The environmental impact of prescribing

Boots pharmacies made the mainstream news headlines last month when it became apparent that some prescriptions that were being prepared using an automated centralised system were being distributed using plastic bags. Lloyds pharmacies have a similar process in place. The argument is that the centralised assembly process is more efficient and safer than the old-fashioned local approach, which used paper bags. The bags can be recycled, but as many of us know, that isn’t necessarily straightforward. Given the backlash against plastic that has been seen recently, and particularly given the fact that pharmacies have always been well known for using paper bags, it is unsurprising that this change has been received negatively by consumers.

Not just plastic to blame

However, the impact of prescribing on the environment is not just limited to plastic bags. Take blister packs, for example, most of which are made of plastic and aluminium foil. Recycling composite waste is notoriously tricky, and given it contributes a relatively low amount to total waste, it is difficult to develop an economical means of doing this. Aside from plastics, another concern is pharmaceuticals finding their way into water supplies. This may be as a result of manufacturing effluent, agricultural run-off, and inappropriate drug disposal. A review by the World Health Organization (WHO) in 2012 founds trace concentrations of pharmaceuticals to be present in various water sources, albeit at levels unlikely to cause harm to human health. Having said that, there are concerns around poor manufacturing practices, particularly of some generics, with contamination of water with antimicrobials in India found to be associated with development of antibiotic-resistant bacteria.

Finally, there is the considerable carbon footprint of the pharmaceutical industry, with a recent paper by Balkhir and Elmeligi noting that this has received little attention in the past.¹ There remains considerable variation across the industry, and although emissions are generally decreasing in most major companies, this too is variable and emissions remain over half-as-great again as for the automotive industry. The impact of the wider supply chain also needs to be considered. Our ageing population and the growing pharmaceutical sector will make these issues increasingly challenging to deal with. Nevertheless, there is some room for optimism, with a 2015 report estimating a reduction of over a third in the contribution of pharmaceuticals to the NHS carbon footprint since 2007, accounting for 15% of total emissions.

Climate change and environmental issues are considered among the greatest threats to human health and wellbeing. This includes the risks of infectious diseases, exposure to thermal extremes, contamination of fresh-water supplies, biodiversity loss, and negative impacts on food production.

It is essential that the production, delivery and use of the medicines we prescribe to prevent and alleviate disease in the shorter term, do not negatively impact on the health of society more widely in decades to come.

Reference


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