decision-making in nursing homes: Factors affecting empowerment. Journal of Clinical Nursing, 22(17-18), 2572-2585. https://doi.org/10.1111/jocn.12118

Cherry, B., Ford, E.W. et Peterson, L.T. (2009). Long-term care facilities adoption of electronic health records technology: A qualitative assessment of early adopters' experiences. Final report submitted to the Texas Department of Aging and Disability Services. Récupéré de http://www.nursinghome.org/pro/HIT/Content/HIT%20early%20adopters%20lessons%20learned_%20guide.2009.pdf

Cooper, S.L. Carleton, H.L., Chamberlain, S.A., Cummings, G.C., Bambrick, W. et Estabrooks, C.A. (2006). Burnout in nursing home health care aide: A systematic review. Burnout Research, 3, 76-87.

Elo, S. et Kyngäs, H. (2008). The qualitative content analysis process. Journal of Advanced Nursing, 62(1), 17-115.

Frisse, S., Röhrig, G., Franklin, J., Polidori, M.C. et Schulz, R.J. (2016). Prescription errors in geriatric patients can be avoided by means of a computerized physician order entry (CPOE). Archives of Gerontology and Geriatrics, 49(3), 227-231. https://doi.org/10.1007/s00391-015-0911-2

Institut de la statistique du Québec (2014). Vieillissement: réalités sociales, économiques et de santé. Récupéré de http://www.bdso.gouv.qc.ca/docs-ken/vitrine/vieillissement/index.html?theme=population&tab=5

Knopp-Sihota, J.A., Niehaus, L., Squires, J.E., Norton, P.G. et Estabrooks, C.A. (2015). Factors associated with rushed and missed resident care in western Canadian nursing homes: A cross-sectional survey of health care aides. Journal of Clinical Nursing, 24, 2815–25.

Lancoster, G., Kolakowsky-Hayner, S., Kovacich, J. et Greer -Williams, N. (2015). Interdisciplinary communication and collaboration among physicians, nurses, and unlicensed assistive personnel. Journal of Nursing Scholarship, 47(3), 275-284.

Laschinger, H.K.S., Gilber, S., Smith, L.M. et Leslie, K. (2010). Towards a comprehensive theory of nurse/patient empowerment: Applying Kanter's empowerment theory to patient care. Journal of Nursing Management, 18, 4-13.

Le Groupe Maurice. Récupéré de http://www.legroupemaurice.com/en/

Little, M.O., Rantz, M. et Lynn, G.A. (2016). Health information technology in long-term care: Potential for the future. JAMDA, 17, 379-380.

Mubashir, A.A., Deutschlander, S. et Charland, P. (2017). Are healthcare aides underused in long-term care? A cross-sectional study on continuing care facilities in Canada. BMJ Open, 7, e015521. https://doi.org/10.1136/bmjopen-2016-015521

Muramatsu, N., Yin, L. et Lin, T.T. (2017). Building health promotion into the job of home care aides: Transformation of the workplace health environment. International Journal of Environmental Research and Public Health, 14(4), 384. https://doi.org/10.3390/ijerph14040384

O'Mahony, D., Wright, G., Yogeswaran, P. et Govere, F. (2014). Knowledge and attitudes of nurses in community health centres about electronic medical records. Curationis 37(1), 1-6. https://doi.org/10.4102/curationis.v37i1.1150

Perry, M., Carpenter, I., Challis, C., et Hope, K. (2003). Understanding the roles of registered general nurses and care assistants in UK nursing homes. Journal of Advanced Nursing, 42, 497-505.

Pillemer, K., Meador, R.H., Teresi, J.A., Chen, E.K., Henderson, C.R., Lachs, M.S., Boratgis, G., Silver, S. et Eimicke, J.P. (2011). Effects of electronic health information technology implementation on nursing home resident outcomes. Journal of Aging and Health, 24(1), 92-112. https://doi.org/10.1177/0898264311408899

Potter, P. et Grant, E. (2004). Understanding RN and unlicensed assistive personnel working relationshipts in designing care delivery strategies. The Journal of Nursing Administration, 34(1), 19-25.

