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Key Performance Indicators: Tier 2 Weight Management Services for children and their families

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Executive summary

This document provides an example of the Key Performance Indicators (KPIs) that could be incorporated into a specification for tier 2 lifestyle weight management services for children and their families.

The KPIs proposed in this document are intended for use with a service commissioned and delivered in line with the Public Health England (PHE) Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families. Commissioners and providers may also find it useful when considering the development of KPIs applicable to services provided for young people up to the age of 17 years.

It is recognised that some of these suggested KPIs may be stretching. KPIs should take account of local needs and should reflect how the service is commissioned, for example, if certain population groups are targeted. Local consideration should always be given when applying the proposed KPIs which are intended to support the whole commissioned service.

Local areas are encouraged to use these as a minimum and to add further KPIs to meet local requirements. The KPIs in this document are presented in summary in Table 1 and are accompanied with explanatory notes in Table 2.

This document has been developed in consultation with weight management service providers and commissioners following consideration of real world service data and published research data

Definitions and useful information

Referred but not enrolled: service provider received the referral, but the individual child or family did not wish to enrol in the service or did not meet the eligibility criteria

Enrolled: an individual child or family who has been referred or self-referred to the service and has been booked onto the service by the provider

Participant: an individual or family who attended at least 1 session

Completer: an individual or family who attended at least 75% of all sessions

Active Intervention: the pre-defined weight management service that doesn't include follow up

Follow up: the period after the active intervention

BOCF: Baseline observation carried forward – where the baseline data is used to substitute missing data

LOCF: Last observation carried forward – where the last available data is used to substitute missing data

UK90 Growth reference: When assessing child weight status it is important to use the UK90 growth reference, to calculate an age and sex appropriate BMI centile or z-score. The UK 1990 growth charts were compiled from measurements on boys and girls collected during 11 British surveys carried out between 1978 and 1990. They show the growth patterns of these UK children

BMI Centile: It is recommended that BMI centiles are used for communication with families and clinicians. A child's BMI and age can be plotted on the UK90charts to work out the BMI centile. The centile is the most commonly used method of interpreting an individual child's BMI and indicates the relative position of the child's BMI as compared with the reference population of children of the same age and sex

BMI z-score: When evaluating children's weight management interventions it is preferable to measure the change in a child's BMI using the BMI z-score rather than the BMI centile. A BMI z-score or Standard Deviation Score indicates how many units of the standard deviation a child is above or below the average BMI value for their age group

and sex. For further information see the Standard Evaluation Framework for Weight Management Interventions.[1]

[1] Public Health England (2018) Standard Evaluation Framework for Weight Management Interventions. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685545/SEF_weight_management_interventions.pdf.

Table 1: Summary of Key Performance Indicators

	Key Performance Indicator
1.	The service provider should be able to demonstrate joint working with appropriate services, in the local area.
2.	Within a month of referral date, attempts have been made to contact 100% of participants (that is families) who were referred but do not enrol. Where contact has been made, the participants should be asked if they would: a) Like to provide a reason for non-enrolment b) Make any suggestions that might support their future engagement c) Be contacted again in 6 months, in case their circumstances have changed.
3.	100% of participants enrolled in the service meet, as a baseline, the eligibility criteria as defined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families.
4.	100% of participants who drop out of the programme are asked the reasons for withdrawal and the timing of withdrawal is recorded.
5.	At least 60% of participants complete the active intervention.
6.	100% of commissioned services are developed using specialists, as defined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families.
7.	100% of staff receive training specific to the proposed service.
8.	XX% of individuals enrolled in the service are from identified high risk groups [please insert locally defined figures].
9.	100% of participant data is recorded, analysed and reported in line with the minimum dataset outlined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families.

10.	i) 100% of enrolled participants are invited to provide feedback at the end of the active intervention. Additional (optional) indicator: ii) At least XX% of enrolled participants provide feedback [please insert locally defined figures]
11.	75% of participants will have maintained or reduced their BMI-centile/z-score at the end of the active intervention.
12.	i) At least 35% of completers provide a weight and height measure at 6 months post active intervention ii) 20% of completers provide a weight and height measure at 12 months
13.	XX% of completers at 12 months have a sustained or reduced BMI centile [please insert locally defined figures].
14.	Adverse events are recorded in 100% of all participants.

