Perceptions of statins
Research with patients, GPs and cardiologists

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Executive summary

This summary outlines key findings from research with patients, GPs and cardiologists, exploring their perceptions of statins. The research explored people’s attitudes and behaviours towards statins, with a specific focus on how media coverage may be affecting the treatment of ‘high-risk’ patients. The findings will be used to inform British Heart Foundation (BHF) activities to promote cardiovascular health and prevent cardiovascular disease (CVD).

The research involved 30 in-depth interviews with patients, three focus groups with GPs, and one with cardiologists, followed by online surveys of patients (n=1,000), GPs (n=625) and cardiologists (n=145).

Please note, care must be taken when interpreting the results as the samples involved are not representative of the wider populations. Furthermore, the purpose of the research was to better understand the range of perspectives people hold in relation to statins, rather than attempt to attribute specific views or behaviours to the direct influence of individual factors.

Patient perspective

- A small number of patients (n=46; 5% of our total survey sample) said they stopped taking statins as a direct result of media coverage. A third of these patients had a history of CVD. While this is a small proportion, it is concerning that anybody at high-risk of CVD is dissuaded from complying with statins treatment due to stories in the media.

- A narrow focus on the direct impact of media coverage is likely to underestimate the scale of impact, particularly as people are not always conscious of the various influences on their compliance behaviour. Indeed, our sample included 100 people who said they were not prescribed statins because they ‘did not want to take them’. Just under a third of these (31%; n=31) had a history of CVD, which suggests that there are ‘high risk’ patients who are choosing not to take statins against the advice of a healthcare professional.

- More broadly, the research highlights other factors underpinning compliance with statins, all of which may be influenced by media:
  - **Relationship with GP** – Confidence in GPs was associated with compliance, and people currently taking statins were more likely to say the GP was ‘very good’ at listening to them, explaining tests and treatments, and involving them in decisions about their care, compared with those who had stopped taking or never taken statins.
  - **Concerns about side-effects** – Fear of side-effects was the most common reason for people not wanting to take statins following an initial consultation, and experience of side-effects was cited by over half of those who had stopped taking statins.
  - **Fear of CVD** – People with a personal (or family) history of CVD were typically more open to the benefits of statins treatment, although for some the emotional after-effects of a heart attack or stroke (e.g. depression) undermined their ability to comply.
General attitudes to healthcare and medication – Non-compliance was associated with cynicism about the healthcare profession and pharmaceutical industry, as well as preferences for avoiding ‘unnatural’ chemicals. Over half of those who declined a prescription for statins because they ‘did not want to take them’ said they preferred to manage their cholesterol in ‘other ways’, such as through diet and exercise.

GP and cardiologist perspective

Almost all GPs and cardiologists surveyed (98%; n=729) believed that media coverage of statins influenced patients who questioned their advice or declined a prescription.

Media also affected doctors’ confidence, with over a quarter of GPs saying they felt less confident discussing statins with patients, and one in five feeling less confident about whether or not to prescribe statins as a result of media coverage.

Over three quarters of respondents (GPs and cardiologists) said media coverage had an impact on other healthcare professionals, resulting in increased reticence to discuss and prescribe statins. Public debate about statins was also associated with increased discussion with patients, with both positive and negative connotations, including more informed decision-making and more prolonged (and possibly challenging) consultations.

Beyond the direct focus on media, the research identified several factors affecting doctors’ differing attitudes and prescribing behaviours towards statins:

- **Patient population** – GPs’ experiences of treating patients informed their attitudes towards statins, with examples of GPs feeling ‘pushed’ into practicing ‘defensive’ medicine due to an increasingly adversarial response from patients.

- **Role of GPs in public health and prevention** – Doctors faced particular challenges prescribing statins for primary prevention, with over half of the survey respondents reporting that between 21% and 60% of these patients questioned their advice.

- **Views about official guidelines and targets** – There were mixed views about the Quality and Outcomes Framework (QOF) targets and National Institute for Clinical Excellence (NICE) guidelines related to statins, with roughly a third of GPs deeming them inappropriate. Concerns related to lack of perceived efficacy of statins for low-risk patients and scepticism about financial implications.

- **Confidence in knowledge about statins** – Only about a third of GPs described themselves as being ‘very confident’ in their understanding of statins and about discussing the risks and benefits of statins with patients; compared with three-quarters of cardiologists.

Overall, these findings suggest that media coverage of statins has a small but important impact on patients and doctors, with a relatively small number of people at high risk of CVD being less likely to comply with statin treatment as a result. However, the interplay between media coverage and other factors highlighted above suggests the indirect effects on compliance may be more widespread, prompting calls from some patients and doctors for respected bodies to engage with the media and provide robust responses to some of the more controversial claims about statins. Public debate around statins presents an
opportunity to reflect on how potentially challenging discussions between patients and doctors about risk and prevention could be improved to support more informed decision-making.
1. Introduction and Methods

This report outlines findings from research conducted with patients, GPs and cardiologists in the UK\(^1\), exploring their views and experiences of statins.

1.1. Background

Statins are a group of medicines that can help lower the level of low-density lipoprotein (LDL) cholesterol in the blood. LDL cholesterol is often referred to as 'bad cholesterol', and statins reduce the production of it inside the liver. Having a high level of LDL cholesterol is potentially dangerous, as it can lead to a hardening and narrowing of the arteries (atherosclerosis) and cardiovascular disease (CVD).\(^2\)

In October 2013, two articles published in the BMJ suggested that side-effects from statins affected 20% of those taking them, and that in some cases (low-risk patients) taking statins may do more harm than good.\(^3\) The BMJ articles were contested on the grounds of misrepresenting previous study data, suggesting that a significant proportion of patients discontinued treatment because of statin-related side-effects. Yet the original study referenced in both articles made no suggestion that these were causally-related side-effects. Indeed, randomised controlled trials of statins consistently show a similar frequency and severity of symptoms in statin and placebo groups.\(^4\)

Authors of both BMJ articles subsequently retracted statements on the 20% frequency of side-effects but still maintained that statins caused side-effects in a significant minority of patients. The ensuing debate received substantial coverage in mainstream media. This has continued in light of recent changes to NICE guidance reducing the level of risk (cardiovascular primary risk prevention threshold) at which statins can be prescribed from 20% to 10% over 10 years.\(^5\) The ongoing debate between medical professionals has been covered extensively in mainstream media, dubbed by some as the ‘statin wars’.\(^6\) Much of the

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\(^1\) Findings are based on research with patients in England, and research with GPs and cardiologists across all four countries of the UK (England, Scotland, Wales and Northern Ireland).


\(^3\) Abramson JD, Rosenberg HG, Jewell N, Wright JM. *Should people at low risk of cardiovascular disease take a statin?* BMJ 2013; 347:f6123; Malhotra A. *Saturated fat is not the major issue.* BMJ 2013; 347:f6340

\(^4\) Finegold et al (March 2014) *What proportion of symptomatic side effects in patients taking statins and genuinely caused by the drug? Systematic review of randomised placebo-controlled trials to aid individual patient choice* European Journal of Preventive Cardiology [http://cpr.sagepub.com/content/early/2014/03/06/2047487314525531.abstract](http://cpr.sagepub.com/content/early/2014/03/06/2047487314525531.abstract)

\(^5\) NICE advises GPs to first discuss lifestyle measures – a better diet and more exercise – with people who have a 10% risk of a heart attack or stroke in the next 10 years. They can then offer a statin if they think it appropriate. Previously, GPs were advised to intervene when their patient had a 20% risk.

\(^6\) “Statin Wars: Doctors are bitterly divided over calls for half of all adults to be put on pills to cut cholesterol” Tom Rawstorne, Daily Mail, 21\(^{st}\) July 2014 [http://www.dailymail.co.uk/health/article-2700573/Statin-wars-Doctors-bitterly-divided-calls-half-adults-pills-cut-cholesterol-Heres-need-know.html](http://www.dailymail.co.uk/health/article-2700573/Statin-wars-Doctors-bitterly-divided-calls-half-adults-pills-cut-cholesterol-Heres-need-know.html)
debate has focused on whether people at lower risk of CVD should be advised to take statins – highlighting concerns about exposing people to possible side-effects, overtreatment and diverting focus away from lifestyle changes.

There is some concern that this recent and ongoing coverage of statin-related side-effects means that people at high-risk of experiencing CVD may be deterred from taking them. This concern stems from anecdotal intelligence given to the British Heart Foundation (BHF) from doctors that high risk patients were declining prescriptions or stopping taking statin medication.

The Picker Institute was commissioned by the British Heart Foundation to undertake research with patients, doctors and cardiologists in the UK, to better understand the extent to which concerns about side-effects associated with statins are affecting treatment of high-risk patients.

1.2. Aims of the research

The overarching aim of the research was to explore patients', GPs' and cardiologists' perceptions of statins, and the extent to which these perceptions influence their attitudes and behaviours.

The research includes a specific focus on how media coverage of statin-related side-effects may be affecting the treatment of high-risk patients. However, it is important to highlight the challenges associated with this aim. In particular, reasons for taking / prescribing statins are often complex and highly personal (for example, relating to an individual's attitude to risk, their habits, beliefs, and social context). This makes it difficult (and potentially unhelpful) to focus on one issue to the exclusion of others. Furthermore, the research is limited to understanding people's perceptions of what motivates their attitudes and behaviours. Yet people are not always conscious of (or willing to admit) the various influences on their behaviour. In light of these challenges, the research takes a broader view, exploring attitudes towards statins more generally and how these link to patient and physician behaviour.

Specific objectives for the research were to explore:

- Attitudes towards statins among high-risk patients, GPs and cardiologists

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7 ‘High risk’ participants were defined using established JBS3 guidelines on prevention of cardiovascular disease in clinical practice, which recommends that CVD prevention should focus equally on the following three groups of patients who are at high risk of CVD (http://www.patient.co.uk/doctor/prevention-of-cardiovascular-disease#ref-1):

- Apparently healthy individuals with 20% or greater risk over 10 years of developing symptomatic atherosclerotic disease (estimated using screening questions based on QRISK)
- People with diabetes mellitus (type 1 or 2)
- People with established atherosclerotic CVD
Views about statin-related side-effects – what do people know / believe; what are these views based on; whether the recent media reporting about statins has influenced how people assess risks/benefits associated with statins; what information do they need / want about statin-related side-effects

The extent to which views about statin-related side-effects are influencing treatment of high-risk patients – both in relation to how doctors advise patients, and how patients themselves decide whether or not to take statins

The purpose of this research was to add to evidence about what determines compliance with statins treatment. It is intended to work alongside other studies (such as analysis of statin prescription rates\(^8\)) to build an understanding of the impact of recent media reports. Findings from this (and related) research will ultimately seek to inform BHF activities to promote cardiovascular health and prevent cardiovascular disease. Findings will also be submitted as evidence to Dame Sally Davies’ commissioned work through the Academy of Medical Sciences, ‘How does society use evidence to judge the risks and benefits of medicines?’

1.3. Methods

The research involved four separate strands of primary data collection:

- **Qualitative interviews with high-risk patients** – 30 in-depth interviews with people estimated to be ‘high-risk’ patients, recruited using ‘free-find’ techniques (on street face-to-face recruitment). Alongside a spread of demographics, the sample included specific quotas (see tables below; and technical appendix) for:
  - CVD history – including people with established CVD; and those with no established CVD, but with 20% or greater risk over 10 years of developing symptomatic atherosclerotic disease\(^9\)
  - Statin status – including those currently taking statins; people who have discontinued treatment, and people who have never taken statins.

