



Ensuring no one is 'left behind' in health

An evidence review of constraints and ways forward

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Key messages

- Despite being exposed to a larger number of health risks than the general population, disadvantaged or marginalised groups typically have less access to quality health services.
- Health needs and constraints to accessing healthcare differ across selected aspects of identity (being LGBT, having a disability or impairment), experience (displacement, sex work) and location (living in a rural area).
- This paper identifies a number of constraints to service access, which we group into social, economic and physical constraints. Where combined, these constraints can magnify exclusions from health coverage and disparities in outcomes.
- Although countries should strive toward universal healthcare, targeted policies play an important role in ensuring at-risk groups benefit fully from broader structural reforms.
- There is limited evidence on interventions to overcome the constraints identified, but there are cost-effective examples of approaches that have worked. Such interventions could precede, accompany or follow broader structural changes to health coverage provision.

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Acronyms

HIV	human immunodeficiency virus
LGBT	lesbian, gay, bisexual, transgender
LIC	low-income country
LMIC	lower middle-income country
MIC	middle-income country
MSM	men who have sex with men
PTSD	post-traumatic stress disorder
PWD	people with disabilities
SDG	Sustainable Development Goal
SSA	sub-Saharan Africa
TB	tuberculosis
UHC	universal health coverage
UMIC	upper middle-income country

1 Introduction

Despite the fundamental importance of health, both intrinsically and in contributing to achievements in other dimensions of well-being, access to good quality basic healthcare is sorely lacking. According to the World Health Organization, more than half the world's 5.6 million 'early child deaths ... could be prevented or treated with access to simple, affordable interventions' and 'at least half of the world's 7.3 billion people do not receive the essential health services they need' (WHO, 2018). In low-income and middle-income countries (LICs and MICs), it is estimated that 3.6 million deaths each year result from a lack of access to healthcare (Kruk et al., 2018) and that upwards of 5 million deaths yearly result from poor quality care (Kruk et al., 2018; NASEM, 2018). The current Covid-19 pandemic is drawing into relief the risks posed by a lack of universal coverage, to people who are excluded and the societies within which they reside, and amplifies the need for universal health coverage (Samman, 2020).

The need to build universal health systems is a pivotal step to extending access to healthcare. However, even within a universal system, different groups of people may face specific constraints in accessing quality healthcare. It is these constraints, and the targeted policies that could support people to overcome them, that we focus on in this paper. This emphasis is not meant to distract from the broader structural reforms needed to attain universal health coverage (UHC). Rather, we agree with Rao et al. (2019: 130) that 'vulnerable populations are a bellwether for the success of UHC policies', and with Klasen and Fleurbaey (2018) that 'leave no one behind' should be 'a guide to an overall development strategy, not a guide for specific targeted interventions[;] targeted interventions come as a result of insufficiencies in the overall

strategy, not as a replacement of a strategy' (2018: 8).

In a companion paper, we synthesise the existing literature and global and regional trends underlying progress towards UHC, as well as the enablers, strategies and constraints that 49 countries have faced in trying to build universal healthcare systems (Box 1). However, it is broadly acknowledged that universal policy may be insufficient to reach groups who may have specific needs and face specific barriers to accessing services. Indeed, this was implicit in our operational definition of UHC: where a country provides 'healthcare and financial protection to more than 90% of [their] citizens' (Stephane Tajick Consulting, 2018). Per Rao et al. (2019), 'Numerous studies on health disparities have affirmed the inverse care law, which states that those with the greatest health needs receive the least healthcare services' (2019: 130). It follows that our focus here is on targeted interventions that could precede, accompany or follow broader structural reforms.

Our interest in policies targeted towards underserved groups aligns with the 2030 Agenda for Sustainable Development pledge to 'leave no one behind' as it applies to healthcare. Underpinning the Sustainable Development Goals (SDGs), the fundamental aspiration to leave no one behind has two key aspects – to 'see the Goals and targets met for all ... segments of society' and 'to reach the furthest behind first' (UN, 2015). This approach is known as progressive universalism. The SDG outcomes document provides an illustrative list of the groups who are consistently left behind but also stresses the need for countries to identify and illuminate the circumstances of disadvantaged or marginalised groups in each national context (ibid.). Many definitions and overarching frameworks have been proposed to

Box 1 Explaining progress toward universal health coverage

Universal health coverage aims ‘to ensure that all people obtain the health services they need without suffering financial hardship when paying for them’. Key elements include: an effective health system geared toward priority health needs; affordability of care; access to essential medicines and technologies, and well-trained and motivated health workers (WHO, 2014).

Our previous research highlights some common enablers of country progress towards UHC. We found that most countries moved towards UHC as a result of disruption to the status quo, notably shifts towards democracy or recovery from episodes of state fragility. We also uncovered peer effects: the barrier for disruption is lower when neighbours and peers have already achieved UHC.

Our findings point to the gradual nature of progress: most governments do not aim to achieve UHC when they start investing in health; rather, they progress towards it through a series of iterative reforms and once universality is achieved, it tends to last. Finally, wealth was not a major determining factor in the achievement of UHC among LICs and MICs, although many countries cite limited resources as a constraint. Instead, decisions are driven by a willingness to make trade-offs; recent economic growth made these trade-offs easier and UHC more likely.

Only a small number (fewer than 30%) of the countries we studied set out with a plan of achieving UHC and in their initial strategies, it is an exception rather than the rule to see vulnerable groups being reached first. With their later strategies, all countries sought to attain universality and most (around 90%) expressed an intention to prioritise access for those who were furthest behind.

Source: McDonnell et al. (2019)

identify ‘left-behind’ groups based on aspects of identity, experience or location. For example, the United Nations Development Programme (UNDP, 2018) proposes five factors as key to understanding who is left behind and why: discrimination, place of residence, socioeconomic status, governance and vulnerability to shocks. Save the Children has adopted a more pragmatic focus, identifying the ‘world’s poorest 20% of households’ and the key child-centered deprivations they face (Wise et al., 2018). Sudden shocks may call for more specific definitions: the Covid-19 pandemic, for example, is focusing attention on high-risk groups such as people who are older; living in congregate facilities – notably nursing homes and prisons; who belong to marginalised ethnic or racial groups; who are without homes; who live in densely populated

urban environments; and/or whose economic circumstances make lockdown an infeasible proposition.

In our previous work, we aimed to illustrate general tendencies across nearly 50 countries. We therefore adopted a broad definition of groups at risk of being left behind as those who have less access to or fewer benefits from health services because of where they live or aspects of who they are. In this paper, our focus is more selective. Given our interest in specificity, in the course of our initial review, we identified five groups that are often left behind by healthcare systems for different reasons: lesbian, gay, bisexual and transgender (LGBT) individuals;¹ sex workers; forced migrants and displaced people; people with disabilities (PWD); and people living in rural areas (Box 2). We have sought to focus

1 We recognise that LGBT is a reductionist category that does not include all aspects of sexuality and gender with which people identify (the acronym LGBTQI+, for example, includes additionally ‘queer’ and ‘intersex’ identification, as well as a ‘+’ to denote greater inclusion). However, we use LGBT in this paper as it is the most widely used term in the evidence we review and includes the categories within this larger designation for which we were able to identify data on health access and health outcomes.

Box 2 Estimates of size of the selected groups at risk of being left behind

Although we focus on groups that typically constitute a small minority of country populations (except for rural dwellers), their numbers are important globally. The impetus for focusing on at-risk groups should not be based on size alone. However, the numbers do suggest that the benefits from investing in these peoples' health could be considerable.

We uncovered the following estimates on the population of the left-behind groups we focus on in this paper:

- Although stigma complicates collecting data on **sexual minorities**, country studies report that between 2% and 6% of populations identify as lesbian, gay or bisexual (Kementerian Kesehatan, 2014, in Lee Badgett et al., 2017; Wu and Stevens-Davidowitz, 2014), though data is patchy and evidence from social media suggests these figures may be underestimates (Baral et al., 2018). Evidence is particularly limited on lesbians (Tat et al., 2015) and there is little if any data on transgender people (Samelius and Wagberg, 2005). Research on LGBT groups in LICs and MICs is often held back by difficulty in identifying these populations, particularly in countries where discrimination is highest.
- The latest statistics on **people with disabilities** are dated: the 2011 World Report on Disability suggests that 1 billion people, or about 15% of the world's population, may have a disability, and that up to 5% of people face 'significant difficulties' in functioning (World Bank and WHO, 2011). Globally, rates of disability are increasing as people live longer.
- There are an estimated 272 million **international migrants**, constituting 3.5% of the global population (UN DESA, 2019). As of 2018, there were 70.8 million **forcibly displaced people**, 41.1 million of who were internally displaced and 84% of whom were in LICs or MICs. Some 3.5 million people were awaiting decisions on their asylum, including nearly 140,000 unaccompanied children (UNHCR, 2019).
- The number of **sex workers** globally is unknown. The only estimate we could identify is from Fondation Scelles, which reports an estimate of 40-42 million sex workers globally (of which 48% are under the age of 18, and 80% are female) though it cautions that there are significant data gaps in many regions of the world (Goldmann, 2011).ⁱ
- As of 2017, 45% of the world's people lived in **rural areas**. The share is higher in poorer countries, averaging 68% in LICs (World Bank, 2019). Economic development and migration are leading to a rapid decline in the share of rural dwellers globally, though their absolute number continues to increase (UN DESA, 2018).

