**Transcribed Telephone Interviews**

***Participant 1***

1. **Could you tell me about your experience of using antibiotics for your child**?

Sure, so when my son was born last year he inhaled his meconium, so he was in the neonatal intensive care unit for a couple for reasons, one of them was sepsis and he was treated with broad spectrum antibiotics during his time there.

**Do you only have one child?** I am expecting another one any day, so just one at the moment.

**What kinds of symptoms would trigger you to seek antibiotics/medical advice]?**

I guess if it was something very persistent that I suspected was bacterial in nature rather than a virus, then we would speak to my GP, but I wouldn’t think about getting antibiotics for…you know…runny nose or something like that.

**What would make you suspect a bacterial infection?** Ummm…being married to a scientist I guess…(laughs)…yeah, I would check with my husband, he’s got a PhD in microbiology, so I guess he would have more of an insight into what’s virus-based and what’s bacteria-based.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

No, I haven’t.

1. **If you or your child is prescribed antibiotics, how do you administer them**?

If it was for me, it would be table-based, and for my child when he did have them it was intravenous.

**How long would you take them for?**

I guess as long as I am told to take them. I know it’s important to finish the course. So just as the doctor prescribes.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

Generally good, I would take a pen and paper to write stuff down so that I don’t have to rely on my memory. I think that helps in most circumstances.

**Do they explain things clearly? Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

I do, but I don’t feel that medical practitioners really emphasis the problem of antibiotic resistance…it’s more kind of more solution-based…you know…ok you’ve got this diagnosis here is the solution come back if it doesn’t work, do you have any questions….rather than I guess the context…you know…no-one’s ever said well we’re not giving you antibiotics because were trying to reduce reliance on them or something like that…but there’s so much time pressure, so I can understand why not

**Do you understand your prescription advice?**

Yeah…it’s generally pretty straight forward.

1. **What have you heard, if anything, about antibiotic resistance**?

Quite a lot, so I’ve seen the department of health posters that were all over public transport, I’ve seen the TV advert with the little dancing pills and then…So I work in investment and we…I work for a big investment company, and we invest in quite a lot of ummm…well all sort of things like food producers and the pharmaceutical sector…so I hear talk about reducing the use of antibiotics in factory farming for example and then I hear information about how it’s not really financially attractive to find new antibiotics in the pharmaceutical sector. So, I suppose I hear about it from an investment point of view.

**Can you explain to me what you think it means?**

Sure, so I understand antibiotic resistance happens over time anyway, but my understanding is because we’re using them so much in factory farming and we’re using them so much in healthcare, and even things like fungicides, we’re accelerating the way that the resistance comes about and creating superbugs that we aren’t able to treat anymore….and..ummm..I guess that the consequences are things like normal medical interventions that are normally not much fun but we assume we will survive like hip replacements or caesareans, become a lot more risky if we can’t rely on antibiotics.

**Is it something you are concerned about?**

Yes, very much so.

**Do you feel it can affect you or your child?**

Definitely, yeah.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

Ummm…I mean… I thought the NHS or the department of health campaign with the dancing pills was quite effective, I’m not sure I’ve seen that much more about...sort of the language used. I mean we talk about superbugs…I mean it’s quite compelling the word superbug I would say, but I don’t think people realise just how bad it could get.

1. **Do you think there needs to be more awareness on antibiotic resistance**?

Yeah, definitely. I was reading an article about COVID deaths recently and global COVID deaths have only just overtaken global antibiotic resistance deaths, and we’re just not talking about it I don’t think.

**What sources would you want to get more information from?**

I mean I thought the TV campaign was effective because it would reach people that maybe wouldn’t know about it ordinarily…umm…but it’s probably really expensive to do a TV campaign. I think we should have more information in the food space, so more information on the fact that you know the cheap meats that we enjoy is only cheap because antibiotics are making the animals grow quicker or being… [unclear]…before they get sick so they can be kept closer together, so I guess supermarkets should talk about it more and things like…I don’t know…maybe big food magazines or cookery programmes should talk about antibiotic resistance and their link with cheap meat.

1. **Do you think there needs to be more awareness/information on antibiotic use**?

Yes, I think so

**What sources would you want to get more information from?**

I guess probably health providers, surgeries, and clinics. Also, for new parents you might feel that you are being fobbed off if you don’t get antibiotics if you don’t why it’s not appropriate. So…I mean…maybe doctors and nurses get put under pressure to prescribe antibiotics, by new parents who don’t quite understand…so possibly baby magazines, or baby books…

**Which specific topic about antibiotic use would you be interested in hearing more about?**

Well, I think really for me it’s still back to sort of the factory farming thing because so many of the antibiotics are used in farming rather than GP surgeries.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **What would be more impactful for you or what would catch your attention?**

Something that really hammers home the impact that would happen to the children if we can’t rely on antibiotics, so the way things are going it’s not particularly positive, I don’t think we’re getting many new antibiotics because…certainly there is no investment there in the pharmaceutical sector, it’s more about the oncology drugs and things like that…it’s sort of the new sexy revenue-generating topic. So, I think something that really hammers home to parents the pretty dire consequences of what could happen to their children if we don’t treat antibiotics with a bit more respect. You know…your kid could fall over in the playground and cut themselves on…I don’t know…a rusty nail or something and if we can’t rely on antibiotics we’re kind of back to 1920s where…you know…you could just die from it. It’s a bit of an (*not understandable*) but I don’t think people realise quite how bad things could be, we’re just really complacent…

**What sort of media would you want to look at: pamphlet, brochure, advert in newspaper/magazines, radio/TV public service announcements, posters, articles, blog, podcast, social media posts?**

I guess the full range really, websites, broadcast media, leaflets.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

I think the NHS is very credible. I think…I’m hesitating to say the government at the moment they don’t have much credibility in the public health space.

**What about international organisations like the WHO?**

Yeah, the WHO would be credible, the UN would be credible, multilateral organisations, and the EU as well…

**What do you think about misinformation on antibiotic resistance and how resistance occurs?**

I mean it’s not that difficult to understand…but you know… people are busy so maybe it’s not something that they find that they’ve kind of absorbed. I don’t think it’s talked about very much, but it’s not insurmountably complicated to understand how antibiotic resistance happens and how it speeds up.

1. **Have your views/perceptions about public health information, health promotion, or healthcare services changed since COVID-19?**

 Yeah…I’d say a lot…

 **In what way?**

I think there’s probably a lot more…I’m more receptive to public health messages and there’s a lot more awareness of what can happen. I’ve heard antibiotics and covid described as… so covid is the lobster that gets thrown in the hot water immediately and everybody in the public health space and beyond is immediately reacting because they’re quickly chucked into the hot water, whereas antibiotic resistance is a lobster put in cold water and then heated up…so it’s happening, it’s still going to be as…you know…as bad a covid, but it’s just slower and it’s not as headline grabbing.

**That’s an interesting** perspective

Yeah…I mean not good for lobsters…but it’s an interesting way of explaining it

1. **Is there anything else you would like to add before we finish?**

No, I’m glad that you are doing research on it, it’s a really important issue.

***Participant 2***

1. **Could you tell me about your experience of using antibiotics for your child?**

I think she’s only…she’s been prescribed antibiotics maybe once…and they were a precautionary…ummm…I don’t know if we ended up giving them to her, any of them, not just half of them. I should know that I suppose. I can’t…she’s never really had any problems in terms of infections. And we’re probably more likely to not give her antibiotics unless there is some evidence that she has got an infection, rather than giving her something we’re not 100% sure.

**So, how old is your daughter?**

She’s 2 and a bit.

**When was she prescribed antibiotics?**

When she was a baby. She had a lot of…like…bad nappy rash and there was a query about whether it was thrush or whether there was something else going on. I don’t think it was any of those things and we didn’t give her the antibiotics.

**Were there any tests done when you took her to the doctor?**

No

**So, after the doctor prescribed antibiotics, did you buy them?**

No just got the prescription.

**Was this a delayed prescription?**

They said if it gets any worse here are some antibiotics.

**So, you just decided not to give the antibiotics because you felt they were unnecessary?**

Yes

**Did you try and tell the doctor that you didn’t think antibiotics were needed?** Well…my partner is a doctor so I took her to the doctor’s on my own but then when I got home I spoke to my partner, and he kind of said oh you know I don’t really…and then a good friend of mine is a paediatrician so we kind of ran it passed her and she said I don’t think it’s an infection and I wouldn’t bother giving them to her.

**So, what kinds of symptoms would trigger you to seek antibiotics or maybe medical advice for your daughter?**

Again, I think probably…go to my friend before I went to the GP. So, if I was really worried about…so, ears definitely I would, if we were worried about ear infection, I would probably take her to the GP. I think something with the throat I’m less likely to because it’s more likely to be viral.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

For me?

**For you or your daughter?**

No, I think probably the opposite…certainly for me, I feel like they give me antibiotics all kinds, all the time.

**Could you tell me a little bit more about some of the cases where they’ve prescribed antibiotics when you’ve felt they weren’t needed?**

So, for example I have got a history of…I had pyelonephritis twice…so they were understandably concerned that if I had a urinary infection, that might develop into a kidney infection…but they prescribed me antibiotics before my urine sample had even come back. When I rang, they just said come bring a sample into the GP surgery and I’ve prescribed you some antibiotics to collect when you bring your urine sample in. So, I didn’t take them until the urine sample had come back, which was negative, and I didn’t…I just didn’t pick them up.

**Has this happened often?**

It certainly happened more than a few times. Equally, I have got quite a…I do regularly get ear infections, my ear drum is quite prone to bursting and sometimes it’s not clear why…there’s no real indication that I have an infection prior to it bursting, but they’ll prescribe me antibiotics anyway.

**So, do you take them in situations like that?**

I think probably more so…I would have done more so before I got with my current partner, who I have been with for quite a few years now… because they’re a doctor, and…that’s you know…if they say you should take antibiotics then I’ll take [them]… you know…

**So, you would follow their advice?** Yeah

1. **If you or your child is prescribed antibiotics, how do you administer them? For example, how long do you take them for? Do you stop taking them when you feel better? Do you save some for use later?**

I think it’s probably…if I really think about it…So, I would take them, I would take the whole course, and often it is administered in the tablet form, and it’s not really…it’s not going to make a difference if I don’t take it for a couple of days. I think probably administering it to my daughter would be more tricky and so I would probably be more inclined to not give her the full course, even though I know that that’s quite bad and I shouldn’t really do that. Especially sometimes they prescribe for extra days…when the normal course might only be five days, they might say… oh I’ll prescribe you seven days’ worth there…sometime I think well, if we’re normally getting prescribed for five days for the same problem, then surely, I could just take it for five days.

**So, this has happened to you, where they’ve prescribed antibiotics longer than necessary, longer than you’re used to?**

Yeah

**And when this has happened, has the doctor said it’s usually for five day but I am giving it to you for 7 days?**

Yeah

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

Again, I think it depends, because sometimes I’ll go into that…again it’s difficult, because I will often already sought medical advice before I’ve even gone in, so I’ve often gone in with a preconceived notion of I think this is what it is because X person told me that’s what it is. So, then I either come out thinking no I think you’re wrong, or I come out thinking now I’m confused…

**Do you feel that the GP explains things clearly to you? How to do you feel about the information you are given? Is it clear?** **Do you feel like you are given the opportunity to ask questions if you wanted to?**

If it’s at the GPs, sadly there aren’t many opportunities to ask questions, because they’re often quite busy. I sometimes feel like…if anything I feel like they don’t…I feel like they don’t explain…They think that I probably won’t understand what they’re talking about so they just tell me the bare minimum, they might even just say oh…you know…I’ve prescribed some antibiotics…and I will have to say oh what kind…you know…what infection do you think it is or you know…I have to ask probing questions about something I would deem as probably…if it was a consultation about me, I would expect them to tell me that information, this what I think you have and this is why I am prescribing antibiotics.

**So, during an average consultation, do they not do that? Don’t they tell you what you have and why they are prescribing the antibiotics?**

It really depends…So, sometimes they might just…I think…I’ve definitely had experiences of doctors who I think just presume that I wouldn’t understand or that I’m not interested… you know… I guess some people do go to the GP and they don’t want to know the analysis they just want to go to the GP and they want the GP to say here take these medications and you’ll feel better.

**Do you usually understand your prescription advice when you are prescribed antibiotics or are asked to take antibiotics?**

Most of the time, although they are like…when it’s like with food is fine, but sometimes it’s you know… not with an empty stomach…I get confused between with food and not with an empty stomach…I feel like they are the same thing

**So, when you are prescribed antibiotics does the doctor tell you anything about the side effects or about anything you should be aware of? Or the pharmacist maybe, do they give you more information?**

No. And certainly less so now than they have ever done before, which wasn’t very much anyway. I mean at the moment obviously doctors…I mean I haven’t seen a doctor for ages but when they prescribed me like I said the last lot of antibiotics I didn’t see a doctor at all.

**Was it done over the phone?**

No, it was done on the…on the MyGP service that they have online. I just put my information down and I just said I’ve got this pain, I think it might be UTI, I’ve got a history of pyelonephritis and they said ok bring a sample in and I’ve left you some antibiotics at the desk you can pick the prescription up.

