

# Factors which influence the decision making when prescribing



**Objectives:** The objectives of the study are: (a) to investigate the main factors which influence the decision making when prescribing, (b) To investigate the role of differing formularies across the prescribing interface, and (c) to outline the factors that influence the continuation of a prescription.

**Setting:** Two National Health Service (NHS) organisations: Ipswich NHS Hospital and Suffolk PCT, during March 2010.

**Method:** A postal questionnaire which enabled qualitative and quantitative data to be compiled. All primary and secondary care prescribers, including nurse specialists within NHS Suffolk and Ipswich Hospital were invited to participate. Excluded from the study were locums and relief prescribers. All eligible participants were identified by the pharmacist gate keepers within each organisation.

**Demographic:** 52(29. 5%) prescribers from primary-care and 25(25. 5%) prescribers from Secondary-care participated in the study. In primary-care, 33 (63. 5%) participants were male whereas only 13 (52%) were male in secondary care.

**Results:** All secondary care prescribers reported that their professional experience has a significant influence on their prescribing, in comparison to 51(98. 1%±3. 8) primary care participants. Findings show that 38(73% ±12) primary care participants agreed that their choice of therapy is influenced by financial considerations e. g. budget, compared to only 10 (40%±19. 2) secondary care participants ( $p= 0. 002$  MWU). Additionally, it can be seen that secondary care prescribers are far less likely to change a prescription if they believe it will have a large impact on the budget ( $p= 0.$   
<https://assignbuster.com/factors-which-influence-the-decision-making-when-prescribing/>

013 MWU). Results show that 29(55. 8%±13. 4) primary care prescribers, compared to only 9(36%±18. 8) in secondary care, would definitely stop a prescription if there was little evidence of clinical effectiveness supporting its use ( $p= 0. 057$  MWU).

Conclusion: The results demonstrate that there are important, significant differences between primary and secondary care prescribing influences and ideals. Most notably primary care clinicians feel the cost of medicines to be a much more important criterion in prescription choice, in comparison to those in secondary care. In addition to this the extent to which primary care prescribers reported that hospital formularies influenced their prescribing choices was greater than might be expected.

## **Introduction:**

Medicines prescribed in primary care accounted for 72. 8% of the total National Health Service drugs budget costs. 1 The high cost of primary care prescribing can be partially explained through analysis of secondary care prescribing patterns. It has become common practice for secondary care clinicians to give patients a limited supply of medications on discharge therefore transferring the cost of prescribing to the General Practitioners (GPs) in the community. It was found that the main reason for this was the presence of restrictive outpatient dispensing policies. 2 By reducing the amount of medication given to the patient on discharge, these policies force secondary care prescribers to request GPs to continue the supply and monitoring of the treatment. 2 As a result, over a fifth of all primary care prescriptions were initiated or strongly influenced by secondary care. 3

Understandably, patients expect GPs to continue their hospital initiated  
<https://assignbuster.com/factors-which-influence-the-decision-making-when-prescribing/>

medicines. Stevenson et al. suggested that the relationship existing between the patient and prescriber added to the pressure of making a prescription. They carried out qualitative interviews with 21 GPs in the Birmingham area and one GP even went so far as to state that “ the tail wags the dog” with respect to prescribing pressure. 4

Interestingly, a survey carried out in the UK by the national audit office found that out of 1000 GPs only a quarter reported to actively reviewing hospital prescriptions before continuing the prescription in primary care. 5 A possible rationale suggests that GPs feel ill-equipped to assess the appropriateness of secondary care prescriptions. Often with the arrival of a prescription from the hospital comes greater responsibility, costs and complex monitoring. A report by Sibbald et al. suggested that primary care prescribers felt inadequately trained for such clinical responsibilities, also calling for improved communication across the interface. 2 A further example of the poverty of communication between primary and secondary care is the limited

evidence for sharing of formularies. Research has demonstrated that the majority of hospitals do not routinely provide primary care GPs with a copy of their formulary, instead they rely upon proactive GPs to make a request. 6