Aspects of identity, experience and location may overlap, amplifying the potential exclusions that individuals and communities face. For example, the prevalence of disability is higher in LICs among women and in rural areas (World Bank and WHO, 2011), while sexual minorities are likely to be overrepresented among the income-poor owing to barriers to education and employment (SOGI Task Force and Koehler, 2015). At the same time, little is known in LICs and MICs about how some categories overlap, e.g. 'the sexuality of people with disabilities within many LICs has received little or no empirical investigation' (Carew et al., 2017: 1).

ⁱ Goldmann (2011) attributes the 40-42 million figure (which is widely cited) to 'UN, 2009' but does not provide any reference and we could not locate the original citation. Other reasons it is so difficult to ascertain the number of sex workers is that most estimates are based on convenience sampling, from jails, health clinics and drug treatment programmes, while many sex workers may not disclose their occupation for fear of stigma or legal prosecution (Sawicki et al., 2019).

on groups that are less frequently studied,² but recognise that this does not take into account other highly salient aspects of disadvantage that are likely to affect many more people – notably inequalities between cis-gender men and women, and those relating to age, ethnicity or race, religion and socioeconomic status, among others (and indeed, we do not overlook how some of these aspects affect some members of the groups we focus on more than others). Our intent is not to be comprehensive but to understand better the impacts of selected aspects of identity (being a sexual minority or transgender, having a disability or impairment), experience (displacement, sex work) and location (living in a rural area). We do not suggest that everyone in these groups is left behind, but that the probability is greater (as is the risk of their not having access to quality services), despite many people within these groups being more exposed to health risks.

This paper provides a selective review of the academic and grey literature on impediments to accessing quality healthcare for these at-risk groups and ways they can be tackled (see Annex 1 for details of the search strategy). It has two objectives. The first is to understand better the static constraints at-risk groups face in accessing quality healthcare – from both the supply side (service availability) and the demand side (service uptake). It is important to underline – not least in light of the Covid-19 pandemic – that this paper does not directly address exposure to dynamic shocks such as disease outbreaks, natural disasters, and cross-border population movements, all of which can exacerbate existing vulnerabilities and create new ones (Rao et al., 2019: 132). Evaluating the impact of shocks is of course critical to understanding poor health outcomes – but here our interest is on long-standing structural constraints that condition exclusion. These constraints may be physical,

social or economic, and can interact in ways that multiply the exclusions associated with each individually, exacerbating inequalities in health outcomes.

These exclusions, in turn, have a considerable cost – both directly and in terms of foregone opportunities. For example, the cost of exclusion resulting from homophobia has been estimated at between \$1.2 billion and \$27 billion in India (up to 1.4% of gross domestic product), and between \$0.9 billion and \$12 billion in Indonesia (Lee Badgett et al., 2017). In LICs, 85–95% of people who need assistive technology are unable to obtain it, although this is one of the most important requirements for being able to participate in education, employment and civic life (UNICEF and WHO, 2015). A recurring theme in the literature is that many governments do not spend enough on basic health services and the burden falls disproportionately on the left behind. To give one example, mental ill-health – which disproportionately affects the groups we consider – receives only around 2% of the health budget in MICs and 0.5% in LICs, despite constituting more than 10% of the global burden of disease (Murray et al., 2013; Mental Health ATLAS, 2011; WHO, 2013, in Banks and Polack, 2015). As a result, in a survey of seven LICs and MICs, fewer than 4% of people who need mental health treatment had received minimally adequate care (Wang et al., 2007, in *ibid.*).

At the same time, some countries offer cost-effective examples of ‘what works’ in addressing these constraints. Our second objective is therefore to highlight specific interventions the literature suggests could enable governments and other actors to deliver better services to these left-behind groups. The focus on cost effectiveness is not intended to detract from the moral case for improving access to healthcare but rather seeks to understand how this can be done in resource-scarce contexts.

2 Frequently studied characteristics include poverty, race or ethnicity, chronic illness, a lack of insurance and old age (Grabavaschi et al., 2013, in Rao et al., 2019: 134).

2 Why groups get left behind in health

Exploring at-risk groups' experiences reveals diverse constraints to accessing quality healthcare – both in terms of demand for and the supply of services. It also points to various interventions that could help to alleviate them. Typically, groups at risk of being left behind have a higher need for health services than the general population. This is mostly the result of socioeconomic inequalities, as evident in a huge body literature on the social determinants of health. Some examples are given here.

While many health needs of LGBT people are similar to those of heterosexual, cis-gender people, *rates of depression, anxiety and suicidality are far higher in the former group, in part due to higher rates of exposure to psychological, physical and sexual violence* (Baral et al., 2009; Sandfort et al., 2015; Tat et al., 2015; Lee Badgett et al., 2017; 2019). For example, in the EU, in a 2013 survey of LGBT respondents, 26% reported physical or sexual violence in the preceding five years (FRA, 2013, in Lee Badgett, 2019). In India, rates of clinical depression among men who have sex with men (MSM) appear to be 6 to 12 times higher than population rates, while the LGBT suicidal ideation rate was 7 to 14 times the LIC and MIC average (Lee Badgett, 2014). Data on exposure to sexual violence remains sparse. While in South Africa it is documented that lesbians experience higher rates of sexual assault and rape, this research has yet to be replicated in other LIC and MIC environments (Sandfort et al., 2015). Reports on murders of transgender people are increasingly being collected (see

HRC and TPOCC (2019) on the United States), but barriers to data collection preclude the production of accurate homicide statistics for this population.

Worldwide, both *MSM and transgender women*³ are disproportionately affected by HIV (human immunodeficiency virus) and other sexually transmitted diseases (Beyrer et al., 2012; Reisner et al., 2016; Baral et al., 2018). In sub-Saharan Africa (SSA), for example, a meta-analysis concluded the average HIV prevalence rate was 18% among MSM, nearly 5 times higher than the prevalence rate among men in the general population (Hessou et al., 2019). Recent research and epidemiological modelling suggest that HIV prevalence rates for MSM are higher than adult population rates for a variety of biological and behavioural reasons, particularly because of the 'high per-act and per-partner transmission probability of HIV transmission in receptive anal sex' (Beyrer et al., 2012: 43). In fact, the recipient in anal sex is 18 times more likely to contract HIV than in vaginal sex (Patel et al., 2014). MSM also tend to have lower rates of condom use than heterosexuals (Zuckerman et al., 2004; Glick et al., 2012), which increases the likelihood of exposure to sexually transmitted disease. MSM may also be more likely to inject drugs (Johnston et al., 2010; Wei et al., 2012).

A recent meta-analysis of the global literature found that 19.1% of transgender women are HIV positive, compared with 0.4% of all reproductive-age adults, a finding that also holds for wealthier countries (Baral et al., 2013, in Lee Badgett et al., 2019). It is argued that discrimination

3 We are cognizant that transgender is a term used to refer to 'all those whose gender identities do not align, according to societal expectations, with their birth-assigned sex', including non-binary people (Kapitan n.d.). In this paper, where we refer to transgender women or men, we are adopting the terminology used in the original work we are citing.

contributes to the impoverishment of transgender women worldwide, inhibiting access to housing, employment and services, and increasing the likelihood of participation in sex work (ibid.).

Sex workers face some of the same health risks as MSM. They are likely to underuse condoms, often because of pressure from clients or managers,⁴ and their sexual behaviour carries much higher risk owing to their number of sexual partners. Female sex workers are 13.5 times more likely to be HIV positive than other women (Baral et al., 2012); in SSA, prevalence rates are 10-20 fold higher than among the general population (Scorgie et al., 2011: 920). A systematic review of female sex workers in SSA found that their vulnerability to HIV is ‘inextricably linked to the occupational contexts of their work, characterised most commonly by poverty, endemic violence, criminalisation, high mobility and hazardous alcohol use. These, in turn, predict behaviors such as low condom use, anal sex and co-infection with other sexually transmitted infections’ (ibid: 920). Moreover, in many settings, there is considerable overlap between female sex workers and injecting drug use, putting them at a dual risk of infection (Stockman and Strathdee, 2010).

