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# **MOBILE HEALTH APPROACHES TO WEIGHT MANAGEMENT: *FOOD FOR THOUGHT***

A collaboration between the Organisation for the Review of Care and Health Applications (ORCHA) & the British Dietetic Association (BDA)

**DATE:**  
01 2021

# Introduction

A high proportion of people in the UK are living with overweight or obesity. Traditional weight management services, inclusive of support in primary care, lifestyle interventions and specialist weight management services, have traditionally been delivered in a face-to-face setting, alongside provision of physical resources to support patients on their weight management journeys.

In recent years, the advancement of health technologies has resulted in an increased availability of mobile health (mHealth) applications which can support both dietitians and their patients in pursuit of achieving weight management goals.

Health apps offer easy, engaging, and accessible ways to help clients better track symptoms or self-manage at home. Apps have the power to support dietetic service provision, increasing engagement levels with patients and helping people to better stick to their personalised plan. Furthermore, studies (detailed in section 2 of this report) provide evidence to suggest that evidence-based mHealth tools can complement existing care and lead to improved patient outcomes.

With the recent impact of coronavirus (COVID-19) on the delivery of face-to-face care, mHealth apps may be able to offer additional support in light of reduced accessibility to weight management services.

The Organisation for the Review of Care and Health Apps (ORCHA) assesses apps for health bodies in eleven countries worldwide. In the UK it provides health app libraries to NHS providers in around half of regions, including a dedicated library for the British Dietetic Association (BDA). ORCHA and the BDA are calling for health professionals to educate themselves on digital health, to embed apps into their clinical practice and consider routinely discussing appropriate mHealth apps with service users.

There are thousands of apps available; type 'diet' into Google Play Store and you get over 1.6 million results. Despite this, health apps are not regulated. ORCHA estimates that at present only 28% of weight loss apps meet relevant health, security and usability standards. It advises that the vast majority should be used with caution or avoided completely as they have the potential to result in harm to users.

To help guide dietitians, and help health and care services engage with safe and effective health apps to support people in weight management, the BDA and ORCHA jointly developed this report. It aims to outline the risks and opportunities that apps offer, detail some of the best apps and best practice examples of embedding apps into practice. It also aims to act as a tool to advise how services can harness apps safely and connect more patients with good effective health apps to effectively improve outcomes.

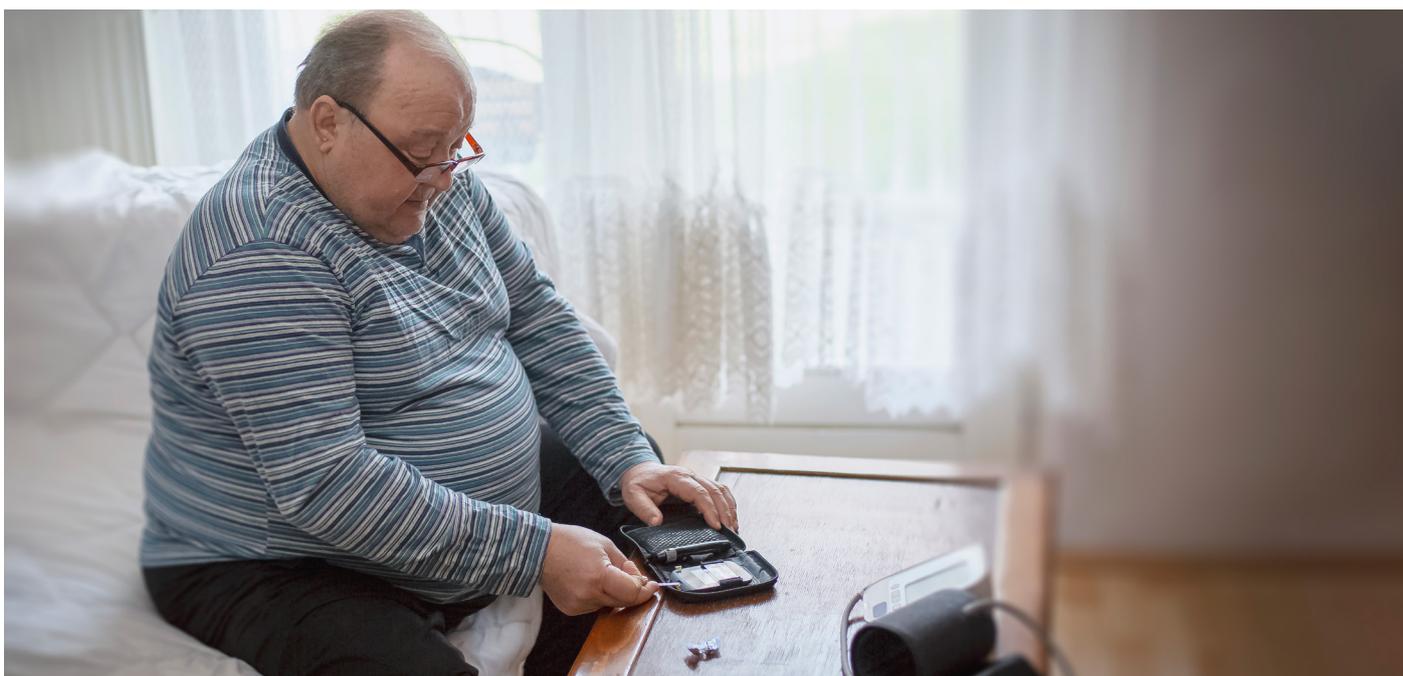
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# Obesity and overweight in the UK

The prevalence of obesity has increased significantly over the last two decades, with nearly two-thirds of the UK population now living with obesity. Obesity is a complex, relapsing chronic condition, which is characterised by excess body fat, that has been shown to impact both a person's physical and mental health. Obesity is associated with multiple health conditions, including Type 2 diabetes, cardiovascular disease and obstructive sleep apnea, which can lead to a reduction in both quality of life and life expectancy. The mechanisms that regulate body weight are highly complex and involve multiple interlinking factors including genetics, psychology, biology and socio-economic factors. Treatments for obesity currently use a stepped approach, with patients firstly being offered diet, exercise and behavioural support followed by pharmacotherapy and finally bariatric surgery. There remains an under-provision of obesity services throughout the UK, particularly those supporting patients with severe and complex obesity. Therefore, there is a need for novel, effective methods of delivering weight management to help meet the unmet needs of those that do not have access to NHS delivered services.

