Understanding Barriers to Accessing Healthcare Among the Most Deprived of the Deprived – the Case of the Batwa in Southwestern Uganda

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UNDERSTANDING BARRIERS TO ACCESSING HEALTH CARE AMONG THE MOST DEPRIVED OF THE DEPRIVED – THE CASE OF THE BATWA IN SOUTHWESTERN UGANDA

THIERRY NYATANYI

A Thesis Submitted to the Faculty of
The Harvard Medical School
in Partial Fulfillment of the Requirements
for the Degree of Master of Medical Sciences in Global Health Delivery
in the Department of Global Health and Social Medicine

Harvard University
Boston, Massachusetts.

May, 2019.
Thesis Advisor: Dr. Byron Good  
Author: Thierry Nyatanyi

Understanding barriers to accessing health care among the most deprived of the deprived – The case of the Batwa in Southwestern Uganda

Abstract

Background: Social deprivation of the Batwa indigenous community has led to high levels of illiteracy, alcohol abuse and poor health outcomes. There are still significant gaps for understanding barriers to accessing healthcare in this context, and how they can be addressed to improve health outcomes. Our study identifies these barriers and proposes relevant solutions for orienting healthcare interventions.

Methods: We used a mixed-methods convergent design. We conducted a cross-sectional survey with 107 Batwa individuals identified through a random household (80%) sampling method, in all Batwa settlements, in Kanungu District. Quantitative data was analyzed using STATA 15 for descriptive and multivariate analysis, and Arc-GIS was used for map generation. We also conducted semi-structured qualitative interviews (25) with Batwa individuals, traditional healers, health providers and policymakers. Interviews were analyzed using conventional thematic content analysis and results were jointly presented with quantitative findings.

Results: Quantitative findings indicate that distance from the health facility and monthly household income had a strong independent association with access to healthcare. These findings were supported by the qualitative findings that suggest that out-of-pocket payment for transportation, user-fees and food security for patients and their caregivers, play a central role in limiting access to healthcare. Individuals eventually opt for alternative traditional therapies as a
quick-fix, due to lack of financial means, eventually borrowing money from peers and community saving schemes, to access conventional health facilities. These expenditures exacerbate their state of deprivation, and places them in an antagonistic relationship with the hospital that initially provided free healthcare services, prior to instituting a use-fee policy.

**Conclusion:** Improving financial protection for user-fee services offered through not-for-profit health facilities must be extended beyond community health insurance subsidies, and where possible, policies for assisting this community that existed previously should be reinstated. In an environment where traditional and modern therapies coexist, integrating traditional and modern therapeutic approaches must be envisaged to accommodate community practices. In order to sustain health benefits from these interventions, there is a need to comprehensively address the distal determinants that currently prevent this community from accessing financial resources.
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A tough journey to the health facility

Lying face down, Prize covered herself with a *kikwembe*, a colorful wraparound cloth worn by many of the women in her village. Prize laid on the ground at a school playground as the sun beamed down and hit hard that afternoon in Byumba, a remote village in Southwestern Uganda. Exhausted, a grimace spread itself across her face, and Prize’s expression said it all: the twenty-one-year-old mother of three was seriously ill. Her husband, Mike, stood not far from her helplessly, amidst the commotion of a cheerful crowd that gathered on the primary school’s premises to elect the local village council.

Both Prize and Mike are from the *Batwa* ethnic group, an indigenous community that predominantly lives in Southwestern Uganda. The young couple left home early in the morning to walk to the primary school for the election. However, as they walked, Prize began to feel worse: she had developed a high-grade fever. As luck would have it, the Byumba Health Center II was not far—an easy walk from the school. However, the couple was out of care-seeking options as Mike lamented, “*She will not be attended too because our eQuality health insurance booklets are not stamped.*”

Without health insurance, Prize had to pay out of pocket for her consultation and all additional costs related to any medical intervention her attending provider deemed necessary to cure her illness. This was a problem, as the couple did not have enough money to pay the full amount for a consultation. A month before, Mike had managed to save twelve thousand shillings (USD 4.00) to pay for health insurance premiums, prioritizing his wife and three children as he exclaimed, “*I paid for the children first and my wife because they are more prone to sickness, but if I had the money I would pay for myself as well.*”
However, the insurance booklet was not “stamped” after failing to raise five hundred shillings (0.2 USD), a contribution required from each household for transporting the village chief to BDP to submit the collected premiums.

The eQuality community-based health insurance policy was initiated in 2010 as an innovative health program, to ensure that all people can access affordable and quality health in the catchment area served by Bwindi Community Hospital (BCH), a non-profit health facility that was also faith-based. Before then, no community health insurance scheme existed in any of the three sub-counties served by the hospital. To date, there is a lack of public health insurance schemes in Uganda, and the existing private health insurance programs cover only 0.13% of the entire population.

For the eQuality health insurance scheme, its modus operandi of premiums and copays is similar to any other ordinary health insurance program. At the beginning of each year, payments for each policyholder are collected from the households and submitted to the Batwa Development Program (BDP), a local NGO that tops-up the totality of the premiums to the tune of twelve thousand shillings (4 USD), covering 75% of the cost for every policyholder.

During the rainy season, they grew crops for subsistence and worked all year round for the local non-indigenous communities nearby, to earn enough money for buying additional food and other household necessities. On a good day of hard labor for Prize and Mike, their combined average income was only about four thousand shillings (1 USD), hardly enough to buy basic household necessities. Mike explained, that “the money we get is all spent on small household items like salt where we only work for (1 USD) a day.” The most recent casual employment the couple contracted involved carrying sand to a construction site in the neighborhood. Mike
continued, “Carrying sand to the top of the hill is a tough job, and we work beyond our abilities. Because we don't have food to eat, we have to work, and when we get sick it is severe.”

I met the couple by coincidence while visiting the primary school, where I was conducting interviews with the Batwa for my research project. Prize caught my attention that afternoon. I noticed that she had spent a good amount of time that afternoon outstretched on the thick grass that covered the playground, while everyone else was ducking below trees for shade. Curious, I approached the couple and engaged Mike in a discussion that ended with us deciding to visit the nearby health facility.

We quickly agreed to slowly walk his wife to seek care, despite having no insurance or money to foot the bill. At least they would provide first-aid as Mike looked into their options for getting the best of care for his ailing wife. As we reached the health center, the attending nurse immediately whisked Prize into the emergency room to give her paracetamol to calm her fever. Prize was well-known to the attending nurse; a couple of months before, she had failed to pay for a medical bill amounting to 20,000 UGX (7 USD), after treating one of her daughters for profuse diarrhea. Mike could not afford to clear the arrears, let alone paying the twelve thousand shillings (4 USD) for consultation.

The attending nurse immediately decided to refer the couple to Bwindi Community Hospital, where she would receive appropriate care and also validate the health insurance booklet with a "stamp." The hospital was a mere walking distance from the Batwa Development Program (BDP). He had no money for transportation. I volunteered to pay for the arrears worth twelve thousand shillings (4 USD), in addition to the transportation costs worth fifteen thousand shillings (5 USD) to provide for their transportation. The nurse called for a boda-boda, the name
used for motorcycle taxis in Uganda, and within five minutes the couple was preparing to leave for BCH.

Prize was diagnosed with an infection and treated with antibiotics upon reaching BCH. She soon recovered and relieved Mike of his worst fears. Luckily, her admission at the hospital wasn't long, and the young couple was spared from the financial stress most patients undergo while admitted into the care of hospitals.

The last time she was at the hospital, Mike walked for hours each day to carry food for his wife who was then admitted into the maternity ward after having recently delivered their last born child. Afterwards, each day Mike would walk back home on an empty stomach to look after their two young daughters that he would leave in the care of their neighbors. This time, at least, it wasn’t happening again; he could breathe a sigh of relief...for now.
Thesis Structure

The story of Mike and his family is not unique to the indigenous Batwa communities in Southwestern Uganda. They face socioeconomic barriers while accessing healthcare, despite efforts for bridging health inequities in public and not-for-profit institutions. The catastrophic expenditures on healthcare, exacerbate their state of deprivation, and continuously feed into the vicious cycle of poor health outcomes and poverty.

The main focus of this thesis is to bring to light the socioeconomic barriers that prevent historically marginalized communities from accessing quality healthcare. The thesis will include two components in its introductory chapter, and each component will include a literature review and a conclusion.

In the first component, I will provide a historical overview of resettlement from the forest, and how this well intended initiative overtime, has contributed to unintended consequences of deprivation and suffering. I will later explore the gaps for addressing the state of deprivation in relation to wildlife conservation policies.

In the second component, I will describe Uganda’s healthcare delivery system, in relation to the political economy. I will further describe in detail the setting of this study, by examining the management, operations, and challenges that Bwindi Community Hospital encounters while providing care for the most deprived—a hospital with a mission of providing quality healthcare for the Batwa.
Part I: Background Paper

1.1 A history of segregation and suffering

1.1.1 What’s in the name

“We used to live across in the forest and then we moved out and starting living within the Community. We would go to look for food among the Bakiga and it would be wrapped in leaves. They used to under look us and couldn’t eat with us on the same plate because we were Batwa. We kept working for them to get food and when time for eating would reach, they would serve our food onto leaves and sit away from us” (Mutwa Female, Bikuto).