Probst, J.C., Baek, J. et Laditka, S.B. (2010). The relationship between workplace environment and job satisfaction among nursing assistants: Findings from a national survey. Journal of the American Medical Directors Association, 11(4), 246–52.

Public Health England (2014). Knowledge strategy: Harnessing the power of information to improve public's health. Récupéré de https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/320506/PHE_Knowledge_Strategy.pdf

Resnick, H.E., Manard, B.B., Stone, R.I. et Alwan, M. (2009). Use of electronic information systems in nursing homes: United States, 2004. Journal of the American Medical Informatics Association, 16(2), 179-186.

Siegel, E.O. et Yong, H.M. (2010). Communication between nurses and unlicensed assistive personnel in nursing homes: Explicit expectations. Journal of Gerontological Nursing, 26(12), 32-37.

Sieger, E.O., Young, H.M., Mitchell, P.H. et Shannon, S.E. (2008). Nurse preparation and organizational support for supervision of unlicensed assistive personnel in nursing homes: A qualitative exploration. The Gerontologist, 48, 453-464. https://doi.org/10.1093/geront/48.4.453

Spinelli-Moraski, C. et Richards, K. (2013). Health information technology in nursing homes: Why and how? Research in Gerontological Nursing, 6(3), 150-151.

Squires, J.E., Hoben, M., Linklater, S., Carleton, H.L., Graham, N. et Estabrooks, C.A. (2015). Job satisfaction among care aides in residential long-term care: A systematic review of contributing factors, both individual and organizational. Nursing Research and Practice, 2015. http://dx.doi.org/10.1155/2015/157924

Sung, H.C., Chang, S.M. et Tsai, C.S. (2005). Working in long-term care settings for older people with dementia: nurses' aides. Journal of Clinical Nursing, 14(5), 587-593.

Vimarlund, V. et Olve, N.G. (2005). Economic analysis for ICT in elderly healthcare: Questions and challenges. Health Informatics Journal, 11(4), 309-321. https://doi.org/10.1177/1460458205058758

Wunderlich, G., Kohler, P. et Gooloo, S. (2001). Improving the quality of long-term care. Washington, DC: National Academy Press.

Yu, M.L. et Perng, S.L. (2014). Adverse events among nursing aides in long-term care facilities in Taiwan. Journal of Nursing Care Quality, 29(3), E7-E14. https://doi.org/10.1097/NCQ.0000000000000044

Zhang, Y., Yu, P. et Shen, J. (2012). The benefits of introducing electronic health records in residential aged care facilities: A multiple case study. International Journal of Medical Informatics, 81, 690-704.

# An Exploration of the Methodological Flaws for Assessing Fibre Intake Among Canadians

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**Abstract:**

According to the 2004 Canadian Community Health Survey-Nutrition, the majority of Canadians are consuming fibre below the adequate intake (AI) level. Although an intervention by Health Canada to improve fibre intakes may seem appropriate, there is insufficient evidence to warrant an intervention given the methodological flaws for assessing fibre intakes in the Canadian population. This paper explores these limitations by reviewing how the AI for fibre was developed, by examining how fibre intakes are assessed by the 2004 Canadian Community Health Survey-Nutrition, and by outlining the limitations of using an AI to draw conclusions about fibre inadequacy. Recognizing the pitfalls of this methodology is the first step to improving the assessment of fibre intakes in Canada, which is needed before any intervention by Health Canada is implemented.