With information and communications technology (ICT) now an integral part of daily life,<sup>1</sup> there has been a corresponding increase in the number of available mHealth apps dedicated to weight management.<sup>2</sup> These interventions have the potential to reach large numbers of people in a cost- and time-efficient way,<sup>3</sup> particularly those in rural areas and those with reduced accessibility.<sup>4</sup> The widespread use of mobile electronic devices, in particular smart devices, has accelerated in the last decade. Two-thirds of the world's population are now connected to mobile devices,<sup>5</sup> many already using different kinds of mobile interventions.<sup>6</sup> Furthermore, practitioners involved in both childhood and adult weight management services have started to demonstrate an openness to the use of mHealth to support treatment.<sup>7</sup> Therefore, the use of mobile phone interventions could offer a promising approach for disease management and prevention that has a potential to help at a population level.<sup>8</sup>



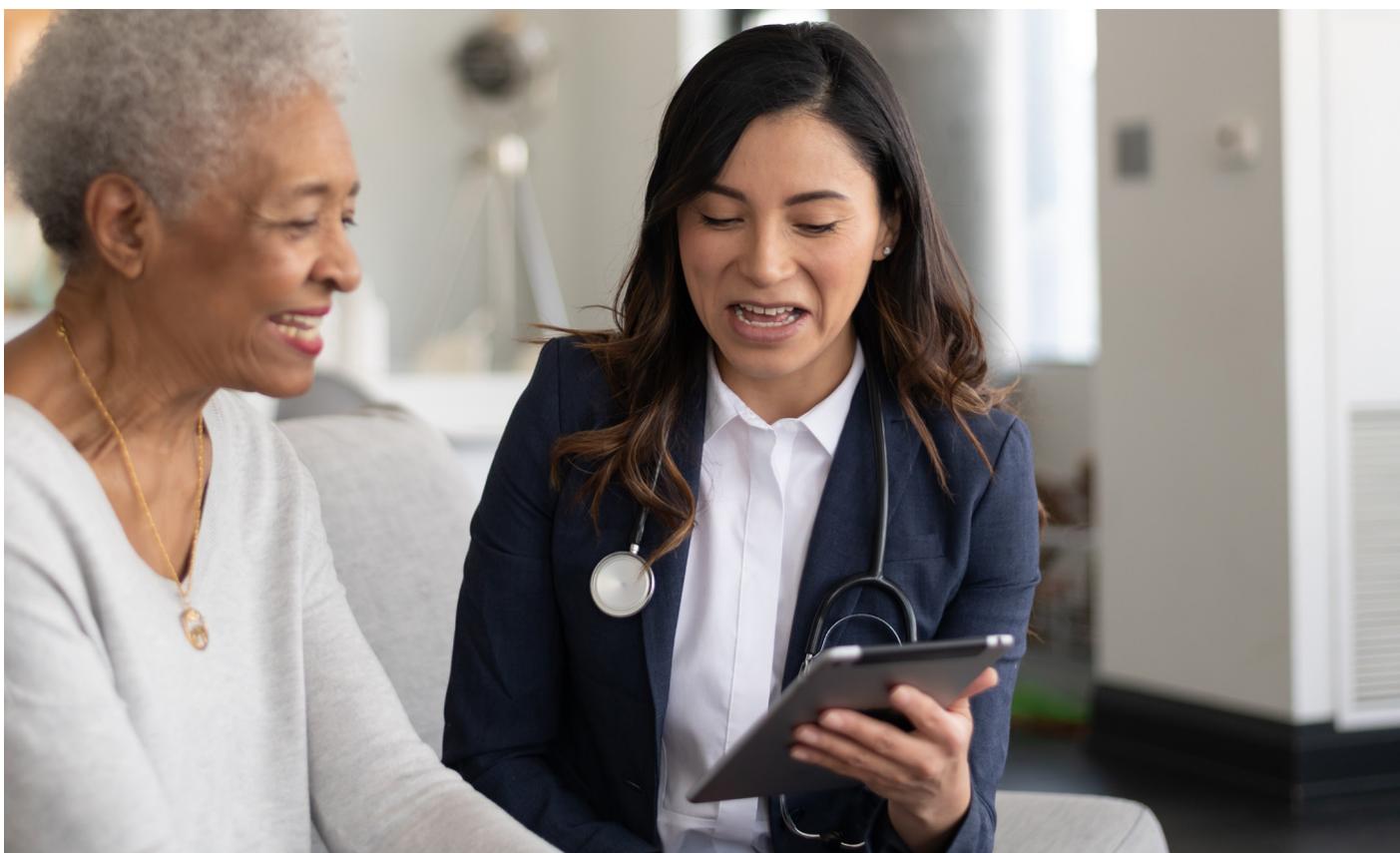
Mobile technology may be a feasible, sustainable, and cost-effective way to engender weight loss. A systematic review on self-monitoring in weight loss showed that using self-monitoring tools (eg, the paper diary, web tools, PDAs, and electronic digital scales) helped individuals lose between 2.9kg and 3.4kg more than those receiving standard care alone.<sup>9</sup> Additionally, researchers have been using mobile phone interventions to support behavioural change by providing more interactive and timely access to relevant information and delivering context-specific prompt assistance.<sup>10</sup> These interventions may take the form of health apps or text message based services. Recently, the use of mobile apps has resulted in weight reduction, physical activity increase, and quality of life improvement in children with obesity.<sup>11</sup> App-based interventions have already been shown to be cost-effective and to reduce the immense barriers associated with more traditional approaches, in addition to demonstrating significant effect sizes for weight loss in both developed and developing countries.<sup>12 13</sup> However, despite potential benefits of using mHealth, this needs to be balanced with data protection and privacy protocols, which vary globally.<sup>14</sup> There may be an unintended risk of compromising users' privacy and safety by enrolling them in mHealth interventions, particularly if ownership or access to data is not specifically detailed. Additionally, the recommendation of health apps may result in unintended increases in health inequality and access, as certain groups, including those with lower socio-economic status, older individuals, and those with diminished dexterity, may be less able to benefit from these technologies. For this reason, the careful and evidence-based selection of mHealth interventions dedicated to weight management is important.



