

# BMJ Open Lessons from the failure of implementing the 'Better Care Better Value' prescribing indicator for renin-angiotensin system drugs in England: a qualitative study of general practitioners' perceptions using behavioural change framework

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## ABSTRACT

**Objectives** To explore reasons for the lack of uptake of 'Better Care Better Value (BCBV)' prescribing indicators for renin-angiotensin-aldosterone system (RAAS) inhibitors and identify learning lessons to inform the implementation of future prescribing policies.

**Design** In-depth, semistructured interviews to explore: general practitioners' (GPs) experiences in prescribing RAAS, perceptions of the BCBV policy and potential barriers to policy implementation and suggestions for improving future policy implementation. Interviews were audio recorded, transcribed verbatim and analysed thematically, then mapped onto behavioural change frameworks (the Capability, Opportunity, Motivation and Behaviour) model and Behaviour Change Wheel (BCW)).

**Setting** Primary care setting in England

**Participants** Interviews were conducted with 16 GPs recruited from a purposive sample of 91 GP practices in three English counties.

**Results** Four factors/barriers, related mainly to GPs' psychological capability and reflective motivation, emerged as the possible barriers for the BCBV's lack of uptake, including: lack of the policy awareness, negative attitude to the policy, lack of incentives and GPs' reluctance to switch patients from angiotensin receptor blockers (ARBs) to ACE inhibitors (ACEIs). The participating GPs proposed interventions to improve future BCBV implementation and they were related to six intervention/policy functions of the BCW, addressing the four identified barriers: education/communication (increase GPs' awareness) and environmental restructuring/regulations (provide GPs with reminding alerts); incentivisation/fiscal (provide GPs with financial incentives); enablement/guidelines-regulations (provide GPs with benchmarking against peers) and enablement/regulations and education/guidelines (facilitate switching from ARBs to ACEIs).

**Conclusions** The main reason underpinning the low uptake of the BCBV indicator appears to be lack of a proactive implementation strategy. This case study demonstrated that passively disseminating policy without

## Strengths and limitations of this study

- Using the comprehensive behaviour change framework (Capability, Opportunity, Motivation and Behaviour) enabled us to conduct a systematic and behavioural diagnosis of factors underpinning the lack of uptake of Better Care Better Value policy with subsequent linking of these behavioural barriers to intervention and policy categories using the Behaviour Change Wheel.
- The purposive sampling strategy used in this study ensured a diversity of study participants which provided for a firm understanding of the study topic building on various perspectives.
- The study sample might represent a biased sample of engaged and interested general practitioners (GPs) in treating hypertension; thus, their views may be different from GPs who did not participate.
- Furthermore, it is also possible that those who were interviewed were more engaged in research and policy, so their prescribing was in accordance with guideline recommendations.

an effective implementation strategy results in low uptake. Furthermore, multifaceted implementation strategies are necessary to influence complex clinical decision making in a time-limited environment, such as prescribing behaviours. These findings suggest that effective policy implementation requires the application of a systematic comprehensive behaviours change framework.

## BACKGROUND

ACE inhibitors (ACEIs) and angiotensin receptor blockers (ARBs) are considered to have equal efficacy in hypertension control and cardiovascular disease prevention,<sup>1 2</sup> except that ACEIs can cause a dry cough in 2%–10% of patients.<sup>1</sup> Accordingly, in all



the UK National Institute for Care and Health Excellence (NICE) guidelines for heart failure,<sup>3</sup> postmyocardial infarction,<sup>4</sup> diabetes mellitus<sup>5 6</sup> and chronic renal diseases,<sup>7 8</sup> ACEIs are the first-line renin–angiotensin–aldosterone system (RAAS) drugs of choice; however, the updated NICE guidelines for hypertension since 2014 has recommended ACEIs and low-cost ARBs as a first-line drug for non-black people <55 years, but treatment should start with ACEIs as the first-line choice and only use low-cost ARBs as an alternative to ACEIs in patients who are intolerant of ACEIs.<sup>9</sup>

