



Poor and forgotten

Examination of the business behaviour
of Boehringer Ingelheim, Bayer and
Baxter in Uganda



Foto: Adam Jones / Wikimedia

Imprint

- Editor:** BUKO Pharma-Kampagne
August-Bebel-Str. 62, 33602 Bielefeld, Deutschland
Telephone: +49-(0)521-60550 | Fax: +49-(0)521-63789
e-mail: pharma-brief@bukopharma.de
Homepage: www.bukopharma.de
- Publisher:** Gesundheit und Dritte Welt e. V.
- Authors:** Dr. Christiane Fischer und Claudia Jenkes
(BUKO Pharma-Kampagne), Denis Kibira (HEPS, Uganda)
- Editor-in-chief:** Claudia Jenkes
- English Translation:** Angela Mayr-Isenberg
- Research assistants:** Kenneth Mwehonge, Guma Martin, James Ochol,
Margaret Abigaba, Djatougbé Vivienne Sossou-Lossa,
Luisa Marquardt, Anna-Lisa Vinnemeier
- Cover photos:** Neil Palmer/Wikimedia Commons, Martina Berg/Fotolia,
usaid/Wikimedia Commons, Levèvre/Wikimedia Commons
- Design / Layout:** Heinrich Dunstheimer
com,ma Werbeberatung GmbH, Bielefeld
- Print:** AJZ Druck & Verlag GmbH, Bielefeld

This study was conducted in cooperation with the Coalition for Health Promotion and Social Development (HEPS) Uganda. We would like to thank Albert Petersen (pharmacist, DIFÄM) and Jana Böhme (pharmacist, VDP) for their hard work of drug assessment.

With friendly assistance of the
Stiftung Umwelt und Entwicklung NRW



© BUKO Pharma-Kampagne 2014

Poor and forgotten

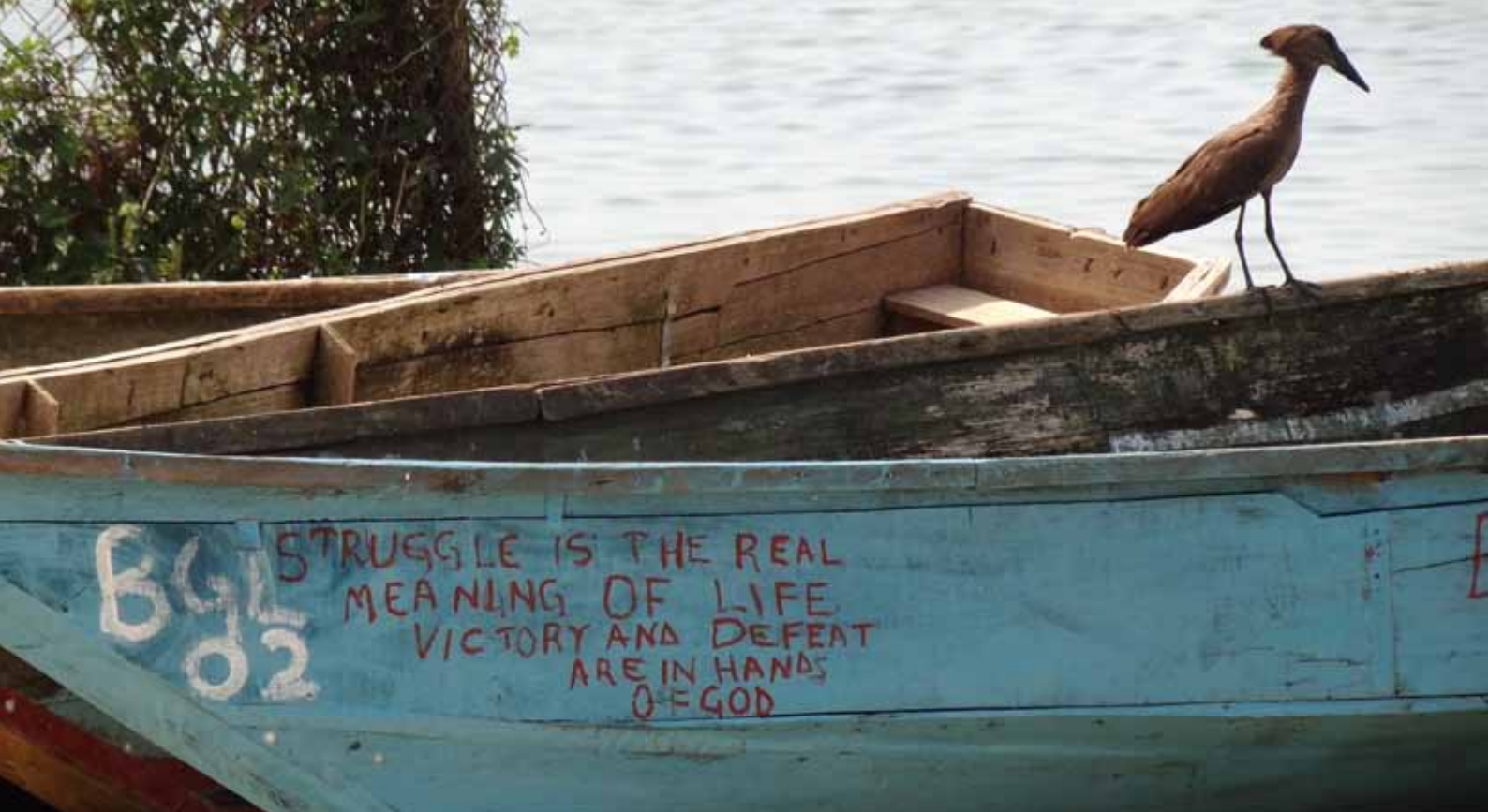


Foto: Adam Jones / Wikimedia

Content

I Uganda – The pearl of Africa	1
Uganda’s health system	4
Prevalent diseases	9
The pharmaceutical market in Uganda	12
II The companies examined	18
III Methods of the study	19
IV Results and conclusions	25
What do the companies offer?	25
Price and availability	30
What do patients, doctors and pharmacists say?	34
Where is research done? What is patented?	37
Marketing and health projects	38
Style of communication	41
V Uganda – a neglected market	42
VI Appendix: List of the examined drugs with evaluations	44



Crater lake in the Queen Elisabeth National Park

Photo: Robert Weinkove / Wikimedia

I Uganda – The pearl of Africa

Because of its manifold and unique sites of natural beauty, Winston Churchill described Uganda as the pearl of Africa. Large bodies of water such as Lake Victoria or the White Nile, (wet) savannah and jungles characterize the landscape. Whereas the experience of nature, safaris and trekking tours are much favoured by German tourists, the poor country itself still fights with enormous problems.

High birthrates and extreme poverty

According to the UNDP, almost 40 percent of the population live in extreme poverty. These people have to live on less than 1.25 \$¹ per day.² There is hardly any other African country with such a high birthrate: on average, Ugandan women bear six to seven children and at least three of one thousand mothers die at the birth of their babies.³ Almost half of the population is younger than 15 years.⁴ But about



Photo: Lesniewski/Fotolia

a quarter of the small children are underweight and many infants do not live to see even their first birthday: 58 out of 1000 newborns die within their first year.

Roughly 34 million people live in Uganda and most of them live on farming (66%)⁵. In addition

1 in PPP, purchasing power parity (exchange rate adjusted for purchasing power differences)
 2 UNDP: International Human Development Indicators. hdrstats.undp.org/en/countries/profiles/UGA.html [Access 27 Feb. 2013]
 3 WHO (2013) World health statistics www.who.int/gho/publications/world_health_statistics/EN_WHS2013_Part3.pdf [Access 24 June 2013]
 4 WHO (2010) apps.who.int/ghodata/?vid=20300&theme=country#

5 Uganda bureau of statistics (UBOS) 2012, Statistical Abstract, p. v www.ubos.org/onlinefiles/uploads/ubos/pdf%20documents/abstracts/2012%20Statistical%20Abstract.pdf



Farmers working on their field in Northern Uganda. This part of the country is particularly poor and only sparsely settled.
Photo: Davis Omanyo, Michael Shade / Wikimedia

on to the metropolis Kampala with its almost 1.7 million inhabitants, there are several medium-sized cities such as Jinja, Mbale, Mbarara or Masaka. 85% of the population, however, live in rural areas, mainly in scattered settlements in the southwestern, eastern and central regions of the country. The more hostile terrain of the North and Northeast is particularly sparsely populated and even more impoverished than the rest of the country.⁶ Here, more than 80% of the population live below the poverty level.⁷

6 Information of the Ugandan Consulate www.konsulat-uganda.de/kurzinformationen.html [Access 6 June 2013]

7 USAID (2006) Public Health Training in Uganda: A Case Study. Final Report, Mai 2006. p. 7

Uganda – then and now

In 1896 Uganda, which was composed of four kingdoms became a British colony. The colonial power intervened massively in the regional power structures and released Uganda into independence as late as 1962. The first president of the federative republic, who had been the king of Uganda, was displaced by the Prime Minister Milton Obote in 1966. Obote abolished the four traditional kingdoms and, accompanied by bloody protests and massacres, introduced a socialist-style one-party system. In 1971 his army chief Idi Amin seized power in a coup. During his reign of terror, he had well above 250,000 political opponents killed and forced



Mural in Kampala. Uganda's history is characterized by oppression and violence. The constitution of 1995 granted extensive fundamental rights for the first time.
Photo: Adam Jones / Wikimedia

60,000 Asians to leave the country. Although Idi Amin was overthrown by Tanzanian troops and Ugandan rebels in 1979, Uganda remained shaken by anarchy and civil war until 1986, when Yoweri Museveni became Head of State. Under his government, the old kingdoms were symbolically re-established and a new constitution was passed containing extensive fundamental rights. Subsequently, Museveni allowed democratic elections and won the majority in 1996 and in 2001. After a referendum in 2005, a multiple party system was introduced. In 2006 and in February 2011, Museveni was re-elected to his office. Without doubt, the political and economic situation has stabilized since his rise to power. But still many problems burden the country. Among them are the omnipresent corruption and the civil war in the North, where the Lord's Resistance Army (LRA) fight against the government. Two million people became fugitives in their own country.^{8,9}

8 Gertrud Schweizer-Erlor (2012) Category Uganda/History on GIZ website [liportal.giz.de/uganda/geschichte-staat.html](http://portal.giz.de/uganda/geschichte-staat.html)

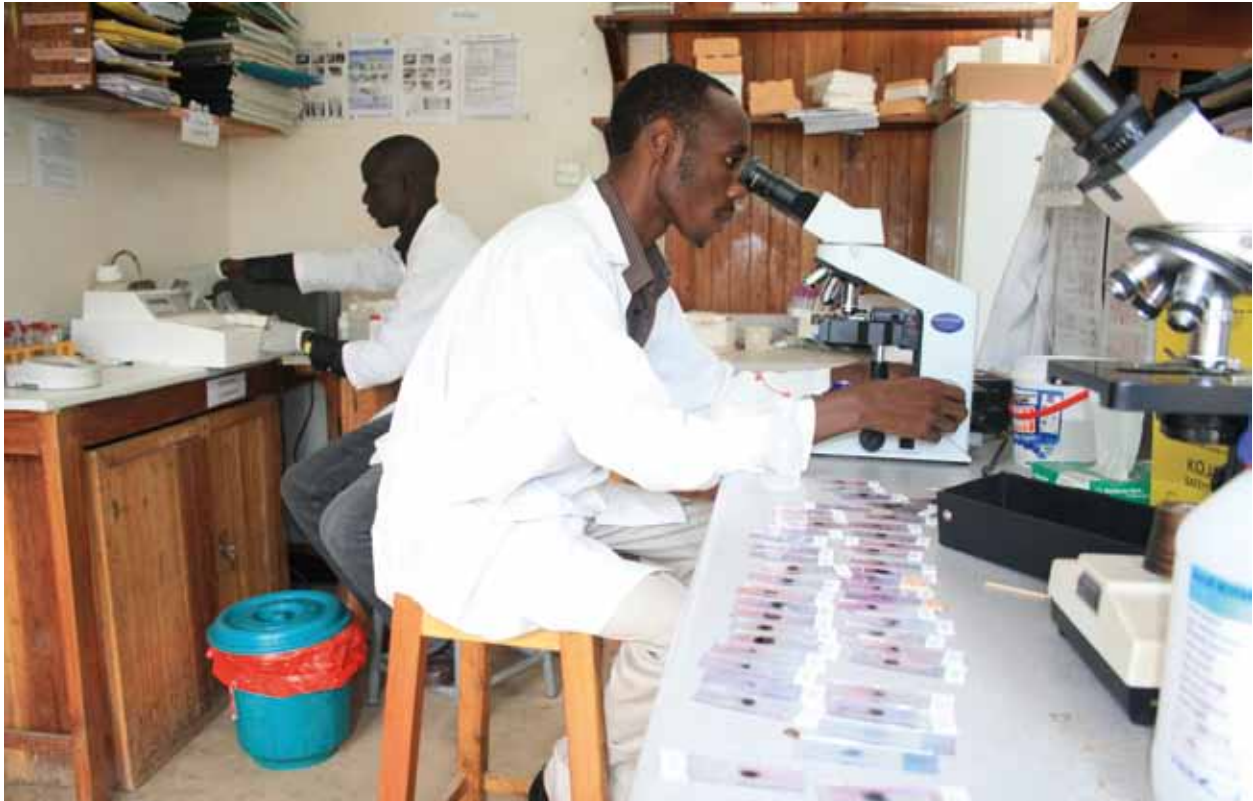
9 Wikipedia re Uganda's history de.wikipedia.org/wiki/Geschichte_Ugandas



Almost every tenth infant in Uganda will not live to see its fifth birthday. Photo: Adam Jones / Wikimedia

	Year	Uganda	Germany
Population (in millions)	2012	34.1	82.8
Population proportion under 15	2010	48 %	13.4 %
Proportion of urban population	2012	14.7 %	74 %
Proportion of people living in extreme poverty (less than 1.25 \$ per day)	2013	38 %	No data
Average birth rate (per woman)	2011	6.2	1.4
Life expectancy at birth (both genders)	2011 (1990)	56 years (43 years)	81 years (76 years)
Life expectancy men	2011	57	78
Life expectancy women	2011	54	83
Maternal mortality (per 100,000 live births)	2013	360	7
Infant mortality (per 1,000 live births)	2011	58	3
Under five mortality (per 1,000 live births)	2011	90	4
Literacy rate among adults	2010	73.2 %	No data

Source: WHO apps.who.int/ghodata/?vid=20300&theme=country#/ / Uganda Bureau of Statistics: Uganda Demographic and Health Survey 2011, Preliminary Report / UNDP: Human Development Indicators hdrstats.undp.org/en/countries/profiles/DEU.html



Laboratory in a community health centre. The equipment is often inadequate.

Photo: Sally Forthwit / Wikimedia Commons

1. The healthcare system

Uganda's healthcare system is organized centrally and has a five-level structure:^{10,11} The lowest level is formed by the village health teams or community medicine distributors. Each village is supposed to have such a village health team (VHT or Health Centre I) who advise patients and forward them to the next health centre. However, in many villages they do not exist or they do not have drugs as a rule.

Community health centres (HC II) found at parish level are the second level of healthcare. They act as dispensaries for out-patient services. The Health Centre III on the next level is supposed to have some hospital beds and run an outpatient clinic where the staff treat common diseases like malaria and offer antenatal care for pregnant women. The staff should consist of an enrolled nurse, a midwife, two nursing assistants and a health assistant.

But again, there is a shortage. Of the six communities in the sub-county Katine, only one had a health centre in 2009. In theory, such an institution is supposed to care for up to five thousand people – in reality the number is much higher.



A health post in a rural area where public healthcare is particularly weak.

Photo: Dave Proffer / Wikimedia

¹⁰ Richard M Kavuma (2009) Uganda's healthcare system explained. The guardian, 1 April 2009 www.guardian.co.uk/katine/2009/apr/01/uganda-healthcare-system-explained

¹¹ Healthcare a major challenge for Uganda (2009) The guardian, 1 April 2009 www.guardian.co.uk/katine/2009/apr/01/healthcare-in-uganda

A shortage of water and power

The fourth level is formed by urban health centres (HC IV), small hospitals for up to 40 in-house patients. It is supposed to have wards for men, women and children and an operating theatre. Its staff should consist of a senior medical officer, another doctor and nursing staff. Nevertheless, numerous hospitals have to do completely without a doctor. Quite often the operating theatre does not work because of a shortage of water, power or other essential installations. The medical management of the hospital is often carried out by a young doctor. In addition to treating the common diseases, he



Vehicles in working order are rather the exception than the rule in many places. Photo: Dave Proffer/Wikimedia

also has to care for patients with more complex diseases and to take a leading role for all health care projects within the region – covering a population of up to 70,000 people.¹²

In addition, each district is supposed to have a larger hospital with specialized departments. At the top of the health care system there are three national referral hospitals, the Mulago Hospital and the teaching hospital of Makerere University in the capital Kampala. The best doctors of the country work there – and often additionally at private clinics to supplement their meagre government salaries.