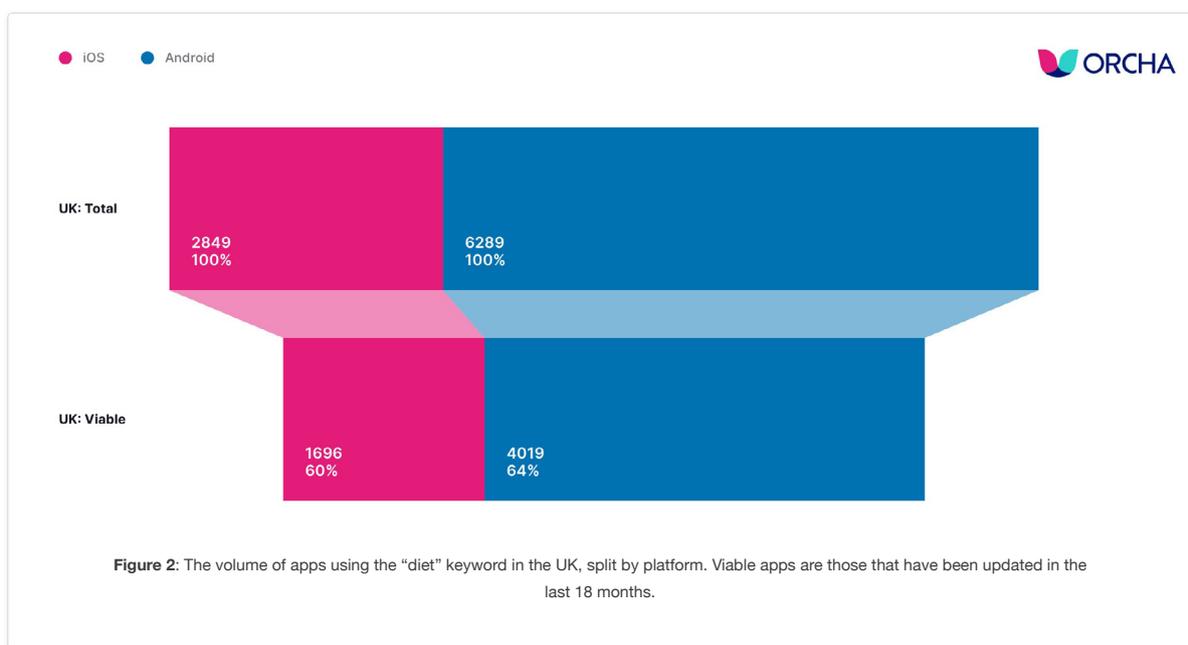
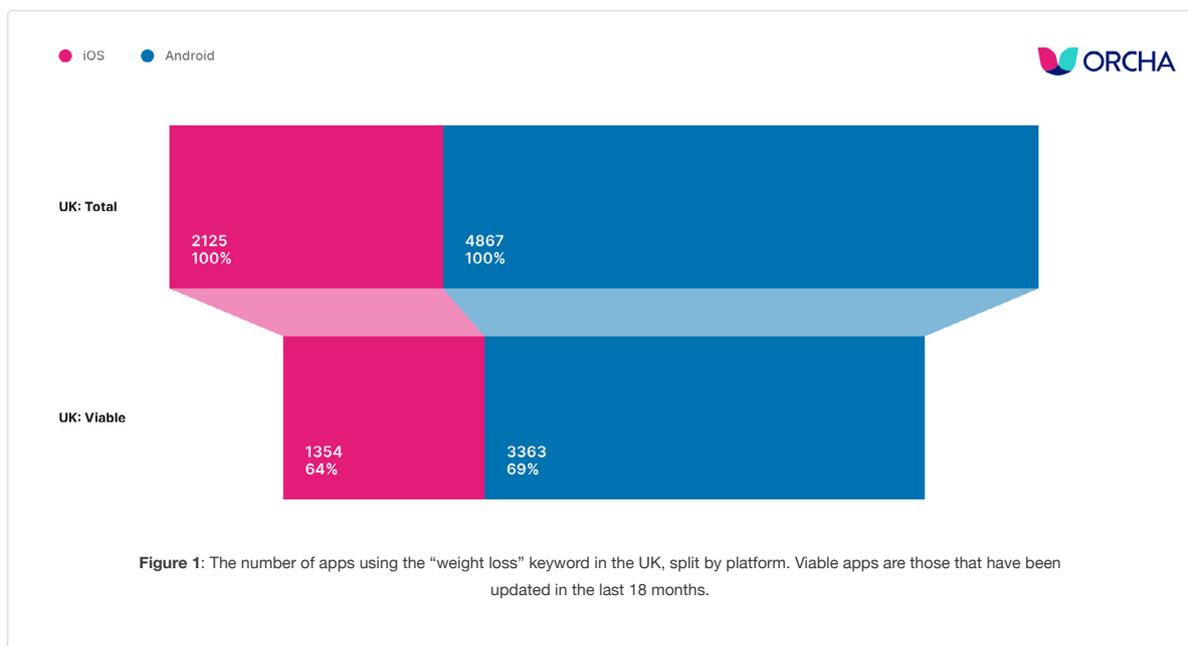
## Weight management apps

Since the launch of the original Apple App Store in 2008, the app marketplace has grown and diversified significantly. One subsection of this market, the mHealth applications, has been enjoying growth in this area, with particular attention being shone in its direction during the current COVID-19 pandemic. The potential for digital health technologies to provide support to populations across a number of health domains has seen increased research and speculation. One such area that has become a focus due to the nature of the restrictions imposed during the pandemic is weight management.

Top level searches using the 42Matters app explorer were performed by ORCHA to explore the volumes of apps available in this area using specific keywords. The criteria used to perform these searches involved matching text containing the keyword in the publicly available app titles and descriptions on the iOS and Google Play app stores. For the purpose of this report, returned apps must be available to download in the UK and must be in either the Health and Fitness or Medical categories in either store. ORCHA also defines “Viable” apps as those that have been updated in the last 18 months. ORCHA uses this definition to group together apps that appear to be maintained regularly and is actively improving and monitoring feedback from users. The two keywords used in this exploration were “weight loss” and “diet” with their funnel plots being shown respectively as Figures 1 and 2 below.