Prescribing cheaper/generic ACEIs instead of more expensive patent-protected ARBs is an important cost-saving strategy across Europe due to their high utilisation volume and expenditure. Multiple initiatives targeting ACEIs/ARBs prescribing have been implemented, including: prescriber education, prescribing targets and restrictions, and financial incentives.<sup>10–12</sup> In the UK, the National Health Service (NHS) Institute for Innovation and Improvement released four Better Care Better Value (BCBV) prescribing indicators in April 2009,<sup>13</sup> one of which set a target for ACEIs prescribed as a proportion of all RAAS inhibitors prescribed overall. The BCBV policy aimed to improve the efficient use of healthcare resources within NHS while maintaining or improving patients' quality of care; the details about the aim and rationale behind the development of BCBV prescribing indicators have been described elsewhere.<sup>14</sup> The BCBV policy encouraged clinicians to initiate new patients on ACEIs and switch existing ARB users to ACEIs when appropriate. A target of 80% ACEIs out of all RAAS inhibitors had been proposed based on expert opinions<sup>9</sup> and the fact that only 2%–3% of patients in clinical trials stopped ACEIs due to dry cough.<sup>15 16</sup> The policy was disseminated through emails, discussion in workshops and/or via emails to individual general practitioners (GPs) informing them about the policy with a link to the full policy's details. The policy was not linked to any central financial incentives or legislation enforcement.

Our previous research indicated that the BCBV policy was ineffective and failed to achieve the 80% proposed target.<sup>14</sup> However, the reasons underpinning the lack of the policy uptake are unknown; identifying these reasons would not only help to improve the uptake of BCBV prescribing indicator but would also provide key learning lessons for effective/successful implementation of other prescribing policies in general. These barriers were explored systematically using the comprehensive behaviour change framework (the Capability, Opportunity, Motivation and Behaviour (COM-B) and the Behaviour Change Wheel (BCW) framework<sup>17</sup>) which enabled us to conduct a systematic and behavioural diagnosis of factors underpinning the lack of uptake of BCBV policy with subsequent linking of these behavioural barriers to intervention and policy categories using the BCW framework.

## Aim and objectives

This study aimed to explore and identify the potential reasons behind the lack of uptake of this BCBV policy. The objectives were to explore GPs' perception of ACEIs/ARBs prescribing and their perceptions of the BCBV policy including the barriers and facilitators for the policy implementation.

## METHODS

### Study design and participants

This qualitative study was reported according to the Standards for Reporting Qualitative Research checklist<sup>18</sup> recommended by the equator network (online supplementary table 1). We used in-depth, semistructured interviews with GPs between August 2014 and January 2015. Participants were recruited from 91 purposively selected GP practices in three English counties: Nottinghamshire (n=40), Derbyshire (n=29) and Leicestershire (n=22), to ensure maximum variation in terms of demographics and clinical characteristics such as practice size, number of GPs, practice deprivation index, prevalence of hypertension and geographical location (urban, suburban and rural). The number of participants was determined by the principle of saturation whereby we continued recruiting participants until no new themes emerged.

The practice managers and senior GPs in the selected GP practices were sent an invitation letter, containing participant information sheets and reply slips with prepaid envelopes (equivalent to the number of GPs in their GP practice), asking them to invite all the GPs in their practices to take part in the study. GPs who were willing to participate by returning the reply slip to the researcher (AK) were then contacted to arrange a date and time for the interview. Furthermore, other recruitment strategies were also used, including: advertising the study in a GPs' local monthly newsletter and snowballing (whereby a study participant identifies and helps with recruiting another potential target participant among his/her acquaintances).<sup>19</sup>

### Data collection

#### Interview process

All the interviews were face to face (20–30 min), conducted at participants' most convenient time and venue by the lead author (AK); AK has not had any relationship with the participants and he has previous experiences in conducting qualitative interviews. The semistructured interview schedule was developed based on previous literature.<sup>20–23</sup> The interview schedule was piloted with one GP and only minor adjustments, related to the flow and order of the questions, were made. All study participants were ensured anonymity, and asked for their permission to audio record the interviews and written, signed informed consents were sought just before the start of the interview. Participants were ensured anonymity and confidentiality which should have provided a safe environment

for participants to report any views that might be diverged from their practice policy.