**So, it’s much easier to get antibiotic than it was before?**

Yeah, I think so. Although I think…again I think that it really depends on what you say. If I had just said I think I may have a UTI, I don’t think they would have prescribed me antibiotics…or because I put I got a history of this and that you know…I was very clear about my symptoms, and how long they’ve been lasting and…I guess if you have a bit of understanding of what kind of questions they would ask and you put that down, they’re more likely to…you kind of skip a stage in the process…

1. **What have you heard, if anything, about antibiotic resistance?**

Just bits really, mainly from my partner about how it’s quite dangerous.

**Can you explain to me what you think it means?**

Gosh…so, I understand it as…so there is the infection…the bacteria can become resistant to certain antibiotics if…I don’t really know…I don’t really understand the intricacies of why it becomes resistant if it’s not administered properly or taken properly. But it becomes resistant and therefore effectively those antibiotics are rendered useless against that bacteria and we’re not creating new antibiotics fast enough.

**Do doctors ever mention that to you when they prescribe antibiotics? Do they ever talk about antibiotic resistance?**

No, never.

**Pharmacists?**

I’ve never heard that in a clinic…like discussed. Even when I was in hospital and I had sepsis and the person from…what’s the lad called…where they actually take your bacteria and they grow it?

**Oh, a microbiologist?**

Yeah! So, he came up and he said that they’d done a culture, and nobody said anything, and obviously they sent me home with an absolute world of antibiotics after that.

**So, they only time you hear about antibiotic resistance is from your partner?**

Yes, on a personal level yeah, from my partner or you know…my friend.

**Is it something you are concerned about?**

No, but I think it should be. It’s something that I don’t really…I think it’s…I feel like it’s one of those things I don’t know enough about it. So, it’s kind of on the very periphery of my radar…like I’m aware that it’s an issue but it’s one of those things that I’m so…I’m kind of blissfully unaware, ignorant to it. I feel like when I do actively consciously try and think about it, the only thing I can think is…yeah, I think that’s probably…I think it’s probably quite bad. But it doesn’t create any kind of emotional reaction of like oh I’m a bit worried, because I just don’t know anything about it.

**Do you feel it can affect you or your child?**

Again, I think when I think about it, rationally I’m sure it could. I don’t know why we would be immune to being affected by it. I think it’s probably gonna affect everybody at some point. But I just don’t have any gage of how bad or how soon or what that…what the implications of that would be or…anything really.

**Well, my next questions would have been what you think about the language used/medical jargon when information on antibiotic resistance is offered to you, but you mentioned that this information hasn’t been offered to you before….**

Yeah, never no….

1. **Do you think there needs to be more awareness on antibiotic resistance?**

I think… I think… definitely! I think…especially even just on a very very basic level of explaining to people why it’s important, for example take the full dose…Because I’m aware of antibiotic resistance, and I probably have…I think I would probably have more awareness that other people…just because I get that…you know…I’ve got that feeding information at home. But I still don’t really understand why we have to take the full course, and I’m still…even though I know that it’s not a very good idea and it’s bad I still…always have that temptation of well I feel better now, so you know doesn’t matter now if I miss the antibiotics, it’s not doing anything for me anyway.

**What sources would you want to get more information from when it comes to antibiotic resistance?**

I think it’s a bit difficult because generally speaking I imagine that the majority of people get prescribed antibiotics through the GP. And so, I would be inclined to say… I think that it’s up to the GP service to, to be…to be less generous with their antibiotic prescriptions and to…rather than just say here have some antibiotics, to explain this is the process that I’m going through right now, it might be an infection, however the risks associated with prescribing antibiotics incorrectly, the long-term risks that that may pose in terms of the community because of antibiotic resistance, is bigger than the risk posed to you currently… But I also completely understand that probably not very many people would be that happy about that…people will be kind of saying well I don’t care about the potential risks for the wider community, if I’m having an infection, I want some antibiotics. And I think there’s a lot of pressure on GPs just to fix things… And so maybe almost like…what might need to come alongside…I do think that it needs to come from the GP service because otherwise it wouldn’t make any sense for them to prescribe antibiotics while also trying to educate people on antibiotic resistance. It needs to be done from a perspective of people are going to take antibiotics if the GP has said that there might be an infection, so they need to not prescribe the antibiotics unless there is some really good evidence to say that that’s the case. But alongside that I feel like there might be some…we might need to have a bit of a look at how the GP service runs? And how…what people’s expectations are of GPs? I know it’s much bigger…it’s a much bigger task, but if people go to the GP thinking that they are going to get…you know they’ve got an infection…people don’t understand, when they get told they have an infection they expect to have something to fix that, even when they are told it’s a viral infection people will say…you’d be amazed at how many people I’ve spoken to who have children who have persisted going to the GP despite being told it’s a viral infection and have eventually been prescribed antibiotics. That is a perfect example of a GP getting worn down despite telling them repeatedly it’s not going to make a difference if you take antibiotics, it’s viral, it’s viral...oh just have the antibiotics, just leave me alone. So, I think the problem is GPs are having to simultaneously manage people’s anxiety about having an infection and people’s understanding about what that means. People do expect the GP to fix them, that’s why you know they go to the GP and say I have this problem and the problem is the GP can’t not say I think you’ve probably got a bit of an infection, but as soon as they say that, and I guess this maybe where the education about antibiotics could come in, is that people think well we have a fix for that. I have an infection, so antibiotics is the answer. And because people just see it as a…it’s like paracetamol, you know…I have pain, oh take paracetamol. Whereas if there is a bit more education about…well actually this is how antibiotics work and these are the things that we’re worried about in terms of what we mean about antibiotic resistance…because at the moment I think, I’ve heard about antibiotic resistance but it’s just kind of like a buzz word, I don’t really…I wouldn’t be able to…I don’t know what it means in terms of for the community, for me, for my family, for the people around me…I don’t know what…how that would manifest or…I don’t really know what it means. So, I think there is immense pressure on GPs to do something, that’s what people want. People want you to do something, they don’t want a GP who says I don’t know, they don’t want a GP who says it’s this, but I think the best thing to is…and I think part of the problem is that the harder it is to get into the GP service, the less people want to be told come back if it gets any worse, because people think no it took me 3 weeks to get this appointment, if it gets any worse next week it’s going to be another 3 weeks before I can come and see you again and people get worried and then end up saying…you know, no I want you to do something about it now, and I think GPs are like stuck in the middle…and a lot of hospital services are put down to GPs as well.

**Which specific topic about antibiotic resistance would you be interested in hearing more about?**

I think…I feel like I would like to know what it means, so even like how antibiotics work, and so what it means when somebody say antibiotic resistance…because I think part of the problem is people just think, what do you mean? just fix it…you know… I think without the understanding of like the biology of what happens when you take antibiotics, that’s how you fight an infection off, and if there’s resistance for that infection, this is wat happens when you take those antibiotics…and that’s what we mean by antibiotic resistance. People want to know what it means for them, people are selfish, me included.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

I definitely think that in terms of like how to take them properly and finishing the full course it’s really important. It’s really difficult [unclear…I think it’s important that we have informed choices, but I also think that more so now than ever before there’s a lot of information that may not be factually correct available…

**What sources would you want to get more information from?**

I think from the GP, I think from the pharmacy as well would be helpful. If it was in regard to my child the health visitor could also supply that information.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **What would be more impactful for you or what would catch your attention?**

Probably…something that’s either really short like a poster or something that I could take away with me, so like a leaflet.

**What about social media posts, maybe adverts in newspaper/magazines, radio/TV public service announcements…things like that?**

Yeah, so social media is always a good place to advertise I think, and I think the TV…I don’t really watch much TV… but I think social media is probably more universal now than TV is.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

I generally trust the NHS…If it’s got an NHS stamp on it, I feel like that’s been well researched and it’s at least backed up with evidence. I think probably…without having a good understanding of other…I’m sure…I feel like there probably are better or more informed organisations out there, but unless people know about them people wouldn’t believe them necessarily.

**What about government officials, international organisation like the WHO?** Yeah…so again with something like an international organisation…I think government officials I’d be less inclined to believe, mainly because I probably perceive them through a very sceptical…ummm…eye anyway…

**What do you think about misinformation on antibiotic resistance and how resistance occurs? Do you think there is misinformation?**

I’m sure there is, there is misinformation about everything these days. And something that’s so…it’s not quite as politicised as vaccines but I’m positive that there’ll be a whole stream of misinformation out there about antibiotic use.

1. **Have your views/perceptions about public health information changed since COVID-19?**

I guess so…I guess it’s difficult because I feel like coronavirus has been…has demonstrated a very clear example of how scientifically what is right in terms of transmission rate is not necessarily what is right for wider society. Which is where…which is like the difference between SAGE and Public Health, like SAGE is to advise purely about the infection, Public Health is to take that information and apply to the information that we have about impact on…you know…mental health and all those other things, and that’s where the decision making comes in.

**What about your views on health or healthcare services?**

What in terms of how I think it should be promoted or how it is promoted?

**In terms of what you’ve seen about health promotion COVID-19 period, what you understand…do you feel like your understanding is better now or less, are you more confused, do you feel like you can trust that information?**

I think the problem is that a lot of the information that we’ve had from the government has come from the government rather than from…apart from obviously Chris Witty…again it’s difficult…It’s very heavily politicised, everything about it is politicised so…but then I guess probably a lot of health is, a lot of the very big public health problem are…you know…smoking, drinking, vaccinations…there’s always somebody who’s got an ideology of it that says that we shouldn’t…you know…I do think that it’s given us a lot of food for thought about how information is given out to people. I feel like my biggest frustration about the whole thing is that we’re not being informed at all, people have just treated us like we’re idiots, like nobody’s gonna understand... There’s never been an explanation about this is what coronavirus is, this is how a virus works, this why we’re telling you that you shouldn’t be doing…that you can’t be doing these things, because a virus works in these ways, and this is how it manifests, this is why you need to isolate for this many days because on average this is how long it will take for you to show…you know…we’ve just been told do this and then nobody…and then people don’t know why and then they start saying you know…they start applying their on anecdotal information to the evidence and make their own mind about what they should be doing. And that’s part of the problem, you know…if they just said this is exactly why we’re telling you…some people might not understand that or might not want to know that, but the information is there then, if you just give the information out people can just choose then whether or not to take it on board.

**Do you feel like your knowledge of viruses, and how viruses work, and the precautions to take during a pandemic…things like that, do you think that has improved since COVID-19, do you feel like you’ve learned more about it?**

Yes, I’ve definitely been more critical about it as well, you know...like asking questions about why has it done that, and how does that work…you know… I mean I’m acutely aware of how infrequently I used to wash my hands, in comparison to how, you know…I think just having that…just being more aware of why we’re doing…even in things like how it’s airborne…

**Is there anything else you would like to add before we finish?** No

***Participant 3***

1. **Could you tell me about your experience of using antibiotics for your child**?

For my child…ummm…my eldest she probably had one or two doses of antibiotics, she’s nineteen now, my youngest she was given them on day two and whether she needed them or not…and I didn’t want her to be given them and she didn’t need them either…yeah, they thought there was some difficulty on day two with her after normal delivery, they said there may have been some infection we’re going to give her antibiotics, and they gave her antibiotics.

**If your children presented certain symptoms, would you seek antibiotics?**

No, never have done.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

No

1. **If you or your child is prescribed antibiotics, how do you administer them**?

Oral liquid

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given**?

Yes.

**Do they explain things clearly?**

Yes

**Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

Yes

**Do you feel like you have enough time to ask questions, to be reassured about your symptoms and things like that?**

Yes, and I do know that in the past when I know that a few issues might take longer 5 minutes, I have booked double appointment. I think the thing is time...if you’re able to ask

**Do you understand your prescription advice?**

Yes

1. **What have you heard, if anything, about antibiotic resistance**?

That it’s…without knowing the ins and outs of the science, that they’re prevalence makes overall resistance lesser. The more you use them, the more resistance…yeah…less is more basically, I’m trying to explain that less is more.

**Is it something you are concerned about?**

Yes…umm…yeah should me or my children be in a life-threatening situation where antibiotics are needed, yeah I’m worried that….it is a worry that people can go through various antibiotics to get the right one…yeah I’m worried about them. [*unclear*]…you’d be worried that your antibiotics wouldn’t treat the condition.

**Do you feel it can affect you or your child?**

Absolutely, as it would the world yeah…and anybody in it

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

I don’t know whether it’s me and my…I don’t know…perceptions, but I find it’s difficult to understand and I ask again and again…yeah so each time when the children have been offered them and when I have been offered them, I asked what would happen if you if you don’t take them , or if you do take them, and if they’ve been prescribed, I’ve always finished the course, and yeah it’s not just (*Unclear*)…the pills…the doctor take it…I feel like I have to get enough information to make the decision, does that make sense?

**Yeah, so do you think the information offered to you is clear, do you understand it, do they use technical terms?**

Yeah, on prescriptions…yeah when we’re handed the prescription and the instructions is clear enough, but I always generally ask more questions.

**And are your questions answered clearly?**

No…not in the instance of the five-year-old when she was in hospital on day 2, no…the answers weren’t clear…I have to hedge my bets and go ok I’ll let her have them if you think it might be ok…they didn’t know either, nobody knew what the problem was, we’re gonna give her antibiotics just in case…no, that wasn’t enough of an explanation for me, I wasn’t happy to let her have some but I felt forced into her having them.

1. **Do you think there needs to be more awareness on antibiotic resistance**?