¹² USAID (2006): Public Health Training in Uganda: A Case Study. Final Report, p. 12

Long distances and not enough staff

The household survey of the ministry of Health in 2008 states that 72% of the population can reach a health care facility within five kilometres. But access to medical care varies widely depending on the region. Whereas almost 100% of the population can reach a healthcare institution within five kilometres in the districts of Kampala, Tororo or Jinja, this is only possible for about 10% in the northern district of Kotido and Kitgum/Pader.¹³ In total, there are only 98 hospitals in a country covering 236,000 square kilometres and having 111 districts. 55 of them are state-run clinics and the rest are mainly



This hospital in the capital has good equipment and a highly qualified staff. Photo: Kharvey Jones | Wikimedia

religious or welfare institutions.¹⁴ Many of the private, non-profit hospitals and healthcare centres are located in rural areas. Their majority is religiously oriented (78%) and operate under three umbrella organizations: the Uganda Catholic Medical Bureau (UCMB), the Uganda Protestant Medical Bureau (CPMB) and the Uganda Muslim Medical Bureau (UMMB). The rest are financed by humanitarian or regional healthcare organizations. The government in part supports these institutions with contributions. In addition there are doctors in private practices, midwives, nurses and also private clinics in the urban centres.¹⁵ Most of the ministries of health on district level have a member of staff supposed to launch partnership projects (PPPs) between the public and the private sectors and to coordinate these activities.¹⁶

¹³ USAID (2006) Public Health Training in Uganda: A Case Study. Final Report, p. 8 – 9

¹⁴ Carolyn Baxter (2005) Biography of a Nation www.open.edu/openlearn/society/international-development/international-studies/uganda-biography-nation [Access 28 Feb. 2013]

¹⁵ Health System Profile for Uganda (2005) p. 11

¹⁶ USAID (2006) Public Health Training in Uganda: A Case Study.



Hoping for free-of-charge healthcare. Patients in a hospital waiting room. Photo: Toshihiro Horii / Wikimedia

Free-of-charge healthcare remains theoretical

In theory public healthcare institutions in Uganda are supposed to grant free-of-charge medical healthcare for all citizens. Even patients' contributions were completely abolished by the government in March 2000.¹⁷ However, in reality the situation looks different: about half of the positions in the health sector are vacant – and there is a blatant lack of doctors and nursing staff. In the northern district Amuru, for example, only one doctor for 243,000 people is publicly employed.¹⁸ Moreover the medical personnel employed are often absent to supplement their small incomes in private institutions. Or they have their patients self-paying for basic healthcare. In view of the healthcare crisis, Ugandan members of parliament threatened in September 2012 to block the health budget for 2013 if the government did not considerably increase their expenditure for health. Only eight percent of the public expenditure was spent for the health sector despite the fact that Uganda committed to spend 15 percent in the Abuja Declaration in 2001.¹⁹

Final Report, p. 14

17 USAID (2006) Public Health Training in Uganda: A Case Study. Final Report, Mai 2006, p. 8

18 IRIN (2012) Uganda: Patients go private as state sector crumbles. News dated 18 Sept 2012 www.irinnews.org/report/96332/uganda-patients-go-private-as-state-sector-crumbles [Access 24 June 2013]

19 IRIN (2012) Uganda: Patients go private as state sector crumbles. News of 18 Sept. 2012 www.irinnews.org/report/96332/uganda-patients-go-private-as-state-sector-crumbles [Access 24 June 2013]

Corruption is widely spread

Corruption is also widely spread on all levels of the health system and it resulted, for example, in embezzlement of monies of the Global Fund or of the Global Alliance for Vaccines and Immunisation (GAVI).²⁰ Great Britain, Ireland, Sweden and Norway suspended their development aid funding to Uganda as a result of serious accusations of corruption. At the end of 2012 the British government announced that outstanding sums of over US\$ 17 million would not be paid unless Uganda could prove proper use of the funds previously received. As a consequence, Uganda's ministry of finance did not release budget funds that were intended to massively increase the health staff.²¹ This aspect shows the tragedy of being dependent on donor countries and organizations. Only 14.4% of healthcare in Uganda is paid for by the treasury, more than twice as much is financed by international development aid partners (35.6%). The rest (50%) has to be paid for by the patients out of their own income.²²

Private expenditure for health is high

The Ugandan state invests roughly 33 US\$ in health per person and year.²³ Public expenditure for essential drugs, however, is insignificantly low: in 2008/2009 it was not even one US\$ per person (0.93 US\$).²⁴ The consequence is a blatant shortage: essential drugs – for example against malaria – are often unavailable. Only half of the public institutions have a supply of important key medicines and only three out of four prescribed pharmaceuticals are actually dispensed.²⁵ In the non-profit private sector where pharmaceu-

20 James Kityo (2012) Uganda's Health System – Victim of Corruption and General Institutional Malady. Reporting on Health 30 July 2012 www.reportingonhealth.org/2012/07/30/uganda%E2%80%99s-health-system-%E2%80%93-victim-corruption-and-general-institutional-malady [Access 5 August 2013]

21 Andrew Green (2012) Aid Freeze Impacts Uganda's Health Sector. Voice of America, 26 Nov. 2012 www.voanews.com/content/foreign-aid-freeze-impacts-ugandas-health-sector/1552996.html [Access 25 June 2013]

22 UNIDO (2010) Pharmaceutical Sector Profile: Uganda, p. 10.

23 MoH Uganda, USAID (2012) Uganda Health System Assessment 2011, p. XVIII

24 UNIDO (2010) Pharmaceutical Sector Profile: Uganda, p. 9

25 Medicines Transparency Alliance, MeTA (2010) Report on the Uganda Pharmaceutical Sector Scan. Part of Component 1 of MeTA Baseline Assessments.



The Ugandan state cannot afford as much as 10 US\$ per year and head for health matters. Diseases often induce debts for poor people. Photo: Neil Palmer / Wikimedia



Examination gloves are washed and dried to be reused. Photo: Mike Blyth / Wikimedia

tics are mostly dispensed against a (small) fee, the situation is no better: the Ecumenical Pharmaceutical Network (EPN) examined 165 church-based Ugandan healthcare institutions and noted that above all there is often a shortage of children's medicines. Particularly zinc tablets and the anti-asthmatic Salbutamol and drugs against tuberculosis and HIV in dosages for children were rare. 83% of the institutions stated that they did not have TB and anti-AIDS medicine on stock.²⁶

Self-medication promotes resistances

As patients often have to buy and pay much for urgently needed medication in private pharmacies, it is not surprising that most rely on self-medication. The majority of patients forgo a doctor's advice and buy pharmaceuticals directly or go to a healer or other informal services.²⁷ As in many poor countries, it is possible in Uganda to buy an antihypertensive medicine or antibiotic

without a prescription. Pharmacists actually have to face the loss of their licenses or even prison in case of such illegal practices. However, the supervision of the drug agency NDA is hardly effective. According to the Uganda Medical Association, massive self-medication is the cause for increasing drug resistances in Uganda.²⁸ In fact, Ugandans spend a large proportion of their income for treatment and medication. Their risk to impoverish is high as a result of a prolonged illness. A public health insurance, which could provide relief, is not available.²⁹ Only three percent of the population have a private health insurance.

²⁸ Joshua Kyalimpa (2013): Health-Uganda: Health-Uganda: Self medication blamed for increased drug resistance. INTER Press Service (IPS) News Agency, 13 Sept. 2013. www.ipsnews.net/2011/07/health-uganda-self-medication-blamed-for-increased-drug-resistance/ [Access 13 Sept. 2013]

²⁹ CMAJ: Public health insurance in Uganda still only a dream

²⁶ EPN (2011): Children's Medicines in Uganda. An investigation into availability and factors impacting access.

www.epnetwork.org/childrens-medicines [Access 9 Sept. 2013]

²⁷ USAID (2006) Public Health Training in Uganda: A Case Study. Final Report, Mai 2006, p. 7



A man is taking his harvest to the market. Poor people like him cannot afford expensive medication. For them diseases like cancer usually mean certain death.
Photo: Emesik / Wikimedia

2. Prevalent diseases

Communicable diseases such as malaria, aids, tuberculosis, respiratory diseases, worm infestations, diarrhoea and skin and eye disorders represent the heaviest disease burden in Uganda. In particular, neglected tropical diseases are still a large problem. Resistant shigellosis and malaria pathogens, multi-resistant tuberculosis, outbreaks of cholera or fatal Hanta and Ebola viruses are an additional burden.³⁰ Non-communicable diseases, for example mental illnesses, are also increasing. The public health policy intends to fight all of these illnesses with the Uganda National Minimum Health Care Package (UNMHCP) which was introduced in 1999 / 2000. It is supposed to grant cost-effective basic medical healthcare and contains basic healthcare for malaria, aids, tuberculosis or mental illnesses, health services for infants and mothers, and preventive measures such a vaccinations, health education, school health or nutritional improvement.

³⁰ USAID (2006) Public Health Training in Uganda: A Case Study. Final Report, Mai 2006, p. 6

Malaria kills mainly children

According to an estimate of the Ugandan ministry of health, public institutions treat 10 – 12 million patients with malaria symptoms every year. At the same time, the disease is responsible for 35% of all hospitalizations. It is transmitted by the Anopheles mosquito and life-threatening especially for pregnant women, children and old people. In a governmental control programme, indoor spraying of walls with insecticides and the use of insecticide treated nets (ITN) is promoted. Thus, a total of 60% of all households possessed at least one ITN in 2011.³¹ But not even one third of the children sleep under an ITN although this simple measure reduces the risk of infection by 90% as the malaria mosquitoes bite at night. Anti-malarial drugs are in spare supply in many places and drug resistances are increasing. Almost half of all fatalities in Uganda are caused by this disease, closely followed by HIV/AIDS.³²

³¹ Uganda Bureau of Statistics and ICF International (2012) DHS Final Report. measuredhs.com/publications/publication-FR264-DHS-Final-Reports.cfm [Access 6 August 2013]

³² MoH Uganda, USAID (2011) Uganda Health System Assessment 2011, p. 5



The female *Anopheles-mosquito* communicates malaria.
Photo: WHO TDR



Educational campaigns are to promote the use of mosquito nets. In Uganda, about 100,000 infants die of malaria every year.
Photo: Sally Forthwit / Wikimedia

Two million people are infected with HIV

Since 2005, the HIV rate has slightly risen again although before it had been effectively contained before as a result of information campaigns in the 90ies.^{33,34} As early as 1986, Uganda's President Museveni started an HIV / AIDS control programme and made the disease into a public issue. Since 2004 however, prevention and treatment have largely depended on funds from the US-American PEPFAR programme.³⁵ The President's Emergency Plan for Aids Relief, founded by George W. Bush, aimed its preventive work at abstinence, monogamy and the use of condoms for many years and mainly worked with religious or evangelical groups. High risk groups such as prostitutes and homosexuals were not targeted and homosexual relationships are still punishable in Uganda today. However, the criminalization of high risk groups, unchanged risky behaviour of certain groups of the population and the low acceptance of condoms favour the renewed rise of the HIV rate. Religiously oriented healthcare providers who rarely stock condoms and partly even object to their use contribute to this problem. In a survey carried out by the ministry of health, roughly three quarters of the rural public healthcare institutions had condoms on stock whereas it was only 14% of the missionary institutions.³⁶

33 USAID: ghiqc.usaid.gov/projsearch/docs/617-08-013/rftop_uganda_rftop_617-08-013.pdf : p. 13

34 Yosh Kron (2012) In Uganda, an AIDS Success Story Comes Undone. The New York Times, 2.8.2012. www.nytimes.com/2012/08/03/world/africa/in-uganda-an-aids-success-story-comes-undone.html?_r=0 [Access 6 Oct. 2013]

35 www.pepfar.gov/countries/c19432.htm [Access 6 Oct. 2013]

About two million people, i. e. roughly seven percent of the adult population in Uganda have been infected with HIV. Above all women and people living in cities bear a high risk of infection. The disease has broken out in 120,000 to 150,000 patients and they suffer from the typical AIDS symptoms.³⁷ Although the government has developed an intervention strategy – AIDS patients should e.g. be treated at home in order to relieve the healthcare centres, there is still a lack of medication, of access to palliative care or to testing and advice centres. As a result, many infected people still have unprotected sexual intercourse since they assume protection by their medication. And not even half of those who need treatment are being supplied with drugs (just under 44%).³⁸

The risk of tuberculosis is high

Together with the HIV epidemic, the risk of tuberculosis has dramatically increased. The WHO counted Uganda among the 22 countries with the highest rate of TB. In 2008 only half of the cases were diagnosed and there was a therapeutic success for only three quarters of the patients under treatment. The situation is aggravated by the fact that roughly 60% of the TB patients are infected with HIV additionally.³⁹

36 Uganda Ministry of Health (2012) Monitoring Access to Reproductive Health Supplies in Uganda. P. 9

37 UNAIDS (2011) Country profile Uganda

38 Measured at the new treatment directive of the WHO where a treatment is already recommended at a value of 350 CD4.

39 MoH Uganda, USAID (2011) Uganda Health System Assessment 2011, p. 5



Women with HIV-infection, who are being treated in an aid-project in Kawempe, Uganda. The project advocates the rights of people with HIV-infection.

Photo: Kate Holt / Wikimedia



Education about Aids has seen better days – like this advertisement board in Kampala.

Photo: Robert. F. D. Gilchrist / Wikimedia

But the Ugandan Ministry of Health has been very successful over the last few years. 2014 WHO confirmed that TB-related death has been cut by half: From 9.900 cases 1990 to 4.700 in 2012. The country has reached an important Millenium Development Goal.

Non-communicable diseases

Infectious diseases cause the largest disease burden in Uganda, but non-communicable diseases are spreading increasingly. Cardiovascular diseases and diabetes play a special role: the risk of 30- to 70-year-olds of dying of these diseases is more than four times as high in Uganda as it is in Germany.^{40,41} In total, non-communicable diseases (NCD) amount to a quarter of all fatalities. The disease burden caused by mental illnesses, war, flight, poverty and aids is also increasing.⁴² About 20% of the population suffer from depression.⁴³ But only

a handful of psychologists or psychiatrists and no corresponding institutions at all exist in Uganda.⁴⁴

According to a WHO prediction, NCDs in Uganda will reach an epidemic extent by the year 2015 as a result of urbanisation and unhealthy living if no countermeasures are taken today.⁴⁵ In 2006 the government initiated a programme aimed at the prevention and control of NCDs⁴⁶ to fight these diseases effectively and reduce mortalities.⁴⁷ In 2010 the Uganda NCD Alliance (UNCDA) was founded. It supports people suffering from cancer, diabetes and cardiac diseases: in addition to consultation services, it offers training for health workers, technical support and builds new health centres.⁴⁸

40 In Uganda 421 of 100.000 die in this age group, in Germany 102

41 WHO (2011) NCD Country profile Uganda

42 WHO Country Cooperation Strategy Uganda www.who.int/country-focus/cooperation_strategy/ccs_uga_en.pdf (Access 10 May 2013)

43 Chronic Poverty Research Centre (2007) Mental Illness and Exclusion: Putting Mental Health on the Development Agenda in Uganda. Policy Brief No. 2/2007, http://www.chronicpoverty.org/uploads/publication_files/CPRC-UG_PB_2007-2.pdf

44 Fred Kigozi, Joshua Ssebunnya, Dorothy Kizza, Sara Cooper, Sheila Ndyabangi and the Mental Health and Poverty Project (2010) An overview of Uganda's mental health care system: results from an assessment using the world health organization's assessment instrument for mental health systems. In: International Journal of Mental Health Systems 2010, 4:1 doi:10.1186/1752-4458-4-1 www.ijmhs.com/content/4/1/1 [Access 6 August 2013]

45 Ministry of Health: health.go.ug/mohweb/?page_id=761

46 Ministry of Health (2013) Non Communicable Diseases health.go.ug/mohweb/?page_id=761 [Access: 6 August 2013]

47 UNCDA (2013) Homepage www.uncda.org/ [Access 6 August 2013]

48 UNCDA (2013) Homepage www.uncda.org/ [Access 6 August 2013]



Education protects from illness. School children taking part in an educational programme financed by USAID in Northern Uganda.

Photo: usaid / Wikimedia



Every fifth Ugandan is depressive – above all as a result of poverty, civil war and aids. There is an increase in other non-communicable diseases as well.