<table>
<thead>
<tr>
<th>History of CVD</th>
<th>Currently taking statins</th>
<th>Used to take statins</th>
<th>Never taken statins</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of CVD</td>
<td>9</td>
<td>6</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>No history of CVD</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

\(^8\) *Impact of statin media coverage on the use of statins in the UK: an interrupted time series analysis using primary care data, BMJ.*

\(^9\) See footnote 6 for definition of ‘High risk’ participants
### Demographic information

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>19</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>BME</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Non-BME</td>
<td>25</td>
</tr>
<tr>
<td>Age</td>
<td>40 or under</td>
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</tr>
<tr>
<td></td>
<td>41-50</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>51-65</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>65+</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total number of interviews** 30

- **Follow-up survey of patients** – The key themes explored within the qualitative topic guide were adapted, based on findings from the qualitative interviews, to develop a patient survey. This was implemented by recruiting from an online panel survey of patients living in England, incorporating quota sampling with 1000 completed responses. Quotas were set for experience of statins (whether people currently take them; used to take them but do not anymore; or have been offered statins but have decided against them) and whether people had / did not have a history of CVD (see tables below; and technical appendix for specific quotas). Participants were recruited from existing panels, meaning that they had agreed in advance to participate in research, and do so using the internet. It is important to note that this methodology means the sample is not representative of the wider population of people at high-risk of CVD.10

<table>
<thead>
<tr>
<th>Currently taking statins</th>
<th>Used to take statins</th>
<th>Discussed, but never taken statins</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of CVD</td>
<td>193</td>
<td>131</td>
<td>97</td>
</tr>
<tr>
<td>No history of CVD</td>
<td>193</td>
<td>193</td>
<td>193</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>386</td>
<td>324</td>
<td>290</td>
</tr>
</tbody>
</table>

---

10 This methodology is similar to that used in the USAGE survey (Understanding Statin use in America and Gaps in Education) – [http://www.statinusage.com](http://www.statinusage.com)
Demographic information

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>546</td>
<td>446</td>
<td>55%</td>
</tr>
<tr>
<td>Female</td>
<td>446</td>
<td>546</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>BME</th>
<th>Non-BME</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME</td>
<td>34</td>
<td>964</td>
<td>3%</td>
</tr>
<tr>
<td>Non-BME</td>
<td>964</td>
<td>34</td>
<td>97%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>40 or under</th>
<th>41-50</th>
<th>51-60</th>
<th>61-70</th>
<th>71-80</th>
<th>81-90</th>
<th>91-100</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 or under</td>
<td>33</td>
<td>134</td>
<td>259</td>
<td>375</td>
<td>165</td>
<td>21</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>41-50</td>
<td>134</td>
<td>259</td>
<td>375</td>
<td>165</td>
<td>21</td>
<td>1</td>
<td>-</td>
<td>13%</td>
</tr>
<tr>
<td>51-60</td>
<td>259</td>
<td>375</td>
<td>165</td>
<td>21</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>26%</td>
</tr>
<tr>
<td>61-70</td>
<td>375</td>
<td>165</td>
<td>21</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>38%</td>
</tr>
<tr>
<td>71-80</td>
<td>165</td>
<td>21</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>17%</td>
</tr>
<tr>
<td>81-90</td>
<td>21</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>91-100</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Total number of respondents | 1000 | - |

- **Qualitative research with GPs and cardiologists** – Three focus groups with GPs (involving a total of 24 GPs) and one focus group with cardiologists (involving a total of seven cardiologists). Participants were purposively recruited to specific quotas (see table below and technical appendix), including experience of patient statin use (based on prescription rates compared to national averages); gender, age, ethnic background, and location.

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of participants</th>
<th>Gender</th>
<th>Age</th>
<th>BME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Male</td>
<td>Female</td>
<td>&lt;45</td>
<td>&gt;45</td>
</tr>
<tr>
<td>Group 1 (GPs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birmingham</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Group 2 (GPs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birmingham</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Group 3 (GPs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Group 4 (cardiologists)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>24</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>

- **Survey of GPs and cardiologists** – Findings from the focus groups informed the development of an online survey of GPs and cardiologists across the UK. Unique access links to the survey were sent to all UK GP practices (n=8,000) and cardiologists (n=1,364) for whom we held a viable email address\(^1\). The fieldwork period was four weeks, with a reminder email sent after the initial two weeks. 625 GPs and 145

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\(^1\) NB Emails were sent to GP Practice Managers asking them to forward the survey to all GPs within that practice.
Cardiologists completed the survey, providing a total of 770 completed questionnaires (see tables below, and technical appendix for sample breakdown). The response rates, based on the percentage of all GP practices and cardiologists who were sent the survey (rather than the totality of all UK GPs and cardiologists), were 8% and 11% respectively.

<table>
<thead>
<tr>
<th>GPs: Demographic information</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>276</td>
</tr>
<tr>
<td>Female</td>
<td>349</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Under 30</td>
<td>8</td>
</tr>
<tr>
<td>30-39</td>
<td>121</td>
</tr>
<tr>
<td>40-49</td>
<td>188</td>
</tr>
<tr>
<td>50-59</td>
<td>241</td>
</tr>
<tr>
<td>60+</td>
<td>65</td>
</tr>
<tr>
<td>Age not given</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total number of respondents</strong></td>
<td>625</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cardiologists: Demographic information</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>129</td>
</tr>
<tr>
<td>Female</td>
<td>16</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Under 30</td>
<td>1</td>
</tr>
<tr>
<td>30-39</td>
<td>9</td>
</tr>
<tr>
<td>40-49</td>
<td>52</td>
</tr>
<tr>
<td>50-59</td>
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</tr>
<tr>
<td>60+</td>
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</tr>
<tr>
<td>Age not given</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total number of respondents</strong></td>
<td>145</td>
</tr>
</tbody>
</table>

All qualitative interviews and group discussions were structured with the aid of a topic guide. Verbatim quotes and case studies are used throughout the report to illustrate key points and findings. These come from participants involved in the research, but any names or identifying features have been changed to protect people's identities. Names used in the case studies have been pseudo-anonymised.

1.4. Limitations of the research

It is important to note that the in-depth interviews and focus groups referenced in this report were qualitative in nature, designed to provide rich data about the range of views and experiences of these groups and to highlight any patterns and typologies where they occur. Participants were purposively selected to ensure the widest possible range of views were included. These elements of the research were not intended to provide statistical data about these groups, or be representative of the wider patient population.
Similarly, it is important to highlight the constraints of the quantitative research. As noted above, the follow-up patient survey involved quota sampling, whereby patients were purposively selected to allow further exploration of topics relevant to specific patient groups. In contrast, the GP and cardiologist survey was open to all physicians (for whom we held a valid email address), yet is inevitably constrained by the number of people who responded. For both of these surveys, therefore, care must be taken when interpreting the survey results, as neither samples are representative of their respective wider populations.

Finally, the purpose of this research is to better understand the range of perspectives people hold in relation to statins and add to the evidence about what determines compliance with statin treatment. Any patterns that emerge from the data are outlined in the report, although it is not always possible to identify causal links. Crucially, the research does not seek to provide a single conclusion or response to the ongoing debate in mainstream media about side-effects associated with statins, but rather highlights the complexity and heterogeneity of views where these exist.
2. Results: Patient perspective

A primary aim of this research was to better understand patients’ attitudes and behaviours towards statins. The in-depth interviews and online survey with patients therefore sought to explore people’s perceptions of statins, and consider the factors that are likely to influence their attitudes and behaviour towards statins.

This section outlines people’s perceptions of statins – both in terms of their initial decision about whether or not to take statins, and their ongoing compliance with the drug. It then looks in depth at several key issues highlighted by participants as being factors affecting their views and decisions about statins – specifically, their relationship with their GP, any concerns they have about side-effects associated with statins, their experiences of cardiovascular disease (CVD), their wider attitudes towards healthcare and medication, and finally, their views about media coverage of statins.

It is important to note that while this report attempts to explore the above issues separately, they are very much interdependent. For example, a patient’s relationship with their GP is intrinsically linked to their wider views about healthcare and drugs. People’s attitudes and behaviours are inevitably complex and highly personal. It is therefore difficult to attribute specific actions or views to the direct influence of individual factors (such as media coverage), and the research does not attempt to do this. Rather, the purpose of this research is to better understand the range of perspectives people hold in relation to statins and add to the evidence about what determines compliance with statins treatment.

2.1. Experiences of statins

As expected, findings from both the in-depth interviews and online survey suggest a wide range of differing views and experiences of statins amongst patients. These range from those who have given relatively little thought to decisions about whether to take statins, to those who have deliberated the issue extensively with family, friends and medical professionals. These differences are explored below – first in relation to the initial decision about whether to take statins, and then about ongoing compliance.

Initial decision to take statins

For over two-thirds of survey respondents (69%; n=689), the initial discussion about statins took place with a GP (see chart 1), with only 12% (n=121) speaking to a hospital doctor or nurse (for example, following an event such as a heart attack or stroke), and fewer still speaking to other healthcare professionals. Of our sample of 1000 patients who had all discussed statins with a healthcare professional, 70% (n=695) were prescribed statins during that initial discussion.
As noted above, the in-depth interviews highlighted substantial differences in people’s experiences of these initial discussions – from examples of extensive debate with healthcare professionals, to people having relatively little input in the discussion. Indeed, there was evidence questioning whether people were ‘making a decision’ at all. For example, a number of people said their faith in their GP (and, for some, the medical profession as a whole) meant they simply accepted the suggested treatment without question.

“I trust my doctor – I trust the doctor, I trust the NHS, however you want to put it. If a doctor’s telling me to do something, I’ll be honest… you’re going to do it aren’t you.” (Male; currently taking statins; history of CVD)

Other patients who had a similarly ‘passive’ approach to taking statins included those with a history of CVD. In several of these cases, people described finding themselves in hospital following an event (such as a heart attack or stroke) and being given a number of different treatments. For these people, a statin was simply one of many ‘life-saving’ drugs they were prescribed, with relatively limited input beyond accepting the prescription.

“When I was in hospital they put me on the medication there, and the emergency doctor briefly, you know, said, ‘Oh this is your medication’, but it was only briefly… I mean they were there obviously to make me better, but I wasn’t fully sure of what they all did.” (Male; currently taking statins; history of CVD)

In contrast to this, a number of patients described more complex decision-making – seeking further information and explanation about the risks and benefits of statins, or challenging the advice of their GP. There were a range of reasons expressed by interviewees to explain their need for more information from healthcare professionals, including fears about side-effects and long-term health implications, and the need to feel in control of decisions.

“I mean I know it’s some kind of intelligent thing to do [to accept the GP’s advice about statins treatment], but it’s just, again, coming back to my natural personality of being quite...
free-spirited and not being tied into someone else's world or rules.” (Female; never taken statins; no history of CVD)

“Would there be any long-term damage to my system as well from taking them? That's what I was worried about. And I mean I did ask the cardiologist, you know, is there any long-term effects? And she said, 'no there isn't', but no-one explained when I started to take them so, you know, you just sort of think, 'Well, I know they're there to help my heart but what other damage are they going to do?'” (Female; used to take statins; history of CVD)

“I think when it comes to the GP, getting [prescribed medication], we've got to sort of push them a bit… They told me to take Aspirin every day, I probably don't, and then they gave me a spray which, I'm very naughty, I don't use either… I probably don't like being on medication long-term, that's my problem, but once I have the scan if they say yes, you have a problem, you have to go on this Nicorandil, which is what they want to give me, I'll take it. I just read too much about the side-effects, that's my problem.” (Female; currently taking statins; history of CVD)

Of the 30% (n=276) of our sample who were not prescribed statins during an initial discussion about the medication, the most frequently cited reason was because they ‘did not want to take them’ (36%, n=100) (see chart 2, below). This was closely followed by a healthcare professional suggesting they were not needed (36%; n=98) and opting for a different treatment option (e.g. diet, exercise, stopping smoking) (32%; n=87).

Of the 100 respondents who were not prescribed statins because they ‘did not want to take them’, three quarters (75%; n=75) said they were worried about possible side-effects, and over half (51%; n=51) preferred to manage their cholesterol in other ways, such as through diet and exercise (see chart 3 below). A third (34%; n=34) of respondents felt statins weren’t necessary for them, and only four people mentioned the inconvenience of taking statins as a
reason not to accept a prescription. (People’s fears and experiences of side-effects are explored in more depth in the section 2.3).

Of these 100 respondents who were not prescribed statins because they ‘did not want to take them’, just under a third (31%; n=31) had a history of CVD. This suggests that there are ‘high risk’ patients who are choosing not to take statins against the advice of a healthcare professional.

**Ongoing compliance with statins treatment**

For those respondents who were prescribed statins either during the initial discussion or subsequently (75%; n=748), we explored any breaks in their prescription, and the reasons for these breaks. Just over half (51%; n=383) reported that they had taken statins continuously with no breaks. The remaining respondents (49%; n=365) were split between those who had stopped taking statins for a period of more than 30 days (34%; n=252), those who had stopped for a period of less than 30 days (11%; n=84), and those who had not taken them at all (e.g. never collected their prescription) (4%; n=29) (see chart 4 below).
Respondents were asked to select up to three ‘main reasons’ for stopping or not taking statins, with the most frequently cited responses relating to side-effects (see chart 5 below). Of those who never took or stopped taking statins for any period (n=365), over half (52%; n=192) said one of the main reasons was because they experienced side effects; and over a quarter (26%; n=94) cited fear of possible side-effects as a reason not to comply with statin treatment. Respondents who selected these options included people with a history of CVD – 42% (n=80) of those who said they experienced side effects, and 40% (n=38) of those who were worried about possible side effects. Again, this suggests that ‘high risk’ patients are stopping their treatment due to perceptions of side-effects.

Participants in the in-depth interviews raised similar issues affecting ongoing compliance with statins treatment. However, they were perhaps more forthcoming than survey respondents had the option to select all that apply, hence total exceeds 100%.
respondents about some of the uncertainties associated with statins – including doubts about their necessity, concerns about any long-term consequences, and how they interact with other priorities, such as a chaotic home life or mental health problem. The interviews also emphasised the complexity of people’s personal situations, and the interplay between all these issues (see case study 1 below).

Case study 1: Dana

Dana is in her 50s, and a full-time carer for her children and a disabled relative. She has high cholesterol, and was prescribed a statin by her GP. She has a good relationship with her GP, but has a number of concerns about medicines in general, which means she is not consistently compliant with the statin treatment. Her main concern is that she doesn’t want to be ‘pushed’ into taking any drugs unnecessarily – and if her doctor doesn’t insist that it’s necessary then she assumes it isn’t.

Dana thinks one of the reasons she’s reticent about taking medication is because she doesn’t want to be dependent on any drugs and would prefer to just ‘get on with life’. She wants proof that statins are beneficial, and feels she hasn’t seen this yet. Similarly, she isn’t convinced by the benefit of making lifestyle changes, as her son’s father died of lung cancer after leading a healthy life.