**Keywords:**

Fibre, Canadian Community Health Survey, dietary assessment, adequate intake, nutrition

**Résumé :**

(traduction)

Selon l'Enquête sur la santé dans les collectivités canadiennes-Nutrition menée en 2004, la plupart des Canadiens consomment moins de fibres que l'apport suffisant (AS). Même si une intervention de Santé Canada visant à augmenter l'apport en fibres peut sembler appropriée, il n'existe pas suffisamment de preuves pour en justifier une, compte tenu des lacunes méthodologiques liées à l'évaluation de l'apport en fibres chez les Canadiens. Cette étude se penche sur ces lacunes en examinant la manière dont l'AS en fibres a été déterminé et dont l'apport en fibres a été évalué dans l'Enquête sur la santé dans les collectivités canadiennes-Nutrition menée en 2004, ainsi qu'en soulignant les limites de l'utilisation de l'AS pour tirer des conclusions sur l'insuffisance en fibres. Reconnaitre les lacunes de la méthodologie est la première étape à suivre pour améliorer l'évaluation de l'apport en fibres au Canada, avant toute intervention de Santé Canada.

**Mots-clés :**

fibres, Enquête sur la santé dans les collectivités canadiennes, évaluation de l'alimentation, apport suffisant, nutrition

The Canadian Community Health Survey (CCHS)-Nutrition from 2004 shows that most Canadians are consuming fibre below the adequate intake (AI) level (Health Canada & Statistics Canada, 2004). Although results from the most recent CCHS-Nutrition in 2015 will allow for an assessment of how fibre intakes have changed in the Canadian population since 2004, there is currently insufficient evidence for Health Canada to implement an intervention strategy to improve the fibre intake of Canadians, given the methodological flaws for assessing fibre intakes and determining fibre inadequacy in the Canadian population. This paper will explore these issues by outlining the limitations to how the fibre AIs were established, highlighting the shortcomings of measuring fibre intake among Canadians, and exploring the challenges of using an AI to draw conclusions about fibre inadequacy in the Canadian population.

## Establishing Dietary Requirements for Individual Nutrients

When establishing dietary reference intakes for individual nutrients, estimated average requirements (EAR) are ideal, since they are based on a requirement distribution for that given nutrient and its relationship with indicators of adequacy (e.g., prevention of a specific disease, measured biomarkers, or protection against deficiency) (Institute of Medicine, 2006). In cases where insufficient data exists, or a requirement distribution cannot be generated, an AI is established as an alternative to an EAR. Adequate intakes are based on the observed or estimated intake of a given nutrient in a healthy population, which can also take into account the level of nutrient intake that is associated with preventing a specific disease (Institute of Medicine, 2006).

## How the Adequate Intake Level for Fibre was Developed

Fibre is a non-essential nutrient with no known level of deficiency or developed biomarkers, thereby resulting in an established AI instead of an EAR (Institute of Medicine, 2006). The AIs for fibre were determined using coronary heart disease (CHD) as the disease endpoint, despite its associations with health benefits such as normalizing blood glucose and lipids, and improving laxation (Institute of Medicine, 2005). The selection of CHD as the disease endpoint was based on three large, epidemiological studies of adult men and women that showed a significant reduction of CHD with higher quintiles of fibre consumption (Pietinen et al., 1996; Rimm et al., 1996; Wolk et al., 1999). A fibre intake of 14g/1000kcal was recommended to protect against CHD, as this was the median fibre intake among individuals with the highest quintile of fibre consumption and subsequently lowest risk of CHD across the three epidemiological studies. The AIs for fibre were then determined for each age and sex group by multiplying 14g/1000kcal by median energy intakes established by the Continuing Survey of Food Intakes by Individuals (CSFII) (Institute of Medicine, 2005, 2006).

