

Contextual factors shaping cholera transmission and treatment-seeking in Somalia and the Somali region of Ethiopia

Santiago Ripoll¹ and Contributors (See Annex 1)

Summary

The drought in the Horn of Africa and the protracted conflict has created a humanitarian emergency that has led to a declaration of famine in several regions of Somalia and the Somali region of Ethiopia. As a result of depleted water resources, widespread internal displacement, malnutrition, and inadequate water and sanitation facilities, cholera outbreaks have occurred.

a) What are the practices, behaviours, social norms and wider factors that increase the risk of cholera/AWD transmission among communities in Somalia and the Somali region of Ethiopia?

b) What beliefs and other socio-economic factors influence the decision to seek treatment for cholera/AWD (for adults, adolescents and children) from health facilities in Somalia and the Somali region of Ethiopia?

To answer these questions, this paper first explores the determinants of risk and vulnerability to cholera in the Somali regions, it then explores behavioural factors that increase the risk of cholera transmission, followed by the contextual factors that shape treatment-seeking.

Risk and vulnerability to cholera in the Somali region

The main determinants of cholera risk go beyond the humanitarian and into the realm of peacebuilding and development. Somalis are more vulnerable to cholera due to (i) the lack of access to water resources and health services due to conflict, (ii) erosion of livelihoods, settlement and enclosure; and (iii) a lack of investment in adequate water and sanitation facilities.

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Key recommendations

This synthesis explores the determinants of risk and vulnerability to cholera in the Somali regions. It reviews the practices, behavioural factors and social norms that shape the risk of cholera transmission and explores the contextual factors that shape treatment-seeking.

This paper draws upon an extensive desk review of more than 80 peer-reviewed articles, research papers and humanitarian reports. It also synthesises the contributions of 15 regional experts who were interviewed or sent email responses.

The recommendations include (i) advocacy for investment in water and sanitation and health facilities and infrastructure; and deepening of social protection and livelihood programmes. (ii) working with local understandings of the disease and enhanced transparency; (iii) addressing multiple care options; (iii) recognising and incorporating religious practices when addressing care seeking; and (iv) building trust and social capacity of care providers.

During droughts different livelihood groups have different vulnerabilities to cholera infection:

- **Internally displaced people (IDPs)** are likely to have poor access to water and sanitation facilities and, if crowded in camps or with family members in cities, they will be highly vulnerable to cholera outbreaks
- **Urban dwellers** are more likely to have better water and sanitation facilities and access to health clinics, although if there is overcrowding with high influx of refugees and displaced people sanitation is generally poor and the risk increases
- Due to settlement, **agropastoralists** and **farmers** are more likely to be at risk of cholera, and the outcomes will depend on their level of nutrition, water and sanitation facilities and availability of healthcare
- **Riverine farmers** in times of drought are relatively more likely to depend on contaminated surface water, and hence are at risk of cholera infection
- **Pastoralists** have better health and nutrition outcomes than settled communities. Their mobility reduces their exposure to high levels of infectious epidemic disease, including cholera. When population movement is constrained (through conflict or drought) or people are settled (as a result of development projects or loss of cattle/destitution), the risk of cholera increases

Clan and family relations are central to understanding Somali society. To understand access to water and hence the risk of having to rely on contaminated sources of water, one must understand the role of clan customary rules of access. Clan relations are also crucial social safety nets of reciprocity that protect Somali livelihoods, as well as relationships that shape access to humanitarian resources, including health care.

Behaviours and cholera prevention and control

A number of behavioural factors should be integrated into prevention and control:

- **Water use and handwashing:** People understand the value of chlorination and the majority use hygiene kits when it is provided by humanitarian aid (including soap and chlorine tablets). However, people may turn to 'sweeter' water from rivers when the first rains come, although these carry the runoff with cholera infested sewage. Ritual ablutions can be a source of contamination if contaminated water is utilised. Hand washing points next to latrines are mostly unavailable
- **Open defecation (OD):** Somalis understand the risks associated with OD and value latrines. OD is frequent in nomadic communities, but is low risk due to mobility and dispersion of these populations. The highest cholera risk from OD is in IDPs, who are forced to practice it close to their homesteads. Disposing of baby and toddler faeces is problematic and alternative solutions should be explored
- **Funeral practices:** Bodies of cholera fatalities are highly infectious. Yet mourning requires ritual washing of the body by family members. There are precedents of introducing safe practices (gloves, disinfectant) whilst respecting the religious needs of mourners

