Rapid assessment of the demand and supply of tobacco dependence pharmacotherapy in Uganda

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Tobacco dependence pharmacotherapy (TDP) plays a major role in smoking cessation. We conducted a rapid assessment of current smoking, availability of TDP and the willingness to quit and to pay for TDP among 56 patients with tobacco-attributable diseases and 38 pharmacies in Uganda. Of the 56 patients, 63% were current smokers, 77.4% wanted to quit and 37% were willing to pay. Drugs were largely unavailable: nicotine replacement products were available in only seven pharmacies (18%) and bupropion in three (8%); these cost respectively US\$15.7 and US\$17.1 for a 1-month supply. Improving supplies and lowering prices could facilitate access to TDP in Uganda.

Tobacco smoking is one of the leading risk factors for premature mortality. Smoking prevalence in Uganda is 7.9%,¹ but could be higher in some sections of the population, such as among patients with an established tobacco-attributable disease (TAD). It is known that continued smoking negatively impacts the outcome of TADs, while smoking cessation improves outcomes.^{2–4} According to the results of the Global Adult Tobacco Survey (GATS), 60% of Ugandan smokers wish to quit, but access to cessation support is extremely limited.¹ Article 14 of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) states that ‘each Party shall develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices, taking into account national circumstances and priorities, and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence’.⁵ For the framework to be implemented, tobacco dependence pharmacotherapy (TDP) should be made available, particularly for those with the most to gain, such as patients with a TAD. The importance of the price of TDPs as a barrier to use in low- and middle-income countries (LMICs) is not well documented.

Current smoking prevalence among patients with TADs is not known in Uganda, nor is the willingness of these patients to quit smoking. Furthermore, the availability of TDP is not known. The aim of this study was to determine the prevalence of current smoking among in-patients with a TAD at a tertiary hospital in Uganda. We also aimed to investigate the supply of TDP through a survey of pharmacies licensed to import medicines into the country and to explore whether the cost of TDP products is a barrier to their use.

ASPECT OF INTEREST

This pilot study looked at both the demand and the supply of TDP. We conducted a cross-sectional survey of 1) medicine importers in the country and 2) patients with TADs admitted to Mulago Hospital, Kampala, Uganda, from 1 June to 13 June 2015.

To qualify for inclusion, patients had to have any of the following TADs: chronic obstructive pulmonary disease (COPD), lung cancer, asthma, cardiovascular disease, stroke or diabetes. A medical officer performed daily rounds for 1 week on the wards to recruit patients. All consenting patients with a TAD were included. Data collected from the patients included smoking status, duration of smoking, products smoked and willingness to quit and to pay for TDP. We did not collect data on number of cigarettes smoked/day due to the heterogeneity of the products smoked.

We used descriptive statistics to summarise the characteristics of the study populations (pharmacies and patients). We calculated the proportions of patients who were current smokers, willing to quit and to pay for drugs. The proportions of pharmacies with each individual medicine available were calculated as well as the mean monthly cost of available drugs.

The survey was approved by the Mulago Hospital Research and Ethics Committee, Kampala, Uganda. All patients provided informed consent to participate.

We assessed 38 pharmacies. Of 66 patients invited to participate, 56 were interviewed; exclusions included 6 patients without a target diagnosis and 4 who were unwilling to participate. Of the 56 patients, 40 (71%) were male; the mean age was 57.5 years (SD 16.4). Twenty-three patients (41%) had been hospitalised with COPD, 8 (14%) with stroke, 8 (14%) with cardiovascular disease, 7 (13%) with asthma, 7 (13%) with diabetes and 3 (5%) with lung cancer. Thirty-five patients (63%) were current smokers, 20 (36%) were former smokers and one had never smoked. The median duration of smoking was 31.5 years (interquartile range 12.5–47.5 years).

Of the 35 current smokers, 18 (54.6%) reported smoking cigarettes, 15 (45.4%) reported smoking other forms of tobacco and 2 gave no response. Of the current smokers, 24 (77.4%) desired to quit and 10 (37.0%) were willing to pay for TDP.

