# Rethinking Obesity Prevention Paradigms: *An Expert Consultation*


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All interview participants signed an informed consent form, gave verbal consent prior to the interviews, and agreed to have their responses shared publicly. Participation in this expert consultation was voluntary and data is presented anonymously.

A workshop on obesity prevention at the 30th European Congress on Obesity in Dublin in May 2023, where preliminary results from the expert interviews were presented along with content aligned to the original consultation questions, are summarized on page 15. Replica Communications is grateful for support from the European Association for the Study of Obesity (EASO) and Health Service Executive Ireland to organize the session and support its speakers, and to Euan Woodward, Executive Director of EASO and Sheree Bryant, Director of Communications for EASO for their input into the ECO obesity prevention workshop, and for their thoughtful edits and comments on this report.

## Executive Summary

There is limited agreement on what individual and population health parameters or system-level outcomes should be measured when assessing obesity prevention interventions. The challenge therefore is to understand how obesity prevention outcomes should be conceptualized and operationalized in public health research, practice, and policy.

The objectives of this expert consultation were to: 1) explore how individuals working in obesity prevention research, public health practice and policy, and obesity advocacy conceptualize and operationalize obesity prevention interventions and outcome measures; and 2) identify gaps and opportunities related to obesity prevention research and practice which can inform future meaningful obesity prevention public-private investments and programs.

This expert consultation was implemented in two phases: 1) semi-structured interviews with global obesity prevention experts and 2) an obesity prevention workshop at the European Congress on Obesity in Dublin, Ireland in May, 2023.

Semi-structured interviews were conducted with obesity prevention experts, public health practitioners and researchers in Europe, Latin America, and North America (n=12). Interview data were categorized into seven themes:

1. What is the difference between health promotion and obesity prevention?
2. What are we preventing?
3. Will universal health promotion actually prevent obesity?
4. Embracing complexity
5. Designing interventions
6. Evidence supporting intervention design; and,
7. Opportunities for advancing obesity prevention.

Most respondents agreed that obesity is a chronic disease, but lacked consensus on whether or not universal health promotion activities constitute obesity prevention strategies. Regardless, experts generally agreed that obesity prevention must take a whole systems approach to be effective, and that this scope presents significant challenges in terms of operational considerations, as well as securing political support and funding. There was agreement that outcomes to assess interventions must move beyond simple measures, such as BMI or weight alone, but there was little consensus on what constitutes such outcomes.

Over 200 delegates attended the obesity prevention workshop in Dublin, Ireland. Delegates included researchers, clinicians, and public health professionals. Live audience polling was implemented throughout the workshop to capture delegates' perceived level of readiness and empowerment to rethink obesity prevention practices and policies. A total of 155 workshop delegates participated in a live Slido poll; 119 answered some or all of the polling questions.

Despite the fact that the majority of respondents (80%, n=72) agreed that obesity prevention must address systemic and/or structural drivers of obesity rather than trying to change individual health behaviours, the majority did not feel empowered (38%, n=33) or only felt partially empowered (35%, n=30) to advocate and to educate funders about what it takes to do obesity prevention properly.

## Executive Summary (continued)

Public health practitioners working in health promotion and/or obesity prevention recognize that simplistic interventions designed to prevent weight gain or BMI increases are insufficient to achieve individual and population-level health outcomes. They agree that traditional research and program funding structures, and related narrow accountability cycles, are impediments to creating systems change, but not necessarily on what the ideal pathway forward looks like or how to accurately measure success or failure.

## 1.0 Background

Historically, obesity has been oversimplified as a lifestyle issue, leading to simplistic solutions that place the responsibility on individuals affected by obesity and contributing to weight bias, stigma, and discrimination.[1,2] This simplistic understanding of obesity is at odds with the science and complex etiology of obesity as well as with peoples' lived experiences.[3,4] Although countless local, regional, national and institutional programs aimed at preventing obesity have been implemented around the world, no country has been able to effectively prevent obesity or halt the progression of the disease at the population level.[5-8]

Standard obesity prevention recommendations, interventions and strategies mainly promote healthy eating and physical activity to prevent weight gain. Although these strategies have been tried and tested in many populations, communities and cultural contexts, they produce inconsistent results, with some showing no effect and others showing only small and/or transient effects on weight and body mass index (BMI) at the individual or population levels.[9-12]

There is limited agreement on what individual and population health parameters or system-level outcomes we should be measuring in obesity prevention strategies.[13,14] The challenge therefore is to understand how obesity prevention outcomes should be conceptualized and operationalized in public health research, practice, and policy.

## 2.0 Objective

The objective of this expert consultation was to explore how individuals working in obesity prevention research, public health practice and policy, and obesity advocacy conceptualize and operationalize obesity prevention interventions and outcome measures. The secondary goal of this initiative was to identify gaps and opportunities related to obesity prevention research and practice which can inform future meaningful obesity prevention public-private investments and programs.

## 3.0 Approach

This expert consultation was implemented in two phases: 1) semi-structured interviews with global obesity prevention experts and 2) an obesity prevention workshop at the European Congress on Obesity in Dublin, Ireland in May 2023.

### *Phase 1: Expert Interviews*

Semi-structured interviews were conducted with 11 obesity prevention experts, public health practitioners, healthcare professionals and policy makers in Europe, Latin America, and North America. One additional expert provided written answers to the interview questions. An interview guide (Appendix A) was used to engage participants in explorations of individual views and thoughts on obesity prevention intervention research, practices, and policies.

