

# The Role of Health Systems in Obesity Management and Prevention: Problems and Paradigm Shifts

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**Abstract** This paper provides an overview of a new section of Current Obesity Reports, called Health Services and programs. This new section seeks to better understand the problems within health systems around obesity management and prevention and to discuss the latest research on solutions. There are few health system issues that are quite as controversial as obesity and there remain several key problems inherent within existing obesity management and prevention approaches that necessitate the adoption of new paradigms and practices. Beginning with articles on addressing weight bias and stigma in health professional training, promoting new models of weight management provision, reviewing the role of regulation and generating an understanding of obesity through a complex systems lens, this new section will encourage readers to better address the challenging problems in obesity management and in doing so, overcome the ‘paradigm paralysis’ that has characterized the last few decades of obesity research and practice.

**Keywords** Obesity management · Obesity prevention · Health system · Paradigm shift · Health professionals · Population health · Interprofessional education

## Introduction

The conclusion of the twentieth century is credited as the first time in human history when the number of overweight people in the world equaled the number of underfed people [1]. As obesity rates continue to climb, health professionals and the

health system are facing a number of challenges around the management and prevention of obesity and related comorbidities. Not only is the increase in prevalence seen over recent years likely to have a major impact on future development of chronic diseases, but if left unchecked, the health consequences of this complex issue threaten to overwhelm the capacity of health systems as they are currently structured. Obesity is strongly linked to a number of diseases, including diabetes, coronary heart disease, hypertension, osteoarthritis of weight bearing joints and certain cancers [2, 3]. It is increasingly evident that obesity is also having a significant impact on health resources [4, 5]. Yet, there are few health system issues that are quite as controversial as that of obesity and its management [6–9]. While the evidence linking obesity with ill-health is relatively strong, including a possible increase in morbidity and mortality across the lifespan [10–14], there remain several key problems inherent within existing obesity management and prevention approaches that necessitate the adoption of new paradigms and practices. This article summarizes these problems and paradigms, which are then further expanded upon in four papers within this new section of Current Obesity Reports on Health Services and Programs.

## The Problems Unique to Obesity Management and Prevention

Why is obesity such a problem to address? The overarching problem is that, although there has been greater realization over the last decade that obesity is a complex health issue [15], it remains, perhaps like no other condition, associated with a belief that it is under the personal control of the individual [16]. This focus on individual responsibility in turn leads to a culture of victim-blaming that is particularly evident within society – read any online media story about obesity and you will see a proliferation of comments on the story that reinforce the view that obesity is simply a result of eating too much and

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moving too little; suggesting the behavior is entirely under the control of the individual, who just needs to develop some “willpower”. It is therefore not surprising that active discrimination against fatness is prevalent and that the perception of personal responsibility is so strongly held in society that it also persists in health settings [17]. As Brown and Flint report (doi:10.1007/s13679-013-0070-y) in the first of four papers in this new section on Health Services and Programs in Current Obesity Reports, weight bias and stigma are alive and well and overtly expressed. However, addressing these pervasive phenomena represents a significant challenge within the health system as it is currently structured.

Leaving aside the challenges of weight bias and stigma, there is a further problem within health systems around how professional roles and responsibilities are defined and enacted, and this can also impact obesity management and prevention efforts. Disturbingly, this is not an area where there has been much change over recent years, despite the increasing rates of obesity. For example, a Cochrane review on improving health professional’s management of obesity was first conducted in 1999 to identify management practices that were helpful in addressing obesity and found only 12 studies that met the inclusion criteria; this increased to 18 studies when the review was updated in 2002, only a small increase [18, 19]. Even with its third update, in 2010, only six randomized controlled trials were identified; these were studies that met the more stringent inclusion criteria, which were amended to reflect changes in systematic review methodology over time [20]. The lack of progress in this area of service delivery is a worrying reflection on the lack of attention that has been paid, and resources devoted, to improving obesity management within the health system, both in terms of how health professionals are trained and in how services are structured.

For most individuals living with obesity, their physician represents the first port of call for advice around weight management. Such advice is taken seriously by patients, often acting as a catalyst for the behavior change required for successful weight management [21]. However, in a recent national survey of Canadian weight management practices, fewer than half of participants who were classed as overweight or obese had asked their physicians about weight loss [22]. While for some individuals, this might reflect a lack of awareness that their weight poses a potential health issue, for others it might reflect an unwillingness to raise the issue of excess weight within a system that is not currently structured to deal with it effectively. In their paper within this new section on Health Services and Programs in Current Obesity Reports, Lewis et al. (doi:10.1007/s13679-013-0073-8) discuss the role of physicians in obesity management, noting the many barriers that limit opportunities for counseling to be provided within primary care, such as time constraints, lack of knowledge and uncertainty about what approaches to take. This is borne out by reports from patients, who in many cases do not feel comfortable

discussing weight issues with physicians or other health professionals [23]. Physicians have expressed a need to spend more time with patients and decrease the number seen per hour [24]. There is also a willingness to refer to other health professionals, such as dietitians, although timely access to these professionals can be an issue [24].