Yes and no, because I think the media has shared a little of that…it’s certainly something that parents and other friends of mine…parents of young children…it’s an issue which is discussed, yeah. You might not know the ins and outs of the science, but people certainly know that there is a discussion around it.

**What sources would you want to get more information from?**

World health organisation, and yeah just health services

**Where did you hear about antibiotic resistance last?**

Probably a poster in a GP surgery

**Which specific topic about antibiotic resistance would you be interested in hearing more about?**

I don’t think so, I just think in general, overall…yeah nothing specific

1. **Do you think there needs to be more awareness/information on antibiotic use**?

Don’t think I can...yes, no because it’s always a balance between medical advice and a parental decision anyway…

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **For example, what would be more impactful for you or what would catch your attention?**

I would say printed literature from health professionals, not just you can look at this link, you can follow this website…but printed information handed to you by another person during a meeting…I don’t know whether that’s about me and autism or in generally, I don’t know…

**What about media like radio/TV public service announcements, does that help you?**

No, it doesn’t and I can say specifically during lockdown I was watching some new programme about a news presenter, she was being interviewed, and talking about when her husband became ill, and she asked her GP friend for antibiotics, that was a bit…I felt startled hearing that on a news item and… I don’t know there was something that didn’t fit well with me that…it was like saying to the nation somebody’s I’ll get antibiotics, and I remember specifically thinking that it was bizarre that it wasn’t [*unclear*], but yeah just go and have antibiotics anytime you’ve got a cold or a cough or something wrong, yeah…

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

Medical experts

1. **Have your views/perceptions about public health information, health promotion or healthcare services changed since COVID-19?**

Absolutely…

**In what way?** Too much differing information, and the way it’s disseminated and inability to get face to face appointments at a GP surgery or yeah even to speak to a GP…yeah, I had some concerns about me and my children and when you telephone, you get a call back from the GP surgery and it was from the nurse prescriber, I could even get to speak to a GP, yeah so access was very difficult.

**Is there anything else you would like to add before we finish?**

No

***Participant 4***

1. **Could you tell me about your experience of using antibiotics for your child**?

I’ve got 3 children, and I’ve only ever used antibiotics for one of them…she had re-occurrent throat infections and chest infections, ear infections as a little one, but she hasn’t used them in the past 2 years…that’s 3 years actually.

**How old are your children?** 7, 5, and 3.

**So, you’ve only used antibiotics with one of them?** Yup the 7-year-old.

**What kinds of symptoms would trigger you to seek antibiotics/medical advice?**

It would be a high temperature, feeling off in themselves or complaining of any pain in areas that I couldn’t help with. Oh, and I’ve given them Calpol in the past actually before I’ve been to the doctors.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

No

1. **If you or your child is prescribed antibiotics, how do you administer them?**

As it says on the label, so depending on what it is and how often, I think the last time she had a 10 day dose of antibiotics and it was 3 a day for 10 days, and I think it was 5 ml and make sure you take the whole course.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

I ask a lot of questions, so I feel fine…all the questions that I have or any concerns that I have are answered so I feel good it’s fine.

**So, they explain things clearly?** Yes

**Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

I make sure I do.

**Do you understand your prescription advice?**

Yes, because not only does the doctor do it, our chemist also does it as well when I pick up the prescription.

**When your daughter was prescribed antibiotics, and you went to collect the prescription from the pharmacist, did they readily give you information or did you have to ask?**

No, no…they tell you how often to take it, how much, and how long, before they give it to you.

1. **What have you heard, if anything, about antibiotic resistance?**

You can become resistant to an antibiotic depending on how long you take them for, if you use them regularly and your body develops an antibody to that, so it potentially doesn’t work effectively as it does the first time.

**Can you explain to me what you think antibiotic resistance means?**

It means that antibiotics don’t work with you, but I think it’s specific types of antibiotics not all the same ones, it depends…

**Is it something you are concerned about?**

No

**Do you feel it can affect you or your child?**

I don’t think so considering that my 7-year-old has only had antibiotics about 3 times in her life, and my other 2 haven’t had antibiotics at all. So, I think if it’s more regularly used then potentially…but for us, no.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

I’m a medical professional so when… I think when the doctors are talking to me, they put it on my wavelength, so I understand what they’re talking about and if I don’t, I ask questions.

1. **Do you think there needs to be more awareness on antibiotic resistance**?

Yes

**What sources would you want to get more information from?**

I would probably go to journal articles. I would look at that source if I was concerned.

**Where did you hear about antibiotic resistance last?**

Oh gosh I haven’t…to be fair I don’t really look into it. I haven’t really…as I say my daughter hasn’t had any antibiotics for 3 years so it’s not something that I’ve thought about.

**Have you seen anything around at GPs?**

No, I haven’t seen anything, not that I can recall…

**Which specific topic about antibiotic resistance would you be interested in hearing more about?**

More about obviously whether the drugs are broad spectrum or narrow spectrum and if you do become resistant to it, do you become resistant to only that one particular antibiotic or would you become resistant to that type of broad-spectrum antibiotics.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

Yes, I do. I think people are very quick to go to the GP to get antibiotics and some, which mine aren’t, but some GPs are very quick to prescribe them.

**You said you’re a medical professional, right? Could you tell me a little more about that?**

I’m a paediatric physio and we look at medication with doctors as well, for children…special needs children.

**So, you’ve heard of GPs who overprescribe antibiotics?**

Yes

**Concerning awareness on antibiotic use, what sources would you want to get more information from?**

From the GPs probably, I think more information needs to be from there…I think NHS websites, you know when you put in your symptoms for things of what parents can do rather than getting antibiotics straight from the GP…But I do feel there is a need for antibiotics, I’m not saying there isn’t any need for antibiotics, but I think it should be used correctly.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?**

I think it’s more…maybe sort of, you know…the NHS websites, anything online…I don’t think that leaflets and things like that work anymore…I don’t go to the doctors that often, and they have posters on the wall…but on a website or social media.

**What about advert in newspaper/magazines, radio/ TV public service announcements?**

Yeah…Yeah all of them

**Do you think there needs to be more awareness on antibiotic resistance?**

It’s not a question I’ve really thought about to be honest. I don’t know. I don’t know what the, you know…I don’t know what the extent of the issue is with being resistant to antibiotics, how many people are, and what antibiotics there are…we need perhaps more information about it.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance, you mentioned NHS websites, are there any sources that you think are trustworthy as well?**

I would always go to a journal article

**What about family members?**

Most of them are in the medical profession…I don’t know…to be fair, I think GPS…anything that are, you know, in the GP practice, in any healthcare building, so like the pharmacy that’s giving you them…schools potentially.

**What do you think about misinformation on antibiotic resistance and how resistance occurs? Do you think there is misinformation?**

Yeah…

**Could you tell me a little more about that?**

Yeah, I think that you unfortunately got a lot of social media going on…I think people believe what they read on social media and in the papers without actually [unclear]…and I think it’s reported on one…just like that tweet that came out about Woolworths yesterday, people believed that Woolworths were coming out, so that again was incorrect, I think 4000 people joined that website…So I think social media has got quite a big part to play in fake news.

1. **Have your views/perceptions about public health information changed since COVID-19?**

No, it hasn’t

**What about your views on health promotion** **or healthcare services?**

I think some of the healthcare services are going for the better and are more convenient for patients and the potential for [unclear]…Appointments that are occurring, things may be missed or over-diagnosed.

**What about your health literacy levels, you mentioned you were a healthcare professional, but do you feel like you’ve learned more about viruses, treating viruses etc during this period?**

Yes, because I’ve been working in ICU. Yes, so I’ve learned quite a lot about treating the virus and how we treat things differently, and how this has come out of nowhere, and now compared to where we were in April of being able to treat COVID, we are a lot further on than we were.

**Do you feel that COVID-19 will improve people’s health literacy levels?**

That’s a really difficult question…I don’t think it will. There’s so much that has happened with COVID-19 and so much information that has been out there on social media even on the news channels and even if you just sit and listen to people saying oh I think it’s all rubbish now, it’s not really as bad as it was, people are making it out to be worse. So, I feel that people’s perceptions are changing…

**For the better or for the worse?**

I think for the worse…I think they’ve lost faith in some of the decisions that have been made.

**Is there anything else you would like to add before we finish?**

no

***Participant 5***

1. **Could you tell me about your experience of using antibiotics for your child**?

Yes, so when my daughter was born, my father-in-law was undergoing test for lung cancer, but it was actually TB, so she came in contact with him. So, 2 weeks old, she had to go on the 6-week course of antibiotics. And then when she was 6 months old, she has a very sever UTI which didn’t get picked up for a few days, A&E sent us home. So, the, about 4 days after we were back in hospital and she had to have the IV antibiotics for the infection. And then just after one she had tonsillitis and needed antibiotics as well. And then my 4-year-old he had tonsillitis well and he had to have them as well. But he only ever had to have them once.

**What kinds of symptoms would trigger you to seek antibiotics/medical advice?**

With my youngest whenever she had a temperature that hit 40, then I know she need Antibiotics because every single time that’s when she’s needed it. With my oldest we pretty much try to ride it out and if he’s been ill, like temperature for a few days, then I will go see the GP. But I don’t tend…he’s a nightmare with medicine, so he’d prefer riding it out than take the medicine.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

[unclear] when she first got taken to hospital at 6 months with the UTI, she had proteins and blood in her urine, but they just sent us home under the watch of the nurses…so, that’s only…

**So, when that happened, how did you feel?**

I felt stressed because…[unclear]…so, she was actually as well as having the TB at thingy she was premature as well…[unclear]…obviously I wasn’t happy and I knew something was wrong with my child because…but then because I had quite bad PND and anxiety with her as well because of so many health issues…so yeah… luckily the community nurses were still coming out so I got to express my concerns to them and then somebody actually listened to me and said yeah I’d send her back up.

**So, when you took your daughter back to A&E for the UTI, did you ask for Antibiotics, did you tell them that you thought your daughter needed antibiotics?**

No, it was actually an ambulance that took us, because we rang the 111, and because she was screaming hysterically for an hour, they sent and ambulance out and her heart rate was up 200 and she had a high temperature so then they took us up and, obviously the doctor says all right no she’ll be ok, you wanna take their word…you wanna take the doctor’s word for it really, don’t you?

1. **If you or your child is prescribed antibiotics, how do you administer them**?

With difficulty…there are…luckily the 4-year-old he’ll complain but he’ll take it, with the younger one you have to, I was using the syringe, and you’ve got to pin her down and…it’s basically a struggle. And obviously she’s had them IV as well.

**Do you follow the full course of the antibiotics?**

Yes.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given? Do they explain things clearly? Do you understand your prescription advice?**

Not always…I have left before, and I think my little one…[unclear]…we have left before and the nurses have given us the wrong antibiotics for both of them but it was only but it was only my littlest…they were both poorly…the littlest needed them and they said oh the other one might do, because it’s the weekend we’ll give you some anyway. So, when I went in to cash in the prescription, she had given the wrong dosage for my 4-year-old, so we didn’t end up using them.

**Right, so you took both kids to the doctor and the nurse prescribing the antibiotics gave you antibiotics for your sun as well who didn’t need it?**

Yes

**And then it was a wrong dosage as well?**

Yes

**So, when you went to the pharmacy to get the antibiotics what happened? Did you get the ones for your son as?**

I might have got them both but the nurse said if he gets worse of the weekend then you can give them to him, but obviously it was the wrong dosage so it was pointless…I think the pharmacist just give them me both…but I never used them for my son. So, it was the wrong do and he got over it.

**So, what did you do with the leftover antibiotics?**

I think I might have taken them back to the pharmacy after

**Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

Not really, it’s more here you go, bye…

**So, are the consultations quite short?**

Yes

**And do you feel rushed?**

Yes

1. **What have you heard, if anything, about antibiotic resistance?**

That some don’t respond to certain antibiotics so they need to be swabbed to get the right antibiotics for it, and that’s caused by people over-using antibiotics, they’re not using them till the end of the course so it leaves the really strong ones.

**Is it something you are concerned about?**

A little bit but not overly, because I know we finish the course of them.

**Do you feel it can affect you or your child?**

If people keep misusing them then eventually yes.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

Yes…I understand it.

**Do you find it too technical?**

I don’t think so, but I don’t feel like I’ve seen anything about it recently…but it’s stuff that I know. I don’t think I’ve ever had a doctor explain it to me, not that I can remember…

**What about a pharmacist or a nurse practitioner?**

No, I just get told to make sure I finish the course of them

**So, you’ve never received any advice from a healthcare professional on the subject?** Not that I can remember.

1. **Do you think there needs to be more awareness on antibiotic resistance?**

I think some people do, yeah…because they will just take the until they feel better and then stop.

**What sources would you want to get more information from?**

Probably leaflets in the antibiotics would be good.

**Where did you hear about antibiotic resistance last?**

I have no idea…

1. **Do you think there needs to be more awareness/information on antibiotic use?** Yeah, I think so, but I do remember there have been a few big campaigns, but I don’t know if there are any recent ones, or if it’s all about COVID at the minute.

**Which specific topic about antibiotic use or antibiotic resistance that would you be interested in hearing more about?**

I don’t think so…

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **What would be more impactful for you or what would catch your attention?**

Probably just like a little poster, something…maybe like something on social media, but something that’s quick to the point not those with all those reading on it because it is difficult to actually sit and read anything lengthy. Especially when you’ve got to focus on it and the kids are fighting.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

Stuff off of the pharmacy, and doctor and them. If there’s posts from the hospitals on Facebook then…they they’re quite trustworthy.

