

Patient Choices Pertaining to Over-the-Counter Medication: A Literature Review

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Abstract

The aim of the study is to identify trends exhibited by patients in the UK about OTC medicines⁴² in terms of reasons and factors effecting decision making and choices about purchases. Balanced and comprehensive research into patient choices about OTC medication requires to ascertain both the negative and positive effects arising from the flourishing OTC medicinal industry; the ease of access of OTC has benefits for the health sector considering that the NHS⁴³ is overburdened, pressures from overworked and stretched medical professionals are relieved, that costs are being transferred to patients as paid customers as opposed to over-reliance on government spending under funding restraints. The research utilised a secondary approach drawing information collated from literature reviews, research articles and journals utilising qualitative and quantitative data. A full review of the research literature was undertaken and data analysis required the screening and organising of literature reviewed.

Keywords: Over-the-counter medication, OTC patient choice, non-prescription, purchase medication, UK medicine purchase.

Introduction

The relevance and importance of patients being informed of mechanisms and provided choice for exercising their right to decide which health and social care provisions and services they consent to being administered or provided accessibility to, is a matter recognised by the National Health Service (NHS), the government and increasingly the public themselves.

Patients' choices as to their own health and social care is their right to determine and is an exercise of freedoms and independence which can form attainment of respect and dignity, to be treated as human beings, be valued and afforded decisions as part of person-centred care. The government has reiterated a commitment to giving patients greater choice and control over how patients receive health care and to empower patients to shape and manage their own health and care. In some circumstances patients have legal rights to choose and must be given these choices by law (Gov.uk, 2016).

With the increasing commercialisation of pharmaceutical companies, ease of information retrieval on health conditions via the Internet and media outlets, liberalisation of regulation for dispensing and purchase of certain medications and ready available access of OTC medication an examination of patient choices and decision making is reviewed in this article.

OTC Medications

Total sales valuation of non-prescription OTC medicines (OTC) bought by consumers in the UK during 2014 was 2.53 billion GBP (Statista, 2015). This is a year on year increase that results in findings that make clear sales of OTC medicines had totalled £2.45bn in 2013, up by £52.3m compared with the previous 2012 (Connelly, 2014). OTC medicines are increasingly bought by patients for self-medication without attending appointments seeking professional medical advice. A societal perspective of understanding the broad reasoning why patients opt to purchase certain medication, may provide insight as to the

decision-making processes and factors that determine choices.

This paper presents findings from a literature review about OTC, in order to examine the reason patients choose to buy OTC medications. The King's Fund conducted a study in four local health economies in England between August 2008 and September 2009. From amongst their wider findings is the model of patient choice, which underpins health policies, requires that patients are

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⁴² Over the Counter is referred to as OTC throughout this article

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Table 1: Literature review inclusion and exclusion

Inclusion criteria	Exclusion criteria
Type of study: qualitative and quantitative primary studies	Type of study: commentary
Focus: Primary studies, focused on UK. On self-prescription, purchase information and decision making processes, private purchasing decision in a retail setting where medicine is sold with or without advice	Focus: Studies on generic medicinal distribution and dispensation from NHS services/ GPs that are not bought from Pharmacies, etc. Non-self-prescription
Limits: Year 2000+ onwards, English language only	Limits: pre-2000; in languages other than English

criteria for research aware of their ability to choose, want to choose and think choice is important. In their patient survey⁴⁴, 75 per cent of respondents informed choice was either 'very important' or 'important'; older respondents, those with no qualification, and those from a mixed and non-white background, were more likely to value choice. The results show there is some intrinsic value in offering patients a choice of provider, and that GPs' perceptions that it is younger, more educated patients who want choice, are misguided (Dixon et al., 2010). The significance in the study of the phenomenon about patients increasingly steering towards self-prescribed OTC medicines, lies in that 3,346 deaths were registered in 2014 in which drug related deaths made mention of prescription OTC medicines on the death certificates (Office for National Statistics, 2015). Further questions and studies are needed to ascertain how many of these deaths might have been preventable and if greater regulative amendments to OTC medicines could be justified.