### **The Need for Paradigm Shifts: How can we Improve our Approach to Obesity Management and Prevention?**

Obesity is traditionally viewed, rightly or wrongly, as being within the medical domain but there are significant limitations to this approach. Specifically, due to its complex etiology and resistance to sustainable treatment effects, managing obesity requires an approach to health that recognizes the need for early identification of health issues and management approaches that differ from the traditional acute, physician centered, diagnosis and treatment model. Within the health system, greater integration between and within existing chronic disease management and prevention strategies is one way to achieve change [25, 26]. However, the need for moving beyond incremental to transformative change for more effective chronic disease management is up for debate [27]. Application of models such as the Chronic Care Model, which incorporates multidisciplinary teams with well-informed, active patients within the wider community and health care context, may be helpful to improve health outcomes, while recognizing the complexity of the existing health system structure [28]. The “productive interaction” between physicians, in conjunction with the health care team, and the patient is critical to the success of this model. The primary care physician is no longer the solo member responsible for all aspects of prevention, management and treatment but part of a team with well-defined roles, thereby freeing physician time and workload. The identified barriers of time and skill can therefore be mitigated, replaced by infrastructure and support for a non-acute care system. To facilitate this approach, new models of interprofessional education and training are also needed. Health professionals need to be socialized to other professional groups with whom they may work, which is not yet the norm within health professional education. Our own work has seen the rich narratives obtained in qualitative interviews developed into a dramatic presentation for use as an educational tool in interprofessional health professional training. This drama depicts the relationship between a health professional and an individual living with obesity, with both internal and external dialogue, to highlight the spoken and unspoken tensions that were identified by our participants. Early data from piloting suggests that it offers a powerful medium to raise awareness of these tensions and provoke constructive dialogue to address them [29], something arguably critical for appropriately addressing the sensitive topic of

obesity. Furthermore, there is a need, and an opportunity, to provide support beyond the traditional health care setting. For example, referral to commercial weight management services offers an effective and pragmatic approach to enhance the provision of support to individuals, as Lewis et al. discuss in their paper (doi:10.1007/s13679-013-0073-8).

If existing approaches toward effective management of obesity are inadequate, population level prevention of obesity is even more so. Current and projected expenditures are unsustainable to the health system over the long term and highlight the need for significant investment in prevention programs to lessen the growing prevalence of obesity. However, data on the effectiveness of interventions to prevent obesity are lacking. One reason for this is that prevention is, by its very nature, a long term endeavour, that requires significant investment of time and resources. Unfortunately, although we may propose improved models of care for chronic conditions like obesity within the medical management paradigm, the current emphasis of our health system on disease treatment and medical management may limit investment in primary prevention or the broader domain of public health [30–32]. This makes it particularly challenging to reconfigure existing systems, given that there are likely to be political sensitivities surrounding the reallocation of resources within the health system. To invest more in primary care or public health will require a reduction in investment in other areas, unless additional resources can be found from elsewhere, which is unlikely given the existing constraints on health system funding [33]. Challenging these structural barriers will require a re-orientation of government priorities to acknowledge and address the complex factors that underlie the obesity epidemic [34–36]. These include greater efforts aimed at addressing the social determinants of health and the broader environmental changes that have created and maintain an obesogenic environment [34–36]. This further reinforces the need for cross-sectoral policy change, particularly through greater engagement with the social, economic and natural environments [37].

Given the myriad issues inherent within the management and prevention of obesity, industry, health professionals, governments and the public struggle with the appropriate steps needed to reduce the prevalence of obesity at the population level [38, 39]. That obesity is acknowledged as being a complex issue is clearly described by Froot et al. (doi:10.1007/s13679-013-0072-9) in their paper within this new section on Health Services and Programs in Current Obesity Reports. In this, they explain how “this complex web of interdependent parts will require a holistic, integrated response from a variety of sectors”. Such a response challenges us all as health care providers and citizens to embrace this complexity, but we need to make sure we do not feel paralysed by it [40]. However, there is a continuing tension within health systems between addressing the complex factors that extend beyond individual

behavior and supporting individuals to manage their weight [40]. In a series of qualitative interviews as part of a multi-level study of obesity, this tension was expressed as an either/or scenario (prevention of obesity versus management; system versus individual), with health professionals and policy makers feeling that they must make a choice between the two. Instead, rather than taking one discourse over another, there is a need for both, which represents a substantial paradigm shift from the current, individually focused, medically dominant approach. This requires not only consideration of social-ecological perspectives, but greater awareness in health professionals of the need to offer support, rather than advice, to recognize the widespread prevalence of weight bias in society and to challenge the stereotypes that dominate the discourse on body weight. Such a paradigm shift will take time, resources and leadership from health care providers in order to shape the public discourse about obesity. In the meantime, it is important to explore what aspects of the current obesity management and prevention paradigms we can influence, using the systems lens described by Froot et al. (doi:10.1007/s13679-013-0072-9).