The Primary care formulary is often vastly different in comparison to secondary care formularies. There is increasing concern in primary care as hospital formularies allocate expenditure for newer, complex, and expensive medication. A study by Reichert et al. has demonstrated that primary care physicians feel the cost of medicines to be an important criterion in <https://assignbuster.com/factors-which-influence-the-decision-making-when-prescribing/>

prescription choice in comparison to secondary prescribers<sup>7</sup> Therefore with the increasing prevalence of primary care GPs continuing expensive medication, primary care prescribers are being encouraged to strictly adhere to prescribing budget guidelines and formularies. An example is the traffic light system that has been implemented across most of the UK. This policy stipulates that GPs are only allowed to initiate ‘green light’ medication. ‘Amber light’ medication however, can be prescribed in general practice if the therapy had originally been initiated by a secondary care clinician. <sup>8</sup>

Alongside concern regarding the growth of pharmaceutical expenditure, there is also a growing concern regarding inappropriate prescribing which moves away from guidelines. <sup>3 9</sup> There is evidence to be found from observational studies, where eligible patients are not always prescribed the correct pharmaceutical therapies indicated for their condition. The consequence of poor prescribing can result in the loss of health and quality of life benefit for patients and society in general, in addition to an increase in health care expenditure. <sup>2</sup> Therefore, for health and economic reasons, it is important to follow the recommended optimal and established drug prescription guidelines. However, prescribing is not only influenced by budgeting guidelines and specific clinical knowledge. A qualitative study in Denmark showed that additional to drug price, pharmaceutical industry sales representatives, also had a significant influence on a physician. <sup>10</sup>

The pharmaceutical companies spend many hundreds of millions of pounds annually marketing their medicines to GPs. <sup>5</sup> However, research has reported that the message these representatives deliver often comes with a bias. <sup>11, 12</sup> Therefore, it is essential that other sources of evidence based <https://assignbuster.com/factors-which-influence-the-decision-making-when-prescribing/>

medicine are utilised. To help promote the adoption of the correct evidence-based practices, many prescribing authorities allow for the role of a local opinion leader. This initiative is proven to successfully improve the uptake of clinically favourable therapy. 13 Alternatively prescribers are encouraged to use internet based resources for example British medical journal, however, Theodorou et al reports that even this source can be unreliable. A study comparing Greek and Cypriot prescribers reported that Greek doctors used more information from publications (journals, proceedings of conferences and textbooks) and less information from pharmaceutical sales representatives. 14 The opposite was apparent in Cyprus, where proceedings of conferences and information from sales representatives are viewed with greater importance, followed by publications. 14

Furthermore, with regards to new medication, sales representatives are the first source of information in Cyprus and second choice in Greece. 14 These findings are consistent with other studies, where it has also been shown that pharmaceutical sales representatives are highly influential in regards to decisions to prescribe new drugs<sup>15 16</sup>. Another study, regarding the information sources which are mostly used by physicians, displayed similar results. It can be seen that publications and pharmaceutical sales representatives were the most popular sources of information, and that internet-based sources were used by half of the participants. 17

Overall influences on prescribing are widely recognised. However, literature comparing the differences between hospital and primary care prescribers is extremely limited. Theodorou et al. reported that one limitation to their

study was the lack of distinction between primary and secondary care physicians. 14

It is notable that no other study has attempted so far to analyse the prescribing behaviour and its determinants amongst both primary and secondary care physicians in the UK. The paper outlines the main factors influences on prescribing decision making and the drug prescription choices. This study also investigates the role of differing formularies across the prescribing interface.

### **Method:**

A literature review was conducted in order to inform the design of a five section questionnaire. This was piloted on primary and secondary care practitioners to ensure face validity and to assist in estimating time for completion.

### **Questionnaire Design:**

The 37 question multi-component survey enabled for qualitative and quantitative data to be compiled. Sections 1-3 required respondents to complete a range of 5-point likert scale questions. A similar 3-point scale was used for section 4.

Choosing therapy: The main objective for section one was to investigate the influences on a prescriber's behaviour. Influences on the practitioner may indicate reasons for the variations in primary and secondary care prescribing. Relevant formularies, internet programmes, media sources and peer influencing were all analysed to give a holistic overview of the current

situation. Currently there is little evidence within literature to quantify the influence of alternative information sources.

