The Essay section contains opinion pieces on topics of broad interest to a general medical audience.

The Primacy of Public Health Considerations in Defining Poor Quality Medicines

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Poor Quality Medicines—A Major Public Health Problem

There is growing, but belated, concern that much of the developing world’s supply of medicines—in particular, its supply of anti-infective drugs—is of poor quality. This constitutes a major public health problem because the high prevalence of poor quality drugs in developing countries results in avoidable morbidity, mortality, and drug resistance [1–7]. Moreover, any efforts to improve public health by developing new medicines or by changing treatment policies will ultimately be pointless if the drugs patients actually take contain insufficient or incorrect ingredients.

Unfortunately, efforts to improve the quality of medicines in developing countries are being hampered by confusion over the terms used to describe different types of poor quality medicines. This confusion has arisen because of poor science and because of tension between the defence of commercial interests and the public health importance of enhanced access to good quality medicines in developing countries. Specifically, some commentators have argued that counterfeit medicines are being viewed primarily as intellectual property (IP) rather than public health concerns and that the innovative pharmaceutical industry is using action against counterfeit medicines to impede the trade in competing generics [8–20]. In this essay, we call for public health concerns to be made the prime consideration in defining and combatting counterfeit medicines and argue that recent World Health Organization (WHO) initiatives eschew IP concerns. We also discuss some related but neglected interventions that might help to improve drug quality in developing countries.

Current Definitions of Poor Quality Medicines

Since 1992, the WHO has used a definition of counterfeit medicines that regards them as products produced fraudulently without any regard to regulatory and public health concerns (Box 1) and usually, but not always, lacking in any active pharmaceutical ingredients (API) [3–5, 9]. By contrast, the definition used by WHO for “substandard” medicines describes them as medicines produced by legitimate manufacturers that do not meet pharmacopoeial standards because of errors in the quality or quantity of raw materials or in manufacture (see Box 1). [7].

Surprisingly, some commentators argue that it is “not immediately obvious that a specific definition of ‘counterfeit medicine’ is a necessary tool to effectively combat the public health problem of unsafe medicines” [8]. We strongly disagree with this viewpoint. It is clearly crucial to distinguish counterfeits from other types of poor quality medicines, in particular, substandard medicines. Counterfeit and substandard medicines are fundamentally different problems and without common understanding, through consensus definitions, the public health problems associated with poor quality medicines cannot be measured and interventions planned and evaluated (see Text S1).

Unfortunately, although it is essential to distinguish substandard from counterfeit medicines because their origins and solutions differ, these terms are often used interchangeably, which is both confusing and incorrect [3, 5, 8] (Box 1 and Text S1). For example, “poor quality medicines”—drugs that have failed physical/chemical tests—are often classified as “counterfeit” even when it is unclear whether they have been produced fraudulently (i.e., they are counterfeit) or whether they are the re-

Citation: Newton PN, Amin AA, Bird C, Passmore P, Dukes G, et al. (2011) The Primacy of Public Health Considerations in Defining Poor Quality Medicines. PLoS Med 8(12): e1001139. doi:10.1371/journal.pmed.1001139

Published: December 6, 2011

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Funding: Wellcome Trust (UK) for PNN & NJW. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript, except for the involvement of Chris Bird as an author.

Competing Interests: PN and NJW have scientific collaborations with the Enforcement Working Group of IMPACT, and NJW is co-chair of the WHO malaria treatment guidelines committee but none of the authors have shares in pharmaceutical companies or works as a part of IMPACT. NJW is a member of the PLoS Medicine Editorial Board. The Wellcome Trust had no role in the writing or decision to submit this viewpoint for publication, except for the involvement of CB as an author. BS is co-founder of MPedigree, which is a non-profit based in Ghana that advocates for the development of strategies to fight counterfeiting. All other authors have declared that no competing interests exist.

