Public perceptions research on medicine carbon footprints.

Qualitative Research Report
September 2023.
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What did we learn?

A summary
People are more likely to want carbon footprint information if they feel they have a genuine choice of which medicine to take.

The importance of informed choice
Participants feel it is important that any individual or organisation who is making a decision should be given as much information as possible in order to make an informed decision. Therefore all those who are involved in choosing medication should be informed about aspects such as cost and the carbon footprint of the medication.

The extent to which an individual has a genuine choice over which medication to take or to prescribe influences how interested or important it is for that individual to be given the information

- When purchasing over-the-counter medication, people feel they have a genuine choice and want to be able to make an informed choice - they would therefore welcome being given information on the carbon footprint of the medicine.
- With prescription medication, people do not generally feel they have a genuine choice and therefore some question why they would be given this information and what they would do with this.
- As the NHS and HCPs are perceived to have more influence over decisions around prescription medicine, and therefore greater potential impact on the carbon footprint, participants feel it is more important that they should have this information than that patients should be given it.
Several would be curious to know this information, but would do nothing with it; others are not interested as they have no choice in the decision.

When people say they would be interested in receiving carbon footprint information of prescribed medication, it is often simply because they are curious to know this.

Several participants said they would be quite likely to read any such information out of curiosity, but most could not initially imagine they would do anything further with this information.

And when they say they are not interested in receiving carbon footprint information of prescribed medication it is usually because either:

- it is seen as too late to change the decision of which medicine is prescribed, therefore they see no point in receiving this information,
- they are not particularly interested in the issue, and/or
- they don’t want to be made to feel guilty for having a negative impact on the environment.

Providing an initial simple rating on the packaging, with signposting to further information, is the ideal

Almost all participants would want the medicine packaging to show an overall clear rating (and several spontaneously suggested using a red-amber-green rating) but with signposting to further information should individuals want to find out more. It is not generally seen as appropriate for this information to be relayed by HCPs during a consultation.
Increasing awareness may change perceptions to some extent, but people are not willing to make compromises with medicines.

**Several participants say that receiving a a 'red-rated' prescription medication could prompt them to take some action:**

- most would look into this further to find out what this means and why the medicine has this rating
- some would potentially ask the pharmacist whether there are any 'greener' alternatives
- a minority would go back to their GP/HCP to discuss swapping to a more environmentally-friendly medication

**Increasing awareness can change perceptions and behaviour**

Some participants who initially said they would not be interested in receiving this information, or that receiving this information would not prompt them to do anything, changed their minds during the conversation.

**Medicines are different to other consumer products**

- The need to receive/buy medicines is often immediate, essential and emotive
- Unlike with many other consumer products, people are less likely to accept any perceived 'trade-off' or compromise on the effectiveness or availability of medications for a more environmentally-friendly option
Clear and well-timed public communication will be key to addressing any concerns.

If providing patients with carbon footprint information about medicines, simple and clear public communication is key

- Understanding of, and interest in, climate change issues varies considerably; some people have very limited understanding
- Considering the impact of medicines on the environment is a new concept for the general public
- The reasons for providing this information and/or including the carbon footprint of medicines in the decision-making process of which medicines to prescribe should be communicated in the simplest terms and before any implementation

In particular, communications should address potential concerns and reassure the public

Key messages should address concerns around providing carbon footprint ratings on medication and the inclusion of the carbon footprint in the decision-making process when prescribing medicines including:

- Clinical effectiveness of medication and patient suitability will still be given the highest priority when choosing a prescription medicine
- Taking this into account will not impact on GP/HCP time and their focus on patients
- Ratings do not impact on how safe the medicine is to take
- Ratings do not refer to how much medicine a patient can or cannot take
How and why did we do the research?

Background and methodology
Background to the research.

**The YewMaker MCF Classifier project**
Supported by the NHS, YewMaker has built *Medicine Carbon Footprint (MCF) Classifier*, a suite of applications to calculate and classify the carbon footprint of medicines within a practical framework that enables carbon-informed medicines use. Medicines account for 25% of carbon emissions in the NHS. For more information visit the YewMaker website. *For more information, visit the YewMaker website.*

**Understanding public perceptions**
*MCF Classifier* is for healthcare professionals, but YewMaker were also keen to understand how the public would feel about receiving information on the environmental impact of the medicines they are taking.

