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Qualitative Research

What advice do general practitioners give to people living with obesity to lose weight? A qualitative content analysis of recorded interactions

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Background: Guidelines recommend general practitioners (GPs) take every opportunity to talk to people living with obesity about their weight, and evidence shows even very brief advice is associated with weight loss. However, little is known about what GPs say when giving brief behavioural advice, and if it reflects evidence-based recommendations for people living with obesity. To understand what behavioural advice GPs give, we categorized the content and delivery of GPs' advice during brief interventions.

Methods: Qualitative content analysis was applied to 159 audio recordings of consultations from the Brief Interventions for Weight Loss (BWeL) trial, where GPs gave brief weight-loss advice to patients with a body mass index ≥30 kg/m^2 (or ≥25 kg/m^2 if Asian) in 137 UK surgeries. Similar content was grouped into descriptive clusters.

Results: The results comprised 4 clusters, illuminating different aspects of the advice given: (i) Content of diet and physical activity advice, showing this was highly varied; (ii) Content of "implementation tips" given to support changes, e.g. using smaller plates; (iii) Content of signposting support, either towards further clinician support, or other resources, e.g. information booklets; (iv) Style of advice delivery, showing GPs rarely gave personalized advice, or reasons for their advice.

Conclusions and implications: Weight-loss advice from GPs to patients with obesity rarely included effective methods, mostly communicating a general "eat less, do more" approach. Advice was mostly generic, and rarely tailored to patients' existing knowledge and behaviours. Effectiveness of brief weight-loss advice could be improved if GPs were given clearer guidance on evidence-based recommendations.

Lay summary

Current guidelines strongly encourage general practitioners (GPs) to talk to people living with obesity about weight loss. Evidence has shown that conversations with a doctor about weight management can be highly effective, as even very brief advice has been associated with weight loss. In order to understand what GPs actually say when offering weight-loss advice to patients with obesity, we analysed 159 audio recordings of conversations between GPs and patients. We found that GPs gave mainly generic diet and exercise messages for example "reduce your carbohydrates" and "move more." Furthermore, weight-loss advice was often not tailored to patients' existing knowledge and behaviours. Obesity is a chronic and relapsing condition, but patients were not given specific or evidence-based advice to support them to manage this. The findings suggest that the brief weight-loss advice from GPs could be more effective if they were given clearer guidance on which methods of weight-loss evidence has shown actually works.

Key words: diet, doctor–patient relationship, lifestyle modification/health behavior change, obesity, physical activity/exercise, primary care

Introduction

General practitioners (GPs) are encouraged to take every opportunity to talk to people living with obesity about their weight. The impetus on intervening opportunistically is emphasized in public health policy internationally, including in the United Kingdom,[1,2] United States,[3] and Canada.[4] Weight-loss interventions support improvements to individuals' weight,[5] health,[6] and wellbeing.[7] These positive impacts are expected to benefit to health care systems, reducing overall annual health care costs across populations.[8] GPs work towards "Making Every Contact Count," a contract condition for primary care services in England,[9] and have regular opportunities to talk to the same patient (crude annual consultation rates = 5.16 per patient[10]). Patients' state that they would like to talk about weight loss with a GP, and family practice is their preferred setting.[11,12]

Although evidence shows even very brief advice is associated with weight loss,[13] it is rare for GPs to talk to patients living with obesity about weight.[14] GPs report a number of barriers that mean weight becomes a low priority topic in consultations,[15] including being unsure what advice to give patients, lacking knowledge about the best ways to lose weight, and not feeling that advice will be effective.[15] When they do talk to patients about weight, a common strategy by GPs is "advice giving," but we are not sure what the content of this advice is.[14]

Key messages

- General practitioners (GPs) are asked to give opportunistic advice to people with obesity.
- GPs lack knowledge and confidence on advice giving for weight loss.
- GPs mostly give generic weight-loss advice, which patients report as unhelpful.
- When giving specific weight-loss recommendations, they were rarely evidence based.
- Guidance for GPs on more specific and evidence-based advice provision is needed.