Prescribing information sources: Reflects participant's opinions on cost effectiveness and its relevance to prescribing. Physician's opinions on factors influencing the addition of a medicine to a prescribing formulary were also questioned.

Continuation of therapy initiated by another clinician: Reflects attitudes towards the continuation of a prescription initiated by another prescriber. Issues have been raised regarding the continuation of therapy and prescription reviewing by primary care practitioners. 16 18 The participant was given various scenarios and questioned in regards to the likelihood that they will continue with that prescription.

Your Views and opinions: This section gave the physician an opportunity to make alternative comments surrounding issues raised by this questionnaire. The prescriber was also encouraged to share their views and experiences. This qualitative data was used to reinforce the answers that the questionnaire's likert scales failed to explore in sufficient depth.

Information about you: Demographic characteristics of the participant were collected. This allowed for analysis of aspects such as prescribing differences between newly qualified and older more experienced practitioners. However, no identifiable information was required on the questionnaire.



**Setting:**

The study was conducted in Suffolk during March 2010. Questionnaire packs were developed containing; one questionnaire, a cover letter and a participant information sheet (PIS). The cover letter and the PIS provided detailed information regarding the study, enabling the participant to make an informed decision about whether or not to complete the questionnaire. The packs were then sent to potential participants post research governance and ethical approval. Implicit consent was assumed on completion and return of the questionnaire.

**Participant Identification and Recruitment:**

All primary and secondary care prescribers including nurse specialists within NHS Suffolk and Ipswich Hospital were invited to participate. Excluded from the study were locums and relief prescribers within NHS Suffolk or Ipswich Hospital. This is due to the fact that it was unreasonable to expect up to date knowledge of local formulary from these prescribers.

NHS Suffolk PCT: All eligible primary care prescribers were identified by a member of the PCT prescribing team. Address labels were generated and questionnaire packs were sent to all primary care practices within NHS Suffolk. The practice manager was asked to distribute the individual packs to each eligible prescriber. Each pack was accompanied by a returnable stamped addressed envelope.

Ipswich Hospital NHS: All eligible participants were identified by a member of the Ipswich hospital pharmacy team. Pharmacists working at Ipswich Hospital ensured the distribution across each ward. Secondary care

questionnaires packs were all supplied with an envelope addressed to return to the hospital pharmacy department via the internal postal system.

### **Sample size estimation:**

Secondary Care: An estimated number of 220 eligible prescribers were identified within Ipswich Hospital. However due to the capacity of the distribution process only 98 questionnaires were circulated. Literature suggests a study of this variety expects a participation rate of around 50% in secondary care.

Primary Care: An estimate of over 300 eligible prescribers was identified by the gate keeper. Again limited by the distribution process, questionnaires were sent to 176 prescribers. A participation rate of 60% was expected, based on comparable literature findings. 15-17

### **Data analysis:**

The demographics were produced characterising the participant population. The ordinal data was dichotomised as follows: 'strongly agree' and 'agree' were combined and regarded as 'agree'. In addition to this 'strongly disagree' and 'disagree' were regarded as 'disagree'.

Statistical analysis was conducted using SPSS version 16. Initially the analysis of the frequencies, mean (std. d) and median (quartiles) were calculated. A Mann-Whitney U test was used to identify the significant difference between primary and secondary care, by producing P-values. This shows the independence of the non-parametric data. After comparing to the demographic a subsequent Spearman's rank correlation coefficient test was

conducted. This identified the correlation coefficient and the statistical significance of the ordinal data trend. A Kruskal Wallis test was used to compare the profession of participants against the 'hours worked per week'. The qualitative data was used to reinforce the statistical findings.