The methodology for the research comprised a secondary review of existing academic literature and the data collection process required electronic searches of academic journals, dissertations and essays with accurate records held of search categories of key words and combinations, names of databases searched and the number and

content of results that arose from each unique search conducted. These processes of searching for relevant literature for inclusion in the research were repeated timely, until exhausted. This methodological process was repeated using Google Scholar, MEDline and CINAHL databases, until reaching the point of saturation. The search of literature was conducted using Google Scholar, CINAHL and MedLine / PubMed online library of academic databases over the years 2000-2016. The mesh terms and keywords searched were OTC medication, patient choice, non-prescription, purchase medications, OTC, patient choice, OTC drugs and UK medicine purchase. The articles were limited to those published in English and relevant to the United Kingdom.

Findings

For the literature review five relevant articles were included in the research synthesis proceeding from the data collation method and analysis process, Wazaify *et al.* (2004)⁴⁵, Hanna and Hughes (2011), Osborne and Luzac (2005), Hughes, Whittlesea and Luscombe (2002) and Gray, Boardman and Symonds (2011). Wazaify *et al.* (2004) found that 74.6% participants visit local pharmacies at least once every month with 32.2% stating they bought OTC medication at least on one occasion monthly, with 86.4% of participants reporting that they follow the medical guidelines of products. The researchers found that in Northern Ireland, the public were knowledgeable of the potential for abuse of OTC drugs and that painkillers were drugs that were most susceptible to be abused. Additionally, the findings indicated that one-third of participants had directly experienced OTC medicine abuse cases. Wazaify *et al.* (2004) evidenced the public had a heightened level of knowledge and awareness of the potential for abuse of OTC medicines. The findings suggest that pharmacists, when discharging their duties, could be more engaged in managing the potential for inappropriate OTC drug usage by patients.

Hanna and Hughes (2011) study of 1,461 people (18.8% males, 81.2% females; ages ranged from under 20 to over 60) found that influential factors in decisions when buying an OTC medicine included perceived effectiveness, familiarity with the name or brand and safety of the medicine. The majority of all respondents reported that knowledge of

44. 'Patient choice: How patients choose and how providers respond'

45. 'Societal perspectives on over-the-counter (OTC) medicines'

effectiveness of OTC medicines, was based on their previous usage. In instances of scientific evidence from drug trials to support effectiveness of a product, but it would not cause harm, two-thirds would still try the product regardless of consequences. Over 70% of participants 'agreed/strongly agreed' that people should be able to decide for themselves what OTC medicine they want, irrespective of scientific evidence about the medicine. Hannah and Hughes (2011) concluded that there was indecision regarding the need for evidence of effectiveness by the public when making choices of an OTC medicine, with individual autonomy and safety taking precedence over evidence. The study concluded pharmacists should realise that patients' expectations might conflict with established evidence-based practice.

Osborne and Luzac (2005) undertook a study⁴⁶ which found 268 OTC medicines were used by 119 (64.0%) patients and 117 (43.7%) were taken at least daily. Only 13 (4.9%) OTC drugs were recorded in the drug history taken at hospital admissions. They found 9.7% OTC medications were still taken during hospitalisation, but only 8 (31%) were recorded on drug charts. In terms of obtaining these OTC medicines, patients bought 183 (68.3%) items from pharmacies, 28 (10.4%) in health food shops and 57 (21.7%) elsewhere including supermarkets, homeopaths, or mail order. Patients had little knowledge of potential adverse effects (side effects) or contraindications. Osborne and Luzac (2005) highlighted that many patients use OTC medication prior to and during hospital stay, but that documentation in hospital notes were substandard. Hughes *et al.* (2002) study⁴⁷ found that patients generally had minimalistic awareness of the potential side-effects of the medication they consumed. However, this appeared not to affect their ability to identify adverse drug reactions (ADRs) because of medicinal usage. Further despite wide availability, patient information leaflets were scarcely utilised by the patients. These leaflets were ordinarily primarily read if the medicine was new or if a side-effect was experienced. Negative views held of the leaflets included poor design and long lists of side-effects. Hughes *et al.* (2002) reached the conclusion that accurate information and advice from

health care professionals could serve to support patients and to ensure they are better informed about the medicines they use.