**What do you think about misinformation on antibiotic resistance and how resistance occurs?**

I think newspapers have a lot to do with it…and like people saying things cause you always get the person saying well I did it and I was fine.

1. **Have** **your views/perceptions about public health information, health promotion or healthcare services changed since COVID-19?**

No because obviously with my youngest I’ve had quite bad health-related [unclear] anxieties so I kind of just blocked it all out, so…we’ve been in a bubble for 6 months.

**Is there anything else you would like to add before we finish?** Not that I can think of.

***Participant 6***

1. **Could you tell me about your experience of using antibiotics for your child?**

The experience I have with my child she’s 3 yrs old, and the amount of antibiotics she’s taken in these 3 years is zero. I believe there are only certain situations were a child in this case or in general a person needs to take antibiotics. And what I see is that there is an abuse of this medication. There’s no awareness about it, people don’t know what an antibiotic is for, and what it is used to treat, and when it can be avoided. I’m a support worker, so I support people with learning disabilities. And I see an abuse again of antibiotics. Sometimes as a preventative way, just take a cycle of antibiotics in a preventative way. I think this is absolutely madness! I see antibiotics being prescribed without any tests, without any investigations. What is going on? And this I think is absolutely wrong. And then I have seen over the past 6 years of living in the UK, and doing this job, that our service users don’t react to antibiotics anymore, so they just give a cycle after another cycle, obtaining zero results and actually getting worst. It seems to me commonly now, that to treat anything an antibiotic is needed. So, people don’t know. People go to the GP and expect to come out of that GP practice with a prescription. So, I believe that there are many ways to treat illnesses, especially minor illnesses, but they are just not taken into consideration. Not at all.

***So, what kind of symptoms would trigger you to seek antibiotics or maybe ask for medical advice that might involve getting antibiotics?***

Well, if it is a bacterial infection, then yes, an antibiotic is needed. But not for viral. Not for viral infections.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

Well, that’s hard to answer, because in my entire life, I think I have taken it a bunch of times, so I don’t think it was ever refused to me when I needed it.

1. **If you or your child is prescribed antibiotics, how do you administer them?**

I would just follow what the GP tells me to do, you know following when and how much, if it’s a tablet or if it’s, you know, a liquid form. Yeah, we would just follow the instructions.

***So, do you take them until you finish the course or until you feel better?***

Well, to be honest the last time I was prescribed antibiotics, I stopped after 2 days. I don’t think it was needed in the first place, but the GP wanted to give it to me. Anyway, so I took it for 2 days and then I stopped.

**Can you tell me a little bit about that? Why were you prescribed antibiotics, if you felt they were not needed?**

So basically, what happened was, I went to A&E because I wasn’t feeling well and the doctor at the A&E, he thought I had mastitis. So, he just prescribed an antibiotic that was ok with breastfeeding. Yes, I wasn’t feeling well, but no I don’t think I had mastitis, not at all.

***So, no tests were done?***

Exactly, no tests were done! I had a tiny bit of temperature, a tiny bit honestly. I had general pain in my body, but the breast was fine, it wasn’t swollen, or there wasn’t any lump, there was nothing. And I was feeding my baby just fine, so because I know very well what mastitis looks like, I don’t think that was the case. Anyway, because I was in pain, like I was having some kind of flu symptoms I would say, I agreed to take the antibiotics. But when I felt better the morning after, one or maybe 2 days after, but not more than that, I just decided that that was not the case [mastitis]. You know, they gave me antibiotics for 2 weeks! To recover from mastitis that I didn’t have, and no one single test was done.

***So, what did you do with the leftover antibiotics?***

I took it back to the pharmacy. This is what I do when I have to discard expired medications.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

Well, I don’t think they are giving much information nowadays. It seems to me that the purpose of a doctor is just to treat the symptoms, you know... to make the symptoms disappear. There is not much investigating, what could be the cause, or what’s going on.

***Do they explain things clearly? Do you feel like you were given the opportunity to ask the questions you wanted to ask?***

Yes, I have the opportunity to ask questions, and no I don’t think they give much information.

***What about what you are prescribed antibiotics or any other medications, do you understand your prescription advice clearly?***

Yes, I think that is pretty much clear, yeah.

1. **What have you heard, if anything, about antibiotic resistance?**

Well, what I’ve heard is the body builds a resistance towards antibiotics, because if they are taken when they are not needed, they end up not working anymore when they are finally needed. And I’m sorry but this is absolutely, 100% doctors’ fault! Because we don’t go to buy antibiotics at the shop. And it’s funny because when I take my service users to a doctor’s appointment…well not know because of everything that’s going on... but up until last year, we used to take them to the practice all the time. And I remember seeing banners in the waiting room… oh, don’t take to many antibiotics because they won’t work if you take too many… But I’m sorry, why are you telling me not to take it? Why don’t you stop prescribing it what they are not needed? I didn’t really get that message to be honest, I found it quite confusing.

***So, when you take your service users to the doctor for their appointments, do they get prescribed antibiotics a lot even though you think they are not needed***?

Yes

***So, no tests are done?***

No! I’m sorry they just guess! Oh, it’s just a urinary infection… it’s just a UTI… take a week of antibiotics. Where is the test? I don’t know… I mean, I don’t want to sound judging, I understand when it comes to service users, they have got lots going on, sometimes they can be challenging, it’s hard to make them understand what is going on. But I believe that when it comes to medication, there is no…you know…shortcut. Everything should be done properly from the beginning to the end.

***So, is antibiotic resistance something you are concerned about? Do you feel like that it could affect you or your child?***

Personally, no. Because as I said it is something we don’t take, we don’t have the need. So far, so good I would say.

***What do you think about the language use when information on antibiotic resistance is offered to you? Do you think it’s too technical, it’s too complex?***

No, I think…well…it’s fine for me, maybe because I am educated about it. So, I can understand what they are saying, what’s the meaning of these messages. But I wonder how many friends, people around me, would understand? I have a friend, she’s always complaining because the doctor should have given her antibiotics for her son, when there is absolutely nothing wrong with her son. Or maybe he is ill, yes her son is not well, but from being unwell and the need for antibiotics, there’s a big gap!

People think the only way is antibiotics!

***So, do you tell her sometimes…***

Yes! They might be sick of listening to me! But I’m trying, every time I have a chance to do it, I’m just doing it. I’m trying to make people aware of what abs are. They are medications, and they come with risks and side effects. Yes, they work when they are needed, but it cannot be used that many times, 10 times a year! What is going on?

I remember even years back, when I was still in Italy, I used to work in nursery, and sometimes I would talk to the mums, and [they would say] oh my daughter has already had the cycle of antibiotics for this winter. I’m talking 2 years old child!

***So, are antibiotics freely available in Italy, or do you need a prescription?***

No, you need a prescription there as well. So again, it comes through doctors.

What you can find here in the UK, are painkillers. You cannot find painkillers in the shop in Italy. Something that really surprised me when I moved over here, because bloody hell, those are medications! What are they doing? Just there, available for everyone! So that was quite shocking, but we don’t have that in Italy. But the antibiotic thing is exactly the same.

***Do you think that maybe doctors feel pressured to prescribe antibiotics? For example, you mentioned your friend who went to the doctor and wanted antibiotics and wasn’t happy that she didn’t get antibiotics for her son. Do you think this is something that doctors have to deal with?***

I think there must be some pressure around it, whether it comes from the parents or… I don’t know…or big pharma whatever it is... I don’t know, but there must be something around it because it is quite shocking to me that doctors don’t carry out an investigation, a proper investigation… maybe, they don’t have time, maybe they have way too many patients to listen to. But it cannot be left as it is, you know... It shouldn’t take them just 2 minutes to prescribe antibiotics. This is why I would expect an investigation all the time.

1. **Do you think there needs to be more awareness on antibiotic resistance?**

Yes, totally.

***So, what sources would you want to get information from?***

Everywhere! Everywhere. I mean, why do they spend so much time talking about how smoking is bad? Why don’t they spend the same amount of time on how antibiotics can be bad as well? Diet. See, in my dream world a bottle of coke should be 10pounds. Not 2 for a pound. But you know, I’m naïve, so…. I believe that health comes from many things, not just from treating the symptoms. We need to treat the cause. We should make disappear everything that makes us ill in the first place. Obviously, there are interests behind it, so it will never happen.

***Where did you hear about antibiotic resistance last?***

Erm… well, it has been a while now. It’s been a while. I believe it was probably some random survey on FB, you know. I don’t see much, especially this year when I haven’t been in any practice, and everything is being done through zoom or skype. So, I didn’t see any leaflets, or anything. Nothing on telly that’s for sure.

**Is there a specific topic about antibiotic resistance that you would be interested in hearing more about?**

Well, I would like to know what are the other options…I mean in order to avoid to develop an antibiotic resistance, what can we do about it? And maybe it’s too technical but yes, I would like to know exactly what happens inside the body that makes an antibiotic not work anymore.

1. **Do you think there needs to be more awareness/information on antibiotic use**?

Yeah, I think information is never enough

**What sources would you want to get more information from?**

Well, I think the telly should be…television should be the first…I’m thinking about the place where I work yeah, the telly is on morning to evening every single day and I think television should be a way also for…you know…educating people not just awful things, not just entertaining, it should be educating people considering the state of things.

**Which specific topic about antibiotic use would you be interested in hearing more about?**

What are the…yeah when should we be taking…In what specific conditions we should be getting antibiotics. Maybe if people would know when exactly is an antibiotic needed and what tests need to be carried on then maybe next time they go to the doctor maybe they will ask for some test.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **For example, what would be more impactful for you or what would catch your attention?**

Maybe something coming from the school could help you know from time to time…I don’t know…ok don’t think I have any meaning behind it, but they spend lots of energy when it comes to flu vaccination and it’s just that! That’s all! That’s all! I don’t see much effort put into diet, put into…you know…sending nutritional food for kids you know…when you send packed lunch… or again around medication they don’t spread a word around the use of Calpol nowadays. I think, it’s shocking. People are mistaking Calpol…you know…for…I don’t know…syrup probably! And they don’t realise it’s medication. But everything just seems so easy for them, but we’re talking little kids. What is going to be for these kids when they’re adults? They don’t see the damage on the long-term.

**That’s a very good point, do you think taking antibiotics as a child or being given antibiotics as a child would result in problem later on with your health?**

Totally! One hundred percent! What we put into our body is going to do something…is going to react…is going to modify something inside our body…so I don’t get why people are so…you know… they’re not well they take medication they get better, so they see they’re improving and they…they’re happy about it but they don’t see that…it can be quite the opposite. Medications come with side-effects, and it is not just a story, it is real. And building up of medication is going to cause something.

**What sort of media would you want to look at when it comes to antibiotic resistance awareness?**

I only look at Facebook sometimes, and Instagram. Look at COVID for example COVID-19 took over every single platform available. You cannot open a single website and not see a message about COVID. So, at the end of the day you make sure people got the message and yes, we got the message. How about everything else?

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance** **for example medical experts, family members, government officials, or maybe international organisation like the WHO?**

Well, I would put family experiences first and then…I still believe in…I still believe there are good doctors out there…Doctors that want people to be healthy…but unfortunately not all of them and that’s it. I’m sorry I don’t trust government experts, I think they are run by politics and not by medical expert[s] and I don’t…I don’t…the WHO don’t have my trust, they don’t have it.

**What do you think about misinformation on antibiotic resistance and how resistance occurs? Do you think there is misinformation?**

Yes, I think so…I think that it is a topic that is not talked about, not much. How many people can say that they know what we’re talking about? They just know that when you are unwell, you need antibiotics, that’s it.

1. **Have your views/perceptions about public health information changed since COVID-19?**

Yes, one hundred percent!

**Could you elaborate?**

I’m not denying that COVID exists, yes COVID exists. I don’t think that we’ve been told the truth, entirely the truth, about it and I wondered if in the past six seven months, probably more now I don’t know, what it…what is public health…you know…experts or you know…all of them instead of spending 7 months putting fear into people’s heads only talking about we’re gonna die, we’re gonna die, we’re gonna die, everybody’s gonna die, you have to lock yourself in don’t get in contact with anybody, we would’ve done the opposite…How about teaching people how to get healthy? How to…I don’t know…lose weight if you’re obese, if you overweight…Get yourself health, get your immune system strong and in proper…in working order…How about putting plans in place to support people to quit smoking, support them on a diet…what about weekly zoom meeting and see how your diet is going…you know in a supportive way. Not in a scaring way.

**So, there has been some health promotion during COVID for example with hygiene and sanitation, so washing hands properly, and covering your mouth, and not sneezing just without covering your face and even recently about trying to get more active because they’ve found that people who are obese have high risks of getting COVID-19, what do you think about those?**

I think those health promotion came on quite late, after being stuck in the house away from the sun, away from…you know…air, clean air…they told us not to do this, not to do that, and they should’ve said…they should have said the opposite, be active! This should’ve been said from the very beginning…and when it comes to the washing of the hands, and being more clean and hygienic, I’m sorry I disagree with it! I disagree with it because we’re not gonna avoid COVID washing our hands ninety time a day. Actually, we’re going to get our skin even more fragile and susceptible to you know…we need bacteria and viruses and fungi, we don’t live in a sterile world, so if you’re ill, you’re unwell you stay home that’s fine, this is what should happen…this is what don’t happen with kids. I’m sorry, they’re not well parents fill them out with Calpol and send them to school…this is…this is…this is absolutely wrong! But when it comes to wash your hands and use antibacterial gel, which is full of bad things, [*they*] are going to make our immune system even weaker and how you going to react…how is your body going to cope when you get an infection? This is the trick things and not many people who know that especially the non-educated ones. I’m sorry, I’m probably…you know…I think outside the box and this is not the…the extra cleaning is not what’s keeping us from getting COVID…

1. **Is there anything else you would like to add before we finish?**

I think we’ve spoken about pretty much everything…But yes, parents! Parents need to know…need to know what’s the abuse now, is going to make in the future…it’s going to be for their children in the future.