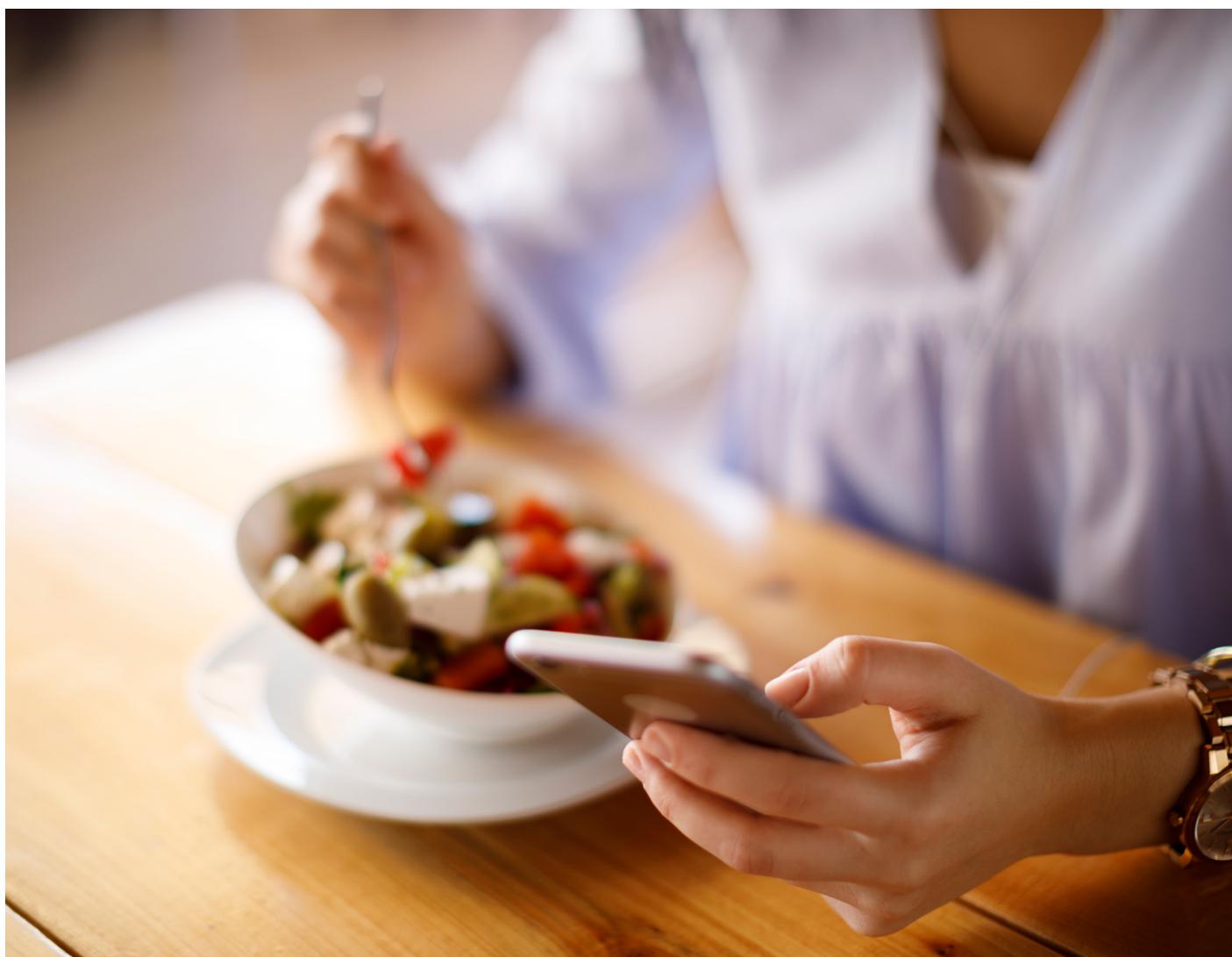
From this data we can see for both sets of keywords the number of apps on the Google Play Store is larger (56% for “weight loss” and 54% for “diet”). There was also a drop of between 21%-30% when filtering the apps that had not been updated in the last 18 months. This, for ORCHA, highlights that a large proportion of apps found in this search may not contain up to date information in terms of clinical guidance or health advice. They may also not be up to date with current data compliance standards as well as user experience best practices. For this reason, apps that fall into this category are not shown on the ORCHA App Finder due to the increased risk they pose to the public.



Note, these figures are calculated by searching for apps (via 42Matters) containing relevant keywords in app titles and descriptions on the iOS and Google Play app stores. The aim of this is to show the volume of apps designed to support weight management and the proportion of these apps that aren’t maintained.

## Health Apps for weight management during the COVID-19 pandemic

Since the COVID-19 pandemic, there has been a 25% rise in daily health app downloads, increasing from 4 to 5 million every day. Apps such as Couch to 5K have achieved significant growth in take-up over recent months since the beginning of COVID-19 lockdown. ORCHA, which provides app libraries to the NHS in 50% of regions, also saw a 180% growth in visits to its libraries between January and May 2020 across all its services, as compared to the same period last year (January – May 2019). This reflects the growing interest in digital health from the public during the COVID-19 pandemic.



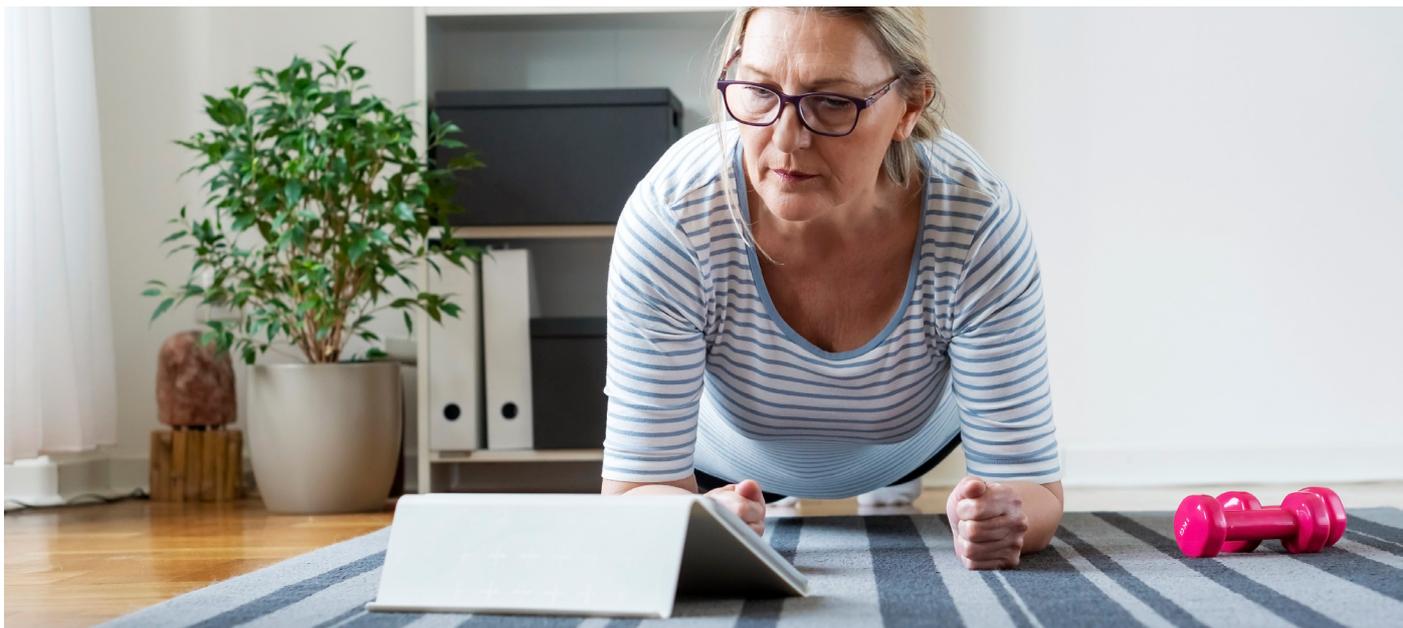
# What the evidence says about weight management health apps.

