

Fake Drugs On The Net Find Way Into Legitimate Supplies

Fake drugs are increasingly being sold on the Internet in a global counterfeit medicines market that has doubled in the last five years to more than \$75 million. The medicines, many of which are life-threatening, have even turned up in the legitimate supply chain and found their way into pharmacies, according a review by Dr Graham Jackson and colleagues published in the March 2012 issue of the *IJCP*, the *International Journal of Clinical Practice*. The problem is so big, experts on Internet security reckon that one in four of all spam adverts sent by email is for a counterfeit or unlicensed drug.

A survey of 423 doctors by the UK medical newspaper GP found that one third said they had treated, or suspect they had treated, a patient suffering from the side-effects of substandard prescription-only medication bought over the Internet. Jackson, who is editor of the *IJCP*, told the press: "Counterfeit medicines pose an every-increasing threat to public health, including death and inadequate healthcare as a result of self medication."

He and his colleagues came across several studies reporting large numbers of people buying drugs on the Internet despite being aware of the risks. There are also large numbers of websites supplying prescription-only drugs without the need for a prescription. "Particularly worrying examples include counterfeit cancer and heart drugs and fake vaccines sold during the bird and swine flu scares," said Jackson.

The fake drugs, sold on unverified Internet sites, often don't even contain the ingredient the sites claim they contain. Others have variable concentrations of active ingredients, and some of the fake drugs have been found to contain dangerous poisons such as arsenic, boric acid, floor and shoe polish, talcum powder, chalk dust, brick dust, nickel, and leaded road paint.

The problem is growing so big that the European Union is developing legislation specifically to deal with it, together with stronger penalties. In 2010, as he finished his term as European Commissioner for Enterprise and Industry, Gunter Verheugen said: "Every faked drug is a potential massacre. Even when a medicine only contains an ineffective substance, this can lead to people dying because they think they are fighting their illness with a real drug."

The reviewers also say there is clear evidence that fake drugs are finding their way

into legitimate supplies. The evidence has been recovered at all levels of the supply chain: from warehouse level, through outlets like pharmacies, to patients.

For instance, in the UK, there have been nine product recalls in the last three years, all prompted by fake drugs being found in pharmacies, or with patients. Another five recalls were due to fake drugs found at wholesalers.

Jackson and colleagues' review contains a wealth of facts and figures on what is happening internationally with counterfeit drugs, such as:

- In the United States, five 'Tamiflu' vaccines tested by the Food and Drug Administration (FDA) contained no active ingredient at all.
- Another four flu vaccines contained levels of active ingredient that were not FDA approved.
- Seizures and detentions of counterfeit drugs in the European Union are increasing. In 2009, they accounted for 10% of all materials detained.
- A large number of drugs available through the Internet are prescription only medications, but many are being sold without a prescription.
- For instance, a UK study of 96 websites marketing painkillers, found that 48% of the sites sold prescription painkillers and 76% of them did not require a prescription.
- Similarly, a US study that reviewed 159 websites offering controlled drugs, found 85% of them did not require a prescription.
- A study by the European Alliance for Access to Safe Medicines found that 62% of the drugs bought over the Internet were counterfeit or substandard. Of these, 68% were unlicensed copies, and the rest were counterfeit branded drugs.
- The study also found that 90% of sites did not require a prescription to buy prescription-only drugs.

Jackson and his colleagues even found a report of a 13-year-old being able to buy the psychostimulant drug Ritalin through the Internet. Considering why people buy over the Internet, the reviewers write: "Although many consumers acknowledge some degree of risk with purchasing medications via the Internet, speed, convenience and cost often prompt these purchases."

One study they reviewed estimates that 9% of Europeans have bought prescription-only drugs via the Internet, even though 69% agreed that it was "dangerous" or a "bad idea" to do so. The most common reasons were cheaper costs (46%) and convenience (30%). They suggest healthcare professionals should be proactive

about fighting this rise in fake drugs, and urge them to report all suspected cases to the authorities.

They should advise their patients to stay clear of unregulated Internet pharmacies, and be especially suspicious of sites that offer prescription medication without prescriptions, or at huge discounts. Jackson said the criminals that make and sell these drugs don't care about what their products do to people's health. They are increasingly targeting cancer and heart drugs, and opportunist drugs like flu vaccines, he said. "There have also been reports of deaths from Internet drugs and some investigators suspect that many more have been overlooked or wrongly attributed to other causes," said Jackson.