



Reasons for not seeking formal healthcare after injuries: A qualitative study with injured individuals in four low- and middle-income countries

Agnieszka Ignatowicz & Equi-Injury Group first

To cite this article: Agnieszka Ignatowicz & Equi-Injury Group first (2026) Reasons for not seeking formal healthcare after injuries: A qualitative study with injured individuals in four low- and middle-income countries, *Global Public Health*, 21:1, 2650929, DOI: 10.1080/17441692.2026.2650929

To link to this article: <https://doi.org/10.1080/17441692.2026.2650929>



© 2026 University of Birmingham.



Published online: 06 Apr 2026.



Submit your article to this journal [↗](#)



Article views: 323



View related articles [↗](#)



View Crossmark data [↗](#)

Reasons for not seeking formal healthcare after injuries: A qualitative study with injured individuals in four low- and middle-income countries

Agnieszka Ignatowicz, Equi-Injury Group first

Department of Applied Health Sciences, University of Birmingham, College of Medicine and Health, Birmingham, UK

ABSTRACT

Injuries are a major cause of morbidity and mortality in low- and middle-income countries, but many individuals do not seek care within formal healthcare systems. Although previous studies have highlighted barriers to healthcare, limited attention has been given to the experiences of those who remain beyond the formal systems. This study explored why injured individuals in Ghana, Pakistan, Rwanda and South Africa did not seek hospital care. Ninety-seven participants were purposively sampled from rural and urban settings. Interview data were analysed thematically, drawing on biosocial and pluralistic understandings of care. Across countries and settings, participants described how decisions not to seek care were influenced by the combined effects of out-of-pocket costs, transport challenges, past experiences with providers and long waiting times. These factors interacted with sociocultural factors, including beliefs, family influences and trust in indigenous healers. However, formal healthcare was not entirely rejected. Rather, care seeking was dynamic and contingent, with participants navigating decision-making based on affordability, perceived effectiveness and acceptability of treatment. The findings highlight that seeking care for injury should be understood within broader structural and sociocultural contexts. Improving access to formal injury care requires contextually grounded, culturally responsive approaches that acknowledge pluralistic care practices and reflect lived experiences of injury.

ARTICLE HISTORY

Received 28 September 2025
Accepted 22 March 2026

KEYWORDS

Injury; seeking care; qualitative; low- and middle-income countries

Introduction

Injuries are an important global public health issue, accounting for more than 5 million deaths annually and leaving millions more with temporary or permanent disabilities (Gosselin et al., 2009; Vos et al., 2020; World Health Organization, 2022a). The burden disproportionately affects low- and middle-income countries (LMICs), where the majority of global injury-related mortality occurs (Gosselin et al., 2009; Hyder et al., 2017). Beyond immediate physical trauma, injuries frequently result in long-term economic and social consequences, such as reduced capacity to work, loss of income and disruptions to family life (Haagsma et al., 2016; Kobusingye, 2005).

Access to timely and appropriate care is critical to mitigating the impact of injury-related mortality and disability (Fraser et al., 2020; Henry & Reingold, 2012). In many healthcare systems, formal services such as hospitals, healthcare facilities and pharmacies are the primary points of providing injury care and rehabilitation. However, in LMICs, access to these services is often limited by resource and geographic constraints and influenced by cultural perceptions of illness and healing (Grimes et al., 2011; Kruk et al., 2018; MacKian, 2003). Injured individuals in these settings and situations frequently bypass formal healthcare services in favour of indigenous healers, faith-based healing or home remedies (Adams et al., 2015; Ariës et al., 2007; Ensor & Cooper, 2004; Shange & Ross, 2022; Tan et al., 2021), and may move between these options when available (Broom et al., 2010; Hughes et al., 2012; James et al., 2018).

Understanding how economic circumstances, social and cultural values, and prior experiences with healthcare shape individuals' decisions about whether and where to seek care when injured is important for designing responsive and equitable health systems (Davies et al., 2024; Odland et al., 2022, 2020). Care

CONTACT Agnieszka Ignatowicz  a.m.ignatowicz@bham.ac.uk  Department of Applied Health Sciences, College of Medicine and Health, Murray Learning Centre, University of Birmingham, B15 2TT, Birmingham, UK

© 2026 University of Birmingham.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

seeking is not always solely driven by biomedical urgency but can be shaped by broader cultural, social and structural contexts (Kleinman, 1980; Lakshmi et al., 2015; Sundararajan et al., 2015). However, the perspectives of injured individuals who do not engage with the formal health system remain largely absent from research. Much of the existing literature on seeking care after injury is based on healthcare facility-based studies or focused on single-country contexts (Whitaker, Amoan et al., 2024; Whitaker, Njawala, et al., 2024); Whitaker, Togun, et al., 2024). While systematic reviews have synthesised findings on barriers to accessing care after injury (Kinder et al., 2022; Whitaker et al., 2021), they rarely capture the experiences and perspectives of individuals who do not engage with hospital services. This matters not only for improving healthcare services planning but also for promoting equity. Without understanding the circumstances of those outside of the formal healthcare system, interventions risk overlooking those most vulnerable and perpetuating existing inequalities.

This paper addresses this gap by exploring why injured individuals in four LMICs—Ghana, Pakistan, Rwanda and South Africa—did not seek formal healthcare. Drawing on qualitative interviews, the study examines both shared and context-specific factors shaping care decisions. In doing so, it aims to contribute new insights to inform more contextually grounded and equitable approaches to injury care.

Materials and methods

This was a qualitative interview study involving injured individuals in four LMICs designed to explore reasons for not seeking formal healthcare.

The study was undertaken as part of the NIHR Global Health Group on Equitable Access to Quality Health Care for Injured People ('Equi-Injury') project. The project aims to understand how to improve equitable access to quality care after injury and develop evidence-based interventions within and across partner countries: Ghana, Pakistan, Rwanda and South Africa. Detailed methods for the main project have been published elsewhere (Davies et al., 2024).

Below, we describe each country's context, focusing on cultural, economic, and structural factors that influence decisions regarding seeking injury care. The four countries were purposively selected to reflect diverse LMICs. Within each country, partner-country research teams selected the study sites based on the feasibility and practicality of data collection, ensuring the inclusion of both urban and rural population to capture variations in healthcare access and injury care pathways, and to represent the country context as much as feasible.

Study settings

Ghana is a lower-middle-income country in West Africa with a population of 33 million (World Health Organization, 2025). It has a pluralistic healthcare system combining formal biomedical, indigenous and faith-based healing practices. Engagement with formal healthcare services is often shaped by financial constraints and social and cultural influences, such as stigma and distrust of formal health institutions, which limit engagement with healthcare systems in Ghana (Ayinde et al., 2023; Nyande et al., 2022; Wongnaah et al., 2025). High out-of-pocket (OOP) healthcare costs make hospital care unaffordable, particularly in rural areas (Aidam et al., 2016). Traditional medicine is commonly used for musculoskeletal injuries, burns and chronic conditions (Ventevogel, 1996). Religious beliefs also shape healthcare-seeking behaviour, with faith-based healing and prayer often preferred over hospital visits (Okyere Asante et al., 2023). These patterns reflect a biosocial understanding of health, where decisions to seek care are shaped not only by clinical need but also by cultural norms, lived experience and financial constraints (Nyande et al., 2022; Sulemana & Dinye, 2014). The study sites were Tamale Metropolis (urban) and Bekwai Municipality (rural).

Pakistan is a lower-middle-income country with a population of 230 million (World Bank, 2021). Traditional medicine, informal healthcare providers, and spiritual healing are widely relied upon, particularly among lower-income and rural populations (Shaikh & Hatcher, 2005). With the highest OOP healthcare costs among the four study countries and Universal Health Coverage (UHC) still in the early stages of being implemented (The World Bank, 2021; The Institute for Health Metrics and Evaluation, 2020), formal biomedical care is unaffordable for many. Cultural and religious beliefs strongly influence medical

decision-making (Arooj, 2023). There is evidence that care seeking often follows pluralistic pathways, where individuals first attempt home remedies and traditional treatments, resorting to hospitals only if their condition worsens (Hussain et al., 2012). The study sites were Karachi (urban), Hyderabad (peri-urban) and Thatta (rural), within Sindh Province.

