**Anorexia in Children and Adolescents Transcript**

**September 2021**

**Dr Louise Phillips, Consultant Paediatrician. BCUHB**

0:01 **Chair:** Hello and welcome, everybody. Thanks so much for joining us. I'm really looking forward to this talk about Anorexia in Under Eighteens. Big thanks to Dr Rebecca Andrews and Dr Louise Phillips, both of whom have been helping us on this talk. Both worked together. Today Louise is taking the lead. So I think that's it. And I'll hand over to Louise. Thank you.

0:41 **Speaker:** Hi, so good afternoon, everybody. Thanks for joining us. So I'm just going to start off just reading this poem to you. I know you can see it on your screen as well, so feel free to go through it with me. It's called **Relationship with Ana.**

I've seen this girl named Ana,
She's pretty thin and tall,
She has the smallest frame I've ever seen,
And not one single flaw,

I met this girl named Ana,
She introduced herself today,
She seems so very nice and kind,
She says she wants to stay,

I know this girl named Ana,
She's so perfect and it's true,
I'm so fat compared to her,
But she'll make me skinny too,

I'm friends with this girl named Ana,
I've started eating less,
Hating the person in the mirror,
My life's becoming a mess,

My best friend is this girl named Ana,
I want her to always stay,
All my other friends have left,
But she will never stray,

The only one I listen to is Ana,
She is so smart and full of advice,
I'm starting to get smaller,
My health is the only sacrifice,

I'm scared of this girl named Ana,
I can't get her out of my head,
It finally occurred to me,
She wants me to be dead,

I hate this girl named Ana,
She makes my life a living hell,
Someone please hear my silent screams,
Cause she won't let me tell,

My worst enemy is this girl named Ana,
She is a demon in my head,
She seems so very nice at first,
But I was so mislead,

I'm a prisoner to this girl named Ana,
I'm captive to her wall,
I can't help but to do what she says,
How can I be so fat still,

My murderer is this girl named Ana,
She starved me to my grave,
My heart finally stopped beating,
I just couldn't continue being brave.

So that's the story of anorexia.

2:40 **Speaker:** So anorexia is a devastating illness. It tortures young people, and it destroys them and their family. It robs them of their childhood, of their friendships and their ability to access education. And they end up in a spiral out of control that they just can't get out of.

And that's why I'm here to talk to you. And it's good that you are here as well so that we can help change what anorexia does to these young people. It carries the highest mortality rate of any mental health illness. So we do need to get this right.

3:19 **Speaker:** OK, so as you said, I'm Dr Louise Phillips. I'm a consultant paediatrician and I work at Glan Clwyd Hospital 50% of my time, as you mentioned. 50% of my time as a general paediatrician or 50% of my time with the Eating Disorders Service, which is where I work with Dr Rebecca Andrews. So I've been doing this for about six years now, so I've learnt a lot along the way about the best way of doing things. So hopefully I'll share some of that with you guys today.

3:45 **Speaker:** So the plan today is:

To start off with a case and just very briefly to get your thoughts about this as it is a real life case.

* A bit of an overview of anorexia and the impact that Covid has had on it.
* How to identify potential case of anorexia and the slippery slope that children go down to get into it.
* Some of the common findings in these patients.
* How they might present to you as GPs and what clues you can pick up in history and examination.
* What the perfect referral is for us to help our service. Analogies to help with our understanding.
* A little bit about starvation and how that works. Some take-home messages.

We have got a few cases, but we probably won't get to those because I'd like to make sure I can answer any questions.

4:31 **Speaker:** OK, so before I put the next case up, these are things I want you to just have a little think about. So if this child presented to you as a GP, what sort of questions might you be thinking about, might you have asked? What important information is there to ascertain? Is it somebody that you would have done some investigations in? And what would you actually do for the next the next under 18 year old that you see in your surgery, and you suspect that they might have anorexia?

5:02 **Speaker:** So this case was a 16 year old girl who was referred by the GP to Paediatrics with a diagnosis of possible Reynaud's. There was a history of some weight loss and there was a history of a reasonable amount of exercise. So she went into the paediatric general clinic and was identified as possibly having anorexia. While plans were being put into place, she became very severely physically compromised and ended up being admitted within two days to the paediatric ward. She has subsequently gone on to have quite significant health issues related to anorexia. And she's actually had a couple of complications and been one of our most unwell young people, actually. So was she identified early? Was she missed? Who missed her? Whose responsibility was it? Was there anything that could have been done differently? How many people do you get who are 16 and female where you think a diagnosis of Reynaud’s is a possibility?

So if you just have a little bit of think about that and I won't go through that now, we’ll come back to that later on at the end and then just see whether some of the answers that you've put down now have changed as we've gone through the presentation.

6:16 **Speaker:** OK, so there's three main problems with anorexia. The first is that it's under recognised. So young people don't want to believe or actually don't believe they've got the diagnosis. Parents don't want to believe it's true. And actually, professionals find it hard to come to terms with the fact the person in front of them might have anorexia and to bring it up. They worry about what if it isn't and they've put the idea in their head? What if the parent and child are horrified by the suggestion? So what tends to happen is people tend to not want to believe it and therefore that helps it remain under-recognised. That then prevents us being able to intervene as early as we as we could do if we were better at recognising it. And that goes across the board for health professionals, not just with GPs. It's underestimated and so I think people tend to feel that the physical consequences aren't that severe. They've just lost a bit of weight, but they're a bit heavier to start with anyway. So what's the sort of big deal? Young people often don't admit they feel unwell. So overall, people underestimate the severity of anorexia, and we see that time and time again. And then lastly, it's really misunderstood. So people feel that it's within a young person's control to stop their eating. So it's their own choice. So they don't need help to sort it out. They just need to do what they're supposed to do and eat. Certainly on the ward, one of the biggest problems that I've had with nurses is that when you've got a child in one cubicle who, for example, has got meningitis and is really ill and having intravenous antibiotics and you've got a teenager in the cubicle next to that child who just refuses to eat, it's very difficult for the nurses to appreciate how both of those children are sick and both of them need help. So the misunderstanding of anorexia really also causes difficulty with intervening and with managing it.

8:17 **Speaker:** The other thing that I think people find quite difficult to understand is that these young people are often quite intelligent, quite bright. To you and I they clearly look thin and malnourished. So how do they not see what we see? How when they look in the mirror or when they think about themselves, do they see somebody that is fat? And I won't go into it now because I haven't got time. But there's a lot of work that's being done on the actual brain and how different centres of the brain when they are starved just don't work properly. So genuinely, when that young person looks in the mirror, they genuinely see an image of somebody who's fat because they see an image that's actually from their brain rather than what's in front of them. So they aren't lying when they say that; this is actually what they are seeing.

