

An evaluation of the Wirral National Child Measurement Programme telephone pilot

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The Applied Health and Wellbeing Partnership

The Applied Health and Wellbeing Partnership supports the development, delivery and evaluation of health and wellbeing services, through the innovative generation and application of evidence for effective and sustainable commissioning.

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Contents

Executive Summary	4
1. Introduction	5
1.2 The National Child Measurement Programme	5
1.3 Evaluation	5
2. Methodology	7
2.1 Methods	7
3. Results	9
3.1 Interviews with healthcare professionals	9
3.2 Analysis of school nurse telephone data	12
4. Discussion	17
4.1 Recommendations	18
5. References	21
Appendix 1: Interview guide	23

Executive Summary

The prevalence of overweight and obesity in children and young people has more than tripled since the 1980s (Han, Lawlor and Kimm, 2010; Lobstein, 2003). Being overweight in childhood is associated with a number of health problems, both during childhood (Freedman et al., 2007; Weiss et al., 2004) and in later life (Reilly and Kelly, 2011). Consequently, childhood obesity represents one of the major public health concerns in the UK, and reducing its prevalence is a major priority for the government.

The National Child Measurement Programme (NCMP) is a government initiative established by the Department of Health in 2005 which aims to measure the height and weight of every child in Reception class (aged 4–5 years) and year 6 (aged 10–11 years) at state-funded primary schools in England, and provide parents with written feedback about their child's weight status (using Body Mass Index to classify levels of obesity, overweight, normal weight and underweight). Furthermore the findings from the NCMP are also used to gather population surveillance data and to inform local planning of services for children and young people.

In 2012, as part of the NCMP, NHS Wirral Public Health piloted a follow-up telephone project. Here, the NCMP school nurse support worker contacted all parents of children that were identified as obese by telephone, ahead of them receiving their feedback letter about their child. Here, the school nurse provided details about the measurement outcome, and asked whether the parents would like to receive any supporting information about local lifestyle and weight management services. The school nurse kept hand-written records of each telephone call and the response gathered. This pilot was delivered in response to a request by the Department of Health, who acknowledged the importance of introducing proactive follow-up to the NCMP outcome data.

A process and impact evaluation was undertaken to understand the perceived impact of the pilot project on health professionals and parents of very overweight children. One-to-one semi-structured interviews were held with healthcare professionals involved in the delivery of the pilot. The evaluation team analysed the data collected by the healthcare professionals during the telephone calls.

A total of 469 children across 85 primary schools in Wirral of Reception class age (aged 4 to 5 years) and year 6 (aged 10 to 11 years) were identified as being very overweight. The data collected from the telephone calls found that less than a quarter of parents stated that they were aware of their child's weight status. Of the parents that were aware of their child's weight status, 10% were concerned. Healthcare professionals felt the telephone calls to parents of very overweight children had taken more time than the previous year due to the increased volume of overweight children.

The majority of parents were aware that their child was overweight, often explaining that their child carried extra weight, had 'a tummy' or ate a lot. Some parents talked of their child not being active. A large number of parents felt that their child was not very overweight as they were active and/or ate healthily. Other parents talked of their child either having a medical condition or a personal issue such as family bereavement or the child being sensitive about their weight, all of which was thought to have contributed to their child's weight status. When healthcare professionals were asked what they thought would happen if the telephone pilot was not available one healthcare professional felt that parents would not be aware of any lifestyle weight management services available.

1. Introduction

The prevalence of overweight and obesity in children and young people has more than tripled since the 1980s (Han, Lawlor and Kimm, 2010; Lobstein, 2003). Being overweight in childhood is associated with a number of health problems, both during childhood (Freedman et al., 2007; Weiss et al., 2004) and in later life (Reilly and Kelly, 2011). Consequently, childhood obesity represents one of the major public health concerns in the UK, and reducing its prevalence is a major priority for the government.

Family involvement is believed to be key for the effective treatment of childhood obesity (Luttikhuis et al., 2009, Rhee et al, 2005), therefore parents' recognition of their child's weight and associated health risks are important steps towards successful intervention (Park et al, 2013). However, often parents fail to recognise their child is overweight (Rietmeijer-Mentink et al., 2013; Warschburger and Kroller, 2009; Grimmit et al, 2008). Furthermore, while some parents may be generally aware of childhood obesity as a health risk (Etelson et al., 2003), they are often unconcerned about the health implications of their own child's overweight status (Crawford et al., 2006; Lampard et al., 2008). This finding is consistent with previous studies; in one study, just 18% of parents of overweight children reported concern about their child's weight (Lampard et al., 2008), while in a sample of more severely overweight children, less than half of parents perceived their child's weight to be a potential health problem (Young-Hyman et al., 2000). Furthermore parents who are unable to identify their child's overweight and the associated health risks may be less likely to prioritise promoting healthy lifestyle behaviours and seeking help for their child (Carnell et al; 2008 Baughcum, 2000). The provision of feedback on weight may improve parents' ability to recognise overweight in their children, and prompt changes in health behaviours (Grimmet et al, 2008).