Dana also gets ‘fed up’ with having to remember to take statins, and describes herself as ‘unreliable’. She blames this on her caring responsibilities for her family, which makes her feel less able to take care of herself. As a result, Dana frequently has periods where she stops taking statins, only restarting if her doctor ‘starts fretting’.

The remaining sections explore some of the key factors underpinning the experiences outlined above, as well as people’s wider views about statins.

2.2. Relationship with GP

The in-depth interviews highlighted the central role that patients’ relationships with their GP play in determining how people feel about proposed treatments. This was certainly a factor when discussing possible statins treatment, with patients who described their GP as ‘competent’ and ‘trustworthy’ seeming to have greater confidence in taking a statin.

These findings are supported by the online survey results, which indicate that patients who are currently taking statins tend to be more positive about the last time they saw a GP than those who have stopped or never started (see chart 6). For example, 71% (n=273) of those currently taking statins said they ‘definitely’ had confidence and trust in the last GP they spoke to, compared to 59% (n=192) of those who used to take statins, and 58% (n=166) of those who had discussed but never taken statins.

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12 The survey asked respondents to think about the last time they spoke to or saw a GP; this was then followed by a further question to gauge how typical this experience was.
Men in our sample appeared to have more confidence in their latest interaction with a GP than women. Of those who said they ‘definitely’ had confidence and trust in their GP (n=631), 59% (n=372) were male; and of those who said they ‘did not have any confidence’ (n=60), 70% (n=42) were female. There was no discernible variation by age, or indeed whether or not people had a history of CVD.

Results for specific aspects of the GP relationship (during their last interaction with a GP) showed a similar pattern. Those currently taking statins were consistently more likely to say that the GP was ‘very good’ at listening to them, explaining tests and treatments, and involving them in decisions about their care, relative to those who used to or have never taken statins (see chart 7).
Confidence in GPs also appears to be associated with ongoing compliance with statins. Of those respondents who continued to take statins with no breaks, nearly three quarters (73%; n=279) said they ‘definitely’ had confidence and trust in their GP. This compares with 58% (n=48) of those who stopped taking statins for a period of less than 30 days, and 56% (n=141) of those who stopped taking statins for a period of more than 30 days. For those who did not start taking statins, only 38% (n=11) ‘definitely’ had confidence and trust in their GP (see chart 8).
2.3. Concerns about side-effects

An important focus of this study, and of recent media coverage, is the role that reported side-effects play in deterring people from taking statins.

As noted previously, fear of side-effects was certainly a factor for some survey respondents, deterring them from accepting a prescription for statins when it was initially raised with a healthcare professional; or prompting them to not collect their prescription or stop treatment at least temporarily (see section 2.1).

A key focus of the in-depth interviews was therefore to understand what drives people’s concerns about side-effects. For several participants, this was linked to direct experiences, with examples highlighting the complexity of how these are identified and acted upon (see case study 2).

Case study 2: Sally

Sally was prescribed statins by her cardiologist following a heart attack. At the time, she had concerns about possible side-effects and any long-term damage statins might cause. She discussed these concerns with her cardiologist, and was told there were no long-term effects. She did not feel reassured by this, as the cardiologist had not provided any more information on the use of the medication and what to expect when on them. However, she accepted the prescription.

After she started taking statins, Sally became worried about symptoms she experienced, including itching and bruising. She spoke to her GP, who said they were indeed side-effects of statins. She wanted to stop taking statins, but her GP persuaded her to stay on them for a few more weeks, as her cardiologist suggested that she would not need to stay on them long-term.

Interviewees who became concerned about possible side-effects of statins typically said they had spoken to a healthcare professional prior to, or soon after, deciding whether to change their treatment. Conversations involved the healthcare professional either reassuring them about the risks and benefits, or suggesting ways to reduce side-effects (such as changing when they are taken, or changing the prescription to a lower dose, or alternative statin).

“I’m terrible when I get tablets, you know, because I read the leaflets for side-effects and everything and if I think [it might affect me] I come straight back down the doctors.” (Female; currently taking statins; history of CVD)

“Oh at first I couldn’t tolerate them at all because I was on a high dosage, terrible muscle aches, terrible insomnia, horrendous, so they just reduced it, reduced it to a very low dose and I can tolerate it. I’m on 10mg which is nothing. I really should be on 20.” (Female; currently taking statins; history of CVD)

“Well the side-effects was, you know, with the statin, it makes you achy, typically makes your bones sore, but the way around it is I take the statins at night-time, when I’m asleep, so I don’t feel the pain as such… The [rehabilitation] nurse advised me to do that, that’s what the nurse advised me, ‘Well if they’re affecting you during the day, take them at night-time instead, have
a sleep’, and I’ll be honest I’ve done that ever since.” (Male; currently taking statins; history of CVD)

It is clear from the findings outlined above that perceptions of side-effects associated with statins – whether related to fears or actual experiences – have a considerable impact on people’s attitudes and behaviours towards statins. It is fairly straightforward to understand how personal experiences of side-effects might affect people’s views about statins; for example, raising questions about their necessity, efficacy, safety, and prompting further discussions with healthcare professionals. However, the impact of experiencing side-effects is complicated by other factors; for example, whether people with a high level of concern about CVD are willing to put up with ‘relatively minor’ side-effects (see section 2.4); or, whether awareness of side-effects from media or other sources means people are more likely to associate general aches and pains with the medication (see section 3.6).

It is less clear what lies behind people’s fears about side-effects. The in-depth interviews suggest this is a complex combination of factors, including the experiences of family and friends (explored below), and media coverage of side-effects, as well as their own interest in and concerns about medication (these latter issues are explored elsewhere – see sections 2.5 and 2.6).

Nearly two thirds of survey respondents (62%; n=519) said they were aware of family or friends who had experience of taking statins, and 39% (n=371) said that their family or friends had spoken to them about issues or concerns they had about statins. Of those whose family and friends had spoken to them about issues or concerns with statins, the most frequently selected issue was that they had experienced side-effects themselves (64%; n=239). The following table shows the remaining reasons, along with the frequencies (see table 1, below):

Table 1: Issues and concerns about statins use raised by family and friends (n=371) [NB respondents had the option to select all that apply, hence total exceeds 100%]

<table>
<thead>
<tr>
<th>Issues and concerns raised by family and friends</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience of side-effects</td>
<td>239</td>
<td>64%</td>
</tr>
<tr>
<td>Worries about possible side-effects</td>
<td>204</td>
<td>55%</td>
</tr>
<tr>
<td>Off putting media reports about statins</td>
<td>94</td>
<td>25%</td>
</tr>
<tr>
<td>Unconvinced about necessity</td>
<td>86</td>
<td>23%</td>
</tr>
<tr>
<td>Preferred to manage cholesterol in other ways (lifestyle changes)</td>
<td>70</td>
<td>19%</td>
</tr>
<tr>
<td>Statins ineffective</td>
<td>33</td>
<td>9%</td>
</tr>
<tr>
<td>Prescription Charges</td>
<td>28</td>
<td>8%</td>
</tr>
<tr>
<td>Inconvenience of taking statins</td>
<td>26</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1%</td>
</tr>
</tbody>
</table>

Interestingly, people who were currently taking statins were less likely to have friends and family who had raised concerns about statins (29%; n=109) than those who used to take
Survey findings also suggest that people are more likely to stop or take a break from treatment if they have friends and family who talk to them about their experiences of or fears about side-effects associated with statins (see chart 9). For example, while only a third (34%; n=252) of our overall sample stopped taking statins for more than 30 days; this was a considerably higher proportion for those whose family and friends had discussed fear of side-effects (40%; n=52) and experiences of side-effects (50%; n=80).

### Chart 9: Continuity of statins; by family and friends with fear / experience of side-effects

<table>
<thead>
<tr>
<th></th>
<th>Total responses to question about continuity of treatment (n=748)</th>
<th>Family &amp; friends with fear of side effects (n=129)</th>
<th>Family &amp; friends with experience of side effects (n=160)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not taken them at all (e.g. never collected the prescription)</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Stopped for more than 30 days</td>
<td>34%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>Stopped for less than 30 days</td>
<td>51%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Continued to take statins</td>
<td></td>
<td>11%</td>
<td>36%</td>
</tr>
</tbody>
</table>

2.4. Experience of cardiovascular disease (CVD)

Fear of CVD emerged as a key driver of people’s views about statins. The in-depth interviews highlighted that people who expressed greater concern about their heart health, either due to personal experience of CVD or the experiences of those close to them, were typically more open to the benefits of medication. These personal and indirect experiences of CVD are explored separately below.

**Personal experiences of CVD (statin treatment for secondary prevention)**

For those with personal experience of CVD, statins could form a relatively small part of their ongoing treatment. Experiences described in the in-depth interviews included regular
monitoring and appointments with specialists for often multiple comorbid conditions and, for some people, taking 30+ different pills a day. For those with previous experience of CVD, prevention of future events was typically paramount, and concerns about side-effects of statins were a relatively minor consideration. So even in cases where people with a history of CVD were able to attribute specific side-effects to statins, this was not always enough to deter them from continuing the treatment. In these cases, the benefits of statins on their long-term health outweighed any inconvenience of what were perceived to be relatively ‘minor’ side-effects.

“The side-effects, if there are any, are minimal… whether there are drugs to counteract the side-effects, I don’t really know, but knowing the damage that high cholesterol can do, I would be inclined to stick with it until it became absolutely intolerable.” (Male; currently taking statins; history of CVD)

It was not possible to explore the direct link between personal experiences of CVD and whether or not people are more likely to take statins from the survey data. This is due to the quota sampling approach adopted for the patient survey, which involved respondents being recruited based on their current status in relation to statins, and whether or not they had a history of CVD (see introduction and technical appendix). However, the data does suggest that people with a history of CVD are less likely than those with no history of CVD to say they ‘did not want’ a prescription for statins during the initial discussion, or that they stopped taking statins due to worries about side-effects. As noted previously, the fact that people with CVD were represented at all in these sub-groups raises a concern that ‘high-risk’ people are not always compliant due to perceptions of side-effects.

People with a history of CVD also spoke about wider factors affecting their compliance with statins treatment. In particular, people spoke about mental health problems and chaotic lifestyles, often associated with their heart health, which affected their ability to comply with statins treatment.

“I just know I have to take [statins]… I also suffer with depression, which apparently is quite common in people who have got heart problems or any disease I think really. It just gets you down, so I’ve sort of gone through periods where I’ve been really depressed and not took them and then been due for a cholesterol check and found, you know, my cholesterol’s gone a bit high again so your doctor sort of gets in a bit of a panic and ups it and has a good talk to me, so I know that they can be quite essential really.” (Female; currently taking statins; history of CVD)

The in-depth interviews suggested that the shock and anxiety often associated with events such as heart attack or stroke were, for some people, barriers to adapting to lifestyle changes, including taking regular medication (see case study 3). After coming to terms with what has happened to them, people were then more likely to start thinking about the implications of taking or not taking medication.

Case study 3: Stuart

Stuart was diagnosed with CVD when he was 44. It took him some time to come to terms with the idea of having a serious illness at a relatively young age and that he would need to
take medication for the rest of his life. During this adjustment period, he developed depression and struggled with remembering to take his medication regularly, including statins.

Stuart has ‘sorted it out’ now and, with the help of his partner, complies with all of his medication. He still has mixed feelings about taking ‘man-made drugs’, particularly about any side-effects that might result from this, but feels that he has ‘no choice’ because otherwise he ‘might not even be sitting here from what they’ve been telling me’.

“If it helps you to live, so be it… unfortunately.”

Indirect experiences of CVD (family and friends)

Several participants we spoke to during the in-depth interviews mentioned family members who had died from CVD. For some, this acted as a spur, encouraging them to adopt a healthier lifestyle, and in some cases providing a symbolic target against which they measured their own health (see case study 4).

“Well like I say, you know, both my dad and my sister died of massive heart attacks so, you know what I mean. My sister was only 57. When I got to 57 I said, ‘right, I’ve outlived my sister’. When I got to 61 and a month, I’d outlived my mum, and when I got to 61 and nine months, I’d outlived my dad, and that to me was, you know, mega targets to reach sort of thing.” (Female; never taken statins; no history of CVD)

Case study 4: John

John is retired, with several children and grandchildren. His father died of a heart attack aged 62, and when John approached the same age he had a ‘terrible, dreaded fear’ that the same thing would happen to him. He spoke to his GP about these fears, and had several tests. The test results showed that he was fine, with only slightly high cholesterol. The GP prescribed statins ‘to be on the safe side’. He’s also trying to reduce stress and live as healthily as possible, although he’s aware that’s not always enough. A friend recently died of cancer despite being cautious about health and doing everything ‘correctly’.

John is aware of statins being mentioned in the media, but doesn’t pay much attention because he’s not sure how reliable it is. He would only really listen to his doctor’s advice.

Overall, John feels that everything involves risk and you have to do what’s right for you.