The Batwa, are an indigenous group of former hunter-gatherers that currently lives in Rwanda, Burundi, the Democratic Republic of the Congo (DRC), and Uganda. They are believed to be the original inhabitants of the mountain forests of the Albertine Rift that cuts across these countries, and from time immemorial, they have depended on the forest for their survival. The 2014 census showed that the Batwa numbered 6,200 Batwa or 0.03 per cent of Uganda’s population.

The Batwa society is egalitarian, with no formal authority and community governance structures. They lived a semi-nomadic lifestyle that permitted them to roam the forests in search of game, wild fruits, honey, and medicinal plants. During the precolonial period, they were recognized by monarchs in Rwanda, where they served various roles (e.g., blacksmiths, potters, performers), and paid tribute in ivory and animal pelts to royal courts. Their knowledge of the forest and its resources brewed a mutually beneficial relationship with Bantu tribes.

However, the Batwa have always been portrayed as primitive and inferior by neighboring Bantu communities, creating a platform for segregation and social exclusion that exists to date.
Existing accounts of this form of marginalization by fellow Africans still exists through myths and tale-tale stories that I have encountered in Rwanda and Uganda. For example, they are believed to be gluttonous and primitive by ethnic groups that feel superior to them as Christopher Taylor summarized in this quote:

*The sheep a celestial animal, is never eaten except by the Twa, considered to be gluttons and always famished (de Heusch 1985:115), cited in Taylor (2011).*

The portrayal of the Batwa as inferior beings is not specific to Bantu tribes, for colonialists also have left detailed written accounts of how they perceived and portrayed the Batwa, as the west met the south. While the imperial powers struggled to unravel the economic potential of the African continent, so were evolutionary scientist who competed to demystify the origins of humankind.

*Savages are of great use to political philosophers; their condition serves as a sort of zero in the thermometer of civilization—a point from which there is a gradual rise towards perfection. They are thus very valuable in hypothetical reasoning. H. Merivale, Edinburgh Review (1837), cited in Buchan and Heath (2006).*

Explorers and travelers continued to provide detailed accounts of their encounter with the Batwa as they pushed through the African continent in the second half of the 19th century, setting the stage for colossal interests of defining them as distinct, in relation to neighboring African tribes. The writings of Kid citing R.G.T Bright who was part of the Uganda-Congo Boundary Commission team, clearly narrates this distinction in the eyes of the explorers.

*The Batwa or Bambutu inhabit the forest. They stand about 4 feet high, and are longarmed, short-legged, and ugly, being usually distinctly prognathous. They have no*
religion and no industries. No attempt is made to cultivate, but they depend entirely on
game and what they can steal from their neighbours. (1908: 490), cited in Kid (2009).

It is from these accounts that the identity of the Batwa was forged, validated and
disseminated. That of a lesser people. Christopher Kidd\(^7\) posits in his paper, that “the Forest
People have been represented by others through the discourses of race, evolution and
colonialism.” He goes on to argue that their lifestyle of hunting and gathering was seen as a
“vestige of our former selves.”

Indeed, this portrayal of the Batwa as primitive has carried-on and is evidenced today in
form discrimination, social exclusion from mainstream society and violence. For example, a
prevailing myth that sex with Batwa women cures backache and HIV has led to incidences of
rape and high rates of transmission of HIV in this community.\(^8\)

1.1.2 The genesis of suffering

“At the time I came to live in Karehe settlement, we were suffering, without shelter...we
were squatters on people’s lands until we were resettled here in Karehe. We got people
who bought land for us and we settled in Karehe. We were squatters at the time we had
been moved out of the forest” (Mutwa Female, Karehe).

Before the colonial-era in Southwestern Uganda, traditional rules and customs regulated
hunting and the use of forest resources, until legislation for the protection of wild fauna and flora
were imposed by the British Colonial Administration, beginning in the late 1800s, to the early
1900s.\(^9\) The first official eviction of the Batwa from Bwindi Forest reserve took effect in the
1960s; however, they still managed to retain their access to the forest and its resources and their
way of life was relatively unhindered.\(^10\)
In the early ‘80s, structural adjustment programs imposed by the World Bank led to government budget reductions and austerity measures that led to some communities depending even more on forest resources for survival. As a result, this triggered an outcry from international conservationists who protested against the poor management of protected forest areas. Also, postcolonial political turmoil in Uganda had reduced the enforcement of legislation that was ideally meant to prevent the use of these resources.

The government that came into power in 1986 ended a five-year civil war, and conservation interests took advantage of the stability that had long before stalled environmental preservation activities. By 1989, proposals from the Uganda National Parks Department (UNPD) were forwarded to the government, requesting that it proclaim the Bwindi Impenetrable Forest a national park and a sanctuary for gorilla conservation—one of the rarest of the great apes.

The creation of the Bwindi Impenetrable Forest National Park (BINP) occurred in 1991, and this led to the eviction of the Batwa from their ancestral lands. The World Bank funded the government of Uganda during the creation of the national park to the tune of $4.3 million, which was meant to support activities related to park management, research, and community projects.

This kind of approach resonated with the neoliberal market-oriented narrative of combining economic development and environmental management as a win-win method, believed at that time to be useful for alleviating poverty. Conservationists also thought that revenues generated through tourism would boost local economies and win community buy-in and support for the creation of the national park.

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<tr>
<th>Year</th>
<th>Authorities involved</th>
<th>Enacted Policy and Implication</th>
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<tr>
<td>The 1800s</td>
<td>Cultural and traditional customs</td>
<td>Traditional rules and customs regulated hunting and use of forest resources</td>
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<tr>
<td>1880s - 1902</td>
<td>British Colonial Administration</td>
<td>Conservation efforts initiated to protect and sustain ecosystems and wildlife</td>
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<tr>
<td>Year</td>
<td>Entity/Event</td>
<td>Description</td>
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<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>1902-1923</td>
<td>British Colonial Administration</td>
<td>Introduction of sports hunting and ban of traditional hunting by local communities</td>
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<tr>
<td>1930</td>
<td>British Colonial Administration</td>
<td>Mgahinga Gazetted as a Gorilla Sanctuary</td>
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<tr>
<td>1932</td>
<td>British Colonial Administration</td>
<td>Bwindi forest gazetted under Kasatoro and Kayonza crown forest</td>
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<tr>
<td>1964</td>
<td>Government of Uganda</td>
<td>Uganda Forest and Game Acts - Residing, hunting, and farming were made illegal. Between 50 and 100 Batwa evicted</td>
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<tr>
<td>1991</td>
<td>Government of Uganda</td>
<td>Bwindi Impenetrable National Park gazetted, and all Batwa expelled from the forest</td>
</tr>
<tr>
<td>1996</td>
<td>Government of Uganda</td>
<td>Uganda Wildlife authority is formed – flaws in revenue sharing identified due to lack of a legal framework</td>
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The Batwa were completely ignored and excluded from all the decisions that led to their eviction, and left without compensation. Therefore, their individual land rights—as determined by international laws and the constitution of Uganda—were violated. Instead, compensation claims from the Batwa’s neighbors were considered legitimate and prioritized. Compensation focused on loss of income generated through activities such as farms and mining sites compensation since their lifestyle of hunting and gathering could not be accounted.

The approach that the government used for compensation aligns with Locke’s Labor Theory of Property according to Huggins et, who goes on to explain that the Batwa individual rights were infringed upon since they did not own land in the eyes of authorities, and by the time of their eviction, land was in an untamed state, prompting government to confer land rights to those who had labored and transformed the land for various reasons.

Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. Lokes (1690) cited by Higgins (2015).

In addition, their indigeneity status is barely supported by the constitution of Uganda; that stipulates in Article 10, that any group existing and residing on Ugandan soil before 1926 is indigenous to the country. This perspective is still maintained by most African countries given
the fact that these countries fought for independence from western powers, and therefore, all Africans must be considered indigenous to their respective countries.

From this line of thought, Higgins et al argues that the claim for indigenous status and rights might sound highly contentious to governments that could be seen as colonizers, sidelining efforts made to build cohesiveness based on human rights, amongst its citizens.\textsuperscript{15}

The abrupt change of their lifestyle left them in despair and forced them to live as squatters—trading labor for food. A total breakdown and collapse of their social being, is evidenced through their current state of absolute poverty and dependence on handouts from faith-based organizations and non-governmental organizations for basic necessities. Social and health indicators show that the Batwa fall below average compared to other nationals, notably on; immunization coverage, antenatal coverage, access to clean water and illiteracy level.\textsuperscript{18}

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<th>Table 2: Key development indicators for Uganda</th>
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<td>Population (thousands)</td>
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<tr>
<td><strong>Health</strong></td>
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<tr>
<td>Life expectancy at birth (years)</td>
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<tr>
<td>Child mortality (%) under 5</td>
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<tr>
<td><strong>Sanitation</strong></td>
</tr>
<tr>
<td>Drinking water coverage (%)</td>
</tr>
<tr>
<td>Latrine/Toilet use (%)</td>
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<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>Adult literacy rate (%literate 15-49)</td>
</tr>
<tr>
<td><strong>Income</strong></td>
</tr>
<tr>
<td>Per capita GDP (constant 2000S)</td>
</tr>
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\textsuperscript{a} Population in millions
\textsuperscript{b} Infant mortality (per 1,000 live births)
\textsuperscript{c} Berrang-ford L et al
The end results of forced resettlement reflect Robert Merton’s theory of unintended consequences of purposive social action, for the main intention was to benefit the victims through neoliberal community conservation actions. 19