**Initial exploratory quantitative research raised questions**
YewMaker commissioned a brief quantitative survey amongst members of the general public in the UK (via a survey panel provider). Results of the survey can be found in the *Appendix*.

**The need for more in-depth qualitative research**
More in-depth qualitative research was required to understand:
- the reasons why people would or would not be interested in receiving information on the carbon footprint of medications
- preferences for different potential methods of delivering this information
- any concerns about this information being provided to patients or healthcare professionals
Research methodology.

15 individual interviews

15 in-depth individual interviews were held with members of the UK public. All interviews were conducted either via an online video platform (Zoom or MS Teams) or by telephone call. Interviews lasted between 35-60 minutes.

A specialist recruitment agency, BEAM Fieldwork, recruited the research participants and a qualitative specialist from PS Research conducted the interviews and a thematic analysis of the qualitative data to produce this report.

Ensuring a range of views are represented

To ensure the research heard from a diverse group of people, quotas were set during recruitment on region, demographics and attitudes.

The profile of the 15 research participants was:

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<th>Region</th>
<th>Age</th>
<th>Highest educational qualification</th>
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<tr>
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<td>White</td>
<td>North of England</td>
<td>18-34</td>
<td>GCSE/O Levels (or no qualifications)</td>
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<td>All other ethnic groups</td>
<td>South of England</td>
<td>35-54</td>
<td>A Level/BTec or equivalent</td>
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<td>Midland/East of England</td>
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<tr>
<th>SEG (for information only; no quotas set)</th>
<th>Personal interest in receiving information on carbon footprint of medicines being taken</th>
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<tr>
<td>AB</td>
<td>Yes</td>
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<tr>
<td>CIC2</td>
<td>No</td>
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<tr>
<td>DE</td>
<td>I don’t mind/I don’t know</td>
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| Male | 7    | White | 11   | North of England | 5   | 18-34 | 2    | GCSE/O Levels (or no qualifications) | 5 |
| Female | 8   | All other ethnic groups | 4   | South of England | 4   | 35-54 | 3    | A Level/BTec or equivalent | 5 |
|       |     |        |      | Midland/East of England | 3   | 55-64 | 4    | Degree or equivalent and above | 5 |
|       |     |        |      | Scotland/Wales | 3   | 65+   | 6    |                                  |   |
Context: a brief look at attitudes to climate change.
Climate change is seen as a complex issue, and many feel they don't have a good understanding.

Understanding of (and interest in) terms and issues varied considerably amongst participants

Whilst a minority feel they have a very good understanding of climate change and carbon footprints, most feel their understanding is fairly limited; levels of interest in the topic also vary widely.

"I understand it well, but I'm no expert"

I think people conflate climate change and global warming. There's always been climate change. The issue is about the rate of change. (Male, 55-64)

I don't understand all the ins and outs of it to be honest. Maybe I should have a better understanding. I've heard of the words obviously. (Female, 25-34)

I don't really understand [the term carbon footprint] at all. It makes me think of something that has a footprint as it walks along, making carbon footprints like a cyber man. I've never had a conversation with somebody about carbon footprints or climate change. (Female, 65+)

"It's all quite confusing"

Assume low levels of knowledge when designing public-facing communication

Any public-facing communication must be simple, should not use potentially confusing terminology and should ideally be tested amongst members of the public prior to use for levels of understanding.
But regardless of understanding levels, all feel climate change is something that needs to be addressed.

It is seen as an ethical issue - people are concerned about the world we are leaving for future generations.

All participants try to minimise their impact on the environment to some extent.

All recycle, some try to reduce their energy and water usage, others have reduced their car usage or choose to pay a premium for more environmentally-friendly travel options.

However, not everyone is convinced that climate change is 'as bad as people say'.

A couple of participants question whether too many events and situations are blamed on climate change unnecessarily.

It’s incredibly important because you care about your fellow citizens on the planet, and I know the planet has finite resources and we’re overpopulated and that adds to pressures on these finite resources. As human beings, we need to be responsible for what nature gives us and hope to leave behind a better future for the next generations. (Female, 45-54)

They say the temperatures rising, but personally, I think we’ve had an ice age in the past, haven’t we? You know, it might be just a natural thing. (Female, 55-64)
Tackling climate change is seen as our collective responsibility.