Photo: Jesse Awalt / Wikimedia

3. The pharmaceutical market in Uganda

Uganda's pharmaceutical market only has a volume of about US\$ 276 million – in Germany it is US\$ 35 billion.⁴⁹ Although a local pharmaceutical industry has arisen in the past ten years, 90 percent of the drugs still have to be imported. 5 – 7% of those originate from industrial countries, the largest part from India and China. Only a very small part of the drugs available on the Ugandan market are produced by about a dozen local companies. The lack of specialized experts, high-level technologies and an unreliable power supply obstruct local production and their competitiveness. Enormous costs could be saved: the production of intravenous infusions by Abacus Parenterals Drugs Limited (APDL), for example, lowered the price for this essential drug by 30% within the first five months.⁵⁰ In 2010, 6,810 pharmaceutical products were registered in Uganda.⁵¹ Their procurement, storage and distribution were carried out via the National Medical Stores (NMS) in the public sector. Public institutions dispense the drugs to the patients. The private sector is mainly supplied via wholesale and retail. In addition there are numerous religiously oriented organizations or international aid organizations which also

take care of procuring and distributing drugs.⁵² However, there is no broad coordination between the numerous donation projects and donor organizations and the public sector, which even aggravates the shortages and gaps in public healthcare.⁵³

Control and regulation are weak

The demand for pharmaceuticals in Uganda is constantly growing and particularly in cities the number of pharmacies has increased rapidly in the past years. Nevertheless, there is only one pharmacy for roughly 70,000 people. 477 pharmacies were licensed in 2009 and 5,263 registered drugstores sold pharmaceuticals. In addition, 1,614 public and private healthcare institutions dispensed medicines.⁵⁴ The National Drug Authority (NDA) in Kampala is responsible for the control of the pharmaceutical market. It was founded in 1993 with the objective of ensuring availability and accessibility of essential drugs at any time. In addition, it promotes rational use and ensure the safety and quality of the pharmaceuticals.⁵⁵ This authority is subordinate to the Ministry of Health and has seven regional offices and a National Drug Quality Control Laboratory (NDQ-CL). Said laboratory tests and analyses pharmaceutical samples and is located at the Mulago National Hospital. However, lacking personnel

⁴⁹ UNIDO (2010) Pharmaceutical Sector Profile: Uganda. Strengthening the local production of essential generic drugs in the least developed and developing countries. p. 8 und VfA (2011) Statistics. Die Arzneimittelindustrie in Deutschland (The pharmaceutical industry in Germany), p. 45

⁵⁰ UNIDO (2010) Pharmaceutical Sector Profile: Uganda. p. 2

⁵¹ Medicines Transparency Alliance, MeTA (2010) Report on the Uganda Pharmaceutical Sector Scan. Part of Component 1 of MeTA Baseline Assessments.

⁵² UNIDO (2010) Pharmaceutical Sector Profile: Uganda. p. 8

⁵³ MoH Uganda, USAID (2012) Uganda Health System Assessment 2011, p. XIX

⁵⁴ UNIDO (2010) Pharmaceutical Sector Profile: Uganda., p. 17

⁵⁵ Muwanga J F S (2010) Value for money audit report on the regulations of medicines in Uganda by national drug authority, p. v – x (executive summary)

and being poorly equipped, this authority is hardly capable of fulfilling its multiple tasks. For example, the regional bureaux, which have to administrate 15 districts on average, are only staffed by one person and often do not have a functioning vehicle at their disposal. For this reason, the annual granting of licenses to the pharmacies often occur with a delay of six months and illegal outlets continue to operate for a long time without being prosecuted by the authority. It is also powerless regarding the increasing trade with pharmaceuticals, food supplements or herbal medicines in busses, on markets and other public places.⁵⁶ But even in the public sector, only three percent of all prescribed medication are correctly labelled and the majority of the patients (76%) do not know how to dose and use the medicines correctly.⁵⁷

Import control is insufficient

Last but not least, the software for supervising and registering pharmaceuticals is too slow and constantly likely to crash. Consequently, un-registered pharmaceuticals can also enter the market or urgently needed drugs are registered

⁵⁶ Uganda Office of the Auditor General (2010) Value for money Audit Report on the Regulation of Medicines in Uganda by National Drug Authority, p. 33

⁵⁷ Balyejjusa S, Mujasi P, Babirye E (2010) Report on the Uganda Pharmaceutical Sector Scan, p. 8



Tight fit: every seventh adult in Uganda has been infected with aids. And not even half of those needing therapy receive treatment. Photo: Dave Proffer / Wikimedia

very late.⁵⁸ It is similarly difficult for the four import control authorities of the NDA to check the pharmaceutical imports at the most important locations of imports. For Busia and Maleba at the Kenian-Ugandan boarder, only one person is responsible and has to comute between the two places. Accordingly this person can hardly check all cargo.

⁵⁸ Uganda Office of the Auditor General (2010) Value for money Audit Report on the Regulation of Medicines in Uganda by National Drug Authority, p. 20 – 23

Health in Uganda and Germany

	Uganda	Germany
Morbidity (reported cases 2012)	<i>population</i>	<i>34.1 million</i>
	<i>82.8 million</i>	
Malaria	10,338,093	no data
Cholera	6,326	no data
Measles	2,027	166
Tuberculosis	44,663	4,043

Mortality	<i>per 100,000 population</i>	
HIV/AIDS, ages 15 – 49 (2011)	181	0.5
Cancer, ages 30 – 70 (2008)	191	150
Cardiovascular diseases and diabetes, ages 30 – 70 (2008)	421	102
Chronic respiratory diseases, ages 30 – 70 (2008)	111	11

Sources: WHO (2013) World Health Statistics, WHO (2014) World Health Statistics

Moreover the laboratory and lab technology of the NDA leave a lot to be desired: The National Drug Quality Control Laboratory only has about a fifth of the staff necessary to guarantee a quality control in accordance with the WHO requirements.⁵⁹ The lab technology is partly outdated or out of order so that important microbiological examinations or the control of traditional medicines remain undone. Supervision of pharmaceutical advertisements is scarcely carried out although all advertisements and advertising material are supposed to be approved by the NDA according to strict guidelines.⁶⁰ So far nobody is explicitly charged with this task within the NDA and adverts in radio, newspapers and television remain unchecked. Like wise, political strategies to regulate the prices of pharmaceuticals do not exist.⁶¹

Aids-therapies: from import to local production

Until 2002, Uganda refrained from importing generic anti-aids drugs since the government was afraid to lose the trust of the USA and of the large pharmaceutical corporations. Only when the Clinton Foundation negotiated particularly advantageous prices with a manufacturer of generics, President Yoweri Museveni gave in and announced that Uganda's Aids patients should be supplied with generics in future.⁶² In 2010, the first locally produced anti-aids drug was pre-qualified by the WHO. Since then, the Luzira Drug Factory in Kampala has produced HIV drugs for the international market, exported into neighbouring countries and supplied aid organizations such as the Global Fund, PEPFAR or Médecins sans Frontières. Locally produced anti-aids drugs are about 30% cheaper than imported generics – thus it was possible to lower the costs for one month's therapy to 9 US\$.⁶³

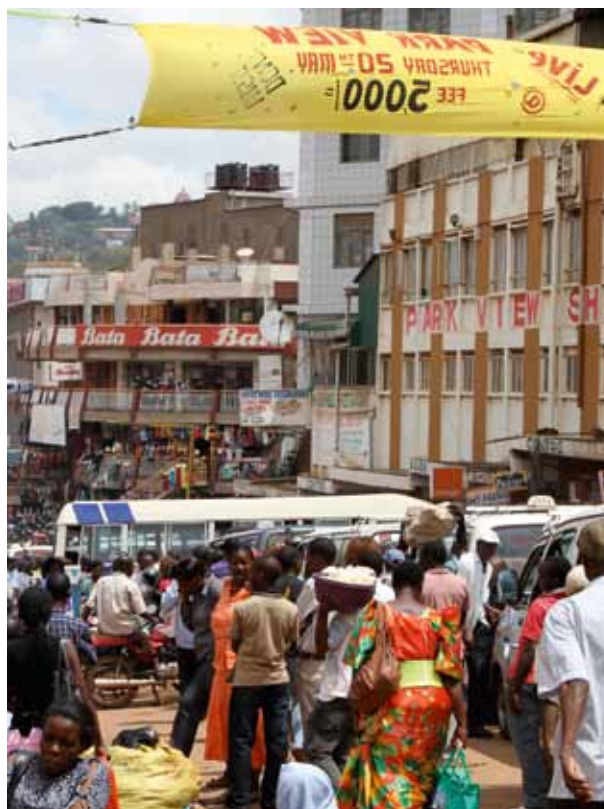
59 Uganda Office of the Auditor General (2010) Value for money Audit Report on the Regulation of Medicines in Uganda by National Drug Authority, p. 26

60 Uganda Office of the Auditor General (2010) Value for money Audit Report on the Regulation of Medicines in Uganda by National Drug Authority, p. 32

61 Medicines Transparency Alliance, MeTA (2010) Report on the Uganda Pharmaceutical Sector Scan. Part of Component 1 of MeTA Baseline Assessments.

62 Irinnews (2003) UGANDA: Gov't commits to buying generic antiretrovirals. Pressemitteilung 23.10.2003. www.irinnews.org/report/46915/uganda-gov-t-commits-to-buying-generic-anti-retrovirals [Access 23 July 2013]

63 F. Kagolo (2012) Uganda to start exporting ARVs within region. NewVision 16.7.2012, www.newvision.co.ug/news/633015-uganda-to-start-exporting-arvs-within-region.html



The number of pharmacies is increasing rapidly in the centre of large cities, as here in Kampala.

Photo: Adam Jones | Wikimedia

Pharmaceutical patents in Uganda

The international treaty of the World Trade Organisation (WTO) relating to intellectual property rights (TRIPS) grants a postponement for implementing the TRIPS agreement to the Least Developed Countries (LDCs). These countries, one of them Uganda, do not yet have to recognize patents. The postponement was granted for pharmaceuticals until 2016, at least for all other goods it has already been extended to 2021.^{64,65} Therefore LDCs are allowed to import and produce preparations that are protected by patents elsewhere as low-priced generics. Our partner organization HEPs Uganda, however, doubt that the period granted will suffice: "HIV infection rates are increasing at an exponential rate. In Uganda for 1 person started on antiretroviral therapy there were 10 new infections in 2009/10. There is increased demand for newer,

64 For all other goods, this term was extended in 2013 – to 2021. Experts are currently discussing whether this extension would automatically apply to drugs as well or whether another extension would have to be negotiated in 2016. From today's point of view, it is very likely that another extension will be granted.

65 WTO (2013) Extension of the transition period under Article 66.1 for least developed country members. Decision of the Council for TRIPS of 1 June 2013. IP/C/64. 12 June www.wto.org/english/tratop_e/trips_e/ta_docs_e/7_1_ipc64_e.pdf [Access 2 August 2013]



In the capital Kampala the access to pharmaceuticals is much better than in rural districts.

Photo: Omoo Kampala / Wikimedia

safer drugs. Resistance to 1st line regimens requires switch to more expensive 2nd, 3rd lines that are also patent protected and we can no longer rely on [imports from] India and Asia.”⁶⁶ India and Thailand have been obliged to acknowledge pharmaceutical patents since 2005; however, Indian patent law excludes small changes of existing products from patenting. Thus quite a number of important HIV drugs are not patented. Meanwhile, Uganda’s government has taken action and anchored early patent protection in national law. On August 21st 2013, the Ugandan parliament passed the Industrial Property Bill to adapt the national patent laws to the requirements of the World Trade Organisation WTO. In it, pharmaceuticals are excluded from patenting until 2016.⁶⁷ The new patent law presents an enormous challenge to the poor country: a patent office now has to be established and staffed with well-trained personnel and high-performance computers. An estimated 2000 experts are needed to administer patent and process patent applications.

66 Akello J (2013) LCD lobby for TRIPS extension. The Independent. Pressemitteilung. 25.2.2013. www.independent.co.ug/news/news/7509-lcds-lobby-for-trips-extension [Access 2 August 2013]

67 Parliament Passes Industrial Property Bill 2009 (2013) Uganda Radio Network, 22 August 2013 ugandaradionetwork.com [Access 15.9.2013]

Anti-Counterfeiting Bill threatens production of generics

Another threat to Uganda’s production of generics is the Anti-Counterfeit Bill. This bill was requested from the East-African contract partners and subsidized by the European Union within the framework of their Economic Partnership Agreement (EPA). This bill is supposed to protect against counterfeiting whereas, in fact, it means early patent protection.⁶⁸ It prohibits the import and export of products which, although not protected in the exporting and importing countries, are under patent protection in a third country. In accordance with the original version of the bill, many of the generics produced in India or Africa would automatically have been declared counterfeits. Activists criticized that the EU did not wish to enforce better safety standards but their own commercial interests.⁶⁹ As a result of public protests by HEPS Uganda, Health Action International (HAI) and others, the wording of the bill was

68 Wambi M (2010) HEALTH-UGANDA: EU Supports Law Threatening Access to Medicines. Press release 15 March 2010. www.ipsnews.net/2010/03/health-uganda-eu-supports-law-threatening-access-to-medicines/ [Access 5 August 2013]

69 Vermeulen N (2010) Uganda’s Luziria Drug Factory: Quality generic ARVs versus patents and their promoters. www.consultancyafrica.com/index.php?option=com_content&view=article&id=405:ugandas-luziria-drug-factory-quality-generic-arvs-versus-patents-and-their-promoters&catid=61:hiv-aids-discussion-papers&Itemid=268 [Access 22 July 2013]



It is a matter of their future: Uganda's economic development should profit from the exclusions from the TRIPS agreement. However, the industrial countries, among them Europe, press for early patent protection. Photo: Sanjoyg / Wikimedia

amended and now explicitly excludes pharmaceutical patents. Now only pharmaceuticals which are incorrectly labelled regarding their “identity and source” are considered counterfeits. But the term counterfeit is insufficiently defined. This will presumably result in numerous legal suits against local manufacturers as Sangeeta Shashikant, legal advisor at Third World Network (TWN) in Geneva pointed out. Aspects of patent law have to be distinguished from quality defects and incorrectly declared contents.

Monitoring clinical trials

Clinical trials carried out in Uganda are almost exclusively directed at the treatment of aids and tuberculosis.⁷⁰ The majority of the research projects are carried out in the capital Kampala where the Makerere University and the large teaching hospital represent quite well equipped research institutions. The Ugandan National Council for Science and Technology worded extensive guidelines for research involving

humans as participants in 2007.⁷¹ This public institution is responsible for the approval and control of research projects on a national level. In addition, there are supervisory committees within the research institutions (Institutional Review Committees, IRCs), which are supposed to guarantee an adherence to ethical principles on site.

⁷⁰ www.centerwatch.com/clinical-trials/listings/location/international/Uganda/ [Access 7 Oct. 2013]

⁷¹ Uganda National Council for Science and Technology (2007) National Guidelines for Research involving Humans as Research Participants. Kampala, Uganda

It lacks painkiller and diabetic medicine

Interview with Emanuel Higenyi, Joint Medical Store

Emanuel Higenyi is currently the Head of Capacity Building at Joint Medical Store (JMS). This organization was established in 1979 as a joint venture of the Uganda Catholic Medical Bureau (UCMB) and the Uganda Protestant Medical Bureau (UPMB). Although set up initially as a service unit for channeling relief supplies to catholic or protestant health facilities, JMS developed into a not-for-profit wholesale enterprise. It procures, stores and sells over 2000 products available ex-stock, including pharmaceuticals, medical and surgical sundries, equipment and instruments as well as laboratory supplies.



Emanuel Higenyi is responsible for the training and potentiating of staff members and health workers. He advises consumers in procurement and storage of medicine, medicine use and supply chain management.

Which facilities does JMS supply, Mr. Higenyi?

We supply faith-based health facilities, private facilities and NGOs procuring for health facilities but not handling medicines directly as well as some paying 'wings' of government health facilities.

How does JMS assure that there are no shortages and stock-outs of medicines?

Shortages and stock-outs occasionally occur. Common factors include unpredictable customer orders, supplier GMP [good manufacturing practices] failures, regulatory actions against manufacturers, delayed deliveries, regulatory actions on products, changing epidemiological patterns or policy shifts. Our mitigating measures include for example perpetual inventory, continuous review of stock status and buffer stock.

Which drugs were affected by shortages in the past?

That was mainly Oxytocin¹ and anaesthetic agents.

From which countries and manufacturers does JMS import drugs?

We import from Kenya, India, China, UK, Pakistan, South Africa or Germany.

Are you facing problems with the transport or delivery of drugs?

Yes because few vehicles are meeting suitability requirements. There are few transporters and the terrain is bad.

What are the drugs that are needed mostly in Uganda and are they accessible for poor patients?

We mostly need Antimalarials, Antibiotics and Analgesics but also, Anticancers, and Antidiabetics. Access these drugs is generally limited due to system and facility level factors.

All in all: Can the Ugandan drug-market serve the patients' needs?