In the early 1960s under similar intentions of conserving mountain gorillas, the Batwa experienced a similar plight of suffering, post-resettlement, in the neighboring Democratic Republic of Congo. By then, they numbered 6,000, and their population halved in less than fifty years, due to their failure to adapt to the new lifestyle outside the forest. This happened during the creation of the Kahuzi-Bieaga National Park that extends into the DRC from the BINP in Uganda. 20

1.1.3 Unfulfilled promises

The advent of neoliberal policies reshaped the conservation paradigm that still exists to date, under the initiative's famous mantra of "community conservation." The initiative is intended to boost local economies by engaging the community in conservation activities in view of alleviating poverty. Currently, the Bwindi Impenetrable National Park stretches over an area of about 320 km², situated between the DRC and Uganda, and it is best known for its mountain gorillas that make up half of the world's gorilla population, and attract tourists all year round from abroad. 21, 22

Ideally, the Batwa and local communities that live at the fringes of the forest are presumed to benefit economically and socially from this initiative. The parliament act of 1996 was responsible for setting up the Uganda Wildlife Authority recommends for 20% of gate receipts to be shared with local communities through local government treasuries, to fund local community projects. 23
However, receipts from the revenues collected at the gate entrance (40 USD) are much lower compared to gorilla trekking permits (600 USD), failing to raise enough resources for supporting local community projects and livelihoods. Projects are developed based on the local community’s needs, yet they often exclude the Batwas' individual needs. Decisions are made by a consensus of the majority, putting the Batwa at a disadvantage compared to others.

Also, multiple levels of bureaucracy impede on timely planning and implementation of projects often creating budgetary deficiencies that stall progress – undermining the overall intention of promoting economic sustainability.24

Conclusion

The case of the Batwa in Uganda is typical of well-conceived projects that end up harming the intended beneficiaries, adding suffering and misery to a community that is socially excluded and marginalized. The irony to this case is the continuous reframing of potential solutions to address this discourse, which do not create the impact needed for improving the livelihoods and wellbeing of this community. Such a missed opportunity prevents the Batwa from gaining there potential to reclaim their rights and reshape their destiny, in a cash-based economy that they are barely acquainted to. In the end, suffering in the form of poverty and violence continue to plague this community while feeding into the vicious cycle of social deprivation and poor health – continuously widening the inequity gap.

1.2. Overview of Uganda’s political economy and healthcare system

Political economy and history
Uganda is commonly known as “the pearl of Africa” – popularized by Winston Churchill in his famous book entitled “My African Journey” after exploring the country on a safari in 1907. The country is landlocked and borders Tanzania and Rwanda to the south, Democratic Republic of Congo to the west South Sudan to the north and Kenya to the east.

Uganda gained independence from Britain in 1962, after 68 years of colonial rule. At independence, Uganda had a prosperous and promising economy in East Africa.

The population growth is estimated at 3% and projected to reach 40 million by 2020. A significant number of the population is young, with 52% of the population below 15 years, and 23% are youths between the ages of 18-30 years, mostly unemployed. Agriculture is one of the country's leading contributors to foreign trade, due to its favorable climate and fertile soils.

From 1964-1986, the country experienced eight changes of government, through violent political turmoil and a civil war that weakened the state – nearing total collapse. These events curtailed its economic potential and grounded its prospects for rapid development. By the end of the civil war in 1986, Uganda was one of the poorest countries in the world. The country regained stability after President Yoweri Museveni, and the National Resistance Movement assumed control of the government and began initiating measures to attract foreign investments to stimulate economic growth and reduce poverty.

With an average GDP growth of 7.3% from 2000 to 2010, Uganda recently surpassed the Millennium Development Goal target of halving extreme poverty from 56.4% in 1992 to 21.4% in 2017.

Today, in Uganda’s economy, agriculture employs 70% of Ugandans and contributes to 26% of the country’s overall GDP. However, despite these strides, the country remains one of the poorest in the world, ranked 163 out of 187 on the Human Development Index.
Table 3: Basic Socioeconomic and Demographic Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measurement</th>
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</thead>
<tbody>
<tr>
<td>UN Human Development Index ranking</td>
<td>163</td>
<td>2017</td>
</tr>
<tr>
<td>Population</td>
<td>34.6</td>
<td>2014</td>
</tr>
<tr>
<td>Urban population (%)</td>
<td>24</td>
<td>2017</td>
</tr>
<tr>
<td>Drinking water coverage (%)</td>
<td>78</td>
<td>2016</td>
</tr>
<tr>
<td>Poverty rate (% living under USD 1.9 per day)</td>
<td>21.4</td>
<td>2017</td>
</tr>
<tr>
<td>GDP per capita in PPP (USD)</td>
<td>1697</td>
<td>2017</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>718</td>
<td>2017</td>
</tr>
<tr>
<td>Literacy rate (men/women ;%)</td>
<td>75/62</td>
<td>2016</td>
</tr>
<tr>
<td>Gini coefficient index</td>
<td>0.42</td>
<td>2017</td>
</tr>
</tbody>
</table>

This data was compiled from the following sources: Uganda National Housing Census (UNHC) 2014, Uganda Bureau of Statistics (UBS) 2018, and Uganda Demographic Health Survey (UDHS) 2016, Human Development Indices and Indicators (UNDP) 2018 Statistical Update

1.2.2 Uganda's healthcare system at a glance

Historical perspective

Before Uganda’s independence in 1962, all citizens enjoyed free access to healthcare, with support from the government. The healthcare system was designed to provide preventive and curative services through a network of health units and hospitals, complimented by home-hygiene health programs. Following the political turmoil that plagued post-independence Uganda, public health programs became unsustainable and less efficient.

In the early ‘80s after the Alma Atta declaration on primary health care, the government of Uganda shifted its care delivery approach and adopted a community-based approach that was implemented through fragmented vertical programs and projects that ran parallel to the Ministry of Health’s governance structures.

With support from donors, programs such as growth monitoring, oral rehydration therapy, breastfeeding, immunization, and family planning were introduced and continuously sustained as vertical programs, specifically selected to improve maternal and child health outcomes. Furthermore, it is within this period, that structural adjustment policies together with the global economic decline of the early ‘90s, resulted in the introduction of user-fees for therapeutic
services. Uganda complied to these new financial policies, as a pre-condition for obtaining a loan from the World Bank.

**Organization of health care**

In 1987, the government conducted decentralization reforms that included the health sector. Health governance is spearheaded by the Ministry of Health and shared with development partners, districts and civil society organizations (CSO). The health system is comprised of public health facilities, private not-for-profit health facilities (PNFP), private for-profit health facilities as well as traditional complementary practitioners. PNFP's are predominantly faith-based (78%), and governed by respective church institutions.

The organization of health care delivery currently includes primary, secondary, tertiary and quaternary levels of care. The care delivery system mirrors the hierarchy of local government administrative units in Uganda. Health centers at the base of that hierarchy provide primary health care; district hospitals in the middle provide secondary and tertiary healthcare; and regional and referral hospitals at the top provide advanced specialized care.

<table>
<thead>
<tr>
<th>Table 4: Health System and Epidemiological Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indicator</strong></td>
</tr>
<tr>
<td>Average life expectancy (total/female/male)</td>
</tr>
<tr>
<td>Maternal mortality (per 1000,000 live births)</td>
</tr>
<tr>
<td>Infant mortality (per 1,000 live births)</td>
</tr>
<tr>
<td>Under-five mortality (per 1,000 live births)</td>
</tr>
<tr>
<td>Vaccination (% of all basic)</td>
</tr>
<tr>
<td>Undernourished (%)</td>
</tr>
<tr>
<td>Adult (15-49 years) HIV prevalence (%)</td>
</tr>
<tr>
<td>HIV antiretroviral coverage (%)</td>
</tr>
<tr>
<td>Incidence of Tuberculosis (per 100,000/year)</td>
</tr>
<tr>
<td>DOTS coverage (%)</td>
</tr>
<tr>
<td>Malaria cases (per 1,000)</td>
</tr>
<tr>
<td>Government expenditure on health as % of GDP</td>
</tr>
<tr>
<td>Government expenditure on health per capita (USD)</td>
</tr>
<tr>
<td>Physician density (per 1,000)</td>
</tr>
<tr>
<td>Nursing and midwifery (per 10,000)</td>
</tr>
<tr>
<td>Number of hospital beds (per 100,00)</td>
</tr>
</tbody>
</table>
This data was compiled from the following sources: Uganda National Housing Census (UNHC) 2014, Uganda Bureau of Statistics (UBS) 2018, and Uganda Demographic Health Survey (UDHS) 2016, Fact sheet of Health Statistics 2018

Health financing

Uganda abolished user-fees in 2001 in public health centers and hospitals.\textsuperscript{38} It was a move made to reduce catastrophic out-of-pocket health expenditures, that affected the poor and impeded on the country’s expectations to meet its poverty eradication goals.\textsuperscript{39} Over time, the government has increased investments in the health sector to improve access and quality of services. Per capita expenditure on health increased from 3.07\% in 2000/2001 to 7.8\% in 2014/2015, falling short of 7.2\% to meet the Abuja declaration commitment of allocating 15\% of GDP.\textsuperscript{40}

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government per capita expenditure on health (USD)</td>
<td>9.6</td>
<td>8.9</td>
<td>8.3</td>
<td>7.8</td>
<td>8.7</td>
</tr>
<tr>
<td>Allocation to health as a % of total GDP</td>
<td>11.1</td>
<td>9.4</td>
<td>10.29</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Donor funding as a % of total expenditures on health</td>
<td>40.9</td>
<td>13</td>
<td>25</td>
<td>25.9</td>
<td>36.9</td>
</tr>
</tbody>
</table>

Source: Health sector development plan 2015

Shortage of funding remains the most significant challenge to providing the Uganda National Minimum Health Package, expected to cost 28 USD per capita, compared to 12 USD spent for fiscal year 2014/15.\textsuperscript{41}

1.3 Bwindi Community Hospital – Delivering healthcare through equity

Bwindi Community Hospital is a private nonprofit, faith-based Hospital that was inaugurated in 2003, under the Kinkinzi Diocese of the Church of Uganda in Kanungu District, South Western Uganda.\textsuperscript{42} Founded by Dr. Kellerman and his wife, Carol, its primary mission is to improve health for the disadvantaged and provide equitable health for all, in a region classified as “hard to reach-hard to stay” by the Ministry of Health due to poor road networks, and high levels of health personnel turnover.\textsuperscript{43}
In 2008, the hospital was accredited by the Uganda Medical and Dental Practitioners Council, and it was acknowledged as the best-performing hospital in Uganda—five consecutive times from 2011 to 2015. It employs more than 120 medical and non-medical personnel, with an admission capacity of 120 beds, it has become one of the fastest growing health institutions in Uganda.  