***Participant 7***

1. **Could you tell me about your experience of using antibiotics for your child?**

My eldest who is nearly 5 had antibiotics within the first 18 months, I can’t remember what it was for. But he was prescribed antibiotics, it was a delightful banana flavoured I’m assuming from the smell, bright yellow that he was happy enough to take and that’s kind of my experience of it really. I wondered if he would take, and he did, he was quite happy with it, he usually got a yoghurt afterwards. And I don’t remember having to go back to the doctors, so whatever it was, was dealt with without any need for anything extra.

**What kinds of symptoms would trigger you to seek antibiotics/medical advice?**

So, if…I would only get a doctor’s appointment or go seek advice if wither of my boys had a temperature that was around for more than a couple of days. Or sort of symptoms that were…if they had a cough or a cold, I wouldn’t even think about going to the doctors unless it was particularly bad but, if it was like over a week. And then I’d just seek advice or kind of almost like confirmation that is nothing and just to ride it out. I’m not the sort of person who would ask for antibiotics, it would only be what’s wrong with my child, what does my child need? So, if they need antibiotics, I’d give them but I wouldn’t ask for them cause it’s not point if it’s…if it’s a virus aren’t going to do anything.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

No

**If you or your child is prescribed antibiotics, how do you administer them?**

As directed

**How long do you take them for?**

As long as I’m told to.

**So, do you finish the full course of antibiotics?**

yes

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

It depends on which particular doctor I’m seeing, but generally the doctors at my surgery are pretty good at explaining what and why, and side-effects and stuff. But I’m also sort of over the years I’ve become quite good at asking what potential side effects are and stuff, and I think part of that is because I ask the questions as well as them giving me information.

**Do they explain things clearly?**

Yeah, and if they don’t, I will make them

**Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

Yeah

**Do you understand your prescription advice?**

Yes

1. **What have you heard, if anything, about antibiotic resistance?**

That it’s becoming more of a problem

**Can you explain to me what you think it means?**

When particular bacterial infections are becoming resistance to antibiotics because antibiotics are being over-used in situations where they aren’t necessarily needed or aren’t effective. So, bacterial infections…some are becoming less responsive to antibiotics, and some antibiotics are becoming less effective than they have been

**Is it something you are concerned about?**

Yes, because I’m allergic to penicillin as is my husband so there is a good risk that my boys are, and I’m conscious that if there is antibiotic resistance then perhaps the potential medicines that we can take might be limited or might be less effective.

**Do you feel it can affect you or your child?**

Yes, I think it could affect anybody, so yes.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

This is going to sound potentially big headed, but I understand it but I’m an intelligent educated woman, and I worry that perhaps some people who aren’t as highly educated as I am, cause I’m educated to a postgraduate level, I worry that some people who aren’t as highly educated aren’t necessarily going to understand it and aren’t necessarily going to say that they don’t understand. I think some of the language is a bit complicated, and I don’t think it needs to be as complicated as it is.

1. **Do you think there needs to be more awareness on antibiotic resistance?**

Yes

**What sources would you want to get more information from?**

Having said that there needs to be more awareness, I don’t necessarily know where that information should come from. I think a good place would be health visiting teams, as they have that input at quite a young age…you know…at the start of family life and that would be a good time…I know as a mum whenever your child is poorly you do sort of panic a little bit, I want to do something. And I think the go-to is always antibiotics unless health visitors can do a bit more, well antibiotics aren’t always the right thing then it can try and just plant that seed in people’s minds, that the right thing isn’t always antibiotics.

**Where did you hear about antibiotic resistance last?**

Don’t know, I can’t think. [unclear] at the GP it comes up sort of fairly regularly, you know…when to…[unclear] about patients who have insisted on antibiotics when they don’t need them…it’s not like it’s discussed all the time but it’s a fairly common topic.

**Which specific topic about antibiotic resistance would you be interested in hearing more about?**

I think personally I’m not interested in the details of how it occurs, other than it’s because of the overuse of antibiotics. But I think if there was a bit more general awareness of using antibiotics when it’s not needed causes this and also making sure that people know the impacts of antibiotic resistance.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

Yes, I think so, because again if someone is ill [unclear] get some antibiotics when a lot of time it won’t do anything

**Is there a specific topic about antibiotic use would you be interested in hearing more about?**

Not personally.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **Like what would be more impactful for you or what would catch your attention?**

Stuff on Facebook especially again mums of young babies who are doing night feeds who are scrolling through Facebook who are scrolling to try and keep awake you’re gonna see those adverts and it will get into your head at that kind of early stage that would have caught my eye when I was nursing constantly [unclear] Instagram for me generally would be a good place to have those advert [unclear]

**What sort of media would you want to look at: pamphlet, brochure, advert in newspaper/magazines, radio/TV public service announcements, posters, articles, blog, podcast, social media posts?**

I don’t watch TV that have adverts or sort of listen to radio adverts so I don’t really come across any adverts. And posters are more likely like bus adverts and bus stops, I’m more likely to see those than anything on the telly, I only sort of watch catch up telly, so I don’t see the adverts

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

NHS [unclear] and Public Health England although I know that they are becoming something else, whatever Public Health England is becoming, if it’s got that stamp on it then I think people are gonna take it more seriously.

**What about family members?**

Well, I’ve got medics in the family, so I do go to them for advice because I know they’re trained, if I didn’t have medics in the family, I wouldn’t necessarily ask my family for advice.

**What do you think about misinformation on antibiotic resistance and how resistance occurs?**

I’ve not seen any, I’m sure it’s out there, there’s misinformation on everything, but I haven’t come across any.

1. **Have your views/perceptions about public health information, health promotion or healthcare services changed since COVID-19?**

I think I’ve become more aware of sort of public health information because obviously there has been much more of it, it’s much more in our face. But I’ve also become quite conscious of the influence of political spin and the government is quite happy to play down certain aspects of things that public health officials and experts have said, the government is quite happy to ignore that when it doesn’t suit them. And I don’t trust this government anyway, and anything they can say about anything really I think you run the risk of people going oh they haven’t got a clue, I’m not listening.

1. **Do you think they also play down the importance of understanding AMR and awareness on AMR, do you think they play down the consequences of increased AMR today?**

Depends on the consequences of everything if it doesn’t fit their narrative.

**Is there anything else you would like to add before we finish?** No, thank you

***Participant 8***

1. **Could you tell me about your experience of using antibiotics for your child?**

Yup, I’ve got 2 children. So, I’ve got a 4 year old and a 2 year old. They’ve both had antibiotics at points in their lives. The oldest one had some for tonsillitis when she was 6 months old then again for an infected cut on her finger. And then the youngest one had some for…I want to say it was a throat infection as well…[*unclear*] it was definitely something throaty or chesty, I can’t recall…I feel like I’ve lost my mind a little bit since having [*unclear*] I forget, I can’t remember in that much detail, but she’s only had them once.

**So, what prompted you to see the paediatrician or the GP when you thought your child needed antibiotics?**

We usually try and do the things at home as far as possible, but all the time with the throat infections, both of them, they both had high temperatures, and it wasn’t coming down with just Calpol and ibuprofen, and I thought it must have been something more and then obviously when we went to the doctor and they gave antibiotics that helped and they both did get better. With the infected finger it was a cut that had gone a bit red and a bit pusy and I just wasn’t sure what to do. We went just to see how to dress it better, what to do if we needed a cream [unclear]…but they prescribed antibiotics just in case. So that was their choice rather than our intention we went [unclear] what to do with the cut, but then they said give the antibiotics.

**So, for the cut on the finger, did they prescribe tablets or?**

At the time they had…they had medicine with umm…like you know they give in a syringe…like you give Calpol

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

No, we’ve never gone and asked for them specifically, no…

1. **If you or your child is prescribed antibiotics how do you administer them**?

However, the instructions tell us to…so with the girls it was like take 5ml every 4 hours or whatever it was, just according to the instructions on the packet and filled [unclear].

Whatever it says on the instructions from the prescription or on the packet or whatever. So, if it’s until it’s completely finished or if it said until it was 14 days or 7 days or whatever the packet instruction say I would take…I wouldn’t stop if they seemed like they felt better or anything, I would do whatever the dose said.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

It’s not always the fullest information that I would like, sometimes you know it’s really busy, or it feels like you’re a little but rushed sometimes…it’s not…I don’t always feel the most fully informed, but then I’m quite conscientious and I’ll always read the instructions in the packet like…all the…you know like all the adverse consequences and stuff…so I’m quite careful and I like to read around it. Or I might google what it is that they’ve prescribed or whatever just to kind of give myself a little bit more knowledge and information. Usually I’m happy enough, like trust them…

**Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

Yeah, yeah I would always [unclear] like why are you giving us that one or like you know…what is the point of the medication. I would always ask

**And then do they explain things clearly to you?**

Yeah, yeah usually. I would never leave if I wasn’t happy with the response I got.

**So, generally do you understand your prescription advice?**

Yeah.

1. **What have you heard, if anything, about antibiotic resistance?**

I’ve heard that it’s like…children or adults take too many the bug or the infection or whatever would not react well to it in the future [unclear] to the antibiotic and you wouldn’t fight the disease. Is that right? I’m not sure. That’s kind of what I think it means.

**Is it something you are concerned about?**

Not really cause as I say we wouldn’t be going seeking antibiotics a massive amount, I think as a global thing in terms of public health as a wider issue, if too many people are doing that and then antibiotics are not gonna work or diseases are gonna mutate of whatever, then that’s a concern. But in terms of me and my children, I don’t think we overuse antibiotics as a family.

**Do you feel it can affect you or your child?**

Again, as I said in a wider public health part of it, if people continue to abuse them and it became a wider issue then potentially yes, but as a pressing concern now, no.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

I’ve definitely seen on posters and pamphlets at the doctors…I’ve definitely seen leaflets…and you know…that are clear and easy to understand saying things like don’t use them if you don’t need them or make sure you use the full packet and things like that. I’ve seen quite clear and straightforward information in the doctors and things…[unclear] the ones that I have seen, I have not obviously read any studies or anything on it but yeah…the basic things saying always use the packet, follow the instructions, or don’t overuse them, they’re quite clear I think.

**So, the language used is not too technical?**

No, not in things that I have seen, no…

1. **Do you think there needs to be more awareness on antibiotic resistance?**

Possibly yeah…Cause as I said I’m not certain what it means or what the wider consequences of it are…I’m aware that it’s a thing but I’m not…I don’t feel like I’m as fully informed as I could be.

**What sources would you want to get more information from?**

I guess within the packet saying like…you know where it says like use it as directed explain why in the packet instructions, or when the doctor does prescribe them if they say if you don’t use this properly this could cause further long-term problems. Just to make sure that you are fully aware of the consequences of the things you are using. Or as I say adverts perhaps like a lot of public health information gets out through the adverts or posters doesn’t it, and I feel like they are quite effective…I feel like I’ve seen stuff but I have not necessarily taken it in whereas…you know like…obviously more big issues like you see cancer posters everywhere or like you know…for like checking your breasts or whatever like make sure you go for your smear test…that information is dead clear and really, really out there. I don’t feel like I’ve seen as much information about antibiotic resistance as those kinds of issues.

**Where did you hear about antibiotic resistance last?**

I reckon it must have been maybe a poster at the GP or a pamphlet at the GP, perhaps.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

I feel like I’m aware that you know for viruses they don’t work it’s only bacterial infections, like I’m aware of the sort of generic uses for it, like there is no massive…like I’ve got no major concerns about it, like we’re healthy we haven’t needed to go to the GP often I think if I had a concern it would be something that I could research if I wanted to… there isn’t anything that I desperately need to know now. Does that make sense?

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **Like what would be more impactful for you or what would catch your attention?**

I think the things that grab my attention the most are things that relate to children or parenting like if I saw an advert or [unclear] social media [unclear] with pictures of children on and things like that so that kind of [unclear]

**Could you repeat that please, sorry?**

Perhaps like social media advert or you know like [unclear] adverts sometimes like it’s obvious it’s got pictures of children on or like Antibiotics overuse in big letters or something like that, like it’s something that I could see while I was scrolling on maybe Facebook or Instagram, or like you know something that would grab my attention that would be something that I would then click through to [unclear].

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance** **so for example medical experts, family members, government officials, international organisation like the WHO?**

Yeah, like I would trust an NHS source, or if it was like you know my local health authority or the health visitors or something that definitely a medical source I would read or like I said from a peer-reviewed source like an academic or something, if it was an expert in the field. I would not necessarily just listen to my neighbour or a friend, like I would do more research.