Rwanda is a low-income country in East Africa with a population of 13 million (National Institute of Statistics of Rwanda, 2022). In Rwanda, a strong tradition of community-based healing practices exists alongside a formal biomedical healthcare system. Despite high rates of community health insurance coverage (Mutuelles de Santé), OOP costs remain a significant barrier, particularly for the poorest (Africa CDC, 2024; Sabet et al., 2024). While primary healthcare (PHC) delivery and outcomes, such as reductions in maternal and under-five mortality and access to basic services, have improved significantly, the quality of tertiary services, including surgical care, remains limited (National Institute of Statistics of Rwanda (NISR) Rwanda, et al., 2021; Selden et al., Selden and Rusingiza, 2025). Traditional healers and herbalists continue to play a key role in healthcare-seeking behaviours, often serving as the first point of contact before biomedical care is considered (Niyonshuti, 2022). The settings for this study were Musanze District in Northern province (urban) and Nyamasheke District in Western province (rural).

South Africa is an upper-middle-income country with a population of 63 million¹ (Statistics South Africa & R.o.S.A., 2019). There is a dual healthcare system in South Africa, where a well-resourced private sector contrasts with an overburdened public health system that serves the majority of the population. Historical racial inequality, economic disparity and substance abuse significantly shape healthcare-seeking behaviours (Bosire et al., 2021). Entrenched system failures, such as long waiting times, shortages of staff, deteriorating infrastructure and frequent stockouts, undermined trust in the formal biomedical health system and pushed many individuals to seek treatment from Sangomas and other traditional and spiritual healers (Coovadia et al., 2009; Kale, 1995). The study sites were Ngqamakhwe (rural, Eastern Cape) and Bishop's Lavis (urban, Western Cape).

Participant selection and recruitment

In each country, we aimed to recruit up to 40 participants from both urban and rural sites, ensuring a balanced sample across settings. Purposive sampling was used, where feasible, to ensure representation across different ages, sexes and mechanism of injury, to capture a range of care-seeking experiences after injury. Sample size was guided by qualitative research principles, including anticipated information power, thematic coverage and insights from our previous studies in the area, and practical considerations such as participant accessibility.

Participants were invited to take part in the study if they had experienced an injury within the past 3 to 12 months, did not seek or had not received the majority of their treatment from formal healthcare services (secondary or tertiary healthcare). Injuries of all types were considered (e.g. fractures, burns, soft tissue injuries) and included if they required medical care. Therefore, individuals with minor injuries and those who had received inpatient care for their injury were excluded.

In four countries, participants were recruited through local community networks, including community and faith leaders, healthcare professionals and community healthcare workers, in collaboration with Community Engagement and Involvement (CEI) leads in each country. Recruitment also involved targeted outreach at religious gatherings, visits to bone setters and indigenous healers and homeopathic clinics. Identification of potential participants often relied on local informants, such as community leaders or health workers, who were aware of individuals recently injured. In South Africa and Pakistan, study team members familiar with the area asked around in public spaces or were directed by word of mouth to individuals known in the community to have sustained the injury.

Potential participants were approached by study team members either in person or by phone and provided with verbal and/or written information about the study in their preferred language. All participants gave informed consent prior to participation. Further details are provided in the ethics considerations section.

¹ At the time of data collection for this study, South Africa was classified as an upper-middle-income country.

Data collection

Face-to-face and telephone (in Pakistan only) semi-structured interviews were conducted between December 2023 and May 2024. Interviews were audio recorded and lasted up to 45 min. They were conducted in the participant's preferred language at a location of their choice, including their homes. Participants were interviewed by in-country study team members, all of whom were native to the country in which the data collection took place and fluent in both English and the local languages used. This facilitated rapport building and enhanced the credibility of the data. If interviews were conducted in languages other than English, translation was performed by the same bilingual in-country researchers to ensure contextual and linguist accuracy. This approach supported consistency and trustworthiness by minimising loss of meaning during translation.

A topic guide (see Appendix) was developed based on existing literature and project members' expertise to explore participants' experiences of seeking care, reasons for not accessing hospital care, and barriers and facilitators to seeking treatment in the formal healthcare system. The guide was adapted to local contexts, allowing the interviewer's discretion to explore emerging themes during discussions. The guide was piloted in each country.

To enhance rigor and trustworthiness, in-country researchers received training and ongoing support from senior research team members. Regular cross-country meetings were held to discuss field experiences, emerging issues and consistency in data collection practices.

Data analysis

We conducted a thematic analysis of the interview data (Clarke & Braun, 2017), using primarily inductive approach. Our goal was to allow themes to emerge from the data, grounded in injured individuals' own experiences. However, the analysis was also sensitised by prior literature on barriers to care seeking in LMICs and guided by biosocial and pluralistic understandings of care (Baer, 2011; Horwitz et al., 2021).

Each country's dataset was independently coded and analysed by both the in-country lead researcher and the central project team, ensuring consistency in analytical approaches and allowing for cross-country analysis. The same analytical process was applied in the four countries. We began by familiarising ourselves with the data, followed by inductive open coding of a subset of transcripts (around four to six) to develop an initial coding framework. This framework was iteratively refined and applied to the remaining transcripts. Codes were then collated into broader themes, capturing recurring patterns in participants' narratives about care-seeking decisions after injury. Coding was performed using NVivo qualitative analysis software (QSR International, n.d.) to systematically organise data.

Themes were reviewed and discussed within country teams and during cross-country analytical meetings. Any discrepancies in coding between in-country researchers and the central team were resolved through iterative discussions and joint reviews of selected transcripts. This process enabled the identification of shared patterns and important contextual variations across study countries. Final themes were defined and named collaboratively, drawing on reflexive team discussions to ensure rigour and sensitivity to the local context.

Ethical considerations and approval

All participants provided verbal and signed consent before taking part in the study. They were given a written information sheet detailing the study's purpose and activities, which was prepared in an appropriate language and, for those with limited reading ability, in-country researchers read the information aloud at the point of recruitment to ensure full understanding. To ensure confidentiality, participants were assured that their identities would remain anonymous throughout data collection, management and reporting. While participants were not reimbursed for their involvement, they received a small token of appreciation for their time and effort (such as food or drink), and transport costs were covered where applicable. The safety and wellbeing of in-country researchers were also considered, with data collection planned in consultation with CEI leads and community leaders and procedures in place to ensure safe access to the field and conduct of the research.

The study received approval from ethical review boards: Ghana Health Service Ethics Review Committee (GHS-ERC 014/09/22), Aga Khan University Ethics Review Committee in Pakistan (2022-7372-23339), Rwanda National Ethics Committee (IRB 00001497 of IORG000110, No 85/RNEC/2023) and Stellenbosch University Health Research Ethics Committee in South Africa (N22/07/079). The University of Birmingham (the overall sponsor for this study) accepted local ethics approvals for this project in lieu of the requirement for a full ethics review.

Results

A total of 97 injured individuals were interviewed for this study. The sample consisted of 57 males and 40 females, with the gender distribution varying by country. Ghana and Pakistan had predominantly male participants, while Rwanda had a higher number of female participants ($n = 23$). In South Africa, women made up the majority of the sample. Around half of the participants were unemployed ($n = 52$). A range of injury mechanisms were reported, including road traffic collision, falls, interpersonal violence and injuries, caused by falling heavy objects. Participant characteristics are presented in Table 1.

Drawing on biosocial and pluralistic lens (Baer, 2011; Horwitz et al., 2021), the analysis of data highlights how injury care decisions are shaped by a dynamic interplay of social, cultural and economic factors. Across all countries and settings, participants described a number of factors that influenced their decisions about when, whether and where to seek care. Key themes included financial constraints, such as the cost of medical treatment, transport and lost income; cultural and familial influences and community norms that shaped decisions around preferences for indigenous, herbal or home-based care. These factors often intersected and converged, illustrating the multi-faceted and context-specific nature of decision-making after injury. In the sections below, we explore each theme in more detail.

1. Financial constraints: direct and indirect costs that impact decisions not to seek care in hospitals

Injured individuals described how financial constraints shaped their care-seeking decisions. The high cost of formal healthcare, including fees for treatment, medication and transport, often pushed individuals to seek care with indigenous healers or managing injuries at home.