As this variation in views and experiences suggests, fear of CVD alone is not a clear cut factor influencing compliance with statins. As stated throughout, there is complex interplay between this and other factors, not least people’s general attitudes towards (and public discourse about) healthcare and medications. This is explored further in the following section.
2.5. General attitudes to healthcare and medication

A patient’s overall attitude towards healthcare and medicine seems to have a strong bearing on their attitude to statins, acting as a filter through which they view the risks and benefits of statins. This is explored in relation to three different aspects: trust in medical professionals; views about medications; and, views about preventative healthcare.

Trust in medical professionals

As noted previously, the in-depth interviews suggest that a patient’s relationship with their GP is associated with their confidence in any treatments prescribed. This was supported by the survey findings, which indicated that patients who are currently taking statins had more confidence in their latest interaction with a GP than those who had stopped or never taken statins (see section 2.2).

However, the issue of trust in medical professionals goes further than the GP-patient relationship. Indeed, participants in both the in-depth interviews and the online survey spontaneously raised wider concerns about being ‘over-medicalised’ and that doctors did not consider all options, such as diet and lifestyle changes, before resorting to drugs.

“I don’t like [doctors] to be writing out a prescription as soon as you walk in the door because, like I say, they don’t know me, they don’t know I’m allergic to antibiotics, you know, so I want them to take the time to listen to what I’ve got to say.” (Female; used to take statins; no history of CVD)

“Well my cholesterol had dropped down anyway, my cholesterol had gone down and so I thought, well... I’ve never been one for taking a lot of pills and I take more pills now than I’ve took in my whole life, you know, so yeah, I just thought, oh well, that’s improved, I’m coming off... He [GP] was annoyed, he said, ‘well if that’s what you want to do’... [It was] more my decision than his, if I’m honest.” (Female; used to take statins; no history of CVD)

Participants from both the in-depth interviews and the online survey spontaneously spoke of concerns about financial incentives for prescribing statins, raising questions about the motives of both physicians and the pharmaceutical industry for ‘pushing’ statins.

“None of us want to die, and it’s true of human beings, we don’t want to die, do we. This is why the commercial companies, the pharmaceuticals, the government, everyone’s making money trying to tell us how.” (Female; never taken statins; no history of CVD)

“When big money rules - patients and their welfare go by the wayside.” (Patient survey respondent)

“Statins are poison and only there to make money for big pharma.” (Patient survey respondent)

Lack of confidence in the expertise and skills of doctors was also raised, particularly in cases where participants had previously been misdiagnosed. Participants also questioned the skills of GPs in relation to CVD, with several participants saying they were more likely to listen to their cardiologist when discussing statins treatment.
“It’s just about the heart that I see the cardiologist whereas the GP, you know, it’s sort of everything isn’t it… like the medications and that, [cardiologists] sort of know instantly which one to put you on to for whatever and what’s sort of up and coming at the moment” (Female; currently taking statins; history of CVD)

**Views about medications**

The in-depth interviews revealed a widespread sense that any medicine should be avoided if at all possible. This was expressed with differing strengths of feeling, from those who were relatively happy to accept the advice of healthcare professionals when they recommended statin treatment, to those who more explicitly challenged medical advice. For this latter group, the general discourse about avoiding chemicals and toxins, and staying 'natural', led to some avoiding statins as 'just another drug'. This divergence in views and behaviours was again related to wider views about healthcare – specifically, people's trust in medical professionals (as outlined above), and their views about lifestyle alternatives (see below).

“Yeah, I mean obviously nobody wants statins. You don't want statins just for the sake of statins, but they are very helpful, but it’s just a tool to help you, that's all they are.” (Male; currently taking statins; history of CVD)

"[The doctor] just wanted to put me on these tablets, 'Well that's what we think's best for you', and that wasn't best for me." (Female; never taken statins; no history of CVD)

The survey highlighted that a significant group of respondents preferred to manage their cholesterol in 'other ways' (such as through diet and exercise) rather than take statins. For example, this was cited as a reason for not accepting a prescription for statins by over half (51%; n=51) of the 100 people who said they ‘did not want to’ take statins when it was initially raised with a healthcare professional. Furthermore, 20% (n=74) of the 365 people who stopped taking statins for any period, cited a preference for lifestyle changes as one of the reasons for not complying with their statins treatment.

There were a number of ways in which statins were differentiated from other medications by participants. For example, being asymptomatic when prescribed a statin, and having no discernible change in physical health as a result (or even experiencing negative consequences as a result of perceived side-effects) inevitably affected how people complied with statin treatment, in particular raising questions about the necessity of the treatment.

“I had to wait a couple of months before I could see the cardiologist and I wanted to see if I could come off the medication because I felt fine. But, you know, I was thinking, ‘well, have I got to take this medication for the rest of my life?’ you know, I don’t really want to. I was really worried about it.” (Female; used to take statins; history of CVD)

A further issue for a small number of participants was the ‘pill burden’ associated with a statins prescription. However, of the 100 survey respondents who ‘did not want to take’ statins during initial discussions with a healthcare professional, only four (4%) cited the inconvenience of having to take statins as a reason. Similarly, only 3% (n=11) of those who stopped or had never taken statins cited the ‘inconvenience’ of taking statins as a reason. The in-depth interviews confirmed that while pill burden was not a key determinant of whether or not people
complied with statins treatment, the concept of having to take medication long-term was certainly off-putting.

“I don’t enjoy it, you know, it’s a case of seven tablets a day, it’s not, well it was 11 tablets at one stage but now it’s down to seven, knowing that you’ve got to take seven tablets for the rest of your life, you just look at the pack of them morning or an evening and go… you know.” (Female; currently taking statins; history of CVD)

Views about preventative healthcare / lifestyle alternatives

People’s views about doctors and medicines were in many cases closely linked to their views about preventive healthcare and lifestyle alternatives to medical interventions. In part, statins were seen as a ‘quick fix’ to heart problems, not addressing underlying issues, such as poor diet, lack of exercise and smoking. This view prompted questions about whether statins were being used to replace, rather than support, a healthier lifestyle.

“Well I just think, you know, obviously it is a good drug, but obviously you need to exercise and do stuff, whereas some people think, ‘oh I’m on a statin, I don’t need to exercise and I don’t need to eat healthily’, so they just, you know, they probably are reducing their cholesterol but not as much as what they should be really.” (Male; currently taking statins; history of CVD)

This issue was explored in the survey – just over half of all respondents strongly agreed that their health ‘means everything’ to them (51%; n=508). There was very little variation across the different statin status groups (those currently taking statins; used to take statins; discussed but never taken statins). However, those currently taking statins were less likely to agree that they take good care of their body than the other groups (see chart 10). Whilst this does suggest a link between statins compliance and attitude towards health more generally, it does not indicate causation. Indeed, this may imply that those who decided not to take statins have made lifestyle changes as a result, or that those who are more likely to take good care of their body are more resistant to taking medication to manage their cholesterol. The in-depth interviews suggested that both of these positions are feasible.
2.6. Media coverage of statins

A key aim of this research was to better understand the perceived impact of recent media coverage of statins on people’s attitudes and compliance with statins treatment.

Nearly three-quarters of our survey respondents (74%; n=686) said they could recall media coverage of statins. Awareness was fairly evenly spread across our quota groups, with only slightly higher rates among those who used to take statins (79%; n=241), compared to 75% (n=197) of those who had never taken statins and 70% (n=248) of those who were currently taking statins. This difference in awareness between these groups may suggest that media played a part in their compliance, although it may also reflect different levels of interest in information about statins; for example, those people who have actively chosen not to take statins may be more receptive to and/or aware of the predominantly negative media coverage affirming their decision.

Those who recalled coverage of statins in the media (n=686) were asked where they had seen, read, or heard this coverage (see table 2 below). The most typical response was ‘news stories in printed media’ (n=406), and analysis of free-text comments suggests that the most frequently cited source was the Daily Mail, with 10% (n=40) specifically mentioning this. ‘News stories on TV/radio’ were also cited as a key source of coverage of statins, with the BBC accounting for the majority of specific mentions (22%; n=76). News websites, health features and more specialist media options were perhaps inevitably less commonly cited.
Table 2: Where people have seen, heard or read about statins in the media (n=686) [NB respondents had the option to select all that apply, hence total exceeds 100%]

<table>
<thead>
<tr>
<th>Where have you seen, heard or read about statins in the media?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>News stories in printed media</td>
<td>406</td>
<td>59%</td>
</tr>
<tr>
<td>News stories on TV/radio</td>
<td>339</td>
<td>49%</td>
</tr>
<tr>
<td>News website</td>
<td>119</td>
<td>17%</td>
</tr>
<tr>
<td>Health features in printed media</td>
<td>113</td>
<td>16%</td>
</tr>
<tr>
<td>Health features on TV/radio programmes</td>
<td>106</td>
<td>15%</td>
</tr>
<tr>
<td>Health websites</td>
<td>95</td>
<td>14%</td>
</tr>
<tr>
<td>Not sure</td>
<td>40</td>
<td>6%</td>
</tr>
<tr>
<td>Social Media (including health forums)</td>
<td>35</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>2%</td>
</tr>
</tbody>
</table>

During the in-depth interviews, people described seeing contradictory information about statins in the media, and that the general tone was often negative. This prompted claims that people would either dismiss these reports or seek further clarification from their doctor before making changes to their treatment.

“I don’t bother with the media. Well, I watch the news but … [it’s the] same again with the tablets, you know, if you listen to everything they said, well you wouldn’t be able to live anyway.” (Female; used to take statins; no history of CVD)

“I never listen to them, because… one time they’re saying you can’t do this, isn’t it, then a couple of months later, this is good for you, so I don’t listen to them. If it doesn’t agree with me, I don’t take it. I know myself what agrees with me and that.” (Male; currently taking statins; history of CVD)

“I would trust my doctor over media hype but I was concerned enough to ask my nurse for reassurance.” (Online survey response)

Despite these dismissive responses to the media in the in-depth interviews, more than two-thirds (67%; n=463) of the survey respondents who were aware of media coverage of statins said that it affected their confidence about whether statins treatment was right for them (see chart 11). This effect was more pronounced for those who had stopped taking statins (69%; n=165) and people who had never taken statins (76%; n=148), than for those currently taking statins (60%; n=150).
The ways in which media coverage affected people’s confidence is more complicated to unpick. The in-depth interviews and free-text survey responses suggest that media coverage has a mixed effect, with those currently taking statins more likely to say that the media either has no effect on them or increases their confidence that statins are right for them. In contrast, those who spoke most passionately about their concerns about side-effects, also appeared to be more aware of media coverage which supported their position.

As noted previously, there are different ways to interpret this data. For some people, this means that media coverage of statins has driven them to change their treatment (see case study 5). However, it could also suggest that media stories are being filtered and considered in ways which confirm, rather than challenge, existing attitudes. This makes sense given previously stated views that media coverage of statins is perceived as confusing and contradictory, meaning that people are more likely to latch on to stories which support their current status.

**Case study 5: Marina**

Marina is in her mid-fifties, and married with two grown up children. She believes she has a healthy lifestyle, although she continues to smoke and knows this is bad for her. She made a concerted effort to improve her lifestyle after her brother died from a heart condition when he was relatively young. This is also the reason that she regularly gets her cholesterol and blood pressure tested.

Marina has discussed statins treatment with her GP. She would prefer not to take any medication unless it is critical, and she feels that her cholesterol is not at that point yet. Her relationship with the GP has been strained ever since she was wrongly diagnosed for a previous health problem. As a result, she would rather speak to a specialist about any new treatments, rather than take the advice of her GP.
Marina’s husband had high cholesterol and was prescribed statins six years ago. He stopped taking them after a few years because he experienced unpleasant side-effects and felt that his cholesterol had not been affected by the statins. He also saw a television program about statins which scared him so much that he went to the GP and told them ‘he just couldn’t put up with it anymore’. He wanted to stop the medication and instead try to get his cholesterol down with exercise and diet. Although the GP was at first unsupportive, and suggested that he shouldn’t believe everything he saw on television, she was subsequently impressed when he succeeded in lowering his cholesterol.

Of the survey respondents who were aware of statins in the media (n=686), half (50%; n=342) reported that as a direct result of this media coverage they did nothing and do not plan to do anything (see table 3). The bulk of people who make up this ‘do nothing’ group (44%; n=149) are currently taking statins. The next most commonly chosen response was that people discussed statins with their GP (21%; n=147), with people who used to take statins being more strongly represented in this group (44%; n=64). Interestingly, 10% (n=66) said that they changed their treatment for high cholesterol as a direct result of media coverage.

Table 3: Actions as a result of media coverage of statins (n=688) [NB respondents had the option to select all that apply, hence total exceeds 100%]

<table>
<thead>
<tr>
<th>As a result of the media people did the following:</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing and I do not plan to do anything as a result of the media coverage.</td>
<td>342</td>
<td>50%</td>
</tr>
<tr>
<td>Discussed statins treatment with my GP</td>
<td>147</td>
<td>21%</td>
</tr>
<tr>
<td>Researched statins online</td>
<td>105</td>
<td>15%</td>
</tr>
<tr>
<td>Discussed statins treatment with my friends and/or family</td>
<td>99</td>
<td>14%</td>
</tr>
<tr>
<td>Changed my treatment for high cholesterol</td>
<td>66</td>
<td>10%</td>
</tr>
<tr>
<td>Discussed statins treatment with another HCP</td>
<td>52</td>
<td>8%</td>
</tr>
<tr>
<td>Nothing yet, but I plan to do one of the above</td>
<td>43</td>
<td>6%</td>
</tr>
</tbody>
</table>

People who said they changed their treatment for high cholesterol as a direct result of media coverage were asked a follow up question to determine what that change involved. Over three quarters of those who responded (78%; n=46) said that they stopped taking statins as a direct result of media coverage.

