

Falsified and Substandard Medicines in Developing Countries: Seeking for The Sampling Procedure to find them

Irhamahayati

Indonesia FDA, Jakarta, Indonesia

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ABSTRACT

Falsified and substandard medicines is a very important issue, especially in developing countries including Indonesia. World Health Organization (WHO) stated that 1 in 10 medicines in developing countries are substandard or falsified. It is result in risks for patients and health systems relating to ineffective drugs, prolong treatment times, possible side effects, increased healthcare spending, even the risk of serious illness and death. There are many factors responsible for this situation, namely the effectiveness of government control, public drug procurement policies, market and economic competition, the depletion of entry barriers driven by free and online trade, availability of raw materials, and mastery of technology on pharmaceuticals. The problem is how to find falsified and substandard medicines amidst so many kinds of medicines in market. If the sampling is done randomly on all types of medicines in all market, it will be less likely to find them. In addition, this kind of sampling technique will be expensive because it requires a lot of resources. Therefore, a risk-based systematic mechanism is needed to guide sampling procedure. This research was aimed to design a model that could be used as a reference. Using the system thinking method, we mapped out relationships between various factors and phenomena surrounding the issue. Then, the system dynamics modelling was developed with a focus on sentinel groups that were most at risk of drug counterfeiting cases. All relevant variables were discussed, and some recommendations were provided in this paper. We hope, using this recommendation, the sampling procedure becomes faster, more efficient, and more likely to find cases. It is because the more effective the way to control falsified and substandard medicines, the higher the protection that consumers or patients may get.

Keywords: Falsified, Substandard, Medicines, Developing Countries, Procedure.