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# The use of medicine retailers by people of Goma as an alternative healthcare provider: a risky but rational practice

Amandine Oleffe<sup>1\*</sup>, Elisabeth Paul<sup>1</sup> and Céline Mahieu<sup>1</sup>

## Abstract

**Background** Medicine retailers, considered here as any person or setting dedicated to the sale of retail medicines, fill an important gap in terms of access to healthcare in areas where population are not covered by universal healthcare schemes. In Goma in the Democratic Republic of the Congo, such retailers have proliferated and are consulted as the first port of call by more than half of the population, playing therefore a key role as an alternative source of healthcare for any type of health condition. The objective of this study is to understand people of Goma's rationale for using the medicine retailers over the formal healthcare system.

**Methods** Twelve focus groups, gathering 147 participants in total, were conducted in four worship communities, covering the most common faiths practised in Goma. Three focus group discussions were organised per worship community: one with fathers, another with mothers, and another with chronic patients and/or highly vulnerable people. We used a qualitative and inductive approach to analyse the participants' practices and perceptions in terms of their use of medicine retailers. We identified central categories explaining the reasons for using medicine retailers and the choice of a specific medicine retailer.

**Results** When facing a health problem, most of the participants in our study tended to first buy medicines at medicine retailers because it was cheap, quick, and easily accessible. Most were aware of the risks and limitations of such practices and had developed a number of mitigation strategies in order to reduce those risks: evaluating medicine retailers' expertise; developing a "medical expertise"; and seeking proactively out empathetic care.

**Conclusions** People in Goma make a conscious and rational choice when resorting to medicine retailers as it is seen as the least-worst option in a complex situation. In order to reduce the risks, they have developed a number of mitigation strategies. Future research should focus on the organisation of medicine retailers as a professional group to improve their supervision in a sensitive context such as Goma and on modalities to articulate them to the formal health system to guarantee a financial accessibility to healthcare for all.

**Keywords** Pharmacies, Community Pharmacy services, Africa South of the Sahara, Democratic Republic of the Congo, Qualitative research

\*Correspondence:

Amandine Oleffe

Amandine.Oleffe@ulb.be

<sup>1</sup>School of Public Health, Université Libre de Bruxelles Route de Lennik, Brussels 808 1070, Belgium



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## Introduction

Medicine retailers — considered in this article, as any person or setting dedicated to the sale of retail medicines, regardless of their official recognition — fill an important gap in terms of access to healthcare in areas where large parts of the population are not covered by universal healthcare schemes [1]. Indeed, access to primary healthcare services remains a challenge for many people around the world, particularly in Sub-Saharan Africa (SAA) where the formal health system faces many structural, material, institutional, and human challenges [1, 2]. This is often due to ineffective governance which contributes to the development of “pluralistic health systems”, comprising a variety of healthcare providers which are globally characterised by an inadequate regulation and limited coordination across structures [2, 3]. This situation leaves significant space for private providers, for example private healthcare facilities, traditional healers, and medicine retailers [1]. Such medicine retailers include a broad variety of providers, with different levels of formality within countries and varying regulations across countries [4]. In Sub-Saharan African towns and cities, most people tend to start out by visiting private medicine retailers when they are ill, mainly because their services are considered to be cheaper, faster, easier, and more friendly than those in formal healthcare facilities [5–7]. Several systematic reviews highlighted the role and importance of medicine retailers in the health-seeking behaviours in SSA, both in rural and urban areas [5, 7–10]. Medicine retailers have therefore become an important source of treatment and medicines, regardless of their expertise level or the quality of the medicines they sell [8, 10].

Such medicine retailers play a central role in the delivery of healthcare services and medicines in the Democratic Republic of the Congo (DRC) [11–13]. This is also the case in Goma, the capital of the North-Kivu province, where more than half of the population (51%) visits a medicine retailer before having obtained a prescription from a doctor, mainly because it is affordable (72%) and closeby to their homes (36%) [14]. North Kivu is located in the eastern part of DRC and could be qualified as a “fragile state” [2, 15, 16]. It is characterised by ineffective governance, high levels of poverty, and is the site of numerous conflicts, prompting the presence of many humanitarian stakeholders who have an impact, both directly and indirectly, on the health sector and pharmaceutical system [2]. Kohler & al. highlighted the links between fragile contexts and the development of informal and unregulated sale of medicines with the consequence to increase the availability and access of medicines for citizens [2]. In Goma, the fragile context is reinforced by the proximity of Rwanda, Uganda, and Burundi; people and goods, including possibly counterfeited medicines

flow easily across porous borders [2, 17]. These medicines feed into a fragile health system, which is characterised by a logic of commodification [2, 14]. This has an impact on the financial accessibility and quality of healthcare, as well on as the relationship between healthcare providers and patients. In parallel, the number of private healthcare providers continues to grow and now represents 79% of the total healthcare supply [18].

For the pharmaceutical sector, the Government has defined minimum standards regulating the opening and functioning of pharmacies [19]. However, these are neither implemented, nor respected. This lack of regulation, combined with the commodification of medicines, has resulted in the proliferation of private medicine retailers all over the city, with a significant increase over the last decade [2, 18, 20, 21]. This proliferation, combined with the lack of effective regulation, impacts the services and health commodities provided that are insufficiently controlled and potentially poor quality [2, 18, 21]. The types of medicines sold are mostly industrial pharmaceutical medicines, including over-the-counter and prescription medicines (most of the time sold without a prescription) and in some cases, combined with natural medicines. Most medicine retailers in Goma operate in “pharmacies” or medicine outlets<sup>1</sup>, although hawkers called “pitaphars”<sup>2</sup> also operate in the city. There are two important dimensions to note regarding these medicine outlets. First, most of them are hosted in permanent buildings and look like “proper” pharmacies, i.e. they are painted in white and green, with the green snake logo, which gives an initial feeling of trust and reliability. Secondly, the people who work in these outlets have varying levels of training and expertise, ranging from no health background at all to qualified doctors. Nonetheless, according to Kahindo et al., only 9% of such outlets in Goma are run by a qualified pharmacist or pharmacist-assistant, whilst 80% are run by nurses [21]. However, our observations suggest that the latter figure is perhaps an overestimate. These outlets vary greatly in terms of skills of the staff, types, quality and quantities of medicines sold, storage conditions, infrastructure, etc [18]. This diversity across medicine retailers, combined with their increasing numbers, has expanded the options available in terms of access to healthcare and medicines, and plays an influential role in people’s behaviours when seeking healthcare. However, people in Goma face multiple risks when it comes to the use of medicine retailers [11, 14].