## Limitations to how Adequate Intakes for Fibre were Determined

Unfortunately, there are numerous issues surrounding how the AIs for fibre were established, which stem from limitations in the epidemiological studies used to calculate the AIs. First, studies used to develop dietary reference intakes should examine healthy populations; however, one of the studies used to calculate the fibre AI only included men who smoke ≥5 cigarettes/day (Pietinen et al., 1996; The ATBC Cancer Prevention Study Group, 1994). Furthermore, dietary data for these studies was collected between 1984 and 1993, and none of the cohorts were from Canada, making it questionable whether these epidemiological studies, upon which the AIs for fibre were determined, are generalizable to today's population of healthy Canadians. Secondly, the Institute of Medicine defines the AI as total fibre which is the combination of both dietary (i.e., naturally found in plants) and functional fibre (i.e., isolated or synthesized fibres with known health benefits in humans) (Institute of Medicine, 2006). However, the three studies used to establish the AIs only examined dietary fibres; it is unclear whether functional fibres protect against CHD like dietary fibres, despite their inclusion in the AI definition.

In addition to the issues from the epidemiological studies used to calculate the fibre AIs, there are also limitations in how the AIs were calculated for each age and sex group. First, AIs for children (1-8 years) and adolescents (9-18 years) are extrapolated from older adults to protect against CHD. Since CHD primarily affects individuals >45 years (Benjamin et al., 2019), this disease endpoint is not an appropriate outcome measure for younger individuals. Secondly, the CSFII survey was conducted in the US in 1994-6 and 1998 (U.S. Department of Agriculture, Agricultural Research Service, Beltsville Human Nutrition Research Center, & Food Surveys Research Group, 2016). Given the decline in energy intakes over the last decade (Garriguet, 2018), and the inherent issues surrounding misreporting of energy intakes (Garriguet, 2018; Hébert et al., 2014), it is likely the CSFII does not accurately reflect the energy intake of Canadians today.

Given these methodological issues from the epidemiological studies used to generate the AIs and the calculation of AIs for each age and sex group, the current AIs for fibre are arguably ungeneralizable to all ages of healthy Canadians today. The use of recent, nationally-representative data of fibre and energy intakes from healthy Canadians, and more appropriate disease endpoints for younger individuals, would greatly improve the AIs for fibre.

## Limitations to Assessing Fibre Intake in the Canadian Population

Similar shortcomings should be highlighted in how fibre intakes were assessed in the Canadian population from the 2004 CCHS-Nutrition. First, fibre intakes were assessed only from food sources, not supplements (Health Canada & Statistics Canada, 2004). As such, the fibre intakes meas-

ured in CCHS-Nutrition 2004 only reflect dietary fibre, and not functional fibre, thereby underestimating true fibre consumption in the Canadian population. In addition, the CCHS-Nutrition 2004 used the Canadian Nutrient File as a food composition database when determining intakes (Health Canada, 2006). Although >95% of foods in the Canadian Nutrient File have measured fibre values, the current laboratory methods used to analyze fibre in this database do not capture all types of fibre in food (Health Canada, 2012, 2015). As a result, the amount of fibre listed for each food item in the Canadian Nutrient File is also underestimated. Collectively, total fibre intake among Canadians is likely higher than what the 2004 CCHS-Nutrition has reported.

## Challenges to Using Adequate Intakes when Determining Nutrient Inadequacy in a Population

One of the major limitations with using an AI, instead of an EAR, is the inability to determine inadequacy of a nutrient within a given population. Due to the lack of requirement distributions among AI-based nutrients, a low prevalence of inadequacy is assumed if a population's average intake is at or above the AI; however, no conclusions can be drawn if the average intakes are below the AI (Institute of Medicine, 2006). In fact, the Institute of Medicine (2006) states that AIs likely overestimate any true requirement for the majority of individuals. Therefore, although CCHS-Nutrition 2004 shows that most Canadians have fibre intakes below the AI, it cannot be concluded that there is a high probability of fibre inadequacy among Canadians, resulting in ambiguity over whether Canadians' fibre intakes are truly of great concern.