This is a relatively small proportion of our total sample (5%), and suggests that media coverage of statins has a relatively small direct impact on people’s compliance. However, it does indicate that a certain group of people have been dissuaded from taking statins as a direct result of media coverage, which is concerning. Furthermore, a third of people who stopped taking statins as a direct result of media coverage (33%; n=15) had a history of CVD, and therefore fall within the definition of being ‘high risk’.

It is also important to recognise that taking a narrow focus on the direct impact of media coverage is likely to miss the wider impact it may have on other factors, such as people’s
relationships with doctors and general discourse about health and medications (see conclusions; these issues are also explored from the perspective of doctors in the following section).
3. Results: GP and cardiologist perspective

In addition to understanding the behaviours, views and influences of the patient population, it was also important to understand the opinions and experiences of clinicians in respect of statins. The research therefore included focus group discussions with GPs and cardiologists, and an online survey sent to all UK GP practices and cardiologists for whom we held a viable email address (see ‘Section F: Survey of GPs and Cardiologists’ in technical appendix).

This section outlines GPs’ and cardiologists’ experiences of prescribing statins, before considering a number of key issues which were felt to underpin their perceptions of statins – specifically, the patient population they serve; their views about the role of GPs in public health and prevention; their views about official guidelines and targets associated with statin treatments; and their confidence in their own knowledge about statins.

As with the patient findings, it is important to note that while each of these issues is explored separately, the relationships between these factors are complex and intertwined. Rather than attribute specific actions or attitudes to individual factors (such as media coverage), this research aims to better understand the range of perspectives amongst clinicians in relation to statins.

NB Unless specified otherwise, survey findings attributed to ‘doctors’ or ‘clinicians’ relate to aggregated responses for GPs and cardiologists.

3.1. Experiences of prescribing statins

As outlined above, we spoke to a mixture of GPs and cardiologists, with the intention that a wide range of experiences of caring for patients at high risk of CVD would be represented in both the qualitative and quantitative phases of the research.

Our research suggests that doctors (GPs more so than cardiologists) vary widely in their views about, behaviours around, and experiences of statins. Of particular note, the GPs involved in our focus groups described differing experiences of prescribing statins to patients. Variations were reported in how, when and even if doctors raised statins as a treatment option with patients, as well as how they discussed and promoted other approaches, such as lifestyle and diet changes.

These differences suggested a range of prescribing behaviours adopted by doctors (primarily GPs), ranging from paternalistic approaches (with doctors taking the lead in advising and recommending statins treatment), through shared decision-making (with doctors and patients deliberating to reach a joint decision), to more defensive approaches (involving doctors explaining the official guidance and leaving patients to take responsibility for the decision).

“We’ve kind of discussed it amongst our team and decided that we’re going to really kind of give the patient the choice – explain the situation, explain the risks, explain the fact that the guidelines have recently changed and then kind of hand the responsibility of the decision over to them in a way” (GP, Birmingham)
The findings from the focus groups suggested that these differences in prescribing behaviour are underpinned by a range of factors, including:

- The patient population that doctors serve
- Doctors’ views about the role of GPs in public health and preventative healthcare
- Their views about official guidelines and targets associated with statin treatment (QOF, NICE)
- Their confidence in their own knowledge of statins

Each of these factors is explored separately below, alongside specific analysis of clinicians’ views about media coverage of statins and how this relates to their attitudes and behaviours.

### 3.2. Patient population

The varied patient populations served by the focus group participants yielded some insights into how GPs vary in their approach to prescribing statins and the range of different behaviours and reactions they had experienced from patients. These were discussed specifically in relation to patient demographics (age, gender, ethnicity, and socio-economic grade). For example, those GPs serving older populations described more frequent experience of prescribing statins, and would see more patients taking a statin on a day-to-day basis. This did not necessarily translate into more challenging conversations about statins, as GPs reported that these older patients were more likely to accept their doctor’s advice, citing different generational attitudes to the doctor-patient relationship. (The patient strand of this research explored the doctor-patient relationship in more detail – see section 2.2).

“I think most of our patients, I mean some I suppose slightly more elderly patients might say ‘well, what do you think doctor?’ or, you know, ‘I’ll do what you advise’ or whatever because that’s just the generational thing isn’t it of the kind of doctor-centred relationship and they just did what you said.” (GP, Birmingham)

Similarly, doctors serving populations with a high number of patients of minority ethnicity, a low level of English comprehension, or a low level of education also reported that their patients were less involved in decision-making around healthcare, resisting information and preferring to accept their GP’s view of the most appropriate treatment. However, they also reported that these patient groups tended to be less receptive to advice about lifestyle changes, and that more outreach work around relevant public health messages was needed. It was also emphasised that, in some communities, the experiences and example of family and friends counted for a great deal when a patient was deciding on a treatment. (NB This informed the patient questionnaire, in which we examined the impact of discourse amongst family and friends about statins on views and compliance – see sections 2.3 and 2.4).

“Particularly our practice has got a high rate of statin because 70% of the population is South Asian, so many of them are smokers or diabetic, don’t listen to [advice about] exercise or anything like that.” (GP, Birmingham)
Conversely, doctors serving wealthier, more health-literate populations reported a different type of resistance, stemming from scepticism around medications and the expertise of GPs. This was also attributed in part to the media, with participants describing experiences of patients bringing newspaper cuttings to appointments and wanting to discuss clinical trials evidence. It was emphasised by many participants, however, that these more affluent groups were more likely to be in good health and their resistance to taking statins was generally of less concern than amongst more deprived communities.

“They’re probably more likely to be more educated and more aware of their own health, you know, to a degree. They’re probably more likely to be more intellectually tapped into their health, so probably less in terms of, they probably represent a lower risk so it’s probably not so bad that they don’t accept treatment.” (GP, Birmingham)

GPs’ experiences of treating these populations – whether being driven to paternalism or being challenged by patients and behaving more defensively – appeared to influence their attitudes towards statins and their subsequent approach to raising the issue with other patients. Some felt that they were pushed into practising ‘defensive’ medicine, due to an increasingly adversarial response from patients.

“It’s... what’s the word? Defensive medicine… lots of doctors [are] scared really, that at some point or other some patient is going to come along, is going to say, ‘right, you know, my LDL has not reduced by 40% as per NICE and as a result I went on and had an event. Now you clearly did not treat me to target. You said everything was acceptable. You got the results and ticked them as satisfactory. How do you justify doing that?’” (GP, Birmingham)

“There’ll be some people who respond very well to the whole handholding thing, and some people who will respond very negatively… But one thing we do very well as a profession I think is to read people, and we get a feel for people after a few minutes and then you can kind of work out how far you can push someone or not push someone.” (Cardiologist, London)

“It takes an experienced GP to handle an awkward patient.” (GP, Birmingham)

This ‘defensive’ approach was particularly associated with treating patients at lower risk of CVD. GPs described an increasingly patient-led approach to statins treatment for these patients, informing them as best they could of the risks and benefits, but leaving the decision of whether or not to prescribe the treatment to the patients themselves.

This issue of patients challenging GPs’ advice about statins treatment, and the impact this has on GPs’ attitudes and behaviours more widely, is explored further in the following section; specifically in relation to the use of statins for primary or secondary prevention (see section 3.3).

### 3.3. Views about the role of GPs in prevention and public health

As noted above, clinicians described differences in how they raised and discussed statin therapy with patients. These variations, at least in part, appeared to relate to differing attitudes towards the use of medication for prevention of CVD. Differing attitudes about statins were linked to debates about their use in primary vs secondary prevention, and the
role of GPs in preventive medicine and public health promotion more generally. These issues are explored in more detail below.

**Primary vs secondary prevention**

In planning the research, we had anticipated that doctors’ views about statins would vary according to their use for patients who were at ‘high’ or ‘low’ risk of CVD; basing their views about the use and efficacy of statins on the NICE guidelines (e.g. patients falling above or below the 20% 10-year risk of developing CVD threshold). However, it was clear from the qualitative research that a more pertinent distinction for clinicians was between primary and secondary prevention of CVD.

Across all groups (GPs and cardiologists) there was widespread agreement that statins are generally an effective treatment for secondary prevention, reducing the risk of reoccurrence of CVD. For primary prevention purposes, however, there was much less agreement, with quite a wide range of different attitudes and behaviours around discussing and prescribing statins with primary prevention patients.

“Secondary prevention is good data but in primary prevention I think the data isn’t as strong.”

(GP, London)

There were a number of key issues for doctors when considering their position within the debate on statin use for primary prevention. This included their broader views about public health and preventative healthcare, including the use of medication as a preventative intervention, and their confidence in the available evidence base for statin therapy in lower risk groups, which form the basis of the new NICE guidance. Doctors’ views about the QOF and NICE guidelines are explored further in the following section (see section 3.4).

Doctors also reported that there was a difference in behaviour and views around statins amongst their patients, depending on whether they were being prescribed for primary or secondary prevention, indicating that primary prevention patients were much more likely to resist or decline a prescription for statins than those with a history of CVD. This spread was attributed by many doctors to how tangible a patient’s risk was to them – in particular, when a statin was prescribed for primary prevention, it was reported that the patient would have no symptoms that the drug appeared to be treating, making them feel unsure about how necessary or beneficial the statin was. This appeared to be a factor for some patients who discontinued statin use, as described earlier in this report (see section 2.5). Using medication as a preventative intervention in this way was problematic for some doctors, as explored in (section 3.1).

There was also a strong feeling amongst doctors that, when the benefit of a statin was not clear to a patient, fear of harm could become more pronounced. This was expressed as an apprehensiveness about potential side-effects, including muscle aches, liver damage and diabetes. These fears were widely attributed to the media by doctors.

“You’re asking patients to take drugs, tablets, lifelong for no physical benefit that they can tangibly feel and I think one of the reasons why I actually tell them why statins are of use to them, because otherwise I have patients who initially have been very compliant and then after a while you notice their compliance falls off and purely because maybe they’re just
even fed up of taking tablets or they don’t see the relevance of it or they don’t see any physical benefits for taking it, they might develop side-effects or, you know, the symptoms that they feel are related to statins and just leave off them." (GP, Birmingham)

This was explored further in the online survey, which corroborated the views voiced during the focus groups. As anticipated from the focus group discussions, the majority of doctors responding to the survey indicated that very few secondary prevention patients would question a prescription for a statin. As chart 12 demonstrates, just under half of all doctors surveyed (47% of GPs, n=276; and 54% of cardiologists, n=74) indicated that between 0-10% of secondary prevention patients would question their advice. However, when asked about primary prevention patients, the range of responses was much broader (see chart 12). This also reflects the focus group discussions, in which GPs indicated that their patient groups responded very differently to statins for primary prevention, depending on their demographic composition (as discussed in section 3.1).

The lower rate of questioning amongst secondary prevention patients reflects the feeling expressed by doctors that those who had experienced cardiovascular disease were more likely to accept a prescription for a statin to avoid a recurrence of the condition, and that there was a shared understanding amongst doctors and patients that statins were safe and effective for secondary prevention. (The role of a patient’s experience of cardiovascular disease in their attitude to statins is explored in more detail in section 2.4).

Cardiologists had a differing perspective on their patient populations, as these tended to be more varied and encompassed a much smaller proportion of patients taking statins for primary prevention. Only 65% (n=91) of cardiologists responding to the online survey saw patients for the primary prevention of cardiovascular disease. Indeed, cardiologists described having far fewer challenging conversations with their patients about statins and met with less resistance to the suggestion. The online survey reflected this view, with more
than half of cardiologists (55%, n=68) reporting that 10% of patients or fewer who question their advice about statins subsequently decline a prescription for statins, compared to only a quarter of GPs (25%; n=150) (see chart 13).

During the focus groups, cardiologists suggested that this lower rate of resistance to statins within their patient population might be due to the nature of their work. Similarly to those patients with a history of cardiovascular disease, patients seeing a cardiologist about their heart health are more likely to have a serious concern and therefore be more willing to accept treatment to prevent occurrence or reoccurrence of cardiovascular disease.

Public health and preventative healthcare

There was a broader discussion about public health issues and preventative healthcare in most of the focus groups. The need for better public health strategies was a strongly recurring theme across all the focus groups, with a range of differing views on how this should be achieved.

Participants also differentiated between different types of preventative activity. In particular, the broader aspects of general good health which reduce overall risk of disease were seen to be too big for GPs to handle alone, and doctors wanted to feel that they were part of a wider drive to improve public health. Conversely, specific interventions designed to manage existing risk factors for a health condition (including statins) were generally felt to be more appropriate to the workloads of GPs.

GPs generally expressed a desire to support patients with lifestyle changes, particularly if they were withholding a pharmaceutical treatment whilst patients attempted to improve their health in this way. However, there was a widespread sense that GPs lack sufficient resources to enable them to do this. There were mixed views about whether GPs should involve themselves more closely in public health issues. Some wanted prevention to form a
greater part of their role, but did not feel that they were currently equipped with the skills they needed in order to do this effectively, relying instead on the skills of nurses or public health practitioners to dispense this advice and monitor progress.