Participants feel we all have a responsibility to tackle climate change; everybody should be 'doing their bit' to minimise their impact on the environment.

- **Individuals**
- **Public sector** e.g. the government, the NHS
- **Private sector** e.g. Pharmaceutical companies

The larger the organisation, the bigger the potential impact and therefore the greater the perceived responsibility.

- "If everyone makes small changes, they add up to big outcomes." (Female, 65+)
- "I think for a lot of people, it’s always someone else’s responsibility. Like governments or organisations, but actually everybody’s responsible. We all need to do our bit." (Male, 55-64)
- "I think everybody, whether you are someone like me or a top CEO of a pharmaceutical, every human has it within our power to do something." (Female, 55-64)
Very few participants have previously considered the environmental impact of medicines.

Only a couple of participants had thought about the carbon footprint of medicines prior to taking part in the research. It’s not something I’ve ever thought about. You just take the pill from the packet. (Female, 65+)

I don’t know where they get all these medicines from. It’s not ever really crossed my radar to think about it. (Female, 45-54)

When discussing the environmental impact of medicines, several participants assumed this relates primarily or only to the packaging. What you often get with medicines is that they come in a much bigger box than you need. You still need to produce medicines and transport them, so that side of it you think okay, but definitely the packaging when you multiply that millions of times, that’s a hell of a lot of packaging. (Male, 55-64)

This is not something that the general public are thinking about and this should be factored into the design of any public-facing communication.
The environmental impact 'trade-off'.

Ensuring actions minimise harm to the environment usually involves making a perceived trade-off
There is a perception that choosing a more environmentally route can mean accepting higher prices, lower effectiveness or a less convenient option.

Potentially...
- less effective
- higher cost
- less convenient

More environmentally friendly option/action

For example, participants described how buying more environmentally-friendly cleaning products may cost more and they may not be as effective, but that they would be willing to make this trade-off to minimise their impact on the environment.

Most people are willing to 'do their bit' but only if this does not have a significant impact on their lifestyle

Whilst all participants recycle their waste and many are conscious of their energy and water usage, most would not be willing to give up their car or to stop flying abroad on holiday and several say they do not often think about the environmental impact of products they buy and use.

I'm not a climate change denier, but I think if we really want to make a difference, it would require substantial changes in people's lifestyles. I'll do my bit, do my recycling, I'm very conscious about packaging. But we are going to Majorca on holiday, and I've not really thought about the environmental impact of that. It doesn't stop me ordering things or getting in the car or going on holiday. (Male, 55-64)
This 'trade-off' is more complex with medicines than with other consumer products.

Unlike most other products, medicines are 'distressed purchases' - the need to receive/buy medicines is usually:

**Immediate**
People want to relieve symptoms as quickly as possible

**Essential**
Buying/receiving medication is not usually a luxury, it is necessary

**Emotive**
Decision is impacted by being in pain/discomfort

People would need reassurance that the clinical effectiveness and availability of medication would not be compromised if the carbon footprint of prescription medication is a factor in the decision-making process.

..therefore:

People are less likely to accept a trade-off and compromise on the effectiveness or availability of medications for a more environmentally-friendly option.

What’s more important is that I want to get better, I want something to help me feel better. I’ll take whatever, I’m not going to worry about it's content and where it came from and how it's been produced. (Female, 25-34)
How do people feel about sharing carbon footprint information of medications with patients?
It's comes down to transparency and making informed decisions.

Participants feel it is important that any individual or organisation who is making a decision should be given as much information as possible in order to make an informed decision.

Therefore all those who are involved in choosing medication should be informed about aspects such as the cost and the carbon footprint of the medication.

I've had a doctor say to me, I'm prescribing you this medication and we'll try that one first because it's cheaper. I thought that was a brilliant idea. [...] I think it's very important that a doctor can have a list of drugs and look at which ones are cheaper and which ones are going to have a bigger impact on the environment. They need to look at all these angles. (Male, 65+)

Plus, the more transparent a process is, the more people feel it can be trusted.
When purchasing over-the-counter medication, people feel they have a choice and want to be able to make an informed choice.