Sex workers report far higher rates of physical, sexual and verbal violence; between 32% and 55% of females working mostly in street-based sex work reported workplace violence in a given year (Deering et al., 2014). They are also much likelier to suffer drug addiction. All of these outcomes result in a higher likelihood of mental

health problems. Disentangling the direction of causality can be challenging. Nonetheless, several observational studies show that sex workers are much more likely to report self-harm, anxiety, depression and post-traumatic stress disorder (PTSD) than the public at large. It is estimated that 68% of sex workers in 9 HICs and MICs met the criteria for PTSD (Farley et al., 2008).

Displaced people can have greatly different health needs, often having suffered physical injuries, PTSD, and much greater levels of stress and anxiety. In 2018, 68% of the 81,300 refugee resettlement submissions made were for victims of violence or torture (UNCHR, 2019). In such cases, people require specialised health treatment to overcome the trauma, but often do not receive any. A lack of treatment compounds mental health problems, which may in turn be worsened by isolation in their new surroundings (Sijbrandij et al., 2017). Economic migrants too may have a higher demand for health services where their migration is driven by poorer access to healthcare or the act of migrating to a different environment provokes mental health issues (Virupaksha et al., 2014). Other categories of displaced people – internally displaced people, asylum seekers – are also likely to have unique health needs.

People living in rural areas tend to be poorer and less well educated, more likely to move into substandard housing and to be lacking in nutrition (Rodríguez-Pose and Hardy, 2015), all factors that can result in poorer health and a higher demand for health services.

4 Per Goldmann (2011), 90% of female sex workers rely on a ‘pimp’.

3 Ways that groups are left out of health systems

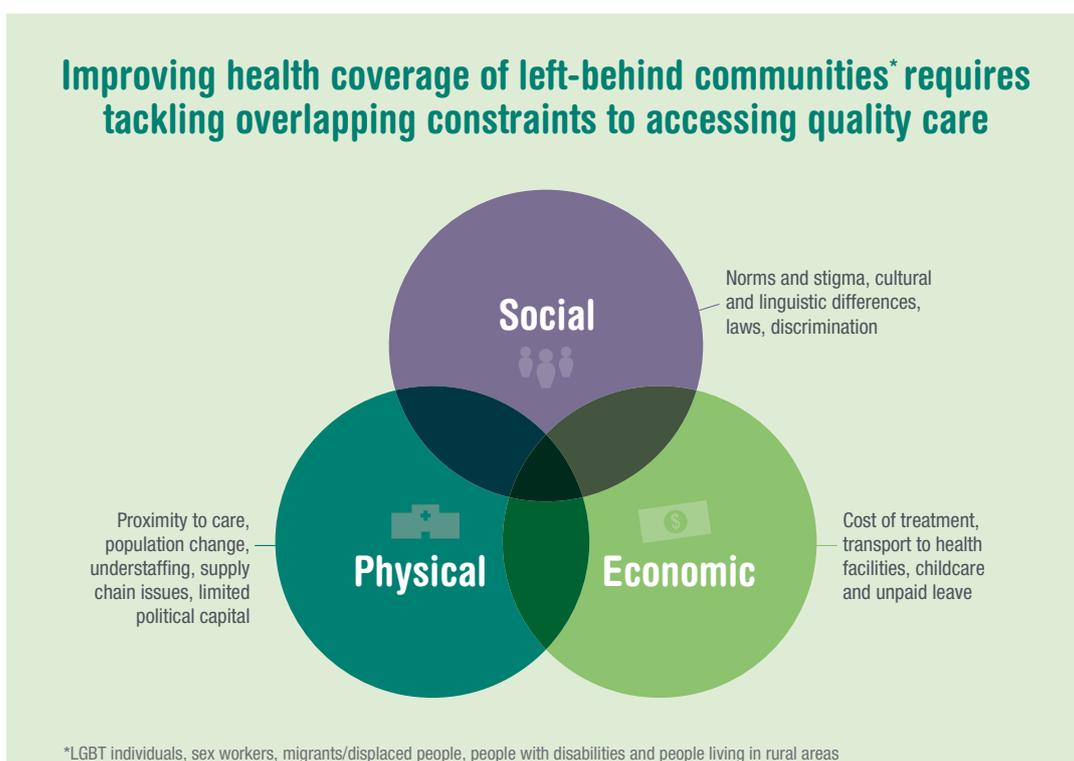
The evidence base highlights the static or persisting social, physical and economic constraints that cause people to be left behind in accessing health services. These constraints affect both the supply of health services and the demand for them. We explore each type of constraint individually and then discuss ways in which they can interact, which in some cases amplifies a lack of access to healthcare (Figure 1). Section 3.1 introduces three social constraints – norms and stigma, cultural and linguistic differences and laws – and provides examples of how they are experienced and their consequences for particular groups. Section 3.2 explores physical constraints, focusing on distance

from care, understaffing, supply-side issues, sudden population shifts and relatively low political capital. Section 3.3 turns to economic constraints, namely the cost of treatment and of transport to health facilities, and the costs associated with childcare and unpaid leave, and finally section 3.4 highlights intersections between these factors.

3.1 Social constraints

Social constraints to accessing healthcare arise from prejudicial norms and associated stigma, cultural and linguistic differences, inferior legal status and interactions between these

Figure 1 Constraints to healthcare access



factors. These factors can lead patients to conceal information about risky behaviours and they engender isolation and loneliness – mental health issues that can also result in problematic behaviours such as higher substance use. Feelings of exclusion may be particularly acute for some groups, notably migrants and displaced people who lack a social network or face cultural differences in their new surroundings.

Some at-risk groups face similar health needs to the general population but experience differing outcomes due to social considerations. Other groups may face more complex health needs that result from who they are, but these needs may not be met due to prejudice. Nor are these experiences mutually exclusive: sex workers and LGBT communities, for example, may have health needs that differ in some respects from those of the general population, but they are often also failed where their health needs are identical. This is the case in India, where 85% of MSM reported police harassment, which in turn impeded their access to HIV services (Safren et al., 2006).

3.1.1 Norms and stigma

Stigma and discrimination affect both health-seeking behaviour and health provision. This is evident in the situation of PWD, who rarely (if ever) face overt legal barriers to accessing health services that relate to their impairment. Nevertheless, negative social attitudes, misconceptions and stigma often impede PWD in accessing the care they need. In some societies, a perception that disabilities derive from sin or witchcraft discourages people from seeking out conventional medicine (DSPD, 2016; Groce and McGeown, 2017). Even when this is not the case, discomfort or communication barriers and a lack of understanding on the part of healthcare staff often undermine the care people receive (Bright and Kuper, 2018). Family members often mistake signs of illness as being part of a person's disability and are therefore less likely to suggest taking them to receive healthcare. Or people may not understand that care is needed because of particular misconceptions, such as the commonly held view that PWD are not sexually

active, which leads to a lack of sexual education and reproductive healthcare provision. This lack of understanding can also mean that often very simple treatments that will improve people's lives are not funded (Banks and Polack, 2015; Carew et al., 2017).

Even when PWD are taken to healthcare practitioners, the treatment they receive may be substandard. Across 51 countries, PWD were 'more than twice as likely to report finding healthcare provider skills inadequate to meet their needs, four times more likely to report being treated badly and nearly three times more likely to report being denied needed care' (WHO, 2018). They are also significantly less likely to seek out healthcare because of previous ill-treatment, discrimination that is particularly acute among working-age men and people seeking in-patient care. Finally, in some resource-constrained environments, treating PWD can be perceived as representing poor value for money, on the basis that they will not be able to return to 'full health' (World Bank and WHO, 2011; Banks and Polack, 2015).

Stigma can also increase the risk of sexual ill health. The lower rate of condom use among MSM is partly attributable to stigma, which can inhibit people when it comes to obtaining health advice that might include advocating condom use. Stigma may also result in higher prevalence of sexually transmitted disease by stopping men participating in HIV testing (Lorway et al., 2014).

Although strategies in most high-prevalence HIV countries identify MSM as an at-risk population, specific programmes for this group are extremely limited, owing in part to widespread homophobia and, in some countries, the criminalisation of same-sex practices (UNAIDS, 2017). According to Avert (2018), stigma and discrimination render it very challenging to target HIV financing to key populations (MSM and people who inject drugs). The result is that only 2% of all HIV funding and around 9% of resources allocated for prevention are spent on these groups, despite 40% to 50% of all new HIV infections in adults occurring among these populations and their partners.