## Results:

52(29. 5%) prescribers from primary-care 25(25. 5%) prescribers from Secondary-care participated in the study. In primary-care, 33 (63. 5%) participants were male compared to 13 (52%) in secondary care. All of primary-care participants were doctors, whereas only 12 doctors participated (48%) from secondary-care. The remaining secondary-care participants were 7 (28%) nurses and 6 (24%) junior doctors. Primary care participants were registered for significantly longer, with a median (IQ) years of 25. 00 (15. 5, 29. 0), compared to secondary care participants who reported a median (IQ) years of 5 (3. 5, 9. 5) ( $p < 0. 01$ , T-test). Primary care participants also reported working fewer clinical hours per week ( $p = < 0. 01$  MWU). Junior doctors are shown to work significantly longer hours per week than doctors and nurses ( $P = 0. 022$  Kruskal Wallis Test).

## Influences on Prescribing:

Figure 1 presents the percentage of prescribers within primary and secondary care that agree with potential influences. It can be seen that 45(86. 5%,  $\pm 9. 2$ ) primary care prescribers agreed that their personal experience influences their choice in therapy, in comparison to 18(72%,  $\pm 17. 6$ ) in secondary care ( $p = 0. 178$  MWU). All secondary care prescribers reported that their professional experience has a significant influence on

their prescribing. Similarly 51(98. 1%±3. 8) primary care participants gave the same response ( $p= 0. 583$  MWU).

### **Colleagues influence on prescribing:**

From figure 1 it can be seen that generally both primary and secondary-care prescribers agreed that their choice in therapy is influenced by the clinician that initiated the therapy, with 38(73. 1%±12) primary-care participants and 18 (72%, ±17. 6) secondary-care participants agreeing. Prescribers also agreed that their choice in therapy is influenced by their colleague's opinions; with 30(57. 7%, ±13. 4) primary care prescribers and 16(64%, ±18. 8) secondary care prescribers agreeing ( $p = 0. 587$  MWU). Further analysis shows that the longer a prescriber has been registered, the more likely they are to be influenced by a colleague ( $R=-0. 41$ ,  $p=> 0. 05$ ).

It is reported that there is a large influence on secondary-care prescribers from nurse specialists. Overall 10(40%, ±19. 2) secondary care prescribers agreed that nurse specialists influence their choice of therapy, compared to 13(25%, ±11. 7) primary-care prescribers ( $p= 0. 472$  MWU).

### **Patient Influences:**

It can be seen in figure 1 that when questioned about the influence of patients on their prescribing 14(26. 9%, ±12) primary care prescribers agreed that patient pressure influences their prescribing, compared to 2(8%, ±10. 6) secondary care prescribers ( $p= 0. 075$  MWU). Analysis also showed that newly registered secondary care prescribers are more likely to be influenced by the patient compared to their more experienced counter parts. ( $R = -0. 596$ ,  $P= 0. 002$  Spearmans)

Most primary care prescribers agreed that patient acceptability of a medicine is an important factor within a prescribing formulary 45(86. 5%,  $\pm$  9. 2) whilst only 17(68%,  $\pm$ 18. 2) secondary care respondents agreed or strongly agreed ( $p= 0. 003$  MWU).

### **NHS Prescribing Resources Influence:**

1 in 3 (34. 6% $\pm$ 12. 8%) of all primary care prescribers agreed that they are influenced by the hospital formulary, in comparison to 100% of secondary care prescribers ( $p = <0. 01$  MWU). Furthermore, 46 (88. 5%,  $\pm$ 8. 6) primary care participants, compared to 14 (56%,  $\pm$ 19. 4) secondary care participants, agreed that they are influenced by the preferred drugs list and the traffic light system ( $P= 0. 041$  MWU). When comparing the differing professions a total of 54 (84%,  $\pm$ 8. 9) doctors agreed to being influenced by these prescribing resources compared to only 3 (42. 3%,  $\pm$ 39) nurses and 3 (49%,  $\pm$ 37) junior doctors.

In addition to this most primary care prescribers agree (30, 57. 7%  $\pm$ 13. 4) that their choice in therapy is influenced by clinical priority groups.