The first objective of this study is to understand people’s rationale when using a medicine retailer as a first point of care. The second objective is to identify the

<sup>1</sup> In this article, we use both terms in a similar and interchangeable way.

<sup>2</sup> This Swahili term could be translated as “people walking around with pharmaceuticals”.

strategies that they have developed to mitigate the risks associated with operating within an unregulated pharmaceutical environment. To do so, we explore the use of medicine retailers in Goma from the perspective of the users themselves. Understanding the role of medicine retailers in people of Goma's health practices could help decision-makers to take actions to improve the financial accessibility to safe and equitable healthcare, by improving the health system functioning and potentially by linking medicine retailers to the formal health-system. Many previous studies have focused on medicine retailers in Sub-Saharan Africa, and a few have explored users' satisfaction level [22–27]. However, to the best of our knowledge, only one, by Chana and Bradley, went beyond this and adopted a sociocultural perspective on medicine use i.e. seeking to explore the *logic* of users when resorting to medicine retailers [28]. Nevertheless, we still know little about people's logic of action for visiting to a medicine retailer. A few studies have focused specifically on medicine retailers in DRC but none on their users [29–31]. In Goma, two studies have focused on the pharmaceutical sector in the city: one mapped the pharmaceutical establishments and another focused on the dispensing of antibiotics for children by medicine retailers [20, 32]. Other studies have explored general health seeking behaviours among the residents of Goma, both quantitatively and qualitatively, and have highlighted the extended use of medicine retailers among the population. Both have identified the need to explore further the explanatory factors underpinning the use of medicine retailers [11, 14].

## Methods

Rooted in the traditions of social anthropology, this study adopts a qualitative and inductive approach through focus group discussions (FGDs) in order to understand how people's behaviours and attitudes are influenced by the local healthcare context, as well as by broader contributing social, economic and geographical factors. Such an approach allows us to be context sensitive and to explore the data with minimal preconceived notions or predetermined analytical categories or frameworks. It enabled us to focus on the patterns and relationships which emerged from the data itself.

### Entry point and sampling

The data for this study was collected during twelve FGDs, based on convenience sampling of four worship communities, representing the most common faiths practised in the city. We choose this specific entry point because worship communities serve as popular sites of socialisation in Goma and bring together people with a variety of socio-demographic characteristics. We organised three FGDs per worship community: one with fathers, one with mothers, and one with patients with a chronic

condition and/or highly vulnerable people. Such groups grouped together people sharing specific characteristics which influence their relationship to their health and health seeking behaviours, i.e., parenthood, gender, and an existing health condition and/or a particularly low socio-economic level. The sample size and the diversity of the participants were sufficient to attain data saturation. Our main inclusion criteria were: being a regular member of the worship community; to not be involved in the sale of medicines; to have been a resident of Goma for at least 5 years; and to be at least 18 years old.

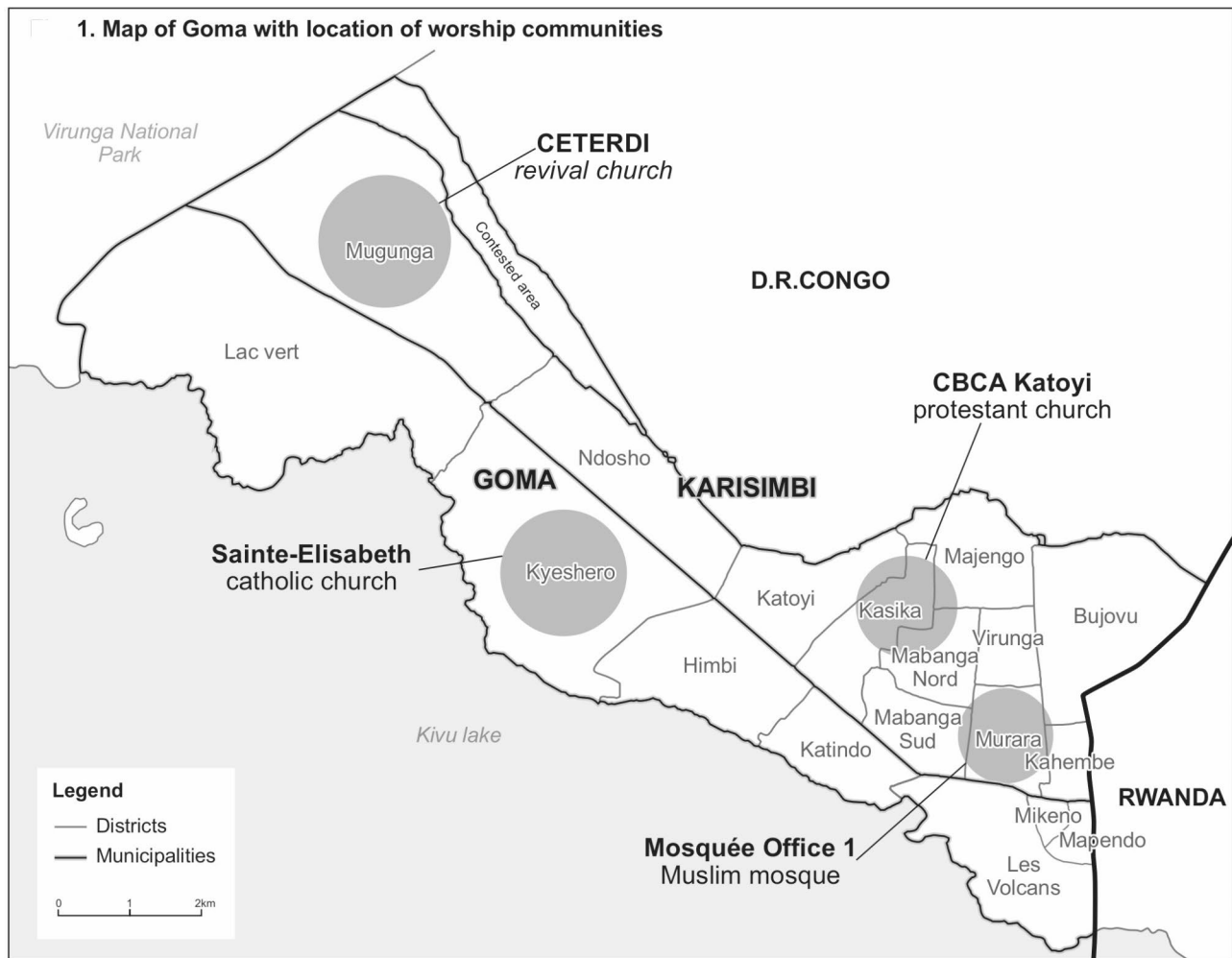
Our sample included a catholic church (Sainte Elisabeth), a protestant church (CBCA Katoyi), a mosque (Mosquée Office 1), and a revival church (CETERDI)<sup>3</sup>. Two were located in the centre of the city (North Mabanga and Murara), one in an intermediate district (Kyeshero) and one in a peripheral zone (Mugunga). Figure 1 shows the map of Goma with the geographical location of the four worship communities. The neighbourhoods varied in terms of the number and types of healthcare providers in operation.