Experts included individuals who had experience in obesity prevention research, practice, and policy. Experts were identified through consultations with the European Association for the Study of Obesity's Public Health Working Group, as well as through obesity experts from North America, Latin America, and Europe.

All experts signed a consent form and provided verbal consent prior to participating in the interviews, and agreed to have their interviews be audio recorded, transcribed verbatim, and shared publicly.

Participation in the interviews was voluntary. Personal identification data was removed from all transcripts prior to analysis. Each anonymized transcript was categorized according to key obesity prevention domains: 1) public health research or 2) public health practice as well as geographical location such as North America, Latin America, Europe, and Scandinavia.

Interview data were analyzed using the Framework method[15] by applying constant comparative techniques. Taking an inductive thematic approach, transcripts were analyzed by the two individuals. An initial coding framework was generated, and further refined through additional coding against transcripts. Interview data were subsequently summarized and exported into matrices to enable comparison of themes systematically.

### *Phase 2: Obesity Prevention Workshop*

An obesity prevention workshop was held on May 17, 2023, in Dublin, Ireland during the European Congress on Obesity hosted by the European Association for the Study of Obesity (EASO) and Ireland's Health Service Executive. The obesity prevention workshop was developed by the EASO Prevention and Public Health Task Force and included live presentations with preliminary results from the semi-structured interviews conducted in the first part of this project, as well as presentations from complex systems experts and obesity prevention researchers and professionals. A detailed workshop agenda can be found in Appendix B.

Over 200 delegates attended the workshop. Delegates included researchers, clinicians, and public health professionals. Live audience polling was implemented throughout the workshop to capture delegates' perceived level of readiness and empowerment to rethink obesity prevention practices and policies. Results from these polls are presented in aggregate format only.

## 4.0 Results

### *4.1 Results from semi-structured interviews*

Interview data were categorized into seven themes:

1. What is the difference between health promotion and obesity prevention?
2. What are we preventing?
3. Will universal health promotion actually prevent obesity?
4. Embracing complexity
5. Designing interventions
6. Evidence supporting intervention design; and,
7. Opportunities for advancing obesity prevention.

Table 1 on page 9 summarises the themes.

Table 1. Themes identified through interviews

| Themes | Issues |
|---|---|
| 1.Health promotion vs. obesity prevention | Individual attitudes and beliefs about the causes of obesity are outdated and biased; systemic barriers to addressing broad causes of obesity. |
| 2. What are we preventing? | Individual versus system level outcomes; weight, BMI, excess adiposity related health impairments, obesity related chronic diseases, unhealthy environments |
| 3. Will universal health promotion prevent obesity? | Need for specific obesity prevention strategies that include primary and secondary prevention strategies. |
| 4. Embracing complexity | Systems oriented approaches must still align with evidence-based causes of obesity rather than solely focus on simplistic nutrition and physical activity behavioral causes. |
| 5. Designing interventions | Beyond individual level interventions to system level approaches, outcomes and measures. |
| 6. Evidence supporting intervention design | Consider new evidence paradigms; beyond traditional medical/clinical evidence paradigms; embrace continuous learning and improvement. |
| 7. Opportunities for advancing obesity prevention. | Research grant cycles must evolve to be able to conduct real-world interventions; funders must consider more than one outcome; collaboration among obesity related chronic disease interventions. |

### 4.12 Theme 1: Health promotion versus obesity prevention

While obesity prevention was seen as a significant public health priority, there were differences in how experts across public health, clinical and research areas conceptualize and operationalize obesity and obesity prevention. The first difference in opinion was related to the scientific definition of obesity. While defining and operationalizing obesity as a chronic disease is important for clinicians, it was not considered an important factor for some public health researchers and practitioners. For example, a public health researcher said that:

> "There is disagreement around categorizing obesity as a chronic disease, but I don't see a difference between chronic disease prevention, obesity prevention and health promotion"
> *Public Health Researcher, Scandinavia #1*

They also noted:

> "I can see why some people would think it helpful if we categorize obesity as a chronic disease. And I can also see the arguments against that...From my perspective, it's not that important. I know it's important…if you're interested in selling drugs to treat obesity, for instance – of course you have an interest in having obesity classified as a disease. So, there are also some commercial interests at play here."
> *[Public Health Practitioner, Scandinavia #1]*

The second difference in opinions was related to the various levels of prevention. Some obesity prevention researchers felt that although distinguishing between primary obesity prevention and health promotion may not be necessary, it is important to distinguish between primary and secondary obesity prevention. As this public health researcher from North America explained:

> "Primary prevention to me is effectively health promotion…but it's where you create the conditions for good health for everyone. It's upstream, it's focused on the social determinants of health. Secondary prevention… really is about preventing excess [adiposity] and reducing the trajectory of adiposity gain…that impairs health."
> *[Public Health Researcher, North America #1]*

### 4.13 Theme 2: What are we preventing?

While health promotion and obesity prevention may overlap, there was agreement that obesity prevention needs to be operationalized in a consistent way across research, public health practice, and policy to be able to set goals and to measure the impact of obesity prevention approaches.

