Perceptions and Attitudes of Community Pharmacists Towards Generic Medicines

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ABSTRACT

BACKGROUND: Following the enactment of legislation in June 2013, generic substitution and reference pricing of medicines has been introduced, for the first time, in Ireland. This novel study is the first assessment of the perceptions of community pharmacists in Ireland towards generic medicines completed in the period immediately prior to the introduction of generic substitution and reference pricing.

OBJECTIVE: To determine the perceptions towards generic medicines among community pharmacists.

METHODS: One-to-one semistructured interviews were performed with a convenience sample of 44 community pharmacists (from approximately 4,500 pharmacists in Ireland) recruited from Ireland's Midwest, South, and Southwest regions. Interviews were transcribed and analysed using NVivo (version 9).

RESULTS: 98% of pharmacists believed that generics were of a similar quality to the originator, and 96% stated that they were as effective as the originator. However, a small number demonstrated some reticence regarding generics: 9% believed that generics were not manufactured to the same quality as the originator; 7% stated they would prefer to take an originator medicine themselves; and 7% reported having experienced quality issues with generic medicines. 89% of pharmacists reported receiving patient complaints regarding use of generic medicine, although 64% suggested that this was due to a nocebo effect (i.e., a result of patients' preconceived notions that generics were inferior). Only a minority (21%) reported that they had attempted to educate patients as to the equivalency of generics. Although 80% were in favor of Ireland's new legislation promoting the use generic medicines, 46% expressed concerns regarding its practical implementation.

CONCLUSIONS: This key stakeholder group had positive attitudes towards generics and the legislation that promotes their use. Concerns regarding patient perception and experience, clinical effectiveness, and manufacturing quality were identified. We propose that interventions supporting implementation of the new legislation should address these concerns.

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What is already known about this subject

- Pharmacist perceptions of, and attitudes towards, generic medicines are a relatively unexplored area internationally, with only 10 publications found in PubMed on this topic since 2003.
- No studies of the views of community pharmacists in Ireland towards generic medicines have ever been published.

What this study adds

- This is the first study of pharmacist perceptions of generic medicines in Ireland and 1 of only 6 other studies on pharmacist perceptions of generics in Europe.
- This is only the second qualitative investigation of pharmacist views in Europe—the other being from Sweden and published in 2012.
- This study adds to the body of knowledge on pharmacist attitudes towards generics, providing in-depth, qualitative data that can be used as a basis for policy implementation and decision making.

In June 2013, new legislation came into effect in Ireland[1]—the Health (Pricing and Supply of Medical Goods) Act 2013)[2]—that introduced generic substitution and reference pricing for the first time in this country. As a result of this new legislation, Irish patients will now have a greater opportunity to receive a generic medicine instead of a brand-name prescription medication. In an effort to ensure that this legislation is successful, pharmacists' opinions of, and attitudes towards, generic medicines are critical to the changes being implemented—that is, to increase the use of generic medicines in Ireland.

Attitudes of Irish pharmacists towards generics have not been published in the past. While assessments of pharmacist perceptions of generic medicines have been carried out in a limited number of other countries, a PubMed search covering the period from January 2003 to January 2014 did not return any peer-reviewed publications on the topic of pharmacist perceptions of generic medicines in Ireland. In fact, only 10 publications since 2003 were found in PubMed on the topic of pharmacist perceptions of, and attitudes towards, generic

medicines, indicating that this is a relatively underexplored area internationally.[3-12]

With Ireland on the cusp of a major modification in health care practices, there are many potential hurdles to overcome during the introduction of such changes.[13] The attitudes and behaviors of health care professionals towards generic medicines are pivotal to the successful implementation of the new legislation. The objective of this novel study was to assess these perceptions among community pharmacists in Ireland in the time leading up to the enactment of the new legislation and to determine what challenges might arise as a result of these stakeholder opinions.

Methods

Preparation of Study Instrument

The study instrument was developed based on a recently published review of the usage of generic medicines and how policy changes to promote the use of generic medicines may affect health care provision[14] and the personal experience of the primary author and study designer (who has over 15 years of quality management and regulatory affairs within the pharmaceutical and biopharmaceutical industry).