### Data collection

A total of 147 people participated in the FGDs, which took place in October and November 2021. The twelve FGDs aimed to explore the collective norms in terms of health seeking behaviours, as well as the participants' practices and perceptions in relation to medicine retailers. For each FGD, between 9 and 18 participants were recruited with the help of the respective religious leaders. The age range was broad (from about age 20 to 100) and varied according to the specificities of each focus group. Each FGD lasted between 1 h 20 min and 2 h 45 min, with an average of 1 h 40 min. FGDs were conducted just after the service of each place of worship in order to ease participants' participation. Contacts with the person in charge of each worship community had been previously established to explain the objective and the modalities of the research. Participants were volunteers coming from preexisting structured groups within each worship community. Supplementary File 1 gives details on the organisation and participants of each FGD.

A team of four Congolese researchers (two men and two women), with a background in community health and development, was established by the lead researcher. The latter conducted a two-day training-course, covering the aims of the study, qualitative methods, and ethical issues. Two members of the research team worked with each FGD as moderator and secretary. The composition

<sup>3</sup> Revival churches are a relatively heterogeneous group coming from various religious movements, such as Evangelicals and Pentecostals. Their main characteristic is to offer an alternative to traditional religious movements that have disappointed their members. Their success and legitimacy are linked to their promises of moral support and healing.



**Fig. 1** Map of Goma with location of worship communities

of each duo varied according to the specificities of each FGD. In order to ensure that the questions were appropriate, well-worded and comprehensive, an initial focus-group discussion protocol was discussed with the Congolese research team and adjusted according to their suggestions. The full guide can be found in Supplementary File 2. This guide included very open-ended questions addressing broad themes such as “what do you do when you or a family member gets sick?” or “where do you go when you need medicine?”, and more targeted questions about the advantages and disadvantages of each type of medicine retailer. The guide was initially drawn up in French, then translated into Swahili by the research team and finally verified by an official translator. The FGDs took place in Swahili, in order to allow the participants to express themselves as freely as possible. Each FGD was audio recorded and after each one, the lead-researcher ran a debrief session with the team.

### Content analysis

The recordings of the FGDs were transcribed in full in Swahili, and then translated to French, the shared language of the team. The data analysis was conducted in French, however the translations of citations into English for the purposes of this article were checked against the statements in French, in order to verify their accuracy. The transcripts were coded using Atlas.ti, using a mix of descriptive and process coding. Using both inductive and thematic analysis, we grouped together the most significant codes to develop central categories regarding the reasons for using medicine retailers and the choice of a specific medicine retailer. The main categories that emerged from our data related to a number of strategies, namely: reducing the costs of a health issue, reducing the risks associated with self-medication, and identifying competent and/or empathetic medicine retailers.

## Results

In this section we explain the reasons why our participants choose to use medicine retailers (mainly due to poverty) and their strategies to reduce the associated risks (including assessing the expertise of different medicine retailers; developing their own medical expertise; and purposefully seeking out the retailers who seemed to offer a more empathetic service). Finally, we present the participants' main recommendations in terms of how access to medicines and healthcare could be improved (including greater financial accessibility, empowering users through enhanced health literacy, stronger regulation of medicine retailers, particularly in terms of their expertise, but also extending their role in the healthcare system).

### The success of medicine retailers: "Our pockets are empty"

One of the main factors influencing our focus-group participants' practices when they need healthcare is their ability to pay for services and medicines. If their health problem is not too serious, most tend to first buy pharmaceutical medicines at medicine outlets, as expressed in the following extract:

*"The thing we choose to use, me and my family and even most people, we use pharmacies<sup>4</sup> when we are sick. It is due to unemployment (...) So, first I analyse where to go according to my financial resources. I see that I only have 1000cf or 500cf [0.50–0.25 USD]. You can imagine what happens next. Right away, my idea is to rather go to the pharmacy because there, you don't have to pay for the consultation." (Catholic church - men)*

Indeed, using a medicine retailer means that the patient only has to purchase medicines, thus making it significantly cheaper than going to the official healthcare facilities where the costs are cumulative and can be considerable. Firstly, the patient must pay for a "medical form" in order to receive care, as expressed in the following extract:

*"And also at the hospital, they put money before everything else. When you want to be treated, they ask you to pay. You can't go to the hospital without money (...) Because already at the door, they ask you for money for the form. If you don't have money for the form, you see that it's almost impossible to continue with care." (Mosque - chronic patients).*

<sup>4</sup> Our respondents tend to refer to medicine retailers as "pharmacists" and to medicine outlets as "pharmacies" regardless of their level of expertise or how 'official' they are or seem to be.