Conversely, less than half as many secondary care prescribers responded in this manner (8, 25. 7%  $\pm$ 17. 1) ( $p= 0. 017$  MWU). In total only 38 (49%,  $\pm$ 11. 1) of all the prescribers are influenced by the clinical priority group. It is apparent that the prescribers who were most influenced were those who had been registered the longest ( $R= 0. 189$ ,  $P= 0. 099$ ).

Further breakdown of the results shows that doctors are far more likely to agree that clinical priority groups influence their therapy 35(54. 6%,  $\pm$ 12. 1), compared to junior doctors 2(33. 3%,  $\pm$ 37), or nurses 1(14. 3% $\pm$ 25).

Results also demonstrate that three times as many primary care prescribers (65. 4%  $\pm$ 12. 9%) were influenced by local opinion leaders, significantly higher when compared to secondary care prescribers (20%  $\pm$ 15. 6%) ( $p = 0. 002$  MWU). However, 15 (60%,  $\pm$ 19. 2%) secondary care prescribers state that they are “ neutral” to the influence of the local opinion leaders. A comparison of the different professions demonstrates that doctors (34, 54. 6%  $\pm$ 12. 1) are more influenced by local opinion leaders than junior doctors (2, 33. 4% $\pm$ 37) and nurses (2, 28. 6% $\pm$ 33. 2).

Additionally many GPs reported that they are also influenced by their own “ in-house” formulary, stating that it is regularly reviewed by the doctors within the practice, evaluating evidence and cost.

### **Media Influence on Prescribing:**

Data shows that 21 (84%  $\pm$ 14. 3%) secondary care participants compared to 28 (53. 8% $\pm$ 13. 5%) primary care participants disagreed that their prescribing is influenced by magazines and newsletters ( $p= 0. 003$  MWU). However analysis suggests that prescribers who have been registered longer are more likely to be influenced by magazines and newsletters ( $R= 0. 212$ ,  $P= 0. 064$  Spearmans).

It appears that the majority of participants disagreed that prescribing is influenced by results from generic internet search websites e. g. google. Analysis shows that 3(12%,  $\pm$ 12. 7) secondary care prescribers and 4(7. 7%,  $\pm$ 7. 2) primary care prescribers agreed that they are influenced ( $p= 0. 873$  MWU). It can also be seen that 2(33%) junior doctors compared to 5(7. 8%) doctors agreed.

In comparison 37(71. 2%±12. 3) primary care participants agreed that evidence based internet sources, e. g. British medical journal, influence their prescribing compared to 12(48%±19. 5) secondary care participants. Further breakdown of the professions shows that only 2(33. 4% ±37) junior doctors agreed with this claim compared to 42(65. 6% ±11. 6) doctors, and 5(71. 4% ±33. 6) nurses.

### **Cost Related Outcomes:**

Findings show that 38(73%±12) primary care participants agreed that their choice of therapy is influenced by financial considerations e. g. budget, compared to 10 (40% ±19. 2) secondary care participants ( $p= 0. 002$  MWU). By comparing the mean amount of years these two groups were registered for it can be seen that those who agreed tended to have been registered significantly longer than those who disagreed ( $R= 0. 250$ ,  $P= 0. 028$  Spearmans).

Furthermore, 41(78. 8% ±11. 1) primary care prescribers agreed that the therapy they chose is influenced by cost, compared to 11(44%±19. 4%) secondary care prescribers ( $p= 0. 001$  MWU). There is a distinct difference between the ' mean' years registered for those who strongly disagreed (2. 5 years) and strongly agreed (22 years)( $R= 0. 283$ ,  $P= 0. 013$  Spearmans).

Additionally, it can be seen that secondary care prescribers are far less likely to change a prescription if they believe it will have a large impact on the budget. 11(44%±19. 4) secondary care prescribers answered ' unlikely' to stopping the prescription, in contrast to a significantly fewer figure of 9 (17. 3%±10. 2) primary care prescribers ( $p= 0. 013$  MWU). It can also be seen

that prescribers who have been registered longer are more likely to 'definitely' change a prescription of this nature ( $R = 0.271$   $P = 0.017$  Spearman's).