**What do you think about misinformation on antibiotic resistance and how resistance occurs?**

I think there probably is misinformation out there, I’ve not massively heard or seen anything, but obvious with like…you know…anti-vax people and things like that, I’m aware that there are people who don’t like vaccines who don’t like antibiotics, I’m aware of such things, but it’s not something I come across regularly I’ve never sort of been involved in hearing that or anything.

1. **Have your views/perceptions about public health information changed since COVID-19?**

Yes, honestly I feel like it’s been a bit of a catastrophe in terms of government communication. I follow lot’s of…on twitter and things I’ve been following public health experts and things like that, trying to get appropriate academic information so I’ve been actively searching for accurate information and data, but I feel like the way the government had gotten information across has been pretty terrible.

**What about when it comes to health promotion like hygiene and sanitation practices, do you think it has changed your behaviours somehow?**

I feel like the information at the start about making sure we washed our hands appropriately and for the appropriate length of time and in terms of wearing face coverings and things like that those big key issues I think have been brought out appropriately, like my 4 year old is always like I’m wearing a mask mummy if ever we’re going out, it’s got through to him about washing our hands and things, those big key information have… but I think a lot of people I know are not sticking to things properly because of the constant new turns and changes in information, people have got a little bit sort of sick of the over-information and the changing information. But [unclear] the family, we are still sticking to all the guidance, we are still washing our hands we are wearing our masks, but I know a lot of people who are not.

**Is there anything else you would like to add before we finish?** No, I don’t think so

***Participant 9***

1. **Could you tell me about your experience of using antibiotics for your child**?

Yes, I’ve got 2 children a 2-and-a-half-year-old and a 10-month-old baby. The 2 ½ year old was born with an emergency section, so he had antibiotics at birth. So, after the first hour he was born, he had antibiotics. Both my children have been breast-fed and the older on up until 18 months and the younger one is still being breast-fed. They were both introduced to solids at 6 months so…but my younger child hasn’t had any antibiotics, but my older one he was born and had to have antibiotics, and probably when he was one, he had to have antibiotics for a chest infection. And after that, since then actually, his digestion has gone completely…it has wreaked havoc on his digestion. He was almost toilet trained by that point which was unusual for a very young child, but you know…he did it himself, and when we gave him the antibiotics, it basically destroyed his gut…he refused to go on the toilet, he suffered diarrhoea for months on end… so now, whenever we’ve been with my younger one to the GP, we recently went because we suspect she had a strep throat, the GP suspected it but didn’t test it and he gave us antibiotics, which I refused immediately because I have spent all this time, like the last 9 months, building her gut, and you know…breast feeding her, and being very careful with what she is given, only to give antibiotics and completely destroy what I’ve built in the last 9 months, so…. You know… I’ve grown up in Bulgaria and…you know…I’ve grown up with antibiotics, I’ve been given antibiotics as a child many many times and it’s not a…you know…you could say they haven’t done much harm to me but equally…[*unclear*] so… I do my best to avoid antibiotics when I can with my children, with my older one it was an emergency situation when he was born and he had to have it, he had to have the antibiotics because I had a suspected infection, that was unavoidable… but since then, I’ve done my best, and I will continue to do my best to avoid them, if possible, with my children. I do feel that my GP tends to be a bit too keen on prescribing them, so I tend to be a bit sceptical when the first thing that the GP reaches out for is antibiotics.

**What kinds of symptoms would trigger you to seek antibiotics/medical advice?**

I mean, last time when the GP said that my daughter needed antibiotics, he didn’t even…he didn’t even test, he looked at her throat and said oh it’s a little bit red. But you know…it could be…most of throat infections are viral they’re not bacterial, all I had to was go online and google it, and you know…if the GP had tested, done a swab and said look there’s a bacterial infection she needs antibiotics she’s very small and she can get sick very quickly, I would have probably agreed to it, when there was an immediate threat to her. But when GP was…you know…he just looked at her throat. So, that wasn’t…so, I would only agree if a test…from here on I would probably insist on a test to be done, so I’m sure it’s a bacterial infection which requires antibiotics, rather than something viral for which our GP seems to be very excited to give antibiotics.

**So when you refused antibiotics for your daughter, how did the GP react? Did they persuade you to take the antibiotics?**

I didn’t, I just didn’t give the antibiotics, I decided that I’m not gonna give them for a couple of days, and if she gets better…she was running a fever as well, we also used homeopathy…so, small children run a fever for many different reasons…so I decided for myself that I would give it a few days, if the fever continues…you know…if I could see any sort of deterioration for her, then yes, I would have given the antibiotics, but the following day she got better. So, she got better without antibiotics. So yeah, I never gave them to her.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

No… No, I haven’t…I feel that the GP would be very happy to prescribe them if I felt that they were needed.

1. **If you or your child is prescribed antibiotics how do you administer them?**

When my son had to have them, they were liquid, they were given in as a syringe.

**How long do you take them for, do you finish the course of treatment?**

I think it was 7 days, that that’s what the GP prescribed.

**So, when you’re taking antibiotics, do you always take them for the full course or do you stop taking them when you’re feeling better?**

No, I take the full course.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

I don’t think it’s all…I never think it’s the full picture which you’d have… At least when I’m at the GP I don’t feel that I’m given alternatives to what…I was also recently for my daughter, because she had eczema, I was offered antibiotics by a dermatologist, and when I’ve tried to say look…you know…she’s too small, I’ve been building her gut for months on end, his response was well her gut is clearly not really good anyway if she’s having eczema, which…you know…was a bit offensive in the first place. So, I don’t feel that we’re…unless I dog really deep and ask for all the alternatives and what are the side-effects, I still don’t feel that it is enough. I go home and google, and I know that you’re not supposed to, but I tend to find information online much more reliable.

**Do they explain things clearly? Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

No, I feel the GP’s rushed off their feet. They don’t have time for me to ask questions.

**Do you understand your prescription advice, or do they not explain how to take the medications?**

They do explain how to take it, and also I can ask the pharmacist as well.

1. **What have you heard, if anything, about antibiotic resistance?**

Well, that’s one of the reasons why I prefer not to give my children antibiotics, unless I absolutely have to, because I don’t want to be contributing to bugs becoming even more resistant to the drugs we’ve got for them.

**Is it something you are concerned about for you or your child?**

Yeah…I’m not concerned that the antibiotics they would be given would not work on them, I’m more concerned that I’m contributing longer term to bacteria becoming resistant drugs by giving my children antibiotics.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

I think it’s explained properly.

1. **Do you think there needs to be more awareness on antibiotic resistance**?

Yes and no…I mean I think there needs to be greater awareness of when not to take antibiotics because a lot of people are happy to take them very quickly and easily.

**Where did you hear about antibiotic resistance last?**

It’s plastered all over my GP practice, it’s also at the pharmacy as well, that you should take your prescribed antibiotics for 7 days…

**What sources would you want to get more information from? Which specific topic about antibiotic resistance would you be interested in hearing more about?**

I’m quite happy to read online about it, if the GP tells me this is a reliable website, so like patient.co.uk or patient access or whatever it’s called. Or on an NHS website, I’d be quite happy to go and read about it.

**Any specific topic?**

No…I mean to me it’s a fairly obvious thing that you should not take antibiotics when you don’t have to.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

Yes, I think people need to be made aware that there are cases where you don’t have to take the antibiotics.

**What sources would you want to get more information from?**

I’m quite happy again to read online if the GP tells me this is a trusted website, go and read here.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness? What would be more impactful for you or what would catch your attention?**

Anything coming from the GP or again if it’s on the NHS website, if it’s on a website I think is reliable. I don’t necessarily think…I tend to check the sources where information come from, so if it’s on the NHS website I’d probably be more likely to trust it, rather than on a random website which I googled.

**What about social media posts, or radio and TV public service announcements?**

Well public service announcements, yes. The social media posts, no. Unless again…you know…I mean even something coming from I don’t know…NHS England, I will be very careful…what account is this coming from, who is behind this account, and who’s paying for this.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance**?

Yes, I would consider WHO or NHS England website. Family and friends, no, they know as much as I do. Researchers, medical professionals, yes.

**What do you think about misinformation on antibiotic resistance and how resistance occurs?** Ummmm…

**Do you think there is misinformation?**

I’m not sure… I don’t think…I’m not sure.

1. **Have your views/perceptions about public health information changed since COVID-19?**

Oh God… they might be changed…probably yes. I no longer know what to believe and what is true. I mean, I follow the rules but I’m equally sensible. You know…I don’t feel that it’s ok to socialise inside a pub regardless with whom it is, if you need to stay apart you need to stay apart, and it applied to pubs. So, I keep that, but equally I’m not entirely sure that what the government is doing with COVID-19 is actually like medical…like science rather than something else.

**What about your views on health promotion** **or healthcare services?**

No, I mean…I think my views have always been that you can’t eat McDonalds and expect to be in good health and…you know… diabetes is a lifestyle disease, so is cardiovascular disease and obesity, so to me that’s…yeah…no it hasn’t changed.

**Do feel like you know more about viruses, and precautions to take during a viral epidemic, things like that…Do you think these have changed since COVID-19?**

I’m probably a bit more aware that to me they’re all common sense that you need to wash your hands immediately after you come home, and when you are on the bus you shouldn’t let your children lick the bus handle and things like that…

**Is there anything else you would like to add before we finish?** No not really, thanks for your time, thanks for listening.

***Participant 10***

1. **Could you tell me about your experience of using antibiotics for your child?**

We’ve never needed to use antibiotics. I think we have sought advice a couple of times when she’s had a rash and when she’s had some temperature and flu-like symptoms. And recognise that probably won’t need some antibiotics unless the doctor recommends it.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

Umm no…

1. **If you or your child is prescribed antibiotics, how do you administer them**?

For myself I normally take a tablet several times a day.

**long do you take them for?**

For a week or something like that

**Do you stop taking them when you feel better?**

No, I always complete the course.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

They’re normally pretty good, yeah. I feel positive about them.

**Do they explain things clearly? Do you feel like you were given the opportunity to ask the questions you wanted to ask?**

Yes, most of the time.

**Do you sometimes feel rushed?**

I think there is an element of time constraint. You feel like there is…you know… that you know their time is precious.

**Do you understand your prescription advice?**

Yes

1. **What have you heard, if anything, about antibiotic resistance**?

I’ve seen in the news that there is a risk of building up a resistance… I guess as an individual and as a population.

**Can you explain to me what you think it means?**

That…umm… microorganisms are building up a recognition to the antibiotics that we use to try and attack them…to reduce them… so they are less effective.

**Is it something you are concerned about?**

Ummm…yeah I would say so. It’s certainly concerning that when we rely on them so much, if we don’t have effective treatments like…it puts us at risk.

**Do you feel it can affect you or your child?**

Yes, certainly for my child if there is a population…proving that antibiotics are less effective that then means that they could be vulnerable to infection in the future.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

Ummm...I think it’s generally been as...you know articles, or straightforward advertising and that seems to have been quite clear without needing to understand the implications behind…you know…the actual science behind it.

1. **Do you think there needs to be more awareness on antibiotic resistance?**

I guess that there certainly, when I think about my childhood or earlier that it seemed to be kind of a magic way just take some antibiotics for anything…and that now seems to be quite perhaps more in the public conscious or certainly in some people’s conscious that that’s not necessarily a good thing and that it has been used and is being used when not necessary.

**Where did you hear about antibiotic resistance last?**

Ummm…I don’t know…other than yourself contacting me.

**So, it’s been a while since you heard about it?**

Yeah.

**What sources would you want to get more information from?**

I don’t know…I guess that if there is a growing issue, that it’s good to know, that if…I’m not familiar on how resistant we’ve become and…you know…whether there is an increased risk or whether we’re talking about avoiding a future risk in relation to it, so…I guess some reassurance that if you know…it’s similar to with coronavirus, so it’s like if we all follow the advice and aren’t giving antibiotics unnecessarily or taking them that aren’t prescribed, then we’re keeping ourselves safe and it’s still effective.

1. **Do you think there needs to be more awareness/information on antibiotic use**?

Yeah, I mean I feel that the coverage that’s already been there has made me aware…I don’t know how prevalent that is across the population or whether people still think -oh well, I’ve got a few leftovers, I’ll give them to my child or whatever…you know…that that kind of attitude seems to be suggested occasionally in the media or…you know…that people don’t see that prescribed drugs are exclusively for that. And I guess that’s worrying that, for myself personally and my family, I think we’re much more careful than that.

**So, you don’t think you would benefit from knowing more about a topic on antibiotic use? Would you want to know about a specific topic?**

I don’t know, to me I feel confident that antibiotics are something that are prescribed, and so I will turn to my GP or a doctor…you know…for that advice and I’m confident that they will give me the best advice possible when it’s needed.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?**

As I said before, I think perhaps some further information in relation to where we are on the standing of resistance and…you know…how that then relates to our protection as an individual and as a population.

**What would be more impactful for you or what would catch your attention? What sort of media would you want to look at: pamphlet, brochure, advert in newspaper/magazines, radio/TV public service announcements, posters, articles, blog, podcast, social media posts?**

Yeah, certainly I think social media, I do kind of pick up on adverts that are there and…you know… I’d say radio…you tend to stay on the broadcast regardless, so you do hear them when they’re repeated. Television ads not so much, it’s one of those…whether it’s still absorbed, I don’t know.

**Would you find pamphlets and brochures interesting?** Yeah, if I felt that it may have something that I wasn’t familiar with, then I would consider, you know, reading them.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

I would generally turn to those that come from the NHS, or…you know…UK public bodies.