Questions for the semistructured interview were prepared and validated by cognitive testing, the purpose of which was to ensure that the test questions were understood as intended. The purpose of the interviews was to elucidate perceptions relating to general opinion and understanding of generic medicines; behaviors towards generic medicines (e.g., dispensing behaviors in the case of community pharmacists); opinions as to the historical poor usage of generics in Ireland; beliefs held as to the quality and efficacy of generics and how these compare with proprietary (that is, brand-name) medicines; and knowledge and opinion of the impending legislative change.

Cognitive testing was performed with 3 individuals who were first asked the questions to be included in the survey, allowed to provide responses, and after responding were asked what their understanding of the questions were. Amendments were made to questions based on responses from all 3 test participants. The responses of these participants to the interview questions were not included in those finally analysed for this study. The interviews used in the study began after cognitive testing had been completed, and the interview questions had been amended.

Sampling, Recruitment, and Interviews

A convenience sample of community pharmacists was recruited, and interviews completed and analysed. Pharmacists were approached in person, while in the pharmacy, and invited to participate in the study. A verbal explanation of the study was provided, and an invitation letter was offered. One-to-one interviews were carried out with consenting pharmacists between June and October 2012: 34 face to face and 10 via telephone. Interview lengths were as follows: minimum 10 minutes 44 seconds; maximum 36 minutes and 15 seconds; mean 19 minutes 29 seconds. Interviews that were recorded (with the interviewee's consent) were semistructured and based on the described study instrument (see Table 1). Additional supporting assessment of opinions was completed using a series of structured questions to which participants could select from predefined answers (Table 2). In this instance, a 5-point Likert scale was used with a single response allowed for each question.[15] Participants were free to volunteer additional commentary on each question. Furthermore, participants were offered the opportunity to express freely any additional opinions or views at the end of the interview session. Participating pharmacists were located in counties Limerick, Tipperary, Kilkenny, Cork, and Waterford.

TABLE 1 Study Instrument: Questions That Formed the Basis for Semistructured Interviews

Questions
What is your understanding of what a generic medicine is?
What is your understanding of how a generic medicine differs from an originator medicine?
What is your understanding of bioequivalence? To the best of your knowledge, what percentage of difference is allowed in terms of bioequivalence between an originator medicine and an equivalent generic product?
What is your understanding of why generic medicines are cheaper than originator medicines?
What do you believe about how generic medicines compare with brand-name medicines?
What is your opinion as to why use of generic drugs in Ireland has historically been much lower than other European countries?
Have you ever had a patient report that a generic medicine, which you dispensed for them, did not work as effectively as an originator medicine? If yes, what type of medicine(s) have you seen this with? Can you please give some brief details of what the patient reported having experienced? What action did you take in this case? Did you then dispense the originator medicine? If yes, was there any reported lack of efficacy from the substituted originator medicine?
Have you ever had a patient report that an originator medicine, which you dispensed for them, did not work as effectively as a generic medicine? If yes, what type of medicine(s) have you seen this with? Can you please give some brief details of what the patient reported having experienced? What action did you take in this case?
Are you aware of the government's plans to introduce reference pricing and generic substitution in Ireland? What is your opinion of this proposed change in Irish legislation?

TABLE 2 Study Instrument: Supporting Structured Questions and Pharmacist Responses

Do you strongly agree, agree, neither agree nor disagree, disagree, strongly disagree with the following statements:	Pharmacists, N = 44					
	SA/A[a]		SD/D[b]		N[c]	
	n	%	n	%	n	%
Generic medicines are generally of the same quality as originator medicines.	43	97.7	1	2.3	0	0.0
Generic medicines are generally poorer quality than originator medicines.	1	2.3	42	95.5	1	2.3
Generic medicines are generally better quality than originator medicines.	1	2.3	27	61.4	16	36.4
Generic medicines work as effectively as originator medicines.	42	95.5	0	0.0	2	4.5
Generic medicines work better than originator medicines.	0	0.0	35	79.5	9	20.5
Generic medicines don't work as well as originator medicines.	1	2.3	43	97.7	0	0.0
Generic medicines may be dangerous compared with originator medicines.	2	4.5	39	88.6	3	6.8
Generic medicines are as safe as originator medicines.	44	100.0	0	0.0	0	0.0
Generic medicines are manufactured to the same quality as originator medicines.	35	79.5	4	9.1	5	11.4
Generic medicines are manufactured to a poorer quality than originator medicines.	4	9.1	39	88.6	1	2.3
Generic medicines are manufactured to a higher quality than originator medicines.	0	0.0	39	88.6	5	11.4
Generic medicines are cheaper to buy than originator medicines.	41	93.2	2	4.5	1	2.3
Generic medicines are cheaper because they are of inferior quality to originator medicines.	1	2.3	43	97.7	0	0.0
If I were ill, I would be happy to take a generic medicine if my doctor prescribed it for me.	41	93.2	2	4.5	1	2.3
If I were ill, I would prefer to take an originator medicine rather than a generic medicine, even if it is more expensive.	3	6.8	39	88.6	2	4.5