3.1.2 Cultural and linguistic differences

Health disparities need not be driven by overt discrimination on the part of health policy-makers or clinicians. Linguistic or cultural differences between groups such as displaced people and health providers may also create communication or trust barriers that make it harder to diagnose illnesses, especially mental illness (Suphanchaimat et al., 2015) and to communicate the risk of treatments, notably where there is a need to rely on medically inexperienced translators (Meuter et al., 2015). The result is that patients may be less likely to seek out treatment or trust the advice they are given. PWD may also encounter this type of barrier in instances where, for example, healthcare professionals find it difficult to communicate with people with hearing or intellectual impairment (Bright and Kuper, 2018).

3.1.3 Legally sanctioned discrimination

Legal issues may be paramount for some communities, such as migrants or displaced people who lack documentation or legal status (PICUM, 2017). Indeed, these communities often struggle to access health services due to their concerns about immigration controls enacted via health providers (Abubakar et al., 2018; Winters et al., 2018). Often, stigma is reflected in and reinforced by legal prohibitions – which, again, result in both a higher need for care and the reduced availability and uptake of basic health services. In some countries, distinct types of legal discrimination are evident, such as in China, where internal migrants face difficulties accessing services under the hukou system.

Among displaced people, LGBT communities and sex workers, discrimination and legal aspects often intersect. For example, laws in 71 countries that prohibit homosexuality also reinforce discriminatory attitudes (ILGA, 2019); and the higher prevalence of mental ill-health among LGBT populations is driven by prejudicial social norms, which tend to correlate with the societal acceptance of homosexuality (Wagner et al., 2013; Oosterhoff et al., 2014). Often, such discriminatory attitudes are legally sanctioned, which allows police and health workers to be extractive or coercive towards those in need of help. For example, in Nigeria, the passage of the

Same Sex Marriage (Prohibition) Act in 2014 led MSM to report an immediate increase in ‘fear of seeking healthcare, avoidance of healthcare, absence of safe spaces to socialise with other MSM, blackmail, and verbal harassment’ (Schwartz et al., 2015). One consequence was a large decline in the number of men taking HIV tests.

At the extreme, pathologising attitudes toward homosexuality have provoked medical and sexual abuse. In India, homosexuals have been subject to conversion therapy, psychopharmacological drugs and shock therapy (Samelius and Wagberg, 2005: 25; Fernandez, 2002, in Zaman et al., 2016: 11). In Indonesia, homosexuality and bisexuality have been characterised as psychiatric problems, and transsexuality as a mental disorder (PDSKJI, 2016, in Lee Badgett et al., 2017), and there are accounts of rape being used to ‘cure’ cis-gender lesbian and bisexual women and transgender men (Lee Badgett et al., 2017). Transgender women and gender non-conforming men in Indonesia (waria) must contend with lack of legal status (almost 70% of waria in Jakarta do not possess legal citizenship documents), which prevents them from accessing healthcare, and many are afraid to petition for identification documents for of fear of harassment (ibid.). It is also more difficult for LGBT groups to seek legal redress when they encounter problems; the reporting rate for sexual violence among LGBT groups appears to be lower the more heteronormative a country is (Finneran et al., 2012).

As with MSM, stigma greatly reduces sex workers’ health access, and the standard of care that they receive varies greatly (Baral et al., 2012). This stigma can be reflected in and compounded by legal prohibitions on sex work (Box 3). Despite pervasive violence, the criminalisation of sex work prevents female sex workers from reporting violence to the police or seeking legal recourse following rape or sexual assault, and there is increasing documentation of police harassment and brutality against them (Scorgie et al., 2011). Female sex workers also face a very high rate of unintended pregnancy, in part because many rely on only one method of contraception – condoms. This is often because

Box 3 The impact of discriminatory legislation on sex workers

A recent systematic review of the impact of criminalising legislation on sex work concludes that it is linked to “extensive harms” among sex workers. It finds that sex workers who were criminalised were displaced into isolated locations, reduced client screening procedures, and avoided healthcare settings and HIV testing, owing to fear of police and an increased police presence. They were three times as likely as other sex workers to have experienced sexual or physical violence, twice as likely to contract HIV or another sexually transmitted infection and one and a half times as likely to report condomless sex with a client.

Source: Platt et al. (2019)

of either poor sexual health education or lack of access to other birth control.⁵ In much of the world abortions are illegal and this can drive female sex workers to have an unsafe abortion, 22 million of which take place across the world every year (Rekart, 2015).

3.2 Physical constraints

Physical constraints can also inhibit demand for healthcare, where people find it difficult to access health services, and the supply of services, where geography hinders provision. Such constraints are perhaps most acute for PWD and rural dwellers in LICs and MICs (and notably for PWD living in rural areas). For rural

dwellers, physical constraints arise from increased distance from services, the reluctance of medical personnel to work in rural areas and less developed supply chains, which reflects and accentuates their relatively low political capital. The International Labour Organization estimates that 56% of rural people globally do not have access to essential healthcare, compared to 22% of people living in urban areas (Scheil-Adlung, 2015).⁶ The number of rural people without any entitlement to healthcare provision rises to 83% in Africa (ibid.).

3.2.1 Physical distance

A primary blockage to providing healthcare in sparsely populated areas is that people will, on average, always be further from care centres. The population density of Africa is 45 people per square kilometre, but it is not uncommon for cities to have between 500 and 1,000 times this level of population density. If doctors and hospitals are assigned geographically and group populations of the same size, then a person in a city with 500 times the density will on average be 22 times closer to healthcare services. Proximity is also conditioned by topography as well as distance, and physical infrastructure – including roads and transport options. It is unsurprising, then, that proximity to care appears to be the barrier that has attracted the most attention in the literature.

Physical barriers PWD face in accessing healthcare include buildings and services that are not designed to allow access for those with physical impairments (Box 4). Significantly more facilities lack the appropriate equipment and training to deal with people with sensory or intellectual disabilities, hindering their ability to obtain treatment (Banks and Polack, 2015).

5 Condoms are far from perfect as a birth control method, mostly (but not entirely) because of incorrect use. The average sexually active woman who uses only condoms as a form of birth control has a 15% chance of becoming pregnant in a given year, a risk that falls to 2% if condoms are correctly used (Planned Parenthood, 2020). Because female sex workers have sex far more often than the average, the risk of unintended pregnancy is much higher, which has led health promoters to recommend the use of a second method of contraception. This advice is often not heeded in lower-income settings, however.

6 These figures refer to the proportion of the population ‘that is not protected by legislation or affiliated to a national health service or health scheme and which therefore does not have the right to access health care when in need’ (Scheil-Adlung, 2015: 6).

Box 4 Physical barriers to attending health facilities in Brazil

A study in 41 Brazilian municipalities focused on the conditions of basic healthcare units, using information based on a survey of healthcare professionals working in 241 randomly sampled units. The study concluded that 60% of these facilities did not have adequate architectural adjustments to allow older people and those living with disabilities to attend, with barriers including the presence of steps and a lack of handrails, ramps, bathrooms adapted for wheelchair users and adequate waiting rooms. It argued that rectifying these deficiencies was essential, not least in light of population ageing (itself associated with an increase in the share of PWD) and an increase in chronic disease.

Source: Siqueira et al. (2009)

In almost every area of health, proximity to care and transport difficulties emerge as a major barrier. In a review of drivers of maternal mortality in LICs and MICs, Bohren et al. identify living in a rural area and poor transportation as one of the biggest barriers to safe child delivery (2014: 13):

In some areas, local public transportation was the only means available, but services were often intermittent in rural areas and the cost of transportation was prohibitively expensive. Travel at night or on weekends is especially difficult as there are fewer options and higher costs.

Even where suitable clinics exist, many PWD struggle to travel to them, because of an inadequate national infrastructure or because healthcare systems have not created an adequate alternative to supply them with the care that

they need (e.g. by travelling to immobile patients or providing transport for PWD so that they need not rely on public transport) (O’Keefe, 2007; World Bank and WHO, 2011).

PWD living in rural areas appear to struggle far more than their urban counterparts in obtaining healthcare. Transportation is a major issue in LICs and MICs, because transport infrastructure and systems are not usually designed to accommodate the travel needs of PWD. As people in rural areas must travel further for basic services such as healthcare, these travel difficulties become more significant. In a recent systematic review, five of seven studies cited transport as a barrier to health access (Bright and Kuper, 2018). The problem of proximity to care is particularly important for PWD in rural areas, as there is normally not a critical mass of people to create specific healthcare facilities to deal with specialist health needs such as having a disability (World Bank and WHO, 2011).

