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Published in:
American Journal of Pharmacological Sciences

DOI:
10.12691/ajps-4-1-3

Publication date:
2016

Document version:
Forlagets udgivne version

Citation for published version (APA):
Musoke, D., & Sodemann, M. (2016). Availability of Essential Medicines across Levels of Care in Gulu District, Northern Uganda. *American Journal of Pharmacological Sciences*, 4(1), 11-14. <https://doi.org/10.12691/ajps-4-1-3>

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Availability of Essential Medicines across Levels of Care in Gulu District, Northern Uganda

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Abstract The constant availability of essential and vital medicines at public health facilities is important for credible health services and the need to meet the health requirement of the community. This study assessed the availability of vital and essential medicines at selected Health Centers II, III and IV in Gulu district. We conducted a longitudinal survey which investigated the availability of vital and essential medicines at randomly selected public health facilities at the level of Health Centre II, III and IV, over a period of six months in Gulu district. The assessment was carried out on a monthly basis. The assessment of the availability of the medicines was carried out using the check lists that were derived from the Essential Medicines and Health Supplies List of Uganda as defined by the Ministry of Health of Uganda for the various levels of care. Seventeen (17) Health Centre level II, four (4) level III and two (2) level IV were included in the survey. The mean availability of medicines at Health Centre level II was 46.1% (range: 42.7- 51.0%); 48.3% (range 47.2- 57.2%) at level III and 48.0% (range 44.4- 51.6%) at the level IV respectively. The results of this study demonstrate a poor availability of essential medicines across the levels of primary health care.

Keywords: essential medicines, vital medicines, pharmaceuticals, availability, public hospitals

Cite This Article: David Musoke, and Morten Sodemann, "Availability of Essential Medicines across Levels of Care in Gulu District, Northern Uganda." *American Journal of Pharmacological Sciences*, vol. 4, no. 1 (2016): 11-14. doi: 10.12691/ajps-4-1-3.

1. Introduction

It is acknowledged that drugs play an important role in primary health care (PHC) as they make the health service credible because they cure disease and alleviate symptoms and lower mortality [1,2,3,4]. A population assured of the availability of affordable medicines at the time they seek treatment develops satisfaction and confidence in the health system and health workers [5]. Drug therapy is the most commonly used method for disease treatment in general practice. Hence, the availability and affordability of good quality drugs, coupled with rational use is fundamental to effective health care delivery [6]. However, medicines are sometimes not available at public health facilities due insufficient supplies or stock-outs; hence patients who attend these health facilities for their health need requirements will not receive the appropriate treatment required. The official government policy is to provide medicines free of charge to the citizens.

In Uganda, the essential medicines have been categorized according to level of use i.e. Health Centres II, III and IV respectively based on the health impact in the community as is the practice in other countries in the region and on the African continent [7,8]. The lower facility, Health Centre II, has fewer selected medicines to treat the most common disease conditions and the range of medicines widens as you move up the leader of the health facilities

i.e. III and IV or referral hospitals. These medicines have been classified as vital, essential or necessary (MoH, 2012). The vital medicines enable the facility to manage life threatening diseases and the essential medicines are for less severe but widespread illnesses while the necessary medicines are those with less impact on the population. The constant availability of vital and essential medicines at these health facilities is important for a credible health service if it's to meet the needs of the population.

This study assesses the availability of vital and essential medicines at selected Health Centers II, III and IV in Gulu district. To our knowledge, this study is the first attempt to investigate the availability of vital and essential medicines in post war northern Uganda over an extended period of time.

2. Materials and Methods

2.1. Study Design

This was a longitudinal survey which investigated the availability of vital and essential medicines for a period of six (6) months from June to November, 2014.

2.2. Study Sites and Area

Health facilities level II, III and IV in Gulu District, Northern Uganda. This district is three hundred (300) kilometres from the national capital city, Kampala. It suffered over twenty years of civil strife and armed

conflict. The observed insecurity has had adverse effects on the social-economic status of the district where health sector also suffered the consequences of armed conflict.

2.3. Sampling

There were two (2), nine (9) and thirty-six (36) functional Health Centres' II, III and IV respectively in Gulu district during the study period.