The hospital serves a population of 70,000 – 100,000 people that are within its catchment area of: Kanyantorogo, Kayonza, and Mpungu sub-counties, in the Kanungu District. The hospital also operates two satellite health centers, Mpungu and Kanyantorogo, which serve distant populations and extend outreach services. The overall vision of the hospital is to by 2020 become a regional center of excellence by offering tertiary health care, training top-notch nurses, and leading innovation through research.
Figure 1: Map of Health Facilities and location Batwa settlements within the catchment area of Bwindi Community Hospital.
**Hospital organization and management**

The hospital is governed by a board of directors comprised of 13 members, and chaired by the Bishop of Kinkizi Dioceses. The board members are from a diverse and multidisciplinary background. Their role is to provide oversight and guidance vis-a-vis the overall mission of the hospital, which is "Serving Jesus Christ through, giving holistic health care and life in all its fullness to; the staff, patients, clients and visitors in the hospital and community."

The executive director, a clinician, assumes the secretariat, implements board decisions, and reports back to the board on management and technical issues with regards to the implementation of these decisions. All support services report through the hierarchy of the executive director.

**Clinical services**

The hospital has made significant strides to improve care delivery through curative and preventive services, spearheaded by the community health program. In reference to BCH (2013-2018) annual reports, patient volume overtime has increased from 1.7% in 2013 to 20% in 2018. In addition, hospital deliveries increased by 43% in 2018, reducing home deliveries without a skilled attendant, compared to 8% in 2013. The hospital also recorded 51/1,000 live births in 2017, setting the institution on track for meeting the 2020 target for reducing child mortality to 30/1,000 live births. Outpatient consultations for malaria have significantly dropped to 4% compared to 56% in 2013.\(^{45,44}\)
**eQuality community health insurance**

In 2010, the Bwindi Community Hospital initiated the community health insurance program (eQuality), to reduce the catastrophic out-of-pocket expenditures that limited access to quality health care services. The purpose of this program is to enable residents within the catchment area of BCH to collectively pay for healthcare before they fall sick. This innovation hinges on a community organization network that is famous in southwestern Uganda, known as Bataka groups (burial societies).

The slogan became famous during the advent of the HIV epidemic that struck Uganda in the early ‘90s. Communities had to mobilize to bury their loved ones in dignity. The essence of the slogan has changed over time to reflect the importance of the eQuality health insurance scheme, hence the adaptation of a new slogan: “Bataka twetambire” loosely translated as let's heal ourselves.

The annual premium for eligibility is 5 USD (per year) for each person. A co-pay of 0.50 USD is required at consultation (5+ years) and 0.25 USD for children under one year of age during consultation. The Batwa community receives subsidies from the Batwa Development Program and is only required to pay 1 USD for annual premiums and 0.10 USD as co-pay. Payment of annual premiums is made in three installments through the Bataka groups.

Members are only eligible if 60% of the group have collectively paid for themselves and their families. Hospital administration sets guidelines for special groups that fall outside of the informal sector such as park rangers, tourist guides, and truckers, to mention a few.

This insurance covers outpatient consultations, laboratory investigation and prescribed medicine. However, specialized services and drugs that are not available at the hospital are not
covered by the program, mainly, medication for non-communicable diseases (NCDs) and treatment for cancer.

The goal of the program is to enroll at least 60% of the entire community within BCH’s catchment area. By 2018 enrollment had significantly increased to 30% representing roughly 30,000 people from 21% recorded during the previous year of 2017. Health insurance contributions represent 20% of the entire hospital budget, far short of the required budget for sustaining healthcare services, according to Brian Aryatunga, the E-quality program manager.
**Figure 2:** Map of Sub-county poverty density for areas covered by Bwindi Community Hospital
Hospital Finances

The hospital operates on an annual budget of 1.2 million USD, of which 58% is spent on operational costs, 24% on medical care, 20% on medical supplies, and 8% on maintenance. The hospital heavily depends on external donor funding to the tune of 58% of its annual budget, 8% from the government, and the remaining amount is internally generated. Significant strides have been made so far—in the last five years, the hospital depended on external funding for 95% of its budget. 44

Figure 3: Bwindi Community Hospital Income 2016/2017

Figure 4: Bwindi community hospital expenditures 2016/2017
**Human Resources**

The Bwindi Community Hospital employs personnel of 118 people. This includes a technical team of doctors, nurses, paramedics, public health professionals, and administrative support staff. Due to the remoteness of the hospital, several incentives are provided to retain human resources such as accommodations, subsidized meals, and work-study arrangements.

Though the hospital does not have enough staff quarters, arrangements are made with landlords that own property around the hospital to accommodate. A few available specialist doctors are posted and paid by the government, and the hospital supports them with housing. Under a special arrangement with the Ministry of Health, the specialist doctors work for two weeks in a month.

**Training and education**

Due to the chronic shortage of health professionals, the hospital initiated a diploma and certificate training program for nurses and midwives at lower tuition costs compared to other nursing schools in Uganda. The Uganda Nursing School Bwindi (UNSB) opened doors in 2013. The program began with 13 students at diploma level, and few girls were making it through from rural areas. The school decided to initiate the certificate training program a year after, to address the gender imbalance as Jane Francis Anynago, the current principal of the school explained.

“The hospital serves a rural community, therefore training and recruiting students who understood the community was paramount for bridging the chronic shortage of human resources in a rural setting.”

The school so far has graduated 154 nurses and enrolled 286 students – mostly from rural areas surrounding the hospital. This approach has so far bridged the human resource gap,
offering the hospital a large pool of health cadres that are committed to serving and staying close to rural communities. The long-term vision of the school is to upgrade and train graduates at the university level by 2025.

The overall vision of the hospital is to become a regional center of excellence offering tertiary health care, training top-notch nurses and leading innovation through research by 2020.44 As Dr. Birungi the executive director of the hospital narrated:

"The hospital is geographically disadvantaged, the bigger catchment area is the forest, and the hospital can only grow financially by introducing specialized services to attract patients beyond this area."

To achieve this vision, the hospital has to invest significantly in human resource capacities, medical equipment, and infrastructure. With the increasing number of patient volume and low community health insurance (eQuality) subscription rates, generating internal revenues to sustain and expand operations to meet the BCH vision is still a dilemma. He further goes on to explain that one of the solutions in sight, is to boost internal hospital revenues by expanding health insurance subscription rates, in collaboration with the Government of Uganda:

“Currently there is no policy for eQuality, and this impedes on internally generated revenues due to low community subscription rates. If at all government sets up a policy for community health insurance, things can change for the better. Therefore, we have to develop some mechanisms to advocate for this to happen.”

Also, the dependency on external donor funding is still high and plans to align priorities with donor funding requirements moving forward might obstruct the ambitious plans for expansion. However Dr. Birinungi is optimistic and believes that a mutual consensus between the administration and donor entities can be reached as narrated:
“I have been part of that movement of those who believe that any progress to be made in the community, the locals must be involved since they know best how their issues can be solved. I think it's ensuring that at least our major partners are very much aware of the kind of model required to improve the delivery of services. Funding should not be restricted but instead tailored to our needs. If we do not agree with their interests, then we do not take on their funding.”

Conclusion

The Bwindi Community Hospital has made significant strides for improving healthcare for vulnerable communities in one of the remotest regions in Uganda. For a hospital that started as a mobile clinic operating under a tree, the journey towards its success is a benchmark for care delivery programs working under similar conditions elsewhere. However, sustaining and expanding its operations without compromising the quality of services and education it currently provides to the most vulnerable communities is the million dollar question that still hangs in the balance as reiterated by one of the senior clinicians: “Sustaining delivery of healthcare in a setting where people have so little, is a real puzzle.”
Part II

Introduction

Approximately 300 million people around the world belong to indigenous communities. Many of these communities still practice cultural traditions and depend on their ancestral lands for food, shelter, and medicine. Indigenous communities have been evicted from their ancestral lands due to a number of reasons including outside groups forcefully taking their land, concern for exploitation of natural resources, and genocide.