9:10 **Speaker:** So I mentioned before about the high mortality for anorexia, and these are just some cases that are quite well known, they were reported in the MaRSiPAN documentation that looked at ways of improving adults, initially, with anorexia and looked into where the NHS failed these people.

Case 1 was a young lady who was admitted to hospital because of having a low potassium level. Potassium levels were corrected, and she was discharged home. Nobody thought to ask or investigate further as to why they were low in the first place, to think about the fact they probably going to go low again and therefore that needed to be dealt with and managed. And unfortunately, she passed away.

Case 2 is another young lady who managed to convince the professionals that were working with her, that she was fine. It was her choice not to eat. They could not make her. She was of sound mind and failure to use the Mental Health Act meant that she actually successfully managed to starve herself to death.

Case 3 is a French model, Isabelle Caro. So she actually was part of an anti-anorexia campaign and she spiralled out of control with anorexia. Eventually she did get assessed and treated, but it was way too late, and she passed away. And her mum, unfortunately, then committed suicide. So it was a double tragedy.

Case 4 and 5 are both young people who died, one because of being fed too slowly and continuing to starve, and then case 5, because of being fed too quickly and failure to recognise that she developed refeeding syndrome.

Case 6 is Julia Duffy. She developed anorexia first at the age of 12, and she was moved from pillar to post from one hospital, one psychiatric unit to another over the following years. And nobody ever could really help her. And in her diaries, she describes taking three hours to pour out a bowl of cereal in order that she measured out the amount of cereal correctly.

And then Case 7 is Avril Heart. So she unfortunately passed away at the age of 19 back in 2012. So some of you may remember her. She was from down south. She was diagnosed with anorexia in her A Level year. She spent 10 months in hospital. Supposedly recovered. Went off to a nearby university, was put under the watchful eye of a junior psychologist who failed to recognise in the week before she died how much weight she had lost. And unfortunately, she passed away as well.

So all of these cases were avoidable deaths from anorexia. And actually some of them really are quite recent.

12:10 **Speaker:** The other one, which is very recent, which you probably have heard about, was Nikki Graham. Most of you will know her as the Big Brother TV personality. She died at the age of 39. After having anorexia or mental health issues since the age of 12.

The pandemic has made things much worse for young people and children and adults with eating disorders. And the referral rates across the across the country have just soared. And we've definitely seen that in North Wales. The services that were often struggling to cope with numbers are now struggling even more. So it's worth having a little bit of a think about why that might be. What is it about the pandemic that's meant that these young people have struggled so much with eating?

Some of the theories are that there's been a real health drive at the beginning of the pandemic. The only time you were allowed to go out was for your physical exercise, and it was encouraged that you did that. We know that people with a BMI on the high side had a worse prognosis if they developed Covid. You were taking young people out of schools, out of their social circles, out of things that would distract them and sticking them at home with online learning and lessons where they had much more time to completely focus on calorie counting and exercise. Often these young people, this sort of age, teenage years, were at home alone. So there were no teachers or friends to keep an eye on them. Parents were at work. So it was a Swiss cheese model, really, for a set of young people to either develop anorexia in the first place or if anorexia was already there, for it to escalate. And that's what we saw really. We saw young people who are much sicker at presentation than we'd been seeing prior to the pandemic.

14:06 **Speaker:** So this was an article that was published in The Lancet, which did recognise that most places in the UK was seeing a doubling of the number of both urgent and routine referrals and that services were struggling to cope with the increase in referrals.

14:24 **Speaker:** Some of the Royal College of Paediatric reports over recent years have already highlighted that anorexia is becoming an increasing problem with young people. With social media. Young people having phones with their apps where they can very easily calorie count, where they can keep an eye on their fitness and how many calories they're burning off, what they're eating and whether they're in a negative deficit or not. It's very easy to type into apps how much weight you want to lose and how quickly. And a lot of the apps don't have ways of actually saying this isn't a sensible thing to be doing and not letting you do it. It does actually let you lose quite a lot of weight if that's what you want to do. We are seeing eating disorders in children who are quite young now. So this this report was children as young as eight. There are other countries that reported children even younger than that. And this perfect girl syndrome fuelled eating disorders. So lots of things on social media about what you look like and how much exercise you do and how perfect you need to be, just makes matters even worse for our teenagers.

15:24 **Speaker:** So there is hope, after all I've said. This is Anna McVicker. She was a girl who developed anorexia at the age of 10 and describes how her childhood was completely robbed of her. And from the age of 10 all she would think about was exercise, calorie counting and what she should and shouldn't eat. For the next 12 years she fought, well tried to battle, with anorexia. And actually she was just hours from her death when the picture on the left was taken. Her emaciated body. She'd been given literally just days to live. She'd been tube fed, but she kept pulling the tube out and cutting the tube. And people really didn't know what else to do with her. She'd already been restrained six times a day for long periods of time to try and get her weight back on. And then she collapsed. She did nearly die. She woke up in resus in A&E department and something must have just clicked, and she decided that actually she didn't want to die. And that was the start of her recovery. And the other picture was taken five years after recovery. And she plays quite important role now in trying to deter young people from going down this route and also helping people realise that they can recover if they can get the appropriate help.

16:46 **Speaker:** There are loads of myths about eating disorders. I mean, some of you may want to ask about some of the ones that you think later, some of you will already know a lot of them. People believe that it's just a fad. They’ll grow out of it. Their attention seeking. Boys don't get it. Once you’ve had an inpatient stay in your weight has gone up, then you're completely cured. There are loads of myths and that, unfortunately, doesn't really help us manage eating disorders. So we need to make sure that we're all myth busters as much as we can be.

17:20 **Speaker:** So as I mentioned, I'm a member of the Eating Disorder Team, so we are called SPEED – Specialist CAHMS Eating Disorder Team. So we cover the whole of North Wales.