- **Rehydration (ORS and IV fluids)** are generally accepted and are used (either with homemade recipes or purchased ORS) in cholera occurrence in parallel to visits to clinics
- **Oral Cholera Vaccination:** is generally valued and accepted, particularly when vaccination campaigns adapt to people's mobility as in the case of polio vaccination: with in-transit, regional vaccination points in parallel to livestock vaccination

Treatment-seeking for cholera

Pluralistic health systems

Somalia is a pluralistic health system, with public and private biomedical clinics, coexisting with home remedies, herbalists, traditional healers, shopkeepers and pharmacists. People seek simultaneously or in close succession the advice of these different health providers. Herbalist, traditional and religious healers combine their practices with biomedical practices, for example in the use of drugs (antibiotics, purges, etc.). Purchase of drugs in shops and in medical centres is the most common option, particularly so for pastoralists.

In the case of cholera care-givers are able to identify diarrheal manifestations, and their preferred first port of call is the biomedical centre, combined administering oral rehydration solutions (homemade or purchased).

Biomedicine is part of a system of health providers that is subsumed within broader spiritual and religious notions of illness. Traditionally, disease and wellbeing is explained through the flow of humoral substances (bile, stool and blood) and spirits.

There is low availability and access of health clinics due to lack of investment and protracted conflict restricting movement. Further, the costs of attending clinics is high. Even in public clinics people are expected to pay for medicines and supplies. Even when these costs are covered, the costs of care include transport, food and accommodation for the patient and accompanying family member, and the days of work lost. Clan and family networks bear those costs, hence individuals with no family networks will not be able to be referred to clinics beyond their community.

Cholera diarrhoea and disease labelling

Labelling a cholera epidemic as AWD greatly diminishes the impact of campaigns. The veil of secrecy around AWD and cholera research and epidemiology impedes adequate information sharing for humanitarian action. It would be better to use the Somali word for cholera: '*daacuun*' or '*kaloraa*'.

Biomedical health care and treatment seeking

People have very good ideas about quality of care, and will gauge experience, available drugs and equipment (laboratory, x-rays, and so on) to decide where to go, choosing to travel far to seek the right treatment.

Clinic-patient relations: positive intra-community dynamics and skilled inter-personal communication and socio-cultural understanding are needed to ensure people use treatment facilities.

Challenges

Trust in the health provider is key, and this is built both through quality of care as well as the social relations and respectful interactions.

Successful patient- health worker relationships are those that mimic and build on the socialisation practices of care and reciprocity of clan/family relations.

When language is a barrier and Somalis are attended by non-Somalis who may not be culturally aware and empathetic, trusting relationship with the health facility is harder to build.

Women are on average less likely to receive treatment and more prone to disease due to inadequate nutrition in adolescence and pregnancy.

Practical Implications/recommendations for humanitarian interventions

a. Advocacy to decrease vulnerability to cholera

A focus on behaviour ignores the reality that people are aware of cholera and know what to do. Epidemic risk will be reduced by:

- **Investment in water and sanitation and health facilities and infrastructure:** State and development agencies must invest in water and sanitation infrastructure that is resilient to drought which includes a holistic understanding of their use. Users should be involved in their design in order to ensure their appropriateness (for example in terms of ritual ablutions or gendered safety concerns).
- **Social protection and livelihoods:** Advocacy programmes should incorporate the promotion of social protection and social insurance mechanisms that stop or mitigate the depletion of livelihoods

b. Humanitarian Response

1. Working within local understandings of cholera and enhancing transparency with the public

There should be increased transparency and open communication about cholera and what is being done to stop its spread:

- Communication and messaging should use the Somali word for cholera or alternatively messaging must highlight that it is a life-threatening kind of AWD. Messages should build on the recognition of symptoms as defined by the audiences to enhance treatment seeking behaviour.

- Messaging should highlight the problem of drinking 'sweet' water when the first rains arrive
- Interventions should be relevant to different livelihood groups, e.g. in-transit oral vaccination linked to successful animal vaccination programmes for pastoralists

2. Addressing multiple care seeking options

- Work with religious leaders in promoting safe practices for cholera prevention and response within a frame of spirituality and religion
- Engage with pharmacists and traditional and Islamic healers to promote cholera prevention and control, as well as providing health training for referral to biomedical clinics when necessary
- Communicate the type of services/quality of care families will receive in health facilities: staff experience, diagnostic laboratory, equipment and so on.