The use of mobile phone interventions within weight management services has the potential to reach a large proportion of the population<sup>15</sup>. But does it work?

There has been considerable research into the use of mHealth apps within weight management over the last decade. Approximately 482 studies detailing the use of mHealth tools have been published, including 51 systematic reviews and/or meta-analyses.

One systematic review conducted in 2014,<sup>16</sup> including 17 studies, found that mobile devices induced weight loss relative to baseline weight. Of the 17 studies identified, 12 were primary trials and 5 were secondary analyses. A total of 8 out of the 12 interventions analysed in primary trials had a mobile phone as an intervention medium with three providing functionality beyond simply providing text message alerts. Two of these studies reported increased weight loss compared to controls of -3.4kg (-4.5kg vs. -1.1kg),<sup>17</sup> -2.9kg (-4.6kg vs. -2.9kg).<sup>18</sup> Another study reported on a BMI reduction of 0.9kg/m<sup>2</sup> (-1 vs. -0.1).<sup>19</sup>

When comparing mHealth tools either with no intervention or receiving non-mobile weight loss interventions, results favoured mobile devices for weight loss.<sup>20</sup> Reductions in body mass index, waist circumference, and percentage body fat were also observed in the review.<sup>21</sup> A second review, among older adults, consisting of 25 studies, found that mHealth interventions were effective at increasing the time spent on physical activity, energy expenditure in physical activity, and the number of walking steps.<sup>22</sup>



It was therefore recommended that mHealth interventions be included in guidelines to enhance physical activity in older people.<sup>23</sup> A third review of health apps for obesity-related conditions in children and adolescents, based on nine studies, argued for the impact of mobile app use on motivation and goal-setting behaviour.<sup>24</sup> A fourth conducted in 2020 also suggested that technology-based interventions, primarily active video games, as well as internet or web-based interventions and mobile phone communications, may have the potential to impact positively on weight-related outcomes in children.<sup>25</sup>

The NHS England **digital pilot scheme**, offering convenient, 24/7 access to online advice significantly boosted the numbers taking up the flagship **Diabetes Prevention Programme (DPP)**. Almost seven in 10 people, 68%, referred to digital schemes took part, compared with around half of those offered face-to-face support. Now up to a fifth of places on the DPP, around 40,000 a year, will be delivered digitally. Digital delivery has also been built into the NHS Low Calorie Diet Programme, with participants offered support remotely via an app, online or over the phone.<sup>26</sup>

Although there are measured advantages to mHealth, there are also those who it may not be suitable for, often centring around equity issues. These should be considered when speaking with a client. This may be because of access to a smartphone, digital literacy, or issues with dexterity.

#### **INSIGHT**

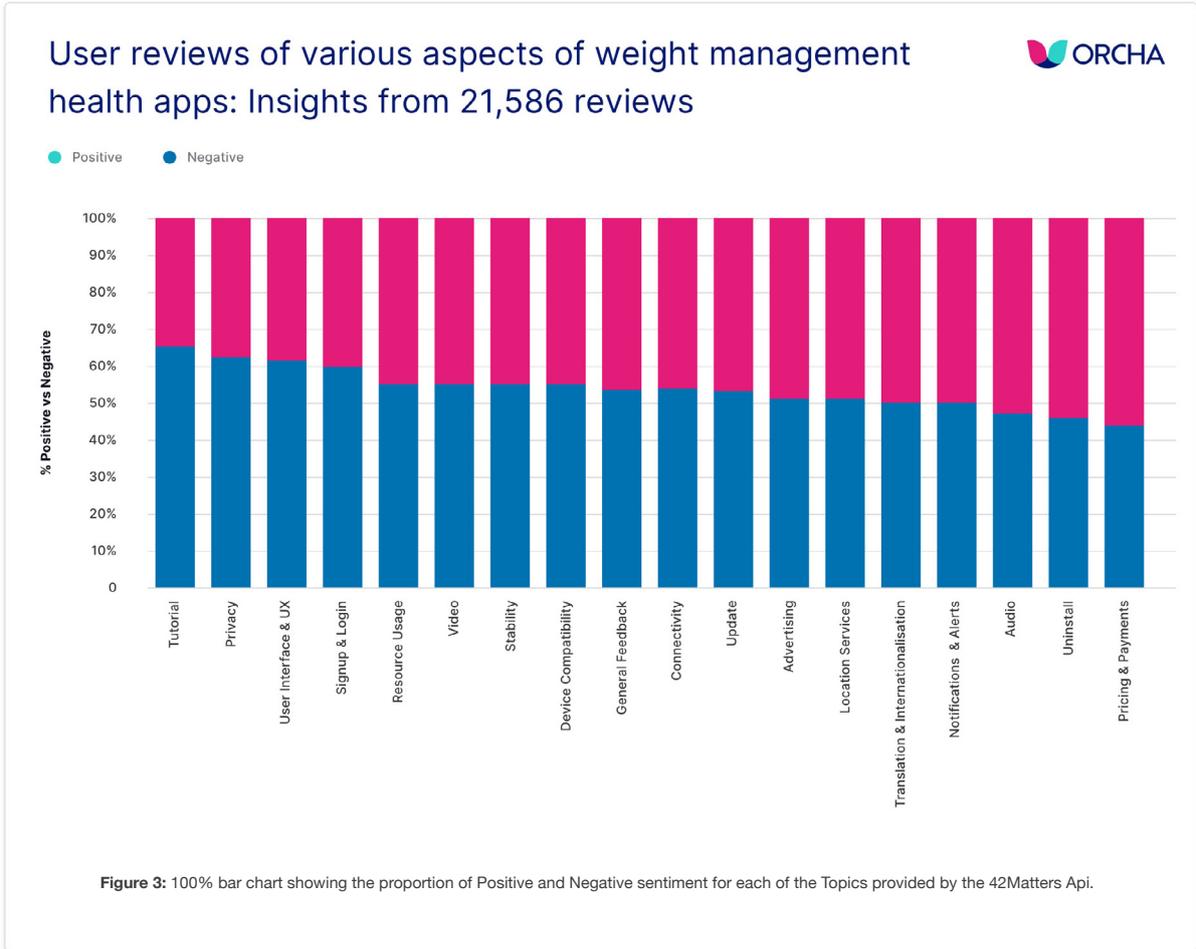
There have been **482 publications** reporting on patient-reported outcomes for weight management health apps, including **51 systematic reviews**. These studies cover a representative sample of society, from children to adults and the elderly. Several studies, including systematic reviews provide evidence to suggest that evidence-based mHealth tools can complement existing care and lead to improved patient outcomes.