All participants feel that including a carbon footprint rating on over-the-counter (OTC) medications is a good idea, as it enables consumers to make a more informed choice. They also feel that this would encourage people to choose more environmentally friendly medications, as long as the more environmentally friendly options were easily available and didn’t cost significantly more than the less environmentally friendly alternatives.

“I’d buy the green-rated medicines. I think most people would buy the green ones. As long as they’re not double the price.” (Male, 65+)

“There’s a difference when you go into a supermarket [compared to prescription medicine]. You’re making the choice of what you want to buy. So I would have a look at [the ratings]. I look at things anyway. And it would change my decision. Even if it meant that exactly the same product costs a little bit more. Yeah, I would opt for that. I mean, there is a limit, you know, I’m not talking about if it cost me five pounds more, you know, money’s tight.” (Male, 35-44)

“It would be good [to have carbon footprint rating on OTC medicines] because you’ve got a choice and then you can choose to help.” (Female, 45-54)
But when it comes to prescription medication, people do not feel that patients have a genuine choice.

Participants do not feel they have a choice when it comes to prescription medications - patients are not considered to have real influence on the decision of which medications are prescribed to them.

- When you are sitting [opposite a GP] you don't know anything. They are just ‘this is what we're going to give you’. (Female, 45-54)

- What choice do you have anyway? You just have what you are given when you go to the doctors. (Female, 45-54)

And during discussions, there was some suggestion that whilst some participants would welcome having a discussion around which medication they could be prescribed, others are not interested in being involved in the decision-making process.

- I don't need to understand all the things a doctor might consider when prescribing a medicine. I'm not bothered about what process they have gone through. (Male, 55-64)

- I trust the medical profession. I always say to my wife, ‘they know what they're doing. Just go in and let them do whatever they're going to do and that's the end of it’. (Male, 65+)

- What choice do you have anyway? You just have what you are given when you go to the doctors. (Female, 45-54)
How do people feel about personally receiving carbon footprint information on medication they are prescribed?
A range of views were represented amongst participants.

Research participants were asked during recruitment about their level of interest in personally receiving information on the environmental impact of the medicines they are taking. To ensure a range of views were represented in the research, quotas were set on levels of interest: six participants initially said they would be interested in receiving this information, four said 'I don't mind' or 'I don't know', and five said they would not be interested.

Whilst the recruitment survey established whether people would be interested/not interested in receiving carbon footprint information of medicines, the in-depth interviews showed this was more nuanced:

I don't want to know
I don't know why I would be told this
I don't mind either way (but I'm not against it)
I would just be curious to know, sounds interesting
I would want to know this in case I can make a change/offset this

So why are people interested or not interested in receiving this information?
Not interested/not sure: if the decision has already been made, participants questioned why they would be told this information.

If individuals do not feel they have a genuine choice of which medicine is prescribed to them, some question why they would need to be informed:

- What would I do with that information?
- It’s not up to me, so why would I need to know?
- How would I know what this means?
- The decision has already been made, why tell me?

I probably wouldn’t be that bothered because partly, what would I do with that information? And how would I even understand what that was telling me? So it’s a nice idea in principle, but what does it mean practically? And if there was something that I had some level of confidence in or understanding of what it all meant, what would I do with that? (Male, 55-64)

Others would prefer not to be told in case it makes them feel guilty or to blame for the impact on the environment:

- Why am I being made to feel guilty when I didn’t choose this medication and I need to have it?
- I don’t think we should have a guilt trip when taking things that are just to make you well. (Female, 45-54)
- I think it’s just a bit too much to know. I think you just want to do whatever you can to make you feel better or to tackle your condition. I think it’d be information overload. (Female, 25-34)
Interested: several participants would just be curious to know about the environmental impact of medicines.

The majority of participants who said they would be interested to personally receive carbon footprint information on the medicines they are taking said they would simply be curious to know this.

Those who would be interested said that if they were given some information, they would be likely to read it or to look into this further.

However not many initially say that having this information would not prompt them to take any other action.

A small number would be interested to be given this information during the consultation so that they can input into the decision making process, e.g. ask to switch to a 'greener' medicine.

