Final Report for the IMAB-Q Study:

Validation and Feasibility Testing

of a Novel Questionnaire to Identify Barriers to

Medication Adherence

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Executive Summary

Issues and Approach

An estimated 50% of patients prescribed medication for chronic conditions do not adhere to the prescribed directions resulting in increased morbidity and NHS resource wastage. Despite medication non-adherence being described by the World Health Organisation as “a worldwide problem of striking magnitude,” progress with understanding the barriers to adherence experienced by patients has been modest. This has led to a call for approaches grounded in empirical evidence and health psychology theory.

This research team have developed a questionnaire, known as the Identification of Medication Adherence Barriers Questionnaire (IMAB-Q), which is intended to support patients and practitioners to identify barriers. This study aimed to determine whether IMAB-Q is valid, reliable and suitable for identifying medication adherence barriers in routine community pharmacy practice.

Nine pharmacies in Norfolk, UK were selected to distribute the IMAB-Q to patients prescribed medication for heart disease prevention. A Visual Analogue Scale (VAS) was included with the IMAB-Q to measure self-reported medication adherence. A small proportion of patients were asked to complete the IMAB-Q twice with a two-week interval to test whether, when repeated, it provided the same results. Pharmacists were asked to use IMAB-Q in routine patient consultations (medicines use reviews) to explore feasibility in routine practice. Finally, pharmacists were invited to attend a focus group to capture their perspectives on using the IMAB-Q.

Answers found

A response rate of 47.33% was achieved from 1407 distributed questionnaires. For six questionnaires, no valid consent form was received and therefore 660 questionnaires were included in the analysis. A valid response to all 30 IMAB-Q statements was obtained from 608 people (92.12%), suggesting good patient readability.

Seven pharmacists attended a focus group to discuss using the IMAB-Q in medicines use reviews. Pharmacists found the questionnaire design to be clear, easy to read, and easy to respond to. They thought that the IMAB-Q could be a useful tool to guide medicines use reviews. There was a recommendation to make it shorter to improve usability. Conversely, the current length was thought to aid the patient in reflecting on their true medication adherence. A particular advantage of the IMAB-Q was to alert pharmacists to issues not routinely discussed, in particular negative emotions.

Self-reported medication adherence was generally high with a median (IQR) percentage adherence of 97% (94, 99). This was accurately reflected in the relatively low average IMAB-Q score of 50.27 from a possible maximum of 150 representing maximum barriers and 30 representing minimum barriers. Negative emotions and beliefs about consequences were the most frequently reported barriers.

A 10 item IMAB-Q accurately identified non-adherent patients because participants who reported low medication adherence were also significantly more likely to report barriers to adherence ($R = -0.14$, $p = 0.001$)

For patients who completed IMAB-Q twice, Spearman's rank correlation coefficient identified a significant, strong positive correlation ($R = 0.83$, $p < 0.0001$) demonstrating questionnaire test re-test reliability.

Background and context

Taking medication regularly is a complex behaviour and barriers may be practical (e.g. being unable to collect medication); physical (e.g. swallowing difficulties); and/or perceptual (e.g. concerns about side effects). Identifying a patient's barriers to adherence is an essential precursor to delivering individualised interventions grounded in empirical evidence and psychological theory. We have shown that the Identification of Medication Adherence Barriers Questionnaire (IMAB-Q) has the potential to support patients and practitioners to identify adherence barriers in practice.

We plan to undertake a further study to explore whether a brief community pharmacist led consultation supported by the IMAB-Q is more effective than the medicines use review for identifying and resolving barriers to medication adherence and thus improving health outcomes.