It follows that rural residents are unable to seek out care as often as those in urban areas, and there is a much longer delay in receiving treatment. This is particularly problematic for emergency care where speed is often essential. A systematic review of all barriers to emergency care in LICs and MICs found that ‘one of the biggest challenges in many rural low resource settings is the scarcity of emergency care, and where present, the distance and time to access appropriate services’ (Kironji et al., 2018). But in non-emergency settings, distance is still a major factor. For example, a study in Ghana found that doubling the distance between patients and their local healthcare centre halved service use (O’Donnell, 2007), while people in rural areas of Pakistan were about half as likely to undergo abdominal surgery, all else being equal (Zafar et al., 2013). Analysis of 34 studies focused on SSA found that geographic and transport-related barriers led to less favourable outcomes at every stage of HIV treatment (Lankowski et al., 2014). Similar results have been found for treatment for hypertension (Chow et al., 2013) and cancer (Brand et al., 2019).

3.2.2 Sudden population shifts

Governments may find it difficult to adapt services in line with population growth. For example, population density often increases quickly in the areas of a city where migrants settle, and these groups may struggle with care provision where health resources are not reallocated swiftly. For migrants, such underinvestment may also be reinforced by their lack of documentation or proof of residence, both of which are often needed to establish entitlement to healthcare.⁷ The evidence suggests that, too often, health inequalities in urban areas are not addressed as quickly as they ought to be (WHO and UN-Habitat, 2016).

3.2.3 Understaffing of health services

Not only are patients further from clinics and care centres in rural areas, but existing care centres struggle to maintain appropriate staffing levels. There appear to be two main reasons. Firstly, it is difficult to convince doctors and nurses to work in rural areas, so the quantity and quality of medical personnel is lower (Vujicic et al., 2009; Awofeso, 2011; Gray and Budgell, 2011; Budhathoki et al., 2017). Secondly, health professionals who do work in rural areas often have very low attendance rates, probably in part because of lower morale and because they are more likely to work on their own, which means they face less social pressure from colleagues and absenteeism is harder to monitor (Banerjee et al., 2004; Chaudhury et al., 2006; Belita et al., 2013).

3.2.4 Supply-side issues

Much of the literature highlights difficulties in getting supplies to doctors and clinics in rural areas. A Lancet review of surgery procedures in 21 LICs and MICs found that rural hospitals were consistently constrained by ‘inadequacies in basic infrastructure, equipment, supplies, and access to banked blood’ (Raykar et al., 2015). There are some genuinely difficult problems to overcome in resourcing rural hospitals. Because they see fewer patients, demand fluctuations are

greater than in urban areas, making it harder to predict patient numbers. Poor storage, transport and communication infrastructure exacerbate this by making it difficult to store or replenish supplies. These problems could be reduced by improved forecasting systems, the use of multiple distributors and better inventory management (Dowling, 2011; Penfold et al., 2013; Wagenaar et al., 2014).

3.2.5 Limited political capital

Being in a disadvantaged or marginalised position is both a cause and consequence of having limited political capital. In rural areas, relatively low political capital is linked to physical distance. The evidence suggests that corruption and neglect, partly driven by lower levels of political engagement, prevent rural dwellers in many countries from demanding accountability and better services (Zafar et al., 2013). This chimes with development literature from other fields, which reveals that being further away from where decisions are made renders it harder for people to highlight their concerns to politicians and to protest or campaign (Lipton, 1977; Majumdar et al., 2004; Bezemer and Headey, 2008).

3.3 Economic constraints

Left-behind groups tend to be relatively income poor; indeed, this is a key reason that many have needs that are not being met by healthcare systems. Economic constraints exist when people cannot access quality healthcare because they cannot afford either the direct costs of healthcare (i.e. medicine, inpatient or outpatient care), and/or the indirect costs, such as transport, time off work and childcare. Globally, between 3.8 billion and 5.0 billion people lack access to all essential healthcare, while 100 million people are forced into poverty because of high health costs (World Bank, 2017). Economic constraints are likely to be more acute for at-risk groups not only because their incomes tend to be lower, but also because their health and transport needs differ.

⁷ Refugees in camps will also be subject to a different set of regulations governing service provision.

3.3.1 Treatment costs

Overall, the impact of healthcare costs appears to be worsening: the incidence of catastrophic health spending (that exceeding 10% of income) has risen from 9.4% of the world's population in 2000 to 12.7% in 2015 (WHO, 2019b). The hardships fall disproportionately on vulnerable groups, even in countries such as China and Thailand that have supposedly universal health financing systems (Rao et al., 2019: 136–137).

The groups we consider in this paper are likely to be poorer than the population average – in many cases because they are less likely to receive a quality education or to be employed. Substantive data validates this claim for people in rural areas and PWD. The global extreme poverty headcount is 17% in rural areas, more than three times as high as that in urban areas (World Bank, 2018). Across 51 countries, rural households faced a larger burden from out-of-pocket payments, mainly due to higher spending on medicines (Saksena et al., 2010). Studies from all parts of the world affirm a higher risk of incurring catastrophic health expenditures among rural relative to urban households: in several Latin American countries, it was 2–4 times higher (Knaul et al., 2010), in Iran, 82% higher (Amiresmaili and Emrani, 2019), in India, 27% higher (Pandey et al., 2018) and in Nigeria, up to 66% higher (Cleopatra et al., 2018). The evidence also shows that having a disability and living in poverty are highly correlated (Mitra, 2018). In LICs, around half of PWD are unable to afford healthcare compared with one-third of people without a disability (WHO, 2019a). More broadly, PWD are 60% likelier than the rest of the population to cite an inability to pay as their main reason for not seeking healthcare.⁸

Evidence on catastrophic health spending among the other groups that we consider is lacking, but the available data points to greater economic insecurity than among the general population, which is likely to constrain access to quality health services. For example, a lack

of economic opportunity appears to be a critical driver of entry into sex work. In a systematic review of sex workers in SSA, Scorgie et al. (2011: 924) find:

Many young African women who trade sex for food, money or shelter come from disadvantaged backgrounds, are poorly educated, divorced, and lack the skills required for other types of formal or informal employment. A startling proportion of [female sex workers] in West and East Africa have received no formal education—well more than 10% in most of these studies and above a third in several. Economic and food insecurity may make sex work the sole survival option for women, particularly those with dependents or whose parents have died.

For sexual minorities and transgender people, the sparse evidence also points to economic constraints. For the United States, households headed by same-sex couples, especially lesbian couples, are more likely to be in poverty than those headed by heterosexual married couples (Schneebaum and Lee Badgett, 2018). Evidence from lower-income countries, based largely on non-representative samples, suggests LGBT populations are vulnerable to poverty in India and in Brazil.⁹ For transgender people, the evidence is scarcer still, but convenience samples for the United States suggest high levels of unemployment and low incomes (Lee Badgett et al., 2009). Finally, the literature on IDPs and refugee communities also highlights their experience of high poverty rates relative to their own countries prior to displacement and relative to their host countries (in the case of refugees), as well as specific barriers to accessing health services in host countries (Samman et al., 2018). This is reflected in data for the United States showing that 9% of citizens are

8 Per WHO and World Bank (2011: 66), across 51 countries, '32–33% of nondisabled men and women cannot afford health care, compared with 51–53% of people with disabilities'.

9 For India, Khan et al. (2005); Newman et al. (2008) and Masih et al. (2012); and for Brazil, Itaborahy (2014), all cited in Scneebaum and Lee Badgett (2018).

uninsured, a figure that rises to 23% among immigrants with legal status and 45% among those who lack documentation (Kaiser Family Foundation, 2020).

High health costs also mean that lower-income households must often spend on healthcare money that would otherwise go towards education and food, perpetuating or exacerbating a cycle of poverty within the poorest parts of the world. Often, an inability to invest in soap, malaria nets and nutritious food increases the likelihood of becoming ill, which in turn limits families' ability to spend money on preventative or curative care, creating a cycle that creates and perpetuates poverty traps. Lower-income countries are particularly likely to underspend on preventative care, reducing the health stock as well as the number of days available to participate in welfare-enhancing market and non-market activities (Wang, 2018).