I probably would [look into it more] out of curiosity. I'm a Gemini, I'm interested in any strange little facts [...] I'd read it but it doesn't mean I'd do anything about it because I might need that medication and there's no alternatives. (Female, 65+)

I think it'd be interesting to know [about the environmental impact], but if you need that medication, you're going to say, sorry, I don't care if that's the only way I can get it. So be it. (Female, 45-54)

It's about my own accountability and my own responsibility. I would want to know that with this prescription, my carbon footprint was x. (Female, 45-54)
Several people would feel 'guilty' if they were prescribed a medication that has a higher carbon footprint than an alternative.

Participants were given a list of words depicting different emotions and asked to choose the word that would best reflect how they would feel if they picked up prescription medication from the pharmacy and noticed that it had either a red rating or green rating for environmental impact.

**Most common feelings if prescribed a medicine with a RED rating for environment impact:**

**Guilty**
Several participants said they would feel 'guilty' that the medicine that they need, and that they haven’t chosen, is harmful to the environment.

**Interested**
Others said they would just be 'interested' to know more about the rating and what this means/why the medication is harmful.

**Annoyed/Frustrated**
Some said they would also feel 'annoyed' that their GP hadn't chosen a 'greener' alternative, and that it is too late to do anything once it has already been prescribed.

**Most common feelings if prescribed a medicine with a GREEN rating for environment impact:**

**Pleased**
Almost all participants said they would feel 'pleased' that the medicine they are prescribed is not harming the environment.

**Proud**
Some said they would feel 'proud' that they were either not harming the environment by taking this medication or that this was having a positive impact on the environment.

**Interested**
Again, some would simply be interested to find out more.
Participants feel they are more likely to take action if they are given a medication with a red rating for environmental impact.

Several of those who said they would only look at the information (i.e. it wouldn’t prompt them to take any further action) changed their minds when asked how they would react if they were given prescription medication that had a red rating on the packet, showing that it was more harmful to the environment than an alternative.

This visual prompt appears to make more people feel they would like to discuss this with a HCP to see if they could be given a greener alternative.

Several participants said they may be prompted to ask the pharmacist about possible other alternatives

I might speak to the pharmacist about it [if medication is rated as harmful to the environment]. It’s easier to talk to a pharmacist than a doctor, they are more available. (Female, 65+)

A smaller number said they may go back to their GP (or other HCP) to ask if there was a more environmentally-friendly alternative

If I knew it was really harmful to the environment, it would worry me. I would possibly ask the doctor if there’s any medication that I could swap to that was better for the environment. (Male, 25-34)
Discussing the topic in more depth changed some people's minds about their interest in receiving information.

The act of taking part in the research and making people give the topic more thought made several people more interested in finding out the carbon footprint of medication and some changed their minds completely from uninterested to interested.

Being made to think about and discuss the topic meant that some participants who had originally stated they wouldn't be interested in personally receiving carbon footprint information on medications would now be interested.

“Before this, before being asked to give my opinions on this, I hadn’t really thought about it. [..] But it opens your eyes more doesn’t it.”

(Female, 45-54)

Educating patients on what the rating means, why they are receiving this information and what they can do with this information could change perceptions and behaviours.
Given the perceived influence and potential impact, participants feel sharing this information with the NHS should be the priority.

Participants feel that the NHS and HCPs have more influence than patients on the decision of which medicines are bought/recommended and prescribed.

NHS and HCPs have more potential to have a greater impact on climate change.

Priority should be given to provide NHS and HCPs with carbon footprint information over providing this to patients.

"The NHS is a purchaser of these products. Maybe they should make [carbon footprint] part of their procurement process. If they have a genuine choice, I would expect the NHS to use that as part of their decision process. (Male, 55-64)"

"They are influencers, the GPs. If the NHS slash GPs say we are not having your products because the travel footprint’s too high and we can get an alternative, surely someone in a [pharmaceutical] company would worry about that. (Male, 65+)"
How would people prefer to be given this information?
People want a simple, visual method on the medication packaging, with a method of finding out more information if desired.