1.2 The National Child Measurement Programme

The National Child Measurement Programme (NCMP) is a government initiative established by the Department of Health in 2005 which aims to measure the height and weight of every child in Reception class (aged 4–5 years) and year 6 (aged 10–11 years) at state-funded primary schools in England, and provide parents with written feedback about their child's weight status. Furthermore the findings from the NCMP are also used to gather population surveillance data and to inform local planning of services for children and young people.

In 2012, as part of the NCMP, NHS Wirral piloted a follow-up telephone project. Here, the NCMP School Nurse Support Worker contacted all parents of children that were identified as obese through the NCMP by telephone, ahead of them receiving their feedback letter about their child. The phone calls provided opportunity for the school nurse to notify parents about the letter, to gather information regarding any of their thoughts or concerns, and request whether parents would like to receive any supporting information about local lifestyle and weight management services. The School Nurse Support Worker did not ask parents directly about whether they were happy or unhappy with the telephone call, but information of this type was volunteered by many parents.

The pilot was delivered in response to a request by the Department of Health, who acknowledged the importance of introducing proactive follow-up to the NCMP outcome data.

1.3. Evaluation

The Applied Health and Wellbeing Partnership (AHWP) explored the impact and effectiveness of the telephone pilot on healthcare professionals involved in the delivery and their perceived impact the pilot had on parents of very overweight children. This supplemented analysis of secondary data which was gathered by the school nurses during the telephone calls, which provided insight into the concerns and thoughts raised by the parents during the telephone calls.

It was initially proposed to include the parents who were contacted via the telephone calls, to explore their views, perceptions, experiences and impact of receiving the telephone call prior to being sent a letter. However, this approach was felt to be unfeasible by the NCMP steering group,

therefore perceived impact was gathered via the healthcare professional interviews and analysis of the school nurse telephone data.

Aims and Objectives

The evaluation qualitatively and quantitatively explored the feasibility, acceptability and perceived impact that the telephone calls had on the uptake of local weight management services. The objectives of the evaluation were:

- To gather process and impact insight from service providers regarding their experiences and perceptions of the telephone contacts (specifically regarding how the additional telephone call was implemented, and how this affected their role; how the telephone calls were received by parents; and the perceived impact that this activity had on the treatment of overweight and obesity)
- To gather insight from secondary data to identify the impact of the telephone calls on the parents (the term parents is used to cover parents, guardians and main caregivers throughout this report)

2. Methodology

Qualitative and quantitative methods were used to assess the process and impact of the pilot project on healthcare professionals, the parents/main caregiver of the child and the individual child. The data collection and analyses took place between September 2013 and February 2014. The evaluation design, selection of participants, and topics for the interview guide were developed in collaboration with the Wirral Public Health Manager responsible for NCMP.

An application was made to Liverpool John Moores University Research Ethics Committee prior to the commencement of the evaluation to review the ethical implications of the proposed participant recruitment and data collection. The evaluation design and methods were approved as being ethically sound in August 2013 (ethical approval reference number 13/HSS/008).

2.1 Methods

Interviews with healthcare professionals

One-to-one semi-structured interviews were undertaken with five health care professionals involved in the development and delivery of the telephone pilot. The School Nurse Support Facilitator was interviewed, and also identified four school nurses to be invited to take part in a semi-structured interview.

All school nurses involved in the delivery of this intervention were aware of the evaluation and the researcher subsequently made contact to introduce themselves and provided a participant information sheet which gave details about the evaluation. A convenient time and date was then arranged for those who agreed to take part. Consent was obtained from all healthcare professionals who agreed to be interviewed. All interviews were undertaken via telephone, audio recorded to assist with analysis, and lasted between 8 and 17 minutes.

The interviews explored how and why the healthcare professionals became involved in the telephone pilot, and their experiences of being involved in the project. The healthcare professionals were also asked about the perceived impact they felt this service had on them in their role, and also on the parents the children.