“I don’t think as doctors we’re very good at dispensing lifestyle advice. I don’t think we should do it. I think people who are trained to do it and spend time doing it should do it ‘cos we go. ‘Yeah, well you just need to lose some weight and exercise and eat fruit’.” (GP, Birmingham)

Others felt that their job was more to do with the treatment of disease and illness, and that the responsibility for promoting these issues lay elsewhere.

“We haven’t got time really to be seeing well people… and promoting wellness… but maybe it’s what we could be offering. But we’re a sickness service in a way, a responsive sickness service, that’s what our main role is to fight disease, to treat disease.” (GP, Birmingham)

If patients were deemed to be unable to achieve lifestyle changes themselves, there was widespread agreement among focus group participants that it was more important to prescribe statins early. It was generally felt that without substantial help which, for whatever reason, doctors were not always able to provide, most patients would not make the required amount of change to have a major impact on their health.

In all the focus groups, discussions about supporting patients with lifestyle change was related back to the need for better public health strategies operating beyond the remit of general practice. Indeed, it was also widely agreed that much of the controversy about when to prescribe statins could be prevented by addressing other risk factors for cardiovascular disease, such as smoking and obesity, in the first place.

“If there was public health funding available for one-to-one training on diet and exercise and CVD that would have a much bigger impact than giving them the statin.” (GP, Birmingham)

We sought to understand this range of views, and how they related to perceptions of statins, further in the online survey. In order to do this, we used an existing scale of attitude questions about preventative healthcare. The results for these questions demonstrated the differences between physicians’ attitudes to preventative healthcare and the reality of their day to day practice (see chart 14).

A majority of doctors ‘strongly agreed’ (84%, n=642) that prevention was one of their responsibilities as a physician, with a further 12% (n=94) ‘slightly agreeing’. However, when asked whether they were ‘motivated to incorporate preventative health interventions’ in their daily practice, only 64% (n= 481) said that they strongly agreed that this was the case. A further 29% (n=216) ‘slightly’ agreed. The disparity increases when asked whether they ‘find
it easy to incorporate preventative health interventions’ into their daily practice, with only 33% of respondents (n=249) ‘strongly’ agreeing with the statement.

An average composite score was identified by combining responses to all the ‘attitudes to prevention’ statements (see chart 14, above), and grouping respondents into above- or below-average score groups. From these groupings, it was possible to identify some common characteristics amongst those with more positive (above-average) or negative (below-average) views about preventative healthcare.

An average or above-average positive attitude to preventative healthcare (using the composite score mentioned above) was associated with a greater level of confidence in understanding the risks and benefits of statins: 61% (n=206) of those with an average or above-average attitude score reported feeling ‘very confident’ compared to only 39% (n=133) in the below-average group.

There was also a link between average or above-average attitude score and confidence in discussing statins with patients: 62% (n=211) of the average/above average group reported feeling ‘very confident’ in doing this, compared to only 39% (n=132) of the below average group.
Attitude also had a role in how likely the media was to impact upon a doctor’s confidence – as described in the media section of this report (see section 3.6).

3.4. Quality and Outcomes Framework (QOF) and NICE guidance

Related to issues of preventative treatment were individual doctors’ opinions of Quality and Outcomes Framework (QOF) targets around cholesterol levels and NICE guidelines for prescribing statins. Recent changes to the NICE guidelines, which lowered the threshold for statin prescription from 20% 10-year risk of CVD to 10%, was particularly widely discussed.

Many doctors reported that, whilst they paid attention to these targets in general, they were a blanket approach which was not appropriate for all patients, including complex comorbidities and patients with strong opinions about certain treatments.

“You know, [you] test your 90 year old for cholesterol, it’s 6.8 and … she’s got to go on a statin because the box says you have to, you have proper conversations… Is it going to make that much difference to your life expectancy or point to your life if you’re fit and well at 90, you know? I haven’t got any evidence that that will make a difference.” (GP, London)

Others reported that, although they were aware of the change in the NICE guidance, their behaviour had not changed as a result – either because they had already been prescribing to lower-risk patients, or because they felt that the change was not appropriate.

Cardiologists were more likely than GPs to feel that the current NICE guidance was appropriate. In the online survey, 93% (n=110) of cardiologists reported that they thought the current NICE guidance was either completely or to some extent appropriate, whilst over a third of GPs (35%; n=183) said the guidance was not appropriate (see chart 15).

“GPs, I think, have been doing a bloody good job on the whole. They mainly are prescribing statins in appropriate ways. The question is should they prescribe them more?” (Cardiologist, London)

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14 Quality and Outcomes Framework (QOF) is the annual reward and incentive programme detailing GP practice achievement results. QOF is a voluntary process for all surgeries in England and was introduced as part of the GP contract in 2004. The National Institute for Health and Care Excellence (NICE) provides national guidance and advice to improve health and social care. It develops guidance, standards and information on high quality health and social care.
In relation to QOF, only 10% (n=57) of doctors (GPs and cardiologists) believed that the current QOF target was completely appropriate (see chart 16). GPs were more likely than cardiologists to indicate that it was not appropriate, with a third of GPs (33%; n=173) saying it was not appropriate, compared to a fifth of cardiologists (22%; n=16).

Across both QOF and NICE guidance, there did not seem to be a significant disparity of opinion amongst doctors when compared by their age, length of time in practice or indeed by their own statin status.

Those doctors who had an average or above-average combined score for all the attitudes statements (see section 3.3; chart 14) were much more favourable in their views about the
QOF and NICE guidance. Only 22% (n=73) of doctors who had an average or above average positive attitude towards prevention said they did not think the current QOF indicator was appropriate, compared to 42% of those who had a below average attitude towards prevention. Similarly, only 20% (n=68) of those with an average or above-average combined attitude score said that they felt that the current NICE guidance was not appropriate compared to 41% (n= 123) of the below average group.

“We’re putting patients on [statins] younger and younger. They’re going to have more and more years on the drug, which we don’t have any experience of. So I think we have to sort of be pragmatic and be sort of sensible about what we’re doing because, you know, rather than rushing to put everybody on a statin, we’ll have babies on them next with a bottle, you know, good for birth. We don’t know what a lifetime of a drug’s going to do.” (GP, London)

**Efficacy of statins in low-risk groups**

Of those who disagreed with or did not follow the new guidance, some were unconvinced of the evidence for the efficacy of statins for patients in the 10-20% 10-year risk group. There was a great deal of discussion of the range of clinical trial data available, exploring the impact of statin use amongst ‘low risk’ patients.

“I don’t think there is sufficient evidence to convince me to need to prescribe at a CVD risk of 10%” (GP, online survey)

Some were concerned that introducing medication to the well population risked incurring damage or side-effects which would cause problems later, reflecting concerns that patients had about the unknown risks of a medication regime when they had no identifiable ‘disorder’ (see section 2.3).

Others were concerned that statins were used as an alternative to lifestyle change, and that patients who were at lower risk of CVD would not comply with a prescription because they did not feel unwell, and therefore would not incur the benefit.

“I have become quite a statin sceptic when it comes to the low end of the treatment range because I do feel that we are moving into a philosophically difficult area where we’re treating normal… Once you’re going down into normal range it has to be a patient-led activity.” (GP, Birmingham)

**Financial implications**

Some doctors voiced concerns that the QOF targets were seen by patients as benefiting doctors financially or being influenced by ‘big pharma’ with no clear benefit for patients. This made them wary of prescribing too much or too soon, and sometimes made it difficult to discuss a patient’s individual health issues. Most doctors related this scepticism amongst patients to negative reporting, particularly about GPs, in the media.

“We get demonised because everything we’re then supposed to do reflects on us getting targets. In terms of medications, flu vaccines, they’re going, ‘doctor, the only reason you’re interested is because you want to make money out of this and I’m not going to be a guinea pig in your trial’, and that’s what they say sometimes.” (GP, Birmingham)
“Difficult when we are pushing patients in a certain direction knowing we have a financial interest in their decision.” (GP, online survey)

“[NICE guidelines] are just blatant drug industry propaganda” (GP, online survey)

Others felt that statins were now being promoted over other treatments as they were now a generic medicine with a lower cost per dose than previously. This was particularly challenging for those doctors who had a strong belief in their responsibility to engage with public health issues and to encourage lifestyle changes alongside, or before prescribing, medication.

“My colleague if anyone has a cholesterol over 5 he’ll put them on statins straightaway because he wants to get the marks and he wants to get the, you know, the targets, whereas I won’t do that”. (GP, Birmingham)

There was also a concern about the disparity between QOF targets and the NICE guidance, particularly given the link to financial incentives. Participants explained that the NICE guidance specifies a lower target than the QOF, meaning that the financial incentive can be achieved without treating patients to the lower recommended cholesterol level. Some doctors were concerned that this was impairing patient care, or at least adding to cynicism amongst patients and physicians.

The survey results highlight the perceived impact of these targets and guidelines. When asked whether the number of patients taking a statin for primary prevention had increased over the past five years, 84% (n=498) of all physicians responding felt that it had increased. A further 12% (n=74) reported that it had stayed about the same. Only 4% (n=23) felt that the number of prescriptions of statins for primary prevention had decreased over the past five years. Table 4 below shows the most frequently selected reasons for a perceived change in the number of people prescribed statins for primary prevention, as selected by those who felt the number had increased. It is clear from this data that doctors feel increases in prescriptions for statins over the last five years are driven primarily by NICE guidelines.

**Table 4:** Main reasons for perceived change in the number of people prescribed statins for primary prevention over the last five years; as selected by those who felt the number had increased (n=497) [NB respondents had the option to select up to three responses, hence total exceeds 100%]

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICE guidelines</td>
<td>371</td>
<td>75%</td>
</tr>
<tr>
<td>QOF targets</td>
<td>243</td>
<td>49%</td>
</tr>
<tr>
<td>Ageing population</td>
<td>226</td>
<td>45%</td>
</tr>
<tr>
<td>Increased evidence of benefits</td>
<td>184</td>
<td>37%</td>
</tr>
<tr>
<td>Increased evidence of risks</td>
<td>67</td>
<td>13%</td>
</tr>
<tr>
<td>Increasing rates of high cholesterol</td>
<td>63</td>
<td>13%</td>
</tr>
<tr>
<td>Patient demand / resistance</td>
<td>58</td>
<td>12%</td>
</tr>
<tr>
<td>Media coverage of statins</td>
<td>43</td>
<td>9%</td>
</tr>
<tr>
<td>Other / don’t know</td>
<td>24</td>
<td>5%</td>
</tr>
</tbody>
</table>
During the focus group discussions, many GPs felt that the lowering of the threshold for recommending a prescription, as outlined in the NICE guidelines, meant that people who were not ill were being treated unnecessarily.

“In my experience the lowering [of the NICE threshold] to 10% captures a lot of the well population who don’t need treatment, so I think the majority of those 10 to 20% I tend to not put them on the statin.” (GP, London)

This was also seen to increase the workload for GPs, as the guidelines raised the number of patients to whom they were advised to offer a statin. Doctors reported that this also increased the number of challenging conversations they were having with patients about the risks and benefits of taking a statin. Whilst the proportion of patients with whom doctors were having those challenging conversations was relatively small, this impacted on their relationship with their patient population at large, and their prescribing behaviour around statins (see section 3.2).

There was a sense from the focus group participants and the free text comments in the GP survey that the change in the NICE guidance was part of a larger culture of over-medicalisation, and that statins were being used in place of advice about healthy diet and lifestyle, which was harder to dispense and monitor. A number of doctors cited examples of patients who would take a statin in order to allow them to continue to lead an unhealthy lifestyle.

“If you just literally on the day you diagnose them with high cholesterol give them a statin, that’s kind of almost like the easy way out for them so they can keep eating the chips and, you know.” (GP, Birmingham)

However, at the other end of the spectrum, there were those professionals who were very enthusiastic about the contribution of statins to the reduction in cardiovascular disease over recent years. Cardiologists were generally much more likely than GPs to fall into this group with most agreeing that the lower NICE guideline for statin prescription was appropriate (see chart 15) and, indeed, some reporting that they did not think the new guidance went far enough.

3.5. Confidence in own knowledge

The extent to which doctors felt that they were able to keep up to date with, understand and explain the latest medical knowledge about statins and cardiovascular disease seemed to have an impact on their wider perceptions of statins and their experiences of prescribing them.

GPs in the focus groups reported a lack of confidence when responding to patients’ concerns about statins. They emphasized that they were generalists, not specialists, and that they struggled to keep up to date on the constantly changing landscape of research on the wide range of conditions relevant to their patient populations, particularly around complex issues such as statins.
“It’s too complicated. It’s just an enormous amount of evidence being churned out all the time so you can’t possibly hope to keep on top of it when the latest scare comes out.” (GP, London)

A range of information sources were identified as being of particular use in helping GPs stay on top of recent developments in healthcare, including ‘digests’ of recent studies, and GP-specific journals and websites. Some reported working closely with local specialists (such as visiting cardiologists and consultant lipidologists) to ensure that they were still following best practice, as defined by specialists in the field.