All (2) Health Centre levels IV in Gulu District (Awach and Lalogi) were included in the study.

Four (4) Health Centre level III in the district were randomly selected. These were: Odek, Laroo, Pabwo and Bobi.

Seventeen (17) Health Centre Level II were randomly selected. These were: Patuda, Acet, Binya, Koro abili, Unyama, Omel, Punena, Palenga, Kali ali, Tekulu, Rwot obilo, Lukwir, Loyaaajonga, Lakwatomer, Pukony, Te-atoo and Lela obaro.

2.4. Data Collection and Analysis

The assessment of the availability of the vital and essential medicines was done alongside the responsible health worker in each of the respective health facilities. Informed and voluntary consent was sought from each officer. The assessment of the availability of the medicines was carried out using check lists that were derived from the Essential Medicines and Health Supplies List of Uganda (EMHSLU), 2012 published by the Ministry of Health, Uganda, on a monthly basis for a period of six months.

3. Results

A total of twenty-three public health facilities were investigated for availability of essential medicines. Seventeen (17) were Health Centre level II; four (4) Health Centre level III and two (2) Health Centre level IV. The check list for the Health Centres had a total of 156, 105 and 60 medicines for Health Centres IV, III and II respectively.

Table 1. Availability of essential medicines by visit to the various Health Centres

Level of Health Facility and number of medicines expected		% of essential medicines available at time of survey					
		1	2	3	4	5	6
Health Centre II [60]	Patuda	-	-	35.0	55.0	46.7	45.0
	Acet	58.3	48.3	41.7	50.0	33.3	41.7
	Binya	63.3	51.7	40.0	53.3	41.7	48.3
	Koro Abili	41.7	40.0	33.3	55.0	41.7	38.3
	Unyama	56.7	53.3	40.0	55.0	48.3	45.0
	Omel	-	53.3	31.7	46.7	36.7	48.3
	Punena	-	60.0	50.0	40.0	55.0	50.0
	Palenga	58.3	51.7	43.3	51.7	43.3	-
	Kal Ali	-	50.0	40.0	56.7	35.0	46.7
	Tekulu	51.7	45.0	33.3	-	48.3	-
	Rwot obilo	66.7	58.3	40.0	43.3	50.0	-
	Lukwir	28.3	43.3	23.3	46.7	38.3	-
	Loyaaajonga	43.3	50.0	31.7	53.3	35.0	-
	Lakwatomer	38.3	50.0	38.3	56.7	35.0	48.3
	Pukony	48.3	58.3	43.3	48.3	50.0	51.7
	Te-Atoo	-	43.3	51.7	43.3	53.3	-
	Lela Obaro	38.3	55.0	40.0	48.3	45.0	-
Health Centre III [105]	Odek	53.3	47.7	31.4	50.5	49.5	50.5
	Laroo	47.7	45.7	31.4	61.0	47.6	51.4
	Pabwo	39.0	44.8	33.3	-	47.6	-
	Bobi	52.7	60.0	50.5	-	65.7	-
Health Centre IV [156]	Awach	57.0	54.5	-	42.3	52.6	-
	Lalogi	58.3	51.3	24.4	50.0	38.0	-

