

The Role of Community Pharmacists in the Management of Skin Problems

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Abstract

Community pharmacists are extremely accessible sources of professional healthcare advice. It has long been recognized that pharmacists are highly qualified but under-utilized. In recent years, a more patient-centered role for community pharmacists to facilitate the safe and effective use of medicines has been proposed. One area for which there is a considerable demand in primary care for advice and support is dermatology and some evidence suggests that many people with skin problems manage their condition through self-care. Pharmacists have the potential to facilitate effective self-care for patients with dermatological problems. Furthermore the chronic nature of many skin conditions emphasizes the need for medicine management support to improve outcomes for those with conditions such as eczema and psoriasis. Nevertheless, little is known about the skin conditions encountered by pharmacists, their dermatological knowledge base or the extent to which they interact and support patients with long-term skin conditions.

A literature review was conducted to better understand the possible role of pharmacists in dermatological care. The results revealed that pharmacist input into the self-care of skin problems is beneficial though their dermatological diagnostic skills need further development. Support for patients with long-term skin conditions appears useful but there is limited data on the outcomes associated with such interventions.

In summary pharmacists could make a possibly valuable contribution to the care of patients with skin problems but the content and scope of this role requires further clarification.

Keywords: Community pharmacists; Skin problems; Eczema; psoriasis

Introduction

Skin problems in the UK affect a large number of people. Recently collated data suggest that in 2006 nearly 24% of the population (approximately 13 million people) consulted their General Practitioner (GP) about a skin problem and skin conditions were the most common reason why patients consulted their GP with a new problem [1]. Furthermore, an on-line survey conducted in 2005 with 1,500 adults, found that 818 (54%) people said they had experienced a skin problem in the last 12 months [2]. While GPs are considered as the “gate-keeper” to the National Health Service (NHS) the available evidence suggests that many patients with skin problems choose to manage their skin condition through self-care. In the first and only community prevalence study of skin problems, 614 patients agreed to be examined by a team of health professionals. The overall prevalence of skin diseases for which it was felt medical care needed was 22.5% though only 21.5% of these patients had consulted their GP about the skin problem in the last 6 months. Self-care was common, for instance, 31% of those with acne, judged moderate to severe by the team, managed their condition through self-care compared to 12% who sought treatment from their GP [3].

Several UK Government policy documents advocate a role for pharmacists in helping to support patient self-care [4-7] and the above data highlight a potentially important role for pharmacists to help facilitate effective self-care for those with skin problems. The workload in pharmacies attributable to consultations for skin problems in the UK is largely unknown but potentially significant given the wide range of conditions which can be managed in pharmacies (see Table 1) and the fact that retail data showing that 17% of all over-the-counter (OTC) sales are for skin care products. This is equivalent to the volume of sales for cough/cold remedies and slightly less than the largest category (23%) attributable to pain relief products [8]. Nonetheless, the difficulty with

extrapolating sales data into workload volumes is that the information does not distinguish between treatment and symptom-related requests for advice. Some insight into the frequency with which patients with symptomatic skin conditions seek advice in pharmacies can be gleaned from observational studies in pharmacies. Evidence from such studies reveal that symptomatic skin problems account for between 12 and 23% of all symptom-based requests for advice [9-10].

To explore the possible ways in which pharmacists might help patients with skin conditions, it is useful to determine the range of skin conditions encountered by community pharmacists, their dermatological knowledge base and diagnostic skills and any evidence for the effectiveness of pharmacist-led interventions in patients with skin conditions. Such information will form the basis upon which to define how best to utilise the skills of pharmacists in the care of dermatology patients.

Health professional (n = 60)*	Mean total score (SD)	95% confidence intervals
GPs	19.90	18.1 – 21.7
Nurses	16.30	14.60 – 18.0
Pharmacists	15.60	13.90 – 17.20

Table 1: Mean total score for the 10 vignettes (reference 14).

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This review provides an overview of the available evidence for the effectiveness of pharmacist interventions in the management of patients with skin problems.

Methods

The main research question considered for this review was “what is the evidence base for community pharmacist involvement in patients with skin conditions?” This can be sub-divided into three questions:

1. What skin conditions are encountered by community pharmacists?
2. To what extent are pharmacists able to recognise/diagnose or offer advice on skin conditions?
3. What is the evidence for the effectiveness of pharmacist interventions for patients with skin conditions?