#### Interview schedule

First, participants were asked about their practice of prescribing ACEIs/ARBs for treating hypertension (online supplementary table 2). Second, participants were asked about their views on the BCBV prescribing indicator including questions that inductively and indirectly explored their awareness, perceptions and the potential barrier for the policy's uptake in clinical practice. Finally, they were asked about the potential strategies that would improve the policy's future uptake.

#### Data analysis

All interviews were audio recorded and transcribed verbatim. Transcribed data were then analysed using thematic analysis.<sup>24</sup> Initially, a focus by question approach<sup>25</sup> was used in the coding process whereby participants' response to a specific question was systematically coded using the same language/terminologies used by the participants. Similar codes were then grouped and organised into coherent categories. Once all the text data were coded and grouped into broader categories, the 'one sheet of paper' approach<sup>26</sup> was used to make connections between the emerged categories whereby all the emerged categories that arose from the participants' response to each question were organised on a large single paper sheet. Then, the categories for each question were grouped into broader themes using axial coding by rearranging the coded text data together under a broader theme.<sup>27</sup>

The emerged themes, about the potential barriers for the lack of policy uptake and the proposed solutions, were then mapped onto the COM-B behaviour change model and BCW,<sup>17</sup> respectively. This was done to provide a systematic and standard, evidence-based method to incorporate the understanding of the nature of the identified barrier behaviours that need to be changed with an appropriate method for characterising the proposed solutions/interventions. The COM-B model is a simple, comprehensive behavioural model, synthesised from 33 behaviour change models, which suggests that for a behaviour to occur, three basic preconditions (comprising six subdomains) must be met: Capability (physical such as skills and psychological such as knowledge), Opportunity (physical such as time/resource and social such as norms of practice) and Motivation (reflective such as confidence/intention and automatic such as emotions/habits).<sup>17</sup> The BCW, on the other hand, identifies nine intervention functions and seven policy categories that could be adopted to change behaviours within the COM-B model. Detailed descriptions of the COM-B components and BCW intervention and policy functions have been described elsewhere (online supplementary tables 3 and 4).<sup>17</sup> To ensure and enhance credibility and validity of the data analysis, L-CC independently analysed four (25%) randomly selected transcripts, and the identified codes and themes were then compared with those identified by AK to check consistency in the analysis; the identified codes and themes by L-CC and AK were comparable.

**Table 1** Characteristics of the study participants

	Total	Counties		
		Nottinghamshire	Derbyshire	Leicestershire
<b>No of GPs</b>	16 (100%)	9 (56%)	5 (31%)	2 (13%)
<b>Age</b> (mean±SD, years)	43.4±7.4	41.3±6.1	46.6±8.8	44.5±10.6
<b>Duration of work experience</b> (mean±SD years)	13.7±8.2	12.2±7.2	19.4±8.0	5±2.8
<b>Gender</b>				
Male	13 (81.2%)	8 (88.9%)	3 (60%)	2 (100%)
Female	3 (18.8%)	1 (11.1%)	2 (40%)	0 (0%)
<b>Ethnicity</b>				
White	12 (75%)	5 (55.6%)	5 (100%)	2 (100%)
Mixed/multiple	1 (7%)	1 (11.1%)	0 (0%)	0 (0%)
Asian/British Asian	3 (18%)	3 (33.3%)	0 (0%)	0 (0%)
<b>Employment type</b>				
Salaried	5 (32.0%)	3 (33.3%)	0 (0%)	2 (100%)
Partner	9 (56.0%)	4 (44.5%)	5 (100%)	0 (0%)
Locum	1 (6.0%)	1 (11.1%)	0 (0%)	0 (0%)
Self-employed	1 (6.0%)	1 (11.1%)	0 (0%)	0 (0%)

GPs, general practitioners.