In the Ghanaian sites, some participants described hospital fees as 'prohibitive', noting that this cost led them to seek treatment from local bone setters. In Rwanda, several participants talked about the accessibility of national insurance schemes for treating injuries:

"If I had mutuelles [community-based health insurance] I wouldn't have hesitated or sought advice, I would have immediately sought medical help at the hospital." (Female, Rwanda)

Beyond direct costs and lack of insurance, indirect expenses, such as transportation costs added additional burdens, particularly for participants residing in rural areas where healthcare facilities were

Table 1. Participant characteristics across four study countries.

Country	Setting	Gender	Types of self-reported mechanisms of injury	Total no. of participants
Ghana	Rural = Bekwai Urban = Tamale	Male = 23 (10 urban, 13 rural) Female = 7 rural	Road traffic collision, falls and injuries caused by falling heavy objects	30
Pakistan	Rural = Hyderabad and Thatta Urban = Karachi	Male = 11 (5 urban, 6 rural) Female = 2 urban	Falls, road traffic collision, injuries caused by falling heavy objects	13
Rwanda	Rural = Nyamasheke Urban = Nyarugenge	Male = 17 (10 urban, 7 rural) Female = 23 (15 urban, 8 rural)	Falls, burns, road traffic collision, injuries caused by falling heavy objects	40
South Africa	Rural = Ngqamakhwe, Eastern Cape Urban = Bishop Lavis, Western Cape	Male = 6 urban Female = 8 (4 urban, 4 rural)	Falls, interpersonal violence, road traffic collision, injuries caused by falling heavy objects, burns	14
Total				97

distant and poorly accessible. In South Africa and Ghana, participants highlighted how the need to get private transportation in emergencies made hospital care inaccessible:

"I was told to look for a private transport [to go to hospital] which would have costed R1000.00, which I did not have." (Female, South Africa)

"I thought of it but couldn't because it wasn't possible for me to pay for a [private] motorbike transport to and from the hospital." (Male, Ghana)

In all the settings, the participants described turning to indigenous healers, home remedies, or self-care as the only financially viable option. Their narratives reflected pluralistic understandings of care, where indigenous, formal and home care coexist as viable options, but the decisions following injury are based primarily on economic considerations.

2. Cultural legitimacy of care: beliefs and norms that validate indigenous treatments and faith-based remedies

Across all study settings, decisions not to seek treatment in hospitals were shaped by embedded cultural norms, family hierarchies and perceived legitimacy of indigenous and faith-based healing. In rural areas in particular, decisions about when and where to seek care after injury were often collective, mediated through social relations, guidance from the local community and long-standing cultural traditions of healing.

In Pakistan and South Africa, participants described deferring the decision to seek care to family members, such as fathers, brothers or community elders, who directed them towards indigenous healers and herbal remedies. These decisions reflected respect for authority but also trust in culturally rooted healing practices:

"My father just said, 'Let's go to the healer.' I don't know why he chose to go there - it was up to him where we go." (Male, Pakistan)

"Since childhood, whenever we get injured, we go to [name of healer]... Our family has always taken us to him." (Male, Pakistan)

Care decisions were influenced by cultural norms and bystanders at the time of the injury, often encouraging the use of indigenous or herbal treatment:

"I was thinking of going to the hospital, but the people around me [bystanders] encouraged me to try the traditional treatment option." (Male, Ghana)

"Someone with a burn injury cannot heal quickly at the hospital. I was thinking that if I take my child to the hospital, it will delay the healing process but if I use traditional medications, it will heal faster." (Female, South Africa)

Indigenous and faith-based healing was also legitimised through religious networks. Some participants believed that injuries were spiritual in nature and best addressed through prayer, rather than treatment in formal healthcare:

"The pastor told me my sores would heal through prayers, so they kept praying, and I kept praying." (Female, Rwanda)

Others cited the accessibility and perceived efficiency of traditional remedies, especially those that their families and communities used for generations. For example, in South Africa, one participant turned to a culturally recognised medicinal plant recommended by a family member:

"My brother suggested a traditional plant called mhlabele. He said it helped him previously. Fortunately, he had that plant in his room." (Male, South Africa)

In these examples, the decision not to seek care in hospital was embedded in cultural beliefs, shared practices and social obligations that shaped how care was understood and chosen.

3. Trust and mistrust: confidence (or lack thereof) in formal healthcare providers shaped by prior experiences and perceived quality of care

Participants' decisions not to seek hospital care were shaped by perceptions of trust and context-specific experiences of receiving formal care. These decisions reflected concerns about the quality, safety and responsiveness of the formal health system, often grounded in prior experiences of receiving care. Although specific concerns differed across study settings, participants often described formal care as inaccessible, poorly resourced or lacking credibility, which led them to avoid hospitals even when injured.

In Rwanda and Pakistan, some participants highlighted concerns about hygiene and safety standards. They also described fears of infection, lack of anaesthesia and unsafe procedures:

"I was afraid to be sutured because I was cut. I was scared that they would perform suturing without anaesthesia. You know, the hospitals, sometimes they run out of anaesthesia." (Female, Rwanda)
"The reason was my lack of trust in the paramedical staff... government doctors do not provide proper treatment." (Male, Pakistan)

Amongst injured individuals in Ghana and South Africa, concerns focused more on delays, medication shortages and poor treatment from healthcare providers:

"No, I did not want to go to the hospital because of the delay there... there is always no medication there." (Male, Ghana)
"You also wouldn't go to our clinic, since the time COVID-19 started, patients are left to wait outside... not getting any help." (Male, South Africa)

Past experiences of unsatisfactory care seemed to reinforce decision not to seek care in formal healthcare services:

"I have already gone through struggles and disappointments when I had my knee operation... I had taken the decision this time around not to go for care [in hospital]." (Female, South Africa)

The narratives were often counterbalanced by widespread trust in indigenous healers, who were seen as accessible, effective and culturally aligned. Participants preferred traditional care for injuries like fractures and burns, drawing on family traditions, community advice and personal success stories:

"The pain was too much but after visiting the traditional healer I realized the pain was reduced." (Female, Ghana)
"I trust them [bone setters] because I know someone who... had a plaster cast, but it didn't improve... After going to a bone setter, he saw significant improvement." (Female, Pakistan)
"They are good with herbs [the healer], they stay in my area. Even whilst talking to them, they told me they would make a mixture for me. They prepared the bark of umnga tree and bandaged me with it." (Female, South Africa)

The accessibility and familiarity of indigenous care shaped treatment choices, even when formal healthcare facilities were available. Many, particularly participants in the Ghanaian settings, also believed hospitals would ultimately refer them to traditional healers for musculoskeletal injuries:

"Mostly, the hospital will redirect you to go to the local bone setter for treatment before going to the hospital." (Male, Ghana)

This perception seemed to reinforce the idea that traditional and formal healthcare care were not opposing choices but part of a continuum in which individuals navigated options based on trust and anticipated outcomes.

4. Navigating between systems: fluid movement between indigenous and formal healthcare systems

Across settings, several participants described moving between indigenous and formal health systems, based on the evolving needs, perceived effectiveness of treatment, affordability and acceptability of proposed treatments. In such cases, care-seeking behaviour was not linear but was shaped by a dynamic negotiation of trust, past experiences, affordability and practical aspects of accessing care.