Regardless of the approach, health promotion or primary obesity prevention, there was general agreement that goals and measures should be focused on health improvements or their drivers rather than weight or BMI alone. As one public health practitioner explained, obesity prevention outcomes need to be based on the same obesity definition that is used in clinical and policy areas:

> "The definition of obesity … is "abnormal or dysfunctional adiposity that impairs health." So, it's not about preventing people from going from overweight to obesity in the BMI sense – it's more about prevention of health impairments."
> *[Public Health Practitioner, Europe #1]*

Similarly, a public health researcher explained that:

> "If one conceptualizes obesity prevention in terms of acting on multiple risk factors simultaneously in ways that are not necessarily aimed at a direct action, i.e., that a person will lose (a certain amount of weight), then it becomes clear that what we're looking at is changing the fundamental drivers of obesity, which are physical environment, social environment, economic environment, political environment, etc. in ways that shift the balance away from obesogenic environments to much healthier environments."
> *[Public Health Researcher, Europe #2]*

However, the heterogeneity of the factors that contribute to obesity is also highly problematic when designing interventions:

> "There is no one obesity, just as there's no one cancer. There's not one treatment for cancer or preventative action for cancer. There's no one treatment or preventative action for obesity. So I think the way to take account of different genotypes and epigenetics and so on is to appreciate that whatever one does at the population level for obesity needs to take account of multiple different [types of] people's needs."
> *[Public Health Researcher, Europe #2]*

### 4.14 Theme 3: Will universal health promotion prevent obesity?

Whether or not universal health promotion approaches will be effective ways to prevent or reduce obesity at population or individual levels was a point of contention among several experts, due in part to the different outcome measures that are prioritized or operationalized. As one public health researcher explained:

> "[BMI] is not everything, but it's very useful … Small changes in consumption can create small changes in weight at the population level that can create small changes in BMI that mean millions of people can be classified above or below the definition of obesity."
> *[Public Health Researcher, Latin America]*

Another expert was more blunt, saying:

> "These interventions have very little effect on [weight or BMI], but they have effects on many other things. So, are we shooting ourselves in the foot by focusing on these very narrow outcomes?"
> *[Public Health Practitioner, Europe #2]*

Thus, the disagreement was not about the importance of health promotion or primary obesity prevention approaches, but about the outcomes we use as measures of effectiveness. As this public health researcher and advocate explained:

> "[We] want to do something that'll actually have an effect on health outcomes. What if we had vaccines but couldn't demonstrate that they will prevent diseases? You have to ask, then…what is the health outcome that is affected by this prevention intervention? "
> *[Public Health Researcher, North America #2]*

### 4.15 Theme 4: Embracing complexity

Although there were disagreements about the specific outcomes and effectiveness measures for universal health promotion approaches or primary obesity prevention approaches, there was a general understanding of the need to embrace the complexity of obesity and the need to move the primary obesity prevention field forward using systems-oriented approaches. However, the reality on the ground is still very focused on changing individual levers:

> "The most important direction of the field now is towards a systems-oriented approach, where you intervene at several levels at the same time… [But] what we see [in practice] now is that we test individual interventions at one of these levels, and the rest of the system stays the same. And then of course, nothing happens."
> *[Public Health Practitioner, Scandinavia #1]*

A public health practitioner agreed, noting:

> "In the last 10 years…we've seen a shift very much to a focus on individual responsibility in lots of things. Which makes it challenging then to try and do the system changes, whether it's the built environment, [or] tackling marketing of high fat/salt/sugar foods... If it all conceptualizes individual responsibility [and] individual behavior, again you go down the same [old] pathways."
> *[Public Health Practitioner, Europe #3]*

In addition to the challenges of the 'individual responsibility mindset' in obesity prevention and health promotion in general, the research community faces additional systemic barriers to implement a systems-oriented approach to obesity prevention. As this public health researcher explains:

> "Researchers [are] using a complicated paradigm of thinking, not a complex way of thinking. Complicated is predictable, controllable, and designable. Complex is unpredictable, self-organizing and emergent. So, let's build strategies that respect the complexity of obesity. And that is just so hard to do, because the systems that…enable that work don't support [building those strategies]."
> *[Public Health Researcher, North America #3]*

From a public health practice and policy perspective, similar barriers to a systems-oriented approach exist, especially since there are deeply ingrained biases about obesity causes among obesity experts. As this public health researcher and advocate explains:

> "Complex systems experts rely upon subject matter experts to develop a model. And if complex systems experts talk to [simplistic] "eat less, move more" content experts, they will develop a systems model for eating too much bad foods and moving too little."
> *[Public Health Researcher, North America #2]*

This means that the complex obesity models we use will only be as good as the assumptions we make about obesity causes. Hence it is important to use scientific evidence about the root drivers of obesity to build the models.

### 4.16 Theme 5: Designing interventions

On the other hand, the expectations of public health policy makers and funders is to identify and

measure changes at the individual and population levels even when conducting a systems-oriented approach.

As one public health researcher who is implementing a systems-oriented obesity prevention project explained:

> "We're already in year four [of a six- year project] and we have no individual level outcomes. We spent so much time and energy getting these systems together. But it is impossible to explain to our funders why we're not [measuring individual outcomes]. Going in and just measuring people's weight and food intake and physical activity status is expensive enough on its own."
> *[Public Health Researcher, North America #1]*

From a policy maker perspective, measuring the impact of primary obesity prevention or health promotion programs is essential and the idea of targeting individual groups who are at risk for obesity may be more desirable. As this policymaker explains:

> "We recently got involved in an advertising [campaign]... And we managed to move it from a population-wide [health awareness] billboard kind of campaign to a targeted [campaign] for the 25- to 35-year-old age group, highlighting the four areas that contribute to weight gain and highlighting those who are at most risk. But, we don't have measures other than the [campaign] reach. And we don't have an idea of the actual impact."
> *[Public Health Policymaker, Europe #1]*