**Table 2** Summary of the identified barriers for the lack of uptake of the ‘BCBV’ prescribing indicator with the subsequent suggested strategies to improve its future implementations mapped on the domains of the COM-B and Behaviour Change Wheel framework

Barriers	COM-B domains
Lack of policy’s awareness	Psychological capability
A negative attitude toward the BCBV prescribing indicator	Reflective motivation
Lack of incentives	Reflective motivation
Concerns around patients’ quality of care	Reflective motivation
Patients’ resistance to the switching decision	Social opportunity
Frequent and over switching of patients from ACEIs to ARBs:	Psychological capability
▶ GPs’ uncertainty about the exact cause of the cough (whether it is associated with ACEIs or not)	Social opportunity
▶ Patients’ pressure	
GPs’ heavy workload and limited time	Physical opportunity
GPs’ perception of doing the switching as an additional duty	Reflective motivation barrier
Strategies/suggestions to improve the uptake of BCBV prescribing indicator	Intervention and policy functions of the BCW
Enhance policy’s awareness	Education intervention with communication policy category
Linking the policy to financial incentives	Incentivisation intervention and fiscal policy category
Increasing GPs’ education and peer pressure	Enablement intervention and regulation policy category
Facilitate patients’ switching from ARBs to ACEIs	Enablement and/or Environmental restructuring interventions and regulation policy category
▶ Support from other healthcare professionals	
▶ Improving communication between GPs and patients	Enablement intervention and regulation policy category
▶ Providing guidance on the switching	Education and/or training interventions and guidelines policy category

.ACEIs, ACE inhibitors; ARBs, Angiotensin Receptor Blockers; BCBV, Better Care Better Value; BCW, Behaviour Change Wheel; COM-B, Capability, Opportunity, Motivation and Behaviour; GPs, general practitioners.

### Patient and public involvement

No patient involved.

## RESULTS

### Characteristics of the study participants

Of the 91 sampled GP practices, 16 GPs from 16 GP practices (17.6%) were interviewed and participated in the study; thematic saturation was reached with 14 interviewees and another two GPs interviewed for assurance. Participants had a mean (SD) age of 43.4 (7.4) years. Participants had a reasonable variation in their characteristics in terms of gender, ethnicity and employment type (table 1).

Table 2 summarises all the identified barriers for the lack of uptake of the BCBV prescribing indicator with the subsequent suggested strategies to improve its future implementation.

### GPs’ prescribing practice and habit in prescribing ACEIs/ARBs

Almost all the participants had a lot of experience in prescribing ACEIs/ARBs. They reported that they often initiate treatment with ACEIs as the first-line treatment for hypertension and reserved ARBs only to patients who are intolerant to ACEIs, mainly due to dry cough; as

one GP explained [‘I’d start with the ACE inhibitor but only if they developed a cough would I then think of an ARB because, well, I’m pretty sure that we were told by guidelines and a visit by one of the regional practice pharmacists, we should always start with ACE inhibitors and only go to ARBs if there was a contraindication to them’] (37-year-old, salaried GP).

### Barriers and facilitators/strategies for the uptake of the BCBV prescribing indicator for ACEIs/ARBs

Participants pointed out a variety of barriers contributing to the failure of the BCBV indicator, which were mainly related to the Capability and Motivation component of the COM-B model, namely: psychological capability (GPs lack of policy’s awareness) and reflective motivation (GPs’ resistance to guidelines and prescribing indicators, lack of incentives to implement the policy, and issues related to switch patients between ARBs and ACEIs). Furthermore, some other barriers related to the Opportunity component of the COM-B model were also identified including patients’ resistance and pressure to ARBs/ACEIs switching.

On the other hand, participants suggested a wide range of strategies that would potentially improve the future

uptake of the BCBV policy. In line with the identified barriers within COM-B model, and subsequent intervention and policy functions of the BCW, the strategies were related to six main intervention/policy functions, including (1) education/communication (to increase GPs' awareness of the policy) (2) environmental restructuring/regulations (providing GPs with on-screen prompts to remind GPs of the policy) (3) incentivisation/fiscal (link the policy to financial incentives) (4) Enablement/guidelines and regulations (to provide GPs with benchmarking against peers) and (5) Enablement/regulations and (6) education/guidelines (both to facilitate patients' switching from ARBs to ACEIs).