Besides, the non-recognition of their traditions, and limited access to essential social services has led to an undermining of fundamental principles of the United Nations declaration on the rights of indigenous people. As a consequence, they are vulnerable to poverty, and poor quality of health, compared to non-indigenous groups living within the same geographic boundaries.

The Batwa people are not exempted from the social suffering experienced by other indigenous populations. They are known to have subsisted on hunting and gathering since time immemorial in Southwestern Uganda. The creation of Bwindi Impenetrable and Mgahinga National parks in 1991, led to their eviction from the forests, without their consent or land compensation. There social deprivation has caused high levels of illiteracy, alcohol abuse and poor health outcomes.

1. ARTICLE 24: United Nations declarations on the rights of indigenous people
i. "Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals, and minerals. Indigenous individuals also have the right to access, without any discrimination, to all social and health services". 48
ii. “Indigenous individuals have an equal right to the enjoyment of the highest attainable standard of physical and mental health. States shall take the necessary steps with a view to achieving progressively the full realization of this right”. 48
The Batwa currently live in abject poverty, forcing them to adopt marginal subsistence strategies, and depend on generous donations from faith-based and civil society organizations for basic needs, such as food and shelter.51

The Batwa health indicators on maternal and child health were alarming at the turn of the century, with a crude under-five mortality rate that was twice as high as the under-five mortality rate of average Ugandans, by then, estimated at 152 deaths per 1000 live births.52

A survey conducted by the Episcopal Mission Foundation (EMF) in Southwestern Uganda in 2002, found elevated rates for under five mortality of hospitalized children and maternal mortality, compared to non-indigenous communities living within the same geographic boundaries.53

These alarming statistics preempted action from Dr. Scott Kellerman and the Kinkinzi Diocese of the Church of Uganda, to improve health for the Batwa disadvantaged communities.49 Following these actions, what started as an outpost clinic in 2002 has expanded into a fully-fledged hospital, currently serving more than 70,000 – 100,000 inhabitants of Mpungu, Kayonza and Kanyantorogo Sub-counties of Kanungu District, Southwestern Uganda. This area is classified as “hard to reach--hard to stay” by the Ministry of Health due to poor road networks and high levels of health personnel turnover.50

There are still scientific gaps for understanding barriers to accessing healthcare based on indigenous perceptions, and the extent to which social and economic factors that impact care delivery in similar contexts can be addressed.54,55 Our study intends to assess how Batwa individuals interact with the health-care system while they attempt to manage ill health, in order to examine the barriers they encounter while accessing healthcare, so as to describe how they
make choices for meeting their health needs. We intend to use the results for improvement of healthcare delivery, to the benefit of the Batwa community.

Methods

Study design

This is a convergent mixed-methods study that combines both qualitative and quantitative methods. A cross-sectional survey was used concurrently with semi-structured interviews to provide a broader perspective and to facilitate the interpretation of quantitative data. Quantitative and qualitative data were separately analyzed and after that integrated during the interpretation of the results.

Study site

The study was conducted from June to August 2018, in three sub-counties (Mpungu, Kayonza, and Kanyantorogo) of Kanungu District, in Southwestern Uganda. Kanungu has a population of 210,000 inhabitants, and among them, approximately 1,000 belong to the Batwa indigenous people that currently live in settlements spread across this area.

Sampling methods

We sampled 80% of households at random from for all eight Batwa settlements in Mpungu, Kayonza and Kanyantorogo Sub-counties. One adult individual (Preferably the head of the household) was identified from each household. We purposively identified two individuals per settlement during the cross-sectional survey interviews and provided detailed explanations about the importance of the follow-up semi-structured interviews (Qualitative).
Recruitment

Quantitative

The researcher worked with a research assistant who was familiar with the study setting, and community leaders from settlements to recruit participants for the survey. The community leaders guided the research team to households in the field and introduced study participants to the research team. Participants were explained the purpose and importance of the study in detail. All interviews proceeded after informed consent was obtained. In total, all individual Batwa (107) consented to being interviewed.

Qualitative

We followed specific criteria for purposes of sample variability that included gender, age group, geographic location, and marital status. All identified participants consented to take part. They were also notified of the interview due dates and time. Discussions and approval of consent were concluded before the beginning of the interview, and consent forms were thereafter signed and documented by the research team. Health care providers, traditional healers, and policymakers were recruited from their workplace. In collaboration with Bwindi Community Hospital village health volunteers were identified and interviewed at the hospital. All participants consented to be interviewed. A total of 14 individual participants from eight Batwa settlements, three healthcare providers from BCH and its satellite clinics, two policy makers, three village health volunteers and two traditional healers took part in the study.

Data collection

Quantitative
Survey

We used a survey questionnaire for data collection. The questionnaire was translated from English to Rukiga and pre-tested for improvement before field application. The data collection questionnaire was structured to cover areas such as demographics, socioeconomic status, status of subscription to health insurance, walking distance to the nearest facility, consulting traditional healers among others. A research assistant – fluent in Rukiga was involved in collecting data during the individual interviews. Before being involved in the study, he was formalized with the research protocol and trained on the basic principles of medical research ethics, in compliance with the global health research training center.

Qualitative

Interviews were conducted in Rukiga and lasted for 30-60 minutes per interviewee. Study participants were requested to choose a quiet setting that is convenient for conducting the interviews, out of the earshot of others in the household. A voice recorder was used upon consent by study participants, and the researcher together with the research assistants took handwritten notes to capture critical moments and important quotations during the interview process. Interviews with the Batwa respondents were conducted using a semi-structured interview guide translated in Rukiga that covered the following discussions topics: (1) History of resettlement; (2) Options available for management ill health; (3) Interaction with the healthcare system; (3) Challenges encountered while managing ill health; (4) How access to healthcare can be improved.

Interviews with the health providers and policymakers were conducted using a semi-structured interview guide in English covering the following topics: (1) Challenges for delivering
healthcare services accessing to the Batwa community; (2) How to improve delivery of healthcare for the Batwa community. A similar questionnaire in Rukiga that covered the same topics was used for interviewing traditional healers.

GIS Data

We collected primary data using GPS Garmin (eTREX) for all health facilities, traditional healers and Batwa settlements in the catchment area of Bwindi Community Hospital using Global Positioning System (GPS) coordinates. Data for the Batwa population size for each settlement was obtained from the Batwa population census report (2016) conducted by Bwindi Mgahinga conservation trust. Collected data were inputted manually in an Excel spreadsheet and imported to ArcGIS for map generation (Georeferencing). Data on poverty measures were obtained from the Kanungu District local government statistical abstract (2013) and directly applied after generating maps.

Analysis

Quantitative

Survey data

Quantitative results were analyzed using STATA 15 software. We first examined sociodemographic factors of study participants, and categorical variables were then summarized in a table as frequencies and percentages. Our outcome variables were visiting the hospital or the health center in the past 12 months. To assess the association of outcome variable and predictors, logistic regression test was used and results presented as odds ratios, p-values, and 95% confidence intervals (CIs). Predictor variables that were included in the univariate analysis
included: age, gender, level of education, owning animals, days without eating in the past two weeks, having soap, monthly household income, health insurance, visiting a traditional healer in the past 12 months and walking time to the hospital. To produce a parsimonious multivariate model, any variable with a p-value <0.2 in the univariate model was included in the final multivariate model.

GIS Data

Spatial data were analyzed using ArcGIS software to generate maps illustrating the geographical distribution of Batwa settlements, the location of all health facilities and the population density for the catchment area of Bwindi Community Hospital.

Qualitative

Interview transcripts were analyzed using the conventional thematic content analysis approach. Audio recordings were transcribed to English from Rukiga by a research assistant who was fluent in both languages. A subset of interview transcripts was open coded to identify a set of initial set of codes that represented key concepts in the data. These resulting codes were revised and utilized to develop the codebook. The codebook was used to code the entire dataset. Codes and relevant quotes were input into a word document. We followed an inductive approach. Coded data were examined to develop themes relevant to barriers to accessing healthcare. This resulted in an initial set of thematic categories. These were further revised through multiple examinations of the coded dataset. Finalized categories from this entire process are presented in qualitative results.
Ethics

This study was approved by the Institutional Review Board (IRB) of the Harvard Faculty of Medicine, Mbarara Institute of Science and Technology Research Ethics Committee, Uganda National Council for Science and Technology and the Bwindi Community Hospital Research Committee.