3.3.2 Transport, childcare and unpaid leave

Travel costs, and missed work, either because they or a child is unwell or seeking treatment, can place a huge burden on families even when healthcare itself is free (Wagner et al., 2010). Travel costs and food consumed while away from home made up more than 40% of the total economic cost of having malaria in Ethiopia; this does not include the greater time off work needed to travel and is despite treatment for this disease being much more decentralised than for other illnesses (Hailu et al., 2017). In a review of the costs of having tuberculosis (TB), the costs of travelling to a treatment centre were shown to be manageable in many lower-income settings but they made up 80% of the cost of having TB in Bangladesh and between 22% and 44% in Ethiopia, Tajikistan and Tanzania (Laurence et al., 2015). In most of these analyses, transportation costs are greater than either the costs of treatment or of missing work due to illness.

Spending time caring for a child or an adult with a disability can reduce the ability of caregivers to earn an income, particularly where they are not covered by regulations mandating paid leave in the case of sickness. Workers in the informal economy, who are typically more disadvantaged to begin with, are most likely to

have to rely on unpaid leave to seek healthcare for themselves or others. In Bangladesh, estimates suggest that for every \$1.00 lost to the economy because PWD were unnecessarily excluded from the labour force, another \$0.26 was lost due to caregivers being unable to work (World Bank, 2008). Recent research finds significant productivity losses due to illness: time lost due to seeking treatment and being ill with TB was reported as 14 days in Malaysia, 60 days in Thailand and 81 days in Netherlands; in Haiti, people with active TB were assumed to be 50% disabled (that is, 50% productivity loss) from symptom onset to diagnosis, were unable to work while hospitalised, and then 50% disabled for the remainder of the first two months of treatment (Laurence et al., 2015).

3.4 Interactions between different constraining factors

Social, economic and physical barriers are individually constraining, but they can also interact in a way that multiplies disadvantage for left-behind groups, thereby worsening disparities in health outcomes. The literature on how constraints intersect for these groups is relatively sparse but nonetheless points to some important ways in which they can heighten exclusion from high-quality health services and result in poorer health outcomes, above and beyond the effects of each factor considered alone (Robinson and Ross, 2013; Lenhardt and Samman, 2015; Kabeer and Santos, 2017; Rao et al., 2019). For example, Marcellin et al. (2013) report that among non-Aboriginal transgender people of colour in Ontario, Canada, experiences of racism and transphobia interacted to increase the odds of engagement in high-risk sex (cited in Robinson and Ross, 2013: 93). Lenhardt and Samman (2015) show that not only do factors such as race or ethnicity, socioeconomic status and rural residence contribute to inequalities in child deaths across 16 LICs and MICs, but that each intersection of these characteristics also contributes to unequal outcomes. Rao et al. (2019) document evidence that being poor, living in a rural area and having limited education result in outcomes far worse than any of these characteristics considered independently.

Aspects of identity that we do not focus on here also matter: inequalities between cis men and cis women, age, socioeconomic status and race/ethnicity, among others, interact in important ways that affect vulnerable groups' options for accessing quality healthcare. Moreover, people who belong to more than one of the groups we consider (e.g. PWD in rural areas, or migrant sex workers) are not only subject to constraints particular to each situation, but also to the effects of these constraints compounding one another in deleterious ways. We look here at examples of how the constraints we explore may interact in a way that accentuates exclusion from health services.

Social and physical constraints can be mutually reinforcing. As previously outlined, transport issues pose a significant problem for PWD, and these issues are greatly exacerbated in rural areas. Lower population density also means that people are less likely to live in proximity to those with a similar disability, reducing social connections – which have been shown to increase knowledge sharing and reduce the loneliness and mental health problems that can be more likely with some disabilities (Hosain et al., 2002; Russell, 2009). Some evidence suggests that social attitudes towards PWD can be substantially worse in rural areas, exacerbating potential health issues (Groce and McGeown, 2017). Moreover, in rural areas, healthcare officials often come from or reside in the same locality as their patients, rendering confidentiality difficult to maintain. This poses an additional barrier to accessing healthcare, particularly for stigmatised groups such as PWD or sexual minorities.

Social constraints also intersect with economic constraints. Greater wealth allows people to be more socially and physically mobile, meaning they can more easily move to areas where integration is easier. Wealth also gives people a higher social status, which can make it less

likely that they will be discriminated against for other differences. For these reasons, economic constraints tend to worsen adverse health outcomes for groups at risk of being left behind (Edberg et al., 2011; Oosterhoff et al., 2014). Stigma and discrimination can also increase income poverty: one reason that LIC and MIC households with a PWD are likely to have lower incomes is that prejudices and a failure to adapt working environments can make it significantly harder for a PWD to find and stay in work. Similarly, discrimination in education and employment depress the economic contribution of LGBT populations to their societies (Lee Badgett et al., 2019).

Economic and physical constraints tend to be correlated – e.g. with people living in rural areas being poorer than those in urban areas (World Bank, 2018). As previously discussed, both socioeconomic status and physical constraints have a significant impact on health outcomes – for example, poverty heightens the physical constraints posed by the need to travel longer distances to seek care in rural areas. WHO (2019b) provides comprehensive evidence showing that across 96 countries, on average, poor people have lower coverage for 'even for basic services such as immunisation, sanitation and antenatal care' and that coverage is typically lowest for people in the poorest quintile of households residing in rural areas. Other evidence points to country-specific effects. In Bolivia, rural households in the poorest quintile experienced twice the share of child deaths as the national average in 2008, while poor urban households experienced slightly more than the national average (Lenhardt and Samman, 2015). In Guinea, urban residents in the richest quintile experienced half the national average of child deaths while rural residents in the poorest quintile experienced 20% more child deaths than the national average (ibid.).

4 The cost of reaching at-risk groups

The previous section outlined three types of constraints that cause some populations to be left behind in accessing quality healthcare, by limiting the supply of health services for certain groups and/or their demand for healthcare, and looked at how these constraints can interact to intensify exclusions. As discussed, these exclusions have significant costs for societies and for the individuals concerned. To give one example, sexual minorities, transgender people and sex workers are more likely to contract a sexually transmitted disease owing to higher risk coupled with constraints on healthcare access; in the United States alone, the annual direct medical costs of sexually transmitted diseases are estimated at between \$14 million and \$23 million (Chesson et al., 2011, in Rinaldi et al., 2018).

We now consider how these constraints can be lifted. This is a broad, complex and contested issue. Some analysis has focused on the balance between investing in improving the socioeconomic circumstances of disadvantaged or marginalised groups that create a social gradient in health versus health-specific investments. Others are concerned with the optimal investment in health systems versus targeted programmes, and in preventative versus curative care. However, underlining all these debates is the clear need for greater investment in health services, notably in LICs and MICs. Greater investment will be particularly vital for at-risk populations as they are more likely both to need care and to be denied care where resources are limited.

In a companion piece, we identified a series of strategies that sought to extend UHC to left-behind groups, often involving targeted inclusion or eligibility, the expansion of health

units focused on primary healthcare across underserved areas, the provision of health cards to targeted groups and the creation of a parallel insurance scheme for the uncovered (McDonnell et al., 2019). We found that government systems appeared to perform better than privately financed initiatives in reaching at-risk groups and that governments appear to focus on raising demand for services (e.g. by removing user fees) before making capital-intensive investments to increase service supply.

In this paper, we review specific health-based interventions targeted at at-risk groups, rather than answering the question of how to bring about UHC; the type of initiatives on which we focus could be important antecedents to, or may complement and/or build on, broader structural reforms. We aim to highlight the cost effectiveness of interventions aimed at left-behind groups given our interest in resource-scarce settings. Throughout our literature search, we struggled to find generalisable programme costs that we could use to assess the cost effectiveness of pursuing a leave no one behind agenda. Policy-makers often do not publicly state the cost of particular programmes and, when costing information does exist, it tends to be highly context specific. Where possible, we identify programmes that are likely to be cost effective in reducing constraints that inhibit at-risk groups from accessing quality care.

4.1 Overcoming social constraints

4.1.1 Reducing discrimination

As discussed in section 3.1, stigma constrains many at-risk groups from accessing healthcare, with far-reaching costs. For example, because MSM and sex workers are less likely to seek

care, the less inclusive the environment they live in is, the harder it is to track the spread of illnesses throughout these communities (Davis et al., 2017). Overcoming discrimination would therefore greatly improve the quality of life of left-behind groups. However, changing social attitudes usually takes time, while top-down change often requires substantial political capital.