To a certain extent-universal access hindered by high prices, low per capita income, unavailability, limited distribution, substandard products and inadequate financing. What is needed is an increased funding and an optimal utilization of drugs.

Do international brand manufacturers play a role on the Ugandan market – and should they play a role at all?

Yes, but they are mainly appealing to a small segment of the population. Brand manufacturers have a role on medicines that are still under patent but which may be required.

¹ The hormone Oxytocin causes contractions of the womb and provokes labour pains.

II The companies examined

Boehringer Ingelheim

„Value through innovation“ is the guiding principle of the company Boehringer Ingelheim. The German family business, founded in 1885 and headquartered in Ingelheim am Rhein, produce human pharmaceuticals and animal health products at six locations and 20 production plants in 13 countries. The focus of the company lies on respiratory and cardiovascular diseases, oncology, neurologic disorders, immunology and infectious diseases.¹

In 2012, Boehringer Ingelheim generated a sales revenue of 14.7 billion Euro. Roughly a quarter thereof was obtained in Asia, Australia and Africa. With a growth of 17.9% compared to the previous year, this group of countries is gaining increasing significance for the company. According to their own information, the company invested almost 2.8 billion Euro in the research and development of new drugs.²

In Uganda, Boehringer Ingelheim import their drugs via the Ugandan company Surgipharm. However, Boehringer informed us via e-mail on August 14, 2012 that they planned to stop the distribution of their drugs in Uganda.

- 1 www.boehringer-ingelheim.de/unternehmensprofil/zahlen_fakten.html
- 2 Boehringer Ingelheim (2012) Company magazine 2012. www.boehringer-ingelheim.de/content/dam/internet/opu/de_DE/document/pdf/jahrespressekonferenz/jpk2013/BoehringerIngelheim_Unternehmensbericht_2012_gesamt.pdf [Access 6 May 2013]

Bayer HealthCare

Science for a better life – is the guiding principle of the Bayer AG headquartered in Leverkusen. In 2012, the subsidiary Bayer HealthCare employed 55,300 people worldwide and achieved a turnover of roughly 18.6 billion Euro. According to their own information, Bayer HealthCare invested almost 2 billion Euro in the research and development of new drugs.¹

Among Bayer's bestselling medicines are Betaferon/Betaseron (for treating multiple sclerosis), Kogenate (for treating haemophilia) and the contraceptive pills Yasmin, Yasminelle and YAZ.² Only Yasmin can be found on the Ugandan market. Of the companies examined, only Bayer are still active in Uganda.

In Uganda, Bayer HealthCare are mainly active in the field of family planning. Together with their American partner organization USAID, Bayer have operated the "Contraceptive Security Initiative" since 2011. In this public-private partnership, Bayer's contraceptive pill Microgynon is sold at a reduced price in Ugandan pharmacies. Middle class couples are thus meant to obtain access to an "affordable quality product".³ The company also offer their contraceptive implant Jadelle in a public-private partnership in Uganda (Jadelle Access Programme).

- 1 www.bayer.com/en/HealthCare-Profile.aspx [Access 7 May 2013]
- 2 healthcare.bayer.de/scripts/pages/de/unternehmen/produkte/index.php [Access 7 May 2013]
- 3 www.bayerpharma.com/en/press/focus-on/contraceptive-security-initiative.php [Access 7 May 2013]

Baxter

The company Baxter develops, produces and markets pharmaceuticals and vaccines which are biotechnologically manufactured and obtained from blood plasma. The company's portfolio contains particularly drugs for treating blood clotting disorders (haemophilia), immune deficiencies, infectious diseases, cancer and kidney diseases, but also products for artificial nutrition and infusion systems.

Baxter employ 50,800 people in 27 different countries. In 2012 Baxter generated an annual turnover of 14.2 billion US dollars. 1.2 billion US dollars were invested in the research and development of new drugs, according to their own information.¹

- 1 www.baxter.de/ueber_baxter/baxter_international.html [Access 6 May 2013]

The company distribute their products in 100 countries worldwide. Their bestselling pharmaceutical is the blood substitute Advate® for treating haemophilia. However, although contained in the list of essential drugs in Uganda, this expensive preparation is not offered there and there is no generic alternative for treating the disorder. Haemophilia patients consequently only have the choice of being treated in a neighbouring country or of waiting for death. Other Baxter products cannot be found on the Ugandan market either.



Photo: Wikimedia

III Methods of the study

This study examines the portfolio of pharmaceutical products, price policy and marketing of Boehringer Ingelheim and Bayer HealthCare in Uganda. This supplements research projects examining the same companies, had in India in 2010 / 2011 and in Brazil in 2011 / 2012. In India and Brazil, the company Baxter was examined additionally however, since this company has completely withdrawn from the Ugandan market, they will only be marginally considered in this study. The three companies were informed about this study beforehand and were regularly requested to provide answers to specific questions in the course of data collection.

Our current collection of data uses the same methods as the previous studies and thus guarantees comparability of the results.¹ We focused on the two districts Hoima and Kampala (capital), the healthcare infrastructure of the district Hoima being similar to other Ugandan districts and, on the other hand, the region of the capital holding a special status. The data collection was led by Denis Kibira of the Coalition for Health Promotion and Social Development (HEPS Uganda) in 2013.² HEPS is an equal partner in this project and was included in the development of the study design as well as in the final evaluation of the results. Our study project was presented to and approved by the Ugandan Ministry of Health.

¹ Fischer C et al (2011) At any price? Examination of the business behaviour of Boehringer Ingelheim, Bayer and Baxter in India. Pharma-Brief Spezial 1/2011; Fischer C, Jenkes C (2012) At the expense of the poor. Examination of the business behaviour of Boehringer Ingelheim, Bayer and Baxter in Brazil. Pharma-Brief Spezial 3/2012

² www.heps.or.ug/ [Access 10th Feb.2014]

Since numerous Ugandan health care institutions are run by churches or charity organizations, we paid particular attention to the non-commercial sector. The ethical evaluation of the business practices was based on the United Nation's Declaration of Human Rights, the World Medical Association's Helsinki Declaration and the companies' own Corporate Social Responsibility Codices.

Why Uganda?

As a particularly poor country, Uganda ranks among the Least Developed Countries (LDCs). There is a very small upper and middle class living mainly in the capital Kampala. Due to limited infrastructure the country is not very attractive for international pharmaceutical companies. However, this may change in the future since Uganda's population is growing rapidly and its economic growth is constant.³ On the one hand European commercial enterprises show enormous interest in the implementation of stricter laws to protect intellectual property in East Africa. On the other hand efforts are made by the German Government to strengthen local manufacturing, for example by GIZ funding in the East African region.

This examination intends to inspect the consequences the globalization process has for Ugandan patients. What are the effects of

³ Information supplied by the "Auswärtige Amt" (German Foreign Office): www.kampala.diplo.de/Vertretung/kampala/de/05_20Wirtschaft/04_20Wirtschaftsinformationen_20Uganda/Wirtschaftsinformationen_20_C3_BCber_20Uganda.html [Access 12th March 2014]



Uganda's middle and upper class are very small. Most of the people are poor.

Photo: Neil Palmer / Wikimedia

advertising strategies, research efforts and business policies of international pharmaceutical corporations on the availability of essential drugs in this particularly poor country? What do the manufacturer's patent policy and product portfolio mean for public health?

Quantitative methods

Our examination used quantitative and qualitative methods to increase the validity and reliability of the results. The quantitative survey and literature research provide figures and facts regarding available branded drugs, the proportion of essential, rational and irrational drugs in the companies' portfolio, the price and the availability of the pharmaceuticals offered, and clinical trials of the manufacturers.

The data were predominantly collected in Uganda and compared to information supplied by the companies and to information obtained by literature research – for example the Human List of the NDA (National Drug Authority, Uganda).⁴ In a second step, the prices and availability of the medicinal products in the public, the private and the NGO sectors as well as in private drug stores were examined.

⁴ National Drug Authority (2013) Human List 2013. The document used for data collection is available at BUKO Pharma-Kampagne. www.nda.or.ug/ [Access 2nd Feb. 2013]

Qualitative methods

Semi-structured interviews were used as a qualitative method. On the one hand, they are intended to show personal consequences for doctors, pharmacists and patients resulting from the business behaviour of the companies. On the other hand, we wanted to know how these persons evaluated access and availability of drugs in Uganda. Furthermore we wanted to find out about the disease spectrum in that poor country. The interviews offer a deeper understanding of the matter beyond facts and figures. An open questionnaire served as an interview guideline. The interviews were conducted in English and subsequently recorded on audio files.⁵ Immediately after the interviews, they were recorded from memory to put down relevant information in a condensed form. The condensed statements of the interviews were interpreted with a thematic text analysis. Important topics were worked out and included in the discussion of the quantitative results of the study.

12 doctors, 12 pharmacists and 8 patients, as well as one representative of the Ministry of Health were interviewed. All interview partners were assured of strict confidentiality. Six doctors

⁵ The audio files are available at HEPS Uganda.



Healthy products – a farmer is selling his goods on the bean-market in Kampala.

Photo: Neil Palmer / Wikimedia

were from Hoima, the others from Kampala. Half of the doctors worked in cities, the other half in rural areas. The public, private and NGO sectors were equally represented.

The patients were interviewed at their homes, since their living conditions also supplied important background information on their economic situations. Half of the selected people were poor, two of them from cities and two from a rural area. Patients were deemed poor if they lived from subsistence farming and did not have a formal income. Their situation in life is often precarious since they cannot pay in cash e. g. for drugs or health services.

Half of the pharmacists were from Hoima, the other half from Kampala. Six interviews were conducted in hospital pharmacies (public, private, NGO) and six other interviews were conducted in private pharmacies (drug shops). Half of the pharmacists worked in cities, the other half in rural areas. An intended interview with the importing company Surgipharm did not take place. We were informed that the interview had been interdicted by one of the companies examined because of possible breaches of confidentiality.

The collection of data

First, all branded pharmaceuticals offered by Boehringer Ingelheim and Bayer in Uganda were identified. These drugs were compared with the list of essential drugs. Moreover, we examined whether Bayer, Baxter or Boehringer Ingelheim had been carrying out pharmaceutical trials in Uganda or were carrying them out at the time of data collection. All data relating to the study, audio files, memory protocols, interview guidelines and company questionnaires can be inspected at BUKO Pharma-Kampagne or HEPS Uganda.⁶ Important sources we used to find answers to our research questions are listed below.

What medical drugs are on the market?

In Uganda, there is the Human List⁷, a standard work – similar to the “Rote Liste” in Germany – listing all medical products available in that country. Thus, it was easy to identify the companies’ portfolios and to check and confirm them by enquiries at the companies and by research carried out in pharmacies and hospitals.

⁶ While protecting personalized data.

⁷ National Drug Authority (2013) Human List 2013. The document used for data collection is available at BUKO Pharma-Kampagne. www.nda.or.ug [Access 2nd Feb. 2013]



Poor populations depend in cost-efficient therapies.

Photo: Tine Frank / Wikimedia

The following information were determined:

- Name of manufacturer
- Dosage, type of application, packaging size, generic name, brand-name
- Is the drug essential?
- Is the drug rational or irrational?
- Prices in UGX
- Availability via the public health system in Hoima and Kampala.

Essential or not essential?

Essential drugs were identified with the Model list of essential medicines of the WHO of 2013.⁸ This list contains about 350 active agents essential for health care. With the medical drugs listed there, diseases prevailing worldwide can be cured or at least treated sensibly.⁹ Since Uganda also has a very good national list of essential medicines,¹⁰ this list was also taken into consideration. A drug was classified as essential (e) if it was found on one of those two lists or even on both.

8 WHO (2013) 18th WHO Model Lists of Essential Medicines. Geneva www.who.int/medicines/publications/essentialmedicines/18th_EML_Final_web_8Jul13.pdf [Access 11th Feb. 2014]

9 Information of the WHO relating to the Essential Medicines List (2010) www.who.int/mediacentre/factsheets/fs325/en/index.html [Access 14th Feb. 2014]

10 Ministry of Health Uganda (2012) Essential Medicines and Health Supplies List for Uganda (EMHSLU). Republic of Uganda

How good are the companies' portfolios?

Medical drugs which are not essential may still be safe, harmless and of medical use. In order to evaluate the respective company portfolio regarding its quality, i. e. regarding the efficacy, safety and the medical use, each pharmaceutical was evaluated by pharmacists, two of them male and one female. The drugs underwent a uniform evaluation process and were examined on the basis of clinical-pharmacological criteria. Pharmaceuticals which are effective and harmless according to current scientific knowledge and which are as effective as the standard therapy, were graded as rational (r); all others as irrational (i). Our evaluation makes use of the scientific criteria for rational drug therapy, which are based on clinical evidence.

In the evaluation process, the drugs were divided into two main groups and several sub-groups. The two main groups separate positive (r - rational) from negative (i - irrational) drugs. The respective sub-groups indicate the most important reason for the classification (see illustration p. 23).

We tried to decide on the basis of the acknowledged international specialist literature providing reliable information on the current state of the international scientific discussion. However, we are conscious of the fact that both objective

facts as well as subjective values enter into the evaluation. Nevertheless, on the basis of the clearly defined evaluation criteria of the study, a good insight into the quality of the examined drugs can be achieved.

The evaluation process eventually resulting in the classification into positive and negative drugs is documented by the “decision diagram” on page 23.

Price and availability

To determine prices and availability, the established WHO/HAI methodology¹¹ was used. All medical drugs available on the Ugandan market (66 forms of dosage and formulation) of Bayer and Boehringer Ingelheim were examined in five hospital pharmacies in the public, private and the NGO sector (a total of 30 institutions) in Hoima and Kampala, respectively. The prices of the pharmaceutical products were recorded in UGX and compared to the average income in Uganda.

Since there is no governmental price regulation for medical products in Uganda and the prices differ much accordingly, we decided to include private pharmacies in our examination. Five private pharmacies were selected each in Hoima and in Kampala. Thus was not only the considerable price variations could be determined but also the availability of various pharmaceuticals in the private sector.

Patents and research projects

All patents are granted by the African Regional Industrial Property Organisation (ARIPO)¹² in Harare Zimbabwe. They are based on the Industrial Property Act in Uganda¹³, which was passed by the Uganda Registration Services Bureau under the direction of the Ministry of Justice in August 2013. Using APIRO and enquiries directed to the companies, we examined which medical products of the companies were protected by patents.

11 WHO/HAI (2008) Measuring medicine prices, availability, affordability and price components. www.haiweb.org/medicineprices/manual/documents.html [Access 11th Feb. 2014]

12 aripo.org/ [Access 14th Feb. 2014]

13 The Republic of Uganda (2013) Industrial Property Act

The Uganda National Council for Science and Technology¹⁴ approves and registers all research projects in Uganda. We looked for pharmaceutical trials of the companies. Publicly accessible data bases of the WHO¹⁵ and of the US National Institutes of Health NIH¹⁶ were also used.

Furthermore, the companies' research activities were determined by correspondence, the companies' websites and exchange of letters with the Ugandan Ministry of Health.

Evaluation of the business behaviour

The marketing behaviour of Bayer, Baxter and Boehringer Ingelheim was determined in three areas:

Advertising: We carried out specific research for concrete examples of product advertising at private pharmacies and at doctors. Other sources of information were information material and websites of the companies as well as press articles and interviews with companies, doctors and a representative of the Ministry of Health.

Disease awareness and sponsoring: Important marketing strategies, like disease awareness campaigns (which are intended to educate the public on particular diseases) or the sponsoring of public events and of patient groups were also examined. As data sources, the interviews with doctors and pharmacists carried out in Uganda were available as well as the companies' websites and correspondence with the companies.