Undoubtedly, fibre has been associated with many health benefits, making it important from a public health perspective to ensure Canadians are consuming adequate amounts of fibre. Although a high prevalence of fibre inadequacy cannot be assumed if the population's intake is below the AI, it makes it especially difficult to draw conclusions about the prevalence of fibre inadequacy if there are methodological issues to how the AIs were originally developed. As such, efforts to improve the fibre AIs such as selecting age-appropriate disease endpoints and using recent epidemiological data from Canada to estimate fibre and energy intakes would greatly improve our understanding of how fibre is associated with Canadians' health. Further, the inclusion of both dietary and functional fibre when determining fibre intakes, and using updated laboratory methods to measure all types of fibre in foods, would improve the assessment of fibre consumption among Canadians. Therefore, the onus is on researchers to improve the AIs for fibre and ensure that fibre is accurately measured at both the population and laboratory levels before any intervention strategies to improve fibre intakes are considered by Health Canada.

## References

Benjamin, E. J., Muntner, P., Alonso, A., Bittencourt, M. S., Callaway, C. W., Carson, A. P., … American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. (2019). Heart Disease and Stroke Statistics — 2019 Update: A Report From the American Heart Association. Circulation, 139, e1–e473. Retrieved from https://www.ahajournals.org/doi/10.1161/CIR.0000000000000659

Garriguet, D. (2018). Accounting for misreporting when comparing energy intake across time in Canada. Health Reports, 29(5), 3–12. Retrieved from https://www150.statcan.gc.ca/n1/pub/82-003-x/2018005/article/54965-eng.pdf

Health Canada. (2006). Canadian Community Health Survey Cycle 2.2, Nutrition (2004): A Guide to Accessing and Interpreting the Data. Ottawa, ON. Retrieved from https://www.canada.ca/en/health-canada/services/food-nutrition/food-nutrition-surveillance/health-nutrition-surveys/canadian-community-health-survey-cchs/canadian-community-health-survey-cycle-2-2-nutrition-2004-guide-accessing-interpreting-data-health-canada-2006.html

Health Canada. (2012). Policy for Labelling and Advertising of Dietary Fibre-Containing Food Products. Ottawa, ON. Retrieved from https://www.canada.ca/en/health-canada/services/food-nutrition/legislation-guidelines/policies/policy-labelling-advertising-dietary-fibre-containing-food-products-2012.html

Health Canada. (2015). Canadian Nutrient File: Compilation of Canadian Food Composition Data. Ottawa, ON. Retrieved from https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/nutrient-data/canadian-nutrient-file-compilation-canadian-food-composition-data-users-guide.html

Health Canada, & Statistics Canada. (2004). Canadian Community Health Survey, Cycle 2.2, Nutrition, 2004 - Nutrient Intakes from Food. Provincial, Regional and National Summary Data Tables, Volume 1. Ottawa, ON. Retrieved from https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/fn-an/alt_formats/hpfb-dgpsa/pdf/surveill/cc_descri-eng.pdf

Hébert, J. R., Hurley, T. G., Steck, S. E., Miller, D. R., Tabung, F. K., Peterson, K. E., … Frongillo, E. A. (2014). Considering the Value of Dietary Assessment Data in Informing Nutrition-Related Health Policy. Advances in Nutrition, 5 (4), 447–455. Retrieved from https://academic.oup.com/advances/article/5/4/447/4568627

Institute of Medicine. (2005). Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington, DC: National Academy Press. Retrieved from default/files/fnic_uploads/energy_full_report.pdf

Institute of Medicine. (2006). Dietary Reference Intakes: The Essential Guide to Nutrient Requirements. Washington, DC: National Academy Press. Retrieved from https://www.nal.usda.gov/sites/default/files/fnic_uploads/DRIEssentialGuideNutReq.pdf

Pietinen, P., Rimm, E. B., Korhonen, P., Hartman, A. M., Willett, W. C., Albanes, D., & Virtamo, J. (1996). Intake of Dietary Fiber and Risk of Coronary Heart Disease in a Cohort of Finnish Men. The Alpha-Tocopherol, Beta-Carotene Cancer Prevention Study. Circulation, 94(11), 2720–2727. Retrieved from https://www.ahajournals.org/doi/full/10.1161/01.CIR.94.11.2720