Afterwards the patient has to pay for the consultation, tests, and finally, the medicines (if they are available). In contrast, at a medicine retailer, people consider that they benefit from a free medical consultation that is somehow included in the purchase of medicines. Furthermore, the cost of the medicines themselves is perceived to be much lower at medicine retailers than in official healthcare facilities:

*"This is because at the pharmacy, there are cheap medicines. If you go to the pharmacy, you will find the medicine at 500cf [0.25 USD] but, at the hospital, you will pay the bill and the care can cost at least 10 USD and even get not only one single medicine." (Revival church - men).*

Another advantage of medicine retailers is their flexibility in terms of the quantities purchased as well as payment. This includes buying on credit and the possibility of spreading payment over several weeks/months. Thus, people can buy medicines in small quantities, or progressively as they need them, and in relation to their household budget.

*"[at the pharmacy], we get medicines in balance with our money. If you have 100cf [0.05 USD], he gives you one tablet, if you have 200cf, it's two, 300cf, it's three and so on." (Revival church - men).*  
*« (...) for example, they ask you 5USD. But you, you don't have enough money to buy this 5USD medicine (...). And, in this case, you will buy little by little. If the one you bought is finished, you buy more and, if you find that you are feeling better, you won't finish the treatment, you leave it at that." (Mosque - men).*

Indeed, many participants choose a specific medicine retailer according to whether or not they give credit, which in turn is influenced by how well they know the retailer.

It is significant to note here that a medicine retailer is not necessarily someone who works in a retail outlet; in some cases, a family member or a "neighbourhood doctor or nurse" becomes an alternative source of medicines, as indicated here:

*"There is the man who sells products in the neighbourhood. He is a caregiver who buys medicines and keeps them at home. He visits several homes in our neighbourhood. He has the medicines and also a thermometer. When a person gets sick in the neighbourhood, we call him first of all (...) he comes without delay (...) Really, that's the way he has become popular in the neighbourhood and all of us, we have started to call him 'doctor' although he isn't even one*

*(...) So, he has already gained everybody's trust in the neighbourhood." (Protestant church - men).*

These local caregivers are often willing to allow patients to postpone payment and might be part of the same social groups as those seeking their services. In return, they get social recognition and a certain form of professional legitimation from their community.

In addition to flexible payment, the use of medicine retailers also allows people to reduce the indirect costs related to an illness, for example by saving time and money on transport. Geographical proximity is also important in the case of a medical emergency at night. In Goma, personal safety is an ongoing concern, particularly after dark, and thus it is safer to buy medicines next door than to cross the city to find a healthcare facility still open. This also highlights the advantage of the extended opening hours of medicine retailers. When our participants can access care quickly, they consider they can prevent an illness from getting worse:

*"(...) But if I go to the hospital, there I will have to queue like everyone else and wait until the healthcare staff calls me. Then, all this time that we have to spend waiting at the hospital: the time of the consultation, the time to do the tests, the time for I don't know what,... And we are feeling very bad, maybe the illness has even got worse without taking any medicines... But, in contrast, at the pharmacy, it's not the case. The first thing at the pharmacy, they welcome you and they give you the medicine linked to your illness straight away." (Protestant church - chronic patients).*

Direct access to the medicines themselves also saves time. At medicine retailers, the medicines are generally available, in contrast to the frequent shortages in official healthcare facilities. In these situations, the focus-group participants do not see the point of going to a healthcare facility if, after a long wait and spending a large amount of money, they will still need to buy medicines at a medicine retailer. There, the access to medicines is easy, quick, and direct and does not involve "cartwheels" or too many questions.

*"The other factor that makes us often use pharmacies is that after attending the consultation at the hospital, they end up sending you back to the pharmacy to buy the products. So, instead of losing a lot of money by going to the hospital, we allow ourselves to go to the closest pharmacy." (Protestant church - men).*

Indeed, medicine retailers are perceived as a cheap and effective short-cut to obtain quick pain-relief; even if on occasions the underlying objective might be to simply provide pain-relief, rather than to heal the patient:

*"(...) when I go to see the pharmacist, he will give me medicines... even if they don't completely cure my illness, they make the pain go away." (Catholic church - men).*

*"That [the lack of money] is the reason why we first go to the pharmacy... maybe by giving him this medicine, he will last another week or two." (Catholic church - women).*

In conclusion, the use of medicine retailers is commonplace, yet they provide critical access to healthcare for those otherwise would struggle to access care or medication. Nonetheless, their use entails a number of risks, many of which are very clear to the participants in our study. In the next section, we present the various strategies people deploy in order to minimise potential negative outcomes of using a medicine retailer.

#### **Risk mitigation strategies related to the use of medicine retailers**

##### ***Evaluating the expertise of medicine retailers: "many are charlatans"***

Some of our participants pointed out the lack of regulation of the pharmaceutical sector by the regional health authorities. This results in a high number of (un)qualified medicine retailers and uncertainty regarding their competence and intentions. The lack of regulation also affects the quality of medicines sold and the dispensing of medicines without prescription, as evident in the quotation below:

*"The problem is that many [pharmacies] are not controlled by the government... they proliferate. We know doctors who own their own pharmacy, but the problem is that they put non-qualified people inside. You can come with a serious case, they give medicines, and you take them without knowing if they are good quality (...) If the pharmacies continue to operate without control, we know that using them is just calming the illness, but in reality, we're not sure that this pharmacist prescribes them [the medicines] accurately to avoid the worst." (Catholic church - men).*

This extract also highlights the difficulty of identifying a "safe" and trusted pharmacy, even if it is owned by a doctor. The participants identified two categories of 'risk' that lead to 'misbehaviour' by medicine retailers. Firstly, the pharmacy staff might not be qualified, indeed some

are regarded as charlatans or impostors who are just fumbling around for an answer. Secondly, some medicine retailers are seen to be purely motivated by profit, rather than aiming to deliver good quality healthcare.