Gray, *et al.* (2011) undertook a study⁴⁸ of 134 surveys and 38 interviews of women aged 25-44 years. Findings included recommendations from other people, both from health professionals and family members, were most often cited as influencing parents' and carers' choice of purchasing non-prescribed medication. Significant too was advertising and well-known brands of children's medicines. The Internet and other media outlets were less often cited as sources. Medicines leaflets and packaging were found to be useful although a significant minority admitted difficulty in understanding all the information therein. This study explored the information sources reported at the point of a specific medicine purchase, thus reflecting actual behaviour rather than general perceptions of useful sources. Parents and carers of pre-school children reported many professional and lay influences on their medicine purchase choices. Pharmacists and staff could consider these influences when advising children's medicine purchasers and a combination of spoken advice and written reminder information would meet the preferences of most purchasers.

The literature review represents five studies that answer the research question on patient choices about OTC medication. These studies are based in the United Kingdom and despite their different participant recruitment, variations in study design, data collection methods and mode of analysis, each study provides and identifies findings common with thematic overviews. The respective studies highlighted three similar findings that could be summarised as (1) the role that a pharmacist undertakes in influencing patient choice towards OTC medication, (2) concerns of the wellbeing and safety of consumers and patients in making choices and (3) the need for due emphasis placed on awareness and educational initiatives for patients to make informed choices about OTC medication.

There were several limitations encountered when conducting the literature review; two studies have disproportionate gender composition. An overrepresentation of women as a sample size of respondents has

⁴⁶ Over-the-Counter Medicine Use Prior to and During Hospitalisation

⁴⁷ 'Patients' knowledge and perceptions of the side-effects of OTC medicines'

⁴⁸ 'Information sources used by parents buying non-prescription medicines in pharmacies for preschool children'

demographic implications in not accurately being representative of the wider UK populace. The data collection phase of enacting the study design through initiating the inclusion and exclusion criteria limited the literature search but is positive, as the limitation is envisioned to provide focus, direct the search from the plethora of irrelevant studies and steer the literature review towards material of substance. All studies reviewed were from the United Kingdom, which provided a degree of relevance and familiarity to context, socio-economic and environmental factors to those within the UK, but however limited findings and potential for significance and generalisation to other countries.

The review found from all studies that there was a reliance of patients and consumers when making choices about OTC medication, to entrust health care professionals, in particular pharmacists. The implication from these findings is that the public are open to and seek advice from health professionals to formulate and influence decision making.

The review found that all studies into choices about OTC medication placed considerable attention and reflected a sense of concern towards health, safety and wellbeing of consumers and patients. The implication from these findings is that public opinion shares a degree of apprehension and alarm especially from those who experience abuse, overdose or uncertainties as to contraindications of OTC medication usage. The review found that information, awareness and educational endeavors as to choices about OTC medication are limited and insufficient. The implication from this finding is that in general, patients and consumers are not well placed to make independent informed decisions without supportive health care guidance.

A recommendation which emerges from the literature review is that pharmacists must be provided training to be accustomed of the importance of their relationship with the public. Patients and consumers place their faith in people of medical standing and positions of responsibility to maintain and safeguard their health. Pharmacists could better advise and inform parents, members of households and family members in influencing choices about OTC medication. Two of the studies have highlighted how members of the family were an influence in considerations of OTC medicine choice. The literature review findings suggest policy-makers, legislators and regulators need to do more to address safety concerns and allay fears of the public of OTC medications. It is