Results show that 46 (88.5%  $\pm$  8.6) primary care respondents agreed that the cost of medication is an important factor when comprising a prescribing formulary, compared to 10 (40%  $\pm$  19.2) secondary care prescribers ( $p = <0.01$  MWU). In addition to this 9 (36%  $\pm$  17.2) secondary care participants disagreed with the same statement.

Data suggests that 9 (36%  $\pm$  17.2) secondary care participants agree that the hospital formulary only lists medicines that are cost effective, compared to 21 (40.4%  $\pm$  13.5) primary care participants ( $p = 0.489$  MWU). When only considering secondary care doctors, this proportion was reduced to 25% ( $\pm$  24.5) answering in agreement. It was also found that 36 (69.2%  $\pm$  12.5) primary care respondents agreed that the preferred drugs list and traffic light system only lists cost effective medicines, compared to only 4 (16%  $\pm$  14.4) secondary care ( $p = <0.01$  MWU). Significantly more primary care prescribers (75%  $\pm$  11.7) agreed that the prescribing incentive scheme encourages the prescribing of cost effective medicine, compared to secondary care prescribers (32%  $\pm$  18.2) ( $p = 0.002$  MWU).

One particularly interesting participant response states "If there are two or more drugs of equal efficacy for the individual patient, then the cheapest option should be used. We should not compromise efficacy or patient concordance by using cheaper alternatives."



## **Evidence Based Medicine Related Outcomes:**

Data demonstrates that 25(100%) and 46(88%±12. 7) primary and secondary care participants respectively, agreed that evidence based medicine should be considered for medicines included in a formulary (p= 0. 233 MWU). The majority of both primary and secondary care respondents, 43(82%±10. 4) and 20(80%±15. 6) respectively, agreed that NICE recommendations are important when deciding whether a medicine should be included in a prescribing formulary (p= 0. 786 MWU).

However, less than one third of secondary care prescribers (20% ±15. 6) are influenced by local opinion leaders compared to a larger number of primary care prescribers (65. 4% ±12. 9) (p = 0. 002 MWU). Doctors (54. 6%±12. 1) were more influenced by local opinion leaders compared to junior doctors (33. 4%±37. 7 agreed) and nurses (28. 6%±33 agreed).

Both primary and secondary prescribers reported that they are not influenced by drug company advertising. It can be seen that 37(71. 2%±12. 3) and 19(76%±16. 7) primary and secondary care prescribers respectively indicated that they disagreed with the statement, suggesting they are influenced by the drug companies when prescribing (p= 0. 102 MWU). However, 2(8%±10. 6) secondary care respondents agreed with the statement compared to 3(5. 8%±6. 2) respondents in primary care.

## **The Continuation of a Script:**

Results indicate that 45(86. 5%, ±9. 2%) primary care participants would 'definitely' change the prescribed therapy, compared to only 15(60%, ±19.

2%) secondary care, if they felt the incorrect medication had been prescribed ( $p = 0.011$  MWU).

Furthermore 29(55.8%±13.4) of primary care prescribers compared to only 9(36% ±18.8) of secondary care would definitely stop a prescription if there were little clinical effectiveness evidence supporting its use ( $p = 0.057$  MWU). Of the secondary care participants, only 3(25%±25.5) doctors would definitely change the prescription. From the demographic it can also be seen that those that would definitely change the prescription have on average been registered longer than the other participants( $R = 0.131$ ,  $P > 0.05$  Spearmans).

Primary care prescribers are far more likely to stop a prescription if they are unfamiliar with a medication. 10(19.2% ±10.7) primary care prescribers answered that it was 'unlikely' that they would change the prescribed therapy, compared to 10(40% ±19.2) secondary care prescribers ( $p = 0.04$  MWU). Only 11(21%±11) primary care respondents would 'definitely' stop a prescription if they were unfamiliar with the dosage regime compared to 11(44%±19.4) secondary care participants ( $p = 0.424$  MWU). However on further analysis of the individual professions 6(50%±28) secondary care doctors stated that they are unlikely to change the prescription compared to 15(28%±12.2) of primary care doctors.