Results

Quantitative

Most participants were female (63.5%), and all respondents were above 18 years with a slight majority (54.2%) aged 15-35 years. School attendance was very low; almost half of the respondents (45%) never attended school, and 50.4% attended but never completed primary school. 65% of participants worked as farmers compared to 11.5% who worked as casual laborers. 71% reported being closer to traditional healers than any other conventional health facility compared to only 3.7% reported to be in proximity to the hospital (Table 1).
<table>
<thead>
<tr>
<th>Characteristics (n=107)</th>
<th>Attributes</th>
<th>Male/Female (%)</th>
<th>Total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>15-35</td>
<td>43.1/56.9</td>
<td>58 (54.2%)</td>
</tr>
<tr>
<td></td>
<td>&gt; 35</td>
<td>28.7/71.4</td>
<td>49 (45.7%)</td>
</tr>
<tr>
<td>Level of education</td>
<td>Never been to school</td>
<td>28.5/71.1</td>
<td>49 (45.7%)</td>
</tr>
<tr>
<td></td>
<td>Attended but did not complete primary school</td>
<td>42.5/57.4</td>
<td>54 (50.4%)</td>
</tr>
<tr>
<td></td>
<td>Did not complete secondary school</td>
<td>33.4/66.6</td>
<td>3 (2.8 %)</td>
</tr>
<tr>
<td></td>
<td>Completed secondary school</td>
<td>100/0.00</td>
<td>1 (0.9%)</td>
</tr>
<tr>
<td>Occupation</td>
<td>Casual labor</td>
<td>25/75</td>
<td>12 (11.5%)</td>
</tr>
<tr>
<td></td>
<td>Crafts</td>
<td>40/60</td>
<td>5 (4.8%)</td>
</tr>
<tr>
<td></td>
<td>Tourist guide</td>
<td>33.3/66.6</td>
<td>3 (2.8%)</td>
</tr>
<tr>
<td></td>
<td>Farmer</td>
<td>37.3/63.6</td>
<td>78 (75.0%)</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>37.2/68.2</td>
<td>6 (5.6%)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>13.6/87.4</td>
<td>3 (2.8%)</td>
</tr>
<tr>
<td>Own a house</td>
<td>No</td>
<td></td>
<td>10 (9.35%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td>97 (90.6%)</td>
</tr>
<tr>
<td>Household income</td>
<td>&lt; $ 5/Months</td>
<td>15 (14.0%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; $ 5 - $20/Month</td>
<td>85 (79.4%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; $ 20 - $40/Month</td>
<td>3 (2.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; $ 40 - $60/Month</td>
<td>1 (0.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; $ 60- $80/Month</td>
<td>3 (2.8%)</td>
<td></td>
</tr>
<tr>
<td>Number of people sharing household income</td>
<td>1-4</td>
<td></td>
<td>42 (39.2%)</td>
</tr>
<tr>
<td></td>
<td>4-8</td>
<td></td>
<td>56 (52.3%)</td>
</tr>
<tr>
<td></td>
<td>&gt;8</td>
<td>9 (8.4%)</td>
<td></td>
</tr>
<tr>
<td>Number of days without eating in the past two weeks</td>
<td>None</td>
<td>38.8/61.1</td>
<td>85 (79.4%)</td>
</tr>
<tr>
<td></td>
<td>1- Day</td>
<td>14.2/85.7</td>
<td>7 (6.5%)</td>
</tr>
<tr>
<td></td>
<td>2 - Days</td>
<td>16.6/83.3</td>
<td>6 (5.6%)</td>
</tr>
<tr>
<td></td>
<td>3 - Days</td>
<td>37.5/62.5</td>
<td>8 (7.4%)</td>
</tr>
<tr>
<td></td>
<td>4 – Days</td>
<td>100/0.00</td>
<td>1 (0.9%)</td>
</tr>
<tr>
<td>Have soap in the household</td>
<td>Yes</td>
<td></td>
<td>72 (67.9%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td>34 (32.0%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>39 (36.4%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td>83 (77.5%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td>24 (22.4%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Traditional healers</td>
<td>77 (71.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Village health volunteers</td>
<td>2 (1.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private clinic</td>
<td>6 (5.6%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health Center</td>
<td>18 (16.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hospital</td>
<td>4 (3.7%)</td>
<td></td>
</tr>
</tbody>
</table>
79% of respondents reported a monthly household income of 5-20 USD, compared to 14% who reported < 5 USD, and only 3% reported > 20 USD in monthly earnings (Figure 1).

**Figure 1:** Proportion of Batwa respondents’ monthly household income

The number of individuals who shared a household varied from 1-3 individuals (25%), 3-6 individuals (52%), 6-9 individuals (26%) and >9 individuals (5%) (Figure 2).
A significant number of residents in the three Sub-counties lived under the poverty line. Residents of Mpungu Sub-county had a higher percentage of poor people (36.43%) compared to populations of Kayonza (19.11%) and Kanyantorogo (16.96%). Most Batwa settlements (75%) were located in Kayonza Sub-county, and the remaining settlements 25% were established in the other two sub-counties (Figure 3).
Figure 3: Map of the percentage of individuals under the poverty line and location of Batwa settlements by Sub-county in the catchment of Bwindi Community Hospital

The Bwindi Community Hospital is located in Kayonza Sub-county. The area encompasses public health facilities, private for-profit health facilities (PFP) and private not-for-profit health facilities (PNFP). Public facilities account for more than 50% of health facilities in the area. Only 25% settlements were within five miles from the hospital compared to the rest (75%). Batwa
population size per settlement varied; the largest settlement had approximately 90-130 residents

(Figure 4)

Figure 4: Map of health facility distribution and Batwa population size per settlement by Sub-county in the catchment of Bwindi Community Hospital

Respondents who lived in proximity to the hospital were 8.9 times more likely to access services compared to those who live (>30 minutes) walking distance from the facility after controlling for age, monthly income, having health insurance and visiting a traditional healer in the past 12
months. Similarly, respondents who closer to the health centers were 0.19 times less likely to access services compared to those who lived >30 minutes of walking distance. Households that earned > 5 USD a month had 7.45% more likelihood to visit the health center (Table 2).
Table 2: Bivariate and multivariate analyses of factors associated with access to health services for Batwa respondents in the catchment of Bwindi Community Hospital, Uganda

<table>
<thead>
<tr>
<th>Outcome/Characteristics</th>
<th>Univariate OR (95% CI)</th>
<th>p-value</th>
<th>Multivariate OR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accessed hospital in past 12 Months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>Reference</td>
<td>0.09</td>
<td>0.52 (0.14-1.90)</td>
<td>0.327</td>
</tr>
<tr>
<td>26-35</td>
<td>0.37 (0.11-1.19)</td>
<td></td>
<td>0.72 (0.20-2.49)</td>
<td>0.607</td>
</tr>
<tr>
<td>&gt;35</td>
<td>0.50 (0.17-1.51)</td>
<td>0.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1.04 (0.45-2.3)</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never been to school</td>
<td>0.72 (0.729-0.29)</td>
<td>0.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attended some form of school</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owns animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1.16 (0.49-2.74)</td>
<td>0.724</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days without eating in past 2 weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Days</td>
<td>0.69 (0.25-1.88)</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1 Days</td>
<td>0.72 (0.20-2.49)</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have Soap in the household</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1.46 (0.33-6.51)</td>
<td>0.615</td>
<td>1.91 (0.28-12.86)</td>
<td>0.506</td>
</tr>
<tr>
<td>No</td>
<td>3.55 (0.69-18.28)</td>
<td>0.129</td>
<td>9.58 (1.19-76.76)</td>
<td>0.033</td>
</tr>
<tr>
<td>Monthly household income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 USD</td>
<td>2.94(1.11-7.73)</td>
<td>0.029</td>
<td>2.35 (0.77-7.09)</td>
<td>0.130</td>
</tr>
<tr>
<td>&gt; 5 USD</td>
<td>2.31 (0.91-5.86)</td>
<td>0.075</td>
<td>1.84 (0.65-5.16)</td>
<td>0.247</td>
</tr>
<tr>
<td>Health insurance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2.125 (0.58-7.74)</td>
<td>0.253</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visited traditional healers in the past 12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2.01 (0.87-4.61)</td>
<td>0.09</td>
<td>2.24 (0.90-5.56)</td>
<td>0.081</td>
</tr>
<tr>
<td>No</td>
<td>3.74 (1.41-9.97)</td>
<td>0.007</td>
<td>5.80 (1.76-18.46)</td>
<td>0.002</td>
</tr>
<tr>
<td>Walking time to the hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 30 minutes</td>
<td>9.94 (1.24-79.27)</td>
<td>0.030</td>
<td>8.90 (1.01-77.99)</td>
<td>0.048</td>
</tr>
<tr>
<td>&gt;30 minutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accessed health center in the past 12 months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>Reference</td>
<td>0.09</td>
<td>0.52 (0.14-1.90)</td>
<td>0.327</td>
</tr>
<tr>
<td>26-35</td>
<td>1.46 (0.33-6.51)</td>
<td>0.615</td>
<td>1.91 (0.28-12.86)</td>
<td>0.506</td>
</tr>
<tr>
<td>&gt;35</td>
<td>3.55 (0.69-18.28)</td>
<td>0.129</td>
<td>9.58 (1.19-76.76)</td>
<td>0.033</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.57 (0.16 -1.97)</td>
<td>0.376</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never been to school</td>
<td>2.125 (0.58-7.74)</td>
<td>0.253</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attended some form of school</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days without eating in the past two weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Days</td>
<td>0.40 (0.04-3.47)</td>
<td>0.413</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1 Days</td>
<td>0.38 (0.10-1.34)</td>
<td>0.134</td>
<td>0.52 (0.11-2.51)</td>
<td>0.421</td>
</tr>
</tbody>
</table>
There is a strong association between education and age of respondents with regards to income.

There was no significant association between health insurance and other key variables (Table 3).