14 www.uncst.go.ug/projects.html [Access 12th Feb. 2014]

15 WHO (2012) International Clinical Trials Registry Platform (ICTRP) apps.who.int/trialsearch/Default.aspx und www.who.int/ictrp/en/ [Access 12th Feb. 2014]

16 US National Institutes of Health (2012) ClinicalTrials.gov. www.clinicaltrials.gov [Access 12th Feb. 2014]

Classification of the drugs in accordance with the grounds for evaluation

POSITIVE	→ Drug of first choice	→ Drugs of proven efficacy and an adequate risk-benefit-ratio, which represent the best treatment for most patients in specific fields of application.
	→ Drug of other choice	→ Products for a smaller number of patients not profiting from a first-choice medication. The risk-benefit-ratio is often more unfavourable than for the drugs of first choice.
	→ Drugs for specialists	→ Drugs the use of which necessitates particular prerequisites, e.g. special diagnostics, instruments or special therapeutic experience. If they are used without control, they bear a high potential risk (e.g. anti-cancer drugs).
NEGATIVE	→ Irrational combination	→ Combinations of different active agents are problematic on principle since the interaction of the individual substances as well as desirable and undesirable effects cannot be calculated. Different substances moreover have different profiles as regards bio-availability and pharmacokinetics: one substance is often more rapidly reabsorbed or decomposed than the other. In addition, the dosage of one of the active agents cannot be individually adapted without changing the dosage of all other substances as well. It is not only the desired effects of the medicinal agents, which are combined, but also their side effects and risks. Combination preparations are evaluated as irrational if they contain more than three active agents, if they contain an ineffective or incorrectly dosed active agent, or if the active agents have mutually exclusive efficacy profiles.
	→ Ineffective drugs	→ Drugs, the efficacy of which could not be proven although several trials have been carried out.
	→ Controversial effectiveness	→ Controversial information has been given on these drugs. As long as no unequivocal data are provided, these drugs should not be used but be replaced by a reliable drug.
	→ Insufficient testing	→ These drugs have not been tested sufficiently and should be replaced by better tried and proven drugs.
	→ Alternative with fewer risks available	→ Although these drugs are effective, they include a higher risk than others and thus a worse risk-benefit ratio than alternative products.
	→ More effective alternative available	→ It is not justified to use drugs which are less effective than alternative products. Patients have the right to receive the most effective medication.
	→ Wrong amount of active agent	→ These medicinal products contain active agents in an amount that is either too large or too small. They should therefore not be used.
	→ Wrong form of dosage	→ Medical drugs must be applied in a suitable form of dosage to be effective and harmless. There are substances which are more dangerous as injections than in tablet form. E.g. if a drug has to be taken at varying intervals during the day, a time-release capsule is not a suitable form of dosage.

IV Results and conclusions

Whereas Bayer, Baxter and Boehringer Ingelheim offer a wealth of products in emerging countries like India¹ or Brazil², and aim at expanding their activities there, the brand manufacturers show little interest in the Ugandan pharmaceutical market. The companies have more or less abandoned this market. At the same time, Uganda has little local pharmaceutical production and demand for essential medicines is mainly covered with imports. Supply remains a challenge especially for those medicines without generic equivalents.

1. What do the companies offer?

Baxter do not wish to supply the Ugandan market

Baxter do not offer medical drugs in Uganda since there is no demand for the predominantly costly products of that company. Even the blood substitute Albumin produced by Baxter is not sold anymore although Albumin still is on the Ugandan list of essential medicines.³ An alternative treatment does not exist. The same is true for Baxter's preparation against haemophilia, a rare blood coagulation disorder. Patients in need of these drugs have to travel abroad for treatment or request the drugs with special import permissions. This is an insurmountable obstacle for poor people. The inadequate supply for patients with haemophilia is not going to change in the near future, either. The Baxter company wrote in an e-mail to Pharma-Kampagne: "First, we neither have such large production capacities nor is it practical in many cases since, for example, an infrastructure is lacking. And of course, we cannot afford it financially to help many countries without sustainable market since the production costs are particularly high for coagulation factors (whether plasma or recombinantly manufactured)."⁴

1 Fischer C, Jenkes C (2011), At any price? Pharma-Brief Spezial; 1/2011

2 Fischer C, Jenkes C (2012), At the cost of the poor? Pharma-Brief Spezial; 3/2012

3 Ministry of Health (2012) Essential Medicines and Health Supplies List for Uganda (EMHSLU). Republic of Uganda

4 E-mail to BUKO Pharma-Kampagne dated 17 June, 2013

Boehringer Ingelheim is also withdrawing

Boehringer Ingelheim registered 20 medical drugs⁵ with the Ugandan National Drug Authority (NDA),⁶ eight of those we have classified irrational, among them the cough mixture Mucosolvan® (ambroxol hydrochloride) for insufficiently proven effectiveness⁷ or the anti-hypertensive Micardis® (telmisartan) which, though lowering the blood pressure, does not reduce the risk of heart attack or stroke.⁸

All Boehringer Ingelheim products are imported and sold in Uganda by the company Surgipharm Uganda Limited. However, not for much longer! At our inquiry, the management of the German family-owned company informed us: "The products mentioned are only on stock in the Ugandan market. Boehringer Ingelheim have not renewed their registration in Uganda. None of the products were needed since generic alternatives exist."⁹ The latter is only partly true: only three of the twelve rational Boehringer drugs can be obtained from other companies. These are the essential anti-AIDS drug nevirapine Boehringer offer under the brand name Viramune® as tablets and as paediatric syrup; and meloxicam (Mobic®) for the treatment of inflammations and pain in joints and muscles. All other sensible treatments currently offered by Boehringer Ingelheim in Uganda are only available as brand products. Neither the essential asthma spray Atrovent N® (ipratropium bromide) nor the anti-asthmatic medication Combivent® (salbutamol + ipratropium) exist as generics. The Spiriva® inhaler (tiotropium bromide) used for chronic obstructive lung diseases or the anti-Parkinson agent Pexola® (pramipexol-dihydrochloride) only exist as branded products. For the treatment of Parkinson's diseases, no equivalent active agent such as Levodopa is available. The public health expert Denis Kibira of our partner organization HEPS therefore writes: "Withdrawal of Boehringer Ingelheim will cause

5 The Human List 2013 of the NDA (National Drug Authority) Uganda is available to BUKO Pharma-Kampagne.

6 www.nda.or.ug/ [Access 3 Dec. 2013]

7 [8 \[9 E-mail to BUKO Pharma-Kampagne dated 14 Aug. 2013\]\(http://arznei-telegramm \(2014\) Arzneimitteldatenbank \(database on medicinal products\). Entry on telmisartan \[Access 31 March, 2014\]</p></div><div data-bbox=\)](http://arznei-telegramm (2014) Arzneimitteldatenbank (database on medicinal products). Entry on ambroxol-HCl [Access 31 March, 2014]</p></div><div data-bbox=)



Potential customer for Bayer's contraceptives? Wealthy Ugandan farmer with her daughter.

Photo: Neil Palmer / Wikimedia

access challenges in the management of Parkinson. However the drug is already unreachable to many due to its cost.”¹⁰

This may similarly be true for the expensive Spiriva inhaler. However, we consider Boehringer Ingelheim's withdrawal of anti-asthmatics from the market to be particularly problematic.¹¹ There are viable therapeutic alternatives in Uganda – such as Duolin® (ipratropium bromide + salbutamol) produced by the Indian company Cipla. However, asthma treatments, particularly inhalers, are often in short supply in Ugandan health care facilities and the majority of patients receive the wrong treatment.¹² Against this background, it is extremely problematic that the number of treatments available is further reduced.

Boehringer Ingelheim do, in fact, emphasize that it is possible to import urgently needed products on a case-by-case basis via Surgipharm. However, exceedingly few people will be in a position to make use of this.

¹⁰ E-mail to Pharma-Kampagne dated 19 May, 2014

¹¹ Atrovent® and Atrovent N® (ipratropium bromide), Duovent® (ipratropium bromid, fenoterol hydrobromide), Combivent® (salbutamol, ipratropium)

¹² JB Kirenga, M Okot-Nwang, Makerere Medical School (2012) The proportion of asthma and patterns of asthma medications prescriptions among adult patients in the chest, accident and emergency units of a tertiary health care facility in Uganda. www.ncbi.nlm.nih.gov/pmc/articles/PMC3462518/ [Access 21 May, 2014]

Bayer's pharmaceutical product portfolio in Uganda

Of the three companies examined, only Bayer will continue to supply Uganda with medical drugs. Import and distribution are also mainly carried out by Surgipharm; some contraceptives, however, are imported via relief organizations.¹³ 49 Bayer drugs have been registered with the NDA (National Drug Authority); we have graded 21 of them as irrational. 13 products have been graded essential and out of those, only the contraceptive injection Noristerat® (norethisteron enantate) and the contraceptive pill Microgynon® (ethinylestradiol, levonorgestrel) are not available as a generic. All other essential Bayer preparations are offered by generic drug manufacturers, for example the antihypertensive Adalat Retard® (nifedipine) or Biltricid® (praziquantel) for treating the parasitical worm disease bilharziosis.

Other rational Bayer drugs, such as the X-ray contrast medium Ultravist (iopromide) or the medical drug Avelon® (moxifloxacin) for treating multi-resistant tuberculosis, are only available as very expensive original products from Bayer.

¹³ The US development aid organisation USAID and the United Nations Population Fund (UNFPA) distribute e.g. the contraceptive pill Microgynon ED Fe® free of charge. The special "Blue Lady package", containing three instead of only one blister pack, differ from the regular Microgynon Fe® package with only one blister pack. The latter is sold at a reduced price of approx. 1 US\$ in private pharmacies in the course of the Contraceptive Security Initiative (s. p. XXX).



Drugs against impotence and tonics

The expensive product Levitra® (vardenafil) only has a very small rational scope of application.¹⁴ In Germany, it is graded as a “drug for increasing the quality of life” (lifestyle drug) and is not refunded by statutory health insurances. The professional journal *arznei-telegramm* assess vardenafil, in comparison with the chemically closely related predecessor sildenafil (Viagra®), as a pseudo-invention with a risk potential typical for this group of active agents. About 60% of the users suffer from side effects like headaches or gastro-intestinal problems. In some cases impaired vision, low blood pressure and fainting occur. At least five fatal incidents – mostly the result of heart attacks – are documented.¹⁵

The benefits of mesterolone injections (Proviron®) for treating blood formation disorders and reduced performance in men are doubtful. The treatment with the sexual hormone mesterolone is considered to be an outdated therapeutic principle in Germany. The benefits of the drug have not been proven and it has not been sold in Germany since 2003. Mesterolone was marketed by Schering as an „active ingredient complex for men“ in combination with vitamin E, yohimbine and strychnine in the 1960ies.¹⁶ With the takeover of Schering, Bayer included this irrational agent in their company’s portfolio.

Another expensive and irrational Bayer drug is Nimitop® (nimodipine). It is supposed to counteract brain-related performance degradation in old age and, in case of an acute stroke, reduce



He does not need drugs against impotence.

Photo: Muhammad M. Karim/Wikimedia

mortality or resulting damage though critical experts have been questioning the benefits of this medication since the 1990ies.¹⁷ The *arznei-telegramm* cannot see an advantageous effect. Its intravenous injection within the first twelve hours after a stroke even deteriorates the course of disease and more patients remain in need of care. This might be caused by the anti-hypertensive effect of the drug.¹⁸ This irrational and expensive drug Nimitop® will probably only be used by wealthy patients in Uganda.

14 *arznei-telegramm* (2003) PHOSPHODIESTERASE INHIBITOR NO. 3: VARDENAFIL (LEVITRA). a-t; 34, p. 35 www.arznei-telegramm.de/html/2003_04/0304035_01.html

15 *arznei-telegramm* (2003) Phosphodiesterase inhibitor No. 3: Vardenafil (Levitra) (LEVITRA) a-t 2003; 34 p. 35

16 *arznei-telegramm* (2003) *Arzneimitteldatenbank* (database on medicinal products). Entry on mesterolone. [Access: 17 March, 2014]

17 *arznei-telegramm* (1991) Was leistet Nimodipin (NIMOTOP) in der Akutphase des Schlaganfalls? (What does nimodipine (NIMOTOP) do in the acute phase of a stroke?) a-t; 4/91, p. 37

18 *arznei-telegramm* (2001) Behandlung des ischämischen Schlaganfalls? a-t 2001; 32: 18-20, p. 25



Only the Leverkusen-based manufacturer Bayer will continue to supply Uganda with their products. Photo: Wikimedia

Nonsensical skin ointment

Bayer offers the irrational medication Baycuten® for the treatment of skin diseases in Uganda as well as in Germany. This skin ointment contains clotrimazol and dexamethasone, i.e. an anti-fungal agent and cortisone. In general, it does not make therapeutical sense to co-treat fungal infections of the skin with cortisone. According to the professional magazine *arznei-telegramm* this does not offer any advantages but bears additional risks. Therefore, they advise against this combination therapy. Pharma-Kampagne has been criticizing the marketing of Baycuten® since the 1980ies. At that time, the medication also contained an antibacterial agent and was considered a “shotgun therapy” against all kinds of skin diseases.¹⁹

Diabetic medicine without therapeutic benefits?

We evaluate the therapeutic benefits of the costly diabetic medicine Glucobay® (acarbose) critically. Bayer tried to prove the benefits of the drug by a large-scale trial. This was not successful. The *arznei-telegramm* concludes: “A benefit of acarbose (Glucobay®) for lowering the risk of cardiovascular diseases in patients with an increased blood sugar level has not been proven. The alleged evidence of benefits shown in the STOP-NIDDM trial is based on data manipulation favouring acarbose.”²⁰

19 BUKO Pharma-Kampagne (1988) *Bittere Pillen will keine(r)*. Pharmaindustrie und Dritte Welt (Nobody wants bitter pills. The pharmaceutical industry and the Third World), p. 4

20 *arznei-Telegramm* (2003) STOP-NIDDM – Studie mit Acarbose. *Schlamperei, Manipulation, Irreführung*. (Stop-NIDDM trial with acarbose. Sloppiness, manipulation, deception.) a-t 2003; 34, p. 73-74

Risky contraceptive pills

The controversial and expensive drospirenone-containing contraceptive pill Yasmin® is rather intended for solvent clients. The active agent drospirenone belongs to the more recent third-generation pills. Compared to the older contraceptives of the second generation containing levonorgestrel, the risk of thromboses for the user is almost doubled.²¹ The manufacturer Bayer does in fact try to downplay the risks as the contraceptives YAZ®, Yasmin® and Yasminelle® belong to the Bayer drugs with the highest turnover: in 2013, the worldwide turnover amounted to 853 million Euros. However, legal proceedings concerning health-related consequences cost the company dear: until 10th February 2014, Bayer agreed to settlements with 8,250 plaintiffs in the USA and paid 1.69 billion dollars.²²

Schering-Jenapharm, today Bayer, advertised their drospirenone-containing contraceptives Aida® and Yasminelle® as having a beauty effect and causing loss of weight right from their market launch in 2006. Consequently they violated the ban on advertising prescription medicines in Germany.²³

21 *arznei-telegramm* (2012) *Arzneimitteldatenbank* (database on medical products), evaluation ethinylestradiol + drospirenone [Access 28 Oct. 2012]

22 *Handelsblatt* (2014) *Yasmin und Yaz kosten Bayer viel Geld*. (German Trade Journal (2014) *Yasmin and Yaz cost Bayer a lot of money*). Report of 28 Feb. 2014. www.handelsblatt.com/unternehmen/industrie/antibabypillen-yasmin-und-yaz-kosten-bayer-viel-geld/9551444.html [Access 30 March, 2014] s. also Bayer Business Report (2012) pp. 58, 70-71, 215, 257 www.bayer.de/de/Geschaeftsberichte.aspx [Access 7 Feb. 2014]

23 *arznei-telegramm* (2009) *Thromboembolierisiko Drospirenon-haltiger Kontrazeptiva Yasmin u.a.* a-t; 40, p. 100

Bayer preparations for long-term contraception

In addition to various contraceptives in tablet form, Bayer offer preparations for long-term contraception like the implant Jadelle® (levonorgestrel) or the contraceptive injections Noristerat® (norethisteroneenanthate) and Norigynon® (norethisteronenanthate + estradiol valerate). Ugandan women favour contraceptive injections²⁴: even in the capital with good access to health care facilities and pharmacies, just under 20% of the women take contraceptive injections but only 10% use contraceptive pills. In rural areas, even less than 2% use contraceptive pills as compared to 13% using injections and just under 3% using implants.²⁵ This strong preference for contraceptive injections may also be based on the circumstance that women wish or have to prevent conception without their partners' knowledge. Since children – and above all boys – are a male status symbol and there are many prejudices against birth control in male-dominated Ugandan society. Moreover, long-term contraceptives were advertised intensely in the 1970ies and 1980ies by development aid programmes in order to stop population growth.²⁶ Contraceptive injections as Noristerat® have to be administered every 2 to 3 months to be effective. Side effects such as spotting and intermenstrual bleeding are frequent but also nausea, headache, vertigo or weight gain, sometimes also depression and nervousness. Many women do not tolerate the three-monthly injection as a result of their high doses of hormones. The German Federal Centre for Health Education therefore recommend the three-monthly injection only for women “who do not tolerate other methods or who cannot take contraceptive pills for health reasons.”²⁷ On the German package insert of Noristerat®, the manufacturer recommends its use exclusively for women “for which other methods of prevention are not suitable”.²⁸

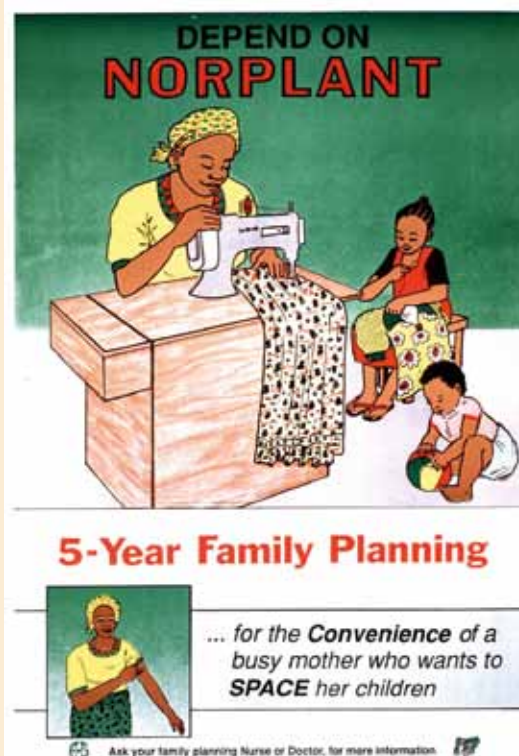
24 In the public sector, the contraceptive injection Depo Provera® of Pfizer is used. It is also available as a generic product on the Ugandan market.