17:35 **Speaker:** There are three areas. As you know, North Wales is sort of split up into the west (Bangor), the central area (Conwy and Denbighshire) and then the east (Flintshire and Wrexham). So for all three areas where there are concerns regarding young people with anorexia, they will come through to our service. So we are actually based in Abergele Hospital in the North Wales Adolescent Service. And from there we run a centralised assessment clinic. So all the children that get referred to us have a centralised assessment with a paediatrician, a psychologist, sometimes a psychiatrist, sometimes a family therapist and a dietician. And Becks is with us a couple of times a month. So there's a whole team that are involved in the assessment. When we first started the service six years ago, we were running one assessment a week. We had to very quickly go up to two. And during Covid terms, we've now gone up to three. We also have slots for reviewing patients who are a bit further down the line. You might be a bit stuck need support. We offer outreach support. We do as much as we can with regard to education and training. My base is Glan Clwyd. So all young people with anorexia who need an inpatient stay will come to Glan Clwyd. They may go to the local hospital first depending on how poorly they are, but as soon as they're stable, they're transferred across to Glan Clwyd. And one of the reasons for this is they can be very difficult young people to manage and understand on a paediatric ward. So we've sort of centralised it, so we become a bit more skilled in Glan Clwyd and that's worked really quite well for us, although we do try not to admit many of them.

19:18 **Speaker:** So just a bit about a paediatrician, I suppose so. So what's my role? So part of this is for reassurance for you guys, I think. If you think somebody has got anorexia, but you're not 100% sure. In the back of your mind, you're thinking, oh, my gosh, what if I'm missing Crohn's disease or Coeliac disease or something else. The assessment that they have within the eating disorder service does include a full history, examination and investigations that I would do. So one of my jobs is to make sure that I'm excluding other causes. So that is just part of every assessment that we do. I'll physically risk assess them and decide as to how safe or unsafe they are to be managed at home and how and the speed at which they need to be referred. Obviously, I do that with a dietician. Having a paediatrician as part of the team is really important because highlighting to the young person and the family, the physical consequences of them starving themselves is one of the biggest motivators that we have for recovery. And just telling a young person that they're low weight or underweight and they need to gain more weight, they just won't listen to you because that's the one thing they're terrified of doing. But sharing concerns with them about their bone health and how slow their heart rate is and the impact on their brain is often the motivation that we need to get them on board. And also for those cases that get quite stuck or quite chronic, to be very realistic with the young person and the family about the consequences physically of being underweight for a prolonged period of time. So that's sort of my role in the team.

20:58 **Speaker:** So for you as GPs, what can you do to try not miss them? We've talked about how important it is to intervene early. The prognosis is so much better for them if we can get them turned around, have weight restored and back into normal life within six months. So, first of all, you need to have it on your radar. So the fact that you have all come today is great because at least it means it will be on your radar, maybe a little bit more than it was yesterday. Think about the sort of classic cases so they don't all read the textbooks just like, you know, for many other diagnoses. But if you have in your mind the sort of classic cases, then you're less likely to miss at least those ones. So the average age used to be about 14 is dropping to 12, although I would still say that we see far fewer who are under 14 than we see between 14 and 16. I don't want you to miss the boys, but it is true that there are many, many more girls than there are boys. They are usually good students, that they're getting As and A\*s. They’re perfectionists. They often do have OCD traits, some of which will have preceded their eating difficulties. They’re well-behaved, they're polite. They've often come from families where the parents have very rarely had to discipline them. And that's one of the difficulties we have in treatment because parents find it hard to stand their ground when these young people get upset because they've never really had to cope with them being upset and distressed before. They're often non-complaining. And they will come up with hundreds of plausible explanations to you as a GP, why they've just lost a bit of weight or just won't eat chocolate anymore. And if the mum wants to believe it, you want to believe it. And they're very good at convincing you. You can really see how it's easy to under-recognise them.

22:50 **Speaker:** And thinking a little bit about how children get themselves into it might also help keep it on your radar. So some of them have come from unsettled home lives. I mean, they don't have to be awful home situations. It might just be that there's been a recent parental split up or bereavement or some sort of trauma. A change in school. So either because of a problem in school or the change from primary to high school is a really classic time for eating disorders to get a hold. And bullying doesn't necessarily have to be that significant. It can be just a one off comment about and how much they've eaten and what they look like, what size they are. And we've had children where the gymnastics coach has just made a comment about how they've grown out of their leotard, all sorts of comments that children just take really quite personally.

And then there's children who just don't fit in for some reason, it might be because they are quite high-flyers and perfectionistic, and they just don't feel that they fit in with that group of friends. And they start to use eating to control how they feel. And puberty is difficult. Some children don't want to grow up. Some children find the change in their body shape quite difficult and learn not eating actually starts to hinder that progress.

Probably the commonest way that we still see is children who are possibly a little bit overweight, and they just want to lose a bit of weight. So they start off by cutting out the chocolates and the sweets and then they move into having smaller portions and they move into missing meals completely. But because it starts in such a healthy way, what happens is they're actively encouraged by friends, by family, by GPs, by school nurses to just carry on. You're doing really well. You know, you're keeping your body really healthy. You look much better now you've lost some weight. They feel much better in themselves and before you know where it is, it's become obsessive and it's just a spiral they just cannot get out of.

And then the other common way we see is children whose mood is dipped initially. So it didn't start out as anorexia at all. It just started out as them feeling a bit down. They lose their appetite a little bit and actually start to lose their appetite and eat bit less, gives them a bit of control. Somebody comments that they look better now that they are a lower weight, and they start to convince themselves that they’ll be happier the more they lose weight. And when they've lost weight and they're not happy, they just think that maybe they need to lose more weight because they're just not lost enough yet to be happy. And again, they start on that spiral.

25:29 **Speaker:** So some of the common things that you might hear is that they are vegetarian and then they go from vegetarian to being vegan, so they will give you all sorts of plausible explanations why they are. But you just need to bear in mind it is a red flag. They love baking. So they may comment. ‘How on earth could it be anorexic? I make beautiful cakes and decorate them and ice them’. But actually, if you ask them about it, you'll find that the baking is always done for others. They never actually try the food that they're cooking. They certainly develop an interest in going to the shops and choosing which yoghurts to have because they know the banana yoghurt has lower calories than the strawberry yoghurt. And then they get interested in food preparation. They want to make sure that somebody is not putting too much oil into the food that they're cooking. They want to make sure that they serve their own food so that the portion size is controlled. They start not to like eating in front of others. And they wear quite baggy clothes either to hide the fact that they've lost weight or actually because they're really quite cold and they have several layers. They start to become quite isolated. So socialisation becomes very difficult. So they spend a lot of time in the bedroom. They may spend a lot of time in the bathroom, which may be because they're vomiting or exercising in the bathroom. And they may be weighing themselves. So they might be going on the scales numerous times a day. And if the household doesn't have scales, they might be spending quite a lot of time in front of a mirror or measuring themselves in other ways using tape measures around the thighs or arms.