Table 3: Bivariate associations of key variables (Income and Health Insurance)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Chi-square (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.018</td>
</tr>
<tr>
<td>Gender</td>
<td>0.993</td>
</tr>
<tr>
<td>Education</td>
<td>0.004</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>0.592</td>
</tr>
<tr>
<td>Own Animals</td>
<td>0.993</td>
</tr>
<tr>
<td><strong>Health Insurance</strong></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.164</td>
</tr>
<tr>
<td>Gender</td>
<td>0.719</td>
</tr>
<tr>
<td>Education</td>
<td>0.639</td>
</tr>
<tr>
<td>Own Animals</td>
<td>0.400</td>
</tr>
</tbody>
</table>

Respondents used both traditional and modern medicine while managing ill health. More than 60% of those who visited the hospital had also consulted traditional healers compared to (53%) for those who attended health facilities and (74%) who consulted village health volunteers (Figure 5).
Figure 5: Proportion of Batwa respondents who accessed conventional health services and traditional medicine within 12 months

Qualitative

Adapting to a sedentary lifestyle and land constraints

Overall, there are eight Batwa settlements in the BCH Catchment area spread across three sub-counties of Kayonza, Mpungu, and Kanyantorogo (Figure 3). Before resettlement, the Batwa were used to living in small families that steadily moved in search of game and wild fruits. After their eviction from Bwindi Impenetrable forest, faith-based organizations and non-governmental entities purchased land to resettle this community. Over time, they have struggled to adapt to a sedentary mode of living, adopting new means of acquiring food through agricultural practices.

“We found when some sympathizers already bought the land. We were asked to come and live in a group [living in settlements]. At first, we were worried because Batwa don't live in groups because each one was living independently. There was a struggle to make us live in a group [living in settlements]. Finally after realizing that the government had chased us from the forest. There were strict rules; we couldn't get the food we were used to [game,
wild fruits, and honey. The forest was no longer accessible. We came and resettled here [Bikuto settlement]” (Mutwa Female, Bikuto)

The fact that Batwa live in settlements without enough land is as a significant factor that prevents them from accessing healthcare. Subsistence in this community depends on agricultural yields, and the extra outputs are traded for cash to increase household revenues that cater for basic household needs. These include out-of-pocket payments to cover for direct and indirect healthcare expenses. When available land cannot generate enough income, respondents find themselves in a fixed position of not being able to make it to the health facilities when they fall sick.

“If one has enough land we could grow crops like coffee, tomatoes to create income daily but with the small land only a few are grown this generates more expenditure from outside while other challenges come up like illness you find yourself penniless even cannot go for treatment” (Mutwa Male, Bikuto)

Concerns of unequal distribution of land within the Batwa community was also cited as a significant challenge. Land is usually inherited through direct family ties, i.e. from father to son. After resettlement, land was equally distributed depending on family size. Over time, families have expanded, exerting pressure on available land for agriculture. Due to these reasons, households managed by young couples are deprived of revenues that can be used to cover basic needs and other essential household necessities such as healthcare.

“The youth [Batwa] cannot have equal land compared to the old people because they were the first in the area and got big pieces of land unlike those that have just married and moved from their homes so they cannot be equal. If you have many children and they start to marry you divide the land to each of them [plots] from the family land” (Mutwa Male, Bikuto)
Without sufficient land, poor nutrition and its effects tend to manifest in the form of poor health. Policy measures for improving health outcomes must be comprehensive to include land acquisition for agriculture, as a means of increasing household income. For these measures to be effectively put into practice, Government has a key role to play. Such measures can be effective for promoting access to healthcare.

“How do you get good nutrition when you don’t have land... probably now government should be able to resettle these people very well with adequate land and shelter?
Certainly, a person who has no daily income or land to grow what to feed the family where do you expect them to get money? So to me, I think it should start from there and build up from there, the rest they would be able to access care like any others.
Government should be able to resettle these people very well with adequate land, shelter"

(Health Provider, Bwindi Community Hospital)

Subscribing to health insurance is costly

During the quantitative data analysis, a significant number of respondents (22.4%) had no health eQuality insurance and therefore could not easily access care at the hospital and its satellite health centers (Table 1). Respondents in the qualitative interviews alluded to the fact that they are often impoverished, and for this reason, they face difficult choices about whether to use their financial resources to pay for health insurance or to meet other competing needs. The prioritization dilemma shaped their decisions of seeking care, and those who failed to pay annually eQuality health insurance premiums resorted to finding care from public facilities that do not charge money.
“You know for us Batwa, most of the time it's challenging to get money. We live by hand to mouth, and we have to look after children as well. Getting money to pay the eQuality [Community health insurance] premium is difficult. When you go to BCH [Hospital], and you haven’t paid, they can’t help. So that’s why I decided to go to the other facility [Public health facility]” (Mutwa Male, Bikuto)

Out-of-pocket expenditures on transportation limit access to care

Qualitative findings demonstrate how respondents face difficulties to reach the health facility due to lack of money for transport. These results are confirmed by quantitative findings where only two out of eight settlements are within a five-mile radius from the hospital in a rural set-up. Also, study participants who lived < 30 minutes from the hospital were more likely (OR=9.4) to access services compared to those who lived further away. During the qualitative interviews, respondents recognized that eQuality health insurance does not cover transport costs to the hospital. As a result, valuable time is wasted on mobilizing money to transport patients at the onset of illness. Health providers also mentioned the fact that geographic distance and terrains that are not easily accessible by car, were significant barriers that prevented patient access to care in this area.

"There is also when you have paid the premium, but you find you lack the transport money to BCH. For example, if labor starts while a pregnant woman is here and the husband has no money, it's difficult. My wife, for example, got into labor and she started walking towards the road as I was trying to look for some money. She delivered by the roadside. I think even the cerebral palsy my child has come from that" Male Mutwa, Bikuto
"Our health insurance does not have cover referral cost or transfer of patients from the hospital and back. Much as they have that insurance cover, there is that barrier of transport, geographic distance, and the terrain because in some areas they are not motorable" *Health Provider, BCH*

In circumstances where respondents face medical conditions that necessitate urgent care, they are forced to borrow money for transportation from neighbors, or, village loans and savings associations known as *Bataka* groups. Money borrowed in such circumstances can be reimbursed in several ways that include providing casual labor for a specific period, depending on the agreement. Such transactions are common and used as a last resort without cash at hand.

“*My neighbors helped me with the transport means I reached the hospital was taken care of given drugs and then brought back so I was to pay 30,000 Ug shillings in total so that can be an exchange of labor for the whole month*” *Mutwa Female, Kebiremu.*

**Skipping appointments to avoid taking medicine on an empty stomach**

Though we did not find any association between food security and access to healthcare in our quantitative results, respondents during the qualitative interviews hinted on the fact that food availability while seeking care at the hospital was a significant challenge. Respondents narrated how they slept on an empty stomach if they had no money to buy food. Caregivers are forced to look for odd jobs to buy food for admitted patients, or, resort to begging for food if money is not available. Providers also faced challenges of managing patients due to poor adherence, as patients skipped regular dosages due to lack of food.
"When you get admitted, food becomes a challenge because we don't have gardens. The one who is looking after [Caregiver] you at the facility gets odd jobs to raise some money to support you. When they don't get jobs, we sleep hungry." **Mutwa Male, Bikuto**

"This has always been a challenge for them [Batwa] like coming for admissions or consultation even taking drugs they say they say they cannot take drugs may be those In the ART clinic they say they cannot take that big drug when I don't have what to drink so even when there are dates of refill even mental cases they say we are not going to swallow those medicines yet we are on empty stomachs, so they tend not to come as per the appointments given to them because of that component of feeding as they access health care" **Policymaker BCH**

**Use of traditional medicine for first aid and managing illnesses that require long term care**

In the quantitative analysis, more than 70% of respondents lived close to traditional healers than any other available health service. 60% used both traditional and conventional medicine while managing ill health (Table 1). Qualitative findings support these quantitative results. Respondents who had difficulties in finding money for transport used traditional remedies as a first aid option while looking for means of transportation to reach the health facilities.

“I first pick the treatments that I know can work and take it and wait. If I don’t get better in a few days, I look for money for transport and go to Bwindi Hospital and also get treatment from there" **(Mutwa Male, Kebiremu)**
The Batwa appreciate the services offered through traditional medicine mainly because of the immediate results they can witness after consulting health facilities without success. This approach is considered as a quick fix for illnesses such as mental illnesses. Caring for their loved ones in such circumstances is a priority, even if it requires extra costs. Information on where to seek the best of care is passed-on through word of mouth, and sometimes they have to cross borders to neighboring countries in search of experienced traditional healers that have dealt with similar cases previously. They move back and forth alternating between different modes of care that include spiritual healing offered through religious convention, but eventually resort to options that are believed to produce immediate better outcomes.

"The services are also good because at first, my niece has mental illness and we took her to traditional healers, and she got better. Even when she got sick recently, we took her to the health facility, and they failed, and then we went to the churches and also failed, so we sent her back to Congo. It's only the cost of care that is very high" (Female Mutwa, Mukongoro)

**Flexibility in accessing traditional medicine and evidence of a failing public health system**

In the quantitative results, more than 60% and 53% of respondents had visited the hospital and the health center respectively (Figure 3). Respondents in our qualitative interviews provided reasons to why they used a mixed therapeutic approach for managing illness, confirming quantitative findings. Participants mentioned that it was easy for them to reimburse traditional healers. Payments can be made in the form of money, offerings such as chicken, or, by providing casual labor. This ecosystem is created over time through social connections.
“When you arrive at the herbalists’ home, he/she will examine you. If they feel they can manage to treat the illness, they will then ask for a certain amount of money. They give you the treatment, and when you get better, you go back to raise the money and pay the herbalist. If you don’t get fine, you will not pay the money. That’s what we usually do”

(Mutwa Male, Kihembe)

“Sometimes when I don’t have money. I can be given tasks to do to pay for the services. If I am unable, like you said, they sometimes ask for chicken for them to provide treatment for us” (Mutwa Male, Kihembe)

Even though public facilities provide free health services, respondents decide to consult traditional healers and quacks due to the poor quality of services. The failure of a public health system is evident in their eyes since they believe that the system is neither effective nor efficient. Public healthcare facilities often lack appropriate medicine and skilled personnel who can attend to patients. Faced with this situation, alternative means of seeking care outside the conventional medical system prevails, as an option, for managing illness.