*“And at the moment, there are some pharmacies that push people to death. There are some pharmacies where you go in and find a person who is just fumbling around. You ask him for a specific medicine, but he doesn’t even know it exists.” (Protestant church - men).*

This generates two kinds of risks. Firstly, the lack of knowledge of some medicine retailers that can lead to inaccurate diagnoses and ineffective treatment, with medicines prescribed in the wrong order, combination, or dosage. This can result in the patient’s health actually deteriorating and possibly the development of new health problems, or, in the worst case, death. People sometimes delay seeking proper care because they are following the advice of a medicine retailer, which results in additional costs, and they feel that they have made a bad investment, particularly when the treatment has been ineffective.

*« (...) if we have a sick child, we risk taking them to the pharmacy without knowing what the child is suffering from. We will give them medicines that might not help them. And if they get more seriously ill after taking the medicines that have not responded to his needs, we will then have to take them to the hospital<sup>5</sup>. And there, as it will already be serious, we will have to pay an exorbitant bill because we went to the hospital too late.” (Protestant church - chronic patients)*

Secondly, there are risks associated with poor practice linked to the profit motive of some medicine retailers. On the one hand, our participants strongly felt that it was legitimate for medicine retailers to seek to make a profit, i.e. they run a business, and this is a necessary and a normal part of their service. On the other hand, although some retailers were felt to go “beyond business” and to have genuine concern for people’s health, others were felt to be motivated *purely* by profit, e.g. they tried to sell off their stock, resulting in the sale of inappropriate, or expired medicines and sometimes in quantities which far exceeded the needs of the patient. These practices can have serious consequences, as explained in the following extracts:

*“The pharmacist might have (...) expired paracetamol that he does not want to throw away. Knowing this, he gives you this medicine that had already expired (...) he looks for a box or a document saying the medicine had not yet expired and he starts selling it. In this case, instead of curing you, he kills you (...) it generates other health troubles.” (Mosque - men).*

*“The bad [medicine retailer] is the one who tells you that chloramphenicol can also work, but you have asked for amoxy. He adapts [his advice] according to his stock. He makes you take a medicine that you don’t want. I used to take a medicine starting with the letter P. He gives me whatever he has starting with PO. This change has caused me insomnia.” (Catholic church - chronic patients).*

Even if it is not always easy to evaluate a priori the level of expertise or the intentions of medicine retailers, the participants in our study identified two different strategies they used in order to mitigate the risks related to unreliable medicine retailers. Firstly, many feel that the best option is to visit a medicine retailer who they already know, perhaps through a family member, a neighbour, a member of the worship community, or a friend. This relative intimacy gives a feeling of trust and safety, based on social closeness and previous positive experiences. These positive experiences can be shared among community members, leading to certain medicine retailers gaining a reputation as ‘qualified’. Secondly, the participants talked about how they identified a charlatan, for example the fact that a medicine retailer does not give explanations regarding the dosage or the side effects of a treatment, or who does not ask about the patient’s pre-existing health conditions. Poor practice, such as the examples outlined in the previous paragraph, are also seen to be indicators of a charlatan. Just as people share recommendations on good medicine retailers, they also share information on charlatans as suggested in the following extract:

*“Because there are times when the person wants to buy medicines in a pharmacy and his companion is against it: ‘no, no, no, in this pharmacy, they sell damaged or altered medicines.’ When other people know this, this pharmacy loses its credibility and people will know straight away that the medicines there are expired.” (Protestant church - men).*

According to the participants, in general, a qualified medicine retailer can be identified by the fact that they ask the patients questions (thus enabling a more accurate diagnosis), they give explanations about the treatment and its possible side effects, and they reorient them towards a formal healthcare facility if necessary.

<sup>5</sup> Many of our respondents do not make a clear distinction between the different types of existing healthcare facilities (health centres, hospitals of second and third levels, etc.), nor between public and private clinics and hospitals. They commonly refer to all types of healthcare facilities as “hospitals”.



### ***Developing personal medical expertise: “we have all become doctors”***

Most of the participants in our study are aware of the dangers of buying medicines at medicine retailers, however, most do not have any other alternative and have developed a certain self-proclaimed “medical” expertise. This is based on them having encountered multiple different health conditions over their lifetimes, meaning they have gained experience and knowledge; this knowledge relates to various medical conditions and symptoms, and the corresponding medicines (and dosage) and many people feel that it offsets the risks linked to the practice of self-medication, be it at home or by using medicine retailers.

*“(…) here now in Goma, we already know all the medicines. We know that the paracetamol is a medicine that heals headaches. We know that when we take an ibuprofen, it is going to treat this or that disease. I would say that we all have already become healthcare professionals because, when we are sick, we know which disease we are suffering from. And we also already know which medicines we have to take for which health condition. At our level, we only go to the pharmacy when we know which medicine we are going to buy (...) If the pharmacist has explained once how to take the medicine, it is enough for us.” (Protestant church - chronic patients).*

Indeed, perhaps unsurprisingly, the chronic patients were the group who most strongly asserted this kind of knowledge. Nonetheless, some of the participants do recognise the limits of their medical expertise, and recognise that their self-diagnosis might not be correct, and the patient’s condition might require medical expertise:

*“The illness depends on how sick the person is. If the person is so sick that they can’t stay at home, you realise that you will have to go to the closest health centre for medical examinations or a consultation. (...) Well, there are health problems that you can identify such as headaches. In that case, we don’t go to the health centre, but I will go to the pharmacy (...) If I haven’t recovered [the next day], then I go to a health centre to get the right care.” (Mosque - men).*

Thus, the level of confidence people feel about their self-diagnosis has an impact on the way they choose a medicine retailer and the kind of advice they seek. When they feel relatively sure about their self-diagnosis, they already know the type of medicines they need, and they do not expect any kind of questions or advice from the medicine retailer. In such situations, they do not feel the need to ‘screen’ them in advance or to assess their level of

competence. However, when they are unsure about their symptoms or condition, they seek guidance from the medicine retailer, and pay closer attention to the competence, profile, and level of expertise of the medicine retailer they decide to visit.