To identify all relevant studies, 5 medical databases (Pubmed, Medline, Science Direct, Cochrane library and EBSCO) and google scholar were searched using the following key search terms: ‘care’ ‘community pharmacist’ ‘pharmacy’ ‘pharmacists’ ‘skin conditions’ ‘skin diseases’ ‘skin therapy’ and ‘treatment’. Only English studies were included in this search from January 1983 up to December 2013. The bibliographies of all included studies were searched and the final list was investigated comprehensively. Despite the limited availability of literature found on this topic a good overlap between sources assured almost complete ascertainment of available relevant studies.

Skin conditions encountered by community pharmacists

Two observational studies in community pharmacy from the 1990’s examined the range of symptomatic problems encountered and give insight into the range of skin conditions encountered. In the study by Bissell et al [9] skin conditions were the second most common symptom-related category (23.1%) comprising rashes, bites and veruccae. In contrast, the study by Smith and Salkind [10] found that skin conditions accounted for 12% of all symptom-based requests, including urticaria, acne, eczema, moles and sunburn. In 2006 Hafajee and Coulson [11] reported on an all requests for skin-related problems in 19 pharmacies over a four week period during the summer. A total of 735 consultations were recorded including head lice (16.3%), insect bites (13.3%), dry skin (10.3%), warts and urticarial eruptions (9.1%) and acne (5.1%).

In a survey exploring pharmacist’s perceptions of the skin conditions for which patients sought their advice on a weekly basis, the majority of pharmacists (78%, n = 780) reported dry skin, followed by eczema/dermatitis (72%) and thrush (66%) [12]. In addition, when asked to record what they felt were the top three conditions during the summer and winter periods, only 7 conditions accounted for over 80% of all perceived conditions [13]. Although this study was based on pharmacist’s perceptions rather than actual encounters, the most common conditions such as dry skin, dermatitis and fungal infections were similar to those seen in the observational studies.

Dermatological diagnostic ability of community pharmacists

When presented by patients with symptomatic (undiagnosed) skin conditions, pharmacists need to assess whether referral to the GP is warranted of if the problem is amenable to treatment with products available from the pharmacy. Pharmacists therefore require some level of diagnostic ability to ensure an appropriate course of action for the patient. To date three small studies have attempted to assess pharmacist’s skill when presented with dermatological problems.

Tucker et al [14] compared the diagnostic ability of community pharmacists, GPs and practice nurses in an on-line study using a series of 10 dermatology vignettes. Each of the vignettes consisted of a digital image of the condition and associated case history. Participants were asked to identify the condition, the features supporting the diagnosis and the most appropriate course of action. A total score (maximum of 30) was computed for each health professional and the mean scores are shown in Table 2. The difference between GPs and both nurses and pharmacists was significant ($F(2, 55) = 5.83, p = 0.005$).

Rutter and Patel [15] recently examined the decision making process used by pharmacists when presented with a simulated patient with a rash and found that that pharmacists rarely adopted a process directed towards establishing a diagnosis. Finally, Manahan et al [16] in a small pilot study, considered the diagnoses and actions of community pharmacists when presented with patients with a skin problem. Pharmacists made contemporaneous notes of their consultations and digitally recorded a photograph of the skin condition over a 5 month period. The images and case notes were reviewed by a consultant dermatologist who completely agreed with the pharmacists’ diagnosis in 58% (n = 18) of cases, partially agreed with 26% of cases and disagreed in 10% of cases.

These preliminary studies tentatively suggest that further training in dermatology for pharmacists could be beneficial. Nevertheless when questioned, pharmacists perceived a need for a wider range of over-the-counter dermatological treatments including topical steroid-antibiotic combination products (49% n = 664), topical antibiotics (26%) and potent topical steroids (12%) [13].