Table 2: Key Performance Indicators and supporting narrative

	Key Performance Indicator	Supporting narrative
1.	The service provider should be able to demonstrate joint working with appropriate services, in the local area.	This KPI should be locally determined, to ensure it fits with local provision and population needs. However, as a minimum, services should be able to demonstrate formal links to Child and Adolescent Mental Health Services (CAMHS), tier 3 specialist weight management provision (if provided), tier 1 services, specialist secondary care services (that is paediatrics, dietetics) for children with significant co-morbidities and adult weight management services. These linkages can be demonstrated through an agreed clinical pathway or memorandum of understanding. It is recommended that this KPI should be the joint responsibility of both the commissioner and provider.
2.	Within a month of referral date, attempts have been made to contact 100% of participants (that is families) who were referred but do not enrol. Where contact has been made, participants should be asked if they would:	This data could help improve services for this disengaged audience and may support future uptake. Where contact has been established with participants and their families who were referred but did not enrol, it may provide an opportunity to

	a) Like to provide a reason for non-enrolment b) Make any suggestions that might support their future engagement c) Be contacted again in 6 months, in case their circumstances have changed.	deliver brief advice. More information about short conversations with families and tools to support brief interventions is provided by PHE[2].
3.	100% of participants enrolled in the service meet, as a baseline, the eligibility criteria as defined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families[3].	Evidence based practice, outlined in National Institute for Health and Care Excellence (NICE) guidance[4] on measuring overweight and obesity, should be used. Royal College of Paediatrics and Child Health (RCPHCH) UK growth charts[5] should be used to determine age and sex appropriate BMI centile or z-score.

[2] Public Health England (2017) Child weight management: short conversations with families.
Available at: www.gov.uk/government/publications/child-weight-management-short-conversations-with-patients
[3] Public Health England (2017) A Guide to Delivering and Commissioning Tier 2 Weight Management Services for Children and their Families. Available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/649196/tier2_child_weight_management_services_guide.pdf
[4] National Institute for Health and Care Excellence (2014) Clinical Guideline 189: Obesity: identification, assessment and management.
Available at: www.nice.org.uk/guidance/cg189
[5] Royal College of Paediatrics and Child Health (2013) Royal College of Paediatrics and Child Health UK-WHO growth charts. Available at: www.rcpch.ac.uk/Research/UK-WHO-Growth-Charts

		Eligibility criteria is defined as children with a BMI ≥91st centile (z score 1.33). There should be no upper BMI centile for individuals accessing the service, however for children or young people with severe or complex obesity, consider referral to a tier 3 specialist weight management service if one is available. Where a tier 3 service is not available it is important to record the number of children who would be eligible for a tier 3 service who are accessing tier 2 provision. This is important as: 1) these children may not do as well in the service, as a tier 2 service is not designed to accommodate the additional needs of these children; and 2) staff may need additional training to ensure that they are able to sign-post families with additional needs to the appropriate services. Services should not exclude, and should make reasonable adjustments for, individuals with physical or learning disabilities, and for individuals with mental ill health.
4.	100% of participants who drop out of the programme are asked the reasons for withdrawal and the timing of withdrawal is recorded.	An attempt should be made to contact participants who withdraw. It is recognised that in practice some may not be contactable. In the situation in which those contacted may not want to disclose the reason for withdrawal, this should be recorded as such.

		It is important to record the number, timing and reasons for participant drop out, in order to inform future service improvements. To maximise feedback from these participants, it is also recommended that every participant who withdraws is provided with the opportunity to complete an anonymous participant feedback survey.
5.	At least 60% of participants complete the active intervention	Completion is measured as attendance of at least 75% of all sessions during the active intervention. It is recommended that commissioners or service providers do not stipulate that specific sessions must be attended. This allows for periods of sickness, holidays and/or clashes with commitments which can occur at any point during the active intervention.
6.	100% of commissioned services are developed using specialists, as defined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families[3].	Specialists may include some of the following experts: a registered nutritionist, dietitian, behaviour change expert and physical activity specialist. More information about the training specifications is provided in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families (section 5).[3]
7.	100% of staff receive training specific to the proposed service.	It is important to consider the training needs of individual staff relating to their level of involvement and interaction with participants, and to ensure staff members receive training appropriate to their role in the

		service. For example, staff responsible for booking participants onto the service will have different training needs to staff facilitating the service. If using nutrition professionals, it is important to ensure that they are appropriately trained and can select and apply appropriate communication methods to explain reliable evidence-based healthy eating guidelines. The UK Register of Dietitians and Voluntary Register of Nutritionists can be found through the British Dietetic Association (www.bda.uk.com/) and the Association for Nutrition (www.associationfornutrition.org/) respectively, which can help when deciding which professionals deliver this component of the service. The Association for Nutrition additionally provides a competence framework for the wider workforce[6]. If delivering physical activity, ensure that the facilitators are appropriately trained and tailor the type, duration, intensity and format of activity to the population needs. This KPI should be locally determined to ensure it is tailored to the service being commissioned and is demonstrated through standard operating procedures and staff training programmes. This is important to ensure the fidelity of the service.