Abbreviations: IP, intellectual property; MRA, medicine regulatory authority; WHO, World Health Organization

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Provenance: Not commissioned; externally peer reviewed.
Summary Points

- Poor quality essential medicines, both substandard and counterfeit, are serious but neglected public health problems. Anti-infective medicines are particularly afflicted.
- Unfortunately, attempts to improve medicine quality have been hampered by confusion and controversy over definitions. For counterfeit (or falsified) medicines, this has arisen from perceived differences between public health and intellectual property approaches to the problem.
- We argue that public health, and not intellectual property or trade issues, should be the prime consideration in defining and combating counterfeit medicines, and that the World Health Organization (WHO) should be encouraged and supported to take a more prominent role in improving the world’s medicine quality and supply.
- An international treaty on medicine quality, under WHO auspices, could be an important step forward in the struggle against both substandard and counterfeit (or falsified) medicines.

Box 1. Current Definitions as used by WHO

Substandard medicines “Substandard medicines (also called out of specification (OOS) products) are genuine medicines produced by manufacturers authorized by the NMRA which do not meet quality specifications set for them by national standards.

“Normally, each medicine that a manufacturer produces has to comply with quality standards and specifications. These are reviewed and assessed by the national medicines regulatory authority before the product is authorized for marketing.” [34]

Counterfeit medicines “A counterfeit medicine is one which 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, wrong ingredients, without active ingredients, with insufficient quantity of active ingredient or with fake packaging.” [9]
Failure to Deal with Counterfeit Text S1. concerning the definitions of different types of braced. Further neglected issues constructive vital dialogue, such a change in comparison to consensus on the accompan essay is of relatively little importance in the above terms is used for what we refer to of health and IPRs’’ [20,23,24]. Which of refer to spurious pharmaceuticals is a dis- ‘’counterfeit’ (a term defined in the TRIPS poor quality medicines.

Public health–oriented definitions of quality medicine. There could be grey areas between all three main types (see Text S1). For example, both substandard medicines and counterfeits could become degraded after manufacture.

doi:10.1371/journal.pmed.1001139.g001

“‘counterfeit’ (a term defined in the TRIPS Agreement as trademark violation) to also refer to spurious pharmaceuticals is a dis-service to public health as it conlates issues of health and IPRs” [20,23,24]. Which of the above terms is used for what we refer to as “counterfeit medicine” throughout this essay is of relatively little importance in comparison to consensus on the accompanying definition, which is vital. If the use of an alternative term, such as “falsified” or “spurious”, creates the conditions for constructive vital dialogue, such a change in terminology should be enthusiastically embraced. Further neglected issues concerning the definitions of different types of poor quality medicines are discussed in Text S1.

The World Health Assembly’s Failure to Deal with Counterfeit Medicines

The World Health Assembly (WHA) should be an ideal setting in which to thrash out solutions to the problem of poor quality medicines in the developing world. However, two days of debate on counterfeit medicines at the 63rd WHA (May 2010) failed to reach any agreement about the way forward apart from establishment of a working group to “examine, from a public health perspective, excluding trade and intellectual property considerations…WHO’s role in measures to ensure availability of quality, safe, efficacious and affordable medical products…WHO’s relationship with the International Medicinal Products Anti-Counterfeiting Taskforce...WHO’s role in the prevention and control of medical products of compromised quality, safety and efficacy such as substandard/spurious/falsely-labelled/falsified/counterfeit medical products from a public health perspective.” [23–28]. The Working Group met at the 64th WHA in May 2011 and requested more time for its deliberations [29]. This delay is not in the interest of global public health, and we hope that a consensus on counterfeit medicine definitions, terminology, and interventions will soon be expedited by MRAs and public health officials working together, as urged by 40 African countries [26] whose voices reflect public health concerns and whose people are most likely to suffer from this stagnation. The Working Group met, for the second time, on October 25–28, 2011. The report is available at http://www.ip-watch.org/weblog/wp-content/uploads/2011/11/SSFFCReport_28OCT.pdf.

The Way Forward

The problems of poor quality medicines cannot be viewed in isolation, as they are enmeshed with many other complex health system problems, especially the affordability and accessibility of medicines and the (often limited) capacity of MRAs. Here, we highlight three potential inter-

Box 2. Proposed New Definitions

Substandard medicines “Each pharmaceutical product that a manufacturer produces has to comply with quality standards and specifications at release and throughout the product shelf-life required by the territory of use. Normally, these standards and specifications are reviewed, assessed and approved by the applicable National Medicines Regulatory Authority before the product is authorized for marketing.