3. Recognize and incorporate religious and spiritual practices when addressing care seeking and in recommendations around burial practices and ablutions

- Build infrastructure to facilitate safe ablutions, for example, water points for handwashing with soap and treated water for ritual ablutions.
- Promoting safety procedures within funeral practices whilst incorporating the religious and spiritual needs of mourners.

4. Build trust and social capacity of care providers

- Incorporate the sensitivity to intra-community dynamics and build skills for inter-personal communication and socio-cultural understanding to ensure people use treatment facilities. Cultural and language sensitivities are needed.
- Clinics in the Somali region of Ethiopia should include Somali staff or if they are non-Somali they should receive training in dealing with Somali clients to reduce misconceptions they may have. Translation services should be offered in the latter case. There should be female Somali staff for Somali women
- Understanding which health providers people trust (biomedical, herbal, traditional, pharmacists, religious healers) and how people frame their diseases experiences will help with appropriate messaging and establishing alliances
- Avoid stereotyping. Messaging explaining the causes and transmission of the epidemic must not stigmatise cholera victims and already marginalised groups

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Background

The drought in the Horn of Africa and the protracted conflict has created a humanitarian emergency that has led to a declaration of famine in several Somali regions in 2017. The most affected is South Central Somalia, but the south-eastern Somali region of Ethiopia is also affected³ as are easternmost districts of Somaliland and Puntland. As a result of depleted water resources, widespread internal displacement, malnutrition and inadequate water and sanitation facilities, cholera outbreaks have occurred in regions South Central Somalia and in the south-eastern Somali region of Ethiopia.

Key contextual factors:

- Poor performance of long *Gu* rainy season – eroded pastoral and agro-pastoral conditions
- More than 620,000 people displaced by drought since November 2016, with 1.1 million internally displaced persons (IDPs) and thousands displaced to Ethiopia
- 275,000 children face or will suffer life- threatening severe acute malnutrition in 2017
- The cumulative figures for the cholera outbreak since the beginning of the year stands at more than 70,000 cases and 1,100 deaths. The case fatality rate of 1.6 per cent remained in the height of the crisis above the emergency threshold of 1 per cent

(Sources FSNAU; FEWSNET and UNICEF)

Exacerbated by the drought and malnutrition, cholera/AWD⁴ has spread rapidly. Since the beginning of the year to the end of June 2017, reported cases of cholera/AWD were over 70,000 with more than 1,100 related deaths in Somalia (WHO, 2017a; UNOCHA 2017c), and cases are now declining. In the Somali region of Ethiopia reported cases of AWD reached up to 35,000 with over 750 deaths (WHO, 2017c). Cholera/AWD is endemic in Somalia and the Somali region of Ethiopia, and is a recurrent crisis. The number of cases has reached the same levels reported for all of 2016 when Somalia experienced its most recent major outbreak. The rates have been exacerbated by the drought and the conflict, with existing rates surpassing the historical average of the upper limits for cholera in the region (*ibid.*). Almost half the AWD cases and deaths were reported from Bay and Bakool regions (see Figure 1). In the Somali region of Ethiopia, the main affected areas are Dollo and Korahey, although the results of an assessment of the outbreak by WHO are still pending (WHO 2017b).

³ Although not part of the remit of this paper- the humanitarian crisis related to the drought extends to large areas of Kenya as well.

⁴ AWD stands for Acute Watery Diarrhoea. AWD can be caused by cholera and other etiological agents including rotavirus, norovirus, giardia and E.coli. As will be shown below, some States prefer to use AWD rather than cholera to describe cholera outbreaks.