27:02 **Speaker:** So important things to remember is that usually the young person in front of you genuinely doesn't believe there is anything wrong with them. They genuinely think that the parents are overreacting and just nagging. Even for health professionals, sometimes it's hard to convince them how poorly they are. So they're not going to tell you that they feel ill. They're not going to give you those clues. The parents actually don't want to believe it as much as a lot of the mums in particular that we see really did know there was something wrong. They don't want to believe it. So it's not going to take much for you to reassure them that everything's fine. So if it's not on your radar, the young person doesn't believe anything's wrong and mum wants you to reassure them - again, it's just a setup for them to go away unrecognised. And also, the other important thing to remember is that they don't have to have a low BMI. So there's a lot going on with sort of restructuring of eating disorder services nationwide. A lot of services have BMI criteria and children have to hit a certain BMI before a service will accept them. So for the SPEED service for North Wales, we do not have any BMI criteria. It's really helpful for us to know what their BMI is, and we'll talk about that shortly. But it doesn't matter what it is, we will accept it. So we do have young people in the service who actually have a BMI that is actually above what is within the normal range. But they've lost a lot of weight and often quite quickly. So what you are looking for is evidence that they're restricting in some way, whether it's missing meals, only to eat healthy foods, having small portions, there is some sort of other compensatory behaviour. So they're going out for a five mile run every day. Even if it's raining, they're still going out in the rain. Or there's any suggestion that they might be vomiting. There just needs to be some suspicion of weight loss. So you may not have any of the weights in your GP records, but if Mum says they were a size 10 and now they’re a size 8 or they were in age 14 clothes, now they're age 12 clothes. That is really important information for you to get and for us to have that. Somebody has noticed that there's weight loss – be it school nurse, teacher, parent, sister, aunty, uncle, whoever. And then there's some body image disturbance. So this will probably be denied by the young person, but it is worth asking. ‘What do you feel about how you look?’ ‘Do you think that you're overweight?’ Do you think you're normal or do you think you're underweight? I'll just give you an idea of whether your opinion is the same as theirs. But as I said, just be warned that you might not get any of that information from them, honestly.

29:54 **Speaker:** So some of the young people that have come to the service where they have given a clue the GP that something's not right. They've said that they feel quite sick, so they don't eat just because they're sick and not hungry. Sometimes they do admit to tiredness, especially if they've been an anorexic whose exercised a lot when they certainly do start to worry is when they actually can't exercise as much because they're too tired. So they seek help, actually, not because of the anorexia, but because they're now too tired to do the exercise they want to do. Spending a lot of time in their room. So parents will often be concerned about their mental health, but not necessarily their eating, and just report that they just aren't themselves. They've lost the spark or they're not socialising at all. They might come to you just with unexplained weight loss and be very convinced that it must be something organic. It can't possibly be a mental health issue, but nobody really knows why they've lost weight. Stress of exams and just blaming that. Well, of course, I've not eaten quite so much. I've been so worried about my exams. Constipation is reasonably common and also just I mean, as you all do all the time, if the parents are really worried, then just think, well, there's something about why the parents are so worried. So even if you don't quite understand why because the child in front of you looks normal weight and is denying any problem, what is it that's making that parent so concerned about then?

31:24 **Speaker:** Some of the actual physical symptoms that they might admit to without sort of realising that they're giving you a clue is dizziness. So, you know, do you feel a bit dizzy when you stand up and they'll often say, yeah, I do, but doesn't everybody. Have they actually fainted? Palpitations and chest pain? Do they get bloated? Again, asking about constipation. Do they feel cold, tired or weak? How are they sleeping? These young people often really struggle to get to sleep because they're so preoccupied with what they've eaten during the day, how much exercise they've done, what they're going to eat the next day.

Concentration is often difficult in school, so they will still be achieving their grade A/A\*s so please don't be reassured by that. But you might be able to elicit some concentration difficulties by asking about and if you read if you read a paragraph in a book, does it take you any longer? Do you have to read it twice before you remember what it said? Is that different how things used to be? And the other thing that you do sometimes get them to admit more honestly is about their periods and whether they're lighter or irregular or whether they've stopped completely.

32:33 **Speaker:** So these are some genuine referrals that we've had from GP surgeries to paediatric general clinics and children who have turned out to have anorexia nervosa, and some of them have been quite delayed by the time they've gone through the whole system.

* An 11 year old with hyperthyroidism who actually had normal TFTs, but because of the weight loss and a family history of thyroid problems, the GP became very convinced by mum that this must be hyperthyroid and there must be some problem with the actual lab results. And then when she came to the paediatric clinic, we spent two hours with her hysterical in the waiting room as we sort of broke the news of the diagnosis. It was really a difficult situation. It wasn't as controlled as it would normally be. We didn't have everybody present that should normally be there because she'd gone into the wrong clinic.
* A 15 year old I've mentioned before with Raynaud’s and chilblains.
* A 13 year old referred with swallowing difficulties, unexplained weight, weight loss, fainting and dizziness. We've seen quite a few with that that have come through that ended up with a diagnosis of anorexia.
* A 15 year old who was referred with them with amenorrhoea.

33:48 **Speaker:** So I’ll mention this SCOFF questionnaire just because CAHMS talk about this quite a lot. So this is supposed to be a screening tool and to see if you answer any of these questions:

S - Do you make yourself feel sick because you feel uncomfortably full?

C - Do you worry you've lost control of how much you eat?

O - Have you recently lost more than one stone in a three month period?

F - Do you believe yourself to be fat when others say you are thin?

F - Would you say food dominates your life?

I suppose to be honest, I'm not sure I find this particular questionnaire that helpful. But some of those questions asked in a roundabout way about how much weight they've lost. What do you think you look like? Do you think you're the right weight for your age? And how long do you spend thinking about food in the day? So some of those questions, I think, asked in slightly different ways are quite helpful.

34:45 **Speaker:** Parental concerns. So as I mentioned already, try and really understand why parents are worried, because that might mean that your radar is on follow then. Just be careful of falsely reassuring. So this is the commonest thing that we see in the families is that they've been seen by the GP, and they've seen often one or more GP, sometimes different GPs. And there's been reassurance that - your BMI is normal, you actually needed to lose a few pounds, comments about why you should be glad that they're going out running rather than fixed on their iPad constantly and we should all be taking a leaf out of their book and eating healthier, and well he or she looks the picture of health to me. So if you're about to say any of those phrases to a teenager whose parents are worried about their eating and their weight, just check yourself and think is that really the right thing to say? Is that really genuinely what's going on in front of me?