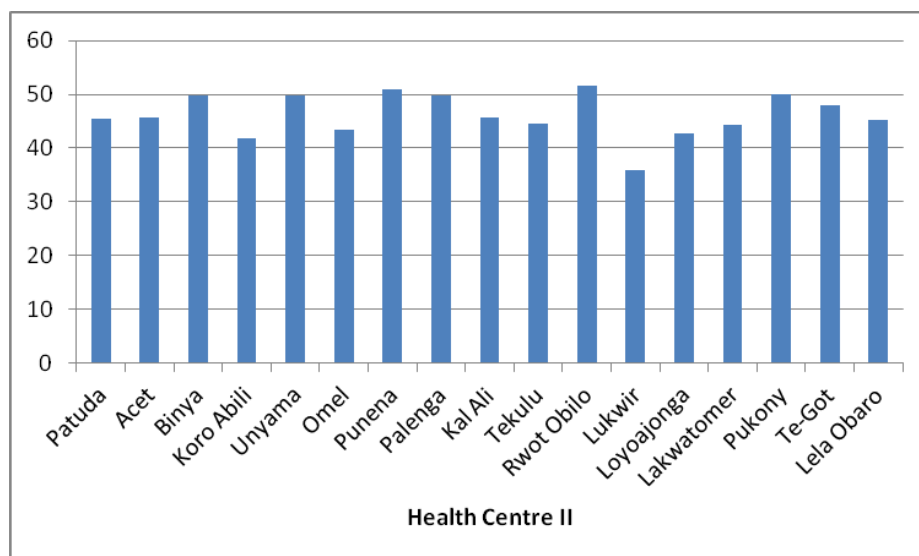


Figure 1. Mean availability of medicines at Health Centre level II

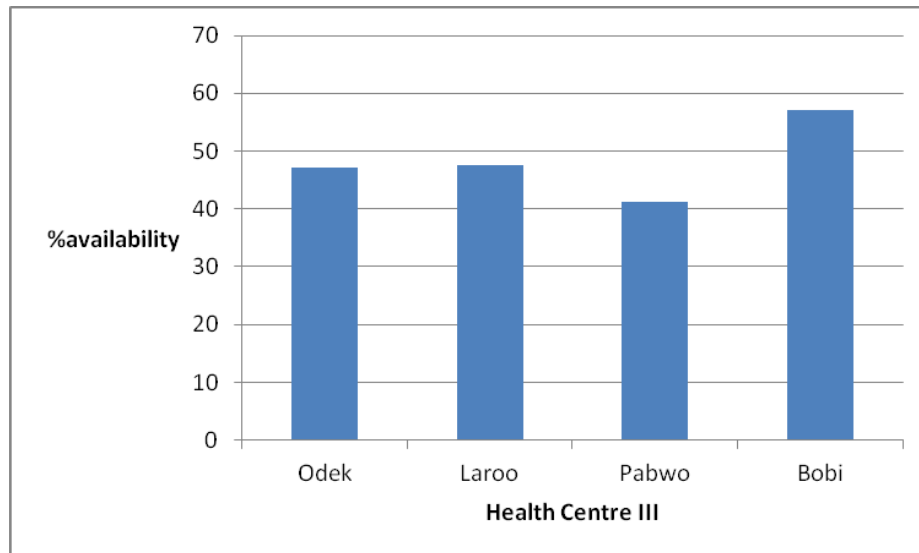


Figure 2. Mean availability of medicines at Health Centre level III

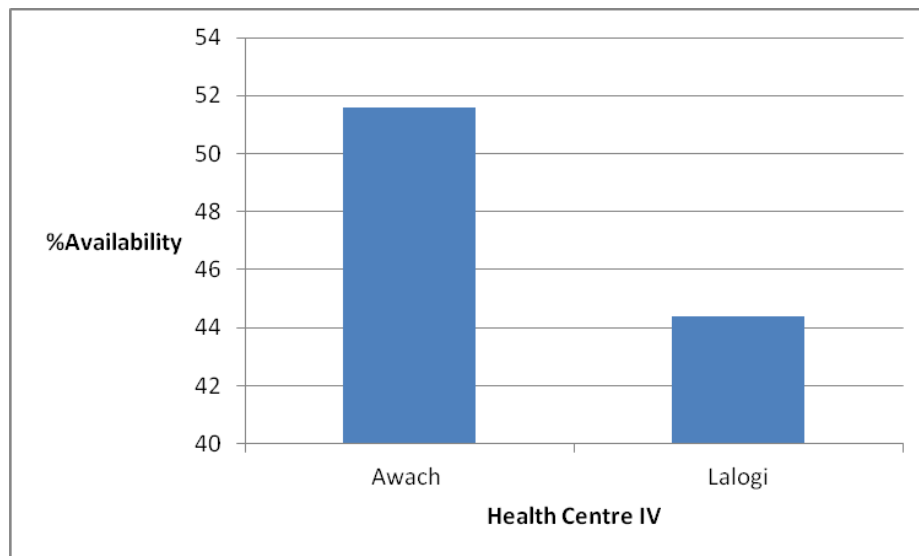


Figure 3. Mean availability of medicines at Health Centre level IV

4. Discussion

In this investigation of twenty three (23) health facilities in Gulu district, Northern Uganda, we have demonstrated that the availability of essential medicines was low at the time of the visits. This could result in a detrimental effect on the health services these communities receive since they are not receiving some or all of the medications that they may need. Essential medicines are by World Health Organization (WHO) definition supposed to satisfy the health care needs of the majority of the population; they should therefore be available at all times in adequate amounts and in appropriate dosage forms, at a price the community can afford.