[a]*Strongly agree/agree.*
[b]*Strongly disagree/disagree.*
[c]*Neutral/no opinion.*

Approval of the design and the implementation of this study was granted by the Research Ethics Committee of the Irish College of General Practitioners.

Analysis of Data

Using a grounded theory approach,[16] interviews were transcribed verbatim and imported into NVivo, version 9 (QSR International, Melbourne, Australia) for analysis. Using an inductive process, transcripts were open coded for themes relating to interviewee opinions, perceptions, and behaviors, including any other emerging themes, and the results were analysed using Nvivo. To facilitate visualization and understanding of the numbers of participants holding the perceptions/behaviors that were coded into specific themes, responses were expressed as a percentage of the total number of participants. Interviews were conducted until saturation of data was observed. Analysis was completed by the primary researcher (SD) and reviewed to ensure reliability and rigor of the analysis by a senior investigator (CD).

The coding framework included (but was not limited to) such themes as opinions regarding safety and efficacy; previous experience with use of generics; personal preferences; beliefs regarding historical usage of generics in Ireland; experiences with patient reports regarding generics; prescribing rationales; personal knowledge of, and attitudes towards, generic medicines; and opinions regarding the proposed legislative changes.

Ongoing analysis of themes emerging from the interviews was carried out as interviews were completed. When 4 to 5 consecutive interviews did not lead to the emergence of any new themes, it was determined that data saturation had been achieved and interviewing was concluded.

Results

Supporting quotations from pharmacists are included in Table 3, as referenced in the text.

Analyzing Pharmacist Interviews

Forty-four community pharmacists were interviewed. Demographics of the group are available in Table 4. Participating pharmacists were located in counties Limerick, Tipperary, Cork, and Waterford.

Opinions Regarding Quality, Efficacy, and Safety of Generics

Table 2 shows the analysis of opinions regarding quality, efficacy, and safety of generics. The majority of pharmacists (98%) were of the belief that generic medicines are of the same quality as the originator, with 96% holding the view that they are as efficacious as brand-name products. All of the pharmacists interviewed believed that generics are as safe as the originator. A small number (9%), however, were of the opinion that generics are not manufactured to the same quality as originator medicines and were of the view that generic manufacturing is of a poorer standard. The majority of pharmacists (93%) stated that they would take a generic medicine themselves, with a small number (7%) stating that they would prefer to take the originator rather than an equivalent generic, if offered a choice (reference quotations 1-3, Table 3).