“Substandard medicines are pharmaceutical products that do not meet their quality standards and specifications.” [35]

Counterfeit medical products “A medical product is counterfeit when there is a false representation in relation to its identity and/or source. This applies to the product, its container or other packaging or labeling information. Counterfeiting can apply to both branded and generic products. Counterfeits may include products with correct ingredients/components, with wrong ingredients/components, without active ingredients, with incorrect amounts of active ingredients, or with fake packaging.

“Violations or disputes concerning patents must not be confused with counterfeiting of medical products. Medical products (whether generic or branded) that are not authorized for marketing in a given country but authorized elsewhere are not considered counterfeit. Substandard batches or quality defects or non-compliance with Good Manufacturing Practices/Good Distribution Practices in legitimate and medical products should not be confused with counterfeiting.” [9] (Footnotes omitted.) And gave the following explanation:

“Many Member States do not have specific or effective legal instruments for combating counterfeit medical products, and may for that reason resort to non-specific legislation related to trademark protection. However, for several reasons such an approach is not satisfactory, as follows. Legal instruments related to intellectual property rights have a broad scope and are not focused on the protection of public health. Counterfeiting of medical products does not always entail the violation of intellectual property rights. The intellectual property rights approach identifies the rights holder as the main victim of counterfeiters and as the main trigger of enforcement and prosecution while, in the case of medical products, the real victim of counterfeiting is the patient; legislation should therefore enable patients and health authorities to undertake appropriate procedures regardless of the action of the holders of intellectual property rights. The technical complexity of the regulation of manufacture, trade, distribution and dispensing of medical products warrants an approach much wider than one based on intellectual property rights. The new text therefore states clearly that the violations or disputes about patents must not be confused with counterfeiting of medical products.” [9]
Box 3. Separating the Issue of Counterfeit Medicines from Patent Issues

A report by the WHO Secretariat on counterfeit medical products includes the following draft resolution:

“14. The Executive Board is invited to consider the following draft resolution:
The Executive Board.

Having considered the report on counterfeit medical products, RECOMMENDS to the Sixty-second World Health Assembly the adoption of the following resolution:........

Recognizing that the primary focus of combating counterfeit medical products is the protection of public health and that the main victims of counterfeiters are patients;

Recognizing the importance of ensuring that combating counterfeit medical products does not result in hindering the availability of legitimate generic medicines;

Recognizing that disputes about, or violations of, patents are not to be confused with counterfeiting;

Recognizing that medical products (whether generic or branded) that are not authorized for marketing in a given country but authorized elsewhere are not considered counterfeit;

Recognizing that quality defects or non-compliance with Good Manufacturing Practices/Good Distribution Practices in legitimate medical products must not be confused with counterfeiting;”

(19), with corrigendum.)

Conclusions

Counterfeit medicines should be defined in terms of harm to health, with punishments appropriate for the injury or killing of patients. Moreover, it is imperative that public health institutions, ministries, and lawyers, and not primarily IP specialists or industrial and trade bodies, take the strategic lead in countering poor quality medicines. We strongly suggest that those concerned with medicine quality and access put the recent controversies behind them and work positively towards agreement on definitions and a treaty to facilitate access to good quality essential medicines and medical products.

Supporting Information

Text S1 Some further problematic issues relating to medicine quality. (DOC)

Acknowledgments

We thank Michael D. Green, Facundo Fernández, Anu Timmermans, and Julian Harris for useful comments on the paper.

Author Contributions

Wrote the first draft: PN. Contributed to the writing of the manuscript: PN AAA CB PP GD GT BS RB PJG NJW. ICMJE criteria for authorship read and met: PN AAA CB PP GD GT BS RB PJG NJW. Agree with the manuscript results and conclusions: PN AAA CB PP GD GT BS RB PJG NJW.

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