### Psychological capability

#### *Lack of policy's awareness (barrier)*

All the participants reported a very low level of awareness and knowledge of the policy. The majority of participants (n=12) had not heard about BCBV indicators and were completely unaware of such an initiative. Participants attributed this to poor policy advertisement and communication to GPs, lack of active initiatives to push the policy from their health boards/authorities, and difficulty with remembering the policy given the amount of information GPs receive; as was noted by one GP ['it's difficult to go through a day at the moment without there being five initiatives. So remembering one from morning till the afternoon is hard enough, far less the next week. [...] It's impossible unless they build it into the systems and make it easy for people to quickly go 'oh, that's what I'm supposed to be doing'] (52-year-old, salaried GP)

#### *Strategies to enhance policy's awareness-education intervention with communication policy category (facilitator)*

To more effectively implement the policy, participants considered it crucial to increase GPs' awareness, through adopting effective methods of advertising, disseminating and communicating the policy. For instance, adopting the policy by local personnel was suggested as an effective method to enhance policy uptake. Another implementation strategy highlighted by the participants was the incorporation of a reminding or alerting tool in GPs' computers to remind them of the policy whenever they attempt to prescribe ACEIs/ARBs (environmental restructuring intervention and regulations policy category), as one GP noted ['I think obviously they have to be publicised [...] I think they have to be championed possibly by somebody in their vicinity so a sort of local person that can speak to GPs individually or as a practice might be helpful'] (43year old, salaried GP)

### Reflective motivation

#### *Negative attitude toward the BCBV policy (barrier)*

Overall, participants had negative views towards prescribing indicators, in particular, cost-oriented policies, as one GP noted ['I think the biggest problem is all too often they're obsessed by trying to save trivial sums

of money rather than looking at the bigger picture.'](50year old, partner GP).

Participants considered the BCBV policy as a cost-oriented policy which jeopardises their prescribing autonomy, and it lacked credibility because participants were not involved in its development, as one GP noted ['I think a number of GPs probably don't like being told what to prescribe by prescribing indicators, largely written by people who aren't seeing patients face to face. I think there probably are a small number of patients where they don't fit the guidelines and sometimes there are reasons within individual patients why you might not want to change them, even if on the guideline it says so'] (52year old, partner GP).

#### *Strategies to address the negative attitudes toward the BCBV policy-enablement intervention and regulation policy category (facilitator)*

A small minority of participants (n=2) suggested that benchmarking, as one GP noted ['The ones [GP practices] that were high prescribers reduced, the ones that were lower prescribers increased. So it's being aware of what your peers are doing is the thing'] (50year old, partner GP) and educating GPs about the evidence base underpinning the policy is another alternative approach to enhance policy uptake, as noted by one GP ["I think most of the time rather than enforcement it's better to try and educate GPs, put the evidence base for them [...] most doctors are quite happy to follow an evidence base'] (58year old, partner GP)

#### *Lack of incentives (barrier)*

Some participants attributed the low uptake of the BCBV indicator to the lack of any financial/enforcement incentives linked to the policy. They believed that such incentives are vital strategy to make GPs interested in this policy, under their current workload, as noted by one GP ['there has to be an incentive there [...]because you're asking people who are already working full time to do something over and above what they normally do'] (41 year old, self-employed GP)

#### *Strategies to implement financial incentives-incentivisation intervention and fiscal policy category (facilitator)*

More than half of the participants strongly suggested financially incentivising the policy as a potential strategy to increase the policy uptake by GPs, as noted by one GP ['In reality I think unless you incentivise people to go and look for groups of patients who are clinically appropriate to switch and cost saving, I think if you don't incentivise people it just won't happen'] (52year old, partner GP)

However, some other participants expressed an opposite opinion and disliked the idea of linking the policy to any kind of financial incentive or legislation enforcement. They believed that GPs should practice to achieve the best for patients' health and prescribe the most appropriate medicines, regardless of any incentive, as noted by one GP ['It [giving incentives] works for some people. I'm a

bit insulted by it because I feel that I would do the best for the patients, regardless of what money was thrown at me, but I know there are perhaps some people that are more motivated by money'] (37 year old, partner GP)