TABLE 3 Supporting Quotations from Pharmacists

Quotation Number	Quotation
1	*To be honest . . . for any decisions that I make, or anything I say to customers, if it was me or any of my family and I was given the option of a generic medicine I would go for it, I would absolutely take it.* Female, aged 30-39 years
2	*I believe that they are equivalent in therapeutic value, and I would have no hesitation in recommending a generic product over a branded one to a customer.* Male, aged 19-29 years
3	*I think generic medications are brilliant. To be honest with you, the only downside is people's perceptions—they think that the brands are better when in reality generics are just as good.* Male, aged 18-29 years
4	*On paper they should be the same and should act in the same way, but we have had cases where people have come in and said that they didn't find a generic as effective as the original and they prefer the original . . . and from customers' queries, some of them don't find that they're the same.* Female, aged 30-39 years
5	*[Generic medicines] work the same therapeutically, but I suppose people just have this notion that if it's cheaper it can't be as good—that's the patients perception of it I think.* Female, aged 30-39 years
6	*I think, to be honest, any time [a patient has] had a problem with a generic instead of a brand is because they feel that they're being cheated; they basically feel that they're getting second best because it's cheaper.* Female, aged 30-39 years
7	*I think if [the patient] started on a generic, and it's what they know, they prefer that; so I think that it's maybe the change—it's a change management issue more than anything else.* Male, aged 40-49 years
8	*One woman I can't convince that the generic coated aspirin would not have caused her to bleed, it's totally in her mind; you can't win those battles.* Male, aged 50-64 years
9	*[If] you know what a patient is satisfied with, you generally won't rock their boat.* Female, aged over 65 years
10	*The first thing I would do is I'd try and explain the situation but . . . at the end of the day, I think quite often with people who are coming in, they've made up their mind and there's really very little you can do at that stage.* Male, aged 30-39 years
11	*You try to explain to them that it is exactly the same medication and explain to them that it's the same amount of drug, just called something else, that 500 milligrams of the generic drug is exactly the same, that it's made in the same way, but then if they're still going "no, no, no," we'd give them the original.* Female, aged 30-39 years
12	*There have been an increasing number of incidences where people have come back and said that the quality of the solid dosage form is significantly poorer, and there is one company who are particularly culpable in this regard, whereby their tablets crumble on punching from a blister pack. Their capsules are virtually impossible to get out of the blister pack. Now that's not to say that there's anything wrong with the actual raw ingredient, with the medication within the solid dosage form, but there are significant shortcomings in the way those solid dosage forms are compounded. And I think that if it's not rectified, it is going to compromise patients' attitudes towards generic medicines.* Male, aged 40-49 years
13	*I've had a couple of issues with a few [generic] tables—they have disintegrated, over time, and that problem didn't arise with the original drug . . . but 99% of the time there's no issue with the quality of [generics].* Female, aged 30-39 years
14	*Packaging-wise, you definitely notice a difference with some of the generics, that you wouldn't have half as much detail on the packaging, the boxes are quite plain. I know some customers will only take [the originator] tablets that actually have the label Monday, Tuesday, Wednesday at the back of them, and a lot of generics won't have any of that detail on the [foil].* Female, aged 30-39 years
15	*I'd like the generic companies to package their stuff better; if it's packaged shabbily it gives a bad impression. Now I know it's nothing to do with the effectivity of the substance, but some of them are very poorly packaged.* Male, aged over 65 years
16	*My grandmother in law . . . was on a generic simvastatin which was changed to another simvastatin which happened to be the same color and shape, with no markings, as her blood pressure tablet, and she ended up taking double blood pressure tablets for about 2 weeks.* Male, aged 30-39 years
17	*If the demographic of patients you deal with are elderly people, and you know they just don't like change, they want to stay the same, so you're kind of on the back foot immediately if you're trying a new drug.* Male, aged 30-39 years
18	Quotation from a non-Irish pharmacist: *My experience with the Irish psyche is that they're very brand oriented. I don't know why, but they tend to be very brand oriented. And, I think that could be impacting on why they don't like generics; they like the original brand . . . but as soon as you tell them it's a copy, it's a generic, they will think it's a second-class drug.* Male, aged 40-49 years
19	*I just think people are very used to getting brands; they think all brands are better. It can be to do with the prescribers; some doctors prescribe a brand because that's what they've always known.* Male, aged 18-29 years
20	*I think that private patients, paying themselves, don't mind, but that the people that don't have to pay are the ones that want to stick to the original brand.... It's GMS [General Medical Services] patients that have a problem with it, not the private patients.* Female, aged 30-39 years
21	*I think an awful lot of people have it in their head that the generic isn't as good. As well, medical card patients have commented a few times, 'It's because I'm on a medical card that you're giving me the cheaper tablet.' That's the kind of presumption I think that's out there—people think that because it's cheaper, they don't see generic as equivalent, but as a lesser tablet.* Female, aged 30-39 years
22	*Get rid of branded generics . . . either it's a generic or its not; there's no need for the middle ground of a branded generic.* Female, aged 30-39 years

TABLE 3 Supporting Quotations from Pharmacists *(continued)*

Quotation Number	Quotation
23	*Bring it on—pharmacists have been waiting for it for years; we have absolutely no problem, we're here ready to go, just give us the guidelines and let us just work on it. I'm all about value, we have to be; as professionals and as people that are actually concerned about people's health and their finances, we want to give the best value. We're not in the business of trying to rip people off, so give us that law so we can do what we're supposed to do—which is look after our customers in every way possible and make them feel better.* Female, aged 30-39 years
24	*I can envisage that people will have issues because we've had issues before with people, and when it does come to it, I'd say there is a certain percentage of the population that won't be happy with taking the generic one or whatever one is the best price at the time because they're just comfortable taking their one particular brand and that's it.* Female, aged 30-39 years
25	*I've had some cases [of patient complaints] where it's actually, say, the Pfizer atorvastatin generic, comes off the same line as Lipitor; the only thing you can blame is patient perception when it's exactly the same thing. Even after I told [the patient] they're the same thing, and you know what they said: "They left some of the good stuff out though."* Male, aged 30-39 years
26	*I think maybe a lot of the time "generic" and "cheaper" are put in the same sentence, so people think because it's cheaper it can't be as good as the original.* Male, aged 30-39 years
27	*I did have one particular incident where [a patient] reported [a problem with a generic] and [the medication] was actually exactly the same thing; it was a parallel import as opposed to a generic. They saw the pack was different, and they said [the medicine] didn't work the same, they didn't want that, but it was, in every sense, exactly the same medication.* Female, aged 30-39 years