Trials have demonstrated that referrals to weight management programmes are effective,[13] but this is not accessible for all patients in the United Kingdom due to devolved commissioning. Therefore, there is increasing institutional impetus for GPs to offer weight-loss advice to patients with obesity.[2] However, GPs report concerns about these conversations, and there is minimal guidance on the specific advice they should give[1] and a lack of evidence-based weight-loss advice that guidance could draw on. Understanding current clinical practice will be important for developing guidance and targeting future training for clinicians. This study analysed the type of advice given by GPs during "brief interventions" (i.e. up to 30 s) to patients living with obesity, and mapped its content. The aim was to understand the exact content of the advice that clinicians provide, and if concerns about advice giving are actualized in practice.

Methods

Data

Data were collected as part of the Brief Interventions for Weight Loss (BWeL) trial, a parallel 2-arm, randomized controlled trial. The aim of the BWeL trial was to assess the effects of very brief opportunistic weight-loss interventions delivered by GPs in primary care in the United Kingdom. From 4 June 2013 to 23 December 2014, BWeL researchers sought to enrol all patients with a body mass index ≥30 kg/m^2 (or ≥25 kg/m^2 if Asian) attending 137 GPs. At the end of a routine consultation participating GPs offered participants either (i) very brief weight-loss advice (advice arm), or (ii) a free 12-week referral to a community weight management service (support arm). GPs watched a training video before taking part in the trial that encouraged them to communicate that weight loss would improve health (advice arm), using their usual style. Half of the 1,882 patients enrolled into the BWeL trial were randomized to have their intervention audio-recorded. Here, we focus on advice arm recordings, which provide opportunity to map the content of very brief advice for weight loss in primary care.

The BWeL trial is registered with the ISRCTN Registry (ISRCTN26563137). Full details are available in the trial report.[13] Ethical approval was granted by the NHS Research Ethics Service, reference: 13/SC/0028). Reporting follows Consolidated criteria for Reporting Qualitative Research (COREQ).[16]

Recording collection and sampling

Of 942 patients randomized to receive very brief advice from their GP, 471 were randomized to have this advice audio-recorded. Interventions were recorded using an Olympus Sonority audio recorder. Recorders were visible to both GP and patient. It was switched on by the GP, with patient consent, once the consultation's main business had concluded, in advance of initiating very brief advice for weight loss. Therefore, we analysed the weight-loss advice given, without having access to background information concerning patients' comorbid health conditions. Patients had opportunity to decline consent, or request deletion afterwards, without giving a reason. Some participants did not consent to be recorded; some recordings were unavailable due to file corruption; some GPs did not deliver advice (deviating from protocol); some GPs only recorded the very start of the discussion; and some recordings were not downloaded from the devices, as this was not a priority during busy times for the trial team. This means that 237 recordings were available for analysis. One hundred and fifty-nine were randomly selected and analysed. Following best practice, information power[17] was used to inform sampling, with the research team aiming for sufficient participants to gain a variety of GP and patient characteristics, and to provide the promise of transferability. Audio recordings were transcribed verbatim, and stored alongside transcripts on secure drives at the University of Oxford.

Data analysis

A qualitative conventional content analysis (QCCA) was used to identify what advice GPs gave to patients living with obesity. The goal of QCCA is "to provide knowledge and understanding of the phenomenon under study,"[18] through coding, categorizing, describing, and examining patterns in data. QCCA is well suited to analysing communication characteristics.[19–22] All consultation transcripts were first read and re-read by AP, a medical student with a weight management interest, and MT a qualitative researcher with training in psychology and clinical communication. Transcripts were then coded inductively line-by-line, descriptively capturing the advice that GPs were giving. Coding captured the meaning of the weight-loss advice and code names were assigned to describe the advice in that code.[23] Coding was iterative; as new codes were developed they were then applied to the full data set. Codes were then grouped into categories that represented similar advice being delivered by GPs. For example, extracts that had been given the meaning unit of: "reduce sugar," "reduce carbohydrates," "reduce fats," and "reduce fatty foods" were condensed into a code called "reduction" and then grouped into the category "dietary changes." Categories were then grouped into clusters to represent broader themes of weight-loss advice given by the GPs. Coding and categorization were first done by AP. AP read all of the transcripts and coded the transcripts. A second coder MT then read all of the transcripts to check all content had been coded using the final codes AP developed, ensuring no part of the recordings had been overlooked or not captured in coding. Throughout the analysis period, regular meetings were held with the research

team including CA a qualitative methodologist with a DPhil in primary care, and experience working in weight management communication. PA, a professor of primary care and practicing GP who was PI for the BWeL trial, also advised on analysis. Data were managed using NVivo 12 for windows.