[6] Association for Nutrition (2012) Nutrition Competence Model for the Wider Workforce. Available at: www.associationfornutrition.org/Default.aspx?tabid=300

8.	XX% of individuals enrolled in the service are from identified high risk groups [please insert locally defined figures for low income, BME communities, individuals with disabilities, individuals with mental health conditions].	This KPI is for local determination to ensure it reflects local need. In order to facilitate the referral of individuals from identified high risk groups, commissioners should support service providers to actively engage and promote awareness of tier 2 weight management services locally with all health and social care professionals. Commissioners should support service providers to raise awareness of tier 2 weight management services among the local target population, as outlined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families.[3] Both commissioners and providers should consider undertaking Equality Impact Assessments to ensure that the needs of protected characteristics are considered. In addition, local areas should consider undertaking health equity audits of service provision to identify areas in which services may not be equitable. To ensure high risk individuals are accessing the service, commissioners and service providers should aim to ensure that the

		proportion of participants attending their service align with the local population prevalence indicators derived from the PHE fingertips tool.[7] Individuals classified as having a learning or physical disability or mental illness should have a statement of special educational needs or a formal diagnosis.
9.	100% of participant data is recorded, analysed and reported in line with the minimum dataset outlined in the PHE Guide to Delivering and Commissioning Tier 2 Weight Management Services for children and their families. This includes: collecting and reporting participant demographics, and participant and parental anthropometrics and wellbeing outcomes pre, post intervention and at 6 and 12 months follow up.	This KPI aims to ensure all required data fields in the minimum dataset are completed for all participants. Providers should make every effort to provide data within each required field. If participant data is not captured or missing, for example in those who do not attend or disengage from the service, as long as it is reported as such, this KPI will be achieved. The importance of taking a patient centred approach is recognised; therefore, a family's decision not to provide data should always be respected and recorded as 'did not wish to provide data'. As excess weight is known to track in families, service providers should do their best to capture parental weight status and ensure that appropriate signposting for adult weight management services is in place for parents or caregivers where appropriate. Providers are encouraged to explore this with parents or caregivers in an empathetic

[7] Public Health England (2018) Public Health Profiles. Available at: https://fingertips.phe.org.uk/

			way, facilitating consideration whilst retaining participants' engagement in the programme. This is an important aspect and evidence demonstrates that child weight management may be more effective if parental weight management is addressed simultaneously[8]. It is important to record post intervention follow up as obesity is a chronic relapsing condition. However, the challenges in maintaining engagement over the longer term are recognised, so it is recommend that baseline observation is carried forward (BOCF) for any missing data points as a minimum, when analysing the service impact data.
10.	i)	100% of enrolled participants are invited to provide feedback at the end of the active intervention. The tool used should be locally agreed, and could, for example, be the NHS family and friends test or equivalent. However, it is very important that whole family feedback is collected that	Commissioners and service providers should consider and explore a range of communication methods to engage with participants in order to collect feedback, and these should be tailored to participant preferences, as different groups may prefer different contact methods. It may therefore be helpful to consider a range of contact methods such as print, phone calls, email, text messages, group sessions or social media networks.

[8] Ells LJ, Rees K, Brown T, Mead E, Al-Kudairy L, Azevdeo L, McGeechan G, Baur L, Loveoman E, Clements H, Rayco-Solon P, Farpour-Lambert N, Demaio A (2018) Interventions for treating children and adolescents with overweight and obesity: An overview of Cochrane reviews. International Journal of Obesity. https://doi.org/10.1038/s41366-018-0230-y

	is from both the child and parent or caregiver (where parents are involved in the programme). Additional (optional) indicator: ii) At least XX% of enrolled participants provide feedback [please insert locally defined figures]	Commissioners are encouraged to work with service providers to set a KPI 10ii related to the percentage of enrolled participants who provide feedback. It is recommended that local consideration is given when applying this KPI as this may be considered a stretching KPI for services, depending upon target population groups. Commissioners should work with providers to ensure that the feedback collected is considered and acted upon in order to improve the service.
11.	75% of participants will have maintained or reduced their BMI-centile/z-score at the end of the active intervention	This figure was derived from the evaluation findings of local weight management services and aligns with the equivalent adult KPI outlined in the PHE.[9] Last observation carried forward (LOCF) analysis should be applied to all participant measures at the end of the active intervention, including participants who do not complete the service by measure of the definition provided[10]. LOCF imputes the last BMI centile/z score achieved. Whilst this may be the baseline for those participants who only attend 1 session (which results in no change in BMI centile or z-