Almost all participants were in agreement over the most appropriate and preferred methods of receiving carbon footprint information of prescribed medicines:

- Overall rating on packaging using simple, visual method (e.g. Red-Amber-Green)
- Easy method of finding out more information if interested
  - Website link (e.g. on NHS website)
  - QR code
  - Via NHS app

"It'd be nice if it was on the packaging somewhere, maybe some levels or ratings like you get with nutrition, for example. So maybe if it was colour coded. I don't expect a dissertation, but just kind of symbolic information that would help. And then if I wanted to do further research, some sort of link saying, go to this website, or this app, or having an app that's connected to that prescription." (Female, 45-54)

"Maybe put it on the NHS website. When I get new medications, I always go on Google and read the side effects and stuff and all the information comes up there." (Male, 25-34)
The majority of participants would not want or expect to be told this information during consultations.

Discussing the environmental impact of prescription medication during a consultation with a GP or other HCP was not seen as appropriate or a good use of time. Most participants also felt that if the information was only included on the leaflet within the packet, it would not be noticed.

Not in a one-to-one. If you manage to get to see the doctor, you are only concerned with your ailment. I think if a doctor told me about the environmental impact, I would probably want to punch him on the nose! (Female, 65+)

[GP]s are not going to do that. You’ve got ten minutes in there. They are not going to have time to tell me about the carbon footprint, no. (Male, 65+)

Don’t put it on [the information sheet], the first thing I do when I buy a packet of paracetamol is take that out and throw it away. (Male, 55-64)
Any information must be accessible.

Feedback from a participant who has vision and hearing impairments

Information on medications is not currently very accessible

Quite often, medication information isn’t accessible. It is good that some boxes have Braille on the box, but it’s actually just the name of the product, not the expiry date or any instructions on how to take it.

I wish there was a way of making packaging more accessible, like with QR codes, or where you can just scan on your phone, or having the actual box or something produced in a way whereby all the instructions are on there.

Thought should be given to how to make this information accessible to people with visual impairments, although the participant recognises that this can be difficult to achieve

I don’t know if there could be some sort of tactile system, like one dot this, two dots this, three dots means this. Or you could have the name of the [rating] colour in Braille, although not everyone can read Braille. Or maybe in large print font, bold, high contrast, different colours. Although it might be a bit overload for small box because you need to know what the colours mean.

I can only think that doctors could say this is what the medication is called, go online to get that information. Or maybe show it on the online account that you can get to access your prescriptions.

Note: The participant was not aware that there are red-amber-green ratings for nutrition on food packaging as she has never been told about this and it is not displayed in an accessible way.
The majority of participants feel a Red-Amber-Green rating would be an acceptable way of showing the overall carbon footprint rating.

Several participants spontaneously suggested using a Red-Amber-Green (RAG) rating, similar to nutrition labels. On prompting, most other participants also feel this type of rating would be an appropriate way of showing the environmental impact rating on the medication packet.

I think something like a traffic light system, where we have three or four categories to say, this is a low carbon footprint, this is medium or this is high, So at a glance you can see, like they have had to do with things like sugar and fat. That would help. (Male, 55-64)

I like the [RAG] idea because it kind of simplifies it. You’ve got to keep things simple. If you get complicated, people stop, the interest goes. (Male, 65+)
There was some concern that not everyone would understand the ratings and that these could be misinterpreted.

A couple of participants said they/others might not trust a red-rated medication and therefore may not take it
- Some participants said they would personally be worried that a red-rated medication could also be harmful to people
- Some feel that others may misinterpret a red rating as meaning the medication was not safe to take, or conversely that a green rating means it is safe to take more than the prescribed or recommended amount

It would need to be clear it refers to the environment and it's not a green, go ahead, take as much of this product as you want. (Female, 65+)

I don't think I would make it red, amber, green. That's a bit frightening to get some medicine with a big red sticker on it. I think they'd be better off saying high, low or medium carbon. My mother's 97 and if the doctor gave her a packet of pills, and it's got a big red sticker on it? She's not very good at understanding carbon footprints; she might get a bit concerned about it. I think you need something a bit more neutral, like a leaf or something. (Male, 65+)

I hope if and when it’s implemented, it’s done properly and not rushed out because that confuses people even more. (Male, 35-44)

If prescribed medication had a red rating, I would be confused and worried about how it would affect me. Worried about how safe it is. (Female, 65+)

Again, clear and well-timed communication will be needed to mitigate these concerns and ensure that patients understand what any ratings do and don't mean.
And there were some questions over using a rating system that is based on a comparison with an alternative medicine.