Some participants admitted begging their care journey in healthcare facilities, but later turning to traditional or home-based options due to dissatisfaction with the experience, fear of further interventions, perceived stigma or perceptions that the care provided would not address their needs:

"I went to the hospital where a doctor around my age administered a free pain relief injection. After that, he started a glucose drip and dressed my wounds, applying bandages. He advised me to consult an orthopaedic specialist, but I decided not to follow that recommendation (...) I chose to visit a bone setter for further treatment." (Male, Pakistan)

"I went to the health centre, arriving there, they referred me to come to the hospital, and I failed to go to hospital as I thought they would immediately admit (...) and I decided to return home." (Female, Rwanda)

"(...) Even if I was referred to [name] hospital to check up my knee and hip, the issue is that I know from previous visits to the clinic they had mentioned the fact that I am overweight. So if I were to see a doctor, regardless of the circumstances, they would bring up that my weight is too much and I need to lose weight. Even if I were to go [to doctors] in ten years time, they would be saying the same thing to me." (Female, South Africa)

For many, indigenous, faith- or home-based care remained the preferred choice of treatment. However, they did not dismiss formal healthcare care but described their engagement as conditional, for situations when symptoms worsened, pain became uncontrollable, or traditional methods failed to bring relief:

"Well, in the future, I plan to consult a doctor because this bandages treatment is a short-term solution; it's not a long-term fix." (Male, Pakistan)

"I would go to the doctor in the future because this time the shape of my foot has completely changed due to self-treatment." (Female, Pakistan)

"I would go to hospital as I went through so much pain (...) I would try to pay for transport so I can get." (Female, South Africa)

Some injured individuals also expressed a desire for improved formal healthcare systems—not to displace indigenous or spiritual healing, but to make hospitals more accessible and trustworthy when needed. In Rwanda, the suggestions included more local facilities, shorter waiting times and better availability of medications:

"As some of us face long time consequences due to not having access to care and seek care from traditional healers, the community awareness can help, so that everyone could visit the hospital when needed." (Male, Rwanda)

Discussion

This study explored why injured individuals in four LMICs —Ghana, Pakistan, Rwanda and South Africa—did not seek hospital-based care. Across settings, participants' decisions were grounded in the social realities of their lives, mediated by financial constraints, cultural norms, mistrust in formal healthcare services and the perceived effectiveness and accessibility of care. These decisions were rarely based on a single factor but rather emerged from a complex interplay of influences (Sundararajan et al., 2020; Tran et al., 2019, 2021), shaping how accessing care for injury was understood and navigated.

A key theme across settings was the intersection of structural, social and cultural factors that influenced care-seeking decisions. Financial constraints, such as out-of-pocket costs and transport costs, are often combined with past negative experiences accessing formal healthcare and cultural preferences for indigenous or faith-based healing. In Ghana, participants talked about high hospital fees while also noting that hospitals often referred fracture cases to traditional bone setters. In South African study sites, concerns over being judged by healthcare professionals and a preference for home remedies were compounded by logistical barriers to care. Formal healthcare services were often viewed as unreliable or difficult to access. Across Rwandan and Pakistani settings, participants described insurance schemes as inadequate for injury-related needs, and in both Ghana and South Africa, issues such as medication unavailability or long waiting times were linked to a lack of trust in formal healthcare services.

Care-seeking decisions were also shaped by sociocultural dynamics, including belief systems, community norms and gender roles. Participants talked about the family tradition of using indigenous or faith-based healing, particularly in Rwanda and Pakistan, where the participants described choosing prayer or consultation with religious leaders over formal care. These beliefs and norms were often intertwined with social hierarchies and gender roles. In some cases, decisions concerning where to seek care were not made by the injured individuals alone but were negotiated within family or community hierarchies, with elders or male relatives ultimately deciding the appropriate course of action. These layered dynamics were often

reinforced by existing structural factors and legitimised pluralistic approaches to care (Balabanova et al., 2013; Moshabela et al., 2011).

However, indigenous, faith-based or home care were not always used in isolation (Kleinman, 1980, 2019; Sundararajan et al., 2020). Participants described shifting between these based on the progression of symptoms or unsuccessful treatment outcomes. Their narratives showed how care-seeking decision-making was often a negotiation between available options, which was based on lived experiences (Sundararajan et al., 2020).

These findings align with broader literature that positions care-seeking in LMICs as embedded in social contexts, where structural inequalities intersect with cultural meanings and social relations to shape access and decision-making (Dawkins et al., 2021; Kane et al., 2023; Moshabela et al., 2011; Saxena et al., 2023). In the case of injuries, decisions to seek care outside of the formal healthcare system were shaped by the interplay of many factors, and pluralistic care practices have emerged as strategies grounded in the lived experiences of injury.

Taken together, our findings highlight that improving access to hospital-based injury care in LMICs requires contextually and culturally sensitive approaches (Cipta et al., 2024; Davies et al., 2024). Those who remain beyond formal healthcare services are often the ones who are most affected by intersecting structural, social and cultural factors. However, their perspectives are often overlooked in research and policy. In many LMIC settings, low levels of participation and consensus in injury care governance have been documented (Leila, 2025), leading to policies and interventions that are often misaligned with the lived realities of injured individuals. For injuries, where decision must be made quickly and often under pressure, care-seeking relies not only on the availability of services but also on what is affordable, trusted and culturally acceptable. Without accounting for these realities, policies are risking existing inequalities and failing to meet the needs of injured individuals (Ford-Gilboe et al., 2018; Patil et al., 2024; World Health Organization, 2019, 2022b).

Based on our results, we offer the following recommendations towards building more culturally responsive, contextually grounded and equitable approaches to injury care:

- 1) Recognise and integrate pluralistic care practises: acknowledge the legitimacy of indigenous, faith-based and home-based healing practices for injuries. Previous research on other conditions in LMIC emphasises that these should not be viewed as oppositions to formal healthcare, but rather as integral to understanding decisions around seeking care (Atim et al., 2021; Klarman et al., 2021; Moshabela et al., 2011). Recent work from Uganda (Sundararajan et al., 2020) further supports this view, demonstrating that pluralistic care seeking is a normative and strategic response to the structural and cultural realities of illness. In the context of injury care, acknowledging these plural pathways allows for a deeper understanding of how individuals navigate injuries and can support the development of more inclusive care practices.
- 2) Develop/strengthen collaborative referral and communication with indigenous and informal providers: work towards partnerships between formal healthcare services and indigenous healers by creating respectful and culturally aligned referral pathways. Research has shown that such collaborations can enhance trust, ensure timely referral to care, and help support access to formal healthcare by validating the role of traditional providers within the broader healthcare landscape (Conteh et al., 2025; Gyasi et al., 2017; World Health Organization, 2022b). In the context of injuries, where time-sensitive care is often critical, collaborative models can promote timely access while respecting cultural beliefs and practices and realities of accessing care after injury.
- 3) Engage diverse stakeholders in service development and injury policy and include a broad range of stakeholders, including those who have experience of injury but did not access hospital care, community members, indigenous healers, religious leaders and others in the development and delivery of policies and health services. Multistakeholder engagement, defined as the active involvement of actors who influence, deliver and are affected by injury care, can help ensure that interventions and policies reflect the priorities of the communities they aim to serve (Ampomah et al., 2022; Frimpong et al., Frimpong and Peprah, 2025). Multistakeholder engagement processes may be particularly important for addressing some of the barriers identified in this study, such as structural and social determinants of access and lack of trust in formal healthcare systems.

- 4) Support for those at risk for exclusion from formal injury care: prioritise community-led interventions and strategies for groups most likely to avoid formal healthcare services after injury due to intersecting barriers. Research has highlighted that community-led intervention can improve outcomes for marginalised groups (Mitty & Flanigan, 2004). As this study highlights in the context of injuries, this group often faces compounded challenges in accessing timely, trusted and culturally appropriate care and therefore may require specific interventions to reduce inequalities (Dixon-Woods et al., 2006; Mock, 2010). Addressing these challenges will require paying attention to the social and structural determinants of health. Access to care is shaped not only by an individual's ability to seek, reach and engage with services but also by health system characteristics that influence affordability, acceptability and quality (Levesque et al., 2013). Equitable injury care approaches should therefore be embedded within broader health system strengthening efforts (Kruk et al., 2018), whilst also ensuring that populations most affected by exclusion are meaningfully involved in the development and implementation of interventions (Peters et al., 2008).

This study had several limitations. First, interviews were conducted in selected urban and rural areas, so findings may not capture the full range of injury experiences or barriers to care-seeking behaviours in hospitals. Second, we relied on participants' accounts of their injuries without clinical verification, limiting our ability to assess the severity of injuries or determine whether hospital-level care was necessary. Third, detailed age data were not collected, which limited our ability to describe the age range amongst participants or explore any difference in experiences across study sites and countries. Fourth, although data collection and analysis were standardised across sites, variations in language, cultural interpretation and research experience may have shaped how the data were gathered and understood. Finally, the method of participant identification may have introduced selection bias; if participants were primarily referred through traditional healers or networks associated with them, this could explain the strong emphasis on traditional healing in the findings. It also raises the possibility that individuals who do not seek care or are not connected to these networks were underrepresented or missed entirely. This is particularly important given that the study aimed to understand lesser-heard voices and the perspectives of those who are disconnected from formal care. Nonetheless, the study provides valuable cross-country insights into the complex factors influencing access to hospital care after injury in LMICs.