#### *Concerns around patients' quality of care (barrier)*

All participants reported their reluctance to switch a patient from ARBs to ACEIs for the cost-saving reason without medical or clinical justification, due to their concerns of compromising patient's quality of care, including loss of blood pressure control. Participants perceived that switching from ARBs to ACEIs may impede patients' adherence as ACEIs were regarded having a poorer safety profile than ARBs, as one GP noted ['We spend so long in starting people off on a drug, gradually increasing it, getting blood pressure controlled. Why do we actually, once we've got it controlled, why do we want to change things?'] (58-year-old, partner GP)

#### *Resistance to and over switching between ACEIs and ARBs*

Participants raised concerns about patients' resistance to the switching decision especially when there is lack of medical justification (social opportunity). Participants suggested that explaining the rationale of the switching justified by treatment appropriateness and guidelines to patients could help patients' acceptance of switching. However, switching due monetary values was deemed by the participants to be unacceptable to patients, as noted by one GP ['A lot of people are quite sensitive about their tablets and I think don't like having them switched'] (32 year old, partner GP)

In addition, the frequent and over switching of patients from ACEIs to ARBs, mainly due to ACEI-associated dry cough was reported as one of the barriers against the BCBV policy. Participants reported two main issues as contributing factors the high reported rate of dry cough, included: GPs' uncertainty about the exact cause of the cough (whether it is associated with ACEIs or not) (psychological capability), as one GP noted ['Well, everybody gets a cough every year and it's always difficult at some times to say is this suddenly because of an ACEI or not? ....]The trouble with ACE inhibitors doing that is there's such a delayed reaction to the drug it's a difficult one. [...]'] (52 year old, salaried GP), and patients' pressure to switch drugs when they are suffering from cough while receiving ACEIs (social opportunity), as noted by one GP ['if somebody comes to the practice and the patient usually complains from cough and they've heard about that it's [ACEIs] caused this cough then they really insist [...]they want to change straightaway.'] (43 year old, locum GP)

#### *Strategies to address concerns' around patients' quality of care and resistance to switching (facilitator)*

Some participants suggested approaches that would encourage patients' switching from ARBs to ACEIs, including: support from other healthcare professionals (enablement and/or environmental restructuring

interventions and regulation policy category), improving communication between GPs and patients (enablement intervention and regulation policy category), and providing guidance on the switching (education and/or training interventions and guidelines policy category). Due to GPs' heavy workload, limited time (physical opportunity barrier), and perceiving switching as an additional duty (reflective motivation barrier); two participants suggested that other healthcare professionals, such as pharmacists and pharmacy technicians, could play essential roles in simplifying the switching process through screening and identifying patients who are eligible for switching, as one GP noted ['Having some support, like here we've got pharmacists' or pharma techs' support who will come in and say 'this is where we can perhaps make a saving by changing this to this and this is the evidence', and we'll say 'yeah, fine'] (50 year old, partner GP).

It was pointed out by participants that the method by which GPs communicate the switching decision with patients (face-to-face consultations vs letters) would have a significant impact on patients' acceptance of the switching. Participants reported that involving patients in the switching decision and explaining the switching rationale in terms of guidelines or appropriateness instead of fiscal terms, would potentially improve patients' acceptance of the switching, as one GP noted ['If it's to do with changing people off drugs, ways in which we can bring our patients on board with that and not make it just look like it's a government edict or a cost-cutting measure or something. So ways in which we can maybe promote it to our patients better than just a letter in the post'] (37 year old, partner GP).

## DISCUSSION

### Summary

This qualitative study identified several barriers as potential reasons for the lack of uptake of BCBV prescribing policy. These barriers were mostly related to psychological capability and reflective motivation demonstrated in GPs' lack of policy's awareness and incentives. Furthermore, several potential strategies to improve the future uptake of the BCBV prescribing policy were suggested and included enhancing GPs' awareness of the policy, linking the policy to financial incentives, providing GPs with electronic reminders/alerts, benchmarking against peers and facilitating patient's switching process. This provides an example and a learning lesson on the fact that passive introduction/dissemination of policies alone is not sufficient for effective behavioural change and that active and multiple implementation strategies are often required for successful policy implementation especially policies targeting prescribing behaviour given the complexity of the prescribing process and decision.<sup>28-31</sup>