TABLE 4 Demographics

Group	Gender		Age				
	M	F	18-29	30-39	40-49	50-64	65+
Pharmacists N=44	23	21	9	17	10	5	3

Pharmacist Experiences with Patient Complaints Regarding Generic Medicines

Of the 44 pharmacists, 39 (89%) reported receiving patient complaints associated with use of a generic medicine. Of the 5 pharmacists who did not experienced these complaints, 1 pharmacist did not dispense generics. Pharmacists reported that when patients had issues with generics, the main experiences described were that the generics were not as effective or that the patients experienced altered or increased side effects. Twenty-eight pharmacists (64%) expressed an opinion that at least some of the negative experiences reported by patients were not actual, but rather were caused by a nocebo effect (i.e., patients' preconceived ideas as to a perceived substandard nature of generics led to them having negative experiences with generics) rather than an actual issue with the medication (reference quotations 4-6, Table 3).

Medication types most reported as being problematic included protein pump inhibitors (27%, 12/44), statins (18%, 8/44), inhalers (7%, 3/44), antihypertensives (7%, 3/44), antibiotics (7%, 3/44), antidepressants (5%, 2/44), and analgesics (2%, 1/44).

Conversely, 11 pharmacists (25%) stated that a patient had reported an issue with an originator medicine compared with a generic. In most cases, since the patient had received the generic before the originator medication, pharmacists indicated that, in their opinion, the patient's preference is often for the medicine first encountered and that such issues are more likely to be due to a change having occurred, rather than an actual issue with the medicine (reference quotation 7, Table 3).

In the situation where pharmacists received complaints from patients related to use of generic medicine and the patients requested the originator instead, 34 pharmacists (77%) stated that they would accede to the patients' preferences (reference quotations 8-9, Table 3). Only 9 pharmacists (21%) stated that they would attempt to educate the patient (reference quotations 10-11, Table 3).

When asked about the differences between an originator and an equivalent generic, 2 pharmacists (5%) felt that there was no difference. Given that the only requirement for similarity (in terms of ingredients) between an originator product and a generic equivalent is that the same active ingredient be used (excipients may vary) and that generic products are often aesthetically different from the originator, patients can be confused if the differences in appearance and excipient content are not adequately explained to them.

Opinions Regarding Low Historic Usage of Generics

When asked why usage of generics in Ireland has been low in the past, the main reasons given by pharmacists were as follows:

- Lack of generic prescribing (31%, 27/44). The primary reasons given for this opinion were familiarity with trade names on the part of prescribers and their lack of knowledge of the generic names of medicines.

- Lack of government incentive or pressure for generics usage (50%, 22/44).
- The influence of the pharmaceutical industry (i.e, proprietary manufacturers) in Ireland (41%, 18/44).
- Poor understanding of generics by consumers (41%, 18/44).
- Brand consciousness or loyalty on the part of the consumer, including being used to a particular brand and having poor cost consciousness (39%, 17/44).
- The nonallowance of generic substitution (32%, 14/44).

Pharmacist Perceptions of Quality and Patient Issues with Generic Medicines

Three pharmacists (7%) reported having experienced quality issues with generic medicines. Issues reported included crumbling tablets and having difficulty getting tablets out of blister packs. The pharmacists reported that, in their opinion, these issues affect consumer confidence in generic products (reference quotations 12-13, Table 3). Poorer packaging was also mentioned by 4 pharmacists (9%) as being perceived as a negative, and 1 pharmacist (2.3%) stated, anecdotally, that differences between originator and generic packaging can even cause issues for patients (e.g., where an originator brand tablet had the days of the week printed on the foil, serving as a reminder to the patient as to whether that day's medication had been taken or not, but similar printing was not available with the generics). This led to patient preference for the originator medicine (reference quotations 14-15, Table 3). Nineteen pharmacists (43.2%) also reported the opinion that patients are sometimes resistant to change and that the different aesthetic presentation of generics can cause confusion and medication errors for some patients, particularly the elderly (reference quotations 20-21, Table 3).