Conclusions

This study explored why injured individuals in four LMICs —Ghana, Pakistan, Rwanda and South Africa —did not seek formal healthcare. The analysis illustrates that decisions about whether and where to seek care are not linear but shaped by the dynamic interplay of financial constraints, cultural norms, social expectations and lived experiences of injury. These findings highlight the need for injury care that recognises and integrates the diverse realities through which injured individuals understand and respond to injury. Contextually and culturally aligned approaches must acknowledge the legitimacy of pluralistic care practices and aim to build health systems that engage with diverse ways of seeking care, strengthen trust in formal care, and improve access to reflect the complexity of decision-making.

Equi-injury group first

Grace Peaston, Debra Sithole, Agnieszka Ignatowicz, Leila Ghalichi, Lucia D'Ambruoso, Ntombekhaya Tshabalala, Derbew Fikadu Berhe, Zabin Wajid Ali, Frederick Sarfo-Antwi, Huba Atiq, Zaheer Babar Chand, Tamlyn MacQuene, Yeukai Chideya, Anita Eseenam Agbeko, Ebenezer Kwame Amofa, Eric Twizeyimana, Nadine Mugisha, Ngirabeza Oda Munyura, Pascal Nzasabimana, Ghislaine Umwali, Denys Ndangurura, Lambert Nzungize, Barnabas Tobi Alayande, Alemayehu Amberbir, Adams Dramani, Olwethu Nodo, Antonio Belli, Alfredo Palacios, John Whitaker, Napoleon Bellua Sam, Jean Claude Byiringiro, Abebe Bekele, Junaid Razzak, Stephen Tabiri, Kathryn Chu, Justine Davies.

Acknowledgements

We gratefully acknowledge the contributions of all participants who generously shared their time, experiences, and insights to support and inform this study. Their perspectives were invaluable in shaping our understanding of stakeholder engagement and in developing strategies to enhance inclusive and equitable policymaking in injury care. We particularly wish to thank the patients, community members, health workers, and policymakers from Ghana, Pakistan, Rwanda, and South Africa, whose diverse voices enriched the research process and outcomes. Their willingness to engage in dialogue and collaboration has been instrumental in advancing this work.

Author contributions

CRedit: **Grace Peaston:** Data curation, Formal analysis, Writing – original draft, Writing – review & editing; **Debra Sithole:** Data curation, Formal analysis, Writing – original draft, Writing – review & editing; **Agnieszka Ignatowicz:** Conceptualization, Data curation, Formal analysis, Methodology, Supervision, Writing – original draft, Writing – review & editing, Funding acquisition, Investigation; **Leila Ghalichi:** Data curation, Formal analysis, Methodology, Investigation, Supervision, Writing – review & editing; **Lucia D'Ambruoso:** Conceptualization, Funding acquisition, Data curation, Formal analysis, Methodology, Investigation, Supervision, Writing – review & editing; **Ntombekhaya Tshabalala:** Data curation, Investigation, Formal analysis, Writing – review & editing; **Derbew Fikadu Berhe:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Zabin Wajid Ali:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Frederick Sarfo-Antwi:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Huba Atiq:** Investigation, Formal analysis, Data curation, Writing – review & editing, Supervision; **Zaheer Babar Chand:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Tamlyn MacQuene:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Yeukai Chideya:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Anita Eseenam Agbeko:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Ebenezer Kwame Amofa:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Eric Twizeyimana:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Nadine Mugisha:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Ngirabeza Oda Munyura:** Formal analysis, Data curation, Investigation, Writing – review & editing; **Pascal Nzasabimana:** Investigation, Formal analysis, Data curation, Writing – review & editing; **Ghislaine Umwali:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Denys Ndangurura:** Data curation, Formal analysis, Investigation, Writing – review & editing; **Lambert Nzungize:** Data curation, Formal analysis, Writing – review & editing, Investigation; **Barnabas Tobi Alayande:** Supervision, Formal analysis, Data curation, Investigation, Writing – review & editing; **Alemayehu Amberbir:** Investigation, Data curation, Formal analysis, Supervision, Writing – review & editing; **Adams Dramani:** Investigation, Data curation, Formal analysis, Writing – review & editing; **Olwethu Nodo:** Data curation, Investigation, Writing – review & editing; **Antonio Belli:** Funding acquisition, Methodology, Supervision, Writing – review & editing; **Alfredo Palacios:** Data curation, Writing – review & editing; **John Whitaker:** Methodology, Writing – review & editing; **Napoleon Bellua Sam:** Investigation, Data curation, Formal analysis, Supervision, Writing – review & editing; **Jean Claude Byiringiro:** Investigation, Conceptualization, Funding acquisition, Data curation, Formal analysis, Supervision, Writing – review & editing; **Abebe Bekele:** Investigation, Conceptualization, Funding acquisition, Data curation, Formal analysis, Supervision, Writing – review & editing; **Junaid Razzak:** Investigation, Conceptualization, Funding acquisition, Data curation, Formal analysis, Methodology, Supervision, Writing – review & editing; **Stephen Tabiri:** Investigation, Conceptualization, Funding acquisition, Data curation, Formal analysis, Methodology, Supervision, Writing – review & editing; **Kathryn Chu:** Investigation, Conceptualization, Funding acquisition, Data curation, Methodology, Supervision, Writing – review & editing; **Justine Davies:** Investigation, Conceptualization, Funding acquisition, Data curation, Methodology, Supervision, Writing – review & editing.

Funding

This research was funded by the NIHR (award number 133135) using UK aid from the UK Government to support global health research and the International Strategy Partnerships Fund 23/24, issued by Research England and the University of Birmingham. The views expressed in this publication are those of the authors and not necessarily those of the NIHR or the UK government.

Disclosure statement

The authors declare that they have no competing interests.

Data availability statement

Data are available upon a reasonable request from the project PIs.

Ethics statements

None.

Ethics approval and consent to participate

This study received approval from ethical review boards: Ghana Health Service Ethics Review Committee in Ghana (GHS-ERC 014/09/22), Aga Khan University Ethics Review Committee in Pakistan (2022-7372-23339), Rwanda National Ethics Committee (IRB 00001497 of IORG000110, No 85/RNEC/2023), and Stellenbosch University Health Research Ethics Committee in South Africa (N22/07/079). The University of Birmingham (the overall sponsor for this study) accepted the local ethics approvals for this project in lieu of the requirement for a full ethics review.

