

COMMENTARY

Open Access



Drug supply shortage in Nigeria during COVID-19: efforts and challenges

Edward Faiva¹, Hashim Talib Hashim² , Mustafa Ahmed Ramadhan² , Shingin Kovona Musa¹ , John Bchara^{3*}, Yahya Dheyaa Tuama², Yusuff Adebayo Adebisi⁴, Mustafa Hayder Kadhim⁵, Mohammad Yasir Essar^{6,7}, Shoaib Ahmad⁸ and Don Eliseo Lucero-Prisno III^{9,10}

Abstract

The COVID-19 pandemic has resulted in massive disruptions in global supply chains. Nigeria is particularly vulnerable with respect to pharmaceuticals since there is reduced local production and about 70% of the drug supply is imported creating a huge supply–demand disparity particularly in times like COVID-19. Nigeria is in need of huge quantities of quality-assured health commodities to effectively respond to the pandemic. Significant shortages of other essential medicines and medical products across the country could be imminent. Drug scarcity in Nigeria during the COVID-19 pandemic period is because of several accumulated factors, majorly as a result of global lockdown, decreased manufacturing, unaddressed regulatory affairs, poor access to resources by the population, lack of buffer stocks, security instability, and poor funding of the healthcare system. This situation if left unattended, could cause serious drawbacks to the health of the populace as well as the quality of life of Nigerians amid the COVID-19 Pandemic. Appropriate measures should be directed to ensure ethical processes on drug production, importation, pricing, and distribution to avoid such events during unavoidable scenarios, like the COVID-19 pandemic and other public health emergencies.

Keywords: COVID-19, Drug shortage, Nigeria, Efforts, Pharmaceutical

Introduction

The leading causes of death and disability in Nigeria are preventable and treatable diseases that can be alleviated with cost-effective essential medicines. However, majority of the population lacks regular access to essential medicines. Many of those who are able to access it are either given the wrong treatment, receive too little medicine for their health conditions, or use the medicines incorrectly [1]. The effective management of drug supply addresses practical ways in which government policymakers, essential medicines program managers, non-governmental organizations (NGOs), donors, and others can work to ensure that high-quality essential medicines

are available, affordable and are rationally consumed. Medicines are of critical importance because they can save lives and improve health. Moreover, they promote trust and participation in health services. They can be expensive and with special concerns bring a uniqueness that sets them apart from other consumer products [2]. Many essential drugs are currently short in Nigeria with the supply of antiretroviral being the most threatened.

The Chairman of Pharmaceutical Manufacturers Group of the Manufacturers Association of Nigeria (PMGMAN), in January 2019, made a case for drug insecurity in Nigeria. He urged the federal government to increase local production of essential drugs from the current 40 to 75%. Moreover, he demanded that at least 300 billion Naira should be injected into the sector to enable players in the pharmaceutical industry to ramp up local production rather than depending solely on import products. In line with this interest, and that of the Pharmaceutical

*Correspondence: Johnbshara@gmail.com

³ Faculty of Medicine, Tishreen University, Lattakia, Syria
Full list of author information is available at the end of the article



© The Author(s) 2021. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

Society of Nigeria (PSN), that have suggested policies that would encourage local manufacturing of medicines, the federal government jacked up the tax for importation of essential drugs up to 20% as part of measures to encourage pharmaceutical firms to manufacture medicines locally [2, 4].

In 1990, the maiden National Drug Policy for Nigerians launched to address the challenges associated with the inadequacies of drug supply and distribution. These inadequacies resulted from various factors, such as: an ineffective structure of drug administration and control, inadequate funding of drug supply and control activities, increased reliance on foreign sources for finished drug products, pharmaceutical raw materials, reagents and equipment, inefficient storage, transportation and distribution facilities, poor selection and procurement practices, involvement of incompetent persons in procurement, distribution and sale of drugs, poor performance of drug suppliers to public health care institutions, and lack of political will to provide safe, efficacious and good quality drugs to meet the health needs of Nigerians. The policy was created with commendable goals and objectives intended to deal with the unsatisfactory situation at that time. The adoption of this policy was an encouraging development by the observers. After more than a decade of its adoption and implementation, modest progress has been reported. The positives to take are the publication of an Essential Drugs List and a National Drug Formulary, the establishment of a statutory agency responsible for drug administration and control, and the introduction of drug registration procedures.

Regardless, a lot remains to be done in many areas, including the actualization of self-sufficiency in local production of essential drugs, establishment of an effective drug procurement system, development of a well-ordered drug distribution system, harmonization and updating of drug legislation, effective control of drug advertisement and promotion, entrenchment of and commitment to rational drugs use at all levels of healthcare, and drug research and development, etc. [5, 6]. The revision of the policy presents an excellent opportunity for the formulation of new strategies, strengthening achievements in areas where progress has been recorded, and addressing those areas that call for more effective action. It is expected that with judicious implementation of the revised policy, as laid out in the accompanying implementation plan, the Nigerian people will have sustainable access to safe, efficacious and good quality drugs [6].

Factors influencing drug shortage in Nigeria

In addition to the importation of finished products, wholesale and retail pharmacy businesses have been flourishing in Nigeria. There has also been a parallel

growth in local drug manufacturing, coupled with a very high demand of industrial conditions and standards required for both raw materials, dosage form processing, equipment, and processing environment [7, 8]. Moreover, the control of global drug business by multinational cooperation that has overcome most of their initial development problems, has resulted in unfair competition from imported products and multinationals against the locally manufactured products [9].