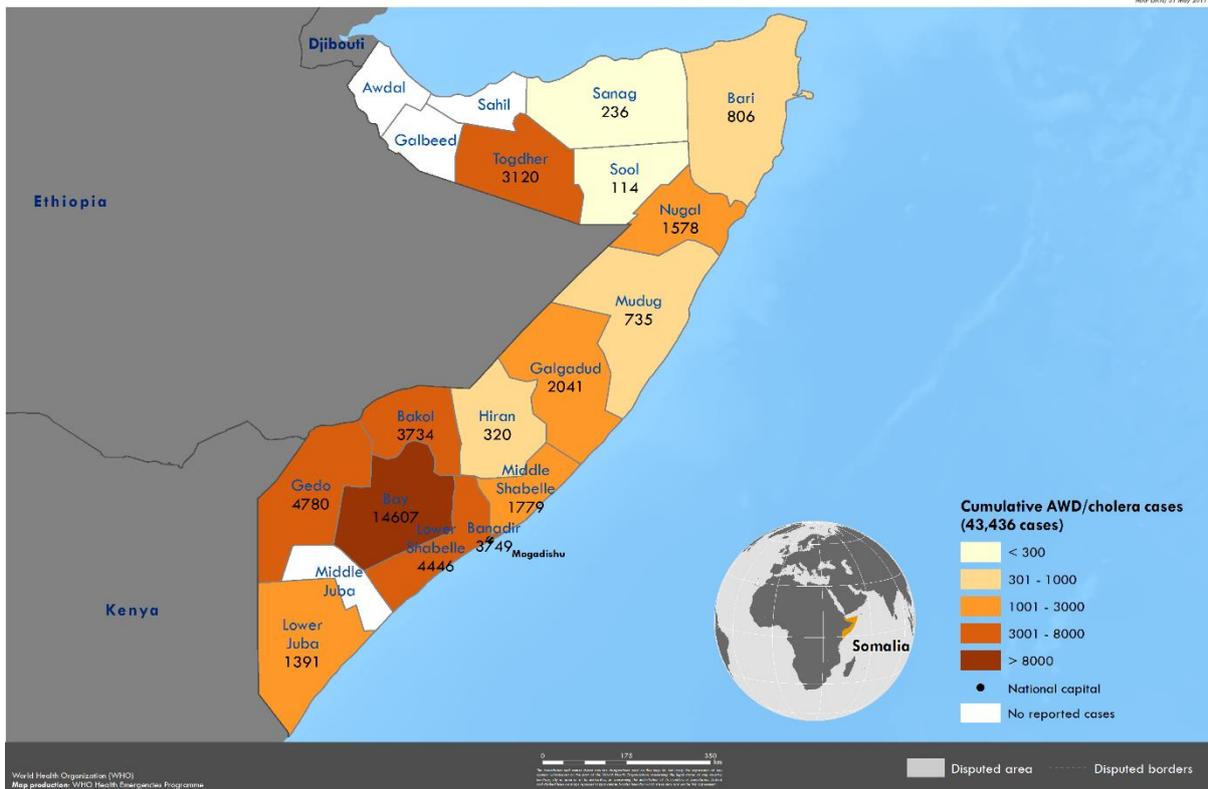


Figure 1. Cumulative AWD/Cholera cases in 2017 as of 21 May⁵ (Source: WHO)

The humanitarian response has involved an Oral Cholera Vaccination campaign, targeting more than 450,000 people (Greene, 2017). Water, sanitation and hygiene (WASH) interventions include distribution of hygiene kits, chlorination of water points and hygiene promotion campaigns. Somalis have been assisted with temporary (e.g. water trucking) or sustainable (well rehabilitation, piping etc.) access to safe water (UNOCHA 2017b). Cholera treatment centres and units have been deployed in the region. The Ethiopian Ministry of Health, in cooperation with aid agencies, deploys some 300 national health professionals to contain drought-induced disease outbreaks (cholera/AWD and measles) in treatment camps in the affected areas of the Somali region (UNOCHA 2017a). However, particularly in Somalia, disruption of movement due to armed clashes makes access to health clinics difficult, as well as preventing access to humanitarian aid (FEWSNET 2017). A joint WHO/UNICEF/Regional Health bureau risk communications initiative has deployed community health workers at the local level to promote (through posters, leaflets and practical demonstrations) appropriate washing, cooking, drinking behaviours, and to signal the need of ORS and attending clinics immediately when AWD occurs (WHO, 2017d). Overall community engagement using individual counselling, house-to-house mobilization, community meetings and use of religious institutions has been deployed (ibid).

⁵ There are currently no maps available for cumulative AWD cases for the Somali region of Ethiopia for the ongoing epidemic.

