

Medicine Prices, Availability, and Affordability in Private Health Facilities in Low-Income Settlements in Nairobi County, Kenya

Dennis Ongarora ^{1,*}, Jamlick Karumbi ², Warnyta Minnaard ³, Kennedy Abuga ¹, Vincent Okungu ⁴ and Isaac Kibwage ^{1,5}

¹ Department of Pharmaceutical Chemistry, University of Nairobi, Nairobi 19676-00202, Kenya; dennis.bagwasi@uonbi.ac.ke (D.O.); koabuga@gmail.com (K.A.); ikibwage@gmail.com (I.K.)

² Ministry of Health, Nairobi 30016-00100, Kenya; karumbij@gmail.com

³ Stichting PharmAccess International, Amsterdam 22700 1100 DE, Netherlands; w.minnaard@pharmaccess.org

⁴ PharmAccess Foundation, Nairobi 6711-00100, Kenya; okungu008@gmail.com

⁵ Administration, Planning and Development, Egerton University, Njoro 20115, Kenya; ikibwage@gmail.com (I.K.)

* Correspondence: dennis.bagwasi@uonbi.ac.ke

Received: 19 March 2019; Accepted: 18 April 2019; Published: 24 April 2019

Abstract: Medicine prices are a major determinant of access to healthcare. Owing to low availability of medicines in the public health facilities and poor accessibility to these facilities, most low-income residents pay out-of-pocket for health services and transport to the private health facilities. In low-income settlements, high retail prices are likely to push the population further into poverty and ill health. This study assessed the retail pricing, availability, and affordability of medicines in private health facilities in low-income settlements within Nairobi County. Medicine prices and availability data were collected between September and December 2016 at 45 private healthcare facilities in 14 of Nairobi's low-income settlements using electronic questionnaires. The International Medical Products Price Guide provided international medicine reference prices for comparison. Affordability and availability proxies were calculated according to existing methods. Innovator brands were 13.8 times more expensive than generic brands. The lowest priced generics and innovator brands were, on average, sold at 2.9 and 32.6 times the median international reference prices of corresponding medicines. Assuming a 100% disposable income, it would take 0.03 to 1.33 days' wages for the lowest paid government employee to pay for treatment courses of selected single generic medicines. Medicine availability in the facilities ranged between 2% and 76% (mean 43%) for indicator medicines. Prices of selected medicines varied within the 14 study regions. Retail medicine prices in the low-income settlements studied were generally higher than corresponding international reference prices. Price variations were observed across different regions although the regions comprise similar socioeconomic populations. These factors are likely to impact negatively on healthcare access.

Keywords: retail medicine prices; availability; affordability; low-income settlements; international reference price

1. Introduction

Governments in low- and middle-income countries (LMICs) are increasingly advocating for universal health coverage [1]. One of the key components of any functional health system is the availability of medicines [2]. However, a majority of the population in LMICs have limited access to medicines [3]. Even when medicines are available, patients have to pay for them out-of-pocket, the cost contributing up to 60% of health care expenditure [4]. Access to medicine is broadly defined by