Each interview was transcribed in note format and the data analysed thematically. Researchers reviewed the transcripts and determined the key themes arising from the healthcare professionals' interviews and secondary data. The researchers then discussed the key themes to highlight any differences, and a final list of themes was then determined and presented for the healthcare professionals.

Analysis of school nurse telephone data

In order to capture the information discussed during the telephone calls to parents, the School Nurse Support Facilitator developed a template to record the child's contact details, age, school, number of attempts to telephone the parents, and a summary of the conversation; this summary included whether the telephone call was received positively or negatively by the parent, if the parent was aware and/or concerned about their child's weight, if the parent was interested in receiving further lifestyle weight management information such as courses available in their local area and/or were they interested in receiving a follow up telephone call to monitor their child's progress, if the parents had requested that their child be placed on a lifestyle weight management course and any additional information that the school nurse support worker deemed relevant. This information was hand-written, so the evaluation team input these notes into MS Excel to enable analysis of the data.

The evaluation team spent time inputting these data onto a password protected laptop at the location of the school nurse team; this information was then saved onto a password protected computer within a secure office that only members of the research had access to. No personally identifiable information was recorded. This method ensured that no personally identifiable data were removed location of the Wirral school nurse team. The secondary data were analysed descriptively and explored parents' responses to the telephone calls.

Triangulation of results

The final process of analysis was to triangulate the findings from the healthcare professional's interviews, alongside the secondary data collected, to determine common themes and conflicting findings, and consider any recommendations that the research team felt may be important to highlight for the future development and delivery of this service. The secondary data were analysed descriptively.

3. Results

3.1 Interviews with healthcare professionals

Experiences of the NCMP

Interviews were held with the School Nurse Support Facilitator and four Wirral school nurses involved in the NCMP telephone pilot. The healthcare professionals described their involvement in the NCMP telephone pilot, describing that there were two teams of healthcare assistants who visited all primary schools in Wirral to complete the height and weight measurements of children in Reception class (aged 4-5 years) and year 6 (aged 10 -11 years). The healthcare professionals also described how the healthcare assistants delivered short education sessions to the children in Reception and year 6, which covered topics such as the content of sugar in fizzy drinks.

Three of the healthcare professionals talked of the positive feedback they had received from the schools regarding the education sessions that were delivered by the healthcare assistants.

“Reception [classes] are quite basic, they have got the puppet. There has been quite a lot of positive feedback. The girls have come back and said that they have had a really good session and teachers have come up and said how great it was”,

”They [healthcare assistants] are getting quite positive vibes from the school but they have cut down the lesson plan a little bit”

Reaction of parents to the NCMP

Healthcare professionals described how some parents were not happy about receiving a letter concerning their child’s weight status, and talked generally about their experiences of being involved with the NCMP. One healthcare professional described how some parents would telephone the Child Development Office, in response to the letter they had received; this person described how parents were often initially unhappy or worried about receiving the letter, but were calmer once the healthcare professional informed them of the lifestyle weight management services available. One healthcare professional raised the point that parents often found it difficult to discuss this issue with their child.

“I have had a few phone calls, a few more than normal on children just into the overweight category”

“They [parents] are not happy when they receive the letters, it makes parents aware and they don’t like to see what they are reading; what they should already know about their own child”

“Generally the feedback that we get is that the mum’s phone up worried and then they know there is help out there so they seem quite calm”

“Sometimes they [parents] don’t like to tell the children that they are overweight and that’s other issues with them”

Two healthcare professionals described two instances where parents had telephoned the office to discuss their child’s weight status and explained that their child’s ethnicity or medication may have contributed to the child’s overweight status. One healthcare professional felt that the number of calls they received from parents explaining that their child’s medication had contributed to their weight had increased from previous years.

"We had one particular mum who's child was mixed race and said did we not take into account that this child was mixed race and obviously was a different shape to the other children",

"We have obviously had a few parents whose children are on medication and we are not aware when we go out to the schools that a child is, say, taking a steroid. We have had a few more of those than we have had in the past but they have been manageable"

Experience of implementing the pilot intervention

Following analysis of the NCMP data, and before receiving an information letter to inform them that their children is 'very overweight', the parents of these children were telephoned by one healthcare professional (a school nurse support worker). This person completed the telephone calls during the evening, from home. The school nurse support worker and other healthcare professionals felt that this was the most appropriate approach, as they had struggled to contact parents during the daytime. One healthcare professional felt that this may have been in part due to parents working and/or completing the morning and afternoon school run and so were unable to answer the telephone calls.