Rimm, E. B., Ascherio, A., Gionvannucci, E., Spiegelman, D., Stampfer, M. J., & Willet, W. C. (1996). Vegetable, Fruit, and Cereal Fiber Intake and Risk of Coronary Heart Disease Among Men. JAMA, 275(6), 447–451. Retrieved from https://jamanetwork.com/journals/jama/article-abstract/396216

The ATBC Cancer Prevention Study Group. (1994). The Alpha-Tocopherol, Beta-Carotene Lung Cancer Prevention Study: Design, Methods, Participant Characteristics, and Compliance. Annals of Epidemiology, 4(1), 1–10. Retrieved from https://www.sciencedirect.com/science/article/pii/1047279794900361?via%3Dihub

U.S. Department of Agriculture, Agricultural Research Service, Beltsville Human Nutrition Research Center, & Food Surveys Research Group. (2016). Continuing Survey of Food Intakes by Individuals 1994-96, 1998 and Diet and Health Knowledge Survey 1994-96. Beltsville, MD. Retrieved from https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/food-surveys-research-group/docs/csfii-1994-1996-1998-and-dhks-1994-1996/

Wolk, A., Manson, J. E., Stampfer, M. J., Colditz, G. A., Hu, F. B., Speizer, F. E., … Willet, W. C. (1999). Long-term Intake of Dietary Fiber and Decreased Risk of Coronary Heart Disease Among Women. JAMA, 281(21), 1998–2004. Retrieved from https://jamanetwork.com/journals/jama/fullarticle/190211

# Canada's New Food Guide: A Dietitian's Perspective

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On January 22, 2019, Health Canada unveiled the ninth version of Canada's Food Guide. This was a necessary overhaul as the previous version, Eating Well with Canada's Food Guide, hadn't been updated since 2007 (Health Canada, 2007). Canada's Food Guide is a tool developed by Health Canada to provide a basic tool to improve nutrition education and literacy in Canadians. The previous food guide received scrutiny from health professionals and the general public claiming it was outdated and influenced by the food industry, thereby adversely affecting its credibility (Health Canada, 2015). The newest version was produced in consultation with Canadians, including the general public, policy makers, and healthcare professionals and provides nutrition recommendations that align with the current nutrition research. The new Food Guide has many improvements; however, there are still some areas that lack inclusiveness for all Canadians.

The most evident change in the new Food Guide is the shift away from a prescription of how much you need from the different food groups. The previous food groups in Eating Well with Canada's Food Guide were vegetables and fruit, grain products, milk and alternatives, and meat and alternatives with recommended serving amounts based on age and gender. Consumers using the previous Food Guide found challenges with understanding the portion sizes and translating the information into meals and snacks (Health Canada, 2015). The new Food Guide shows a more basic approach with an image of a plate where half the plate is vegetables and fruit, a quarter of the plate is protein foods, and the last quarter is filled with whole grain foods.

## Protein Foods

Creating broader categories, such as "protein foods", demonstrates to Canadians who look to Canada's Food Guide for nutrition guidance that protein can come from a variety of sources, including plant-based foods such as legumes, nuts, and seeds, or from animal sources like meat, poultry, and dairy. The healthy eating recommendations on the new Food Guide also make a point to say "choose protein foods that come from plants more often " (Health Canada, 2015). This message is important as there are many health and environmental benefits to including more plant proteins, even if meat and dairy are still part of the diet. Along with being a good protein source, legumes are also high in fibre, B-vitamins and minerals like magnesium, iron, and potassium, while being low in saturated fat. Research shows that consumption of beans, lentils, or soy is associated with a decreased risk of colorectal cancer, cardiovascular disease, and Type 2 diabetes (Zhu et al, 2015; Marventano et al, 2017; Bazzano et al, 2011; Sievenpiper et al, 2009).

