



Safe internet buying of medicines: why and how pharmacists should help

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The impact of the Internet on the delivery of healthcare services is phenomenal. People's ability to assess risk has not changed, so we become vulnerable to new ways of exploitation. An understanding of thought processes may enable us to change the "it will never happen to me" mentality!

We know all too well the dangers of buying medicines from the internet. In May 2008, a man was reported to have died in a pool of his own vomit, from an accidental overdose of drugs he received from an online pharmacy in the US; a CNN investigation showed just how easy it was to purchase prescription drugs online without a legitimate prescription [1]. A recent article featured in *Bloomberg* also reports that counterfeit medicines are on the rise worldwide, as criminals capitalise on the growing use of the Internet by consumers searching for inexpensive drugs. For example, there are fewer than 300 online pharmacies in Canada authorised by government agencies, but over 11,000 fake Canadian pharmacies are operating online from overseas [2].

On 5 June 2008 the European Alliance for Access to Safe Medicines unveiled its comprehensive report, *The Counterfeiting Superhighway*. The report revealed that a frightening 62% of medicines purchased online are fake or substandard! These include medicines indicated to treat serious conditions such as cardiovascular and respiratory disease, neurological disorders, and mental health conditions. Whilst only 38% of the medicines received were found to be genuine branded medicines, of these 16% were illegal non-EU imports (genuine products, imported into the EU illegally from a non-EU country) and 33% did not have patient information leaflets,

which in itself is also illegal and potentially dangerous to consumers' health [3].

We know of the efforts made by a number of national authorities to raise awareness of the possible dangers of e-pharmacy. These include the French *Agence Française de Sécurité Sanitaire des Produits de santé* [4], the German *Bundesinstitut für Arzneimittel und Medizinprodukte* [5], Swissmedic [6], the UK Medicines and Healthcare Products Regulatory Agency and the European Commission [7]. Even in countries where e-pharmacy is allowed, the national drug regulatory agencies underline the risk [8].

Health professionals have stepped up their efforts to warn patients of the dangers of buying from the Internet [9]. In Canada, the UK and the US; the National Association of Pharmacy Authorities, the Royal Pharmaceutical Society of Great Britain and the National Association of Board of Pharmacy respectively, have all established a seal of Internet authentication as a measure to regulate legal online pharmacies and to educate consumers about the need to buy from reliable sources should they insist on bypassing a contact with health professionals about the use of their medicines.

Why do patients choose to take the risk of buying from the Internet?

The Internet and digital technology make information globally accessible. With Web 2.0, social networking web-

sites and online communities have been proven to be a powerful driver of how we live our lives and make decisions; many social networks empower their members to rate and review products and services, including online pharmacies; share experiences with other members, compare prices across different countries, and more. The advent of better educated and informed consumers is challenging health professionals in their provision of accurate information and acceptable prices, even though in some cases, these consumers may be obtaining their information from unreliable sources. Make sure, as a pharmacist, that you are in a position to educate patients on reliable sources of online medical information.

While there has not been any research published on the risk perceptions of patients when buying medicines on the Internet, sociology has taught us that risk communication can be considered effective if it alerts the target audience as to what is hazardous, the extent of the danger and what should be done to protect oneself [10]. According to the psychometric paradigm, mainly developed by Paul Slovic [11-13], the human perception of hazard is generated in two ways:

- the level of dread it arouses (also called "dread risk")
- the level of knowledge of those exposed (also called "unknown risk").

The former means that we need to materialise the dangers of counterfeit and substandard medicines to patients.

"Show us the dead bodies" legislators said in challenging professional bodies regarding the case cited in the beginning of this article. An analogy can be made with the prevention and control of tobacco use. Grotesque images of collapsed lungs and heart failure on cigarette packs can be effective in reducing the use of tobacco because of the high level of fear they arouse in people.

The latter refers to the insufficiently high media coverage of the bad experiences of people who buy medicines online, causing harm to themselves and their loved ones. We need to be more forceful in deterring our populations who may decide to buy online.

In understanding the relationship between risk perception and personal involvement with a hazard (in this case, potential death from the use of counterfeit medicines), studies [10] have shown that if the object that is jeopardized (personal health) is of great personal importance and the risk cannot be controlled by the individual (harm from counterfeit medicines), under-estimation of the degree of risk in buying a counterfeit medicine will result. Most people consider themselves less likely to suffer from any particular hazard than other similar people.