### Comparison with existing literature

To our knowledge, no other studies have investigated the implementation of BCBV prescribing indicator for

ACEIs/ARBs, apart from our previous research<sup>14</sup> which quantitatively assessed the uptake of BCBV prescribing indicator for ACEIs/ARBs. Similarly, no other studies have investigated the precise impact of the other two BCBV prescribing indicators for statins and proton pump inhibitors (PPIs), issued in 2006 in the UK. However, McGinn *et al*<sup>32</sup> assessed the quality and efficiency of statins and PPI utilisation from 2004 to 2007 and found significant improvement in the quality and efficiency of statins and PPI prescribing attributed to a wide range of national and local initiatives in the UK over that period, one of which was the BCBV prescribing indicators for statins and PPI; however, the authors did not quantify the exact impact of the BCBV prescribing indicators for statins and PPI on the observed improvement in quality and efficiency of statins and PPI prescribing.

#### Barriers and facilitators for the uptake of the BCBV prescribing indicator

##### *GPs' awareness of the BCBV prescribing indicator*

Given the high and continuous encouragement from the NHS to maximise cost-effective prescribing,<sup>33</sup> it was unexpected to find that almost all the study participants were unaware of this BCBV indicator, which aimed to save NHS money while maintaining the quality of care. Participants attributed their lack of awareness of the policy to the poor advertisement and dissemination methods used to transfer and communicate the BCBV policy (psychological capability).

Lack of awareness is a well-known barrier for policy uptake,<sup>34</sup> attributed mainly to GPs' limited time to process all the policy information they receive.<sup>35</sup> This psychological capability barrier could be overcome by education intervention and communication policy category from the BCW.<sup>17</sup> This was demonstrated in participants' preference to adopt local communication and dissemination of the policy through, for instance, the local prescribing committee or medicines management team and being championed by a local peer colleague.

A computerised decision support tool was also suggested as an effective way to enhance the uptake of the BCBV policy. It is evidenced from the literature that use of reminding tools and decision-support systems were viewed as essential elements for providing high quality and efficient care management.<sup>36</sup>

##### *GPs' negative views of guidelines and prescribing indicators*

Prescribing indicators, including BCBV, were perceived to reduce GPs' prescribing autonomy, not flexible to fit individual patients, lacking authorship credibility, and mostly cost oriented which affects GPs' reflective motivation to change their prescribing behaviour. These findings are consistent with the barriers to guidelines adherence.<sup>20 37</sup> Reducing doctors' prescribing autonomy; hence the promotion of 'cookbook medicine' has been one of the most commonly reported barriers to guideline uptake.<sup>38</sup> Furthermore, credibility of guidelines, which is determined by its developers, has been identified as one of potential

determinant for guidelines' uptake.<sup>39</sup> GPs' acceptance is higher with guidelines issued by peers or those developed and approved by a local medical committee.<sup>20 40</sup>

##### *Linking the BCBV indicator to financial incentives*

Lack of financial incentives was also reported as one of the crucial barriers to BCBV's uptake. However, there were variations in participants' views on the roles of financial incentives in promoting the policy uptake. The discrepancy seems to be related to GPs' employment type (partner vs salaried GPs; ie, whether the incentives affect GPs' income or not). Linking policies to financial incentives is one of the well-recognised approaches to enhance policy uptake.<sup>29 41 42</sup>

##### *Concerns around switching patients between ARBs and ACEIs*

This study found an overall reluctance and unwillingness of GPs to switch patients for non-medical reasons due to their concerns about negatively impacting patients' quality of care which again affect GPs' reflective motivation about outcome expectations to change their prescribing behaviour. However, we have demonstrated in a recent published study<sup>43</sup> that switching of ARBs to ACEIs neither compromised patients' adherence, blood pressure nor had any negative effects on patients' cardiovascular complications. In addition, this current study identified several strategies that could facilitate or motivate GPs to switch ARBs, including the provision of support from other healthcare professionals, improvement of GP-patient communication and providing GPs with guidance on how to perform the switching.