35:51 **Speaker:** I'm just going to show you this triage form. You guys don't have to fill this in. So if you have concern about somebody with anorexia, you will refer to CAMHS. If you mention in your referral about your concern about an eating disorder, it will get seen by the local Eating Disorder Lead in CAMHS and then sent on to me. So that sounds like a long process, but to be honest, it can literally take minutes because it can all be done by email and scanning. When CAMHS send the referral on to me, I have to have certain information in order for me to work out 1. whether they should get an assessment and 2. how quickly I need to see them, because we only have so many urgent slots and routine slots. And as I've already mentioned, the demand at the moment, for the service is really high. So some of the stuff that they will ask in the triage will be a current height and weight. Any previous weights. So that's anything you've got in your records, even if it's from when they were fine. It doesn't matter. It just helps us know what centile they are on. How much they're eating and drinking, whether there's any risk or concern about vomiting or laxatives or diuretics, how much activity they're doing, any physical symptoms that they're reporting, or at least that they've said no to. So fainting is a particular worry. And then physical observations. So the most helpful physical observations for us are a lying and standing blood pressure and heart rate and a temperature because they will really allow me to be able to know how sick this child is and therefore how quickly we need to see them. And in some respects, that's helpful for you as GPs, because if you put that information in your referral to CAMHS and then I've got it, I'm almost holding some of the risk then with you guys because I know how sick they are. But if that information isn't in the referral, they'll often just get triaged as routine, because I've got no idea, really. No further information to know how unwell they are.

37:54 **Speaker:** So a perfect referral will have a background of why you're worried about them and why you think it might be an eating disorder, anything you can give us about the pattern of restriction. What were they eating a year ago? What are they eating now? How much they're exercising? Where the family are? Does Mum think that this is anorexia? Has she got any idea? Any previous weights and heights? And if you can actually work out a BMI percentage, you can have a gold star. But to be honest, as long as I've got weight and height, it doesn't take long to do that. And you can do it in an app. Physical symptom. As I've mentioned before, parental, carer or school nurse perspective on what's happened with their weight. The lying and standing blood pressure and pulse and temperature. Anything you find on examination is abnormal. You don't have to do bloods if you want to do bloods because you're worried that they're dehydrated or you do think they might be hyperthyroid or something like that, then that's fine. But please don't feel obliged to do bloods in order to refer because we do a whole set of bloods, which I’ll whizz though a little bit later on. And in fact, sometimes if you do bloods and there in the normal range and you reassure the family that the bloods are normal, it's actually quite harmful for us because the young person then just thinks, well, I'm fine then, because my bloods are fine. And it's hard for us to backtrack from that. And we'll also do an ECG at a time of assessment. So obviously, if you're really worried because the heart rate's really low and you want to do an ECG then absolutely fine. But please rest assured, we will do an ECG when we see them as well.

39:28 **Speaker:** This is just a typical sort of referral; it’s a reasonable referral. I'd be grateful if you'd see this 14 year old young lady who was previously size 12, now size 8. Denies any concerns about her health and reports feeling fine but just doesn't feel hungry. Mum is concerned, as are the school. She plays in the school netball team and is a keen swimmer. In clinic today, she seemed a little slender, cold hands, nothing else to find. Weight 35kg and height 154cms. Pulse was 48 and NBP 100/67. So that’s a pretty good referral from the point of view that we know that there's been a weight loss. We know that Mum's concerned and the young person saying she's fine, which are both red flags. We know she's quite athletic. We know she's already got bradycardia. Her BMI percentages haven’t worked out in my head now, but that will be that will be low. And what would be really helpful is if we've got the lying and standing heart rate and blood pressure and the temperature. That would have just added a little bit more to that referral.

40:27 **Speaker:** So this picture of hibernating hedgehogs I use routinely in the presentations that I do, just to try and show you what nature is like, really. So these hibernating hedgehogs can have heart rates of up to three hundred when they're well and active and their heart rate can drop to two when they're hibernating. Yet they're still technically alive. And the temperature can drop from twenty five to five degrees. So this is how good nature is at keeping people alive despite the changes in their physiology. And this is why anorexia gets such a hold of young people, because they continue to feel reasonably well, because they do it over a period of time despite their physical parameters, actually at times being quite dire. And one of the young people that I saw in clinic who was trying to convince me she was absolutely fine, said to me: ‘Well, Dr Phillips, I guess I could run a mile faster than you’. And to be honest, she probably could have done.

41:31 **Speaker:** So I'm going to just quickly whizz through a bit about salivation syndrome, just because hopefully it'll just help you understand a little bit more about the physical consequences. So the one of the problems is that these children are intelligent. So the fact that their brain gets starved doesn't make them less intelligent. So they will still be getting their As and A\*s. But what it does do is it affects their judgement and the flexibility of thinking, and it makes them more rigid about food and OCD type things. So that's part of the problem is that they still often achieve in school. What starvation does to keep you alive is three things. Your body metabolically adapts. It slows down your metabolism and it prioritises things. And what that does is it keeps you alive in the short term, although long term may have significant implications.

42:24 **Speaker:** So this chart (you don't need to read in great detail) is just to emphasise that when you're eating normally, your body uses the food that you're eating to produce energy, and it's usually produced in the form of glucose. So as long as you eat regularly, your glucose levels are maintained because of the food that you eat. If you're not eating, in order to maintain your glucose levels, your body has to get glucose from somewhere else. So it'll get it, first of all, from glycogen stores such as in your liver, that'll last you a couple of days. Once that's gone, it needs to make glucose from somewhere else and that's when it starts to break things down. So your carbohydrates, your fats in your body get broken down. Your body also starts to use ketones, particularly for your brain rather than glucose. So the glucose that is being made can be used for parts of your body that can't use ketones. Now, those mechanisms will last for quite a while because what your body tries to do is stop you breaking down proteins. Because once you start breaking down proteins, what you're doing is you're breaking down your muscles and then you start to run into trouble. And it's the breaking down of muscles that starts to cause some of the effects that we see, such as heart rate being quite low, blood pressure being on the low side, your bowel wall not working as well, because it's a muscle. So the impact of that starts to really take hold.