[9] Public Health England (2017) Key Performance Indicators: Tier 2 Weight Management Services for Adults. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/656531/adult_weight_management_key_performance_indicators.pdf

[10] Attendance of at least 75% of all sessions

			score) it is important that these participants are included as their attendance has had an economic impact on the service. LOCF analysis enables demonstration of the full impact of the service on BMI centile or z scores reductions achieved by all participants.
12.	i) ii)	At least 35% of <u>completers</u> provide a weight and height measure at 6 months post active intervention 20% of <u>completers</u> provide a weight and height measure at 12 months	This figure is provided as a minimum. Consideration of a more stretching target such as 50%, which has been achieved by some established services, is encouraged. Ideally, anthropometric data including height and weight should be measured and recorded by the service provider, to eliminate the known risk of recall bias. However, given the known challenges around collecting follow up data, participant self-reported measures are acceptable. Where self-reported data is used, it should be clearly recorded as such on the minimum dataset. Data to support the long-term impact of weight management services is limited and can be difficult to obtain. Therefore, commissioners should consider prioritising the collation of this data when setting out to procure services and work with service providers and other local partners to help achieve this KPI. Service providers are advised to inform participants at the start of the intervention that follow up data will be required and to stress that this data is an important measure of the

		maintenance of behaviours learnt during the intervention. It should therefore be stressed that participants should return for measurements even if no further improvements have been achieved. It would be helpful to ask participants how they would like to be followed up, for example a face to face session, phone, email, text etc. Service providers should consider ways of maintaining engagement with individuals after they have completed the service to ensure that their progress continues to be monitored. Service providers may wish to explore a range of communication methods to maintain contact with participants, and these should be tailored to participant preferences, as groups may prefer different contact methods. It may therefore be helpful to consider a range of contact methods such as print, phone calls, email, text messages or social media networks. Whilst this KPI has been set for completers to give a fair reflection of the service, this data should be contextualised with the completion KPI (5). Data from participants who have not met the completion criteria should still be collected and recorded where possible.
13.	XX% of <u>completers</u> (that is those who have completed at least 75% of all intervention sessions) at 12 months have a sustained or	Commissioners and service providers are strongly encouraged to work together to develop a local metric for this KPI. Whilst some established weight management programmes have managed to achieve over 50%,

	reduced BMI centile [please insert locally defined figure].	it is recommended that local consideration is given when applying this KPI, so a suitable metric is agreed that takes into account the target population groups. Whilst the KPI has been set for completers to give a fair reflection of the service, this data should be contextualised within the completion KPI (5). Data from participants who have not met the completion criteria should still be collected and recorded where possible. Data from completers, who attend follow-up, whilst valuable, provides a biased picture of weight loss. To deal with this, baseline observation carried forward (BOCF) analysis should be applied for any participants who do not return for follow up. BOCF analysis imputes that anyone who did not attend follow up weighed the same at follow up as at baseline; in other words, they lost no weight. This analysis is important because evidence demonstrates that relapse is highly likely, particularly in those who have disengaged with the service. This KPI is critical because trial data in a similar age group suggests that there may be difficulties in sustaining the intervention impact over the longer term. Given the chronic relapsing nature of obesity, it is important that long term impacts are carefully monitored.[8]

		Service providers should consider ways of maintaining engagement with individuals after they have completed the service to ensure that their progress continues to be monitored. Service providers may wish to explore a range of communication methods to maintain contact with participants, and these should be tailored to participant preferences, as groups may prefer different contact methods. It may therefore be helpful to consider a range of contact methods such as print, phone calls, email, text messages or social media networks.
14.	Adverse events are recorded in 100% of all participants.	To ensure interventions do no harm, it is essential that all adverse events are reported. As a minimum service, providers must document any changes to linear growth (for example a fall in centile for height), new injuries or medical diagnoses that may have occurred whilst taking part in the intervention and any changes to psycho-social wellbeing. The PHE Data Collection tool for child weight management services – section 4 supporting evidence provides links to useful psycho-social wellbeing assessments.[11] Even if no adverse events occur, or the events that occur seem unrelated to the intervention, it is still important to document this.

[11] Public Health England (2017) Child weight management services: collect and record data. Available at: www.gov.uk/government/publications/child-weight-management-services-collect-and-record-data

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