

DECISION MAKING BY COMMUNITY PHARMACISTS WHEN MAKING AN OVER-THE-COUNTER DIAGNOSIS - A PILOT STUDY

Shaminder Bhogal, Final Year (4th year) MPharm Undergraduate Student, Paul M Rutter BPharm, PhD Professor of Pharmacy Practice

Pharmacy Department, MA Building, University of Wolverhampton, Wulfruna Street WV1 1SB. Correspondence to: paul.rutter@wlv.ac.uk *SelfCare* 2013;4(1):20 - poster1

INTRODUCTION

Over the last 15 years healthcare policy in developed countries has placed greater emphasis on empowering patients to exercise self-care, especially for conditions deemed minor and self-limiting. The UK government has published numerous papers detailing how maximizing self-care can be achieved. Current UK health policy advocates making medicinal products more freely available to the general public.

Pharmacy research has focused on what motivates patients to exercise self-care¹, the acceptance of other healthcare professionals toward greater availability of medicines for non-prescription sale/supply^{2,3} and auditing pharmacist advice^{4,5}. However, how pharmacists arrive at a diagnosis has been largely neglected. Two studies, by way of example, assessed the questions pharmacists ask and the actions taken but did not attempt to understand the reasoning pharmacists employed to reach the decisions they made^{6,7}. One recent study has assessed factors that influence pharmacists decision making, although this study concentrated on their selection of non-prescription medicines rather than how they made a diagnosis⁸.

The UK consumer organization 'Which?' has frequently highlighted the deficiency in the diagnostic ability of pharmacists when assessed using mystery shoppers^{9,10}. This pilot study explored how community pharmacists go about making a diagnosis in order to understand their reasoning.

METHODS

A semi-structured interview with each recruited pharmacist took place immediately after a patient consultation that required the pharmacist to diagnose the patient's signs and symptoms.

All pharmacies (n=147) from two co-terminus National Health Service boundaries in the Midlands region of England were sent postal information on the study. The information was addressed to the 'pharmacist in charge' and included a cover letter, participant information sheet and consent form. Nine pharmacists returned completed consent forms. SB then contacted each pharmacist to arrange a convenient date for the researcher to attend the pharmacy. At this point four pharmacists decided to withdraw from the study, leaving a sample of five pharmacists.

Each interview was recorded and transcribed verbatim by SB. Transcripts did not identify participants. Data were collected and analyzed in iterative cycles to allow themes to be derived. Coding of data was initially performed by SB and verified by PR.

This study was approved by the Behavioral Sciences Ethics Committee in the School of Applied Sciences, University of Wolverhampton.

RESULTS

Three major themes were identified from the interviews that helped to explain the process pharmacists used when making a diagnosis:

1. **Information gathering via structured patient questioning;**
2. **Pharmacists' prior experience; and,**
3. **Subject specific knowledge.**

1. Information gathering via structured patient questioning.

All five pharmacists used a mnemonic driven approach entitled 'WWHAM' (standing for: **W**ho is the patient; **W**hat are the symptoms; **H**ow long have the symptoms been present; **A**nanything tried already and, other **M**edication). Comments made by the pharmacists included:

'Of course we have to check all the WWHAM questions and once I'm happy with all that information I can make a decision... There needs to be a system in place mentally, so I just follow the WWHAM questions and maybe they are not in specific order all the time.'

(Pharmacist 1)

'I always use the WWHAM protocol... That would be my approach with any request.'

(Pharmacist 4)

Three of the five pharmacists acknowledged that the WWHAM mnemonic was not solely relied upon and supplementary questions would be asked depending on the specific context:

'I tend to use the WWHAM questioning but I tailor it to each patient. You still need to ask questions around it but I base everything around WWHAM.'

(Pharmacist 2)

'I add more questions on to WWHAM depending on each patient and their case as different cases require me to ask different questions.'

(Pharmacist 5)

2. Pharmacists' prior experience

All pharmacists reported that previous consultations with patients presenting with similar symptoms helped to shape their decision-making. This was illustrated both from the consultations observed and from more general comments made during the interview:

'I've been practicing for 5 years now and you get more familiar with what treatment to give out. Especially skin problems, because the first summer I qualified I didn't know what a heat rash was but when I saw it frequently during that time I just knew when I saw it again what it was straight away.'

(Pharmacist 2)

3. Subject specific knowledge.

The third theme identified was in relation to the pharmacists' knowledge base; this did vary from pharmacist to pharmacist, but on the whole, showed inconsistencies when compared to currently accepted medical opinion:

'...I recommended she see her GP (medical practitioner), because if she had them before (mouth ulcers) it may be a sign of vitamin deficiency.'

(Pharmacist 2)

'...certain additional things you ask...that ring alarm bells. Colored phlegm is always one, so that was true in this case (patient presented with yellow sputum), and she would need to go to the doctor.'

(Pharmacist 3)

DISCUSSION

This study looked at what factors affect community pharmacists' decision making when arriving at a diagnosis. The process seemed largely based on asking set questions in a set order to gather information, which was, to some extent, augmented by drawing on previous experiences. This cohort of pharmacists used the WWHAM mnemonic for information gathering. In the consultations observed and subsequent interview, it was clear that very few questions other than the WWHAM questions were asked before a decision was made and appears to shape the basis on which they made decisions. All pharmacists drew on previous experience (often referred in a medical diagnosis context as pattern recognition) to some extent. Pattern recognition is often attributed to a practitioner exhibiting expertise in that situation and clinical context, and in medicine is often associated with time and practice; the novice and expert practitioner. However, in this study it was not apparent that greater levels of experience contributed to their ability to make appropriate decisions.

Of course practitioners must have an adequate knowledge base to inform decision-making. This has relevance in this study where the knowledge base of the pharmacists could be called in to question. If knowledge is poor, lacking or out of date, then this will potentially have an adverse affect on the final diagnosis.

Limitations: The sample size in this study is small and it is unknown whether data saturation was achieved, although all pharmacists interviewed gave very similar responses. Because of the small number of participants the findings do need to be viewed with caution and further larger studies need to take place to test these findings; this work is on-going.

CONCLUSION

The findings from this study provide insight in the way UK pharmacists arrive at a diagnosis. It is clear that the WWHAM mnemonic is heavily relied upon as the main form of data gathering and prior clinical experience is drawn on to help decision-making. It also appears that inappropriate knowledge may be hindering the process. Further work is required to substantiate these findings.

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