“We did have a visiting cardiologist to the practice and I mentioned it to him and he said, ‘well actually it’s a small increase in the [risk of] diabetes and overall mortality is still better and we’re still pushing it, remember that’, that sort of thing, that’s what you do.” (GP, London)

This lack of specialist knowledge seemed to contribute to feelings of uncertainty in some GPs, and their subsequent apprehension about discussing statins with patients who they felt would be challenging or reluctant. For some, this contributed to their practicing an increasingly ‘defensive’ style of medicine with all patients, not just the challenging minority. However, the challenge was twofold – on the one hand, wanting to make sure that treatment was recommended when it was really seen to be necessary and, on the other hand, not treating patients unnecessarily or forcing treatment on a patient.

This issue of confidence in knowledge and explanations of statins was explored further in the online survey. Both GPs and cardiologists were asked how confident they felt that they ‘understand the risks and benefits of statins’ (see chart 17). Cardiologists were considerably more confident than GPs in their perception of their understanding of risks and benefits, with 75% (n=109) reporting that they were ‘very confident’, compared to 37% of GPS (N=232), and the remaining 25% (n=36) reporting that they were ‘fairly confident’. No cardiologist reported that they were not confident in their understanding of risks and benefits. In contrast, 60% of GPs (n= 372) said they were ‘fairly confident’, whilst 2% (n=12) said they were ‘not very’ confident and 1% (n=6) said that they were ‘not at all’ confident in their understanding of the risks and benefits of statins.
Doctors were also asked how confident they felt about ‘explaining the risks and benefits of statins with their patients’. A similar pattern was evident in responses to this question (see chart 18), with all cardiologists saying that they were either ‘very confident’ (75%; n=107) or ‘fairly confident’ (24%; n=33). Again, GPs were less confident overall, with only 38% (n=235) saying that they were ‘very confident’ and the majority of GPs (58%; n=361) reporting that they were ‘fairly confident’ in explaining the risks and benefits of statins to patients. 4% (n=25) of GPs indicated that they were either ‘not very’ or ‘not at all’ confident in explaining these risks and benefits.
Amongst GPs, length of time in practice seemed to have an impact on confidence around both understanding and explaining the risks and benefits. 42% (n=191) of GPs who had been in practice more than 10 years reported that they were ‘very confident’ in understanding the risks and benefits, compared to 30% (n=38) of doctors who had been in practice between two and ten years, and only 9% (n=3) of those who had been in practice for two years or less. Similarly, GPs who had been in practice for more than ten years were more likely to say that they were ‘very confident’ about explaining the risks and benefits to patients (43%; n=193) compared to those who had been in practice two to ten years (27%; n=35) or those practising less than two years (17%; n=6).

3.6. Media coverage of statins

A key focus of this research is whether recent media controversy about statins has any perceived impacted on the treatment of ‘high risk’ patients, specifically whether people with a prescription for secondary prevention or a substantial risk of developing cardiovascular disease had been discouraged from taking statins by media reports about the prevalence of side-effects.

It was important to explore the views of healthcare professionals on this for two reasons – firstly, because healthcare professionals (particularly GPs) have wide-ranging experience of the views and behaviours of their patient populations and would be able to provide an insight into any changes in attitudes towards statins over time, and secondly because we wanted to understand whether the media controversy had impacted on the prescribing behaviours and opinions of medical professionals themselves.

Perceived impact of the media on patients

The widespread perception among doctors in the focus groups was that the impact on patients of recent media coverage of statins has been broadly negative. Participants spontaneously cited the influence of the media on deterring patient compliance with statin treatment. The Daily Mail in particular was cited as a source of misinformation and confusion for patients on a wide range of health issues, but particularly in respect of statins.

Patients citing media coverage during consultations was a prominent feature in doctors’ descriptions of their experiences of prescribing statins. However, when pressed on this issue, focus group participants acknowledged that it affected a small but vocal minority of their patients. The general feeling seemed to be that these patients would ‘cherry-pick’ stories which backed up their existing inclination towards statins, particularly amongst those patients who were already disinclined to take statins.

There was no clear consensus on the kind of patient who was likely to respond to the media in this way. However, there was general agreement that patients who were more likely to challenge the prescription of a statin (whether or not they cited media stories during the consultation) were those at lower risk levels, and those with no history of cardiovascular disease, either personally or in their family.

As the online survey showed, estimates about the number of patients who were ‘questioning’ a prescription for statins varied widely amongst GPs and cardiologists from as little as 0-10%
of patients, to as many as 91-100% of patients with whom statins were being prescribed for primary prevention (see section 3.2).

The online survey also asked doctors whether they felt that the media was a major influence on patients who questioned a prescription of statins (for either primary or secondary prevention). Three quarters of respondents reported that the media was ‘to some extent’ an influence (74%, n=549). Almost a quarter of respondents felt that the media was ‘completely’ influencing patients who were questioning a statin prescription (24%, n= 180). Just 2% of doctors felt the media had no influence.

The nature of the perceived influence of the media on patients seemed to be increased scepticism amongst some patients about the safety and efficacy of statins. Common patient concerns influenced by the media, as reported by focus group participants, were that they would experience side-effects (such as muscle aches) or more permanent negative effects (such as liver damage or developing diabetes).

Doctors also acknowledged the impact of the experiences of other members of a person’s social environment, such as family members and friends, on their preconceptions about and attitudes towards statins. There was general agreement that this could also have an impact on whether a patient questioned or declined a prescription for statins.

Doctors responding to the online survey were asked to identify the three main concerns expressed by their patients who questioned a prescription for statins. As the table below shows (see table 5), the two concerns chosen by far more respondents than any others were fear of side-effects, and having read something negative in the media. Family or friends having had a bad experience of statins was the third most chosen concern.

**Table 5:** What are the main concerns expressed by patients when they question your advice about taking a statins? (n=768)  [NB respondents had the option to select three responses, hence total exceeds 100%]

<table>
<thead>
<tr>
<th>Concern</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of side-effects</td>
<td>563</td>
<td>73%</td>
</tr>
<tr>
<td>Read something negative in the media</td>
<td>552</td>
<td>72%</td>
</tr>
<tr>
<td>Family or friend had bad experience of statins</td>
<td>365</td>
<td>48%</td>
</tr>
<tr>
<td>Prefer to try lifestyle changes</td>
<td>311</td>
<td>41%</td>
</tr>
<tr>
<td>Disagree with medication in general</td>
<td>140</td>
<td>18%</td>
</tr>
<tr>
<td>Current pill burden</td>
<td>120</td>
<td>16%</td>
</tr>
<tr>
<td>Experience of side-effects (e.g. from other drugs)</td>
<td>118</td>
<td>15%</td>
</tr>
<tr>
<td>Not convinced of the effectiveness of statins</td>
<td>77</td>
<td>10%</td>
</tr>
<tr>
<td>Prescription charges</td>
<td>8</td>
<td>1%</td>
</tr>
</tbody>
</table>

Focus group participants also raised the idea that irresponsible media reporting ‘primed’ patients to expect side-effects from their statins. There was some disagreement about the extent to which this was the case – with some doctors attesting that minor side-effects were
common, but often manageable, and others citing a recent trial in which patients taking a placebo had experienced as many side-effects as those taking a statin.15

"I think it doesn’t help when you have things like, you know, stuff put in the Daily Mail as well because patients are conditioned to then expect a side-effect with it." (GP, Birmingham)

Another, less direct, impact of the media was on the relationship between GPs and patients more generally. GPs in the focus groups raised the issue of media articles questioning the motivation and knowledge of doctors prescribing statins, relating this to financial benefits such as the QOF targets (as discussed previously) and the influence of pharmaceutical companies. Others cited articles which reported negatively on the pay and workload of GPs as detrimental to patients’ trust in their GP.

“At the same time as demonising the statins they’re also undermining us as their GPs.” (GP, Birmingham)

Impact of the media on healthcare professionals

Of the surveyed doctors who specified where they had seen media coverage of statins, the most frequently mentioned mainstream media source was the Daily Mail, reflecting the discussions in the focus groups. Many of the GPs who responded also identified the BMJ and Pulse magazine as sources of coverage of statins.

“It depends on the source of the information. If it’s Daily Mail I’ll just ignore it but if it’s like an article in one of the medical journals with peer review that would help.” (GP, London)

Within the focus group discussions, there was a range of opinions about the distinction between reliable scientific publications and ‘mainstream media’. For example, most GPs in the focus groups reported that they found the BMJ and GP-specific publications to be credible sources of information about statins; yet cardiologists tended to view these as generalist publications, lacking in credibility when discussing statins.

“Medical journals, BMJ (which no longer counts as the former)” (Cardiologist; online survey response to the question ‘Where have you seen, heard or read about statins in the media?’)

One of the biggest impacts of the media coverage of statins cited by doctors was the increase in their workload that resulted from the higher number of patients for whom a statin was now recommended by the new NICE guidance and, subsequently, the increased number of challenging conversations which arose with patients.

Focus group participants did not believe that their own opinions were influenced by the general media, with many reporting that they would pursue the same prescribing behaviour regardless of media coverage. This issue was specifically explored in the online survey, with doctors being asked how media coverage of statins impacted upon their confidence in

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discussing and prescribing statins. The findings from these questions corroborated the views expressed in the focus groups, with a substantial proportion of all doctors indicating that media coverage had ‘no effect’ on their confidence discussing statins with patients (44%, n=320) or about whether or not to prescribe statins (58%, n=421).

However, the survey results highlight that media has had some impact on doctors, with almost half of those surveyed reporting that the media had had an impact on their confidence (see charts 19 and 20). In particular, 27% of GPs (n=161) reported that they ‘feel less confident about discussing statins with patients’ due to media coverage (see chart 19), and 22% of GPs (n=128) said that media coverage made them ‘less confident about whether or not to prescribe statins to patients’ (chart 20).

**Chart 19:** In general, how does media coverage of statins make you feel about discussing statins with patients?

<table>
<thead>
<tr>
<th></th>
<th>GPs (n=595)</th>
<th>Cardiologists (n=138)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel more confident about discussing statins with patients</td>
<td>25%</td>
<td>19%</td>
</tr>
<tr>
<td>I feel less confident about discussing statins with patients</td>
<td>27%</td>
<td>19%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>No effect</td>
<td>53%</td>
<td>69%</td>
</tr>
</tbody>
</table>

**Chart 20:** In general, how does media coverage of statins make you feel about prescribing statins to patients?

<table>
<thead>
<tr>
<th></th>
<th>GPs (n=595)</th>
<th>Cardiologists (n=138)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel more confident about whether or not to prescribe statins to my patients</td>
<td>18%</td>
<td>19%</td>
</tr>
<tr>
<td>I feel less confident about whether or not to prescribe statins to my patients</td>
<td>22%</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>No effect</td>
<td>56%</td>
<td>69%</td>
</tr>
</tbody>
</table>
The proportion of cardiologists who said that they felt less confident due to the media was lower than GPs, with only 19% (n=26) saying that it made them ‘less confident discussing statins with patients’ (chart 19), and 12% (n=16) saying that it made them ‘less confident about prescribing statins’ (chart 20), compared to 27% and 22% of GPs respectively.

Those doctors (both GPs and cardiologists) who were more positive about preventative healthcare (i.e. those who had an average or above average combined score on the attitudes towards prevention statements – see section 3.3; chart 14) were less likely to report that the media made them feel ‘less confident about discussing statins with patients’; 60% of those who said the media made them feel less confident were in the below-average group, whilst 59% of those who said they felt more confident had an average or above-average combined score.

Similarly, of those doctors (both GPs and cardiologists) who said that the media made them feel ‘less confident about whether or not to prescribe statins to my patients’ (n=144), nearly two-thirds (62%, n=89) had a more negative attitude to prevention (below-average combined score). Conversely, of those who said they felt more confident about prescribing statins (n=136), a similar proportion (65%; n=88) were in the more positive (above average group) attitude group.

Doctors responding to the online survey were also asked whether they thought that the media coverage of statins had had an impact on other healthcare professionals. The majority of respondents (56%, n=295) reported that it had an effect ‘to some extent’ with a further 18% (n=96) reporting that the media ‘definitely’ had an impact on other healthcare professionals. The remaining 26% (n=136) said that the media did not have an impact on other healthcare professionals. There were no notable differences in the extent to which GPs and cardiologists thought the media had impacted on other healthcare professionals.

Analysis of free text comments provided alongside this question provides some insight into what the perceived impact of media coverage on the behaviour of other healthcare professionals is assumed to be. Two key issues stand out from these comments:

- **Fewer prescriptions** – Other healthcare professionals were assumed to be more ‘reticent’ or ‘cautious’ about raising and prescribing statins as a result of media coverage, particularly in borderline cases or with patients who were more likely to resist their advice.