When healthcare professionals were asked if they understood the pilot's aims and objectives all felt they were clearly explained to them before the pilot took place.

"In the very beginning when we first started it, we met up with X and they explained to us all the purpose, you know that we were doing a government scheme run by the Department of Health and why we were doing it"

During the year that the telephone pilot took place, the healthcare professionals felt that there were more overweight and very overweight children than in previous years. One healthcare professional thought that the telephone calls to parents of very overweight children had taken a long time due to the high numbers of very overweight children. Two healthcare professionals stated that some children that were highlighted in Reception as overweight had also been categorised as overweight in year 6.

"At the moment getting an awful lot of very overweight children, it is taking a lot more time this year than last year"

"All I have heard is at the moment the schools that we have done they are picking up a lot of very overweight children much more than last year"

"These children that we picked up in Reception are still overweight in year 6"

"One team have found that they have actually picked up an awful lot more overweight's this year"

Impact of the telephone pilot on healthcare professionals

One healthcare professional felt that their day-to-day role had changed due to a change to the delivery of in-depth education sessions to year 6 children. This person described how they now talked to the children about not drinking fizzy drinks, rather than discussing food types. This healthcare professional felt that this approach was more effective, and that children learnt more this way. Another healthcare professional felt their daily working had been largely affected due to having to complete the telephone calls outside and in addition to their working hours.

"The positive side that X and I have started to do is we don't do as in-depth a talk to the kids as much, the year 6 children. We don't blind them all with the science"

of vegetables and things like that. We do a lot of talk about fizzy drinks and how important it is to stop with these energy drinks and things like that and they seem to take that more on board than going really into detail about certain foods”

One healthcare professional described how they felt that the telephone calls to parents had reduced the amount of telephone calls the office received from parents, often complaining about the letter. One healthcare professional stated that one year they had experienced up to ninety telephone calls from parents, but felt that since the pilot had been delivered, the number of calls had largely reduced.

“I had 80 or 90 phone calls the first year from angry parents which is why we brought this [the pilot] in for the very overweight children to pre empt and it has cut it down incredibly”

“X’s role has certainly cut down on the amount of phone calls”

“X handles it really well, they do a fantastic job, because we were getting so many phone calls about the overweights”

During the pilot, telephone calls were only made to the parents of children who had been classified as ‘very overweight’. Some of the healthcare professionals described how they received a large number of phone calls from parents of children classified as ‘overweight’. It was felt that telephone calls to parents of children classified as ‘overweight’ may reduce the number of calls received by parents, but that they did not have the capacity to do this.

“We were getting so many phone calls about the very over weights there is no way X could deal with the ordinary overweights and that seems to be a problem at the moment - we are getting a lot of ordinary overweights”

“We haven’t got the capacity to actually deal with that [telephoning parents of overweight children]”

“I think if that goes into too much then I think we should all think of doing our own for the overweight”

“They [parents of children who are overweight] do tend to come through to me so it impacts on my role a little bit time wise because I spent half an hour this morning talking to one mum who was lovely, but that was half an hour of my time”

When healthcare professionals were asked what they thought would happen if the telephone pilot was not available, one healthcare professional felt that the parents who were concerned or angry would ring up the office and complain. This healthcare professional also felt that parents would not be aware of any lifestyle weight management services available.

“I would probably be tearing my hair out with the number of phone calls! If X didn’t make the phone call I think the parents that are concerned or angry would probably ring in and complain and they wouldn’t be aware of any service unless we told them”

Perceived impact of telephone pilot on families and children

When healthcare professionals were asked what support they thought the pilot offered for the families and children, two healthcare professionals felt that the pilot offered help and information that parents may have previously not been aware of.

“They offer Weigh to Grow, an alternative, they offer help, it’s a little bit of help that parents are not aware of”,

“Some parents, if they get a letter, X will ring them but it does not necessarily mean that they [the parents] will take that child, sometimes they will say ‘I will just leave it’”,

“Or sometimes they will say to X yes I want to go but when it comes to actually going on the course they don’t take the course up, they will have changed their minds”

“If X didn’t telephone them the parents to pre-empt them [the parents] then they wouldn’t know about the [Lifestyle and Weight Management] service”

The healthcare professionals felt unsure about the impact of the pilot on the children who were identified as very overweight, describing how the parents had control over informing the child about their weight status and deciding on whether an intervention is required.

“They are not told their weight in school and if the parent chooses to tell the child then that is up to them [the parent]”,

All the healthcare professionals described that they did not know whether the telephone calls had impacted on the uptake of local services, and felt this was something they would benefit from.