### ***Calling on a more humane service: “the compassionate heart of the pharmacists”***

Our participants see medicine retailers as much warmer and more humane than the practitioners working at healthcare facilities. Indeed, a ‘good’ or ‘qualified’ medicine retailer is closely associated with the notion of a ‘warm welcome’ i.e. they take time to ask questions, to listen to patients’ complaints and to take the patients’ feelings and condition into account when advising them. This may be because there is a certain social closeness between medicine retailers and their patients, meaning that they might be seen as friends:

*“(…) That’s why we prefer pharmacies. The owner of the pharmacy is like a friend, he’s like a family member. Because he can give you his products on credit. Then you start paying progressively.” (Protestant church - men).*

Beyond the fact of giving medicines on credit, this social closeness is also expressed by a warm welcome, attentive listening, and empathy towards patients. This empathy is in fact two-way as people understand the financial constraints faced by medicine retailers if they give credit too often. However, this social closeness only exists if the medicine retailers are seen to be motivated by concerns which go beyond pure profit, as explained previously. This contrasts with the general attitude of healthcare practitioners who work in healthcare facilities who are seen to treat patients with superiority and condescension and, in the worst case, with lack of respect, even more so when the patients are unable to pay the various bills. The relationships they maintain with the patients are seen to be asymmetric and marked by a lack of empathy, for example:

*“But you can go to the pharmacy of a known or unknown person, you will get medicines. After seeing the patient’s condition, the pharmacists still have this heart of compassion. Even if they are there for business, they can’t refuse you the medicines... even if they don’t know you, seeing the patient’s health condition. But, at the hospital, this is not the case.” (Revival church - men).*

Secondly, the ‘humane’ side of medicine retailers is linked to their “beyond business” attitude which includes a real concern for people’s health. Their profit motive



is therefore seen as much more acceptable than that of healthcare facilities where patients need to pay in order to receive treatment, which is seemingly at odds with the Hippocratic oath. The “beyond business” attitude of medicine retailers allows them to be more flexible in the relationships they develop, also reflecting their strategies to attract and retain their clients. This contrasts with the rigidity of the procedures in healthcare facilities, as well as a perceived lack of commitment to caring for the needs of all their patients, and a certain inflexibility in the public sector in general.

*“The healthcare professionals have already deviated from their mission. But, when taking the Hippocratic oath, they swear that their priority is health, to care first for patients. That is the priority of doctors but, for the moment, they don’t even show empathy for the patient. If he doesn’t have money, he won’t be treated (...) The patient can die in front of them like that. So, we think it best to go to the pharmacy, because of our lack of resources.” (Catholic church - men).*

#### **Voices from below**

Our participants consider that the government and regional authorities are responsible for the deterioration of the health system and the lack of regulation of the pharmaceutical sector; they blame the authorities for the risky and complex situations they face. According to some, the strategies they have developed are necessary to compensate for the negligence of the public sector and its inability to secure generalised access to healthcare. Some recommendations expressed by the participants emerged from the FGDs and are presented below.

#### **A plea for an improved financial accessibility to healthcare**

Several participants would like the government to create employment and income-generating activities in order to relieve their financial difficulties, and which in turn would allow them to take better care of their health. Most participants would like healthcare and healthcare facilities to be made more financially accessible, with some suggesting the use of self-supported ‘solidarity funds’ and mutual health insurance schemes, possibly developed through the various worship communities. Other participants would like to see the costs of healthcare facilities reduced in order to be in line with the financial resources of the people who live in Goma. Some also suggested that the modalities of payment should be reviewed i.e. flat rate pricing and no pre-payment in order to access care.

#### **Individual empowerment through health literacy**

Despite their self-proclaimed medical knowledge, several of our participants would like to be more empowered in terms of health literacy. They would like to be better equipped to understand medical problems or conditions, to know how to use medicines appropriately and how to screen the quality of the medicines they purchase. They also would like to be better informed in terms of the existing healthcare reforms and initiatives that are implemented in the city, in order to make a more informed choice when it comes to their health. This also includes better tools to select a qualified medicine retailer.

#### **Better regulation of medicine retailers’ expertise**

Several participants called for greater control of the pharmaceutical sector by the regional authorities, arguing that the regulations for the opening and functioning of pharmacies should be more strictly imposed. This includes verifying the qualifications and skills of medicine retailers. The fact that our participants use interchangeably the terms “pharmacist”, “pharmacy caregiver” or “nurse” when describing medicine retailers reflects the current blurred boundaries surrounding the professional profile of medicine retailers in Goma. The Ministerial decree n°1250 regarding the conditions for opening and running pharmaceutical facilities specifies, amongst other things, that a pharmacy must be run by a pharmacist [19]. However, according to the Provincial Order of Pharmacists, the number of graduate-level pharmacists in the city and the province of North-Kivu is not enough to cover the needs of the local community. The question is then to identify which professional profiles would be allowed to work as medicine retailers and under what conditions. Some of our participants suggested a mandatory minimum training course in order to enter the profession and an ongoing training system for currently practising medicine retailers. Allowing only trained and qualified medicine retailers to work in pharmacies would help our participants to feel safer and would reduce the risks of an inaccurate diagnosis and ensuing treatment. These issues need to be analysed in depth as there is much at stake for the credibility of the health system and patient safety. However, the potential negative effects of such a reorganisation and cleaning up of the pharmaceutical sector, such as the increase in the black market, must also be taken into consideration.