**What about family members?** Yeah, I mean my wife and in-laws are from a health background so certainly I might speak to them about their understanding of the situation.

**What do you think about misinformation on antibiotic resistance and how resistance occurs?**

I think…I don’t know…

**Do you think there is misinformation?** Yeah, I think there is a broad, kind of confusion about…you know…viruses and bacterial infections and there’s still that kind of concept that antibiotics might solve anything and everything, and perhaps it’s worth a try. That kind of attitude may still be prevalent in public psyche as it were, even when you know that the information there…that you still may kinda go, well is it worth having…you know…is that going to be a solution or worth the risk of it. As I said, I feel that being married to a medical professional helps me to be reassured whether it’s a good choice or not.

1. **Have your views/perceptions about public health information changed since COVID-19?**

I think public health information around covid-19 has been varied and continually changing, so it’s difficult from that regard to have a clear view on those aspects. But that doesn’t mean that… I wouldn’t say that my view of public health advice in general has been impacted.

**What about your views on health promotion** **or healthcare services?**

Not especially other than that GP services have changed, but equally…I think over the time I’ve only contacted them once, my GP practice, and I’ve found that the avenues of communication are more effective, in many ways it’s more convenient to contact them remotely than having to book an appointment and go and see them. To a certain degree I guess yeah… You’re kind of thinking about how to protect yourself, certainly from viruses… Trying to change your behaviour from that regard, and that hopefully that might actually impact on catching colds and flu, as well as covid.

**Is there anything else you would like to add before we finish?** No I don’t think so.

***Participant 11***

1. **Could you tell me about your experience of using antibiotics for your child?**

[*unclear*] I have 3 kids. But most often it was things like earache. So, we visit the doctor with earache and then…Sometimes they would advise to just keep monitoring it, sometimes they would take a swab and prescribe antibiotics, and then once or twice they called and said the test had come back and we needed to switch antibiotics to just more target the infection.

**How many children do you have?**

3 children

**How old are they?**

8, 6, and 4 years old

**And have they’ve all taken antibiotics?**

Yes

**More than once each?**

Yes

**What kinds of symptoms would trigger you to seek antibiotics/medical advice?** Umm, let’s see…they’ve all had ear infections, one of my children came out with a really like horrid rash that was spreading up her arm, so I took her to the doctor for that and the GP initially just said…you know…it just looks like a little viral rash, we’ll just monitor it, and then it did worsen, so they saw her again and then they sent me to children’s A&E and she go them, IV medication for that one, I think it ended up being more complex.

**You mentioned earlier that your children were sometimes given antibiotics and then you were called later on to switch the antibiotics, did I understand that correctly?**

Yeah, so sometimes, at least…I think twice…it’s happened that they’ve seen my kid who’s had an ear infection…usually…only usually they know this if an ear infection is like oozing the yuck out of their ear…so they’ve seen that, so they’ve prescribed an antibiotic and took a sample at the same time, took a swab, and then the lab test came back and they’ve just switched the antibiotic to more specifically target the strain of infection.

**Right, so that has happened twice?**

I think…I think twice…yeah.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

Ummm, no because I’ve never asked. But I’ll take the kid and see if the doctor thinks that antibiotics are warranted, but I leave that choice to them because I know antibiotics are over-used sometimes. So, if the doctor thinks just let it wait, I’m happy to just let it wait.

**Were you ever prescribed antibiotics when you’ve felt they weren’t necessary?** Ummm, no I don’t think so, because if I’ve thought that I should take them in to the GP, then I think it’s possible that they might have been warranted, so…that’s why I was there. If that makes sense?

1. **If you or your child is prescribed antibiotics, how do you administer them**? Well, according to the instructions.

**So how long do you take them for?**

Well, with the children’s one it’s usually liquid and usually you take them from a bottle. And if there is anything leftover, we tip it down the sink, because they are liquid.

**Have you ever stopped taking them when you feel better? After a couple of doses?** No.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

Usually, fine. Sometimes the GP will just like zip through the instructions, like for dosage really quickly, and the I just have to make sure that I have gotten it again from the chemist.

**Do you feel like they explain things clearly to you?**

Ummm…yeah. Yeah, in general terms. Not like in a medical lecture way. Yeah…yeah, enough to know how to go forward, definitely.

**Are you given the opportunity to ask the questions you wanted to ask?**

Yes

**Do you understand your prescription advice, do you feel like it’s clear when it’s given to you?**

Advice as in dosage, what things to look for if there’s any side effects, that kind of thing?

**Yeah, exactly**

Ummm…I don’t know that side effects are mentioned very often. But then do antibiotics have a lost of side-effects, that it’s warranted? I don’t know. I guess adverse reactions to look out for, are actually never mentioned. They’ll sometimes ask if there’s any known allergies, like penicillin allergies. But yeah, we’re not told about reactions to look out for.

1. **What have you heard, if anything, about antibiotic resistance?**

Oh, well I know that it exists, and it’s a problem that experts are concerned about, like specifically TB is one I know, because it’s such a long like programme to get through, or regimen, and antibiotic resistant TB is a thing that people are quite concerned about. Like that’s one of the, sort of headline diseases that is talked about.

**Can you explain to me what you think it means?**

Yes, so what I understand is that when you only partially finish a course of antibiotics some bacteria will still be present in your body, that will have survived longer…you know that far into the process…and then when you stop the antibiotics those bacteria then…the ones that are left are the ones that are slightly stronger against the antibiotics, so over time the bacteria can mutate and become a new strain that are unaffected by current antibiotics. And then we’ll need to find stronger ones to fight it.

**Is it something you are concerned about?**

Yeah!

**Do you feel it can affect you or your child?**

Yeah, over time because there’s only so many antibiotics that we have so far, and if something mutates then we don’t have a way to fight it. Yeah, that is worrying!

**What do you think about the language used/medical jargon when information on antibiotic resistance is given to you?**

Well, I guess in the phrase given information about antibiotic resistance, I think most of my sources like understanding of it, is news headlines, like articles I’ve read…you know like things that are out there. I don’t know how much of [*unclear*] is actually from just talking with doctors. So, I don’t know…As a lay person I feel like I understand it…you know…well enough, remembering my high school biology classes.

1. **Do you think there needs to be more awareness on antibiotic resistance?**

probably yes…yeah

**What sources would you want to get more information from?**

It would be a thing I would think would come from the NHS, they usually have like really good national campaigns like educational campaigns, information campaigns…So that would be the main source I would expect it to come from. Also, from a GP where they’re prescribing, that would be the next logical place.

**But do you usually get it from a GP, when they are prescribing?**

Only [*unclear*] they doubly check and insist that you take it through to the full course… I know why they are always telling you to finish the course, because of that, so…

**So, when they are telling you to finish the course, you understand that it’s implied that it’s because of antibiotic resistance, but to they clearly say that it’s because of antibiotic resistance?**

No, no…I don’t think so…But I’m reading into it because I understand already that antibiotic resistance is a problem.

**Where did you hear about antibiotic resistance last?**

Oh…I couldn’t say specifically.

**So, it’s been a while?**

Yeah, it’s just been…I’ve been conscious that it’s been an ongoing problem [*unclear*] but I couldn’t say when I had the last…when I last heard about it, yeah.

**Which specific topic about antibiotic resistance would you be interested in hearing more about?**

Umm…well, you know…you want to hear about positive stories, I’d like to hear about new development of drugs that are tackling the problem…I guess that would be the best.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

Probably yes! Because I think people just eat them like candy whenever they feel a bit off, and I know people who want to be prescribed antibiotics when they clearly have a virus. And that’s obviously counterproductive. So, yeah I think it could do with a lot more education.

**So, these people that you just mentioned, when they go to the GP, do they ask for Antibiotics?**

Yeah, just in discussions at work, like you know with the staff…you know at the lunch table, people say that they’ve gone to the GP and they’ve been refused prescription, when they’re like clearly I did need…or they think they have x, y or z…and I’m like…to me…well obviously I’m not a medic, but I’m like sounds like you’ve got a cold or something that’s obviously viral, but if they’re unwell they are expecting to get antibiotics.

**Do you feel that doctors are sometimes pressured to prescribe antibiotics especially for children?**

Oh, that’s a good question. I would say that I could see that happening, but I don’t have any…I don’t know…

**Is there a specific topic about antibiotic use you would be interested in hearing more about?**

I’m not sure, I guess the most important thing would be for people to understand how much they affect our body…So to understand that they’re not just something to be taken lightly…Because I know they can upset your intestines and you can have allergic reactions to them, like I’m allergic to a couple myself. So, maybe if that was more understood, people would be more careful about when they have to take antibiotics.

**Which sources would you want to get more information on antibiotics use from?**

Again, I guess it would be better to come from the NHS

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?** **So, what would be more impactful for you or what would catch your attention?**

Are you asking about like specific types of media?

**Yeah, so is there a specific type of media that you would want to look at and find out more about antibiotic resistance?**

Umm…I don’t know. It would depend on whether it was something that was given to me or something that I was seeking out on my own. So, if I’m seeking it out on my own, I’d want it to just be on the internet so it would be easy to find. If it was something given to me, I guess I would just want like a printed leaflet or something cause like if they are in front of me, I don’t have to…as opposed to like being told to go to a website cause then…let’s be honest you never actually do it.

**What about adverts in newspaper/magazines, radio/TV public service announcements do those work for you or social media posts?**

Of all of those…I don’t watch live TV… I don’t subscribe to any magazines or newspapers, so what I read I search for on the internet, like a topic. So, I…yeah, I only listen to digital radio. So, of all of those, social media would actually be the best way to get a hold of me, of my attention.

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?** NHS, NICE, WHO yeah, my own GPs, I have friends and family who are medics so I would trust them.

**What do you think about misinformation on antibiotic resistance and how resistance occurs? Do you think there is misinformation?**

Oh, there’s bound to be. As soon as I get something that’s more complex than one plus one, then there’s people out there saying the wrong thing, then definitely it’s out there. Have I seen it? I don’t know, I don’t think so…

1. **Have your views/perceptions about public health information changed since COVID-19?**

No, I still like trust our public health institutions, and I trust the messaging.

**What about your views on health promotion** **or healthcare services?**

I don’t think so…I think we’re all just terribly much more conscious of our health and like…you know…in the public realm and interactions and stuff…so I think public health awareness is certainly heightened like now…It may be that other people feel less trustworthy of public health because…I don’t know why…but I feel certainly just as trusting in our public health information as before.

**Is there anything else you would like to add before we finish?** Oh, I don’t think so…

***Participant 12***

1. **Could you tell me about your experience of using antibiotics for your child?**

I’m a primary resident parent, so I’ve got 3 children, so generally we don’t tend to use antibiotics, we don’t seek them but obviously when it’s appropriate and the doctor things it’s appropriate we would take them.

**So, how old are your children?**

So, I’ve got a 5 ½ nearly six yeah old now, a 14 and 17.

1. **Have you ever been refused antibiotics when you’ve felt they were needed?**

Ummm…no because I generally don’t tend to ask for them, if you see what I mean. What I tend to do is go to the doctor to confirm that it’s viral related rather than needing antibiotics. Because obviously as a single parent you’re more…you have less time and obviously what you want to do is make sure that the treatment is…it’s not something underlying causing that child to suffer if you don’t give them medicine.

**So, what kind of symptoms who trigger you to seek medical advice?**

So, normally if…I mean obviously it’s something which…cough which is persistent, excluding COVID let’s ignore that one, sort of eye infection particularly discharge from the eye or where I think there’s…[unclear]…so generally it’s something which I think…high temperature…where my youngest or any of children are under the weather for more than two three days, or if their mum is concerned. So, she doesn’t have them that often, but if she comes back and says I’m a bit concerned about them being under the weather or her daughter is under the weather, she would point it out and at the point I would probably out of caution just take them…I would trust the other parent totally with regards to wanting the best for her child, so obviously if she’s concerned I would probably take that to face value and probably leave it a day and then obviously if it’s still persistent then I would take it…this child…and [unclear]…you know those are my children.

1. **If you or your child is prescribed antibiotics, how do you administer them?**

Normally it’s obviously for the eldest it would be standard tablets, [redacted] has got autism, she’s the middle one, and generally she doesn’t use capsules well so we use paediatric syrup or a strengthen version of that because she just can’t swallow, it’s textural thing for her. If it’s my youngest it’s paediatric, generally paediatric solution.

**How long do you take them for, do you stop taking them when you feel better?**

No, they take the full course. think there’s a big danger of that, if you stop the course early before it’s finished…there is a reason why it says on the bottle please take the full course, we need to make sure that we don’t produce drug resistant bugs out there.

1. **When you leave a medical consultation with a healthcare professional, how do you feel about the information you have been given?**

Ummm…generally…I mean they’re under pressure, they’re under time pressure, you know…and obviously sometimes you feel it’s a bit rushed, but certainly the last time I took [redacted] it was for a concern his mum had and I didn’t think it was anything significant but obviously I can’t listen to this chest and it sounded very chesty to me so obviously I took him down. The doctor was happy, he took the time… [redacted] doesn’t like doctors so it was more of a challenge to get him to lift his top up and all of that sort of thing and the doctor was…it was a doctor in that case but before that with [redacted] it was a nurse practitioner… exceptionally professional…you know [redacted] is not one to…she doesn’t have eye contact…she’s got full verbal and she and [unclear] but she’s very phobic, so she’ll say I don’t want tablets and I’ll say well I don’t think we’re gonna get any tablets but just in case…you know…we’ll talk to…alternatives about that…but the nurse practitioner was very very good.