Another common theme running throughout many of the conversations focused on a lack of consensus regarding ownership of and responsibility for obesity prevention, regardless of what interventions are deemed appropriate:

> "Obesity prevention needs to be cross-government. The problem with obesity is it's everybody's job and no one's job, everybody's business and nobody's business. So a government education person feels it's health, health feels it's agriculture, agriculture feels [it's someone else's responsibility]... I think it's very hard at the government level to make progress…But it can be done because if you look at the COVID response, everyone worked together and everyone did it and changes were made. I won't say we'll never get there [for obesity] but I do think it's very, very complex."
> *[Public Health Practitioner, Europe #4]*

The challenges around making meaningful obesity prevention efforts a priority for funders was also highlighted:

> "Sometimes there's a temptation to oversell what we're doing, you know? Politically, you have to get the money. To establish our [community health program] there had to be a bit of upselling – 'this will be great, this will be good, it's going to achieve X, Y, and Z…' The challenge is, every three to five years you have to keep making yourself shiny and new to keep the investment there, to keep the political focus."
> *[Public Health Practitioner, Europe #3]*

### 4.17 Theme 6: Evidence Supporting Intervention Design

Even though obesity prevention efforts can be more targeted, there remains a need to consider the effectiveness of these measures in terms of addressing root causes of obesity at the population and individual level. This requires us to critically reflect on the epistemological models used in obesity prevention. As this public health researcher explains:

> "Many researchers who are conducting these obesity prevention studies come from nutrition, physical activity, or health promotion research faculties. But they became obesity researchers overnight when the research funding agenda became about obesity prevention and treatment. But their epistemological framework is deeply rooted in health promotion, nutrition, and physical activity research areas."
> *[Public Health Researcher, Scandinavia #2]*

Others added that obesity prevention is stuck in dogmatic beliefs about the causes of obesity which is preventing an evidence-informed and systems-oriented approach.

> "We're in this loop with obesity prevention, where folks have gotten comfortable with tried-and-true "interventions" they believe in as a matter of theology, because it funds their careers. You have these community-based projects for which there has been copious funding over the years, but they don't want to be bothered with providing data about whether or not the approach actually works.
> *[Public Health Researcher, North America #2]*

Experts also agreed that, in addition to moving beyond reductionist obesity prevention approaches, we also need to consider new study designs to show effectiveness. As this participant explained:

> "You cannot really produce standard clinical evidence from a systems approach. You need to challenge the evidence concept a little bit or produce other kinds of evidence…We can make a process evaluation that can perhaps be published in a scientific journal, but perhaps it's not something that would be able to convince policymakers or funders."
> *[Public Health Practitioner, Scandinavia #1]*

Another participant reiterated the need to move beyond evidence-based medicine paradigms and said:

> "Researchers need to go beyond the evidence-based medicine pyramid and understand that we need a continuous learning approach, not a 'we did it and we've shown that it works and therefore you should be able to apply it' approach."
> *[Public Health Researcher, North America #3]*

### 4.18 Theme 7: Opportunities for Advancing Obesity Prevention

Although there are many barriers and challenges to obesity prevention research and practice, participants had some ideas and suggestions for how we can advance obesity prevention.

From a funding perspective, there was clear agreement that current funding mechanisms need improvement. As this public health researcher explains, there are ways to change research funding mechanisms:

> "The election cycle is hugely problematic. The grant cycle is hugely problematic… The big problem here is that we create accountability cycles that are very short, for government performance…If we shift from targets to continuous improvement; if we shift from an independent judgment about whether you reach your accountability targets and instead move towards something like self-assessment to understand our own metrics and identify metrics that are helpful to us; if we stop worrying about attribution and move toward improvement or being risk-averse and encourage risk-taking and experimentation and [toward] more distributed decision making instead of reinforcing the hierarchy, we'd be a hell of a lot better off."
> *[Public Health Researcher, North America #3]*

Breaking down the silos and collaborations among chronic disease prevention groups was also suggested as a potential opportunity for change. As this public health researcher and NGO leader says:

> "It would be great if funders were willing to not focus on single outcomes – you know, obesity prevention programs or diabetes prevention programs, or mental health promotion, whatever – but to try to connect these issues and encourage research into real-world interventions that try to address some of the root causes and some of the connections between these issues."
> *[Public Health Practitioner, Europe #4]*

### 4.2 Results from the Obesity Prevention Workshop

The objective of the obesity prevention workshop was to bring together public health researchers, practitioners and policy makers and hold an initial discussion about long-standing concepts and approaches in obesity prevention and health promotion and consider new ways forward.

The workshop was structured around three main categories:

1. Description (What?): What are we doing in obesity prevention research, practice and policy?
2. Explanation (Why?): How do public health researchers, practitioners and policy makers experience the current status of obesity prevention?
3. Synthesis (So What?): What challenges and opportunities do we face in obesity prevention and how can we move forward?
4. Action (Now what?): What are some key principles and/or strategies that can be used to advance the obesity prevention field forward?

This workshop was considered a first step towards creating dialogue and reflection in a respectful and transformative space. Although polarizing views were anticipated, recognizing the interests and perspectives of all stakeholders is a critical step towards finding solutions.

The first part of the workshop included a description of the current state of obesity prevention research, practice and policy. Dr. Ximena Ramos Salas, Consultant, European Association for the Study of Obesity (Sweden), provided an overview of the preliminary themes that emerged from the interviews with obesity prevention researchers, practitioners and policy makers (as described in the previous section 4.1).