References

- Adams, A. M., Islam, R., & Ahmed, T. (2015). Who serves the urban poor? A geospatial and descriptive analysis of health services in slum settlements in Dhaka, Bangladesh. *Health policy and planning, 30*(suppl_1), i32–i45. <https://doi.org/10.1093/heapol/czu094>
- Africa CDC. (2024). Rwanda's Health Financing Model Offers a Test Ground for Africa.
- Aidam, P. W., Nketiah-Amponsah, E., & Kutame, R. (2016). The effect of health insurance on out-of-pocket payments, catastrophic expenditures and healthcare utilization in Ghana: Case of Ga south municipality. *Journal of Self-Governance and Management Economics, 4*(3), 42. <https://doi.org/10.22381/JSME4320163>
- Ampomah, I. G., Malau-Aduli, B. S., Seidu, A., & Emeto, T. I. (2022). Integrating traditional Medicine into the Ghanaian health system: Perceptions and experiences of traditional Medicine practitioners in the Ashanti region. *International Health, 15*(4), 414–427. <https://doi.org/10.1093/inthealth/ihac059>
- Ariës, M. J. H., Joosten, H., Wegdam, H. H. J., & Van Der Geest, S. (2007). Fracture treatment by bonesetters in central Ghana: Patients explain their choices and experiences. *Tropical Medicine & International Health, 12*(4), 564–574. <https://doi.org/10.1111/j.1365-3156.2007.01822.x>
- Arooj, N. (2023). Understanding the role of traditional healing practices in Pakistan: Leading towards holistic healthcare. *Qlantic Journal of Social Sciences, 4*(1), 27–32. <https://doi.org/10.55737/qjss.717809184>
- Atim, C., Koduah, A., & Kwon, S. (2021). How and why do countries make universal health care policies? Interplay of country and global factors. *Journal of Global Health, 11*, 16003. <https://doi.org/10.7189/jogh.11.16003>
- Ayinde, O. O., Fadahunsi, O., Kola, L., Malla, L. O., Nyame, S., Okoth, R. A., Cohen, A., Appiah-Poku, J., Othieno, C. J., Seedat, S., & Gureje, O. (2023). Explanatory models, illness, and treatment experiences of patients with psychosis using the services of traditional and faith healers in three African countries: Similarities and discontinuities. *Transcultural Psychiatry, 60*(3), 521–536. <https://doi.org/10.1177/13634615211064370>
- Baer, H. A. (2011). Medical Pluralism: An Evolving and Contested Concept in Medical Anthropology, In A Companion to Medical Anthropology (eds M. Singer and P.I. Erickson) (pp. 342–357. <https://doi.org/10.1002/9781444395303.ch20>
- Balabanova, D., Mills, A., Conteh, L., Akkazieva, B., Banteyerga, H., Dash, U., Gilson, L., Harmer, A., Ibraimova, A., Islam, Z., Kidanu, A., Koehlmoos, T. P., Limwattananon, S., Muraleedharan, V., Murzalieva, G., Palafox, B., Panichkriangkrai, W., Patcharanarumol, W., Penn-Kekana, L., ... McKee, M. (2013). Good health at low cost 25 years on: Lessons for the future of health systems strengthening. *Lancet, 381*(9883), 2118–2133. [https://doi.org/10.1016/S0140-6736\(12\)62000-5](https://doi.org/10.1016/S0140-6736(12)62000-5)
- Bosire, E. N., Norris, S. A., Goudge, J., & Mendenhall, E. (2021). Pathways to care for patients with type 2 diabetes and HIV/AIDS comorbidities in Soweto, South Africa: An ethnographic study. *Global Health: Science and Practice, 9*(1), 15–30. <https://doi.org/10.9745/GHSP-D-20-00104>
- Broom, A., Wijewardena, K., Sibbritt, D., Adams, J., & Nayar, K. (2010). The use of traditional, complementary and alternative Medicine in Sri Lankan cancer care: Results from a survey of 500 cancer patients. *Public Health, 124*(4), 232–237. <https://doi.org/10.1016/j.puhe.2010.02.012>
- Cipta, D. A., Andoko, D., Theja, A., Utama, A. V. E., Hendrik, H., William, D. G., Reina, N., Handoko, M. T., & Lumbuun, N. (2024). Culturally sensitive patient-centered healthcare: A focus on health behavior modification in low and middle-income nations—insights from Indonesia. *Frontiers in Medicine, 11*, 1353037. <https://doi.org/10.3389/fmed.2024.1353037>
- Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology, 12*(3), 297–298. <https://doi.org/10.1080/17439760.2016.1262613>
- Conteh, A., Dean, L., Wilkinson, A., Macarthy, J., Koroma, B., & Theobald, S. (2025). Health seeking by people living with non-communicable diseases in a pluralistic health system: The role of informal healthcare providers. *International Journal for Equity in Health, 24*(1), 67. <https://doi.org/10.1186/s12939-025-02428-z>
- Coovadia, H., Jewkes, R., Barron, P., Sanders, D., & McIntyre, D. (2009). The health and health system of South Africa: Historical roots of current public health challenges. *The Lancet, 374*(9692), 817–834. [https://doi.org/10.1016/S0140-6736\(09\)60951-X](https://doi.org/10.1016/S0140-6736(09)60951-X)
- Davies, J., Chu, K., Tabiri, S., Byiringiro, J. C., Bekele, A., Razzak, J., D'Ambruoso, L., Ignatowicz, A., Bojke, L., Nkonki, L., Laurenzi, C., Sitch, A., Bagahirwa, I., Belli, A., Sam, N. B., Amberbir, A., Whitaker, J., Ndangurura, D., Ghalichi, L., ...

- Tanweer, A. (2024). Equitable access to quality injury care; equi-injury project protocol for prioritizing interventions in four low- or middle-income countries: A mixed method study. *BMC Health Services Research*, 24(1), 429. <https://doi.org/10.1186/s12913-024-10668-y>
- Dawkins, B., Renwick, C., Ensor, T., Shinkins, B., Jayne, D., & Meads, D. (2021). What factors affect patients' ability to access healthcare? An overview of systematic reviews. *Tropical Medicine & International Health*, 26(10), 1177–1188. <https://doi.org/10.1111/tmi.13651>
- Dixon-Woods, M., Cavers, D., Agarwal, S., Annandale, E., Arthur, A., Harvey, J., Hsu, R., Katbamna, S., Olsen, R., Smith, L., Riley, R., & Sutton, A. J. (2006). Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups. *BMC medical research methodology*, 6, 1–13. <https://doi.org/10.1186/1471-2288-6-35>
- Ensor, T., & Cooper, S. (2004). Overcoming barriers to health service access: Influencing the demand side. *Health policy and planning*, 19(2), 69–79. <https://doi.org/10.1093/heapol/czh009>
- Ford-Gilboe, M., Wathen, C. N., Varcoe, C., Herbert, C., Jackson, B. E., Lavoie, J. G., Pauly, B. (B.), Perrin, N. A., Smye, V., Wallace, B., Wong, S. T., & Browne (for the EQUIP Research Program), A. J. (2018). How equity-oriented health care affects health: Key mechanisms and implications for primary health care practice and policy. *The Milbank Quarterly*, 96(4), 635–671. <https://doi.org/10.1111/1468-0009.12349>
- Fraser, A., Newberry Le Vay, J., Byass, P., Tollman, S., Kahn, K., D'Ambruoso, L., & Davies, J. I. (2020). Time-critical conditions: Assessment of burden and access to care using verbal autopsy in Agincourt, South Africa. *BMJ Global Health*, 5(4), e002289. <https://doi.org/10.1136/bmjgh-2020-002289>
- Frimpong, F., Peprah, C., & Owusu-Addo, E. (2025). Stakeholder networks and systems for health equity: Accessibility of newly commissioned district hospitals in Ghana. *medRxiv*. p. 2025.01. 31.25321475. <https://www.medrxiv.org/content/10.1101/2025.01.31.25321475v1>
- Gosselin, R. A., et al. (2009). Injuries: The neglected burden in developing countries. *Bulletin of the World Health Organization*, 87(4), 246–246a. <https://doi.org/10.2471/BLT.08.052290>
- Grimes, C. E., Bowman, K. G., Dodgion, C. M., & Lavy, C. B. D. (2011). Systematic review of barriers to surgical care in low-income and middle-income countries. *World Journal of Surgery*, 35, 941–950. <https://doi.org/10.1007/s00268-011-1010-1>
- Gyasi, R. M., Poku, A. A., Boateng, S., Amoah, P. A., Mumin, A. A., Obodai, J., & Agyemang-Duah, W. (2017). Integration for coexistence? Implementation of intercultural health care policy in Ghana from the perspective of service users and providers. *Journal of Integrative Medicine*, 15(1), 44–55. [https://doi.org/10.1016/S2095-4964\(17\)60312-1](https://doi.org/10.1016/S2095-4964(17)60312-1)
- Haagsma, J. A., Graetz, N., Bolliger, I., Naghavi, M., Higashi, H., Mullany, E. C., Abera, S. F., Abraham, J. P., Adofo, K., Alsharif, U., Ameh, E. A., Ammar, W., Antonio, C. A. T., Barrero, L. H., Bekele, T., Bose, D., Brazinova, A., Catalá-López, F., Dandona, L., ... Phillips, M. R. (2016). The global burden of injury: Incidence, mortality, disability-adjusted life years and time trends from the global burden of disease study 2013. *Injury Prevention*, 22(1), 3–18. <https://doi.org/10.1136/injuryprev-2015-041616>
- Henry, J. A., & Reingold, A. L. (2012). Prehospital trauma systems reduce mortality in developing countries: A systematic review and meta-analysis. *Journal of Trauma and Acute Care Surgery*, 73(1), 261–268. <https://doi.org/10.1097/TA.0b013e31824bde1e>
- Horwitz, R. I., Lobitz, G., Mawn, M., Conroy, A. H., Cullen, M. R., Sim, I., & Singer, B. H. (2021). Biosocial Medicine: Biology, biography, and the tailored care of the patient. *SSM - Population Health*, 15, 100863. <https://doi.org/10.1016/j.ssmph.2021.100863>
- Hughes, G., Puoane, T., Clark, B., Wondwossen, T., Johnson, Q., & Folk, W. (2012). Prevalence and predictors of traditional Medicine utilization among persons living with AIDS (PLWA) on antiretroviral (ARV) and prophylaxis treatment in both rural and urban areas in South Africa. *African Journal of Traditional, Complementary and Alternative Medicines*, 9(4), 470–484. <https://doi.org/10.4314/ajtcam.v9i4.4>
- Hussain, S., et al. (2012). In Bhattacharya, A. (Ed.), *Alternative and Traditional Medicines Systems in Pakistan: History, Regulation, Trends, Usefulness, Challenges, Prospects and Limitations, in A Compendium of Essays on Alternative Therapy*. Rijeka: IntechOpen.
- Hyder, A. A., He, S., Zafar, W., Mir, M., & Razzak, J. (2017). One hundred injured patients a day: Multicenter emergency room surveillance of trauma in Pakistan. *Public Health*, 148, 88–95. <https://doi.org/10.1016/j.puhe.2017.03.006>
- James, P. B., Wardle, J., Steel, A., & Adams, J. (2018). Traditional, complementary and alternative Medicine use in sub-Saharan Africa: A systematic review. *BMJ Global Health*, 3(5), e000895. <https://doi.org/10.1136/bmjgh-2018-000895>
- Kale, R. (1995). South Africa's health: Traditional healers in South Africa: A parallel health care system. *BMJ*, 310(6988), 1182–1185. <https://doi.org/10.1136/bmj.310.6988.1182>
- Kane, S., Joshi, M., Mahal, A., & McPake, B. (2023). How social norms and values shape household healthcare expenditures and resource allocation: Insights from India. *Social Science & Medicine*, 336, 116286. <https://doi.org/10.1016/j.socscimed.2023.116286>
- Kinder, F., Mehmood, S., Hodgson, H., Giannoudis, P., & Howard, A. (2022). Barriers to trauma care in south and Central America: A systematic review. *European Journal of Orthopaedic Surgery & Traumatology*, 32(6), 1163–1177. <https://doi.org/10.1007/s00590-021-03080-3>
- Klarman, M., Schon, J., Cajusma, Y., Maples, S., Beau de Rochars, V. E. M., Baril, C., & Nelson, E. J. (2021). Opportunities to catalyse improved healthcare access in pluralistic systems: A cross-sectional study in Haiti. *BMJ Open*, 11(11), e047367. <https://doi.org/10.1136/bmjopen-2020-047367>