Ongoing humanitarian interventions to address cholera:

- Messaging: awareness raising and encouraging risk-mitigating behaviours
- Water purification: chlorination of water supply, wells and trucked water
- Hygiene: distribution of hygiene kits, including water treatment tablets (e.g. Aquatabs), jerry cans and soap
- Treatment: deployment of mobile treatment centres equipped with integrated diarrhoeal disease kits: ORS and IV infusion equipment and Ringer Lactate solutions, antibiotics and other relevant equipment. Also transport medium to collect and diagnose stool samples
- Vaccination: more than 400,000 people aged one and over vaccinated with oral cholera vaccine.

Research questions, methods and report structure

This paper responds to concerns raised by UNICEF about their response to the cholera epidemic. The research questions were agreed between UNICEF Eastern and Southern Africa Office (ESARO) and Communication for Development (C4D) staff and researchers for the [Social Science in Humanitarian Action Platform](#). The Platform provides evidence synthesis and social science analysis of the social dimensions of humanitarian emergencies.

This paper draws upon an extensive desk review of more than 80 peer-reviewed articles, research papers and humanitarian reports. It also synthesises the contributions of 15 regional experts who were interviewed or sent email responses (see Annex 1). Contributions from these experts are indicated in the text as 'Contribution [surname]' to differentiate them from written sources. Consultation with experts allows for the inclusion of up-to-date insights and a broader range of perspectives that are not available in published literature.

The geographic focus is the three regions of Somalia (Somaliland, Puntland and South Central region) as well as the adjacent Somali region of Ethiopia in the easternmost part of the Horn of Africa. Much of the evidence here, however, applies to people of Somali origin living in the Horn, including Djibouti and Northern Kenya.

This paper is structured in three main sections: a first section that explores the social, economic and political vulnerabilities to cholera. It explores the political conflict and its role in shaping access to water and health. It will show that different Somalis, depending on their livelihood and geographical location (pastoralists, agro-pastoralists, riverine farmers, IDPs or urban dwellers) have different vulnerabilities to cholera infection. Section 2 highlights behaviours and practices related to the transmission of cholera. Section 3 explores the Somali health system and identifies the factors that determine health-seeking behaviours in general and treatment-seeking in the case of cholera.

Section 1. Risks and vulnerabilities to cholera

Key insights on risk and vulnerability:

- The current cholera epidemic is a result of overlapping political and economic conditions, which have increased risk and vulnerability
- Access to available water sources, humanitarian and health provision is curtailed by the protracted conflict
- Government reticence to acknowledge cholera prevents appropriate messaging and information sharing for response
- The protracted crisis has depleted livelihoods, increasing inequality and vulnerability and making many nomads settle: health outcomes for settled rural communities are worse than those of nomadic populations
- Privatisation in the whole region and the government settlement in the Somali region has limited access to key water resources for a limited group and many people have to rely on inadequate sources
- Clan-based customary norms had previously ensured access to water sources but reduced prominence of these social systems has jeopardised access for the most vulnerable
- Family and clan relations are central to resilient livelihoods and access to

a. Cholera within a complex emergency

Drought occurrence increases the chances of cholera outbreaks in the Somali regions. Cholera is a disease of oral-faecal transmission, and dwindling water resources in the drought are impacting the quality and quantity of water available. Scarcity makes water more stagnant and increases the concentration of pathogens. As will be shown below, many communities in South Sudan and Somalia lack adequate water and sanitation facilities due to inadequate infrastructure. Cholera can spread through the contamination of water holes or through run-off due to inadequate sanitation facilities spreading the bacterium to lower ground (Crooks and Hailegiorgis, 2014). **The lack of water can push people and cattle to use water from contaminated sources.** Shallow wells and stagnant water pans are easily contaminated by sewage systems if these are inadequate (Mutonga et al., 2013). **Furthermore, real or perceived water scarcity can mean changes in sanitary practices such as washing hands or fruits** (Stanke, Kerac, Prudhomme, Medlock, and Murray, 2013). Carcasses of dead animals exacerbate the contamination of water sources (contribution Livingstone). This ongoing cholera epidemic in the Somali regions is said to have unfolded in just this way:

The initial outbreak and rapid spread in Bay Region, Somali are almost certainly related to the scarcity of water and reliance on poor quality, surface water during the drought. The Shebelle and Juba Rivers were very low and there have been a lot of cases in riverine villages (contribution Balfour; also see map in figure 1 above).