43:54 **Speaker:** The other way of saving energy is to just do things slower, so your heart rate, rather than being in the 70s or 80s might be in the 30s, 40s or 50s because it just takes less energy. Your skin cells and hair cells, which take quite a lot of energy to turn over, just stop turning over. So your hair falls out. It's quite dull. It's not in good condition. Your skin doesn't heal as well, and you bruise more easily. Some children get particular rashes under their skin. Brain doesn't work as fast, so concentrating is harder. Bowel doesn't work as well, so constipated. And temperature. So literally your body thermostat gets turned down. So your core temperature can actually get readjusted. So we've seen children with temperatures of thirty four, thirty five just to conserve energy. And as well as that you will say that your peripherals don't get and circulated to as well. So the children present with Reynard’s and chilblains, that's one of the reasons why they've got such cold peripheries.

44:59 **Speaker:** Prioritisation. So if you've only got so much energy, then you're going to prioritise the energy to where you really need it. So actually, if you're 14 and trying to stay alive, growing and having periods actually aren't that important for short term survival. So there will be an impact potentially on adult and growth and also on progression through puberty. So that can also have implications for future fertility. And one of the ways I try and explain that to families and young people, is it's like on your phone when you're starting to run out of battery, goes into power saving mode. So your phone still works. You can still call 999. You can still make some phone calls and send texts, but all the background apps don't work very well. So that's exactly what your body is doing, which is helpful to keep you alive, but really not very good for you long term.

45:53 **Speaker:** The Minnesota Study. I'll just mention this. So this was done in the Second World War by an American physiologist called Ancel Keys. What they did was they took thirty six conscientious objectors to war and basically said, well, if you don't want to fight in the war there'll be no consequences as long as you take part in our human experiment. They were selected from a group of two hundred and they went through lots of tests before they enrolled to make sure that they were physically and mentally normal. And when they enrolled, they had a 12 week period where they just did lots of assessments on them, physical and mental assessments while they were eating normally. They then starved them for twenty four weeks and during that twenty four weeks they repeated loads of those experiments and then at the end they fed them. And one of the reasons for doing this was partly to see the effect of starvation on physiology. But it was also to look at how you can re-feed people - prisoners of war and the soldiers had come back from the war who'd lost a lot of weight and have been starved. How you could do it safely.

What they showed was that a lot of the physiological changes that we see in anorexia were exactly what was shown in this experiment. So things like respiratory rate dropping, heart rate dropping, blood pressure dropping, skin being in poor condition, constipation and all those sorts of things, they saw. And they also saw changes in their mental health. So they became quite isolated, quite OCD, quite rigid about food, quite depressed, and they lost their libido. So lots of the sorts of things that we've seen in the cognitions in children with anorexia. And a lot of families will often say to us, well, when are they going to get the therapy to help with their thinking? And in actual fact, a lot of the problems with their thinking are literally because the brain is starved. So what you need to do is feed the brain. They don't need therapy, they need food. And this this study is often very helpful in trying to help families understand how the ongoing problems with their mental health are caused because of the starvation. So it's a really interesting study to try to read a bit more about it, if you're interested.

48:16 **Speaker:** And so this slide is just really to emphasise the importance of weighing the young person. So please, please, we get lots of letters with people saying I didn't want to weigh them because I didn't want to worry them, or they refused to get weighed or lots of other reasons why they don't get weighed. But if you just go about it as if it's just something you need to do, it's not a big deal. I just need to check your weight. Often these young people just get on the scales, even if it's not made into a big deal, that it normally isn't a big deal. And if we've got a height and a weight and as I said if you can work out a BMI, that's really helpful. If you haven't got time or whatever, we can do it. The one thing that we do with their BMI, which is quite interesting and helpful, is just compare their BMI to what their BMI would be if they were on the 50th centile for someone else that at their age and sex. And it just gives you an idea of how underweight some of these children can be. We sometimes use weight for height as well. So that's where whatever their height is on, you look at what their weight would be if they were on the same centile for that weight and then you put their weight over that weight and work out that. And usually those percentages are pretty similar. So, for example, in this girl that's been heighted and weighted, her BMI is only 74% of what it should be, and her weight/height is 73%. They are usually quite similar.

49:45 **Speaker:** Some of the things that you might see on your examination. So you might notice the clothing that they're wearing. They might look quite pale. Thigh gap is a really big thing that young people talk about all the time now. And how prominent are their clavicles? Do they look gaunt? Have they got prominent cheekbones? What sort of condition are their lips and mouth in? Their hands give you loads of clues. Have they got visible tendons? Are they cold or a bit purply or are they actually quite orangey coloured with carotenaemia? A lot of these young people eat so many vegetables that their skin does actually turn orangey yellow. Have they got any scars and calluses that suggest they make themselves vomit? Is the skin dry? Is it not healing very well? What's the muscle mass like when you ask them to get on and off the bed? Do they seem to have a bit of muscle weakness? Obviously, the heart rate is very helpful. And then just generally, do they seem a bit slow? Is it a bit difficult sometimes to answer questions? Is their thinking affected? Do they seem a bit emotionally laboured? Are they getting quite agitated with comments that you think are quite innocent comments?

50:56 **Speaker:** The sit-up squat test is also something that we do quite regularly. To be honest, most people, even anorexics who are quite sick can still pass this ok, but actually if they can't that really is quite a big red flag. So if you get them to lie down flat on the couch without pillows so it's a hard surface and then get them to cross their arms and then get them to sit up and see what they can do without having to lean on their hands or arms. And the other way of doing it is just to get them to squat down and bend the knees and have their arms aside and then see if they can stand up again without using their arms. And if they can do it fine, they get a 3 unable to get a 0. And then there's the one of the two in between. So just something you can do if you want yourself to get a bit more information about how poorly they are.

51:44 **Speaker: T**his medical risk assessment chart is the King's College Document for Vanishing Anorexics and the MaRSiPAN document has similar charts like this. And this is just to highlight the alert and concern for blood pressure systolic and diastolic and the change in it when they stand up. So just to give you an idea of when you’ve done their blood pressure and how worried you need to be or don't need to be. So that's just a useful document and the temperature is on there as well. So, again, that's one of the reasons why we really ask for that information to be in referrals. Just while I think about it actually, I think you've all had a leaflet emailed around to you this morning, which Dr Andrews has put together, which is an excellent leaflet, all about eating disorders, in particular anorexia, and how to pick it up and what to do about it and how to assess them. And this chart is in that leaflet.