Slightly more secondary care participants (8, 32% ±18.2) stated they are unlikely to change a prescription if uncertain about explaining the treatment compared to (13, 25%±11.7) primary care participants ( $p = 0.783$  MWU). 13(25%±11.7) primary care participants stated that they are 'definitely'

likely to stop a prescription if they have a lack of knowledge about the medicine's side effects compared to 5(20%±15. 6) of secondary care prescribers ( $p= 0. 479$  MWU). A correlation can be seen showing that the more years a prescriber has been registered, the more likely they are to change a prescription ( $R= 0. 165$ ,  $P=> 0. 05$  Spearmans).

A comparison of the professions shows that 6(11. 5% ±8. 5) of primary care doctors are 'unlikely' to alter a prescription presenting with unlicensed medication compared to 4(33%±26. 6) of secondary care doctors ( $p= 0. 206$  MWU).

Results show that 10(40% ±19. 2) of secondary care participants stated that they are 'unlikely' to stop a prescription that requires specialist manufacturing, compared to 6(11. 5%±8. 6) of primary care ( $p= 0. 002$  MWU). Further analysis also shows that the longer the prescriber has been registered the more likely they are to change a prescription of this type ( $R= 0. 236$ ,  $P= 0. 039$  Spearmans).

General trends were reported by primary care prescribers regarding the continuation of a prescription. GPs suggest that often drugs are stopped by hospitals by mistake or without communicating a reason. They also suggest it is very difficult to get in touch with the hospital prescriber if this occurs.

## Discussion:

The low response rate limits the generalisability of the results. However, the population demographic affords some confidence in the findings, as they are a good representation of the population when compared to similar studies. 2

14 22 The significantly higher average of 'years registered' in primary care  
<https://assignbuster.com/factors-which-influence-the-decision-making-when-prescribing/>

compared to secondary care can be attributed to the natural progression of the medicine profession, with the more experienced clinicians transferring across from secondary care to general practice. Recognition by both sectors reported that professional experience is the main driving factor behind prescribing. This is supported by a qualitative study of 19 GP's by Freeman et al. whose results also state the importance of professional experience in clinical practice. 23

There is a significant reported influence on primary care prescribing by the preferred drugs list, the traffic light system, clinical priority groups and local opinion leaders. This suggests that primary care prescribers are possibly using a wider range of prescribing resources to influence their therapy choices compared to secondary care prescribers. Current literature also supports this hypothesis by highlighting a larger selection of prescribing information sources used by GPs compared to hospital doctors. 24

The extent to which primary care prescribers reported that hospital formularies influenced their prescribing was higher than might be expected. Previous research demonstrates that the majority of hospitals do not routinely provide primary care GPs with a copy of their formulary. 6 Research suggests that the majority of primary care prescribers originate from a secondary care setting. 25 Therefore, this previous experience may justify the stronger influence of the hospital formulary.

Efficacy, effectiveness and economics are the key influences in an ever-changing formulary or prescribing policy. 26-28 Therefore, up-to date evidence based knowledge is essential when prescribing, 29 which is why

results showing that only a small percentage of secondary care prescribers are influenced by evidence based internet sources is surprising. These results, in combination with the hospital formulary being the only significant influence on secondary care prescribing, may suggest that hospital prescribers rely on secondary information sources, rather than evaluating the raw data themselves. A study consisting of 430 doctors was used to analyse prescribing information sources. It suggested that GPs are more likely to use primary information sources, for example medical journals, compared to hospital doctors who were prone to using secondary information sources, for example senior colleagues and the British national formulary<sup>31</sup>

A study by Reichert et al. has demonstrated that primary care physicians feel the cost of medicines to be an important criterion in prescription choice. <sup>6</sup> The results from this study echoed this statement. The significantly reduced influence of cost of medicine on secondary care prescribing may be explained by the lack of budget inhibitions within the hospital formulary. These inhibitions are present because the hospital discharge outpatient dispensing policy often only supplies enough medication for 14 days. <sup>6</sup> Sibbald et al also suggest that in secondary care it has become common place for clinicians to give patients a limited supply of medications on discharge and transfer the cost of prescribing to the GP in primary care. Furthermore, ou