Of the 38 pharmacies surveyed, one was public, one was private (not for profit) and 36 were private. The TDPs available are shown in the Table. Only seven (18%) pharmacies had ≥ 1 type of nicotine replacement

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KEY WORDS

pharmacotherapy; Uganda; tobacco dependence

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TABLE Availability and cost of tobacco dependence pharmacotherapy in the surveyed pharmacies

Name of drug	Pharmacies with drug in stock <i>n</i> (%)	Average monthly cost of drug UGX (USD)
Any nicotine replacement product*	7 (18.4)	55 000 (15.7)
Bupropion	3 (7.9)	60 000 (17.1)
Nortriptyline	1 (2.6)	

*Gum, lozenge, spray, patch.

UGX = Uganda shilling; USD = United States dollar.

therapy (NRT), of which three had bupropion only and one had nortriptyline only. The mean cost for a monthly course of NRT was US dollars (US\$15.7). Neither varincline nor cytisine, two common TDPs, were found in stock in any of the pharmacies surveyed. The only pharmacy that stocked nortriptyline could not provide a cost.

DISCUSSION

This study established that 63% of patients with TADs in Mulago Hospital were current smokers, of whom 77.4% wanted to quit and 37% were willing to pay for TDP. This paper also shows that the inverse care law applies to TDP, with low availability and high prices.

Although Uganda has signed up to the WHO FCTC, smoking cessation services are not yet well developed in Uganda. There are few formal smoking cessation clinics and few staff trained in smoking cessation interventions such as behavioural change or drug therapies, and there is no telephone quit line for smokers. The 63% smoking rate among patients with TADs is comparable to those in other studies, such as the 72% rate cited by Khot et al. and Garcia-Aymerich et al.^{6,7}

The proportion of patients wishing to quit in this study could be higher than the 60% reported in the GATS, due to the effect of the current illness on the patients and the known opportunities for quitting smoking on admission.¹ The cost of about US\$15.7 for a monthly course of NRT is about 18.1% of the Ugandan average monthly income of US\$86.7.⁸ In comparison, a smoker in the United Kingdom (UK) spends an estimated 65 pounds sterling (GBP; US\$92 at the time of publication) on NRT per month, approximately 3.5% of the average estimated monthly income of GBP 1848 (US\$2615) in the UK.^{9,10}

The findings of this paper should be interpreted with caution, as this was a small study in a single centre, involving patients admitted to hospital over a few days, thus rendering it vulnerable to selection bias. As they are from a self-reported questionnaire, the data on items such as willingness to pay for TDP are untested and may not reflect true behaviour in practice.

CONCLUSION

Governments should make TDP available for patients with TADs, and clinicians should be trained in smoking cessation as a component of the response to the rising tide of non-communicable diseases. Larger studies with more diverse populations are required to better understand the supply and demand for TDP as well as qualitative studies to investigate the drivers of TDP unavailability.

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Le traitement pharmaceutique de la dépendance au tabac (TDP) joue un rôle majeur dans l'arrêt du tabac. Nous avons réalisé une évaluation rapide de la disponibilité du TDP et la volonté d'arrêter et de payer pour le TDP parmi 56 patients atteints de maladies attribuables au tabac et 38 pharmacies en Ouganda. Soixante-trois pourcent des patients étaient des fumeurs actuels, 77,4% souhaitaient

arrêter et 37% étaient prêts à payer. Généralement, les médicaments étaient indisponibles : les substituts de la nicotine ne se trouvaient que dans sept pharmacies (18%) et le bupropion dans trois pharmacies (8%) et coûtaient US\$15,7 et US\$17,1, respectivement, pour un traitement d'un mois. Améliorer l'approvisionnement et réduire les prix pourraient faciliter l'accès au TDP en Ouganda.

El tratamiento farmacológico de la dependencia al tabaco (TDP) cumple una función primordial en la deshabituación tabáquica. Se llevó a cabo una evaluación breve sobre el tabaquismo actual, la disponibilidad del TDP y la buena disposición al abandono del hábito y a sufragar el costo del tratamiento en 56 pacientes aquejados de enfermedades atribuibles al tabaquismo y 38 farmacias de Uganda. El 63% de los pacientes eran fumadores actuales, 77,4% deseaban

abandonar el hábito y 37% estaban dispuestos a pagar por el TDP. En general, los medicamentos no estaban al alcance; solo siete farmacias contaban con productos de sustitución de la nicotina (18%) con un costo mensual de US\$15,7 y tres farmacias ofrecían bupropión (8%) con un costo de US\$17,1 por la dosis mensual. Mejorar el suministro y disminuir los precios, podría favorecer el acceso al TDP en Uganda.