#### **An extended role for medicine retailers**

Some participants suggested that the role and services offered by medicine retailers should be extended and reinforced, perhaps by allowing them to conduct certain medical tests and analyses or to install small laboratories in their pharmacies for more accurate diagnoses. However, even if policymakers were to take such steps, they

would still need to take account of the fact that medicine retailers have varying levels of expertise and experience, as outlined above.

## Discussion

In Goma, the success of medicine retailers and the use of other informal sources of medicine such as family members and neighbourhood doctors and nurses are closely linked to the fact that they reduce the direct and indirect costs related to healthcare, and thus stand in stark contrast to the services offered in healthcare facilities. Medicine sellers involve low overall costs and patients can pay in instalments; this contrasts with common practice in more formal facilities. However, the participants in our study are aware of the dangers and limitations linked to the use of medicine retailers and have developed three main strategies in order to mitigate the risks; these in turn influence their choice of medicine retailer. Firstly, they assess the level of expertise of different medicine retailers; secondly, they develop their own medical knowledge; and, finally, they look for a more humane service by seeking out retailers who offer a more patient-focused service.

### The use of medicine retailers: a rational choice

When they are unwell, the residents of Goma tend to buy medicines on their own before consulting a doctor, in line with other sub-Saharan countries (for example, see research from Benin and Ghana) [11, 14, 33]. The use of medicine retailers seems to be mostly influenced by financial, structural, and cultural constraints, as previously highlighted by other authors [33, 34]. By weighing the pros and cons, our participants resort to medicine retailers as the least-worst option. As such, we can consider that the use of medicine retailers and self-medication are not decisions based on ignorance. On the contrary, they are the result of rational thinking and constitute a response to the pressures and constraints of a specific context. In places where universal healthcare is still under development and people have limited financial means, one alternative might be the use of contributory health insurance. Some participants suggested that such forms of insurance could be linked to the worship communities as they are places of socialisation and solidarity in Goma. However, there are numerous challenges of such an approach in low- and middle-income countries, whereby contributory health insurance can only be expected to make a limited contribution both to achieve universal health coverage and to limit household health expenditure [35–38].

### Cumulative experiential knowledge: citizens as ‘small doctors’

The residents of Goma have developed a certain kind of medical “folk knowledge” defined by Massé as “*socio-cultural constructs reflecting the vision that populations themselves have of the world of health and illness*” (authors’ translation) [39]. This folk knowledge builds on people’s previous experiences of illnesses and medicines and allows them to make conscious choices in terms of healthcare and to act with greater autonomy [33]. However, as highlighted by Baxerres et al., people’s knowledge essentially comes from their previous encounters with healthcare practitioners. This suggests that the patients’ decisions are informed to a certain degree by medical advice; yet this is a form of “indirect” advice, invariably based on knowledge which has been reproduced and transformed over time [33]. In the specific case of Goma, we could go even further and talk about the *transfer* of medical knowledge, particularly as some of our participants describe themselves as “small doctors”. This self-assigned status suggests that these participants no longer need nor expect “medical” advice from the medicine retailers when buying medicines. They have become clients rather than patients. However, other participants, who have not developed such expertise, still find themselves in the position of a patient, waiting for a free consultation from medicine retailers, or at least for advice and orientation. This fluctuation between the status of client and patient has been previously identified by Baxerres et al. in terms of people buying medicines from healthcare facilities, however in the context of Goma, it could be extended to the use of medicine retailers and outlets [33].

### The delocalisation of medical practice

Many of the focus-group participants look for a healthcare service that is humane and accessible; our data shows that when this is not provided by state provision, it can result in the development of alternative healthcare mechanisms such as the neighbourhood doctor or nurse. This phenomenon represents a certain delocalisation of medical practice and knowledge, away from healthcare facilities and towards people’s immediate social environment. Medicine retailers occupy a productive space between the intimate sphere of the household and the outside professional sphere of medical professionals. Some medicine retailers are seen to be more sensitive to people’s needs, that they adapt better to patients’ expectations, and people consider that it is legitimate for these retailers to seek to make a profit in their business dealings. In contrast, healthcare practitioners in healthcare facilities generally have a bad reputation but are nonetheless expected to respect their Hippocratic oath under all circumstances. This reflects a form of idealisation or

“romanticisation” of the public health sector [40]. The general attitude of medicine retailers and their success within the community have led our participants to consider them as the “new healthcare practitioners” and a visit to a medicine retailer has come to replace a visit to a healthcare facility. Baxerres et al. identified a similar phenomenon in terms of the pharmaceutical sector in Ghana [33]. This raises questions about the position and the function of healthcare practitioners in such contexts and the fact that healthcare facilities in Goma are currently underutilised [11, 14, 33]. This can doubtless be explained in part by the commodification of health within public healthcare facilities and the for-profit attitude displayed by their practitioners. However, the growing importance of medicine retailers in people’s health-seeking behaviours could also be an opportunity to rethink healthcare provision and to reassert the value of healthcare professionals within healthcare facilities.