25 Uganda Bureau of Statistics (2011) Demographic and Health Survey 2011, P. 16

26 Merkel Beate (1983): Die Dreimonatsspritze. (The three-monthly-injection.) In: BUKO Pharma-Kampagne (Hrsg.) Pharmamultis als Entwicklungshelfer? (Pharma multinationals as development aid workers?) p.11 ff.

27 BzgA: Die Dreimonatsspritze (German Federal Center for Health Education: The three-monthly-injection) www.familienplanung.de/verhuetung/verhuetungsmethoden/weitere-hormonelle-methoden/dreimonatsspritze/#c191 [Access 25 April, 2014]

28 Bayer: package insert of noristerat. www.jenapharm.de/unternehmen/paerapare/gebrauchsinfo/noristertat.pdf [Access 25 April 2014]



Old advertisement for Norplant. Photo: Wikimedia

Jadelle® and demographic politics

Jadelle® (Norplant II) is the successor product of Norplant I and was developed on behalf of the World Population Council, a demographic Think Tank from the USA. After 25 years of research, the licence was granted to the Finnish company Leiras which was taken over by Schering in 1996 and belongs to Bayer today. In the late 1980ies and early 1990ies, the use of the Norplant implants caused numerous feminist and women's organization to become active. In many poor countries, Norplant was implanted in thousands of women. The implant was seen as a favourable method for the containment of population growth (considered problematic by industrialized countries). The product was criticized worldwide because of its heavy side effects and its high potential of misuse. Incidents became known repeatedly that Norplant was implanted without the women's knowledge or even against their will. The product was – according to the accusation – mainly aimed at limiting the birth rates.

The successor product Jadelle® is currently vehemently marketed as a long-term and simple contraceptive method. It was “ideal for women in developing countries with poor access to health care and where women often have a low status”.¹ But particularly with contraceptive implants good medical care and supply structures are necessary. Especially in view of undesired effects a continuous medical supervision has to be guaranteed since the women using the implant cannot terminate the treatment themselves. In an emergency, it must be possible to remove the implant fast expertly and under sterile conditions. However, this is often impossible in poor countries and above all in their rural regions.

1 Ministry for Foreign Affairs (2012) Finnish product improves women's and girls' access to birth control in developing countries. Press release 226/2012

Bayer's contraceptive implant Jadelle® (levonorgestrel) was likewise graded positively since it offers certain advantages for women in special situations because of its five years' efficacy. However, the side effects of implants are more numerous than those of oral contraceptives. Irregularities in menstrual bleeding are more frequent. Further undesired effects are headache, depression, weight gain or loss of hair. Moreover, women cannot stop the treatment themselves but are dependent on expert help and sterile conditions to have the implant removed. Jadelle® is not offered in Germany. Even in the USA the product is not on the market although it has been FDA approved.²⁹

Conclusion: Bayer are the only of the three companies examined that still consider the Ugandan market to be sufficiently profitable to offer brand preparations. This may be based on the fact that Bayer is involved in several development aid programmes intended to improve access to contraceptive preparations in Uganda (s. p. 36 ff). However, it is a matter of concern that 21 of 49 Bayer medications (43%) were graded as irrational. 13 preparations (27%), however, are essential for health care, but almost all can be replaced with products containing the same active agents.

2. Price and availability of the medical drugs

The price and availability of all preparations by Bayer and Boehringer Ingelheim were examined in the two districts of Hoima and Kampala in five private, five public and five NGO clinics each and in five private drug shops. In public hospitals, the drugs are free of charge whereas NGO hospitals decide themselves whether or not they charge drugs. Patients in private clinics, however, have to pay themselves for any treatment and the customers of private pharmacies have to pay for medication. Medical drugs are not bound to a fixed retail price and no upper price limit exists.³⁰ Hospitals and pharmacies fix the

²⁹ Jenkes (2013): Verhütungsimplantate für die Frau von Welt? (Contraceptive implants for the woman of the world? Pharma-Brief 7/2013, p. 3 – 5

³⁰ Import prices are kept secret. Even upon enquiry, the companies were not prepared to give the respective information. Only the importing company Surgipharm sent us their price list. It contains the „Trade“ and the „Retail Price“

pharmaceutical prices at their own discretion – depending on the purchase price, availability and demand. Accordingly price differences for the same medication are considerable. Depending on the region and facility, we have encountered large differences which also affected the availability of the respective drug.

Hardly any brand preparations in Hoima

We did not find any medical drugs of Boehringer Ingelheim either in the private or in NGO hospitals of this district. Only in one public hospital the contraceptive implant Jadelle® (levonorgestrel) was available, which Bayer offers in the course of an access programme in Uganda (s. p. 36 ff).³¹ In a private pharmacy we found two Bayer preparations: the irrational hormone preparation Primolut N® (norethisteron) controlling the menstrual cycle. The essential contraceptive Microgynon® (ethinylestradiol and levonorgestrel), which is sold at a reduced price under the Contraceptive Security Initiative. At the same private pharmacy, the irrational anabolic Proviron® (mesterolone) was available. According to our partner organisation HEPS, the results from Hoima can largely be transferred to the rest of Uganda since the economic situation and infrastructure of other districts are similar or worse.

The situation in the capital

In the capital Kampala, the situation is different: a large proportion of the middle and upper classes of Uganda live here. Consequently, considerably more brand preparations of the companies examined are offered here. We found the contraceptive pill Microgynon® (ethinylestradiol + levonorgestrel) in two out of five public hospitals. In one public hospital (Murchison Bay Hospital) we found the essential HIV-medication Viramune® (nevirapin) of Boehringer Ingelheim, although its generic is also available in Uganda. At the same hospital a conspicuous amount of original preparations of the Bayer company were available. Among them were many important essential products as Biltrizid® (praziquantel) for the parasitic worm disease Bilharziosis,

³¹ Bayer (2012) Press release. INNOVATIVE PARTNERSHIP REDUCES COST OF BAYER'S LONG-ACTING REVERSIBLE CONTRACEPTIVE IMPLANT BY MORE THAN 50 PERCENT. Bayer (2012) Sustainability report, p. 82 – 99



Here the price is appropriate! Merry market woman in Northern Uganda.

Photo: Pete Lewis, Wikimedia

the antihypertensive Adalat retard® (nifedipin), the antibiotic Ciprobay® (ciprofloxacin) or Aspirin cardio® (ASS, 100 mg). Murchison Bay also stocked the contraceptive coil Mirena® (levonorgestrel) and two irrational Bayer combinations: Neo-penotran forte® (metronidazol and miconazol), a pessary against vaginal fungi, which is not on the market in Germany and the ointment Baycuten® (clotrimazole and dexamethason). The accumulation of original preparations is extraordinary, particularly for a prison hospital. Murchison Bay Hospital supplies the largest prison in Uganda and is, at the same time, reference hospital for seriously ill prisoners from other districts.³² According to our partner organization HEPS, the preparations originate from a drug donation made by the Red Cross.^{33,34}

NGO clinics use only few originals

In NGO hospitals, only few Bayer drugs were used (0 – 5 per hospital). In two out of five facilities,

we found the irrational diabetes medicine Glucobay® (arcabose), another NGO hospital offered the contraceptive pill Microgynon® (ethinyl-estradiol and levonorgestrel) free of charge. At the same clinic, we found the sensible, but overpriced X-ray contrasting agent Ultravist® (iopromide), the important antihypertensive Adalat® (nifedipine) and the irrational hormone preparation Primolut N® (norethisteron) by Bayer but also the rational antiasthmatic Combivent® (salbutamol+ipratropium) by Boehringer Ingelheim. In four NGO hospitals, the medication was handed out free of charge. In the catholic Rubaga Hospital, however, the patients had to pay high prices and contraceptives were not available for religious reasons.

In the Rubaga hospital the antihypertensive Adalat® (30 tablets á 30 mg nifedipin) cost e. g. the high price of 105,000 UGX (Ugandan Schilling), roughly 30 Euro. This price for one package corresponds to about one third of an average monthly salary.³⁵ Nifedipine is offered by numerous Indian generic drug manufacturers, among them Cipla, Cadila, Torrent, Unique. These preparations cost about 6,000 UGX per package which is much cheaper in comparison to the original drug.

32 The health care situation of prisoners in Uganda tends to be rather bad - even at the Murchison Bay. Whereas the prisoners are often insufficiently treated and do not receive necessary medication, half of the patients live in neighbouring residential districts Human Rights Watch (2011) Even dead bodies must work. Health, hard labour and abuse in Ugandan prisons. p. 68 ff. www.hrw.org/sites/default/files/reports/uganda0711webwcover.pdf [Access 13 Feb. 2014] The Republic of Uganda. Office of the Auditor General (2010) Value for money audit report Uganda prisons service. www.afrosai-e.org.za/sites/afrosai-e.org.za/files/reports/1273680950Prisons.pdf [Access 13 Feb. 2014]

33 E-mail from Denis Kibira to Pharma-Kampagne dated 26 May, 2014

34 The German Red Cross confirmed in an e-mail to Pharma-Kampagne dated 28 May, 2014 that the International Committee of the Red Cross (IKRK) had distributed medicinal drugs to the Murchison Bay Hospital until 2012.

35 Average income Uganda: 303,700 UGX. In Kampala, the income is considerably higher with 960,000 UGX, but the workers in the Northern regions earn on average only 141.400 UGX. www.ubos.org/UNHS0910/chapter7.Average%20Monthly%20Household%20Income.html [Access 5 Feb. 2014]



Urgently needed drugs for neglected diseases.

Photo: Jaqueline Kabluyen / Wikimedia

Stockouts and erratic price increases are common problems

Interview with Dr. Michael Mubiru, Lubaga Hospital

Dr. Michael Mubiru is pharmacist and head of the pharmacy section in Lubaga Hospital. The catholic hospital was founded in 1899 and is the second eldest hospital in Uganda. Its mission is to provide quality health care to the less privileged. Lubaga hospital is located in the western part of the capital Kampala. The hospital has 395 employees. It treats about 165,000 patients a year and has 20 deliveries per day.

Who goes to the hospital to get treatment, Mr. Mubiru?

The catchment area of Lubaga hospital are surrounding neighbourhoods and parishes like Kabowa, Mutundwe, Busega, Ndeeba, Nateete and Najanankumbi. The patients mainly suffer from Malaria, Diarrhoea, Pneumonia, Septicemia, Anemia. We often see patients with non communicable diseases, mostly diabetic and hypertensive patients.

Compared to other hospitals in Uganda how do you judge your equipment?

We have a fairly good range of equipment but we lack the specialized equipment like the CT scan or Intensive Care Unit (ICU) equipment which some of the other hospitals have.

Does the hospital offer drugs?

The hospital offers drugs to the patients and they are paid for by the patients.

What drugs are needed most and are these drugs accessible for patients?

Antimalarial, antibiotics, antihypertensive and diabetic drugs are needed most but there are sometimes stockouts and shortages. Also in Lubaga hospital.

How can it be assured that patients with chronic diseases receive lasting treatment?

It is assured that the hospital budget has money readily available for purchasing drugs. However for the affordability it may not be a sure deal.

Are brand name drugs used in the treatment?

Brand name drugs are at times used but their use is discouraged. They are too expensive.

What are the common problems Lubaga hospital has to cope with?

The overuse of antibiotics and polypharmacy are really a problem here.

What are the main problems in the Ugandan drug market?

From my personal point of view that's the non-availability of some essential items and the erratic increases in price.



Market scene in the capital Kampala.

Photo: Neil Palmer / Wikimedia

Private clinics sell brand products

In private houses, we found 4 to 24 brand products of Bayer and Boehringer Ingelheim. The patients of these private clinics are middle and upper class and have to pay themselves for treatment and medication. The anti-hypertensive Adalat® (30 mg nifedipine) is also used here. This brand medication is sold at prices of 82,800 UGX or 96,000 UGX, respectively, which are considerably lower than in the catholic Rubaga hospital. Private clinics also sold the essential antibiotic Ciprobay® (ciprofloxacin) at the imposing price of 100,000 UGX for 10 tablets. Irrational products as the painkiller Buscopan plus® (butylscopolaminium bromide, paracetamol) against cramp-like abdominal pain or the antihypertensive Micardis® (telmisartan) of Boehringer Ingelheim.³⁶ Micardis cost 126,000 UGX (approx. 36 €), Co-Micardis® (telmisartan + hydrochlorothiazide) even 168,000 UGX (approx. 48 €).

Likewise, contraceptives are expensive in the private sector: whereas the essential contraceptive pill Microgynon® is handed out free of charge in some public and NGO clinics, private clinics charge between 1,500 and 3,000 UGX for one month's supply. One clinic even charged 56,000 UGX (approx. 16 Euros), i.e. one sixth of an average monthly salary.

³⁶ arznei-telegramm (2008) Sekundärprävention nach Insult. (Secondary prevention after insult.) a-t 2008; 39, p. 94-95

Many branded goods in private pharmacies

In private pharmacies, contraceptive pill can be obtained at a considerably lower price: the monthly supply of Microgynon® cost 8,000 UGX at the most.

In private pharmacies in Kampala, we found many original Bayer and Boehringer Ingelheim preparations. In four out of five pharmacies, Bayer's critical contraceptive pill Yasmin® was sold for up to 52,000 UGX (approx. 15 €) per monthly pack. In one pharmacy, we found the Bayer potency medication Vardenafil (levitra®). Four tablets cost 20,000 UGX.

Boehringer Ingelheim products can also be obtained in private pharmacies considerably with varying prices. One pharmacy charged 14,000 UGX for a monthly pack of Micardis® (telmisartan 80 mg), another the tenfold price.

Conclusions: With few exceptions, original preparations are mainly used in the private health sector of the capital, i.e. by Uganda's middle and upper class. The comparison with the average monthly salaries shows that only wealthy citizens, and above all those living in the capital, can afford Bayer and Boehringer Ingelheim products at all. Large differences in pricing between individual pharmacies, private clinics and NGO facilities make the patients' choice of a sensible and cost-efficient treatment more problematic.



Men take their harvest to the market. The monthly income of their families amounts to about 60 Euro.

Photo: Adam Jones / Wikimedia

3. What do patients, doctors and pharmacists say?

Interviews with numerous patients and experts conform the results of the quantitative part of the study: on the whole, Bayer and Boehringer Ingelheim products are rarely used. Above all, they are hardly on stock in remote and rural regions. Moris Seru, senior pharmacist at the Ugandan Ministry of Health, remarked in this respect: “Here in Kampala you can find these drugs but expensively, but in places like Kabale, you go to a pharmacy and you find that there are certain drugs that are not there or you find places like Kagadi, where these drugs are not available at all.” Brand preparations are, in fact, used in the private sector of the capital. According to a physician at a private ward of the Mulago hospital³⁷ in Kampala: “Medications of Bayer and Boehringer are not common in our markets here except for asthma, I commonly prescribe the Combivent®. Also Bayer Aspirin® is common on market. (...) Arcabose, we use it but rarely and the cost is a little bit high for most of the patients to afford.”

Only very few can afford expensive brands

As a rule, only generically available treatments are declared essential. This is confirmed by a Health Ministry’s employee: “Also because of the prices. The private for profit and private

³⁷ The Mulago hospital is in fact a public hospital. But is also has a private ward for wealthy patients. They have to pay for their treatment themselves.

not for profit facilities that serve the poor can’t afford to have these drugs on their stock because they do not have the money to buy them and if they stocked them, the poor cannot afford them.” One physician confirmed this in an interview: “We try to make essential medicines available but we don’t take considerations on brands and we go with the cheaper version that is the generics.” Another physician remarked: “When we prescribe medication, we partly do not know the manufacturer. Most of these drugs are from India. I am sorry I don’t even know Baxter.”

The interviewed public and NGO pharmacists stated that they mainly stocked generic products. “The National Medical Stores only include generic products. Generic products are cheaper for big consumption in hospitals, it will be better to buy in bulk”, according to the pharmacist of a rural public health institution in the district of Hoima. And the pharmacist of a rural NGO clinic declared: “(Our) facility administration does not procure from those companies.” The pharmacist of a private clinic in Kampala did have Boehringer’s Combivent® on stock – as the only original preparation of the companies examined.