It was explained to participants that the environmental impact rating would potentially be based on a comparison to alternative medications and that if there were no alternatives to a particular medication, the medication would be given a green rating as it would be the most environmentally-friendly option.

Some participants felt that basing the rating on a comparison with alternative medicines could be misleading

Some participants pointed out that this would need to be very clearly communicated, as the natural assumption would be that the rating was based on standards that are consistent across all medications, similar to nutritional RAG ratings.

Whilst all participants would trust the ratings, a minority would want to reassurance around how these ratings had been calculated

There is an assumption that any rating would be regulated or verified in some way, particularly if it is used or accepted by the NHS.

That doesn't make sense to me. If there are two products that are objectively good for the environment and the difference between them is infinitesimally small, but one is given a red rating and the other is green, that gives people a false picture. But then if there is only one product available and it's got red all over it, it's probably going to stop people taking it potentially, so that might put people's lives at risk. It's a tricky one. (Male, 55-64)
How do people feel about environmental impact being part of the decision-making process when prescribing medicines?
Most participants would be comfortable if HCPs did take the carbon footprint information into account when choosing prescription medication.

Almost all participants would not be concerned if the environmental impact was being considered by HCPs when choosing which medication to prescribe.

However, most would want the environmental impact to be low down on a list of priorities, and discussions suggest the priority list is generally:

- Most clinically effective
- A medicine that I know suits me (esp. if repeat)
- Availability
- Cost
- Environmental impact

"I would think it was a good idea. I wouldn't be fussed if they were doing that. I would be glad that they are taking care of the environment." (Male, 25-34)

"You have to start with the fact that you have to treat the patient with the best medicine. Then after that, if you've got a choice of medicines that are equally effective, you should use the one that is greener." (Male, 65+)

"I think the way things are at the minute, cost [is more important]. In an ideal world, cost wouldn't be an issue but at the moment, for the NHS, cost rather than environment." (Female, 45-54)
However most participants do not feel it is appropriate for HCPs to be tasked with making this decision.

![Warning]

Participants do not feel it is appropriate for HCPs to be tasked with making the decision between different factors (such as cost and carbon footprint), particularly if it requires any extra time or effort on their behalf.

HCPs (particularly GPs) do not have time to do this - need to allow HCPs to focus on seeing and treating patients, and not adding anything else to their role that could impact on this.

Work should already be done for HCPs and they should be presented with best option.

I feel it's quite a lot for them to do. Obviously, they've got people to see, the other bureaucracy to be worrying about, dealing with appointments and all that stuff. I think it's quite a lot to ask them to spend a bit of time researching. (Female, 25-34)

You can't have this dilemma being thrown at the GP of cost over sustainable impact. It's unfair. (Male, 65+)

[GPs] are so pressured for time. I think a lot of work should be done for them, quite frankly. So the choices they have already been filtered through for sustainability. They haven't got the time to be sitting there doing all the work. (Female, 45-54)
Participants raised some concerns over the impact of including the carbon footprint in the decision-making process for prescribed medications.

Potential impact on individual

Would I be given a less effective medication?

Would I have to change my regular medication?

Would it mean HCPs have less time to see patients?

Potential wider impact

Will this cost the NHS more?

Would it really have much of an impact on climate change?

They have a lot of side effects these medicines. It has taken me ages to get used to these medicines, I wouldn't want them changing them, looking at them and thinking to try some different ones. (Female, 45-54)

It's OK if [GPs] are looking at the environmental impact as long I am getting the tablet I need for my injury or whatever. But if they are thinking, this is [less harmful to the environment] but it will only be 80% effective? They can't cut corners as to what they are giving somebody. (Female, 45-54)

There might be some very small, incremental positive outcomes that come as a result of this, but it wouldn't be a game changer [..] I suppose the issue is probably more about environmental cost and cost to the NHS. Should we have a product that is costing us more to have on the NHS because it's more environmentally friendly? I think that goes to the heart of the whole environmental question - how much are we willing to pay individually, and as a society for things that might make things better? (Male, 55-64)
And participants questioned the extent to which the NHS should be considering the carbon footprint of prescription medication.