Health Centre level II and III receive medicine supplies centrally from the government owned National Medical Stores by a push system whereby the facilities receive medicines determined centrally by the government owned Medical Stores every two months. Availability of essential medicines was low, with over 30% of the essential medicines expected to be available, not at the facilities.

This is similar to the findings which were reported by a survey conducted in a facility under a push system in south-western Uganda (Tumwine *et al* 2010) [11].

Health Centre level IV purchase medicine supplies from the government owned National Medical Stores by the so called “Pull” system. They too however, have low availability of essential medicines because of their inability to fund all their medicine requirements. The public health facilities are majorly by the government. Donors contribute to support some crucial services such as immunization and provision of antiretroviral medications. This is however inadequate because in order to deliver the minimum healthcare package, the health sector needs an estimated USD 40 per capita per annum. In 2008/2009, the total public allocation to health per capita was USD 10.40 (Ministry of Health, Uganda, 2009) [10] and this has not increased appreciably since then.

5. Conclusion

This study demonstrates a poor availability of essential and vital medicines across the levels of primary health care.

Acknowledgements

This study was funded by the Primary Health Care Project of Gulu University.

Statement of Competing Interests

The authors have no competing interests.

References

- [1] World Health Organization (1986). Components of Primary Health Care. International conference of Alma-ata.
- [2] Murray, C.J.L., Vos, T., Lozano, R., Naghavi, M., Flaxman, A.D., et al. Disability adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease study 2010.
- [3] Lozano, R., Naghavi, M., Foreman, K., Lim, S., Shibuya, K., et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet* 380: 2095-2128.
- [4] Pasquet, A., Messou, E., Gabillard, D., Minga, A., Depoulosky, A., et al. Impact of drug stock outs on death and retention to care among HIV-infected patients on combination antiretroviral therapy in Abidjan, Côte d'Ivoire. *Plos ONE* 5:e 13414.
- [5] Nabbuye-Sekandi, J., Makumbi, F.E., Kasangaki, A., Kizza, I.B., Tugumisirize, J., et al. Patient satisfaction with services in outpatient clinics at Mulago hospital, Uganda. *Int J Qual Health Care* 23:516. 2011.
- [6] Enato, E.F.O., and Chima, I.E., Evaluation of drug utilization patterns and patient care practices. *West African Journal of Pharmacy* 22 (1) 36-41. 2011.
- [7] Masters, S.H., Burstein, R., DeCenso, B., Moore, K., Haakenstad, A., Ikilezi, G., Achan, J., Osei, I., Garshong, B., Kisia, C., Njuguna, P., Babigumira, J., Kumar, S., Hanlon, M. and Gakidou, E. Pharmaceutical availability across levels of care: evidence from facility surveys in Ghana, Kenya, and Uganda. *PLoS One*. 11; 9(12):e114762. 2014.
- [8] Mori, A.T., Kaale, E.A., Ngalesoni, F., Norheim, O.F. and Robberstad, B. The role of evidence in the decision-making process of selecting essential medicines in developing countries: the case of Tanzania. *PLoS One*. 8;9(1):e84824. 2014.
- [9] Ministry of Health, Uganda. Essential medicines and health supplies list of Uganda (EMHSLU). 2012.
- [10] Tumwine, Y., Kutyabami, P., Odoi, R.A., Kalyango, J.N., (2010). Availability and expiry of essential medicines and supplies during the "Pull" and "Push" drug acquisition systems in a rural Ugandan hospital. *Tropical Journal of Pharmaceutical Research*, 9(6): 557-564.
- [11] Ministry of Health (Uganda). *Annual Health Sector Performance Report – Financial Year 2008/2009*. November 2009.