The impact of changes to laws upon stigma is cited widely in the literature. Governments should be made aware that when they develop legislation that criminalises same-sex relations or selling sex (as opposed to criminalising the buying of sex) or when they pass laws that discriminate against LGBT populations, they are making their citizens' health worse. Several cross-country analyses in Africa have found that HIV transmission rates are higher where there is a greater stigma around MSM (Mayer and Beyrer, 2007; Poteat et al., 2011; Beyrer et al., 2012). The reverse is also evident: in India, the 2009 High Court decision that decriminalised adult consensual same-sex activity resulted in increased acceptance of LGBT issues and a vast uptick in the provision of health services to this community (Zaman et al., 2016).

In Thailand, a review of and change to legislation that was reducing the uptake of health services by MSM and transgender persons cost the government about \$32,000 (Thailand National AIDS Committee, 2014),¹⁰ equivalent to the cost of treating four people for HIV in South Africa for 12 years (South Africa is the country with the most similar income level for which data was available) (Tagar et al., 2014). More broadly, countries have shown a willingness to challenge discrimination and stigma in the wake of an epidemic. For example, many SSA countries have invested heavily in awareness campaigns to reduce the stigma around HIV, encourage testing and treatment, and improve reproductive health.

4.1.2 Providing services that are adapted to specific needs

A second area in which social constraints need to be overcome is in adapting services to meet the needs of excluded groups – which is particularly

important for PWD, refugees and those who engage in higher-risk sexual activities.

As previously discussed, healthcare facilities are commonly not adapted to needs of PWD. This can be driven by inadequate attention to the requirement of these groups when infrastructure is designed and built, and is unfortunate not least because it is often less expensive to build physical accessibility into a health facility in advance than it is to retrofit buildings; whereas integrating accessibility into new buildings can amount to less than 1% of the cost, making adaptations to completed buildings can reach up to 20% of the original cost (UNICEF, 2013: 19). As well as improving access, healthcare systems need to employ more specialists who are versed in the specific needs of PWD (and to retrain existing staff to this end), improve referral systems and increase the availability of assistive technologies such as hearing aids and wheelchairs, which can greatly improve quality of life for PWD (WHO and World Bank, 2011; Banks and Polack, 2015; UNICEF and WHO, 2015).

Although refugee integration can pose challenges in low-income settings, notably where countries receive large number of arrivals in a relatively short period, it improves the health of new arrivals both by reducing isolation and by giving them better understanding of how to access health services (UNDP, 2009; Joshi et al., 2013). Programmes such as language classes, guides to local behaviour, and information on how to access services such as healthcare have all been shown to greatly improve integration. It is also important to improve attitudes towards refugees in host countries, as integration is very much a two-way process, and local hospitality is strongly linked to quicker and more cohesive integration (Strang and Ager, 2010). Many integration programmes are relatively inexpensive (UNDP, 2009).

Extensive evidence shows that well-designed mental health treatment for people in LICs and MICs need not be expensive to be highly effective. Several studies in India show a high return from lay councillor behavioural activation treatment (Buttorff et al., 2012;

¹⁰ The revision of legislation over a two-year period was estimated at 1,057,700 THB (Thai baht), to which we applied the baht/USD exchange rate for December 2014 (32.9095).

Patel et al., 2017).¹¹ WHO has demonstrated more broadly that investment in mental health can offer excellent value for money. In a 2016 exercise they estimate that the average annual cost over 15 years of scaled-up investments to treat moderate to severe depression was \$0.08 per person in LICs, \$0.34 in LMICs, \$1.12 in UMICs and \$3.89 in HICs. The benefit to cost ratios were in the range of 2.3 to 2.6. The per person costs for treating anxiety disorders were nearly half that of depression, with returns in the range of 2.7 to 3.0 (Marquez and Walker, 2016). The evidence for high returns from investments in mental health in LICs and MICs is very strong, as is the evidence that illustrates the high mental healthcare needs of many refugees. However, literature focusing specifically on the cost effectiveness of providing mental health services to refugees in LICs and MICs is lacking.

Many countries have built specific outreach programmes for MSM, sex workers and others at high risk of contracting STDs. Because of stigma, it is not enough to supply treatment centres; instead, patients need to be convinced to come forward and use them, which means they must trust that their information will stay anonymous. Thailand offers a good example of how this can be done. Approximately 28% of MSM in Bangkok are HIV positive, as calculated by cohort studies sampling the city's estimated 185,000 MSM. An additional 32% are considered to be at high risk of contracting the infection, despite condom use of 82% (normally considered high). High HIV prevalence was driven by low testing rates, such that people did not realise they had become HIV positive. Although Bangkok offered adequate testing facilities, they were not being properly utilised (Zhang et al., 2015).

A follow-on pilot study created five walk-in test centres so that people did not have to wait to be treated and could be more confident in their anonymity. The researchers trained staff to provide better preventative advice and, most importantly, recruited MSM and transgender

women (the two most at-risk groups in Bangkok) to share among their peers messages about the importance of being tested. This programme – particularly the recruitment drive – was hugely successful. While the authors do not cost the overall programme, most of the activities they describe appear to be very low cost; the most expensive seems to be giving people \$3 for every friend they brought to the clinic (Ongwadee et al., 2018). Similar outreach programmes have been adopted as part of Thailand's National Operational Plan Accelerating Ending AIDS 2015–2019. Within this plan, an ambitious outreach programme accounts for less than 5% of the total HIV treatment budget, which appears to be good value for money as it has led to much greater use of HIV testing facilities (Thailand National AIDS Committee, 2014).

Evidence from multiple HICs, the Democratic Republic of the Congo, India, Kenya, Thailand and Zimbabwe suggest that providing HIV prevention programmes for sex workers is highly cost effective. However, these programmes tend to be funded by donors rather than local governments, highlighting the pervasiveness of societal discrimination and/or the de-prioritisation of the needs of left-behind minority groups. The lack of local buy-in can in turn lead to the inconsistent rollout of programmes and low coverage rates, which can render them far less effective. Many programmes also suffer from insufficiently guided epidemic transmission models (Wilson, 2015).

4.2 Overcoming physical constraints

4.2.1 Improving physical proximity

The only way to lower the distance between people and health facilities is to build health systems at a more localised level, so that they are closer to the people who need them. However, doing so risks exacerbating the problems of human capital and supply chains that also hold back rural healthcare, as previously

11 Often depression or anxiety render people less likely to engage in activities that give them enjoyment or improve their mental health, such as socialising, exercising or working towards purposeful projects. This can generate a negative feedback loop, exacerbating their health problems. Behavioural activation treatment aims to break this cycle in a short amount of time and re-introduce positive behaviour.

discussed. A second approach to bolster access to healthcare is to improve the local road infrastructure so that travel times are reduced. While the evidence suggests this approach yields benefits in health and other areas, road building is expensive and beyond the control of health policy-makers (O'Donnell, 2007).

Better ambulance services are often a cost-effective way to reach patients and in many LICs they can be provided in addition to existing voluntary first-responder systems (Nielsen et al., 2012). A Malawian motorcycle ambulance system reduced median referral delays by between 2 and 4.5 hours, or approximately half, at a cost of \$508 a year – 24 times cheaper than a conventional ambulance (Hofman et al., 2008).

Finally, innovations in digital health technology have the potential to improve the ability of poor people living in underserved areas to access healthcare including through telemedicine and the use of drones to deliver needed supplies (Rao et al., 2019: 144; Box 5).

4.2.2 Supply chain management

Supply chains can be improved in rural areas by building in better stock tracking systems. Several studies in Tanzania have shown that this can be cheap and effective, often simply requiring a mobile phone and basic training for health workers (Barrington et al., 2010; Nilseng et al., 2014).

4.2.3 Improving human capital

As discussed, improvements to the quality and attendance of health workers in rural hospitals are needed. To increase the number of health professionals willing to work in these areas, some healthcare systems have provided financial incentives for workers to move to areas of highest need. This needs to be carefully managed: the Philippines rolled out such a system but because the money for salaries came from local government, they often struggled to fund the post. Canada instead funded this type of programme by reducing salaries in areas with an oversupply of people who wanted to be doctors (Wilson et al., 2009). An additional difficulty holding back rural health workers is the lack of opportunity for peer learning, because they are in more isolated environments. Rwanda has worked

Box 5 Using drones to reduce physical barriers to health supplies

In Rwanda in 2016, American start-up Zipline partnered with the Rwandan government to launch the world's first commercial drone delivery service to carry blood, rabies vaccines and antivenom over long distances where hilly supply routes are difficult to navigate. Whereas trips from the capital to more remote areas of the country take hours by car, a drone can make the same trip in minutes. As of March 2020, around 75% of blood deliveries outside Kigali relied on Zipline drones. In May of 2019, the company moved into Ghana, and as of March 2020, it reached 2,000 hospitals, covering 12 million people. It was planning to launch its service in India and in the United States, in North Carolina, later in 2020.