Prof. Harry Rutter, Professor in Global Public Health, Department of Social & Policy Sciences, University of Bath (UK), provided an overview of how obesity prevention evidence to date has tended to be agentic (highly targeted at the individual level) rather than structural (targeted at the population level) in nature. Thus, to date we have delivered very narrow interventions targeting one particular outcome hoping that they will have the desired effect of reducing obesity, without taking into consideration contextual factors (e.g. political lobbying, public relations offensive, media) that undermine the interventions by minimising the magnitude and impact of the intervention. The short duration of these interventions limits the type of evidence that can be generated. These challenges in intervention design and implementation can be addressed if we shift the focus of obesity prevention interventions towards strategies that reshape systems over time. These population level and systems level strategies may have indiscernible effects at the individual level, but may have a better impact in the long term. A key priority should be to develop a clear long-term vision for obesity prevention so that we can all understand and agree on what we are trying to achieve.

Dr. Jennifer Lyn Baker, Research Group Leader in Lifecourse Epidemiology, Frederiksberg Hospital Center for Clinical Research and Prevention (Denmark) reviewed the perspective of obesity prevention researchers and suggested that we need better metrics to assess obesity outcomes based on adiposity-based function, rather than just body mass index (BMI). BMI is an indirect measure of adiposity and although it is imperfect, it has some utility since low and high levels of BMI are associated with increased risk of ill health. It is clear that within the prevention continuum, the majority of obesity interventions to date fall in the categories of health promotion, primordial prevention, and primary prevention, which leaves behind a significant proportion of the population living with obesity.

Many health promotion interventions are often labeled as primary obesity prevention but it is challenging to attribute effects of these levers because they are not specific or distal to obesity. From a research perspective, the outcome matters (e.g. incidence of overweight, pre-obesity, obesity, reduction of adiposity, improved adipose function) as it determines the prevention and evaluation approaches we use.

So the key question is: what are we trying to prevent? Furthermore, the hierarchy of evidence is a challenge since obesity prevention actions and interventions do not readily fit the Randomized Controlled Trial (RCT) framework. We should go beyond RCTs and probabilistic statements as well as drive integration of different types and levels of evidence about what does and does not work. Funding agencies and political bodies should be educated about obesity prevention interventions requiring the integration of different types of evidence, the inclusion of multiple intermediate outcomes and longer term cycles as to evaluate lifecourse and generational outcomes. We should also consider equity in all obesity prevention actions and interventions.

To describe the impact of these challenges for public health practitioners and policy makers on the ground, Sarah B. O'Brien, National Lead, Healthy Eating & Active Living Programme, Health & Wellbeing, Health Services Executive (HSE) (Ireland), provided an overview of the Irish obesity prevention strategy.

The HSE Health and Wellbeing initiative takes a population level approach and works collaboratively across sectors at the national and local levels. The key priorities are: tobacco free Ireland programs, mental health and wellbeing and alcohol programs, healthy eating and active living programs, and sexual health and crisis pregnancy programs. Within the healthy eating and active living program, the aim is to mobilise health services to improve health and wellbeing by increasing levels of physical activity, healthy eating, and healthier weight across service users, staff, and the population as a whole, with a focus on families and children. There are several policy drivers for obesity prevention in Ireland that have led to a variety of strategies such as: food reformulation targets, active travel infrastructure, walkable communities, restrictions on marketing and promotion of health damaging commodities and products, standards for food provision and physical activity in public funded sectors such as schools, health services, public sector workplaces, and taxation levies and subsidies. All of these strategies are intended to create changes at the population level, leading to reduced risk of obesity and other chronic diseases.

Throughout the workshop, Euan Woodward, Executive Director, European Association for the Study of Obesity, engaged the audience in several polling questions to gauge their views on specific issues that the speakers discussed through their presentations.

A total of 155 workshop delegates participated in a live Slido poll; 119 answered some or all of the polling questions. Polling questions were introduced after each presentation and during the panel discussions. Although the majority of the poll respondents believed that obesity is preventable (67%, n=58), many believed that obesity prevention and health promotion overlap (88%, n=46). Over half of the respondents agreed that obesity prevention interventions are intended to prevent new occurrences of overweight, pre-obesity, or obesity at the population level (53%, n=44). Despite the fact that the majority of respondents (80%, n=72) agreed that obesity prevention must tackle systemic and/or structural drivers of obesity rather than trying to change individual health behaviours, the majority did not feel empowered (38%, n=33) or only felt partially empowered (35%, n=30) to advocate and to educate funders about what it takes to do obesity prevention properly. Table 2 on page 18 breaks down the polling results.

## 5.0 Discussion

In this consultation, we found that obesity and public health experts agreed that both prevention and treatment strategies are needed to address obesity, and that dichotomous thinking in terms of developing obesity prevention and obesity treatment strategies is not helpful. However, there were polarizing perspectives among participants about what the goal of obesity prevention should be or which measures to use (e.g., primary weight gain, adiposity related impairment, obesity related chronic diseases and conditions, improved nutritional outcomes). On the other hand, there was some agreement that obesity prevention interventions should shift towards systems-oriented approaches and consider outcomes that are important for health and wellbeing of individuals and populations while adhering to the principle of "doing no more harm."

Reviewing what has been done in obesity prevention to date, there was some disagreement about whether these interventions are actually obesity prevention strategies or universal health promotion strategies. Those that believed that these interventions are actually universal health promotion strategies argued that they may not be enough to prevent obesity at population and/or individual levels. Therefore, we need to develop both selective or targeted obesity prevention strategies and universal health promotion measures to reduce the impact of obesity and obesity-related conditions on the individual and society (Figure 1 on page 21).