52:44 **Speaker:** And so just a quick mention about blood. So as I've said, we don't expect you to do bloods. I wouldn't stop you, but you’re not expected to. We do lots of bloods. So this is our list of all the bloods that we do. Partly to make sure we're not missing anything and also to enable us to physically assess them properly.

53:06 **Speaker:** You might find that the bloods will all come back within the normal range. And as I've said, the worst thing that you can do is say ‘oh, your bloods are all normal, you must be fine’. So I don't really tend to ever use the phrase normal with these young people. If all the bloods are completely normal in the range, what I would tend to say something like: ‘At the moment, your blood results are in a normal range, but some of them are only just in the normal range. And that's a real worry to me because it's not going to be long before they're outside of that normal range’. And to be honest, most of these young people will have bloods that are really borderline. So their white count, for example, will often be three, four, five. So right at the lower end of normal. The creatinine will often be higher than you'd expect for somebody who's got reduced muscle mass. So, yes, the creatinine might be 60, 70 or 80, which is normal. But actually for a child with that sort of muscle mass, it should really be 40s and 50s. Calcium is probably normal-ish, but it's a good reminder of the bone health and how especially they're not having periods and not producing oestrogen, we need to worry about are they laying down bone good, strong bone foundations.

54:20 **Speaker:** The alkaline phosphate might actually be slightly lower than normal. So, again, you might not particularly think this is a problem because you would normally worry about values that are higher. But actually if the alkaline phosphate is low, that's a worry that their bone turnover isn't doing what it's supposed to do for somebody who's supposed to be laying down their bone mineral density. Their liver function tests are often towards the upper end of normal or actually above normal.

54:46 **Speaker:** Amylase gives us a bit of a clue as to whether there is any vomiting. It's not a black or white answer to it, but it gives us a bit of a clue. CKs that are quite high, make us think about excessive exercise. Glucose is usually still normal. I mean, low glucose does worry me because it does suggest they're really not compensating any more at all, but the glucose might be on the sort of low, normal side. So 3.6/3.7 rather than 4.5/5.5.

55:17 **Speaker:** We do check vitamin D levels, and again, that's a bit of a worry about the bones if that's outside. The hormones – FSH and Oestradiol - they're quite useful. Oestradiol, particularly for not having periods, is often less than 50. And that LH is often quite low. And knowing what they are at their initial assessment is really helpful going forward, because that's a marker of things recovering.

55:44 **Speaker:** Thyroid function tests are quite helpful, so TSH/T4 will often be normal, but actually what you will find is that the T4 will only just be normal. So in theory, you'd expect the TSH to be towards the upper limit of normal. But in fact, it often isn't. It is often only just normal as well. So it's part of the powering down that we talked about.

56:06 **Speaker:** Take home messages. So I hope you have some of your own take home messages. Some of mine I suppose would be to:

* Just keep it on your radar and just be curious. Don't always accept what's being said in front of you.
* Pop them on the scales. No excuses. Just do it as part of your usual routine.
* If you can send a referral that's got some of that information that I've talked about that would be really helpful. It would just help SPEED things up. Even if they say to you, I've listened to you, I promise over the next week I'm going to eat more. Please don't say: ‘Oh, OK them I’ll weight you again in a week or I’ll weight you again in a month. You can by all means do that, but still send the referral in. And you can always say to them, well, that's great, you work really hard, I'll send the referral in and if you are working really hard by the time they see you, you'll be in a much better place. We've seen so many children who've been delayed by two, three, four months because they've managed to convince the GP that they will do it, they will gain weight, and they've managed to gain a little bit initially, but then it's just not been sustained.
* Tell us any weight you've got, even if it's their birth weight or weight when they were two. The physical obs are really important.
* If you feel like you need to do something to help them while they're waiting for an assessment, the advice that we would tend to say to give is to just limit their exercise if they're running five miles, seven days a week, just try and work on cutting that back. If you try and stop it abruptly, you're likely to really struggle to contain them until their appointment. If you can try and just encourage them to lessen this a little bit that's really helpful.
* And then when you hear what they're eating, don't worry about trying to increase what they're eating with high calorie foods, just increase what they're already eating. So if they're having cereal and a yoghurt and an apple, maybe just have two apples and two yoghurts and an extra bowl of cereal before they go to bed. So just stick to the foods that they already feel safe with.
* As I've said, don't do blood tests unless you specifically want to for your own reasons. We will do them anyway.
* If you're worried about whether they are anorexic or not, you can always discuss it with the single point of access (SPOA) within CAMHS. Or just send a referral to CAMHS and put it in your queries and then they can pick it up with the family and with myself.
* And if you're really worried about their physical health, then you can discuss it with me so you can get hold of me, via my secretary at Glan Clwyd and if I'm not around and you're really worried that it can always be referred to Paediatrics on Call. But to be honest, most of them we do try and see before you would get to that point.

58:51 **Speaker:** OK, I'm not going to go for the cases because we are dead on time. I'm just going to mention these last couple of things. So books, the parents, if you want to suggest anything the parents might want to look at, or indeed, if you want to read yourself:

‘Lighter than my Shadow’ is a pretty good one and ‘Survive FBT’. So the treatment that we use for the anorexics is family based treatment and this is a book that we now started to give out to families. So it might be something interesting for you guys to read it. Also, be aware that this is what parents are likely to be given.

59:25 **Speaker:** And finally, the way that we work with our central assessments, I suppose, is just to try and show you how successful it's been. So when we first set up the service, the two things that we wanted to do were to get children better, more quickly and get them better at home with their family. So if you just look at the first column paediatric admissions before SPEED was set up. There were 29 admissions in one year to Paediatrics before SPEED was set up. In the year following setting up SPEED that dropped to 3. The Psychiatric admissions in the years before SPEED averaged between 12 and 13 a year. In the year after SPEED was set up, it dropped to 2. So when you work out the bed days and the prices for that difference, we actually saved just over £1m in our first year just in Paediatric and Psychiatric bed days. And alongside that, we also showed a fall in total treatment time. And the improved outcome for these young people really helped us as a service, because what it meant was that the service providers and the team with which we worked really starts to get enthusiastic because rather than dread working with young people with eating disorders, because people felt you couldn't do anything for them, people really started to believe, actually, if you got in there and you did the right thing, you could really turn these children around. So there was a much greater therapeutic enthusiasm.

1:01:00 **Speaker:** OK, so sorry about that. I'm two minutes over. I'm more than happy to take questions for those of you who are able to stay.