Consequently, patient education was seen as a necessary step for wider acceptance of generics, and 15 pharmacists (34%) stated that, in their opinion, patients see generics as being a substandard, or lesser, alternative because they are cheaper, which is described as "own-brand syndrome." Indeed, 16 pharmacists (36%) expressed the opinion that Irish patients hold a significant preference for branded medications (reference quotations 18-19, Table 3).

Five pharmacists (11.4%) reported having patients who asked for cheaper generics. This was a minority of cases and tended to be limited to private patients, who, according to the pharmacists, have a better understanding and education regarding generics. Pharmacists additionally made reference to General Medical Services (GMS) patients getting more branded medication than private (i.e., self-paying) patients (reference quotations 20-21, Table 3). In Ireland, the GMS, or medical card, scheme is a means-tested scheme available to persons who are unable, without undue financial hardship, to arrange general practitioner, medical, or surgical services. Having a medical card entitles holders and their dependents to a number of free services, including prescription medicines (a dispensing charge applies to prescription medicines). In quarter 4 of 2013 approximately 40% of the Irish population were holders of medical cards.[17] Furthermore, some pharmacists felt that branding of generics should be disallowed because it is contrary to the intent of having generic medication and made it necessary for them to stock multiple "brands" of the same generic medication (reference quotation 22, Table 3).

Opinions Regarding New Legislation

All of the pharmacists interviewed were aware of the Irish government's plan to introduce reference pricing and generic substitution in Ireland. When asked about their opinions about the new legislation, 35 pharmacists (80%) indicated that they felt positive about the legislation or were accepting of it. Twenty-four pharmacists (55%) were of the opinion that it made financial sense and was necessary for the country, although 20 pharmacists (46%) expressed concerns and reported that they anticipated issues with its practical implementation (reference quotations 23-24, Table 3).

Discussion

According to a PubMed search in January 2014, Irish pharmacists' perceptions of generic medicines have not been studied in the past. Internationally, a limited number of assessments have taken place for such countries as New Zealand,[9] Portugal,[4] South Africa,[5] Malaysia,[8] France,[10] and Sweden[6] that included studies on views held regarding specific medication types, such as antiepileptic drugs[7] and inhalers.[3] Given the major changes currently underway in the Irish health care system (i.e., the introduction for the first time of reference pricing and generic substitution), the opinions and behaviors of this critical stakeholder group have the potential to be pivotal to the success or failure of the changes being implemented.

In contrast to other reports of reticent pharmacist views,[3,8,9] this study has shown that Irish pharmacists were generally positive towards, and accepting of, generic medicines, with many holding the view that they are as effective as the originator, with the exception of nonsubstitutable situations—such as with Narrow Therapeutic Index drugs— and that differences in presentation can be a source of problems for some patients. Very few pharmacists expressed reticent opinions, but 1 of the primary concerns, as has been reported elsewhere,[6] was that confusion caused by differing aesthetic presentations of generic medicines has the potential to be problematic for patients.

While a majority of pharmacists were in favor of the new legislation (with references made to the United Kingdom situation: that no clinical issues linked to a much greater use of generic medicines are seen, thus, the same situation could reasonably be expected in Ireland without risk to patients) about half of the pharmacists interviewed (46%, 20/44) expressed concerns as to the practical implementation of associated changes. Concerns included the impact on the running of the pharmacy as well as on patients. Pharmacists felt that they could meet considerable resistance from patients and that they, being at the "coal face," may need to spend substantial periods of time explaining the new system to patients, if adequate educative interventions are not put in place by either the government or other interested bodies (e.g., the Pharmaceutical Society of Ireland). Indeed, the requirement for education of the general public to improve opinions and, therefore, increase patient acceptance of generics was a recurring theme in this study, as it has been in other studies.[4-6,10] Increased public awareness and education were considered to be fundamental to improved acceptance of generics by consumers. In fact, an anecdote told by a pharmacist, regarding how she convinced a patient who was reticent to take a generic version of an inhaler, is indicative of how such an intervention might work. The pharmacist told how she brought out both the generic and the proprietary inhalers and showed both to the patient, pointing out the ingredients of both and showing the patient that they were the same. This practical demonstration of equivalence convinced the patient to try the generic inhaler, and the pharmacist indicated that the patient did not return with any subsequent issues. Such examples should be made use of when designing educational interventions for patients.