Moving from a focus on individual behavior change and personal responsibility toward a social-ecological approach, that recognizes and seeks to integrate these multiple spheres of influence, poses a significant challenge, particularly given what has been eloquently described as “policy cacophony” [35]. Lang describes this as “noise drowning out symphony of effort. This cacophony is not helpful because policymakers need coherent directions on which they feel they can deliver” [35]. In countries such as Canada and the US, a Neo-liberal agenda that is committed to the dominance of the free market means that departments of Finance, Industry, Trade and Economic Development have greater power than Departments or Ministries of Health [41]. It is also well known that policies within departments outside of the Health Departments can influence a population’s health, yet non-health departments are not traditionally concerned with the health of populations [37, 42]. Further, the ‘health’ value of a Department or Ministry of Health is different from the economic development and profit-oriented values of the Department of Industry, Trade and Commerce [41]. This holds true even when the products sold by businesses are contributing significantly to the poor health of the population as the operation and proliferation of fast food restaurants demonstrates [43]. There is therefore a need to influence public policy across a number of areas, including agriculture, manufacturing, retail, education, culture, trade and economics [35]. Moreover, greater investment in health promotion and the primary prevention of health problems is necessary, along with the implementation of policies that would play a major role in preventing obesity.

These constraints on the development of a vibrant public health system are a significant issue for the successful prevention of obesity. In recent decades it has become glaringly evident that the lifestyle approach toward obesity management

of ‘eat less and move more’, has had limited success [44], likely as the result of an increasingly unsupportive environment for engaging in healthy behavior [45, 46]. Choices are now recognized as no longer being made within the context of a neutral environment. Instead, a range of influences, such as the media, marketing, economic and urban development, have constructed countless social, economic, political and physical barriers, which actively discourage people from doing the very things we require of them to achieve good health. The dramatic changes in the food environment are a significant contributor to the obesogenic environment. Portion sizes of processed foods and drinks have greatly increased, and value-added items can dramatically increase the calorie content of meals [43, 47]. Eating fast food more than twice a week has been linked to weight gain because of its energy dense nature, with some meals containing anywhere between half to a full day’s worth of calories [48]. While there is a trend toward providing consumers with healthier choices within restaurants [49], this is an insufficient response to the obesity epidemic and it is likely that the substantial changes needed will require some form of Government regulation, rather than a reliance on industry self-regulation alone [50, 51]. The role of regulation is therefore an important consideration for the overall context and resolution of this problem and is discussed in the paper by Ries (doi:10.1007/s13679-013-0068-5) in this new section on Health Services and Programs in Current Obesity Reports. It must be stressed however, that these approaches do not mean that the individual has no responsibility for their own health, but recognizes that health is connected to other social and environmental determinants and that individual behavior change can be constrained by the context of the obesogenic environment in which we live [35].

## Conclusion

Effective obesity management and prevention requires acknowledgement that the problem goes beyond individual behavior and is influenced by psychology, society, environments, and public policy [52]. Therefore, moving beyond a focus on the individual, toward a more integrated approach to chronic disease management and prevention will require effort from different sectors, both within and beyond the direct purview of health care. However, reducing obesity will be just one outcome that could be realized by this approach. In addition, improving how we manage or prevent obesity within the health system may require a comprehensive, system-wide shift in thinking and actions [53, 54]. Health system transformation is possible, and indeed necessary if we are to have a sustainable health system. Achieving the system-wide changes necessary will require a degree of long-term thinking and commitment that is often lacking within current political structures, which tend to promote short-termism over the lifespan of a political party [55].

Although there are currently significant barriers to the effective management and prevention of obesity, the multidisciplinary literature shaping the field has grown significantly over the past few decades. With continued recognition of, and investigation into, the complexities inherent in the management and prevention of obesity, we can move away from ‘paradigm paralysis’ to better address these challenging problems.

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## Compliance with Ethics Guidelines

**Conflict of Interest** Sara F.L. Kirk is employed by Dalhousie University for research into obesity.

Tarra L. Penney declares that she has no conflict of interest.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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