**So, do they explain things clearly to you, are you given the opportunity to ask the questions you wanted to ask?**

Yes, absolutely…I think…I mean obviously [unclear] with [redacted] and [redacted], [redacted] has got some autistic traits but not enough to be diagnosed as autistic…if you explain to them what’s going on and you ask questions on their behalf…I mean [redacted] will whisper can you ask him about this can you asked her about this…you know…so I would often ask those questions just to make sure it reduces the anxiety for my children. I’d it takes an extra two three minutes it takes an extra two three minutes.

**Do you understand your prescription advice?**

Generally, I ask the…If I’ve got any questions, I insist on asking the pharmacist but if…generally if it’s just paediatric solutions it says take 4 times a day for the next…I don’t know…6 days or whatever it is on the bottle then I’ll just follow that. If there is any specific questions then I’d want to speak to the pharmacist.

1. **What have you heard, if anything, about antibiotic resistance?**

My understanding…and obviously I’m not a professional or anything…is that due to the over-subscription of using antibiotics and people not taking them for the correct length of time it almost semi-kills it but it allows some of the bacteria to survive, they are much more resistant…so my understanding is that if you blanket take them they become ineffective over time cause the bacteria has got more time to develop a resistance to them…that’s my understanding of it…I mean it’s basic but it’s as much as I know if you see what I mean.

**Is it something you are concerned about do you feel it can affect you or your child?**

Yes, I think…as…as…there’s only a limited number of drugs and if we produce resistance to all of those then the…there’s less chance of potentially of one day one of my children not responding, because that bacteria is resistant to that form so… and obviously I think it’s very similar to I think…is it anti-fungal? There’s only about 4 anti-fungal treatment you can use so if you’ve got one which is resistant to that then it’s quite a serious problem and like I can see that happening certainly withing the near future so it’s a big concern.

**What do you think about the language used/medical jargon when information on antibiotic resistance is offered to you?**

I don’t think it’s clear, if I talk about it to other parents…you know when I pick up the kids…generally there is a lack of understanding, I’ve heard people not taking antibiotics correctly…oh well [redacted] is taking the tablets and he got better after 2 days so [he] stopped taking the tablets…So, I don’t think it’s clearly understood by a lot of parents…and that’s only a very unscientific view…I’ve heard quite a few parents say that as well, and I think when I said oh you do realise you’re supposed to take all of it…well why would you do that? Well, it does create problems because in some cases although…you know X is better, it may have…it may allow that bacteria which is being sort of attacked by the antibiotic to gain a resistance…so you know… and there doesn’t seem to be much understanding… and I don’t think it’s clear…I mean you know…I’ve seen some limited information and like posters, but I mean how many people read those posters? And that would be a concern. I don’t think that there is very much information given by health visitors when you have a child for instance, I don’t think you know…you are prepared… I don’t think there is enough information of what you should take your child down to a doctor’s for, when you should [unclear]…you know the expectation is I must come away…I know parents who will not go away unless they get a prescription because they see that they’ve got to get value…there’s an expectation that you come away from a doctor with a prescription, if you haven’t got that…I’m paying for that service, I’m not getting any money for it…

1. **Do you think there needs to be more awareness on antibiotic resistance?**

oh absolutely! Absolutely. I mean if you said to me can you remember any campaigns, I’ve seen a couple of posters a couple of leaflets from the pharmacy, there was something to do with …you know…antibiotics don’t cure the cold or something like that, I mean that sort of thing, but it’s nothing in your face, absolutely.

**Where did you hear about antibiotic resistance last?**

Eighteen months ago, if that.

**What sources would you want to get more information from?**

I think there should be greater push for parents so via schools, so the campaign should go via schools when we’re very good at getting the flu vaccine over, there’s lots of information, it’s nice and…you know…it’s being pushed, you get letters through from the NHS stating that it’s a good idea to have your child…remember I’ve got a child who’s you know…in primary…so…but there’s nothing ever, I’ve never ever had anything in regards to that [antibiotic resistance] about educating parents or teachers a well.

**Which specific topic about antibiotic resistance would you be interested in hearing more about?**

So, I think very much…you know…it’s a pain taking a child to the doctors to be honest, especially with me because I have to take my 14-year-old daughter with me every time, so it’s not like have got one and have to juggle childcare around that…[unclear]….so for me it’s how to help me diagnose when…the difference between a viral infection and something which does require antibiotics so, tell-tale signs. So, more better guidance…So, for instance the doctor says well you should only bring them down if you’ve had this type of cold for so many days, you see what I mean? So, otherwise…like what happened in my particular case with [redacted], I took him down because his mum was concerned and obviously, I wanted to…because she’s not got the resident care she, she would obviously be concerned, what’s happening, is he ok, you know…and to reduce that anxiety I took him down to the doctors. Now if I was able to say look the doctor won’t…there’s no point, we should only being seen them after the fourth day this continues and his temperature stays high, as an example and I’m just making that up because I’m not a [unclear]…that sort of advice would allow then the mum to realise and me to realise, we’ve got some guidance there, as long as we both stick to the guidance and it’s based on good NHS practice as an example, in the majority of cases you don’t need to take your child to the doctor unless he develops…some more better guidance certainly to help avoid me having to take unnecessary trips and it also means if your child has this, this, and this please take them to the doctor’s sooner rather than later…you know…it’s not an emergency but you know…make an appointment.

1. **Do you think there needs to be more awareness/information on antibiotic use?**

Yes, so I think…I mean I’m quite well clued up but as I said my understanding is certainly from other parents, they don’t realise the dangers so I think that message is not clear…So, we need to have a slogan that needs to get into schools…obviously touch points with parents with young kids and start the habit early so people will get that knowledge much earlier. Cause I…if you have a new-born child having that knowledge…that guidance is not gonna change, is it? So, you start much earlier…I don’t remember…I mean [redacted] was just born down the road and [redacted], when we were together, [redacted[ was born in this house…I don’t remember…I took [redacted] to some of the [unclear] tests, and we shared the care of [redacted] at that stage, I don’t remember being told anything like that…you know…it was…the baby box you get, I can’t remember what it’s…whatever it is…it doesn’t have any leaflets in it about when to do this, what to do etc etc. and I think that’s a missed opportunity…the bounty box I think it’s called, or something isn’t it… where you get samples and nappies and stuff like that…there’s ample opportunity to say look you should be making sure that their health is [unclear] or the midwife or whatever should be instilling this good practice very early on, because it’s just again a missed opportunity by the health profession.

1. **What kind of resources do you think parents would benefit from more when it comes to antibiotic resistance awareness?**

For me, a slogan campaign, something which is easy to remember…you know…something bright and cheerful, something which my child would pick up on to be honest, because in a lot of cases it’s dad, make sure I take my tablets to the end, dad why haven’t you given me my tablets have we finished the bottle, type of thing. It should be in their head so the child is aware that they should take it as well to the end. So, it should be a dual thing. And I think some sort of online…like a parenting thing you can go on, not the NHS cause it’s essentially…it’s all like do you have this or do you have that…it’s almost like [unclear] do you need to ring blah blah blah…not like that…and online forum where I can look out and find proper information, so I could look up a drug…because there’s lots of crap out there on the internet isn’t there, I’m not being funny but as a parent if I put…say I got penicillin V, that doesn’t mean anything to me as a parent, what the V stands for, but being able to understand and go to an NHS website which will tell me what that is used for and as a parent if you’ve got a child at this age you put your…you put the drug, the child’s name, and you’ve got a treatment plan that you can actually see., this is normally recommended to be taken for 7 days, these are unlikely side effects so you’re aware. There’s nothing like that the moment, you’ve got to hunt around, you’ve got to look for that type of information…

1. **Which sources of information would you consider to be trustworthy about antibiotic resistance?**

Probably from a pharmaceutical company, an NHS site, or like a hospital site. So, I should be able to go to a known children’s hospital website and be able to pull up much more relevant information about treating my child, cause a lot of it is adult-orientated, so if you look at the NHS it talks about children but you know…as I said there’s that flow of yes no type thing, there doesn’t seem to be anything that I can go away and ask about this, just to reassure me…my child is not getting better after 3 days of taking antibiotics should I contact a doctor yes or no? Now as a parent if you’re anxious and I’m talking about first time parents, or you know…or something like myself…is it normal? I’m just going to persist because as far as I’m concerned unless it deteriorates significantly, I would just assume that that’s part of the…that that might be a sign that the antibiotics are not working. Do you see what I mean? But I wouldn’t know…my last touch point was of a doctor and a pharmacist’s assistant giving me something and saying off you go now give it to your child for 7 days and come back if it doesn’t work, that’s just about it…you know I think to support doctors and health professionals it needs to have a more intelligent approach where you can tailor things. So, a 6-year-old not responding is probably more serious than my 14-year-old, who’s much more adult like, I mean she’s a young woman at 14 I’m not being funny. So, she’s much more tolerant, her body mass is much greater so as such can withstand a lot more so it may be that at 14 you don’t worry about but the 6-year-old I should worry, you see what I mean? It needs to be tailored because you can’t just have one response, a baby it it might be if it doesn’t work after 18 hours and the temperature hasn’t gone down or the cough hasn’t disappeared or the symptom hasn’t disappeared, contact you doctor ask for advice or health visitor ask for advice…cause it’s much more serious you’ve got to move it to the left for younger children, I think.

**What do you think about misinformation on antibiotic resistance and how resistance occurs?**

I think there is a great deal of misunderstanding, as I said parents have got the assumption that they’re only getting value from the NHS if they’re getting a prescription and so therefore, they see it as a way of getting better medicine for free, as it doesn’t cost country very much money. that’s not my understanding…I think because there’s not enough information, and because there is no clear…what website to go to, to get definitive answers it’s compounding the problem because there are lots of people posting on forums, it’s all a conspiracy, you don’t have to do that…there’s lot of misinformation out there, there’s a lot of rumours, and I think having a definitive point would be useful to counter this misunderstanding…you can go abroad and I’ve heard this as well oh I’ve bought some antibiotics from a Greek island and in some places…I mean I worked in Saudi for a while and you can buy it from the supermarket. And you know…because we’ve got global travel because people sort of think oh well I can get it and it’s cheaper there and the next time I get an infection I’ll just take it…and just the danger of that is…and let alone you don’t know whether that is legitimate or not legitimate, I’m not being funny but I couldn’t recognise counterfeit antibiotics, I assume that in the UK it’s all controlled, but I’m not saying that it isn’t controlled in other countries, but if you’re buying it in the supermarket I don’t see how you would have that same level of control. So, I think there’s a big danger of not countering…there’s nothing…it’s all very passive. There’s nothing campaigning out there. And in terms of public health campaigns I haven’t seen any of those really. I saw more about Brexit and that it was a good idea that the government was leaving the EU than anything to do with health for instance.

1. **Have your views/perceptions about public health information changed since COVID-19?**

I think the health information had been consistent so washing your hands and distancing and things like that, I mean it’s not being helped by the UK government, I mean if you ask me what the current regulations are in the high or tier 2 which I’m in, I have no idea. Because I’ve been living since February for such a long time, on effective lock-down for want of a better word, now local restrictions I have no idea, I don’t think the UK government has helped at all and I think that lack of strategy at the top is filtering down to parents like me. I think the basic information on the NHS website is [unclear] for instance there is very little difference between a cough that I’ve got, I’ve got a tightening of the chest that is a standard thing for an asthmatic to have I can’t tell the difference and according to the NHS website, I should be self-isolating and should have been self-isolating for most of my life, because I surely have got COVID. But it isn’t…it’s basic…it’s not effective…I mean we only look for 3 symptoms, I know that there’s more than 3 symptoms for COVID, and therefore I don’t believe that although the information is clear it’s not comprehensive, and I think that’s just a disservice.

**What about your views on health promotion** **or healthcare services?**

I think it’s all just become about COVID and I don’t think there’s been anything about mental health for instance…you know…which is a big, big thing…you know…I’ve got an autistic child and they changed the legislation because it was grossly unfair to allow her out [unclear] once a day, that really wasn’t goof for her mental health, and of course in some places it was too noisy for her, so I would have to drive to take her to somewhere quieter to just, I couldn’t just decide I wanted to go out…I mean luckily where I live I wasn’t too bad so, assuming we could get down the path without meeting anyone, it was generally quiet. But there is nothing about mental health, nothing about keeping positive…I’ve heard oh don’t eat snacks, are you eating snacks, you know this COVID app it asks about your consumption of snacks but that’s about it…and there’s no talk about healthy eating or anything like that so I think it’s been adequate for symptoms of covid and what you should do if you do come across it but the rest of it has just been dropped. I think certainly my knowledge of this type of virus and other viruses has improved, I’m more cautious so for instance I… you know… I’m aware it’s on metal so I avoid using money, I use cards now, I avoid using the pin so for instance at the fuel station I won’t put in anything more than 40 pounds of fuel, my car takes only 70 pounds. I’d sooner not start tapping buttons because I know that chances ae it could be a source of infection. I actively encourage the kids to wear masks even my youngest even though he doesn’t legally have to. So yes, I think my knowledge has improved.

**Is there anything else you would like to add before we finish?** No that’s it, thank you for your time.