Adapting a more plant-based dietary pattern to reduce meat intake can also have profound benefits for the environment. Scientists have found that when meat-based dietary patterns are replaced with plant-based alternatives it can have a substantial impact on the environment, including reduction in greenhouse gas emissions, land use, water use, and fuel use. (Rose et al, 2019, Sabaté et al, 2015). There is also a section of the new Food Guide with grocery shopping tips that encourage Canadians to think of the environment by using reusable bags, to choose products with less packaging, and to buy in-season fruits and vegetables. In a time when climate change is becoming one of the most urgent global issues, it is important to focus on dietary patterns that can promote a sustainable food system that will support future generations.

## Food Processing

The Food Guide also focuses on encouraging dietary patterns that limit highly processed foods, which can add excess sodium, sugars, and saturated fat. Eating too much of these foods can increase the risk of chronic diseases, such as Type 2 diabetes, and heart disease (Moubarac, 2017). The shift away from food and nutrients in isolation and towards a dietary pattern rich in whole foods is a more beneficial way for Canadians to think about their nutrition. Along with the development of the new Food Guide, there should be public health interventions to improve the food environment to help Canadians limit their intake of highly processed foods. Two examples could be creating sustainable environments to increase the availability of affordable produce for low income populations and developing policies to restrict marketing of unhealthy food and beverages to children to make processed food less appealing.

## Hydration

Advice on hydration on the new Food Guide has also caught up with current evidence. It recommends that water should be the main beverage of choice and that 100% fruit juice, vegetable juices, and sugary drinks, including sugar-sweetened milk, should be limited. The previous Food Guide stated that a half cup portion of fruit or vegetable juice was equivalent to one serving of fruits or vegetables. Although 100% fruit and vegetable juices provide vitamins

and minerals it is also a significant source of sugars and lacks fibre. It is recommended to consume whole fruits and vegetables instead. Milk is no longer its own food group on the new Food Guide but along with water, lower fat and unsweetened milk is listed as another healthy drink choice for those who wish to include it in their diet.

## Mindful Eating

Another big change to Canada's Food Guide is advice on mindful eating. Mindful eating consists of being conscious of all sensations during eating, such as thoughts, taste, and feelings. Thirty percent of Canadians eat all of their meals alone and 60% of Canadians sometimes eat while doing another activity, such as using technology, watching television, preparing meals, listening to the radio, reading, or working (Statistics Canada, 2018). Being distracted or eating alone during a meal can make it challenging to be mindful while eating. This can impact the amount of food or drinks consumed, as well as the level of enjoyment from the meal. The new Food Guide encourages Canadians to create a positive eating environment by removing distractions by turning off technology, eating with others, and making the eating area attractive.

## Areas for Improvement

The new Canada's Food Guide has provided many new recommendations that are up-to-date with current nutrition research that will hopefully shape the thinking around what and how Canadians eat; however, there are some areas of the Food Guide that are not applicable to all Canadians.

One population that may struggle to meet the new guidelines is low-income Canadians. The plate that is displayed on the Food Guide provides an arrangement of bright and fresh fruits and vegetables that are not affordable for everyone, especially individuals experiencing food insecurity. It is important to provide examples which support inclusiveness for all budgets. This could be achieved by including an image of frozen blueberries or a cube of frozen spinach along with the images of fresh produce. This image would demonstrate that more affordable and accessible frozen fruits and vegetables can be a part of a healthy plate.

Another critique of the new Canada's Food Guide is that there is little representativeness for cultural groups. A solution to demonstrate cultural diversity would be to provide examples of meals from different cultures and how individuals can adapt cultural meals to fit the recommendations.

The new Canada's Food Guide does consist of gaps that will prevent it from being applied to all Canadian populations, and it is very unlikely that one guide will suit the needs of everyone. According to Canadian Health Minister, Ginette Petitpas Taylor, the benefit to the new guide is that documents will constantly be updated to reflect new research in nutrition (Global News, 2019). This provides the opportunity to create resources tailored to low income populations or different cultural groups. Although the guide is not perfect, it provides much more up-to-date and realistic recommendations around the foods to consume and related behaviours to improve nutrition education and literacy for Canadians.