“We don’t really have any feedback on that [the impact it has on the child]”

Suggested improvements to the telephone pilot

Healthcare professionals were asked whether they would make any improvements to the pilot, should it run again. One interviewee felt it would be useful to include a contact telephone number in the letter to parents, for parents to contact if they had any queries. Another healthcare professional highlighted how a lot of their time is spent responding to telephone calls from the parents of overweight children, and that there are not enough resources to provide adequate support to this group.

“If we had the resources, and I don’t mean from us but maybe from elsewhere, it might be nice to have a telephone number where anybody could ring and it would be a help if the number was on the letter; if you have a problem with this to ring this number”

“I do feel that the majority of calls come through are from the overweight children and there is no one there to deal with that category and there is no way that we can fit that into our programme”

3.2 Analysis of school nurse telephone data

During 2012/13, a total of 469 Reception and Year 6 children were identified as very overweight.

The School Nurse Support Worker made a total of 775 telephone calls between January 1st 2013 to July 31st 2013 to inform the parents of very overweight children that they would be receiving a letter in the post to inform them that their child was very overweight; an average of five telephone calls were made per evening of the working week.

Over two-thirds of calls (67%, n= 517) were re-attempts to make contact with parents; the maximum number of calls made to homes was five.

The average number of phone calls required to contact parents of Reception children was 1.7, compared to 1.6 for the parents of Year 6 children (table 1).

Table 1 Number of telephone contacts made

	Telephone attempts made					Total
	1	2	3	4	5	
Reception	66	78	57	16	5	222
Year 6	192	166	138	52	5	553
Total	258	244	195	68	10	775

School nurses successfully made contact with 74% (n=346) of children identified as very overweight (Reception = 71% success rate; Year 6 = 75% success rate) (table 2).

Table 2 Success telephone contacts made

	Total number of children classified as very overweight (n)	Total number of parents contacted through the pilot (n)
Reception	130	92 (71%)
Year 6	337	252 (75%)
Total	467	344

Parent responses to telephone call

During the telephone conversation the school nurse support worker noted down responses from the parents of the very overweight child. The evaluation team coded these responses as either positive, negative or as no response. The majority of forms (77%, n=266) contained no information regarding how the telephone call was received by the parent. The remaining positive and negative responses (n=80) were analysed descriptively to provide further evidence of their views. Of those parents who did provide a response, the majority were positive (74% (59/80)).

Parents talked of understanding why the call had been made, and feeling appreciative of the call. One parent stated that they were initially shocked that their child had been identified as very overweight. Some parents felt that they had been needing help with their child's weight for a period of time, and described how they needed support with issues such as portion size, healthy eating and how active their child should be; these parents welcomed the telephone call and the offer of subsequent support. Other parents felt that it would be the 'kick start' that their child needed and that they would like their other children to also attend LWMS.

Awareness and concern

Data were collected from 109 parents regarding the topics of awareness and concern. In terms of awareness, 23% of parents (78/109) stated that they were aware that their child was very overweight; however, only 10% (11/108) stated that they were concerned about this.

In terms of age group, 47% (15/32) of parents of Reception class children were aware of their child's weight, compared to 82% (63/77) of parents of Year 6 children. Despite awareness, only 6% (3/52) of parents of Reception class children were concerned about their child's weight, compared to 14% of parents of Year 6 children.

Request for further information/ follow up telephone call

During the telephone conversation, the School Nurse Support Worker recorded any requests from parents for further information on lifestyle weight management services such as courses available in the local area. The School Nurse Support Worker also recorded whether parents were interested in receiving a follow-up telephone call to monitor their child's progress. Just under half of parents (42%, 146/291) stated that they would like further lifestyle weight management information and 9% of parents (n=32) stated that they would like a follow-up telephone call to monitor their child's weight progress.

In terms of age group, 30% (22/74) of parents of Reception age children requested further information about lifestyle and weight management services, compared to 56% of parents of Year 6 children. Four parents of Reception class children said they would like a follow-up telephone call, compared to 27 parents of Year 6 children.

Referral to lifestyle weight management services

Data were recorded from a total of 334 parents regarding whether they would like their child to be referred to a local lifestyle and weight management service. Of these, 31% (105/334) said that they would like their child to be referred; 19% (17/88) from Reception class and 36% (88/246) from Year 6 (figure 1).