Alongside the main categories that were inductively developed, the research team was also interested in whether the content of the advice GPs delivered was personalized to the patient, or not, and if GPs drew on any evidence to support their advice delivery. These 2 deductive categories are defined and included in the results.

Results

Of the 159 adult patients in the consultations analysed, 62 were male and 92 were female, and we had missing data for 5 patients due to incomplete labelling of audio recordings. The mean age was 57 (standard deviation [sd] = 16) years and mean initial body mass index was 35 (sd = 5) kg/m^2. Overall, 6 patients (4%) were from minority ethnic groups, most participants were of White ethnicity. The mean index of deprivation score for patients' locations was 13 (sd = 10, *N* = 153). (IMD is the official measure of relative deprivation for areas in Englandhttps://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/464430/English_Index_of_Multiple_Deprivation_2015_-_Guidance.pdf.)[24] The mean length of consultation recordings was 92 s (range 7–532 s).

We identified variation in the content and delivery of GP advice in very brief opportunistic interventions for weight loss, and we developed 4 clusters, to describe the content of interventions: (i) Diet and physical activity changes, (ii) Implementation tips to support diet and physical activity changes, (iii) Signposting support, and (iv) Style of advice delivery.

See Supplementary Material 1 for visual representation of how the data were clustered.

Cluster 1: diet and physical activity changes

GPs in 44/159 consultations advised making dietary changes. These GPs may have gone on to discuss physical activity (PA) later on in the consultation. The content of the dietary advice included: changing the type and amount of food, and recommending a specific type of diet. In 23/159 consultations GPs recommended PA changes only, and in 14/159 consultations GPs packaged diet and PA recommendations together:

Dietary changes GPs gave advice to make dietary changes in 44/159 consultations (108 instances). Saying, for example:

> …be careful what you eat and follow proper dietary advice… (Practice 20, Doctor 1)

GPs would also advise patients to "look at their diet" (23 instances in 19/159 consultations).

Changing type of food and amount

In 26/159 of these consultations (68 instances) GPs gave advice to change the type or amount of food people consumed. Guidance on food choice changes included advising patients on what to eat more of (e.g. fibre and vegetables) (25 instances in 17/159 consultations), and what to eat less of (e.g. carbohydrates) (34 instances in 20/159 consultations), saying for example:

> I think, yeah, just try and reduce your carbohydrates next. (Practice 8, Doctor 2)

GPs also recommended changing food choices (6 instances in 5/159 consultations) such as substitutions:

> So, you don't want to be thinking I'm a bit peckish, I'm going to demolish a Mars bar, cos that's a lot of calories, and you won't feel any less hungry. What you want to be thinking is I'm a bit peckish, I'm going to eat a banana. (Practice 52 and Doctor 2)

We found that advice to monitor calories occurred rarely (3 instances in 3/159 consultations), for example:

> Sometimes it can be worth, you know, you can get these little apps for your phone which can calorie count and sometimes that can be quite useful to try and get an idea of how much you're eating and then how many calories are in it and things. (Practice 46, Doctor 1)

Recommending a specific diet

GPs would also give patients specific diet recommendations (e.g. intermittent fasting, low fat diets; 11 instances in 9/159 consultations). For example, below a GP recommends a specific diet for the patient to follow, stating that "chopping and changing" intake of calories helps the body to lose weight. In this way, the GP recommends the patient should follow an intermittent fasting diet.