# What does the public think about weight management health apps?

While the uptake for mHealth has increased and there is evidence suggesting their efficacy, the questions remain; do users enjoy using them and what can we take from this to help us recommend the right apps to the right person? To answer this, ORCHA collected 21,586 consumer reviews of selected weight management apps via 42Matters Review Analysis application program interface (API). The average satisfaction rating was 3.8 out of 5, with 61% of reviews listed as positive, and 39% negative, suggesting both an appetite for, and positive beliefs about apps for weight management.

Most negative sentiment was connected with pricing and payments, whereas the most positively rated aspect concerned tutorials. This suggests that from an end-user perspective, the communication and education material available in apps are valued and may be key to satisfaction.



### *INSIGHT*

Based on **21,586 published reviews of weight management apps**, the average user rating was **3.8 out of 5**, with **61% of reviews listed as positive**. The most positive components of these apps were the tutorials and ease of sign up and login. The most negative sentiment was towards pricing and payments, and audio features. This suggests that among those who could access these technologies, there was a general appreciation of their use, however a strong disutility towards pricing suggests that these technologies may be inaccessible, or unattainable to some.



# How to identify effective mHealth and safeguard patients

There are many weight management health apps available to download via both iOS and Android. It is clear that there is demand for such technology and people appear to enjoy using them, but importantly is it safe and effective?

There may be an unintended risk by enrolling patients in mHealth interventions, particularly if interventions do not conform to existing regulatory standards and frameworks, such as the NICE evidence standards framework for digital health technologies.<sup>27</sup> These standards are developed to safeguard patients and best ensure outcomes. By providing a structured process for the evaluation of digital health technologies, they enable objective assessment of the risks and benefits of these technologies. As a result, digital health technologies which conform to these standards will ensure that a user's data is safe, that the solution is easy to use, and that it is evidence-based, offering the best chances for a positive health outcome as a result. If the use of digital health is to be a sustainable and effective strategy, it is first important that technologies which meet these regulations are identified, giving users the best chance of success.

## The ORCHA platform

The Organisation for the Review of Care and Health Apps (ORCHA) is an independent digital health evaluation and distribution organisation. It helps NHS and care organisations to deliver the right digital health apps to the right people at the right time. As the measure of what makes a good app is constantly evolving, it can be hard to know which standards digital health technology must meet and if it does. The ORCHA review does this. The intelligent platform looks at a technology's nature and purpose and identifies which 350 digital health standards and measures it must meet, across clinical effectiveness, data security and usability. These standards include the NICE evidence standards framework for digital technologies,<sup>28</sup> which is recognised as essential for digital and mobile health interventions for behaviour change.

The ORCHA algorithm then looks at how appropriately the technology meets the relevant and compulsory standards, producing an overall score. The ORCHA Score is an objective independent evaluation, not influenced by popularity or the financial position of their developers. Any score below 65% indicates that an app has some issues that users should investigate further prior to use. Scores below 45% indicate that an app has considerable issues or challenges and in its current form is potentially unhelpful or unsafe. A breakdown of how the app performed against data security, usability and clinical effectiveness is also detailed on the ORCHA app library ([appfinder.orchaco.uk](http://appfinder.orchaco.uk)).

## Quality levels of weight management apps

To date, ORCHA has reviewed 379 diet and weight management health apps. Amongst these, only 21.1% (80) achieved a score of 65% or over, which is the ORCHA quality threshold. The average score is currently 56.5%, which is below what ORCHA considers to be a good quality app. This therefore suggests that care should be taken before selecting a weight management app and that using ORCHA can help in this selection process.

## Usability, data privacy and clinical effectiveness

When looking at the three elements that make up the overall ORCHA score, there is a trend for apps to be strong on usability but lacking in data privacy and clinical effectiveness. The average user experience rating for the 379 weight management apps is 74.6%. As the quality threshold across all three elements is 65%, this shows that weight management apps are relatively good at engaging and being easy to use.

However, data privacy scores, that look at the measures an app has taken to protect a user's data, averaged 55.5%. This indicates that many apps have issues that users should investigate further prior to use (note: each ORCHA review provides details on what the problem may be and so can prove helpful). The average clinical assurance score stands lower again at 45.5%, which is marginally above the 45% cut-off mark for an unhelpful or potentially unsafe app. Therefore, it is vital that apps are screened to ensure an app has documented evidence to demonstrate clinical effectiveness.

### **INSIGHT**

Although there are health apps with documented clinical assurance, the majority fall below expectations in this field. Therefore, care should be taken when selecting mHealth apps.

# Which weight management apps to consider in practice

ORCHA has identified 10 high scoring weight management apps in a range of categories across iOS and Android. These apps have been assessed using ORCHA's 350-point evaluation, which is described earlier. The table below aims to give you an overview of which app to use for your patients.

 <b>MyWay Diabetes</b>		<b>Features:</b> Condition Management, Data Capture, Data Sharing, Goal Setting and Gamification, Information Provision, Service Signposting
<b>Description:</b> My Diabetes My Way is an interactive website and smartphone app for people with diabetes and their family, friends and carers. It provides reliable and accurate information and resources to help you manage your condition more effectively.	<b>Platform:</b> iOS & Android <b>Level:</b> 3 <b>Cost:</b> Free	<b>Clinical Assurance:</b> 89.3% <b>Data Privacy:</b> 90.7% <b>User Experience:</b> 92%
<b>Categories:</b> <span>Type 1 Diabetes</span> <span>Type 2 Diabetes</span>		
 <b>Second Nature</b>		<b>Features:</b> Alerts & Notifications, Auto Health Tracking, Automated Guidance, Carer Support, Data Capture, Data Sharing, General Information, Goal Setting & Gamification, Health Monitoring, Health Tracking, Information Provision, Treatment Support, Wellbeing Tracking. <b>Premium Features:</b> Online Consultation, Remote Clinical Monitoring, Social Support Networks
<b>Description:</b> 3-month lifestyle change programme that helps you lose weight and build healthy habits.	<b>Platform:</b> iOS & Android <b>Level:</b> 4 <b>Cost:</b> Free/£44 or £55 3 month subscription	<b>Clinical Assurance:</b> 84.6% <b>Data Privacy:</b> 78.5% <b>User Experience:</b> 86.8% (Andorid) / 88.3% (iOS)
<b>Categories:</b> <span>Nutrition</span> <span>Weight Loss</span> <span>Type 2 Diabetes</span>		
 <b>My Desmond</b>		<b>Features:</b> Condition Management, Data Capture, Data Sharing, Goal Setting and Gamification, Information Provision, Service Signposting
<b>Description:</b> myDesmond brings together the content and research evidence from our NICE approved face-to-face DESMOND self-management programmes to a portable interactive web-based platform to support you in managing your health.	<b>Platform:</b> Web App <b>Level:</b> 3 <b>Cost:</b> Free. Requires enrolment from health care provider	<b>Clinical Assurance:</b> 84.5% <b>Data Privacy:</b> 73.2% <b>User Experience:</b> 82.5
<b>Categories:</b> <span>Type 2 Diabetes</span>		

**Table notes:**  
 For all of the apps featured in the above table, the developer stated compliance with GDPR.



Liva UK



Description:

The platform monitors physical activity, sleep, mood, nutritional intake and biometric parameters like blood sugar levels, blood pressure, lung function.