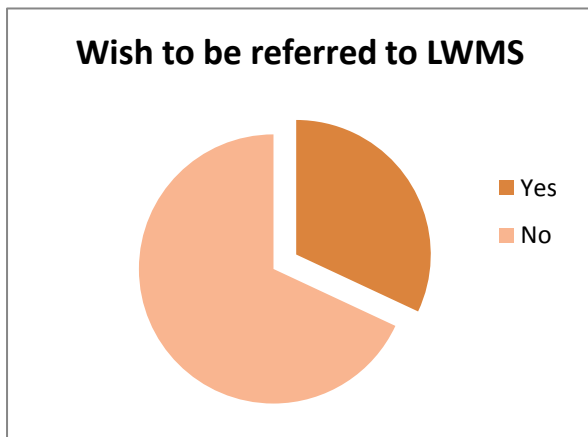


Figure 1 Referrals to LWMS

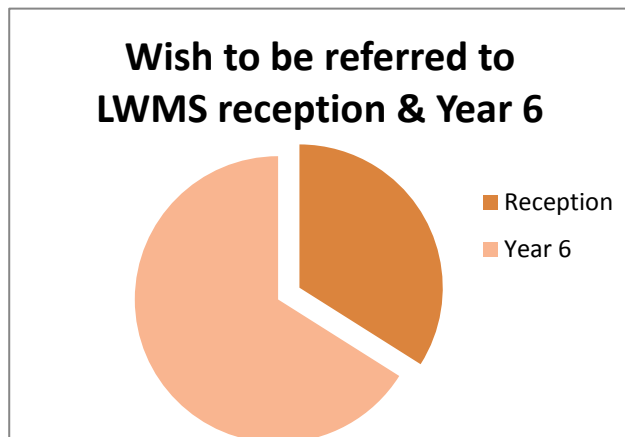


Figure 2 Referrals to LWMS by school class

Additional responses

The school nurse recorded any additional comments made by parents, which were categorised into four main themes; issues with the child, child already losing weight, parents did not think child was overweight, parent was aware child was overweight.

Issues with the child

Parents talked of their child either having a medical condition or a personal issue such as family bereavement, or the child being sensitive about their weight, all of which they thought may have contributed to their child's weight status.

Some of the medical conditions reported by parents as having contributed to their child's weight status included: Autism (n=5), Asperger's (n=4), Asthma (n=2), medication which has

led to weight gain (n=2), broken bone (n=1), operation (n=1), Celiac disease (n=1), Hirschsprung disease (n=1), Perth disease (n=1), under GP (n=1). Two parents stated that their child had a medical condition but did not go into any further detail (table 3).

The parents whose children had Aspergers and Autism talked of their child's food choices being limited due to the child's preference. One parent whose child had Autism stated that they rewarded their child with treats for good behaviour, and two other parents felt they were in need of advice for their child's eating habits and subsequent weight status. The parents whose child had Asthma talked of them not being able to be active and they were on steroids which they thought may have contributed to their child's weight status.

Table 3 Medical reasons given by parents to explain child's weight gain

Medical problem	Number
Autism	5
Aspergers	4
Asthma	2
Medication	2
Broken bone	1
Recent operation	1
Celiac disease	1
Hirschsprung disease	1
Perth disease	1
Under GP	1

Some parents talked of their child's weight status being a sensitive topic, and did not want to draw any attention to it. One parent felt their child's self-esteem was negatively affected and another stated that their child's sibling had anorexia and did not want to 'make a big deal' over their weight. Another parent mentioned that their child's weight status was a 'touchy subject' with the child.

Some parents felt that their child would not be interested in lifestyle and weight management group activities, with one parent expressing that their child did not like groups where they did not know anyone else. Two further parents stated that their child had been comfort eating due to family illness and bereavement. A small number (n=2) of parents mentioned that their child was a 'fussy eater' and/or did not like fruit or vegetables.

Child already losing weight

Parents made several comments (n=8) with regards to their child already losing weight through healthy eating and/or exercise for example through, gymnastics, rugby or swimming classes and/or changing eating habits at the family home. According to some of the parents some (n=7) of the children had already attended weight loss services including Weigh To Grow, MEND and Slimming World (n=3 attended with their parent/main caregiver); these parents explained that they had seen a positive change in their child's weight status. Other parents of children that had previously attended Weigh To Grow or MEND (n=3) felt that there had not been any significant results regarding their child's weight status. One parent stated that their child had initially lost weight on the course but then later regained the weight.

Other parents (n=4) stated that they were trying to help their child lose weight but did not disclose how.