  “[Other healthcare professionals] May be less happy to discuss it at all for fear of a prolonged discussion. Also if people expect side-effects they tend to get them, which results in multiple consultations/phone calls etc.” (GP, survey respondent)

  “I think that media negativity has a very negative influence on healthcare professionals’ confidence to recommend something which they have previously learned to be useful. i.e. media “education” can eclipse professional education.” (GP, survey respondent)

- **More discussion with patients** – Increased public debate about statins was associated with increased discussions between patients and healthcare professionals. This had both positive and negative associations, including more patient-centred decision-making, and more prolonged (and possibly challenging) consultations.
“[Other healthcare professionals are] More aware that patients will often be well informed about statins and be aware of potential side effects due to media coverage. This can make it easier to have an informed discussion with the patient about risks/benefits.” (GP, survey respondent)

“I think the public debate on the use of statins has created a situation where patients are more empowered to discuss their views on statins with their GPs, rather than agreeing to take them and then hiding them in the back of a drawer when they got home.” (GP, survey respondent)

“It takes time to counter argue - we don’t have time! - I remember the MMR debacle! - exhausting!” (GP, survey respondent)
4. Results: Information needs

This section considers patients’ and doctors’ information needs in relation to statins. In all four strands of the research, participants were asked to reflect on what support and information patients needed to decide whether statins were the right treatment for them. GPs and cardiologists were also asked for their views about the information needs of healthcare professionals in relation to statins. These are explored from the patient and doctor perspectives below.

4.1. Patient perspective

The in-depth interviews suggested that people get most of their information about statins from GPs, including the benefits and risks, and advice about what to do if they experience side-effects. Inevitably this was dependent on people’s relationship with their GP, with some participants saying that they would prefer to speak to a cardiologist or pharmacist in the first instance, who they felt were either more skilled in this area or with whom they had a better relationship.

“I would place it in [my GP’s] skill and judgement. If he attributed what I was complaining of to any of the drugs I was taking, I would simply say, ‘well come on then, what do we do?’... When you’re in my condition, when you have as many medical things... you have to hand your life to your GP.” (Male; currently taking statins; history of CVD)

A similar spread of information sources was confirmed by the survey data, with two thirds (66%; n=662) of respondents stating that they get their information about statins from their GP (see chart 21). This was followed by a fifth of respondents saying they get information from online sources, and slightly less from a nurse (14%, n=140) and cardiologist (12%, n=115). 18% (n=177) of respondents said they got their information from the media, and when asked to specify, the majority mentioned TV and newspaper articles (see chart 21).
Other sources of information that were cited by in-depth interview participants included the information leaflet supplied with any medication. This was a particularly important source of information for people who were concerned about drug interactions or experiences of allergic reactions to other medications.

People also valued support provided through specialist services following a heart attack or stroke. Several people spoke positively about post-event care provided by specialist hospital teams or the British Heart Foundation. These included opportunities for clarifying medication and lifestyle advice that may have been provided soon after the event, with more time and space to ask questions. There was a general sense that this type of support could be made more widely available; for example, providing some of the pamphlets used during these sessions in GP surgeries.

Additionally, respondents mentioned doing their own research online and via the media, specifically searching for more information about heart conditions, medication, lifestyle advice, and information about alternative remedies. People were not able to name specific or trusted sites (other than some mentions of the NHS and BHF sites, and some health forums), and typically described using key words in search engines. There was a stated need for credible advice at this generic level, although people acknowledged that they were not always able to gauge reliability. People also spoke about being ‘scared’ by some of the search results, and would therefore seek more personalised advice from a healthcare professional.
Survey respondents were asked whether they had access to reliable information about statins, and just under two-thirds (63%; n=589) felt they did (see chart 22). However, over a third felt that they did not have access to enough reliable information, with 31% (n=286) saying they had ‘some but not enough’, and a further 7% (n=63) said they did not have access to any reliable information about statins.

When asked what kind of information people would like to receive, the in-depth interviews highlighted a wide range. Above all, participants wanted to discuss any concerns about statins one-to-one with an experienced healthcare professional. The need for tailored and personalised information about the risks and benefits of statins was a clear priority for some participants.

Beyond this, preferences included generic written information (leaflets, websites) to provide information that would support decision-making and provide explanations about possible side-effects, such as why they occur, how typical they are, and what, if anything, can be done about them. Certainly for some participants the fear of not understanding what was happening to them when they experienced side-effects was an additional concern. One participant said that her mother stopped taking statins due to worries about minor side-effects she was experiencing, and that this might have been avoided if the GP had reassured her mother that this was ‘normal’.

“If it was just like occasional cramps I think maybe from my point of view you would still persevere with taking the tablets, do you understand what I mean, if you knew this isn’t actually doing me any harm, this is just a side effect, it’s common, you’re supposed to feel this. I think maybe that’s what a lot of people when you get a side-effect from things, you don’t know if it’s unusual.” (Female; never taken statins; history of CVD)

A crucial component of any generic information was that it should come from a credible source. This was particularly important given the confusing and often contradictory information that was available online and from news sources. There was some call for the
British Heart Foundation and other respected bodies to engage with the media and provide robust responses to some of the more controversial claims about statins.

"All the things that people see in the media tend to be of a negative idea and not a positive, and if the British Heart Foundation can educate people into seeing the good side of these things, I think we’re doing everybody a favour." (Male; currently taking statins; history of CVD)

These findings were supported by the survey results (see chart 23). Two-thirds of respondents (67%; n=631) said they would like information about the risks and benefits of statins; while 40% (n=371) wanted tools to help decide whether statins are the right medication for them, and 39% (n=368) wanted information about how statins work and what they are used for.

![Chart 23](chart23.png)

The most popular form in which people would like to access this information was online (58%; n=545), with printed information (51%; n=474) and conversations with a healthcare professional (40%; n=376) also popular (see chart 24).
4.2. Doctor perspective

A key information need described by doctors related to support with explaining benefits and risks of statins to patients. There were widespread concerns that doctors were not equipped to teach complex concepts, such as population-level and relative risk, to patients.

“You try and, I mean I’m not a teacher in this sense in a way, it’s one of those things I don’t know if any of us are particularly skilled or taught how to explain risk or the concept of risk, you know.” (GP, Birmingham)

Doctors reported problems relating to several different aspects of interactions around statins, including:

- Communicating the patient’s own risk of CVD (e.g. explaining QRISK scores)
- Discussing the impact of different treatments (e.g. lifestyle changes vs. medication)
- Tackling questions about the risks and benefits of statins (e.g. responding to recent media coverage of statins)

Feeling ill-equipped, either in time or ability, participants said, led to confusion and a lack of clarity amongst some patients about what the doctor had actually been telling them.

The online survey asked doctors whether they agreed that ‘current postgraduate training provides me with the skills I need to be proficient in prevention and health education’. Although 27% (n=197) of respondents ‘strongly agreed’, 40% (n=299) agreed ‘slightly’, while 14% reported that they either ‘slightly’ or ‘strongly’ disagreed. These results suggest that a large proportion of healthcare professionals could benefit from the provision of additional resources or training around preventative healthcare interventions in general, and statins in particular.
Different patient populations, as discussed previously, posed different challenges. Some doctors identified that the level of education, as well as English language proficiency, that they were dealing with was very low in some cases, meaning that explanations involving concepts such as percentages were not well understood by patients.

In the focus groups, it was suggested that better, more visual tools were needed to make sure that information was being communicated well, understood and retained properly by patients.

Some doctors reported using more interactive resources, including apps and websites which aimed to communicate risks. The ability to modify different factors (such as BMI and smoking status) and demonstrate the resulting reduction in risk of CVD was very powerful for some patients, they reported.

The online survey also explored this issue. Having asked about their level of confidence in explaining the risks and benefits of statins to patients, respondents (both GPs and cardiologists) were also asked what would help them feel more confident (see table 6). The responses reflected the focus group discussions about the need for more tools to use with patients – such as visual aids to explain risk, and decision aids to examine treatment options. However, the most commonly chosen option that would help healthcare professionals feel more confident was a digest of the latest information about statins from a reputable source. This indicated that resources aimed at GPs to help them improve and consolidate their knowledge would also be of value.

Table 6: What would help you feel more confident explaining the risks and benefits of statins to patients? (n=768) [NB respondents had the option to select up to three responses, hence total exceeds 100%]

<table>
<thead>
<tr>
<th>Information source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A digest of the latest information about statins from a</td>
<td>412</td>
<td>54%</td>
</tr>
<tr>
<td>reputable source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision aids</td>
<td>385</td>
<td>50%</td>
</tr>
<tr>
<td>Visual aids</td>
<td>382</td>
<td>50%</td>
</tr>
<tr>
<td>Responses to specific media stories from a reputable</td>
<td>298</td>
<td>39%</td>
</tr>
<tr>
<td>source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publication of all clinical trials data about statins</td>
<td>153</td>
<td>20%</td>
</tr>
<tr>
<td>Nothing</td>
<td>63</td>
<td>8%</td>
</tr>
</tbody>
</table>
5. Conclusions

The findings from patients, GPs and cardiologists highlight the complex variation in people’s views and experiences of statins. There are multiple factors influencing people’s attitudes and behaviours, which vary for every individual involved in the study. This complexity means that it is difficult to draw conclusions on specific triggers and influences affecting decisions about statins. Rather, it points to the importance of taking the full range of influences into consideration when assessing how changes (such as recent media coverage of statins) may affect people.

Patient perspective

The patient research shows the range of influences affecting initial decisions about whether to take statins, as well as ongoing compliance with the treatment. In particular, the findings suggest that people are more likely to take statins and comply with their treatment if they:

- have trust and confidence in their GP;
- do not experience side-effects, or know people who have experienced side-effects;
- have either personal experience of CVD, or have close family or friends with CVD;
- have faith in the medical profession, and are open to the benefits of medication; and,
- are not aware of media coverage of statins.

While none of this is unexpected, what is perhaps surprising is that none of these factors are conclusive, and the story is inevitably more complex. Indeed, participants in our research described many different combinations of these influences, with often different outcomes; for example, people who experienced side-effects yet saw this as an acceptable price to lower their risk of CVD.

Focusing on media coverage further highlights this complexity. While only 46 people in our patient survey (5% of the total) said they stopped taking statins as a result of media coverage (see section 2.6), there is scope to suggest that the implications may be broader than this for two reasons. First, and as outlined in the introduction, people are typically unable to identify (or admit to) what influences their behavior, and therefore may not recognize the influence of the media on their decisions. Second, the research findings suggest that media plays a role in people’s perceptions of the other factors which influence compliance; for example, promoting negative perceptions of the medical profession, pharmaceutical industry, and raising awareness of the perceived risks of side-effects associated with statins.

This is not to say that media coverage is necessarily responsible for people’s views about these issues, or influencing compliance indirectly through these issues. It is difficult to unpick causality here, and the link between awareness of media coverage and compliance with statins may simply show that people are more receptive to (and therefore aware of) information that supports their own views and preferences. So, where people are open to the benefits of statins, they may be less likely to register or act on media stories that contradict
their position. Conversely, and perhaps of more concern, where people are averse to the use of statins for various reasons, media stories may make this position more entrenched.

**GPs and cardiologists’ perspective**

GPs and cardiologists had similarly complex and wide-ranging views and experiences of statins. GPs in particular described differing experiences of prescribing statins to patients, with variations in how, when and even if doctors raised statins as a treatment option. Further differences were noted in how they discussed and promoted other approaches, such as lifestyle and diet changes.

These differences appeared to be rooted in doctors’ experiences of discussing statins with patients, their confidence in their understanding of the risks and benefits of statins, their views about public health and preventative healthcare, and their views about formal guidelines and targets associated with statins. For example, doubts about the use of statins for primary prevention, or experiences of challenging conversations with patients averse to statins, prompted some doctors to practice more ‘defensive’ approaches to prescribing statins.

Doctors were more unified in their views about the role of media coverage of statins on patients, claiming that this played a major role in influencing people who challenged their advice about statins, and to some extent primed people to expect side-effects and question the motivation of those prescribing the treatment.

Whilst doctors were less convinced that media coverage affected their own prescribing behaviour, as with patients there is certainly scope to suggest a secondary influence. In particular, increasing the number of challenging conversations they had with patients and undermining their confidence in their knowledge and expertise around statins. Both of these effects have the likely impact of encouraging more ‘defensive’ practices.

**Implications for the British Heart Foundation**

The complexity of the debate around statins, and the difficulty of discussing health issues that are intangible for many people (due to lack of symptoms and complex concepts of future risk) means that people will struggle to make informed decisions. Recent media coverage of statins appears to be compounding this complexity. There is therefore a clear need for further support for patients (and doctors) to help people make informed decisions about how to manage their heart health.

For patients, there is a stated need for clear, simple information about risk – both risk of CVD, and risks associated with statins. This is a complicated topic and neither patients nor doctors were able to suggest specific approaches, although there was some mention of existing information, tools and decision-aids that could be promoted more widely.

For doctors, there is a need for additional information about statins in particular, and cardiovascular disease in general, to support doctors (specifically GPs) in feeling as confident as possible when explaining risk and benefits of statins to a range of patients. GPs also sought more contact with and input from specialists (for example, local cardiologists) to increase confidence in the latest evidence and what this means for particular patient groups.
There was a widespread desire for more robust responses to counter inaccurate or sensationalist reporting of health issues (and statins in particular).

Finally, there was a sense among both patients and doctors that the use and promotion of statins needed to be located within a wider programme of public health and preventative healthcare activities. While no doctors queried the need for statins as an important tool for preventing CVD, there was a sense that any focus on statins would be counterproductive if it was not supported by broader activities to promote healthy lifestyles.