> So, you need to chop and change, [um] and this is another reason why the 5:2 is quite good. (Practice 51, Doctor 4)

PA: do more We identified 23 instances in the 159 consultations where GPs provided PA advice. Of these, 21 instances (across 18/159 consultations) focussed on increasing the volume of PA, saying for example:

> increase your physical activity safely and in moderation, then that's going to help you from a medical point of view. (Practice 37, Doctor 1)

GPs also mentioned gym prescriptions (6 instances in 4/159 consultations); or specific guidance on PA frequency and intensity that is needed for weight loss (3 instances in 2/159 consultations). There was 1 instance of a GP giving very specific advice on what to do when exercising. The GP told a patient to focus on walking uphill:

> striding up a hill will burn more calories than running on the flat. (Practice 53, Doctor 2)

In 12 instances across 9/159 consultations PA advice was explicitly not given due to limitations of the patient's current health issues. For example, the GP in the quote below draws on the patient's current "situation" to justify not asking them to change their PA behaviours. However, as we do not have

access to additional patient details other than the recording of the brief intervention, we are unable to speculate on the patient's exact situation.

> And in your situation, I can hardly ask you to go out and start doing lots of exercise (Practice 9, Doctor 2)

Suggesting changes to both diet and PA We identified 15 instances (in 14/159 consultations) where diet and PA advice were packaged together as an approach to weight loss:

> otherwise it's a question of- (.) sort've portion control really and trying to get as much exercise as your joints will allow (Practice 13, Doctor 1)

Cluster 2: implementation tips to support diet and PA changes

We identified that GPs would give to patients, what we termed, "implementation tips" (N = 33/159), which were specific information about how the patient could implement advice to support the recommended diet and/or PA changes.

Specific advice included eating smaller portions (26 instances in 21/159 consultations); using smaller plates (3 instances in 3/159 consultations); daily or weekly self-weighing (5 instances in 5/159 consultations); eating at different times of day (e.g. eating at regular intervals; 3 instances in 3/159 consultations), avoiding alcohol (7 instances in 6/159 consultations), and changes to mind set or intention (16 instances across 13/159 consultations). For example, the GP below advises that the patient needs "determination" to help make effective change:

> I think certain, just, just basic things can help like firstly just determination that you want to do something about it really (Practice 4, Doctor 1)

Cluster 3: signposting support

Alongside providing advice on methods of weight loss (mostly diet and PA changes), there were 126 instances (78/159 consultations) where GPs would also advise patients to access further support. This was either through suggesting a follow-up appointment (84 instances), or signposting patients elsewhere (37 instances).

Further support from a GP GPs in the BWeL trial were asked to advise the health benefits of weight loss and not to stray beyond that statement. As such, they were not encouraged to offer further support for patients, but were told they could based on their own clinical judgement. We identified 84 instances across 62/159 consultations where GPs advised patients to access further support from general practice, through booking follow-up consultations with the GP or practice nurse. In the example below, the GP advises that if the patient would like support they can book in to see them again.

> if you want to come back and see me in order to discuss that, if you want some support, you're very welcome to do that (Practice 6, Doctor 7)

Signposting other resources Patients would also be advised to use resources (37 instances in 30/159 consultations), such as a booklet from the British Heart Foundation, to guide their choices. In 4 instances across 4 consultations advice would include a discussion of pharmacotherapeutic support through a prescription (e.g. orlistat, a medication that reduces fat absorption to support weight loss), exemplified below:

> But we can go through that, and see maybe if some orlistat would be helpful for you as well. (Practice 6, Doctor 7)

Cluster 4: style of advice delivery

Personalized and superficial When GPs gave advice that went beyond the general health benefits of losing weight, to advise patients how to lose weight (e.g. through diet changes), the advice was either "superficial" or "personal." We defined instances as "superficial" when GPs would deliver generic advice that was not personalized to the patients, such as a general statement reflecting PA guidelines. In contrast, we defined instances as personalized when GPs took into account patients' capacity to follow the advice, such as a patient's limited physical mobility and the implications on this for exercise.