## References

Bazzano, L. A., Thompson, A. M., Tees, M. T., Nguyen, C. H., & Winham, D. M. (2011). Non-soy legume consumption lowers cholesterol levels: a meta-analysis of randomized controlled trials. Nutrition, metabolism, and cardiovascular diseases, 21(2), 94-103. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2888631/

Global News. (2019, January 23). Health Minister Ginette Pepitas Taylor explains the new Canada's Food Guide [Video file]. Retrieved from https://www.google.com/search?q=evidence+review+of+canadas+new+food+guide&oq=evidence+review+of+canadas+new+food+guide&aqs=chrome..69i57.8743j1j7&sourceid=chrome&ie=UTF-8

Health Canada. (2007). History of Canada's Food Guides from 1942 to 2007. Retrieved from https://www.canada.ca/en/health-canada/services/canada-food-guide/about/history-food-guide.html

Health Canada. (2015). Evidence review for dietary guidance: Summary of results and implications for Canada's Food Guide. Retrieved from https://www.canada.ca/content/dam/canada/health-canada/migration/publications/eating-nutrition/dietary-guidance-summary-resume-recommandations-alimentaires/alt/pub-eng.pdf

Health Canada. (2019). Food guide snapshot. Retrieved from https://food-guide.canada.ca/en/food-guide-snapshot/

Marventano, S., Izquierdo Pulido, M., Sánchez-González, C., Godos, J., Speciani, A., Galvano, F., & Grosso, G. (2017). Legume consumption and CVD risk: A systematic review and meta-analysis. Public Health Nutrition, 20(2), 245-254. doi:10.1017/S1368980016002299. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28077199

Moubarac, J.C. (2017) Ultra-processed foods in Canada: consumption, impact on diet quality and policy implications. Montréal: TRANSNUT, University of Montreal. Retrieved from https://www.heartandstroke.ca/-/media/pdf-files/canada/media-centre/hs-report-upp-moubarac-dec-5-2017.ashx

Rose, D., Heller, M. C., & Roberto, C. A. (January, 2019). Position of the Society for Nutrition Education and Behavior: The Importance of Including Environmental Sustainability in Dietary Guidance. Journal of Nutrition Education and Behavior, 51(1), 3 – 15. Retrieved from https://www.jneb.org/article/S1499-4046(18)30673-0/fulltext#sec0005

Sabaté, J., Sranacharoenpong, K., Harwatt, H., Wien, M., & Soret, S. (2015). The environmental cost of protein food choices. Public Health Nutrition, 18(11), 2067-2073. doi:10.1017/S1368980014002377. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25374332

Sievenpiper, J., Kendall, C., Esfahani, A., Wong, J., Carleton, A., Jiang, H., & et al. (2009). Effect of non-oil-seed pulses on glycaemic control: A systematic review and meta-analysis of randomised controlled experimental trials in people with and without diabetes. Diabetologia, 52(8), 1479-1495. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/19526214

Statistics Canada. (2018). Infographics. Retrieved from https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2018003-eng.htm

Zhu, B., Sun, Y., Qi, L., Zhong, R., & Miao, X. (2015). Dietary legume consumption reduces risk of colorectal cancer: evidence from a meta-analysis of cohort studies. Scientific reports, 5, 8797. doi:10.1038/srep08797. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4350074/

## Appel à contributions

Les critères de soumission se basent sur les douze déterminants de la santé, tels que définis par Santé Canada et l'Agence de santé publique du Canada. Idéalement, toute personne qui souhaite soumettre un manuscrit à la RISS devrait clairement identifier quel déterminant de la santé est associé à sa recherche, ainsi que la nature de cette relation : *de quelle façon le sujet à l'étude est-il relié à la santé humaine, à travers le déterminant de la santé choisi ?*

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