The need to standardize many drugs of herbal origin circulating in Nigeria, and the inability of the countries to put to good use the research results from their basic or applied scientists has led to brain drain to foreign laboratories. There is still the inadequacy on the part of the government to check illegal importation, manufacture, and sale of fake, adulterated, substandard and expired goods due to fraudulent drug dealers and some corrupt government officials. Lack of effective research and development due to poor research support from the government and private companies has also been a major factor associated with drug scarcity in Nigeria [10, 11].

Conclusion and recommendations

With the threat of the COVID-19 pandemic still looming, it is high time that the federal government removes bottlenecks on importation of drugs and devises other effective ways of ensuring that Nigeria is not at any time cut off from the supply of essential drugs.

There is dire need to achieve financial sustainability through greater efficiency and financing mechanisms that will increase availability while ensuring equity. Efficiency in public pharmaceutical supply through strategies that build on public-sector strengths should be ensured, while also incorporating greater flexibility and competitiveness. More effort should also be directed at changing the behavior of providers, patients, and the public to promote effective, safe, and economical prescribing, dispensing, and patient use of medicines. The role of government in improving the availability, affordability, and rational use of medicines in the private sector should also be strengthened. Through adoption and enforcement of legislations and regulations, the government should also regulate the safety, efficacy and quality of drugs and medical products as to ensure all medicines meet basic quality standards.

Abbreviations

NGOs: Nongovernmental organizations; PMG-MAN: The Chairman of Pharmaceutical Manufacturers Group of the Manufacturers Association of Nigeria; PSN: Pharmaceutical Society of Nigeria.

Acknowledgements

None.

Authors' contributions

All the authors contributed equally in this work. All authors read and approved the final manuscript.

Funding

Not applicable.

Availability of data and materials

Not applicable.

Ethics approval and consent to participate

Not applicable.

Consent for publication

All authors agreed the publication of this manuscript.

Competing interest

The authors declare that they have no competing of interest.

Author details

¹ Faculty of Pharmaceutical Sciences, Ahmadu Bello University, Zaria, Nigeria. ² College of Medicine, University of Baghdad, Baghdad, Iraq. ³ Faculty of Medicine, Tishreen University, Lattakia, Syria. ⁴ Faculty of Pharmacy, University of Ibadan, Ibadan, Nigeria. ⁵ College of Medicine, University of Kufa, Kufa, Iraq. ⁶ Medical Research Center, Kateb University, Kabul, Afghanistan. ⁷ Kabul University of Medical Sciences, Kabul, Afghanistan. ⁸ Punjab Medical College, Faisalabad, Pakistan. ⁹ Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, UK. ¹⁰ Faculty of Management and Development Studies, University of the Philippines (Open University), Los Banos, Laguna, Philippines.

Received: 12 January 2021 Accepted: 18 January 2021

Published online: 22 January 2021

References

- Overdependence on drug importation, others kill local pharma industry, threaten medicine security. *M.guardian.ng*. 2020. <https://m.guardian.ng/features/overdependence-on-drug-importation-others-kill-local-pharma-industry-threaten-medicine-security/amp/>. Accessed 14 Dec 2020.
- How local manufacturing can reduce fake, substandard drugs in Nigeria. *M.guardian.ng*. 2020. <https://m.guardian.ng/features/how-local-manufacturing-can-reduce-fake-substandard-drugs-in-nigeria/amp/>. Accessed 14 Dec 2020.
- Dada DA, Aku E, David KB. COVID-19 pandemic and antiretrovirals (ARV) availability in Nigeria: recommendations to prevent shortages. *Pan Afr Med J*. 2020;35(Suppl 2):149.
- Akinyemi K, Fakorede C, Anjorin A, Abegunrin R, Adunmo O, Ajoseh S, et al. Intrigues and challenges associated with COVID-19 pandemic in Nigeria. *Health*. 2020;12(08):954–71.
- Nigeria: Averting Drug Scarcity in Nigeria. *allAfrica.com*. 2020. <https://allafrica.com/stories/202004070630.html>. Accessed 14 Dec 2020.
- Erah P, Bafor E. Assessment of pharmacist–patient communication in some health care facilities in Southern Nigeria. *Niger J Pharm Res*. 2005. <https://doi.org/10.4314/njpr.v3i1.35380>.
- Lucero-Prisno DE, Yusuff AA, Xu L. Current efforts and challenges facing responses to 2019-nCoV in Africa. *Glob Health Res Policy*. 2020. <https://doi.org/10.1186/s41256-020-00148-1>.
- Akande-Sholabi W, Adebisi Y. The impact of COVID-19 pandemic on medicine security in Africa: Nigeria as a case study. *Pan Afr Med J*. 2020. <https://doi.org/10.11604/pamj.supp.2020.35.2.23671>.
- Lucero-Prisno D, Elhadi Y, Modber M, Musa M, Mohammed S, Hassan K, et al. Drug shortage crisis in Sudan in times of COVID-19. *Public Health Pract*. 2020;1:100060.
- Nigeria relies heavily on drug imports. Why this is worrying in the time of COVID-19. *The Conversation*. 2020. <https://www.google.com/amp/s/theconversation.com/amp/nigeria-relies-heavily-on-drug-imports-why-this-is-worrying-in-the-time-of-covid-19-134562>. Accessed 14 Dec 2020.
- Collaboration O, Newton PN, Bond KC, Babar Z. COVID-19 and risks to the supply and quality of tests, drugs, and vaccines. *Lancet Glob Health*. 2020;8(6):e754–5. [https://doi.org/10.1016/S2214-109X\(20\)30136-4](https://doi.org/10.1016/S2214-109X(20)30136-4).

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ready to submit your research? Choose BMC and benefit from:

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

At BMC, research is always in progress.

Learn more biomedcentral.com/submissions