Categories:

Diet and Weight Loss

Diabetes

LLP

Features: Alerts and Notifications, Auto Health Tracking, Behavioural Change Techniques, Carer Support, Condition Management, Data Capture, Data Sharing, General Information, Goal Setting and Gamification, Health Tracking, Information Provision, Social Support Networks, Treatment Support, Wellbeing Tracking.

Premium Features: Online Consultation, Remote Clinical Monitoring

Platform: iOS & Android

Clinical Assurance: 76.7%

Level: 4

Data Privacy: 75.3%

Cost: Free/Requires enrolment from healthcare provider for more

User Experience: 70.9% (Android) / 72.4% (iOS)



Calorie Counter + (Nutracheck)



Description:

Nutracheck Calorie Counter + App makes it fast and easy to track what you eat, whether your goal is to lose weight, gain weight, improve your diet or eat for fitness.

Categories:

Nutrition

Weight Loss

Features: Alerts and Notifications, Auto Health Tracking, Automated Guidance, Data Capture, Data Sharing, General Information, Goal Setting and Gamification, Health Monitoring, Health Tracking, Information Provision, Social Support Networks, Wellbeing Tracking.

Platform: iOS & Android

Clinical Assurance: 65.3%

Level: 2

Data Privacy: 72.9%

Cost: Free/£3.99 per month

User Experience: 86.8%



FoodSwitch



Description:

FoodSwitch has a database of packaged foods to help you identify those that are better for you. In three simple steps, FoodSwitch can help you towards better health by reducing the salt, fat and sugar in your diet.

Categories:

Nutrition

Healthy Living

Diet and Weightloss

Features: Data Capture, General Information, Health Tracking, Information Provision, Wellbeing Tracking.

Platform: iOS & Android

Clinical Assurance: 82.5%

Level: 1

Data Privacy: 66.2%

Cost: Free

User Experience: 81.7%



My IBD Care



Description:

My IBD Care is an award-winning app developed by experts to help people with Crohn's and Colitis live happier, healthier lives. It's time to get scanning! Just find a food or drink barcode to quickly see what's inside.

Categories:

Wellness

Crohns Disease

Irritable Bowl Syndrome

Ulcerative Colitis

Features: Alerts and Notifications, Automated Guidance, Behavioural Change Techniques, Carer Support, Condition Management, Data Capture, Data Sharing, General Information, Goal Setting and Gamification, Health Tracking, Information Provision, Online Consultation, Remote Clinical Monitoring, Service Signposting, Social Support Networks, Treatment Support, Wellbeing Tracking.

Platform: iOS & Android

Clinical Assurance: 61.3%

Level: 4

Data Privacy: 76.5% (Android) / 76% (iOS)

Cost: £9.99 per month

User Experience: 87.3% (Android) / 88.1% (iOS)



HeadUp



Description:

HeadUp™ is an app that helps you analyse, manage and improve your overall health and fitness.

Categories:

Fitness

Features: Alerts and Notifications, Auto Health Tracking, Automated Guidance, Data Capture, Data Sharing, General Information, Goal Setting and Gamification, Health Monitoring, Health Tracking, Information Provision, Risk Indicator, Social Support Networks, Wellbeing Tracking.

Platform: iOS & Android

Clinical Assurance: 66.9%

Level: 2

Data Privacy: 83.1% (Android) / 84.8% (iOS)

Cost: Free

User Experience: 89.7% (Android) / 87.2% (iOS)



Moves4Me



Features: Automated Guidance, Data Capture, Data Sharing, General Information, Goal Setting and Gamification, Health Monitoring, Health Tracking, Information Provision, Social Support Networks

Description:

The innovative Moves4Me app is supporting adults to stay physically stronger for longer by improving access to resistance exercise training.

Platform: iOS & Android

Clinical Assurance: 58.1%

Level: 3

Data Privacy: 64.7% (Android) / 64.5% (iOS)

Cost: Free Trial/£8.49 per 3 months

User Experience: 86.5% (Android) / 87.3% (iOS)

Categories:

Caring for Elderly

Fitness

Healthy Living



Change4Life Food Scanner



Features: Data Capture, Data Sharing, Information Provision

Description:

Food Scanner is here to help you and your family make healthier food and drink choices. It's time to get scanning! Just find a food or drink barcode to quickly see what's inside.

Platform: iOS & Android

Clinical Assurance: 57.2%

Level: 1

Data Privacy: 76.9%

Cost: Free

User Experience: 66.5% (Android) / 64.9% (iOS)

Categories:

Weight Loss

Table notes:

For all of the apps featured in the above table, the developer stated compliance with GDPR.

## Levels

There are a wide array of different types of health and care apps available with an equally wide array of functionality and sophistication. ORCHA believes that just because an app offers more functionality it does not mean it is automatically better than a functionally simple app. Apps that, for example, simply provide information and guidance – similar to health ‘leaflets’ – can be very useful in certain circumstances and this is not impacted by their relative functional simplicity.

In order to assess and score these apps in a way that enables a fair comparison of like for like solutions, ORCHA has devised a Level system. These Levels (currently ranging between Level 1-4) are indicative of the area of focus an app has (wellbeing, general health or specific conditions) and the level of functional complexity and associated risk. The Levels are an important part of the ORCHA baseline scoring system which adjusts between each Level to reflect a shifting prioritisation from the usability measures towards the professional assurance review domain (outlined below).

**Level 1 - Wellbeing / Utility:** These apps are focused on either general wellbeing with a health focus or are utility apps used in a health context.

**Level 2 - General Health:** These Apps are focused on general health.

**Level 3 - Condition Management:** These apps can be focused on general health or supporting specific health conditions.

**Level 4 - Regulated:** These Apps can be focused on general health or specific conditions and contain advanced and complex features that are subject to formal regulation.

## ORCHA Scores

The ORCHA review looks at an app's compliance with standards, guidance and best practice in three distinct areas:

**Data privacy** looks at what information an app collects from a user, what it does with that information and how secure it is of handling that data.