“It’s because I have insurance [eQuality] and can afford it. But if I haven’t paid [To access care from BCH and satellite clinics under the eQuality scheme], I go to the other facilities [Government Health Facilities]. There are times when we don’t go because we know there are no medicines at the facility [Government Health Facility] and so we consult with traditional healers. The one we visit uses both modern and traditional medicine [Medical Quack]” (Mutwa Male, Bikuto)

Introduction of user fees and evidence of dissatisfaction
Though we did not collect quantitative metrics for determining user-fee policy implications over time, respondents demonstrated a sense of discontent towards the user-fee policy in the qualitative interviews. They had a strong belief of entitlement to Bwindi Community Hospital. Back in the days, the hospital provided auxiliary services such as food and transport to patients, and nowadays, the policy has changed, and these services are no longer availed as in the past. Providers explained the fact that funding streams are not sustainable and the tourism industry highly subsidizes the hospital. Following these new policy changes, respondents are defiant and demonstrate a feeling of not being fairly treated, and yet, the hospital was built for them.

"The advice that I give is a message. Tell them that you spoke to us but Batwa still don’t want to go to the health facility. When they get ill, they want to stay home yet BCH is our health facility” **Mutwa Male, Karehe**

“"The challenges in accessing health care include the means of transport and the food to eat while at the hospital..unlike in the past as us the Batwa food was provided, but now the system has changed... we no longer get those services, so it's to take care of yourself, and as you can see there is nothing we have that can help us in getting the necessities; so even though we get to the hospital there is nothing to rely on” **Mutwa Male, Kebiremu**

"I would think that their rate of compliance is like any other person now. I know that previous, that never used to be the case. I witnessed at some point some Mutwa throw medicines there just because he had not been given food. That time it used to be that every time they are sick, and they come for health care, when they are going back, you
give them posho, beans and so it was like throwing a tantrum saying, now that you are not giving me beans, you even have your drugs” *Health Provider, BCH*

**Discussion**

This is the first study to assess barriers to accessing healthcare by the Batwa in three rural Sub-counties in South-Western Uganda. We identified the following barriers:

**Challenges to subscription for the eQuality community health insurance**

More than 25% of respondents in our study had no community health insurance, and therefore could not access quality healthcare while sick. Despite continuous efforts to subsidize health insurance premiums for this community, the subscription rates are still very low, and this mainly due to lack of financial means. Individuals have to address basic necessities such as food and clothing, which are competing priorities to health insurance subscription.

Though our study did not assess household/family prioritization of healthcare in this context, studies conducted elsewhere on targeted subsidies found that there is a need for research, on how households prioritize health insurance during the implementation of subsidy policies, in low resource settings.60

**Limited access due to lack of transport means**

Lack of transportation fees is a significant barrier that prevents patients from seeking. Respondents alluded to the fact that they do not have readily available resources at the onset of illness, and this in turn leads to poor health outcomes, due to the delays for seeking timely care. In our results, proximity to the health facility had a strong association with access to health
services. Previous research has also recognized transportation challenges as a primary factor for limiting healthcare access, especially in populations that have a low socioeconomic status.\textsuperscript{61}

**Borrowing money for accessing healthcare**

In the wake of a healthcare emergency, respondents borrow money to cover for transportation and other medical related expenses, from local community savings groups. These community organization networks known as Bataka groups enable individuals to collectively pay for services when in need, at no interest. Due to the fact that it is difficult to access finances in this community, respondents perform painstaking casual labor as a mechanism for debt reimbursement once discharged from the health facility. Studies conducted in Uganda demonstrate the importance of such programs as a source of immediate financial support for accessing care.\textsuperscript{62}

**Lack of food assistance for patients and caregivers**

Once admitted at the hospital, respondents fail to get food and sleep on an empty stomach. The hospital does not provide food for patients and family caregivers have to look after their patients by providing adequate food during the entire period of stay, and resort to working odd jobs near the hospital premises, in order to raise money to buy food. Our study also found that respondents sometimes can miss medical appointments, or skip regular dosages of prescribed medicine due to lack of food. Available studies conducted in resource limited settings on HIV and TB drug adherence indicate that food assistance is a strong incentive and enabler for improving health outcomes due to improved health facility visits. \textsuperscript{63}
Lack of medication in public facilities

Although access to healthcare in Uganda is considered to be free in public facilities, respondents alluded to the fact that services delivered in public settings did not meet their expectations; citing lack of medication due to stock-outs. They are forced to spend out-of-pocket on medication, in a supposedly “free” healthcare environment. Studies conducted previously in Uganda have identified that underutilization of health services in public facilities due to poor quality services, as one of the current setbacks for universal access to healthcare.64

Use of traditional medicine as an alternative to limited health facility access

Our study also demonstrates that respondents use traditional therapies for first aid, as they look for money to access health facilities. They also resort to this form of therapy while managing diseases termed as chronic, by conventional healthcare systems, such as mental illness. With nearly 290 people for one traditional healer, and 10,000 people for a western-trained professional health provider in Uganda, previous studies have confirmed the role of traditional medicine in bridging the gap, where access to modern medicine is a challenge. 65

Challenges related to instituting user-fees

Our study shows that the Batwa feel entitled to Bwindi Community Hospital. Previously, they used to receive free healthcare, transportation, and food assistance. The roll-back of these benefits, and the introduction of health insurance premiums and user-fees has led to sentiments of dissatisfaction, and a feeling of being abandoned – for the hospital was built for them, and therefore belongs to them. Studies conducted in rural Malawi after the re-introduction of user-fees without consideration of the vulnerability of the community, demonstrate that uptake of
services diminishes and limits access to care in communities where uptake of services were relatively high.\textsuperscript{66}

**Land ownership as a distal determinant for accessing healthcare**

Our results show that land constraint is the prime factor that shaped respondents’ choices of seeking care from existing healthcare services, in a rural agrarian economy. Without access to land, respondents do not have extra yields that can be sold to generate enough income for accessing healthcare. Also, all respondents do not own the land they toil for survival; for the land belongs to NGO’s and faith-based organizations that hold land titles and certificates of ownership. Studies on land productivity conducted in similar rural settings proved that there is a strong relationship between land tenure and low agricultural productivity in rural populations.\textsuperscript{67}

**Rampant poverty and competing priorities**

Our study shows that the Batwa currently live under the standard 1.25 USD/day poverty line threshold for Uganda. In this study, 95% of individuals earned less than 20 USD per household for an average family size of 4-8 people. Without enough income, this community navigates through the healthcare system with extreme difficulties in their quest for therapy. There is an extensive literature on poverty and access to healthcare in Uganda that recommend empowering the community by improving financial access through microcredit lending mechanisms and involving the community into income generating activities so that they can be able to contribute to healthcare expenses. \textsuperscript{63}
Limitations

Our findings have some limitations. First, our sample was based on Batwa communities in Kanungu district and therefore not generalizable to communities in other settings. However, the fact that the socioeconomic status of these communities is similar, the contextual differences are most likely minimal. Second, this study only interviewed health providers from faith-based not-for-profit facilities and did not include providers from government facilities. Therefore, the concerns and perceptions on care delivery might not reflect their views, thus suggesting a need for a comprehensive study that involves public facilities. In addition, we did not differentiate the type of health centers during data collection, and in our analysis we could not exactly pin-point how they differed. Lastly, this study shows how user-fees limit access to care, hence the need to conduct research to ascertain the extent to which user-fee policy changes has impacted utilization of health services.

Conclusion

This study on barriers to accessing healthcare in a resettled indigenous population illuminates critical findings regarding the role of social and economic determinants that shape the choices of care, in a landscape where modern and traditional therapies are used interchangeably as a result of a failing public healthcare system and not-for-profit user-fee healthcare environment.

The barriers to access healthcare by the Batwa was eloquently expressed by a Health Provider during an interview at Bwindi Community Hospital:

“Batwa are generally disadvantaged compared to the rest of the population because their level of education and income are low, and so these are people who cannot afford out-of-
pocket payment because they are trying to fulfill the primary/essential needs of food, shelter and clothing – you know theirs is hand to mouth. They work for what to eat to an extent that some of them do not have good shelter to talk about, other than the NGOs that have been helping.”

Improving financial protection for user-fee services offered through not-for-profit health facilities must be extended beyond community health insurance subsidies, and where possible, reinstate policies for assisting this community in view of eliminating catastrophic out-of-pocket expenditures on user-fees, transportation and food. Resource allocation for improving quality of services in public settings should be envisaged to ensure the effective and efficient use of health resources to maintain the gains of universal access to healthcare. In an environment where traditional and modern therapies coexist, integrating traditional and modern therapeutic approaches must be envisaged to accommodate community practices. Lastly, in order to sustain health benefits from these interventions, there is a need to comprehensively address the distal determinants that currently prevents this community from accessing finances. Without these appropriate measures in place, access to quality healthcare remains elusive, for the Batwa.
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