Parents did not think child was overweight

A large number of parents (n=37) felt that their child was not very overweight as they were active and/or ate healthily. Some parents stated their child played sport such as rugby,

swimming or attended the gym and others talked of their child not eating sweets. Some parents (n=2) mentioned that their child ate healthy, but was not active.

Other parents talked of their child as having always been a 'big boy/girl', and that their child was tall and not obese. Other parents (n=10) talked of their child as being small or as not looking overweight. Some parents put their child's weight status down to a recent or hoped for growth spurt such as puberty.

Parent was aware child was overweight

Some parents were aware that their child was overweight highlighting that their child carried extra weight, or had 'a tummy' or that the child ate a lot and portion sizes were on the large size. Other parent talked of their child not being active.

Some parents (n=22) stated they would speak with their child regarding their weight, as a result of receiving the telephone calls.

Demographics

Demographic data were collected from the forms regarding the postcode of the primary school in which the child attended (this was restricted to schools postcode so that the individual child could not be identified).

Of the 85 schools in Wirral that were identified as having very overweight children, 38% (n=179) came from the most deprived areas of Wirral, and 19% (n=89) came from the least deprived areas of Wirral. The maximum number of very overweight children in a school in Wirral was 15 and a minimum number of very overweight children in a school in Wirral being 1.

4. Discussion

A total of 469 children across 85 primary schools in Wirral of reception class age (aged 4 to 5 years) and year 6 (aged 10 to 11 years) were identified through the NCMP as being very overweight. A total of 775 telephone calls were made by the School Nurse Support Worker between January 1st 2013 and July 31st 2013 to inform the parents of those children classified as 'very overweight' that they would be receiving a letter. The School Nurse Support Worker made contact with 74% of parents whose children were identified as very overweight.

Less than a quarter of parents stated that they were aware of their child's weight status. Of the parents that were aware of their child's weight status 10% were concerned. Some parents were aware that their child was overweight, highlighting that their child carried extra weight, had 'a tummy' or that the child ate a lot. Other parents talked of their child not being active. A large number of parents felt that their child was not very overweight as they were active and/or ate healthily. Some parents stated their child played sport such as rugby, swimming or attended the gym and others talked of their child not eating sweets. Some parents mentioned that their child ate healthily, but was not active enough.

Other parents talked of their child either having a medical condition or a personal issue such as a family bereavement or the child being sensitive about their weight, all of which was thought to have contributed to their child's weight status. Some of the medical conditions listed by parents as having contributed to their child's weight status included; Autism, Asperger's, Asthma, medication which has led to weight gain, broken bone, operation, Celiac disease, Hirschsprung disease and Perth disease. The parents whose children had Aspergers and Autism talked of their child's food choices being limited due to the child's preference. One parent/main care giver whose child had Autism stated that they rewarded their child with treats for good behaviour, and two other parents felt they were in need of advice for their child's eating habits and subsequent weight status. The parents whose child had Asthma talked of them not being able to be active and they were on steroids which they thought may have contributed to their child's weight status.

These findings support previous research which found that three-quarters of parents of overweight children did not recognise their child's overweight status, and only 20% perceived their child's weight to be a health risk (Park et al., 2013). The authors of this study also found that parental perception of risk was also associated with child overweight status. This finding is consistent with other studies; in one study, just 18% of parents of overweight children reported concern about their child's weight (Lampard et al., 2008), while in a sample of more severely overweight children, less than half of parents perceived their child's weight to be a potential health problem (Young-Hyman et al., 2000). In addition, a systematic review of qualitative studies exploring parental perceptions of healthy behaviours found that overweight was seen as a problem for the future, and an issue that would affect other people's children rather than their own (Pocock et al., 2010). A previous review identified that many parents have a poor understanding of the relationships between obesity and health risks (Towns and D'Auria, 2009). Other studies have suggested that the increasing prevalence of overweight in the population has changed perceptions of 'normal' body size, leading to widespread underestimation of overweight (Johnson et al., 2008).

Of the Wirral schools identified as having very overweight children, 38% were based within the most deprived areas of Wirral, and 19% from the least deprived areas. This finding reflects other evidence, which found that low socioeconomic groups had lower awareness of the health risks associated with being overweight.

Healthcare professionals felt the telephone calls to parents of very overweight children had reduced the amount of telephone calls the office received, often regarding complaints from

parents about the letter. One healthcare professional stated that they had one year experienced up to 90 telephone calls from parents, but explained that since the pilot, the number of calls had largely reduced. Healthcare professionals thought that parents would not be aware of local support services, if the telephone calls were not made. This was supported by the quantitative evidence, which found that just under half of parents said they would like further lifestyle weight management information, and 9% of parents stated that they would like a follow up telephone call to monitor their child's weight progress; furthermore, just under a third of parents contacted stated that they would like their child to be referred to a lifestyle weight management service.