- Kleinman, A. (1980). *Patients and healers in the context of culture: An exploration of the borderland between anthropology, medicine, and psychiatry* (Vol. 3). Univ of California Press.
- Kleinman, A. (2019). Concepts and a model for the comparison of medical systems as cultural systems, *Management of Healthcare*, 3–11. Routledge. <https://doi.org/10.4324/9780429450242-1>
- Kobusingye, O. C., et al. (2005). Emergency medical systems in low-and middle-income countries: Recommendations for action. *Bulletin of the World Health Organization*, 83(8), 626–631.
- Kruk, M. E., Gage, A. D., Joseph, N. T., Danaei, G., García-Saisó, S., & Salomon, J. A. (2018). Mortality due to low-quality health systems in the universal health coverage era: A systematic analysis of amenable deaths in 137 countries. *The Lancet*, 392(10160), 2203–2212. [https://doi.org/10.1016/S0140-6736\(18\)31668-4](https://doi.org/10.1016/S0140-6736(18)31668-4)
- Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., Adeyi, O., Barker, P., Daelmans, B., Doubova, S. V., English, M., García-Elorrio, E., Guanais, F., Gureje, O., Hirschhorn, L. R., Jiang, L., Kelley, E., Lemango, E. T., Liljestrand, J., ... Pate, M. (2018). High-quality health systems in the sustainable development goals era: Time for a revolution. *The Lancet Global Health*, 6(11), e1196–e1252. [https://doi.org/10.1016/S2214-109X\(18\)30386-3](https://doi.org/10.1016/S2214-109X(18)30386-3)
- Lakshmi, J. K., Nambiar, D., Narayan, V., Sathyanarayana, T. N., Porter, J., & Sheikh, K. (2015). Cultural consonance, constructions of science and co-existence: A review of the integration of traditional, complementary and alternative Medicine in low-and middle-income countries. *Health Policy and Planning*, 30(8), 1067–1077. <https://doi.org/10.1093/heapol/czu096>
- Leila, G. (2025). Health system governance for injury care in low- and middle-income countries: A survey of policymakers and policy implementors. *BMJ Global Health*, 10(2), e017890. <https://doi.org/10.1136/bmjgh-2024-017890>
- Levesque, J. F., Harris, M. F., & Russell, G. (2013). Patient-centred access to health care: Conceptualising access at the interface of health systems and populations. *International Journal for Equity in Health*, 12, 18. <https://doi.org/10.1186/1475-9276-12-18>
- MacKian, S. (2003). A review of health seeking behaviour: problems and prospects. *Health Systems Development Programme*.
- Mitty, J. A., & Flanigan, T. P. (2004). Community-based interventions for marginalized populations. *Clinical Infectious Diseases*, 38(Supplement_5), S373–S375. <https://doi.org/10.1086/421398>
- Mock, C. (2010). *Strengthening care for the injured: success stories and lessons learned from around the world*. World Health Organization.
- Moshabela, M., Pronyk, P., Williams, N., Schneider, H., & Lurie, M. (2011). Patterns and implications of medical pluralism among HIV/AIDS patients in rural South Africa. *AIDS and Behavior*, 15(4), 842–852. <https://doi.org/10.1007/s10461-010-9747-3>
- National Institute of Statistics of Rwanda (NISR) [Rwanda], et al. (2021). Rwanda Demographic and Health Survey 2019–20 Final Report.
- National Institute of Statistics of Rwanda. (2022). Rwanda's population.
- Niyonshuti, J. P. (2022). Knowledge and attitudes of health care providers towards the use of traditional and complementary/alternative medicine in Rwanda.
- Nyande, F. K., Ricks, E., Williams, M., & Jardien-Baboo, S. (2022). Socio-cultural barriers to the delivery and utilisation of child healthcare services in rural Ghana: A qualitative study. *BMC Health Services Research*, 22(1), 289. <https://doi.org/10.1186/s12913-022-07660-9>
- Odland, M. L., Whitaker, J., Nepogodiev, D., Aling', C. A., Bagahirwa, I., Dushime, T., Erlangga, D., Mpirimbanyi, C., Muneza, S., Nkeshimana, M., Nyundo, M., Umuhozo, C., Uwitonze, E., Steans, J., Rushton, A., Belli, A., Byiringiro, J. C., Bekele, A., & Davies, J. (2020). Identifying, prioritizing and visually mapping barriers to injury care in Rwanda: A multi-disciplinary stakeholder exercise. *World Journal of Surgery*, 44(9), 2903–2918. <https://doi.org/10.1007/s00268-020-05571-6>
- Odland, M. L., Abdul-Latif, A., Ignatowicz, A., Alayande, B., Appia Ofori, B., Balanikas, E., Bekele, A., Belli, A., Chu, K., Ferreira, K., Howard, A., Nzasabimana, P., Owolabi, E. O., Nyamathe, S., Pognaa Kunfah, S. M., Tabiri, S., Yakubu, M., Whitaker, J., Byiringiro, J. C., & Davies, J. I. (2022). Equitable access to quality trauma systems in low-income and middle-income countries: Assessing gaps and developing priorities in Ghana, Rwanda and South Africa. *BMJ Global Health*, 7(4), e008256. <https://doi.org/10.1136/bmjgh-2021-008256>
- Okyere Asante, P. G., Tuck, C. Z., & Atobrah, D. (2023). Medical pluralism, healthcare utilization and patient wellbeing: The case of Akan cancer patients in Ghana. *International Journal of Qualitative Studies on Health and Well-Being*, 18(1), 2238994. <https://doi.org/10.1080/17482631.2023.2238994>
- Patil, A. D., et al. (2024). Exploring medical pluralism as a multifaceted approach to healthcare. *Indian Journal of Integrative Medicine*, 4(2), 49–59.
- Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R., & Hafizur Rahman, M. (2008). Poverty and access to health care in developing countries. *Annals of the New York Academy of Sciences*, 1136, 161–171. <https://doi.org/10.1196/annals.1425.011>
- QSR International. (2025). NVivo. A qualitative data analysis software tool.
- Sabet, J. C., et al. (2024). Rwanda's health-care success holds lessons for others. Three takeaways for other low-income countries. *Think Global Health*.
- Saxena, S., et al. (2023). Factors Influencing Women's access to Healthcare Services in Low- and Middle-Income Countries: A Systematic Review : Women's access to Healthcare in LMICs. *NURSEARCHER (Journal of Nursing & Midwifery Sciences)*, 3(02), 67–75.