Effectiveness of pharmacist interventions for patients with skin problems

Evidence from Australia has shown that pharmacists are often used as a source of advice on skin problems. In a telephone survey of 416 patients in Marlborough, 114 (27%) of people reported experiencing a skin problem in the previous two weeks and 19% said that pharmacists were the sole source of advice on their problem [17] Furthermore, when evaluating consumer satisfaction with the advice about a skin condition received in a pharmacy, Plunkett et al [18], interviewed 181 consumers

Skin problems	
Eczema/Dermatitis	Hyperhidrosis
<i>Hydrocortisone cream 1%</i>	<i>Anhydrol Forte</i>
<i>Clobetasone cream 0.05%</i>	<i>Driclor</i>
<i>Wide range of emollients</i>	
Acne	Psoriasis
<i>Benzoyl peroxide (2.5 – 10%)</i>	<i>Coal-tar lotion (Exorex®)</i>
<i>Nicotinamide gel</i>	<i>Miconal® (1% dithranol)</i>
<i>Salicylic acid washes</i>	
Fungal infections	Warts/Verruca/Corns/Calluses
<i>Imidazole creams (e.g. Canesten®)</i>	<i>Salicylic acid paints (various products)</i>
<i>Allylamines (e.g. Lamisil®)</i>	
<i>Griseofulvin spray</i>	Cold sores
<i>Amorolfine lacquer</i>	<i>Aciclovir</i>
	<i>Penciclovir</i>
Dandruff/Seborrheic Dermatitis	Scabies/public lice/head lice
<i>Ketoconazole shampoo</i>	<i>Malathion</i>
<i>Selenium sulphide</i>	<i>Permethrim</i>
	<i>Dimethicone</i>

Table 2: Range of conditions and treatments available for treatment in UK Pharmacies.

who had consulted in pharmacies for advice on a skin problem. In total 105 (58%) consumers reported that they were satisfied with the advice they received from the pharmacist.

Two small studies in male prisons in the UK have shown the potential benefit of a pharmacist-led dermatology clinic for the care of patients with skin conditions. In the first study, it was reported that 96% (n = 102) of prisoners with skin problems gained a better understanding of their condition after visiting the clinic [19] and in the second, 85% (n = 106) of prisoners reported their condition to be “better” or “much better” after treatment from the pharmacist. In addition, 97% (n = 106) said that they would use the service again if they developed a different skin problem in the future [20].

Supporting patients with long-term skin conditions

Patients with long-term skin conditions often require support to help them achieve the maximum benefit from treatment. In a focus group study with psoriasis sufferers, Ersser et al [21] found that patients wanted, but did not receive, advice and information on how to use prescribed therapies. The study highlighted the lack of medicine management support for these patients and in the UK, the medicines use review (MUR) service which was introduced in 2005, is designed to improve medicine management in patients with long-term conditions [22]. The MUR represents an opportunity for patients and pharmacists to discuss any problems or difficulties they might experience when using their treatments. This is particularly relevant to patients with conditions such as eczema and psoriasis which require a high degree of self-management. In fact the pharmacy white paper *Choosing Health through Pharmacy* suggests pharmacists provide MURs to enable improved medicine management in patients with long-term conditions [6].

Community pharmacists could therefore help support medicine management for such patients. In a study exploring the extent to which community pharmacists undertook MURs on patients with long-term skin conditions, it was found that 44% (n = 866) of pharmacists had performed such reviews with the most common conditions being eczema/dermatitis (46.5%, n = 269) and psoriasis (27.2%, n = 157). [23] When asked about their confidence at performing a dermatology MUR, the mean confidence score (on a five point scale) was 3.5. Unfortunately, the study did not determine whether patients benefited from the intervention. It therefore remains to be seen if the MUR process improves disease severity for patients with skin problems though some evidence suggests better symptom control in asthmatic patients after an MUR [24].

To date three small studies have explored the impact of pharmacist input for patients with long-term skin conditions. In the first, it was shown that advice from pharmacists on the appropriate use of emollients could reduce the severity of eczema symptoms in children [25]. The second study also investigated the contribution of pharmacists in meeting the needs of patients with atopic eczema. Pharmacists identified a total of 1597 problems in 370 patients. The most common (20%) related to topical steroid concerns. Subsequently, pharmacists made 1747 interventions with the majority (76%) consisting of verbal advice [26]. The authors concluded that many of the concerns or problems experienced by patients with eczema could be addressed by pharmacists. Finally, in a small study by Woodford et al [27], counselling patients on the use of topical corticosteroids lead to an increase in the acceptability of the use of these agents.