Table 2: Obesity Prevention Workshop Polling Results

| Questions | Answers | N | % |
|---|---|---|---|
| 1. In your day-to day work, do you focus on: | Primary Prevention<br>Secondary Prevention<br>Treatment<br>Other | 9<br>2<br>5<br>9 | 36%<br>8%<br>20%<br>36% |
| 2. Is obesity preventable? | Yes<br>No<br>I don't know | 58<br>8<br>21 | 67%<br>9%<br>24% |
| 3. Is health promotion different from obesity prevention? | They are completely different<br>They are on in the same<br>They overlap<br>It's irrelevant | 3<br>3<br>46<br>0 | 6%<br>6%<br>88%<br>0% |
| 4. Which do you think is most true? | Good nutrition and sufficient exercise are enough to prevent obesity, we just need to convince more people to adopt better health behaviours.<br><br>Good nutrition and exercise alone are not sufficient to prevent obesity, and many other drivers must be addressed. | 5<br><br>28 | 15%<br><br>85% |
| 5. Obesity prevention must address systemic/structural drivers of obesity rather than trying to change individual health behaviours. | Agree<br>Disagree<br>Not sure | 72<br>9<br>9 | 80%<br>10%<br>10% |
| 6. What are we trying to achieve? | Prevent new occurrences of overweight/pre-obesity/obesity in the population?<br><br>Reduced severity of adipose tissue impairing health?<br><br>Prevent further adipose tissue gain or decrease in adipose tissue function among populations already living with obesity?<br><br>I don't know | 44<br><br>16<br><br>5<br><br>18 | 53%<br><br>19%<br><br>6%<br><br>22% |

Table 2: Obesity Prevention Workshop Polling Results (continued)

| Questions | Answers | N | % |
|---|---|---|---|
| 7. Is weight loss the cure for obesity? | Yes<br>No<br>I don't know | 6<br>22<br>1 | 21%<br>76%<br>3% |
| 8. Do you feel empowered to advocate and to educate funders about what it takes to do obesity prevention properly? | Yes<br>No<br>Partially<br>Not applicable | 17<br>33<br>30<br>6 | 20%<br>38%<br>35%<br>7% |

Secondary obesity prevention interventions could target at-risk populations and individuals before the onset of obesity (characterized as excess or abnormal adiposity that impairs health) in order to be maximally effective. However, since obesity is a heterogeneous condition, the specific risk factors for obesity vary from person to person. Thus, generic obesity prevention strategies may not be enough to prevent obesity at the individual level. Furthermore, once obesity has developed, treatment interventions are needed to reduce its severity, course, and associated disability, which would be considered secondary prevention of obesity related chronic diseases. Based on the complexity of obesity at the individual level, clinical guidelines recommend that obesity treatment measures should also be tailored to address root causes and barriers for each individual patient.[16]

Although targeted disease prevention and universal health promotion strategies share many similarities such as being targeted at the population level rather than that at the individual level, for example, it is important to distinguish between these strategies, to ensure adequate intervention design and impact evaluation. One way to conceptually distinguish between universal health promotion and targeted disease prevention strategies is to consider that disease prevention strategies may be primarily concentrated within the healthcare sector, while health promotion strategies depend on inter-sectoral actions and may be more concerned with upstream determinants of health or the social determinants of health.[17]

Specifically, health promotion strategies include measures that can "enable people, including people with obesity, to increase control over, and to improve their health" [18] such as policies to improve food and physical activity environments or policies to eliminate poverty. While selective disease prevention interventions that target specific at-risk individuals, subgroups or populations before the onset of the disease, may include primary care interventions that focus on preventing adiposity related health impairments at the individual and population level.

As with all scientific investigation, public health initiatives labeled "obesity prevention" require an appropriate conceptual lens. Obesity is a chronic, relapsing biological disease, characterized by a complex etiology, involving dynamic genetic, environmental, socio-economic and psychological factors. This awareness shifts our perspective from viewing obesity solely as a lifestyle issue to acknowledging the deeper biological underpinnings which drive the likelihood of developing obesity, and underscore the multifaceted biology of behaviour.

It is important to recognize that some universal health promotion strategies that aim to improve our food and physical activity environments, for example, are important and necessary to improve population health outcomes. However, they may not be enough to prevent obesity or obesity related chronic diseases either at the population level or the individual level. Unless universal health promotion strategies have been specifically designed to prevent adiposity related health outcomes, it may be impossible to know if these measures are effective. In addition, when it comes to both universal health promotion and targeted obesity prevention interventions, it is critically important to reflect on whether and how these interventions may perpetuate biased, reductionistic and outdated beliefs about obesity. Stigmatising health promotion interventions have no role in public health strategies and policies.