**Clinical assurance** this looks to see if there is a suitably qualified professional or organisation behind the app, or if it has been endorsed, accredited or underwritten by such an individual or organisation. It also assesses what evidence there is around the user testing and the effectiveness of the app in terms of claimed health benefit.

**User experience** this assesses how an app has been designed to support the overall experience, including availability on platforms, consideration for accessibility and needs, such as visual impairment, how well the app is supported and its cost.

## Overall score

An app is assessed against 350 criteria, from across the three domains. Some results provide a positive number, whilst others are negative. Each measure is objective, giving a clear metric-based assessment. Any score below 65% would indicate that an app has some issues that users should investigate further prior to using. Scores below 45% indicate that an app has considerable issues or challenges in its current form and is potentially unhelpful or unsafe.

### **INSIGHT**

ORCHA's intelligent evaluation enables identification of apps that highly conform to relevant standards concerning data privacy, user experience and clinical assurance. These apps provide a variety of features, from recipes, live exercise classes, calorie counters, advice, monitoring and games to promote healthy living.

# How dietitians can use mHealth within their practice

There are a number of practical ways to effectively use mHealth within practice. These include:

- Look at your existing pathways and start to map out the points in those pathways where a health app may be of benefit to a service user. For example, apps may be used at the point of triage, or after a service user has been referred and is waiting for an appointment.
- Develop education programmes around the benefits and use of mHealth tools to aid weight management. This will help provide greater awareness, and promotion of self-care to service users.
- Engage with service users about preferred modes of delivery and support.
- Ensure to take a person-centred approach, looking at digital preferences, finance and engagement preferences.
- Create a shortlist of favourite apps taken from the ORCHA app library and use them to better understand them.
- Consider introducing service users to apps which allow remote monitoring, for example of sugar consumption, and food diaries. This information may aid consultations.
- Create a list of apps which can be used as learning resources, that allow users to learn more about nutrition and exercise.
- If any app is not listed on the ORCHA library, contact the organisation to request an app is reviewed.



# Case Studies – Best practice using health apps as part of weight management services

Health providers who have adopted digital health and embedded into service delivery are seeing an impact.

## Case study: Tackling the escalation of diabetes

The 'Healthier You' programme has been commissioned by West Lancashire Clinical Commissioning Group, where there is a higher than the national average level of diabetes. To help overcome often life-long habits and embed new long-term behaviour change amongst participants, the team identified that health apps could strengthen the course.

Alongside advice and worksheets, participants are introduced to apps that will help them apply the recommended changes. So now, during the session on being more active, they have fun comparing each other's results on Accupedo Pedometer, a simple free app that counts your steps. Or, after learning the importance of knowing their sugar intake, they are encouraged to use the Change4Life Food Scanner, to know exactly how much sugar is in what they buy from the supermarket.

The introduction of apps has been successful; uptake has been high, and coaches report that apps are helping to better embed practical changes into participants' lives. Later in the course, participants also increasingly reference information from an app rather than asking a coach, which is a good sign for self-management skills which are important for long-lasting results. Participants get their blood sugar levels tested at the start, half way through and at the end of the course. These measures show that the course is working and participants are preventing Diabetes.

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Commenting on the introduction of apps, Rachel Gaskell, Health and Wellbeing Coach at Jon Scott, Health & Wellbeing Manager, Reed Momenta, adds to this: "The programme achieves results. Participants change their behaviours and across Lancashire lose on average 3.1kg, and in West Lancashire this figure is 5.4kg. Adding apps to the programme further empowers and informs participants, providing practical support and engaging personalised information. This helps to make changes stick and become part of everyday routine.

Reed Momenta said: “Participants who use apps as part of the course seem to understand and engage with the subject better. They also have a clearer picture of how they are performing against any goal. For example, when we discuss the importance of keeping a food diary, those with the Calorie Counter app by Fat Secret, not only had amazing insight at their fingertips, but regularly monitored and adjusted their nutrition habits.”

Mike Maguire, Chief Officer of West Lancashire Clinical Commissioning Group, continued “To tackle the escalation of diabetes, people need to introduce lifestyle changes that are achievable and sustainable. Adding ORCHA to the NHS Diabetes Prevention Programme helps us to better deliver this. By including engaging tools, that people can access when they need them, we’ve increased the programme’s ability to deliver long term behaviour change that will ultimately save lives.”

## Case study: Social Prescribing

Care Merseyside is an award-winning social prescribing charity, that offers non-clinical interventions for people in the local community, helping people to improve their health and wellbeing. So, if they want to stop smoking, lose weight etc, it connects them with the right service.

It embedded tested health apps into its service in 2019 and has seen significant advantages. It reports that apps have been a lifeline to the people it supports, particularly during COVID-19. Apps have given the charity a different way it can provide support to people. It has enabled the charity to give help to people with a wide range of challenges, recommending apps such as Sidekick to help with weight management to Sleepio, to help people to sleep better.

It has found that apps provide a no-pressure experience of learning and documenting how a service user is feeling. People particularly like that they are convenient and private. If a person is particularly anxious around others and sharing their thoughts and feelings, the charity has seen that an app can provide a safe space for a service user to connect with their thoughts and others.

Commenting on the move, CEO, Cathy Connolly said: “Often people aren’t confident to engage with services, but an app allows them to start an activity in private, and once they see results it gives them the confidence to start an exercise programme.

“For example, one lady had never engaged with exercise, her weight had built up, which made the idea of going to a gym even more intimidating. She started to use an app, and it has gradually introduced exercise into her life. She has lost weight and is now open to engaging with other activities, whilst using the app to measure her progress. This wouldn’t have happened without the app.”

# What next?

It is encouraging to see a good number of well-designed apps that have proven clinical efficacy. With rising levels of obesity and populations unable or reluctant to connect with health services both historically and more recently due to COVID-19, it is essential that people are connected with this digital health than can help in weight management.

But worryingly, most people are either unaware of weight management apps or search in unregulated app stores, where based on ORCHA's assessment of a sample of 379 diet and weight management health apps, it appears almost 80% of apps do not meet quality thresholds. This puts people at risk of harm, and even if directed to an ineffective solution, may prevent further attempts to connect with lifestyle support. App stores also make it very hard to match an individual's needs.

Facing a wide variety of weight challenges, personal preferences, and goals, one weight management app can't possibly meet everyone's needs. In addition, apps are not suitable for everyone, for example reliance on apps for self-monitoring must be used with caution for those at risk of an eating disorder. Selection of an app is better when conducted with a dietitian or health care professional.

Moving forward, it is best for health professionals to access a formulary of quality health apps, enabling people to be connected to the app that is right for them, maximising their probability for a positive outcome.

Where this is taking place, it is clear that apps can make a significant difference – food for thought indeed.



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