Marketing activities are rare

The marketing activities of the companies are correspondingly few. Visits from company representatives appear to be extremely rare and limited to the capital. 10 out of 12 physicians stated they had never received representatives



Lonely mountain region in the southwest of Uganda, district of Kasese. You will look for expensive brand pharmaceuticals in vain at the next health care post.
 Photo: Dylan Welters / Wikimedia

of pharmaceutical companies. One doctor at the Mulago hospital in Kampala, however, remembered that he had seen Bayer employees with informational material about Glucobay® at the Mulago hospital. “Yes, I’ve seen guys move around with those medicines of Glucobay® and others. They have never offered anything like gifts to me. I just saw guys with posters.”

His colleague at the private ward mentioned that he had had received ball-point pens and information material. Of the pharmacists interviewed, only one had contact to company representatives – he works at an NGO medical college. Two of the pharmacists had attended a company-sponsored conference. A pharmacist of the Mulago hospital remembers to have attended a Boehringer Ingelheim sponsored conference on arthritis prophylaxis. His colleague at a public health care facility in Hoima mentions: „I attended one conference when Bayer company was advertising [the contraceptive pill] Microgynon Fe®. Samples were given and education materials.“

Brand name = quality?

Although Bayer’s and Boehringer Ingelheim’s brand products are hardly stocked in Ugandan pharmacies and prescribed relatively rarely, some people connect these products with high quality: “Generally, these products are very good products but the problem is that they are very expensive and it is so hard for most patients to afford them.”, the pharmacist at a private facility in Kamapala states and adds: “Actually I per-

sonally have never seen any drug representative from Bayer and would recommend them to do a lot of advertising here because these are very good products which are hard to find.”

Some patients apparently connect brand names with quality: an NGO physician from the city of Hoima mentions that one patient rejected treatment with an Indian generic and favoured treatment with Bayer’s original preparation Praziquantel®. “He thought this [Indian] drug may be ineffective.”

Malaria is the major health problem

These interviewees named malaria as the most serious health problem. “Malaria is now common and the whole week I have been seeing patients with malaria”, says a physician at the paediatric ward of the Mulago hospital. His colleague at an NGO facility in rural Hoima has to treat malaria patients on a daily basis.

All other physicians stated that they treated malariapatientalmostdaily.Theyhadprescribed anti-malarial medication either just before the interview, at the same day or at least on the preceding day. Patients also estimate this disease, which is transmitted by mosquitoes, as a major problem. Seven of the persons interviewed had gone to health care facilities because of a malaria infection, one had also been in hospital because of pneumonia and one wealthy patient from the city of Hoima was being treated for high blood pressure.



Not only in Germany brand names are appraised. In many poor countries, pharmaceutical drugs of German manufacturers are considered quality products.
 Photo: van Beem / Wikimedia

Medication often cannot be obtained

In the case of rare diseases like haemophilia, Ugandan patients have little hope for adequate treatment. The physician of a public NGO clinic in Hoima: “We give them supportive care, then they are referred to outside countries.” A pharmacist in Kampala confirmed this and explained: “I have actually not come across a patient suffering from haemophilia but I can speak on behalf of other patients with cases where their medicine is not available at all in the country. We refer them to other sources and Nairobi [capital of Kenya] is always the main source where they get these other drugs.” A pharmacist in Hoima declared: “For haemophilia vitamin K is used and it is in the country.” This medication is, however, not suitable as a permanent treatment but only for emergencies when the bleeding cannot be stopped. The statement of a pharmacist in Hoima therefore seems to be more realistic. When asked what happened to haemophilia patients in Uganda, he merely answered: “They die.”

Some interviews confirmed that medication is sometimes or permanently unavailable. A hospital physician remarked: “In Mulago hospital, we give medicine for free but if the medicine is not available, they can go out and buy.” Likewise the pharmacist of a public health care institution in Hoima declared that some preparations were not on stock, not even as a generic product: “The patient was then referred to a private pharmacy.”

Private visits to a doctor are expensive

If patients – for example as a result of insufficient health care within the public system – have to make use of private health facilities, it may become expensive. According to the physician of a rural NGO clinic: „Patients pay for medicine, patients pay for transport, laboratory costs and other utilities like water, bed, electricity...” The patients confirmed in several interviews that they had to bear high expenses on health. A woman suffering from malaria enumerated: “You first go to the doctor and tell him what you feel and you pay 20,000 UGX. Then you go to the lab to be checked for malaria which is 5,000 UGX. And then you pay for the rest. I paid 12,000 UGX for the full treatment.”

Nevertheless, hospital stays or visits to a doctor were accepted by the families of all patients and were considered indispensable in case of serious diseases like malaria. “Yes, it is acceptable for my family because malaria is a killer and there is no short cut. You have to automatically go and get treatment”, one patient said. The patient suffering from high blood pressure qualified that the treatment was only acceptable as the health care facility was within easy reach.

The interviews showed that Ugandan patients regarded their physicians highly and set high expectations in them. A critical awareness of patients concerning the choice of treatment hardly exists. It is not expected by the physicians either. As the physician of an NGO clinic says: „Patients do not choose treatment, the clinician decides on

the treatment.” Another physician says: „Of course they want the treatment and they trust us so much and take what we prescribe for them.”

None of the physicians and pharmacists had taken part in a clinical trial or series of tests. Only one patient stated that she had taken part in a trial on malarial therapy with an artemisinin combination preparation recommended by the WHO.

4. Where is research carried out?

None of the companies was carrying out a clinical trial in Uganda during the period of examination.³⁸ In total, it was confirmed that the Ugandan market is hardly interesting for the companies although well-equipped institutions like the public Mulago hospital with their highly qualified personnel are available. Here, research is mainly carried out on HIV/aids and Malaria.³⁹ In total, there are only 274 studies in Uganda. Among them there are single studies on epilepsy, congenital heart disease, cancer, asthma, pneumonia, depression, but also on the disputed HPC vaccination. At least there are a few studies on neglected diseases like tuberculosis, sleeping sickness, tropical worm diseases and the Ebola virus.^{40,41}

5. What is patented?

The companies examined do not hold any pharmaceutical patents in Uganda. That may change in the future since above all the USA and Europe urge African states to introduce strict laws on patent protection for the pharmaceutical sector as well.

6. Marketing

As was confirmed by our interviews, pharmaceutical representatives are almost exclusively active in the capital which is also the location of sponsored conferences. Advertising activities of

38 World Health Organisation WHO (2013) International Clinical Trials Registry Platform (ICTRP). www.who.int/ictrp/en/ [Access 2 Dec. 2013] and www.clinicaltrials.gov/ [Access 2 Dec. 2013]

39 Uganda National Council for Science & Technology www.uncst.go.ug [Access 7 Feb. 2014]

40 Clinical Trials.gov <http://www.clinicaltrials.gov> [Access 7 Feb. 2014]

41 Centre Watch (2014) Uganda Clinical Trials www.centerwatch.com/clinical-trials/listing/location/international/Uganda [Access 7 Feb. 2014]

the three companies are very few. We could find no marketing directed at laypersons or adverts published in mass media or ads on television. This was also confirmed by the interviewed employee of the Ministry of Health: “The advertisements are there but not for these companies.”

7. Which health projects do the companies take part in?

Bayer is partner of various information and aid programmes intending to improve access to contraceptives in Uganda. Two of these programmes are financed significantly by public development aid funds: the Contraceptive Security Initiative and the Jadelle®-Access-Programme.

The Jadelle®-Access-Programme

With this large-scale partnership project, the Bayer group considerably improved market opportunities for their expensive contraceptive implant Jadelle®. 27 million women in the poorest countries of the world, among them Uganda, are to use the preparation for long-term contraception. This initiative is financed e.g. by the Bill and Melinda Gates Foundation and also by public funding of the Norwegian, British, US-American and Swedish governments. Bayer's health care sector halved the price of their gestagen implants and their partners committed themselves to a purchase obligation for six years in return. According to Bayer, the Jadelle®-Access-Programme is supposed to prevent 27 million unwanted pregnancies and thus the death of 280,000 infants and 30,000 mothers. Moreover, 250 million dollar (approx. 194 million Euros) of global health care costs could be saved.⁴² An audacious calculation – but unborn children do indeed not cause any costs. However, countries like Bangladesh, where birth rates have drastically decreased in recent years, have shown that successful programmes for family planning are based on a holistic approach: they have to be embedded in better health care for children and mothers and extend far beyond the mere distribution of contraceptives.⁴³

42 Press release of the Bayer company. www.bayerpharma.com/de/presse/im-fokus/von-der-idee-zum-vertrag.php [Access 29 April, 2014]

43 Najma Rizvi (2014) Spectacular success. D+C No. 4/2014, p.147 f.

Ensure competitiveness

The Jadelle®-Access-Programme was initiated in 2012 at the London summit on family planning and signed at the margin of a UN General Assembly. Ex-US president Bill Clinton talked of a “very big deal”. People “will have healthier families and live longer”. The fact that the deal is particularly profitable for Bayer is out of the question. Price competition on the market of contraceptives is high: similar contraceptive implants are, e.g. Implanon® (registered in approx. 80 countries) and Nexplanon® (registered in 21 countries), both produced by Merck & Co/MSD or Sino Implant II of the company Shanghai Dahua Pharmaceuticals. Global marketing of Sino Implant started in 2008 and the medication is now available for just under US\$ 8 in 24 sub-Saharan, Asian and Latin-American countries, and also in Uganda.⁴⁴ Sino Implant® is said to counteract pregnancy for four years. Bayer’s Jadelle®, however, prevents unwanted pregnancy for up to five years and, in contrast to the rival product from Shanghai, prequalified by the WHO. The implant used to cost US\$ 18 – in the partnership it now costs US\$ 8.50.⁴⁵

This initiative therefore can be seen as an answer to price competition. With the Jadelle®-Access-Programme, the Bayer group were able to make their contraceptive implant competitive with the support of public development aid funds. And particularly poor countries in which an enormous market growth can still be expected since their demand for contraceptives is still largely unsatisfied.

The Contraceptive Security Initiative

For the Contraceptive Security Initiative, Bayer reduced the price of Microgynon Fe® (levonorgestrel + ethinylestradiol + iron) for the private market in several African countries. This contraceptive pill with its sensible composition has been obtainable as a price-reduced original preparation in Ethiopia since 2010, in Uganda since 2011 and in Tanzania since 2014. The “middle class



Young woman in the Ruwenzori Mountains. Only 20 percent of Ugandan women aged between 20 and 25 years use contraceptives – just under three percent use the contraceptive pill and over 13 percent use contraceptive injections. Photo: Dylan Walters / Wikimedia

forming in these countries thus also have the possibility of taking over the financial responsibility for their own family planning”, the company write.⁴⁶ They wish to make “high-quality oral contraceptives available” in this manner.

Creating new markets and creating brand awareness

Their project partner is the public US-American development aid organization USAID. They finance country-specific information material provided by Bayer as well as the corresponding social marketing relating to family planning. Bayer are not cagey about the purpose of this initiative: their cooperation with USAID represented an “innovative approach to open up the markets in developing countries”.⁴⁷

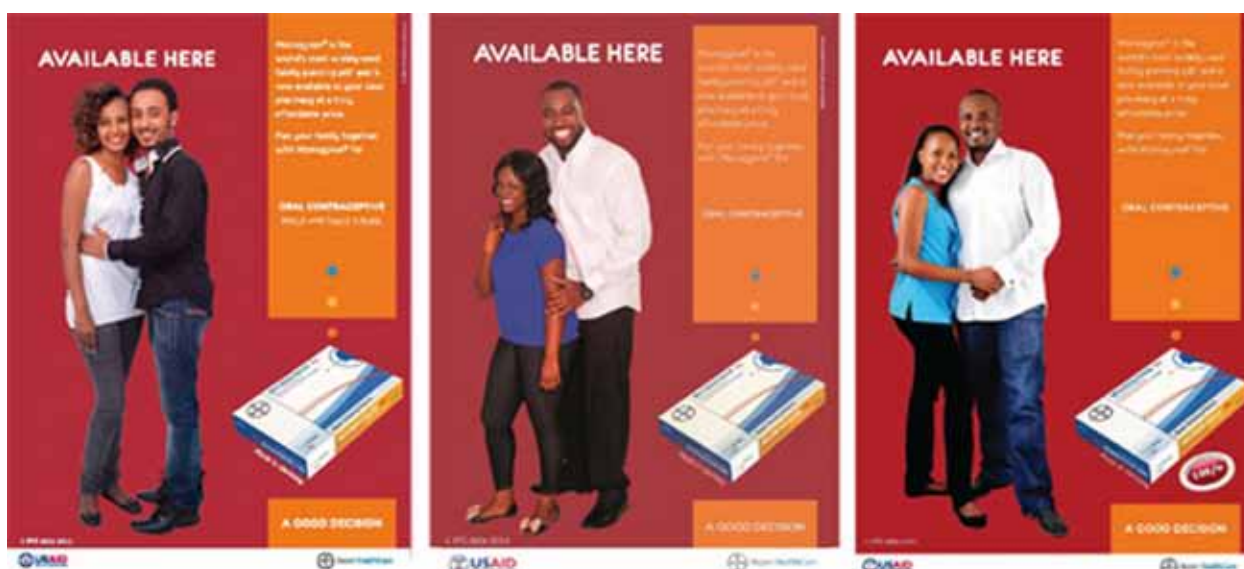
In 2011, the group provided oral contraceptives

⁴⁴ Reproductive Health Supplies Coalition (2012) Contraceptive Implants. Product Brief. Caucas on New and Underused Reproductive Health Technologies. p. 2

⁴⁵ Bayer News Channel (2013) Initiative allows access to contraceptives to 27 million women. 27 Feb. 2013

⁴⁶ Bayer sustainability report 2011 dated 6 June 2012. www.nachhaltigkeit2011.bayer.de/de/Gesundheit-weltweit-foerdern.aspx [Access 19 March, 2013]

⁴⁷ Bayer HealthCare: We cooperate with USAID to create a sustainable market for contraceptives in Africa. www.bayerpharma.com/de/presse/im-fokus/contraceptive-security-initiative.php [Access 29 April, 2014]



Microgynon Fe® is already being advertised in private Ethiopian pharmacies. In Uganda, there seems to have been little marketing up to now.

at lower prices for approx. 10 million women.⁴⁸ The fact that lack of access to contraceptives is an immense problem in many African countries – as in Uganda – is indisputable. However, the question whether or not poor populations would be better served with lower-priced generics of high quality is open to discussion. We therefore grade this partnership as a marketing instrument to defend Bayer’s position as the world’s market leader for oral contraceptives and their market position in the sector of women’s health.

Sexual education with Bayer

The same is true for Bayer’s joint project with the DSW (German Foundation World Population, Deutsche Stiftung Weltbevölkerung): the Young Adolescents Project, or YAP, was established during 2009 – 2012 in Uganda and has also been established in Kenya since 2013. This project targets at educating teenagers and pupils between 10 and 14 on reproductive health, sexuality and contraception. With a “youth truck”, the project’s staff drive to schools, market places and youth clubs, always in focus: the Bayer logo on the youth truck, which is suitably decorated in the company’s colours of green and blue. Together with sexual education, brand awareness is simultaneously conveyed.

⁴⁸ 119 million cycles with which 10 million women can prevent conception for a year.

The DSW also supported activities for the World Contraception Day sponsored by Bayer in Uganda. Every 26th September, the World Contraception Day, in its 10th year in 2013, culminates in approx. 70 countries around the world in events, press conferences and concerts although it is an all-year-round campaign.⁴⁹

Commitment to neglected diseases

The company’s commitment to fighting sleeping sickness is thoroughly welcome. This fatal disease is transmitted by the blood-sucking tsetse fly. Cause of the treacherous disease are parasites which affect the brain and the nervous system. The patients increasingly lose control over their consciousness and sink into a comatose state in the final stages. There are two forms of the disease which are caused by different species of the parasite and two different courses of the disease result. *Trypanosoma brucei gambiense* is common in Central and West Africa, including Northwest Uganda. The parasite causes a chronic form of the disease and patients may carry the infection for months or years without apparent symptoms. *Trypanosoma brucei rhodesiense*, however, breaks out within a few weeks and it is therefore easier to diagnose. This form of the sleeping sickness occurs in East and Southeast Africa (including South and East Uganda) and is by far rarer.

⁴⁹ Bayer: Sexual education programmes – for a self-determined family planning. <http://www.bayerpharma.com/de/gesellschaftliches-engagement/familienplanung/aufklaerung/index.php> [Access 29 April 2014]



German Foundation World population (DSW) shows presence on the World Contraception day in Uganda.