Some of the parents described how their children were already attending weight loss services, with parents noting a positive change in their child's weight status; some parents of children who had previously attended local weight management services felt that there had not been any significant reduction in their child's weight status.

All healthcare professionals described that they would value any feedback on whether the parents acted upon the advice and information given to them as a result of the telephone pilot, as this was not currently communicated to them. The healthcare professionals also thought it would be useful to include a contact telephone number for parents to seek further information. Another said they felt it would be useful to have the time to speak to those parents of children who were identified as overweight; they perceived that this group often rang to complain, and it was felt that a pre-letter telephone call may mitigate against this. However, it was recognised that they would not have the capacity to undertake this activity with their current workload and staffing levels.

4.1 Recommendations

The telephone pilot has highlighted a number of key findings integral to the delivery of the future of the telephone pilot NCMP programme.

Telephone calls

- Continue with the School Nurse Support Worker telephoning parents of very overweight children to inform them of their child's weight status ahead of them receiving the letter. This was found to largely reduce the number of telephone calls received at the Child Development Office. According to healthcare professionals, before the telephone pilot was in place, some parents telephoned staff involved in the NCMP pilot and were often angry and upset regarding their child's weight status. Some parents also expressed that they would like to make a complaint regarding the letter they had received containing their child's weight status. However the healthcare professionals explained how the telephone pilot had largely reduced the number of telephone calls the Child Development Office had received and subsequent complaints.
- Continue the telephone calls to parents after the normal working hours of 9:00am to 5:00pm as this was the most appropriate time to make contact with parents.
- Consider contacting parents of children who were identified through the NCMP as overweight. Healthcare professionals spoke of the number of overweight children identified through the NCMP as increasing, yet they are not contacted by the school nurse support worker. However issues of capacity were identified, and some healthcare professionals suggested they could each contact a proportion of parents of overweight children.

- The evaluation highlighted that the telephone form devised to capture information during the telephone calls was not used consistently for each individual telephone call, resulting in inconsistencies in the secondary data (missing responses, for example). A new form may be required, containing the following sections which must be covered during every telephone call carried out by the school nurse support worker:
 - name of child
 - date of birth of child
 - full address including postcode
 - school child attends
 - how the telephone call was received by the parents – positively or negatively,
 - is the parent aware of their child's weight status?,
 - is the parent concerned by their child's weight status?,
 - does the child suffer from any medical condition or take any medication?
 - is the parent interested in their child being referred to a lifestyle weight management service?
 - has the parent/main caregiver's child previously attended a lifestyle weight management service?
 - how did they find it?
 - is the parent interested in receiving a follow up telephone call regarding their child's progress?
 - Is child aware or will they be aware of their weight status?

Letters

- When developing the letter to be distributed to the parents of children identified as very overweight, it may be useful to include a contact telephone number for them to contact if they wish to do so. Parents may seek further information regarding their child's weight status and/or any help available to them. The contact telephone number would not be the Child Development Office but maybe health advisors who have been trained to offer telephone support with regards to very overweight children.

Education and awareness

- Healthcare professionals talked of several parents stating that their child was very overweight due to factors such as ethnicity or due to medication. It may be useful to develop some factsheets for parents regarding the leading causes of obesity and how these can be avoided, with useful tips on how to eat healthily and be active with their child, as well as information regarding local lifestyle weight management services.
- From interviews with healthcare professionals it became apparent that not all of the lifestyle weight management services had leaflets available at all times. It may be useful for the NCMP team to have some additional lifestyle weight management service leaflets available to distribute to parents.

Feedback

- Healthcare professionals expressed that they would value feedback about if and how the advice provided through the telephone pilot had been used. At the time of evaluation, the healthcare professionals did not have any knowledge if the child attended the lifestyle weight management service as a result of their contact. It may be beneficial for the NCMP developers and the local lifestyle weight management services to link up so that healthcare professionals can ascertain if the children who were identified as very overweight actually attended the lifestyle weight management service, and if their weight status changed in any way.

Early intervention and follow-up

- Healthcare professionals highlighted that some children who had been identified as very overweight in Reception were also highlighted as very overweight in Year 6. Early intervention when the child is initially identified as very overweight may be beneficial. For example, attendance of local lifestyle weight management services and a follow-up to see the child's progress and discuss next steps.

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