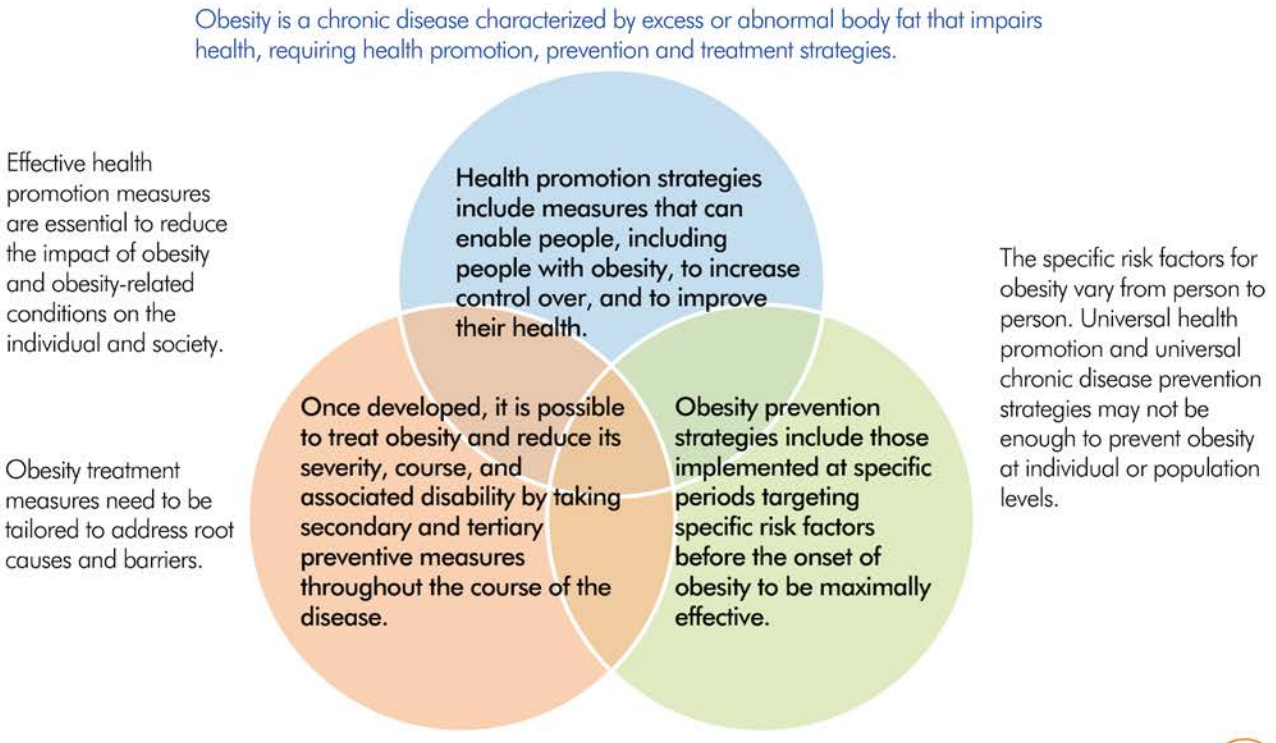
Positioning general public health measures like nutrition education, developing healthier environments for physical activity, "bad food" taxation policies and public awareness campaigns as obesity prevention interventions implies the existence of a definitive approach to preventing the onset of the disease. Due to the chronic nature of obesity and its complex etiology, however, the concept of "prevention" may itself be misleading.

## 6.0 Conclusion

The effectiveness of historical approaches for preventing obesity and consensus on how to measure their effect has yet to be definitively established. Certainly, the global rise of obesity prevalence over the past several decades suggests a disconnect between the efficacy of what we have been calling obesity prevention and actual individual and population outcomes. Consider this:

> "We have to do something, but…we have to do it in such a way that we are accumulating evidence that [an intervention] is either effective or not effective. I mean, it is absolutely fascinating that [in terms of obesity prevention] no country in the world is winning."
> *[Public Health Policy Maker, Europe #1]*

Figure 1: The overlap between health promotion, obesity prevention and obesity treatment



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## Appendix A: Individual Interview Guide

1. How do you define obesity prevention (primary/secondary), and how does it differ from health promotion?

2. In your opinion, what are 3 top current challenges in obesity prevention research, intervention design/execution and policies? (Probes: Funding/sustainability, confusion b/n obesity prevention and health promotion, heterogeneity of factors influencing obesity incidence?)

3. What demographic do you feel holds the most promise as a focus for successful obesity prevention programs? (Probes: How to measure/identify capacity for change? Where/when to offer intervention? How to avoid stigmatization/unintended consequences?)

4. What are 3-5 high-level, critical components of realistic, sustainable and equitable obesity prevention programs? (Probes: How to remove barriers and negotiate complexity? Funding and case for investment? Cross- and multi-sectoral buy-in?)

5. How can clinical and community work be integrated to inspire and support/sustain meaningful obesity prevention programs? (Probes: Who has done/is doing this successfully?)

6. Which outcomes are important markers of success for obesity prevention interventions? (Probes: Is it about weight? How do you measure/evaluate? How can clinical and prevention indicators/metrics be aligned?) How do we learn from failure?)

## Appendix B: EASO Training Course on Obesity Prevention

### Rethinking Obesity Prevention in the 21st Century

**European Congress on Obesity (ECO)**
**May 17, 2023**
**10:00 AM - 12:10 PM Local Time**
**The Convention Centre Dublin**

This session, as part of ECO2023, has been supported by:

**Science is rapidly evolving our understanding of the complex psychosocial, cultural, political, commercial, biological, and environmental drivers of obesity and related chronic diseases.**

Modern public health strategies must integrate new insights about the complex causes and impacts of obesity, including our understanding about the interaction between psychosocial and biological determinants of health, and develop obesity prevention/health promotion programs that are practical, feasible, equitable and measurable.

This teaching session will feature insightful presentations from leading experts in obesity and chronic disease prevention, as well as audience discussion and polling, on crucial considerations in obesity prevention, including:

- What are the key historic and emerging challenges facing public health researchers, practitioners, and decision makers when it comes to obesity prevention?
- What kind of research evidence do we need to generate to support health promotion initiatives? What kind of investments and timelines are required?
- How can we integrate behavioural causes of obesity and obesity related chronic disease with biological, social, commercial, and environmental causes, and develop new public health strategies?
- How do we support the next generation of obesity prevention professionals?
- Is it time to rethink long-standing concepts in obesity prevention and health promotion, and create a new plan?