imperative that regulators focus upon deterring inaccurate claims by certain manufacturers of OTC medication who overstate the 'capabilities of their products' such as 'specific pain range' relief (Lagan, 2016) which has the potential to mislead the public, diminish public confidence and lead to dependency. There needs to be investment in finance, infrastructure and human resource by successive governments through the Department of Health and the NHS to educate and raise awareness of the public to OTC medication implications to health and to advise on responsible usage, contraindications and severity of OTC drug abuses. Shared responsibility for this should be discharged to respective local authorities (through Public Health England oversight) and NHS regional teams that undertake healthcare commissioning and delivery across the United Kingdom. Improvements to existing educational health material, particularly medication leaflets should be considered as leaflets were usually only read if the medicine was new or if a side-effect was experienced. Negative views of the leaflets included poor design and long lists of side-effects.

Literature reviewed was from the 2002-2011, to provide further depth and overview of recent developments as to the present context of public health, a recommendation would be that additional research be conducted on OTC medication inclusive of relevant current studies.

References

- Connelly, D. (2014). OTC medicines: a breakdown. *The Pharmaceutical Journal*, 293(7828).
- Deaths related to drug poisoning in England and Wales, 2014 registrations. (2015). 1st ed. [ebook] London: Office for National Statistics, Crown, p.10. Available at: http://www.ons.gov.uk/ons/dcp171778_414574.pdf [Accessed 29 Nov. 2017].
- Dixon, A., Robertson, R., Appleby, J., Burge, P., Devlin, N. and Magee, H. (2010) *Patient choice: How patients choose and how providers respond*. London: King's Fund.
- GKA, (2015). *Medical Market Research*. [image] Available at: <http://blog.gilliankenny.com/blog/ccgs-medical-market-research> [Accessed 29 Nov. 2015].
- Gov.uk. (2016). *The NHS Choice Framework: what choices are available to me in the NHS? - GOV.UK*. [online] Available at: <https://www.gov.uk/government/publications/the-nhs-choice-framework/the-nhs-choice-framework-what-choices-are-available-to-me-in-the-nhs> [Accessed 17 Jun. 2017].
- Gray, N., Boardman, H. and Symonds, B. (2011). Information sources used by parents buying non-prescription medicines in pharmacies for preschool children. *International Journal of Clinical Pharmacy*, 33(5), pp.842-848.

Guides.library.harvard.edu. (2016). *Overview - The Literature Review: A Research Journey - Research Guides at Harvard Library*. [online] Available at: <http://guides.library.harvard.edu/literaturereview> [Accessed 10 Jul. 2017].

Hanna, L. and Hughes, C. (2011). Public's views on making decisions about over-the-counter medication and their attitudes towards evidence of effectiveness: A cross-sectional questionnaire study. *Patient Education and Counselling*, [online] 83(3), pp.345-351. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/21440405> [Accessed 5 Jul. 2017].

Hughes, M., Whittlesea, C. and Luscombe, D. (2002). Patients' knowledge and perceptions of the side-effects of OTC medication. *Journal of Clinical Pharmacy and Therapeutics*, 27(4), pp.243-248.

Lagan, B. (2016). Nurofen maker fined £890,000 over misleading pain relief claims. *The Times*. [online] Available at: <http://www.thetimes.co.uk/tto/business/industries/consumer/article4740915.ece> [Accessed 6 Jul. 2017].

Oborne, C. and Luzac, M. (2005). Over-the-Counter Medicine Use Prior to and During Hospitalisation. *Annals of Pharmacotherapy*, 39(2), pp.268-273.

Statista, (2015). *OTC medicines: breakdown of sales value 2014 | UK Statistic*. [online] Available at: <http://www.statista.com/statistics/415963/over-the-counter-otc-medicine-breakdown-of-sales-in-great-britain/> [Accessed 11 Nov. 2017].

Wazaify, M., Shields, E., Hughes, C. and McElnay, J. (2004). Societal perspectives on over-the-counter (OTC) medicines. *Family Practice*, [online] 22(2), pp.170-176. Available at: <http://fampra.oxfordjournals.org/content/22/2/170.full> [Accessed 8 Jul. 2017].