#### **Recommendations for local health authorities**

The main challenge for policymakers and local health authorities is to guarantee a financial and equitable access to healthcare and medicines, while limiting the risks for the population. Medicine retailers have become an alternative healthcare provider for people of Goma, and we recommend the authorities to supervise their practice instead of forbidding it, such like in Nigeria and Tanzania where medicine retailers benefit from an official recognition under specific conditions. Indeed, regulation enforcement in the current context of Goma is not seen as a realistic option as there are many challenges in relation to governance and rule of law. Even if people of Goma are aware of the risks they face while going to medicine retailers, health authorities have a role to play in reducing the risks for the public. To do so, several options can be considered. One is to improve medicine retailers’ practices and skills. Three different options can be considered here. First, the provision of regular trainings and continuous education to strengthen their expertise and skills. Then, the supervision by qualified professionals who, beyond general advice on daily management, could be used as referral in specific situations when the case exceeds MRs’ knowledge. Finally, the implementation of a form of accreditation that would be linked to the two previous points (training and supervision). This accreditation — through a visible label for example — would give a tangible indication to people of Goma when choosing a skilled medicine retailer. Another option would be the partial and conditional articulation of medicine retailers to the formal health system. This could be done through the linkage between medicine retailers and future health projects or initiatives, such as their articulation to contributory health insurances as part of universal health coverage scheme. But this could

be also done in direct collaboration with healthcare facilities and their healthcare providers. They could consider delegating some basic functions (such as testing frequent illnesses with rapid diagnostic tests) to medicine retailers in order to give them an extended role, such as suggested by some of our participants. This should indeed come with appropriate training. The advantage for healthcare facilities would be to improve their services by dedicating more attention to more complex cases, and therefore to revalorise providers’ skills. However, a risk of resistance from the formal health system should be taken into consideration. The overall advantage would be to decrease the number of wrong diagnoses, and the resistance developed to specific types of medicines. In parallel, healthcare facilities must be made more attractive and accessible to the public. To do so, pricing and payment modalities need to be rethought. Such initiatives are already being implemented in some healthcare facilities with donors’ support in Goma and in the province. In addition to enhancing financial accessibility, the attitude of healthcare providers needs to be improved, with strategies combining intrinsic and extrinsic motivation as they regularly face income challenges in terms of amount and frequency of payment. Finally, health authorities should also consider implementing communication campaigns destined to people of Goma. The objective would be two-fold: informing them on existing and future initiatives improving the financial accessibility to healthcare system and securing the pharmaceutical sector, but also enhancing their health literacy to convert them into more empowered health players. These campaigns must be thought and broadcasted through communication channels adapted to the specificities of the people of Goma.

However, to implement such changes, further research is needed. These could focus on concrete modalities to improve the supervision of the pharmaceutical sector in a sensitive and fragile context such as North Kivu, to articulate medicine retailers to the formal health system in order to improve its financial accessibility, and to increase health literacy among people of Goma. To do so, more data are needed, including regarding the organisation and functioning of medicine retailers as a professional group to better understand their daily practice and the challenges they face.

#### **Limitations and methodological considerations**

Although we endeavoured to gain an emic and representative picture of the attitudes and practices of the residents of Goma in this study, our results are inevitably framed by a certain number of limitations. Our data is possibly influenced by a degree of participation bias, given that participation was voluntary and the fact that we collaborated with local religious leaders to put the groups together. During the FGDs, we tried to ensure

that the participants could express themselves freely, however, this might have been affected by the differing socio-economic statuses and professional backgrounds within some of the groups and the fact that some participants felt more comfortable speaking in a group than others, and thus occasionally monopolised the floor. To improve interaction between participants, greater attention could also have been paid to our exclusion criteria to ensure they were no participants with links to the formal or informal healthcare systems in operation. Data was collected in Swahili, again to allow participants to express themselves as freely as possible, however, we probably lost some nuance in the process of translation.

The institutional affiliations of the research team and perceived intentions also had an impact on the way some people participated. In the early discussions, some people were reluctant to take the floor; they were sometimes suspicious and were concerned that we belonged to official public health institutions and that we could use the information to ‘clean up’ the medicine retailing sector. These dynamics were also sometimes complicated by sensitive discussions with some participants who considered that they should be paid for their participation in the FGDs, however, this was not possible under the ethical framework guiding the study.

This study focuses solely on the residents of Goma and is one part of a broader exploration of medicine retailers in the city. Subsequent studies will contrast and complement the data reported in this paper and will explore the perspectives of medicine retailers themselves and of policymakers.

## Conclusion

In this study, we investigated people’s practices and strategies when using medicine retailers. Whilst the results primarily apply to the city of Goma, they could also be applicable to the province of North-Kivu as well as to other African cities in similar situations. This qualitative study focuses on the “demand” dimension of healthcare i.e. the perspectives of patients, thus addressing a gap in the literature [5, 8, 9, 22]. Furthermore, by giving the voice to the residents of Goma, we have tried to go beyond the “single story of medicine, health, and health-seeking behaviours”, as denounced by Mkhwanazi [40].

When facing a health problem, most of our participants choose to first resort to medicine retailers, primarily because of their financial, social, and material accessibility. However, our participants are aware of the risks and limitations linked to their practices. They know that resorting to medicine retailers will generally only bring them pain-relief, rather than full recovery, yet this is seen as the least-worst option. In this paper, we have demonstrated the rationale behind people’s choices and have identified the main risk mitigation strategies. These

include: evaluating the level of expertise of medicine retailers; developing medical knowledge; and looking for warm, empathetic care. Participants made some recommendations which would enable them to make more informed decision and ultimately guarantee them better and safer access to healthcare in the future. These include pleas for improved financial accessibility to healthcare, individual empowerment through health literacy, better regulation of medicine retailers and an extended role for medicine retailers.

## Supplementary Information

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Supplementary Material 1

Supplementary Material 2

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## Author contributions

A.O. contributed to the concept, lead the research on the field, performed thematic content analysis, and drafted the original manuscript. E.P. contributed to the interpretation of results and the revision of the manuscript. C.M. contributed to the concept, thematic content analysis, interpretation of results, and revision of the manuscript. All authors reviewed the manuscript.

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## Data availability

Data associated with this article can be obtained from the corresponding author upon reasonable request.

## Declarations

### Ethics approval and consent to participate

Ethics approval was obtained from the Erasme Hospital Ethics Committee in Belgium (P2021/309 – CCB4062021000160) and the Université Libre des Pays des Grands Lacs in Goma (004/CE/ULPGL/MK/2021). The research has been performed in accordance with the Declaration of Helsinki.

### Consent for publication

Not applicable.

### Competing interests

The authors declare no competing interests.

### Informed consent

was obtained from all subjects involved in the study. We guaranteed confidentiality and anonymity and explained their modalities.

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