**Join us for an engaging discussion about the future of obesity prevention and health promotion!**

# Rethinking Obesity Prevention in the 21st Century

**European Congress on Obesity (ECO)**
**May 17, 2023**
**10:00 AM - 12:10 PM**
**The Convention Centre Dublin**

## Agenda*

| | | |
|---|---|---|
| 10:00 AM | **Welcome and Introduction** | **Euan Woodward**, Executive Director, European Association for the Study of Obesity (UK) |
| 10:10 AM | **Is it a Risk Factor or a Disease (and Does It Matter?) Capturing Perspectives on Health Promotion and Obesity Prevention** | **Ximena Ramos Salas**, Research Consultant, European Association for the Study of Obesity (Sweden) |
| 10:25 AM | **Audience Interactive Polling** | |
| 10:30 AM | **Rebalancing Our Concept of Obesity: Changing the Fundamental Drivers of Weight and Health** | **Harry Rutter**, Professor in Global Public Health, Department of Social & Policy Sciences, University of Bath (UK) |
| 10:50 AM | **Audience Interactive Polling** | |
| 10:55 AM | **Are We There Yet? Evidence and Context to Inform Obesity Prevention Strategies** | **Jennifer Lyn Baker**, Head of Research, Lifecourse Epidemiology, Center for Clinical Research and Prevention, Copenhagen University Hospital-Bispebjerg and Frederiksberg, Copenhagen (Denmark) |
| 11:15 AM | **Audience Interactive Polling** | |
| 11:20 AM - 11:30 AM | **Obesity Prevention on the Ground in Ireland: Where Do We Go From Here?** | **Sarah B. O'Brien**, National Lead, Healthy Eating & Active Living Programme, Health & Wellbeing, Health Services Executive (Ireland) |
| 11:30 AM- 12:05 PM | **Audience Q&A with speakers** | |
| 12:10 PM | **Closing remarks and adjourn** | **Euan Woodward**, Executive Director, European Association for the Study of Obesity |

*This ECO Teaching Session is preceded by a plenary session starting at 8:30 am. Details on that session can be found at eco2023.org.

# Rethinking Obesity Prevention in the 21st Century

## Speakers

**Euan Woodward** has worked with EASO since 2005 and has been its Executive Director since 2007. He is responsible for the development and implementation of EASO's strategic action plans and coordinates the activities of the Association's General Council, Executive Committee, Task Forces and Working Groups. He manages EASO's annual congress (the European Congress on Obesity), its network of Collaborating Centres for Obesity Management (COMs) and its research projects. He is the Dissemination WP leader in several EU Projects. He holds a BA (hons) in European Business and a Masters in Business Tourism.

**Ximena Ramos Salas** has a PhD in public health with a specialization in health promotion and socio-behavioural sciences from the University of Alberta. As a consultant, she has served as both Executive Director and later Director of Research and Policy at Obesity Canada, and as a research consultant with the European Association for the Study of Obesity and the World Health Organization. She has authored and co-authored numerous scientific articles and lectured widely on the impact of weight bias and obesity stigma, health inequalities, and patient-centered research, education, and public health policies. In 2020, she co-founded Replica Communications, a strategic research and knowledge mobilization firm.

**Harry Rutter** is professor of global public health at the University of Bath. He was founder director of the English National Obesity Observatory; established the English National Child Measurement Programme; and chaired the UK NICE group on guidance on walking and cycling. He is co-chair of the Lancet-Chatham House Commission on population health post COVID-19; and is an adviser to both WHO Euro and headquarters on topics including transport, physical activity, obesity, environment and health. His research is focused on effective, sustainable and equitable mechanisms for improving the research, policy and practice responses to complex systems problems in public health, with a particular focus on transport, built environment, obesity, physical activity, and both communicable and non-communicable diseases.

**Dr. Jennifer Lyn Baker** is Head of Research, Lifecourse Epidemiology, Center for Clinical Research and Prevention, Copenhagen University Hospital-Bispebjerg and Frederiksberg, Copenhagen, Denmark. Her programme investigates how body size and growth during childhood in combination with other exposures across the lifecourse relate to disease. Dr. Baker has authored over 100 peer-reviewed publications, has lectured worldwide on effects of obesity in children and has served on several international expert scientific committees. Dr. Baker is the co-chair for the European Association for the Study of Obesity Childhood Obesity Task Force.

**Sarah B. O'Brien** is National Lead – Healthy Eating and Active Living Policy Priority Programme for the Health Service Executive. She is responsible for ensuring that key national policies, Healthy Weight for Ireland and Get Ireland Active are implemented across the health services and funded agencies. For the past 16 years, Sarah has worked for HSE in the area health promotion and social marketing. Her roles have included policy, programme and campaign development, and project management. Sarah holds a BSc (Hons) Nursing Studies from the University of Salford in the UK and an MSc in Leadership and Management Development from the Royal College of Surgeons Ireland. In recent years, her role has involved leading on development and implementation of HSE Healthy Weight for Children Framework, including national social marketing campaigns and a focus on tackling health inequalities through community activation. Working closely with HSE Clinical Programme Obesity, she is leading on establishing specialist community-based weight management services for children and young people. She is also co-applicant and lead knowledge user on the HRB-Applied Partnership Award LANDSCAPE research project.