1:01:02 **Chair:** Well, thank you so much. That was wonderful. That was so good. In fact, I was thinking, gosh, when did you last have any teaching or training on anorexia, eating disorders? And I can't remember. So that really was superb. Thank you. Take home messages. There was one thing I was going to ask in a moment. It's one of those situations perhaps where we have to be a bit brave as well. And that's not unusual for us. You know, we might have somebody with cancer, and we need to bring up that end of life discussion or maybe suggest an HIV test to someone. So well, it's not unusual that we have to be a bit brave. And I think it's just remembering to be brave and actually bringing it up and perhaps avoid colluding with the parents and patients where, you know, none of us want it to be anorexia. Therefore, we sort of all put our dark glasses on and ignore the elephant in the room and make ourselves feel better. So be brave and ask, you know.

1:02:14 **Chair:** But coming onto the ask, I was struck by the terminology and things to avoid saying, and I was kind of going through my head, what do I say if I ever sort of ask the opposite to it, is if someone's clearly overweight? And my hope for a tactful way of bringing this up is to say something like, well you're quite cuddly, aren't you? You know, and the opposite of that is, you know, it's not unusual. You know, somebody fainted in work or at school and they brought in. So, you know, after you've done everything else and the capillary glucose is normal or they've lost weight or whatever, you know, you know, you're quite slim and trim aren’t you. I was going to ask if there's any suggestions of how best we can bring it up, actually, without putting up big barriers before you even get to see them. You know, you don't want to see them with a wall half built. Is there is there a particular way that you feel it would be a good way to bring it up or to just be brave and come out with it? You know, I mean, there's got to be a tactful way of doing it. Have you any suggestions?

1:03:33 **Speaker:**  I mean, I do often ask them, what do they feel? You say, have you got any worries about your weight and what you look like, what do you think? Do you think you're fine? Do you think you are underweight or overweight? Because actually that's probably more important. You know what you think. You need to know what they think. Do they think that they are overweight? Do they think that they're OK? And then if you do need to point out to them actually, you're concerned about their weight for their height or their age, that I would just say ‘Well, I'm concerned actually you are underweight for your age’. But you don't necessarily even need to point that out to them, it's more the concern that they what they've come with their eating pattern is unusual or we're just concerned actually that you are at a time where you should be growing and actually that doesn't seem to be happening. And it's a really important time because most of them are in those teenage years. And so it's probably more important. And then the actual number of their weight, you can just say know it's just for important information for me to be able to refer you onto the service. They often won’t ask whether that's too high or too low. And I'm not sure that you pointing it out to them, once you've made the decision of referring them really matters, to be honest, because as I say some of them actually are overweight. We will accept children who are overweight if they've lost a lot of weight. Some of the boys that we've seen have probably been the worst for that. They've been very overweight and lost weight dramatically and been really quite sick. But they've still had BMI of twenty when we've seen them.

1:05:12 **Chair:** If anyone does have any questions, please put them in the chat box. There was only one other thing that I just thought of, and I suspect the answer might be no, there isn't, but - males with anorexia, are there any specific questions or things to look for. Obviously, they won’t be getting amenorrhea, but, you know, is there anything else particularly that some that might be useful just to ask.

1:05:45 **Speaker:** So the boys tend to be over-exercisers predominantly, so their actual dietary intake often isn't that bad overall. I mean, we've had one boy who was really sick, anorexic, but his intake was three thousand calories a day. It was just he was exercising so much he was still in negative deficit. So actually, if you'd have asked him what he eats in a day, you'd be like, well, that sounds fine, but it's the fact that he’s overexercising. Some of the ways I try and get an idea of whether their exercising is just normal, healthy exercise or obsessive exercise is I'll say: ‘So what would you do if it was raining or snowing or freezing cold or what would you do?’ And if they would still have to go out and that's what often the parents will say - no matter how bad the weather is, they still insist on walking the dog 10 miles and dog comes back shattered. That then is obsessive exercise. So it's just getting that feel for what they're doing it for. And could they not do it, what would the consequences be? So that was quite a good clue in the boys.

1:06:50 **Chair:** Thank you so much. Somebody just asked if are you aware of any other referral team? Obviously, we're up here in the north. Are you aware of any similar services/teams say, down in South Wales or other areas of Wales?

1:07:09 **Speaker:** There's a lot of investment at the moment going on for eating disorders. So I think services are being funded and set up better now. I don't know any that run quite how we run. There was an eating disorder review that was done by Jacinta a psychiatrist back in 2018 and the recommendation from that review was that services such as our SPEED should be set up across Wales. People are trying to, but I don't think many places have got it off the ground and the Covid hit us, and services are stretched. They all have their different ways of referring in with different sort of criteria. And so I don't know what all of those are, to be honest with you.

1:08:03 **Chair:** I can't see any other questions. There's been lots of thanks and praise for a fantastic talk which I will reiterate. Louise has just asked if there's any specific advice, we might give about eating and should we ask people to eat more regular, say, every four hours or eat more food if they feel comfortable. I think you’ve part answered it actually. For example, you said eat 2 apples or 2 yoghurts etc. Any particular advice in that regard

1:09:02 **Speaker:** So if you try to give them something different to eat or you try to get them to increase their portion, you're unlikely to be successful because they're going to panic. So what they seem to cope with better is eating at another time of day, the same thing that they've already eaten. So once they've come through our service and we've got them on a proper meal plan, they will have three meals and three snacks a day. So that's what we get them to. So for you guys, if you can just increase that, let's say they never touch breakfast, but they have dinner and tea. If you could get them to either have breakfast or have supper, and it can just be the same food, a yoghurt, or it doesn't matter. People worry about lack of variety and missing nutrients. But to be honest, at the point at which you see them, what's more important is to eat something regularly. So just build it up. So just eat the same thing once extra during the day. Or if you think they’ll do more than that, that's fine. But you need to have lower expectations because you're more likely to be successful then. And if you can do that and you can also cut down a bit of the exercise, you'll automatically make them a bit safer while they're waiting to get to their assessment date. We are back now to seeing urgents within one to two weeks and routines between four and six weeks. So it's not long before they will be seen.

1:10:30 **Chair:** Thank you. It's a wonderful service. And I think, again, it’s a good measure of the quality of the presentation because, you know, it doesn't feel scary anymore. I think if we feel we don’t know much about something, it’s scary, isn’t it? You’ve taken that away. So thank you very much. Wonderful. So I think we can draw to a close just once again, thank you so much to you and to Becky as well.