Superficial advice, as exemplified below, was identified in 59 instances in 58/159 consultations. We observed that superficial advice on how to lose weight was provided unprompted (before the patients had the opportunity to respond) or after the patient raised difficulties experienced trying to lose weight. For example, 1 GP stated it was good for a patient's health to lose weight, finishing with superficial advice to "change their lifestyle a bit."

> I'm here to talk to you about weight loss and how that might be beneficial for you. And in fact it would be very beneficial for you, particularly with the funny turns……
>
> And I would certainly advise you to look at ways of maybe
>
> changing lifestyle a bit to try and lose weight… (Practice 37, Doctor 1)

There were 30 instances of personalized advice in 30/159 consultations. We observed personalized advice would happen when the patient had explained what they were doing to try to lose weight. When patients highlighted a problem they face in attempting weight loss, the advice from GPs would focus on suggestions of alternative options. For example, 1 patient mentioned that they had recently had to swap to a gluten free diet and found gluten free products to be high in sugar. As a result, their GP suggested that they made their own bread using gluten free flour:

> GP: [Um] I suppose the only thing that I can think is to [er] to actually be making your own, to use gluten free flour which… won't have the sugar in it,
>
> Pat: Yeah that would be a good idea (Practice 1, Doctor 3)

Advice qualification We identified 4 instances in 4/159 consultations when GPs provided a reason for the advice they were providing to patients, we called this "advice qualification."

Qualifying advice by drawing on external sources

In 2 of these instances GPs would qualify the advice that they gave to patients by drawing on external sources. For example, when a patient said that they had used "SlimFast" before, a GP responded with this advice:

> The studies show that all the different diets are actually equal, it's a question of finding one that suits you. (Practice 6, Doctor 7)

General qualification

In 2 of these instances (in 2/159 consultations) the qualification was done without specifying where the information came from, with GPs using general phrases, such as "they say." In the example below the GP is drawing on information given in the BWeL trial training videos.

> They've discovered that even if people just lose weight for a short time, put it on again and lose weight for a short time, put it on again, there are still health benefits, its better than not doing it at all (Practice 50, Doctor 1)

Abstract advice In all the other instances of advice (across the 155 other consultations) GPs provided abstract advice without giving any reason, justification, or evidence. For example, here the GP suggests that the patient has a high-fibre diet, but does not explain how this may support weight loss:

> It's easier when the weather improves but look carefully at what you're eating, make sure you have a low fat, low sugar, high fibre diet. Little of it, lots of exercise and see how you go. (31-02-23)

Discussion

Our content analysis of 159 audio-recorded interactions, in which patients with obesity were offered weight-loss advice, showed that advice mostly focussed on patients' diet and PA behaviours, commonly communicating "eat less and do more" messages. Following these broad messages clinicians offered "implementation tips" on how to carry out their advice in only 33/159 consultations, meaning advice was mostly given without any detail on how to follow it. One of the most common things that GPs did (121/159 consultations) was to suggest that patients seek further support to help them pursue losing weight. Most advice was "superficial" comprising unilaterally delivered content which was not personalized to patients, unless prompted by the patients in their response to general advice. We found that when GPs were more specific than "do more, eat less," the advice given was highly varied, superficial and often lacked an apparent evidence base for patients living with obesity. Advice was mostly given in abstract (155/159 consultations), without providing any justification, or evidence for why the actions being recommended might support weight loss.

A recent systematic review and thematic synthesis of perceptions about discussing weight loss highlighted that clinicians reported a lack of knowledge about what advice they should give patients,[15] and feel poorly trained on this topic.[25] This was reflected in our analysis, which identified that much advice given by clinicians was scientifically unsupported, and unlikely to result in weight loss if followed. For example, increasing exercise only, or making small changes to energy intake or expenditure, have been shown to be ineffective for treating obesity, and yet were often part of clinicians' advice. The notion that small changes in behaviour can have large weight-loss impact is a common myth, highlighted in a study that showcased how "false and scientifically unsupported beliefs about obesity" are prevalent in the scientific literature and press.[26] Another common myth in our findings was that patients needed the "right mind set" to lose weight.[26] The prevalence of a general "eat less, do more" messaging from clinicians exemplifies their lack of knowledge of effective advice. With a lack of specific training to counter these persistent and pervasive unscientific messages, clinicians may perpetuate them. Therefore, the frequency of ineffective advice in our data is unsurprising. Training for clinicians could specifically address common "myths" about effective weight-loss advice, and how to refer patients to weight management programmes if possible.[13]