The technical and scientific support from other healthcare professionals, such as pharmacists, to simplify the switching process and decrease the workloads of GPs was regarded as an effective approach to facilitate and encourage switching patients from ARBs to ACEIs. This is timely in line with the newly established scheme for pharmacists working in GP practices in the UK.<sup>44</sup>

Furthermore, our study participants preferred communicating the switching rationale via methods that include better patient involvement (face to face or telephone). Research evidence has demonstrated an increase in patients' acceptance of switching by informing patients about the switching through better communication with their GPs.<sup>45</sup> Although sending letters to patients as a way to communicate and inform patients about their generic switching might be acceptable by patients,<sup>46</sup> face-to-face meeting appeared to be acceptable by patients in case of therapeutic switching,<sup>33</sup> likely because therapeutic switching, unlike generic switching, is considered more contentious<sup>47</sup> as the switching involves changing of their drugs' active ingredient. However, this should be balanced against its cost implications. Another identified barrier was related to GPs' social opportunity to change their prescribing behaviour; this was represented through pressure and resistance of patients to switch from ARBs to ACEIs. The study participants reported that communication of the switching decision to patients is critical to decreasing patients' resistance. In line with our study findings, it has been found that

patients often accepted the switching when it was explained in terms of clinical evidence but they are less likely to accept the switching because of saving money.<sup>33</sup> This is important since patients' dissatisfaction with medication switching was found to be associated with communication about the switching rather than the switching itself.<sup>48</sup> Consistently, Stevenson *et al*<sup>49</sup> pointed out that to improve patients' acceptance of switching, GPs should avoid explaining and discussing the switching in financial terms but rather explain it in other terms such efficacy.

There are certain limitations that need to be acknowledged. Although it could be argued that the study sample of 16 GPs might be small, this number of participants is greater than 12 participants which is the recommended number of participants in qualitative interviews at which thematic saturation is often reached.<sup>50</sup> The study sample might represent a biased sample of engaged and interested GPs in treating hypertension; thus, their views might be different from GPs who did not participate; however, even if this was true then this is unlikely to affect our conclusion since GPs who are non-engaged or not interested in treating hypertension are likely to also have not heard of the BCBV policy and would have reported similar barriers. Moreover, since the interviews were conducted in 2014/2015, the presented views might be different from GPs' views now although behaviours and attitudes are parts of person's personality and not easily change with time. Furthermore, although it is possible that the GPs who were interviewed in our study were more engaged in research and policy, this is unlikely to bias their reporting of barriers for the policy's lack of uptake.

### Implications for research and practice

Behavioural barriers related to GPs' capability, opportunity and motivation were identified as potential factors underpinning the lack of uptake of BCBV policy. This provides key learning lessons that implementation of healthcare policies in practice might be hindered by unexpected contextual and cultural factors and that just introduction/dissemination of policies is not sufficient for effective behavioural change. Adopting social behavioural change frameworks is crucial for effective intervention design which requires multifaceted approach through using multiple implementation strategies to enable successful and sustainable implementation of interventions. The findings of this study have many important implications for future practice. Through understanding of the barriers for this policy failure and the subsequent possible suggested solutions, we do believe that it is possible to not only improve the future uptake of the BCBV policy but also provide lessons on how to improve the uptake and implementation of other health policies, including prescribing policies in particular. It is evidenced from the literature that a single policy or initiative, such as BCBV indicator, would often fail to achieve any marked change in GPs' prescribing behaviour,<sup>28–31 51</sup> given the complexity of the prescribing process; therefore, effective policies often possess multiple components.<sup>22</sup> It has been shown that multiple component policies are mostly

required to maximise prescribing efficiency, including ACEIs/ARBs.<sup>10 12 41 52</sup> This includes adopting active and multiple implementation strategies, such as a combination of education/communication, financial incentives, electronic reminders/alerts, benchmarking and/or support/guidance on how to perform the switching. The BCW could be used as an evidence-based tool to guide the design of behavioural change interventions through mapping the identified source of behaviours that needs to be changed, with the corresponding intervention functions and policy categories of the BCW. Evaluating the feasibility, usefulness and effectiveness of this approach around designing prescribing policy interventions could be the focus of future research.

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