Most feel the NHS should play a significant role in considering the carbon footprint of prescription medication

Participants expect that ‘the NHS’ has a significant role to play in choosing which prescription medications HCPs can prescribe, and that the carbon footprint of medications should be part of the decision-making process of which medications it buys/recommends.

BUT...

Some feel reducing its environmental impact should not be a priority for the NHS at the moment

Several participants feel the current state of the NHS means that it should not currently be focussing efforts on reducing its carbon footprint, but on improving services and cutting costs. Others feel that the NHS should focus on cutting waste in other ways, e.g. single-use plastic, wasted medicines, rather than on the carbon footprint of prescription medication.

And a few participants questioned who actually has a genuine choice about which exact medicines are given to patients...

Is it 'the NHS'?

Is it the GP and other prescribing healthcare professionals (HCPs)?

Is it the pharmacist?

Or is it all of the above?

It's not just the doctors, it's the pharmacists as well. Often it's the pharmacist that would be controlling the decision on the [exact medicine]. (Male, 65+)
And finally...
Participants feel that increasing awareness of the environmental impact of medications could be a catalyst for wider positive change within the sector.

In the longer-term, increasing awareness of the environmental impact of medications could change behaviour amongst:

- Manufacturers and suppliers
- Organisations that purchase medications, e.g. NHS, pharmacies
- HCPs prescribing medications
- Individuals purchasing OTC medicines

I think it would open up the eyes of a lot of people buying [medication]. And maybe if a manufacturer saw that they’ve got a lot of red and another one has a lot of green, they might go ‘oops, we better do something or we could end up going out of business’. (Female, 45-54)

The pharmacist could go to the wholesalers and say I want people to feel good about the medicines I give them. I want the low carbon versions, I’m not taking the one with the red sticker, I don’t want to upset my customers. (Male, 65+)

I think it will regulate itself. Years ago, food didn’t have that red, green, orange and that regulated itself. 20 years ago, you didn’t know what sugar, fat, salt food had in it, you just bought it. so I think over the years it would regulate itself. (Female, 55-64)
Appendix.
Results from YewMaker's quantitative survey amongst UK consumers (n=314).

Q1. How important is it to you that the NHS tries to reduce the carbon footprint of its medicines?

- Very important: 42%
- Fairly important: 43%
- Not very important: 12%
- I don't know: 4%

Q2. The NHS can only reach its climate goals if suppliers make changes. How important is it to you that the NHS requires medicine suppliers to show they are reducing their own carbon footprint?

- Very important: 45%
- Fairly important: 41%
- Not very important: 12%
- I don't know: 3%

Q3. Medicine suppliers have useful information about the carbon footprint of their medicines that would help the NHS in its actions on climate change. How important is it to you that they should disclose this information to the NHS?

- Very important: 57%
- Fairly important: 31%
- Not very important: 9%
- I don't know: 4%
Results from YewMaker's quantitative survey amongst UK consumers (n=314).

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Q4. If a medicine is available at the same cost but with different carbon footprints, how important is it to you that the NHS chooses the medicine supplier with the lower carbon footprint?

- Very important: 47%
- Fairly important: 37%
- Not very important: 10%
- I don't know: 6%

Q5. How important is it to you that your doctor has access to carbon footprint information when deciding which medicines to prescribe?

- Very important: 31%
- Fairly important: 41%
- Not very important: 25%
- I don't know: 5%

Q6. Would you personally like to have information about the carbon footprint of medicines you are taking?

- Yes: 42%
- No: 17%
- I don't mind: 38%
- I don't know: 3%
Q7. We are interested in how important climate change is to you generally. Which of the options best describes how often you consider the environmental impact of the products you use?

<table>
<thead>
<tr>
<th>Frequency of Consideration</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>I often consider the environmental impact of products I use</td>
<td>38%</td>
</tr>
<tr>
<td>I sometimes consider the environmental impact of products I use</td>
<td>46%</td>
</tr>
<tr>
<td>I rarely consider the environmental impact of products I use</td>
<td>12%</td>
</tr>
<tr>
<td>I never consider the environmental impact of products I use</td>
<td>4%</td>
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Report by Emma Slater.

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