Sources: Ackerman and Kosiol et al. (2019); Farley (2020)

to overcome this by piloting a mentoring scheme for rural nurses, which has shown significant improvement in several quality-of-care indicators (Anatole et al., 2013). Finally, some countries have begun using mobile-phone-based systems to track the attendance of health workers. In an example in India, pilot biometric scanners have been fitted to mobile phones so that teachers and healthcare workers have to clock in every day in a way that is measurable (Reda et al., 2011). Research has shown that electronic measurement of attendance coupled with incentives for attendance appears to be the optimal way of ensuring their presence (Guerrero et al., 2012).

4.3 Overcoming economic constraints

As outlined, poverty prevents more than half the world's population from accessing a basic package of preventative and curative care advocated by the World Health Organization. Two types of policy are needed to improve the health of those with limited means: policies that

prevent illness and those that reduce the costs of illness by improving access to treatment and reducing the opportunity costs of being sick and requiring unpaid care.

Select examples demonstrate the potential of low-cost interventions to benefit poor households by reducing the likelihood of illness. For example, in a randomised control trial in Pakistan, researchers gave poor households free soap and encouraged greater handwashing. Compared with a control group, illness among children in the treatment group was reduced by 50% for pneumonia, 53% for diarrhoea and 34% for impetigo (Luby et al., 2005). If such declines in the infection rate for these illnesses were replicated worldwide, this could cut global infant mortality by more than 1 million deaths every year. It is harder to run randomised control trials on clean water and access to sanitation, as these can be more easily shared by different people in a community, but the evidence suggests similar benefits (Hall et al., 2018).

Targeted policies to reduce the costs of health treatment include various types of subsidies or fee exemptions that reduce health costs and/or cash transfers that may be made conditional on service utilisation (or alternatively, accompanied by messaging advocating such utilisation). In Africa, user fee exemptions for poorer households have been ‘rare and generally ineffective in protecting the poorest’ (Leighton and Diop, 1995; Ridde, 2008, in Ridde and Morestin, 2010), whereas generalised user fee

removals have bolstered access to healthcare, though cost–benefit analysis tends to be lacking (Ridde and Morestin, 2010). Providing economic support to cover the specific needs of at-risk groups such as assistive technologies for PWD can be cost effective – for example, a study in Sweden found that the cost of providing assistive technology to a student with cognitive impairments was recovered if he or she avoided a one-month delay in entering the job market (SIAT, 2013, in WHO and UNICEF, 2015). It is worth noting that while providing services to marginalised groups may be relatively more expensive, it may yield higher returns: Carrera et al. (2017) argue that selected health and nutrition interventions in poor areas saved 1.8 times as many lives as equivalent investments in non-poor areas.

These policies should go alongside policies aiming to reduce transport costs – particularly for PWD and those in rural areas, and should also extend to other barriers such as the need for childcare. For example, the literature points to several initiatives that have sought to lower the price of travel for healthcare, as in Northern Nigeria and Sierra Leone where policy-makers have issued travel vouchers or interest-free loans to this end. The evidence suggests that, as a result of these measures, emergency referrals and overall care have increased (Essien et al., 1997; Samai and Sengeh, 1997; O’Donnell, 2007). In Southeast Asia, several countries have extended health subsidies and insurance to cover transport costs (Tangcharoensathien et al., 2011).

5 Conclusion

Billions of people across the world cannot access adequate health coverage. This paper has provided a selective review of issues affecting access to health for five groups that are exposed to distinct health risks and yet are likely to have less access to quality health services owing to aspects of their identity (being a sexual minority, a transgender person, having a disability or impairment), experience (displacement, sex work) and location (living in a rural area). Although the focus of this paper is on targeted interventions, we have sought to stress that such interventions should not detract from the need for greater investments in health systems (and indeed, in improving the socioeconomic circumstances of disadvantaged and marginalised groups that bring about poorer health outcomes). However, we argue that to leave no one behind, policy-makers should explore the role of targeted policy to precede, complement and/or follow reforms aiming at building or maintaining UHC, in order to ensure that at-risk groups fully benefit from these broader structural reforms.

The reasons for why so many people cannot get the care they need tend to be complex and context specific. However, we have identified underlying social, physical and economic constraints, and ways in which these interact with one another in ways that can magnify exclusions. Although the literature is very limited, we describe selected targeted health interventions that seek to increase demand for health services among at-risk groups and their supply. Not only are there cost-effective approaches to bolster healthcare access, but in some cases, the economic returns are substantial, particularly when accounting for indirect costs of illness such as the opportunity cost of caregivers' time. Where relevant, countries could seek to adapt, replicate and scale up these examples of good practice.

Our review has been selective in part because the evidence is much stronger in some areas

than in others. We urge greater research into the specific needs of at-risk groups and policy responses as a first step to respond to subnational health disparities. We conclude by highlighting the following core evidence gaps:

- *The identification of at-risk populations and their health needs*

The identification of at-risk populations is challenging in contexts where group identity is derived from stigmatised characteristics (e.g. having a disability) or indeed, illegal (e.g. related to participation in sex work, belonging to a sexual minority, being transgender and/or being an undocumented migrant). There is a need to understand better the size, distribution and the health needs of diverse groups in a way that does not subject persecuted groups to additional risk. The gaps in knowledge concerning the number of people belonging to at-risk groups and their distribution within countries are magnified when considering the overlap among characteristics associated with health disparities. For example, evidence from lower-income settings is scant on the share of PWD belonging to a sexual minority or who are transgender, and the share of sex workers who are refugees or undocumented migrants.

- *The constraints that different at-risk populations face*

More evidence is available on the social and physical barriers at-risk groups face, because these constraints can be gleaned through analysis of legal and societal institutions. The analysis of economic constraints is necessarily anchored in microdata on the economic circumstances and health needs of particular communities. Here, substantial evidence illustrates the constraints that people in rural areas and

PWD face, but there is far less relating to sex workers (particularly those who are cis male and transgender), sexual minorities and transgender populations and refugees/undocumented migrants. The evidence on how interactions of constraints worsens outcomes for the populations we consider is also sparse.

- *The cost-effectiveness of targeted interventions*

Little information is available regarding the generalisable programme costs of targeted interventions focused on bolstering healthcare access. Policy-makers often do not provide costing information on specific programmes and where this does exist, it tends to be highly context specific. Moreover, data is lacking on the costs and returns of interventions targeted at particular groups. For instance, while studies stress the cost effectiveness of mental health interventions in LICs and MICs, we did not uncover any evidence on the cost-effectiveness of providing mental health services to refugees in these contexts.

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Annex 1 Methodology

This literature review is based on two main sources. First, we undertook a systematic search for academic articles that examine the benefits and/or difficulties in providing healthcare to marginalised groups, then supplemented this initial review with a broader, less structured search of the academic literature. Second, we identified ‘grey literature’ highlighting the research and advocacy undertaken by international organisations and NGOs (the review of which also flagged additional relevant academic papers). We discuss these two sources of information in turn.

Search of academic articles

We undertook a systematic search of the Web of Science and International Bibliography of the Social Sciences (IBSS) databases for articles containing at least one term from each of the following three columns in their abstract or title:

Search terms LNOB	Search terms health	Measurement or outcome
Leave no one behind	Healthcare	Measurement
Leave no one behind	Healthcare	Relative gain
Progressive universalism	Medicine	Economic return
Left behind	Health treatment	Financial return
LNOB	Health policy	Education rates
Pro-poor	Department for health	Productivity
Poorest	Ministry for health	Public return
Universal healthcare	SDG 3	Private return
	SDG three	Rate of return

This returned 241 articles from Web of Science and 81 from IBSS. We then read each of these abstracts and discarded those that were not relevant to this paper. The remaining 58 are discussed in this review. Because these articles tended to focus on different at-risk groups, often in different countries, it was not possible to summarise general costs of reaching or benefits from reaching left behind groups.

We added more academic literature to our search in two ways. First when we came across references to seemingly useful articles that did not get picked up by our search terms, we included these as well. Secondly, in many areas we felt we had not identified enough literature to understand the questions we were trying to answer, either owing to gaps in literature for a particular area or to gaps in our search strategy. To address this issue, we added to literature with specific searches using google scholar, PubMed, IBSS and Web of Science.

Grey literature review

We uncovered grey literature using google searches of key international organisations and non-governmental organisations involved in research related to the key words above – notably the World Bank, World Health Organization, and organisations campaigning to raise awareness of issues affecting the specific at-risk groups identified through the academic review.



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