Many studies focus on the frequency of weight-loss advice between clinicians and their patients with obesity,[27,28] with few focussing on the content. Supporting clinicians to discuss weight loss more frequently is important. However to increase opportunities for patients to access to support, our analysis shows that clinicians should also be supported on what to say, as simply raising the topic does not mean that effective or appropriate advice has been shared.

In the United Kingdom, current National Health Service (NHS) recommendations suggest advice should be personalized,[29] and National Institute for Health and Care Excellence (NICE) guidelines recommend taking into account a "person's individual preference" and to "Offer support depending on the person's needs."[1] Despite guideline recommendations we found that personalized advice was rare. On the one hand, this may illustrate a dilemma for clinicians who are encouraged to talk about weight opportunistically, within tight time constraints of primary care, whilst tailoring their approach to an individual (which is more in depth than brief, generic advice). On the other hand, clinicians report concerns about causing offence when discussing weight loss,[15] and giving general advice may allay these concerns about what specifically they should say to patients. Nevertheless, patients find general advice unhelpful.[30] Further research could examine consultation recordings to identify how a tailored approach can be briefly delivered in a patient acceptable way. This could support more frequent delivery of personally relevant advice.

Previous research has shown that weight management services delivered through primary care[31] or community services[13] are effective for weight loss. People are often aware of what they could do to lose weight, but require strategies and support to enact these behaviours.[32] Clinicians who feel undertrained to offer advice could support their patients with obesity by focussing on signposting to these effective services. If clinicians do not have access to such services, including implementation tips may similarly support patients, but this would need further investigation.

Whilst previous studies have highlighted key concerns reported by clinicians when discussing weight loss with patients living with obesity, these post hoc accounts are limited by recall and social desirability biases and cannot assess how these concerns are actualized in practice. Our research builds

on these previous studies showing how reported concerns around lack of knowledge about what advice to give translate into the type of advice provided in the consultation. By mapping the exact content of advice given we are able to highlight the specific "myths" or unscientific beliefs that are communicated in practice, so that these beliefs can be targeted in future training and guidance. This study adds to a growing body of research highlighting the values of analysing real recorded weight management discussions.[33,34]

Limitations

A strength of this paper is analysis of 159 recorded doctor patient interactions, avoiding recall and social desirability biases present in post hoc accounts. Our use of content analysis enables clear categorization and grouping of types of advice. A limitation was that these data were collected as part of trial where clinicians received training in delivering brief interventions for weight loss, and so the content of their advice may differ from an untrained population. A further limitation was that participating clinicians were encouraged to provide weight-loss advice in around 30 s, limiting the opportunity to be personalized and tailor advice to patients. Nonetheless, time restrictions are an issue for GPs that are being encouraged to add talking about weight into their standard consultations.

Conclusion

Primary care clinicians are uncertain about what advice is effective when talking to patients living with obesity about weight, and think that patients do not follow the advice they give. Our analysis identifies that clinicians mostly do not provide effective advice, and so even if patients were to follow the advice, they would be unlikely to lose weight. When clinicians lacked support services to offer patients they commonly advocated a general "eat less, do more" approach. This message is disliked by patients, and unlikely to be effective. Future training and guidelines can address misconceptions that this approach is effective for the population of people living with obesity, and instead emphasize the importance of offering support through referrals to weight management services if possible.

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Supplementary material

Supplementary material is available at *Family Practice* online.

Ethical approval

Ethical approval was granted by the NHS Research Ethics Service (reference: 13/SC/0028).

Conflict of interest

PA spoke at a symposium for the Royal College of General Practitioners that was sponsored by Novo Nordisk, who paid his employees for this.

Data availability

The data underlying this article cannot be shared publicly due to the privacy of the individuals who took part in the study and did not consent for data to be made publically available.

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