Understand the patient's perception of risk

Every patient has a reason, whether good or bad, to go online to buy their medicines. It could be to:

- Reduce the cost. This is particularly true in countries where social insurance coverage is weak or insufficient and where medicines are expensive. This is one of the main drivers of the tremendous development of e-pharmacy in the US. For those patients who have to buy most if not all medicines out of their pocket, buying from the Internet is seen as a way of reducing their treatment costs. Some social insurance systems in Europe might also favour the development of e-pharmacy, especially when they do not

cover the first hundred euros of medical fees: these patients similarly turn to alternative sources.

- Access drugs without prescription. The availability of a prescription-only medicine is often more important to the patient than the price of the product. This may perpetuate drug abuse or misuse.
- Be anonymous. There is physiological unwillingness to discuss "embarrassing" problems such as erectile dysfunction and depression. However, little is known about confidentiality of patient information when using illegal Internet drug outlets.
- Increase the range of possible treatments. Gain access to products or medicines that are not (yet) authorised in their country.
- Increase access to medicines. Geography can limit the patient's access to a bricks and mortar pharmacy. This is especially evident in rural areas.

How can pharmacists become more effective communicators?

Buying medicines on the Internet is a potentially dangerous activity. All public service announcements should note that the effectiveness of warning messages about buying medicines online is a function of the interaction between the target audience, the authority of the messenger (perceived competence and trustworthiness) and the content of the message

(hazard, extent of dangers and what should be done to protect oneself).

Our patients have an intuitive understanding of risk and they can be helped to a better appreciation and consequently be placed in a position to make more informed decisions. But they must be given information in a format that is consistent with their initial belief system. This is a role that pharmacists can play in their daily interactions with patients; we need to be sharp to identify the needs and concerns of our patients in paying for their medicines and in obtaining a regular supply of affordable and quality medicine in their communities. Patients should be sufficiently counselled about the proper channels in buying medicines and the misconceptions and risks of buying medicines from the Internet. Figure 1 shows a simple 3-step approach that can be taken when communicating to patients.

Explain and give examples of potential dangers to the patient

According to WHO, a counterfeit medicine is "a medicine that is deliberately and fraudulently mislabelled with respect to identity and/or source. Counterfeiting can apply to both branded and generic products and counterfeit products may include products with the correct ingredients or with the wrong ingredients, without active ingredients,

Figure 1: 3-step approach to communicating risk to patients



with insufficient active ingredients or with fake packaging”.

The message must be: do not take the risk of buying your medicines from unknown sources, such as the Internet. If you must buy from the Internet, ensure that the website is that of a pharmacy you know and trust. Tell your customers that:

- Over 60% of medicines purchased online are fake or substandard (including medicines to treat serious conditions).
- 96% of online pharmacies researched are operating illegally.
- 94% of websites do not have a named, verifiable pharmacist.
- Over 90% of websites supply prescription-only medicines without a prescription.
- In many cases, the medicines ordered do not arrive or the information leaflet is missing.
- Shipping is not always in accordance with the storage requirements (controlled temperature).

You can quote a 2004 US Government Accounting Office report [14] or refer patients to one of the websites referred to earlier.

ers. On the other hand, the loosely-regulated environment of the Internet is a pull driver, enabling rogue operators to proliferate. As pharmacists, it becomes clear that we need to be proactive in communicating the high risk of obtaining counterfeit medicines from the Internet and be accountable for our patients' outcomes. Framing the content of such a message and the means of delivering the message is then critical if we want to influence our patients' perceptions of risk. As hospital pharmacists we also have to be aware of the potential illicit source and doubtful quality of medicines a patient is using when admitted to hospital, which potentially may even be the reason for admittance.

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Provide the patients with tools and information

Under EU Directive 2000/31 [15] all e-pharmacy websites should provide the following information in addition to any relevant national requirements:

- name of the pharmacy providing the service
- the geographic addresses of the pharmacy and their details (telephone and fax numbers) including e-mail address, which allow it to be contacted rapidly and communicate with in a direct and effective manner
- professional title of the pharmacist responsible and Member State where it was granted
- professional body with which the pharmacist responsible is registered and the relevant supervisory authority, where applicable
- reference to the applicable professional rules in the Member State of establishment and the means to access them - a link to, or the geographic address of, the body that issued them.

Conclusion

This article highlights some key push factors that drive patients to buying their medicines on the Internet. It is important for family care givers and healthcare professionals to understand these driv-

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