The widely spread West African form of the disease can be effectively treated with a combination therapy of the active agents nifurtimox (Bayer HealthCare) and eflornithin (Sanofi-Aventis), even at an advanced stage of the disease.⁵⁰ In 2009, this therapy was included in the WHO list of essential drugs. Since then, Bayer HealthCare provided the WHO with annually 400,000 tablets of nifurtimox for a period of five years. In addition, the company annually supply 10,000 ampoules of the likewise essential active agent suramin free of charge. This drug is used for the East African type of the disease. In the course of the Stop-TB-Partnership, the Bayer company further supply their important antibiotic Avelox® (moxifloxacin) for an emergency aid programme against multi-resistant forms at a reduced price.⁵¹

8. Manner of communication

All companies were contacted by letter at the beginning of the examination and were asked for comments on special questions during the course of the study. As a rule we received extensive information in good time.

⁵⁰ Bayer HealthCare: Afrikanische Schlafkrankheit (African sleeping sickness) www.bayerpharma.com/de/gesellschaftliches-engagement/vernachlaessigte-krankheiten/afrikanische-schlafkrankheit/index.php [Access 30 April 2014]

⁵¹ Bayer (2014) Business Report 2013. Strategies of the subgroups www.geschaeftsbericht2013.bayer.de/de/strategie-der-teilkonzerne.aspx [Access 30 April 2014]



The youth truck of DSW displays the Bayer logo and the company's colours of green and blue.

Boehringer Ingelheim practiced open communication. The company answered our inquiries promptly and in detail and was prepared to take part in a direct meeting.

Bayer answered the questions raised in this study without delay, completely and extensively. The company provided us with a reliable contact person. Bayer denied information on import prices referring to the company's secrecy policy. **Baxter**, for the first time, provided us with a contact person for this study and proved their willingness to give information. The company promptly answered our questions and considerably improved their communication behaviour as compared to the preceding study.



Skyline of Düsseldorf, capital of NRW, Germany.

Photo: Martin Falbisoner / Wikimedia

V Uganda – a neglected market?

For three decades, BUKO Pharma-Kampagne examined and evaluated the portfolio and the business policies of pharmaceutical companies in poor countries. However, this study raises new questions: Is it sensible or lamentable if international pharmaceutical corporations withdraw from poor countries like Uganda? Will the (mostly Indian) manufacturers of generics succeed in filling this gap? And last but not least: are development aid funds – available e.g. in the course of the Contraceptive Security Initiative or the Jadelle Access Programme – a sensible incentive to motivate companies to serve neglected markets like the Ugandan one?

The brand manufacturers Baxter, Boehringer Ingelheim and Bayer have no or only little interest in supplying pharmaceutical drugs to a country without solvent patients or to engage in research there. As long as important drugs are available as generics, this may not be a great loss. After all, expensive brand products and especially irrational pseudo-innovations burden the health budget unnecessarily. But what if innovative drugs, for example against hemophilia, Parkinson or cancer are not (or no longer) available as a result? The Bayer company do not even offer their cancer drug Nexavar®

„NRW (Northrhine-Westphalia) bears responsibility for the development of the world beyond our continent solely as a consequence of its economic prowess, its strong focus on export and its historic legacy.“⁵²

From the report of the Minister for innovation, science and research

(Sorafenib) e.g. in Uganda. Their chief executive officer Marijn Dekkers did not even conceal the fact that the drug was basically intended for rich people. “Let’s be honest. We developed this product for western patients who can afford it.”⁵³

So, do the patients in the poorest countries of the world have to contend themselves with what is offered by the proverbial “pharmacy of the poor”, i.e. Indian manufacturers of generics? And is this contrasted by a “pharmacy of the rich” whose research portfolio is exclusively tailored to the needs of industrial countries?

⁵² Minister for Federal Affairs, Europe and Media in the state of NRW (2012) focal points of the state government for Europe and One world. www.nrw.de/web/media_get.php?mediaid=25054&fileid=79641&sprachid=1

⁵³ MSF (2014) Médecins sans frontières criticize Bayer boss Dekkers. News on the MSF website of 23 Jan. 2014 www.aerzte-ohne-grenzen.de/article/aerzte-ohne-grenzen-kritisiert-bayer-chef-dekkers [Access 9 May 2014]



They aren't short of coal here, but short of money. A charcoal booth in Uganda.

Photo: Hein Waschefort / Wikimedia

But drug donations and brand medication at a preferential price are not sufficient when the free market fails. Particularly German politics should be held accountable globally, e.g. by actively supporting the formation of a local pharmaceutical production in Uganda, by providing advice for the procurement politics of pharmaceuticals or for the price control of medical drugs. The German Society for International Cooperation (GIZ) located in Bonn could make an important contribution to this. In the recent two years, they have made accessible “Africa’s potentials together with private industry”⁵⁴ and also promoted projects in Uganda. Except for a project on HIV/Aids, none of the programmes dealt with health.⁵⁵ We advocate to critically reconsider public-private partnership projects and to increasingly invest in establishing sustainable health care structures.

We also recommend the German Federal State of NRW (Northrhine-Westphalia), which decisively financed this study through their Stiftung Umwelt und Entwicklung (Foundation Environment and Development), to advocate innovative research projects at universities. Particularly public research should keep an eye on a socially fair access to research products – beyond patents

and economic exploitability.⁵⁶ The university of Münster has made a first step in this direction. In January 2014, they decided on a patent strategy which emphasizes just licences in the field of medicine.⁵⁷ We hope that this example sets a precedent to be followed. After all, the NRW ministry of research committed themselves to a science and research policy “which focuses on human wellbeing (...) which is open for values and whose disciplines will not freeze in mainstream in one direction.”⁵⁸

⁵⁶ BUKO Pharma-Kampagne described numerous practical examples for socially just research: Pharma-Brief Spezial 1/2013. Public Benefit - delivered.

⁵⁷ „In the field of medicine, contracts are aspired according to the model of ‚equitable licences‘.“, it says in the strategy paper. www.uni-muenster.de/AFO/patente/aussendarstellungderpatentstrategie.html [Access 27 May 2014]

⁵⁸ Ministerium für Innovation, Wissenschaft und Forschung NRW (2012) Bericht der Ministerin für Innovation, Wissenschaft und Forschung des Landes NRW (Ministry for Innovation, Science and Research

⁵⁴ GIZ: Annual topic: Developers for the future www.giz.de/de/ueber_die_giz/101.html [Access 27 May 2014]

⁵⁵ Projects of GIZ in Uganda: www.giz.de/de/weltweit/310.html [Access 12 May 2014]

VI. List of examined drugs

Drugs Bayer 2013

Generic name	Brand name	Strength	Dosage form	Units per package	Classification	Recommended Retail Price (UGX)
acarbose	Glucobay	50 mg	tablet	30	i	83,600
acarbose	Glucobay	100 mg	tablet	30	i	120,500
acetylsalicylic acid	Aspirin cardio	100 mg	coated tablet	30	r + e	7,800
Bifonazole	Mycospor cream	15 g	cream	1	i	33,100
Bifonazole	Mycospor solution	15 ml	solution	1	i	33,100
ciprofloxacin	Ciprobay	250 mg	coated tablet	10	r + e	73,900
ciprofloxacin	Ciprobay	500 mg	coated tablet	10	r + e	149,500
ciprofloxacin	Ciprobay XR	500 mg	coated tablet	3	r + e	23,400
ciprofloxacin	Ciprobay infusion	2 mg/ml; 100 ml	PVC bag injectable solution	1	r + e	184,600
clotrimazole / dexamethasone	Baycuten N cream	15 g	cream	1	i	35,000
dimeglumide gadopentetate	Magnevist	469 mg/ml, 20 ml	solution	1	r	249,500
drospirenone / ethinylestradiol	Yasmin	3 mg + 0.03 mg	tablet	21	i	37,300
ethinylestradiol + levonorgestrel	Microgynon	0.03 mg + 0.15 mg	coated tablet	21	r + e	12,100
ethinylestradiol + levonorgestrel / iron	Microgynon Fe	0.03 mg + 0.15 mg	coated tablet	1 blister à 28	r + e	2,900
ethinylestradiol + levonorgestrel / iron	Microgynon ED Fe	0.03 mg + 0.15 mg	coated tablet	3 blister à 28	r + e	free
estradiol valerate	Progynova tablets	2 mg	coated tablet	84	i	74,800
etofanamate	Bayrogel 5%	20 g	gel	1	i	15,200
etofanamate	Bayrogel 5%	40 g	gel	1	i	28,700
hydroxyprogesterone hexanoate	Primolut depot	250 mg	ampoule	1	i	43,100
iopromide	Ultravist	300 mg/ml; 20 ml	vial with injectable solution	1	r	50,800
iopromide	Ultravist	300 mg/ml; 50 ml	vial with injectable solution	1	r	67,700
iopromide	Ultravist	300 mg/ml; 100 ml	vial with injectable solution	1	r	83,000
iopromide	Ultravist	370 mg/ml; 50 ml	vial with injectable solution	1	r	69,400
iopromide	Ultravist	370 mg/ml; 100 ml	vial with injectable solution	1	r	98,000
isoconazole nitrate	Gyno Travogen ovule	600 mg	pessary	1	i	45,200
isoconazole nitrate	Travogen	10 mg (20 mg tube)	cream	1	i	25,200
isoconazole nitrate diflucortone val.	Travocort	10 mg + 1 mg	cream	1	i	21,600
levonorgestrel	Jadelle	75 mg	implant (2 silicone rods)	1	r + e	
levonorgestrel	Microlut	0.03 mg	tablet	1*3*35	r + e	free
levonorgestrel	Mirena	52 mg	intrauterine system	1	r	840,400
mesterolone	Proviron	25 mg	tablet	20	i	36,700
methylprednisolone	Advantan	15 g	cream/ointment	1	r	22,700
metronidazole miconazole	Neo-penotran forte	750 mg + 200 mg	pessary	7	i	51,100
moxifloxacin hydrochloride	Avelon	400 mg	coated tablet	5	r	106,600
moxifloxacin hydrochloride	Avelon	1.6 mg/ml; 250 ml	plastic bag	1	r	190,700
nifedipine	Adalat Retard	20 mg	coated tablet	60	r + e	151,400

Generic name	Brand name	Strength	Dosage form	Units per package	Classification	Recommended Retail Price (UGX)
nifedipine	Adalat LA	30 mg	coated tablet	30	r	99,400
nimodipine	Nimotop tablets	30 mg	coated tablet	100	i	417,000
nimodipine	Nimotop infusion	0.2 mg/ml, 50 ml	infusion	1	i	92,900
norethisterone	Primolut N	5 mg	coated tablet	30	i	40,700
norethisterone ena + estradiol val	Norigynon	1 ml	injection	1	i	6,600
Norethisterone enantate	Noristerat	1 ml	injection	1	r + e	
praziquantel	Biltricide	600 mg	tablet	4	r + e	87,400
Prednisolone + cichocaine	Scheriproct	1.3 mg + 1mg (10 mg)	ointment	1	i	193,000
Prednisolone + cichocaine	Scheriproct	1.3 mg + 1 mg	suppository	12	i	19,300
rivarobaxin	Xarelto	10 mg	coated tablet	10	r	212,600
varденаfil	Levitra	5 mg	tablet	4	r	100,600
varденаfil	Levitra	10 mg	tablet	4	r	125,600
varденаfil	Levitra	20 mg	tablet	4	r	155,300



Photo: Hjalmar Gislason / Wikimedia

Drugs Boehringer Ingelheim 2013

Generic name	Brand name	Strenght	Dosage form	Units per package	classification	Recommended price for consumer (UGX)
ambroxol hydrochloride	Mucosolvan syrup	15 mg/5 ml; 100 ml	syrup	1	i	14,300
hyoscine	Buscopan	10 mg	tablet	50	i	25,500
hyoscine, paracetamol	Buscopan plus	10 mg + 500 mg	tablet	50	i	41,100
ipratropium bromide	Atrovent	250 mcg/ml; 20 ml	inhalant solution	1	r	59,800
ipratropium bromide	Atrovent N	20 mcg/dose; 10 ml	inhalant aerosol	1	r + u	74,400
ipratropium bromide + fenoterol hydrobromide	Duovent	0.02 mg + 0.05 mg/ 10 ml	inhalant aerosol	1	i	46,000
meloxicam	Mobic	7.5 mg	tablet	30	r	90,400
meloxicam	Mobic	7.5 mg	tablet	30	r	63,200
nevirapine	Viramune	200 mg	tablet	60	r + u	83,600
nevirapine	Viramune	10 mg/ml; 240 ml	oral suspension	1	r + u	58,000
pramipexole dihydrochloride	Pexola	0.125 mg	uncoated tablet	100	r	93,600
pramipexole dihydrochloride	Pexola	0.25 mg	uncoated tablet	30	r	176,400
pramipexole dihydrochloride	Pexola	1 mg	uncoated tablet	30	r	376,100
salbutamol+ ipratropium	Combivent	3 mg + 0.5 mg/ 2.5 ml	inhalation solution	1	r	82,400
telmisartan	Micardis	40 mg	tablet	28	i	81,400
telmisartan	Micardis	80 mg	tablet	28	i	94,200
telmisartan + hydrochlorothiazide	Co-micardis HCT	(40 + 12.5) mg	tablet	28	i	81,400
telmisartan + hydrochlorothiazide	Co-micardis HCT	(80 + 12.5) mg	tablet	28	i	94,200
tiotropium bromide	Spiriva capsules & HandiHaler	18 mcg (30 doses)	solution for inhalation	1	r	218,700
tiotropium bromide	Spiriva	18 mcg (30 doses)	solution for inhalation	1	r	198,800

Drugs Baxter 2013

Generic name	Manufacturer	Strength	Dosage form	Units per package	Classification
albumin	Baxter	25%; 50 ml	plastic bag injectable solution	1	r + e
albumin	Baxter	25%; 100 ml	plastic bag injectable solution	1	r + e
cyclophosphamide	Baxter	50 mg	tablet	50	r + e
cyclophosphamide	Baxter	1,000 mg	vial with powder for injectable solution	10	r + e
glucose	Baxter	50 mg/ml; 100 ml	plastic bag with injectable solution	1	r + e
glucose	Baxter	500 mg/ml; 1,000 ml	PVC bag with injectable solution	1	r + e
ifosfamide	Baxter	1,000 mg	vial with powder for injection + diluent	10	r + e
isoflurane	Baxter	100%; 100 ml	bottle with inhalant liquid	6	r + e
mannitol	Baxter	200 mg/ml; 250 ml	plastic bag with injectable solution	1	r + e
metronidazole	Baxter	5 mg/ml; 100 mL	plastic bag with injectable solution	1	r + e
sodium chloride	Baxter	9 mg/ml; 100 ml	PVC bag with injectable solution	1	r + e
sodium chloride	Baxter	9 mg/ml; 500 ml	PVC bag with injectable solution	1	r + e
sodium chloride	Baxter	9 mg/ml; 1,000 ml	PVC bag with injectable solution	1	r + e

These Baxter-drugs are on the Ugandan list of essential medicines.



Photo: Neil Palmer / Wikimedia

BUKO Pharma-Kampagne and HEPS Uganda have scrutinised the business behaviour of the pharma companies Bayer, Boehringer Ingelheim and Baxter in Uganda. The conclusion: The brand manufacturers have no or only little interest in supplying a country without solvent patients with drugs or in getting involved in research there. While Baxter has already given up on the Ugandan market, Boehringer Ingelheim is planning to retreat. Only Bayer carries on selling drugs in Uganda – among them several hormone preparations and contraceptives, some of them of rather dubious benefit.

As long as drugs are available as generics (by other vendors) it may not be such a great loss, if brand manufacturers retreat from a poor country. For expensive brand products and especially irrational pseudo-innovations strain the health budgets

without necessity. But what happens, if thus innovative remedies against haemophilia, Parkinson or cancer aren't available any longer and if access to essential therapies, e.g. against asthma, becomes even more difficult?

This study presents valid facts and analyses concerning Uganda and raises important questions actors and deciders in development and health policy have to face: For instance, how can you fill gaps in supply while the free market fails? How can you consolidate local production? And last but not least – are development aid funds – for instance the Contraceptive-Security-Initiative or the Jadelle-Access-Programme in favour of Bayer – a reasonable stimulus to induce pharma companies to engage in neglected markets, e.g. in Uganda?

BUKO

Pharma-Kampagne

BUKO Pharma-Kampagne
August-Bebel-Straße 62
33602 Bielefeld, Germany
Fon: +49 (0)521 60550
Fax: +49 (0)521 63789
Mail: info@bukopharma.de
Web: www.bukopharma.de
www.twitter.com/BUKOPharma
ISSN 1618-4580



Donations: Gesundheit und Dritte Welt e. V.
Sparkasse Bielefeld
Donations account: 105 627
BLZ: 480 501 61
IBAN: DE97 4805 0161 0000 1056 27
BIC: SPBIDE3BXXX