Patient preference was seen to have a considerable influence on dispensing practices, with many pharmacists (77%, 34/44) acceding to patients' wishes for brand-name medications, despite the fact that pharmacists believed the majority of issues/complaints from patients regarding generics are not actual, but rather due to the nocebo effect, that is, patients' prejudices regarding generic medicines (reference quotation 25, Table 3). Pharmacists were of the opinion that this negative patient perception may be based on the fact that generics are less expensive so, therefore, cannot be as good (reference quotation 26, Table 3). Also, pharmacists believed that many negative patient experiences were due to changes in medication and that the first medication that the patient is exposed to will tend to be the preferred option. Therefore, when this is changed, the patient is more likely to experience a problem (reference quotation 27, Table 3).

Additionally, generics manufacturers/licence holders may play a role in improving the opinions of consumers regarding their products. One aspect could be to ensure that packaging is of a standard at least equivalent to that of the originator and, where relevant, to ensure that it provides the same facilities for prompting/reminding of patients to take the medication (e.g., the anecdote where a pharmacist stated that continued use of 1 proprietary brand was due to patient preference for the packaging, as the days of the week were printed on the blister pack foil). An argument can be made for regulators approving generic medicines to require that if patient aids are part of the originator packaging, any generic equivalents must provide similar aids in order to obtain a marketing authorization. Moreover, a theme emerged on the topic of branded generics: while generic substitution makes the issue of pharmacists needing stocks of multiple branded generics moot, (that is, unless a "do not substitute" prescription has been written), pharmacists expressed views that branding of generics should not be permitted as, practical aspects aside, branding of generic medications is not in keeping with the intention of provision of generic medicines. Indeed, a recent report from the Irish Economic and Social Research Institute on the costing of generics in Ireland has shown them to be similar to the original branded medication, thereby not resulting in substantial benefit to either the Irish exchequer or consumer.[18]

Since improved consumer confidence in generics was considered to be one of the major hurdles to be overcome in improving use of generics in Ireland (similarly noted in other studies[4-6]), the question was posed by pharmacists: How can this information/education be provided in a manner that is easy for patients to access and understand? While 1 pharmacist showed a patient both the originator and generic products side by side to prove their equivalency (in the case of asthma inhalers), the practicality of doing this on a day-to-day, patient-to-patient basis is obviously something that busy pharmacists cannot undertake. Provision of educational supports could be facilitated, for example, by use of a novel tool, recently published by our group, based on optimized quality of information and reading ability, for development of websites providing health care information.[19] The resulting availability of easy-to-read handouts/pamphlets, websites, or similar sources of information may not only provide consumers with the information to dispel myths about generics and, hence, improve their confidence but may also have the dual effect of making the role of the pharmacist easier during a time of upheaval and change.

Limitations

A possible limitation of this study could be in the selection of participants. All of the pharmacists interviewed were community pharmacists, whose opinions may differ from pharmacists working in hospitals or other settings. Furthermore, differing interview settings (some participants were interviewed face-to-face, and others were interviewed over the telephone) might have influenced the data gathered in this study.[20] However, review and comparison of the themes emerging from participants interviewed in different settings did not show any substantial difference in the opinions, perceptions, and behaviors expressed between participants. Moreover, while the authors acknowledge that quantification of qualitative data is sometimes contentious, we chose to adopt this approach in order to best provide easy visualization of results and offer a more comprehensive insight into the patient perspective. The strengths of such an approach have been discussed by Schonfelder in 2011.[21]

A strength of this study is the number of subjects used for qualitative interview; the number of participants in this study compared favorably with the only other semistructured interview-based studies that could be found in PubMed (i.e., 16 participants were interviewed for an analogous study in Sweden[6] and 6 pharmacists (from a total of 15 health care professionals) were interviewed for a similar study in South Africa[5]).

Conclusions

Community pharmacists in Ireland hold positive opinions about usage of generic medicines, yet they have concerns about the practical implementation of reference pricing and generic substitution. Concerns were also raised about the impact on patient acceptance due to the varying appearance of generic medicines and regarding the lack of confidence that they observed in the general public in relation to usage of generic medicines.

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