Health promotion in dermatology

The health promotion role of community pharmacists is well established [28]. One important health promotional activity in dermatology is counselling on adequate sun protection measures as a way of reducing the risk of skin cancer. In assessing skin cancer knowledge and prevention counselling in a group of Arizona pharmacists, it was found that the mean correct score on skin cancer knowledge and prevention was 5.8 (max score 10) [29]. Pharmacist's knowledge of melanoma and other skin cancers appeared to be related more to the number of years in practice and having a relative with the condition rather than any inherent knowledge acquired from training. In a randomised, controlled trial to assess the impact of a training intervention on skin cancer counselling rates, Mayer et al [30] observed that training led to a 66% increase in counselling rates with the intervention group when pharmacists were presented with simulated patients that warranted sun protection advice. The authors concluded that pharmacists can play an important role in educating people about skin cancer prevention strategies.

Patient perspectives

An exploratory focus group study considered the role of healthcare providers (dermatologists, nurses and pharmacists) in the management of skin problems. Pharmacists perceived their role as the initial screeners and final checkers as well as re-emphasizing any information provided by doctors and checking patients' understanding of such advice [31]. In contrast, patients commented on how in some instances they received conflicting advice at the pharmacy. Though participants agreed that the role of each healthcare provider was complementary, there was a recognised and important “gap” between pharmacists and other health providers leading to the suggestion that the precise role of the pharmacist is both unclear and possible underutilised. A recent qualitative study examined the reasons why people sought advice on symptomatic skin problems in pharmacies. The main reasons cited included the convenience/accessibility of professional advice, triage to doctor care if warranted, familiarity with the pharmacist and the perceived minor nature of their skin condition [32].

Possible future developments

An important function of pharmacists enshrined in much health policy in the UK has been to manage minor ailments thus avoiding the need for a GP appointment. Since up to a quarter of all symptomatic requests for advice in pharmacies are potentially related to skin conditions, it is important that pharmacists are able to distinguish between conditions amenable to pharmacy care and those which require the involvement of the GP. This requires some level of diagnostic skill and the evidence to date suggests there is some scope for further training for pharmacists in dermatology. In a recent qualitative study of the views of pharmacy staff on the key facilitators and barriers to managing symptomatic skin problems in a pharmacy, both lack of time and adequate knowledge of dermatology were identified as barriers by pharmacists to helping such patients [33]. Despite this lack of knowledge, support for pharmacists managing more skin problems was identified in a study of minor ailment management by GP [34]. It is therefore in the interests of GP practices to highlight the important triage role performed by pharmacists and to encourage patients to use pharmacists as a first port of call for advice about symptomatic skin problems. Future research also needs to address not only the education of pharmacists in dermatology but better time management, perhaps involving greater delegation of duties to other members of the pharmacy team.

Pharmacists' ability to manage a wider range of dermatological conditions could be met through a greater deregulation of treatments from prescription status, thus avoiding the need for patients to visit their GP. Since many skin conditions such as psoriasis, rosacea etc. are chronic in nature, initial supplies from pharmacies would provide an opportunity for patients to assess the effectiveness of a product before seeking further supplies from their GP. Nonetheless, any further deregulation of medicines for skin conditions would need to be accompanied by comprehensive training materials for pharmacists to support these switches. Any training would need to ensure that pharmacists are able to correctly identify suitable patients and the over-the-counter licenses should have appropriate caveats to safeguard against inappropriate use of deregulated products, for instance, a requirement that medical advice is sought to confirm the diagnosis.

Notwithstanding the potential to increase the range of dermatological conditions amenable to treatment from pharmacists, it is more pragmatic to explore the role of pharmacists in chronic disease management for patients with skin conditions. Such initiatives would obviate the need for pharmacists to make the initial diagnosis, allowing them to focus more on addressing any practical medication related issues e.g. how to apply treatments, awareness of triggers to disease flares etc. In short, the role of the pharmacist would be more aligned with facilitating effective self-management for patients with long-term skin diseases. The fact that pharmacists are likely to be allowed access to GP records in the near future would enable them to review a patient's clinical history and electronically communicate any concerns or issues that arise during subsequent consultations with patients.

Conclusion

Pharmacists in the UK the potential to make a valuable contribution to the care of patients with skin conditions though this role needs to be more clearly defined. Future studies should focus on the outcomes associated with pharmacy-assisted self-care as well as an exploration of the development and utility of pharmacy-based services for patients with long-term skin conditions.

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