- Selden, O., Rusingiza, E., & Balkrishnan, R. (2025). Overview, infrastructural challenges, barriers to access, and progress for Rwanda's healthcare system: A review. *Integrative Journal of Medical Sciences*, 12, ID 745. <https://doi.org/10.15342/ijms.2025.745>
- Shaikh, B. T., & Hatcher, J. (2005). Complementary and alternative Medicine in Pakistan: Prospects and limitations. *Evidence-Based Complementary and Alternative Medicine: eCAM*, 2(2), 139–142. <https://doi.org/10.1093/ecam/neh088>
- Shange, S., & Ross, E. (2022). The question is not how but why things Happen”: South African traditional healers' explanatory model of mental illness, its diagnosis and treatment. *Journal of Cross-Cultural Psychology*, 53(5), 503–521. <https://doi.org/10.1177/002202212211077361>
- Statistics South Africa, R.o.S.A. (2019). Mid-year population estimates 2019.
- Sulemana, A., & Dinye, R. D. (2014). Access to healthcare in rural communities in Ghana: A study of some selected communities in the Pru district. *European Journal of Research in Social Sciences*, 2(4).
- Sundararajan, R., Mwanga-Amumpaire, J., King, R., & Ware, N. C. (2020). Conceptual model for pluralistic healthcare behaviour: Results from a qualitative study in southwestern Uganda. *BMJ Open*, 10(4), e033410. <https://doi.org/10.1136/bmjopen-2019-033410>
- Sundararajan, R., Mwanga-Amumpaire, J., Adrama, H., Tumuhairwe, J., Mbabazi, S., Mworozzi, K., Carroll, R., Bangsberg, D., Boum, Y., & Ware, N. C. (2015). Sociocultural and structural factors contributing to delays in treatment for children with severe malaria: A qualitative study in southwestern Uganda. *The American Journal of Tropical Medicine and Hygiene*, 92(5), 933–940. <https://doi.org/10.4269/ajtmh.14-0784>
- Tan, M., Otake, Y., Tamming, T., Akuredusenge, V., Uwinama, B., & Hagenimana, F. (2021). Local experience of using traditional Medicine in Northern Rwanda: A qualitative study. *BMC Complementary Medicines and Therapies*, 21(1), 210. <https://doi.org/10.1186/s12906-021-03380-5>
- Institute for Health Metrics and Evaluation. (2020). *The Global Burden of Disease*. <http://www.healthdata.org/gbd>
- The World Bank. (2021). *World bank indicators*. <https://data.worldbank.org/>
- Tran, T. T., Sleigh, A., & Banwell, C. (2021). Pathways to care: A case study of traffic injury in Vietnam. *BMC Public Health*, 21(1), 515. <https://doi.org/10.1186/s12889-021-10539-9>
- Tran, T. T., Lee, J., Sleigh, A., & Banwell, C. (2019). Putting culture into prehospital emergency care: A systematic narrative review of literature from lower middle-income countries. *Prehospital and Disaster Medicine*, 34(5), 510–520. <https://doi.org/10.1017/S1049023X19004709>
- Ventevogel, P. (1996). *Whiteman's things: Training and detrainning healers in Ghana*. Maklu.
- Vos, T., Lim, S. S., Abbafati, C., Abbas, K. M., Abbasi, M., Abbasifard, M., Abbasi-Kangevari, M., Abbastabar, H., Abd-Allah, F., Abdelalim, A., Abdollahi, M., Abdollahpour, I., Abolhassani, H., Aboyans, V., Abrams, E. M., Abreu, L. G., Abrigo, M. R. M., Abu-Raddad, L. J., Abushouk, A. I., ... Murray, C. J. L. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: A systematic analysis for the global burden of disease study 2019. *The Lancet*, 396(10258), 1204–1222. [https://doi.org/10.1016/S0140-6736\(20\)30925-9](https://doi.org/10.1016/S0140-6736(20)30925-9)
- Whitaker, J., Amoah, A. S., Dube, A., Rickard, R., Leather, A. J. M., & Davies, J. (2024). Access to quality care after injury in Northern Malawi: Results of a household survey. *BMC Health Services Research*, 24(1), 131. <https://doi.org/10.1186/s12913-023-10521-8>
- Whitaker, J., O'Donohoe, N., Denning, M., Poenaru, D., Guadagno, E., Leather, A. J. M., & Davies, J. I. (2021). Assessing trauma care systems in low-income and middle-income countries: A systematic review and evidence synthesis mapping the three delays framework to injury health system assessments. *BMJ Global Health*, 6(5), e004324. <https://doi.org/10.1136/bmjgh-2020-004324>
- Whitaker, J., Togun, E., Gondwe, L., Zgambo, D., Amoah, A. S., Dube, A., Rickard, R., Leather, A. J., & Davies, J. (2024). Community perspectives on barriers to injury care in Northern Malawi: A three delays framed assessment using focus groups and photovoice. *BMC Health Services Research*, 24(1), 1382. <https://doi.org/10.1186/s12913-024-11890-4>
- Whitaker, J., Njawala, T., Nyirenda, V., Amoah, A. S., Dube, A., Chirwa, L., Munthali, B., Rickard, R., Leather, A. J. M., Davies, J., & Chegou, N. N. (2024). Identifying and prioritising barriers to injury care in Northern Malawi, results of a multifacility multidisciplinary health facility staff survey. *PLoS One*, 19(9), e0308525. <https://doi.org/10.1371/journal.pone.0308525>
- Wongnaah, F. G., Osborne, A., Duodu, P. A., Seidu, A., & Ahinkorah, B. O. (2025). Barriers to healthcare services utilisation among women in Ghana: Evidence from the 2022 Ghana demographic and health survey. *BMC Health Services Research*, 25(1), 305. <https://doi.org/10.1186/s12913-025-12226-6>
- World Bank. (2021). World Population - Pakistan.
- World Health Organization. (2019). *Traditional healers broaden health care in Ghana*. World Health Organization.
- World Health Organization. (2022a). *Preventing injuries and violence: an overview*. World Health Organization.
- World Health Organization. (2022b). *Regional framework for harnessing traditional and complementary medicine for achieving health and well-being in the Western Pacific*. World Health Organization.
- World Health Organization. (2025). Ghana [Country overview].

Appendix – topic guide

SWITCH THE DICTAPHONE ON

What injury did you suffer (e.g: (broken bone/dislocated joint; penetrating wound; concussion or head or neck injury)

What part of your body was injured? (If a respondent has not already covered this in the response to the above question)

How about after your injury happened, what did you do?

Probe:

Was anyone there to help? (Who?)

Did you think that you needed medical help? (If not, why not?)

Did you consider seeking medical help?

Probe:

Why not?

If yes, why? What happened?

Was there anything in particular that stopped you accessing care after making that decision?

Probe:

Availability of transport

Need to pay for transport

Length of journey

Need to get permission from a relative/community

What happened after you did not access care?

Probe:

Did you go for treatment somewhere else, like a traditional healer of bone setter?

How are you feeling now?

Probe:

Are you now back to your full fitness?

Is there anything that could be changed for you to access injury care in the future?

Probe:

Community issues?

Geographic/transport issues?

Health facility issues?