This cholera outbreak in the Horn of Africa can only be understood as part of a complex emergency: **famine and cholera outbreaks in the Horn are often man-made** (Macrae and Zwi, 1994). While there are environmental factors involved, such as decreased rainfall and decreased vegetation cover, the conflict is the main driver of the humanitarian emergency. Drought and the ensuing famine and cholera outbreaks have become recurrent, due to the ongoing conflicts and the depletion of livelihood strategies. This drought is indeed a

repetition of the 2011 drought, when low rainfall occurred with a high food prices (domestically and regionally), and with major clashes between different armed actors. Humanitarian access and movement of people to seek help are severely curtailed (Maxwell and Fitzpatrick, 2012). The conflicts which play out on the ground are a reflection of the interests of non-State actors, regional and international governments in the region (Seal and Bailey, 2013). The situation is described by Yusuf Dirie:

It's not about the day to day of the person on the ground, as defined by them. People get caught up in somebody else's game. It is not happening on the ground where they live, but above in higher places of power and geographically far. Yet they get caught up. (...). Any discussion about the Somali territories doesn't take place in the vacuum: historical grievances, Ethiopian and Kenyans do not want a centralised state. Transient elites [in the federal government] – they are supported by outside states. They are also involved in the big geopolitics (Yemen, Turkey and so on). It is a minefield. Average Somali individual gets sucked into other agendas [...] If you are in a pastoralist community in the border, you are brought into the war of Shabaab and Kenya. If you are in the Somali region of Ethiopia, the paramilitary bring you into that game. People are not able to dictate the terms in which they live. And there you have the outbreak of famine, cholera, and then humanitarianism is trying to bring them into a strange equilibrium (contribution Yusuf Dirie).

Conflict and the police and military presence redirect the access of people and animals to resources, blocking their access to grazing, water sources or to health services. **This lack of access combined with decreased water availability means that more people depend on inadequate and potentially contaminated sources of water, and when they fall ill, they cannot access treatment.** Checkpoints, bureaucracy and kickbacks impede access (ICG 2017). Unlike in 2011, Al-Shabaab has less area under its control, although it controls large areas the South West State and Jubaland. See Annex 2 for areas under effective Al-Shabaab control in April 2017. In these areas, Al-Shabaab is carrying out its own humanitarian aid (Rono 2017) and disrupting mainstream agencies that they perceive as political. In the 2011 famine, the US and other regional governments blockaded Al-Shabaab-controlled areas in order to weaken them, but ultimately this made famine more likely (Seal and Bailey, 2013: 3).⁶ The Ethiopian military, which had undermined Al-Shabaab's presence in Somalia after invading the south of Somalia, has recently retreated into its own territory, which makes an Al-Shabaab comeback very likely. Kenya is also fighting against Al-Shabaab, and recently carried out an air raid over Somali territory, bombing a water well and killing dozens of Somali pastoralists.

The Ethiopian retreat has been to redirect troops to both repress dissent in the Somali Region itself (for example, against attacks by the Ogaden Liberation Front) and to repress the Oromio protests and their spillover into the Somali region. There have been reports of Ethiopian paramilitary and police violence against Somali people in the region. To add to these international conflicts in the 'War on Terror', there is a degree of inter-clan conflict. Simultaneously there are clan militias, as well as disgruntled federal and government forces preventing movement and access with 'predatory behaviours' such as erecting barriers/checkpoints (ICG 2017: 1).

As conflict displaces people, it pushes them towards towns and IDP camps where they seek security. **Conflict is also reshaping the access of pastoralists to grazing lands and people's access to water sources, already dwindling due to the drought.** This means

⁶ Seal and Bailey (2013) point to the importance of recuperating a perception of neutrality of humanitarian interventions. In their assessment donor mechanisms and the cluster coordination were perceived as being political instruments. John Livingstone in his contribution flags that there is a general distrust of the UN, with several conspiracy theories circulating amongst Somali urbanites.

that people are pushed to live in locations with inadequate water and sanitation facilities and to rely on contaminated sources of water. Pastoralists are not able to move along their usual grazing routes (see below) and hence are unable to use many of the wells that are in use in the dry season.

In the case of pastoralists, the conflict may reshape the way they organise their families and their herds. As Pike *et al.* details for the Turkana and Samburu in Northern Kenya, seeking security for the herd may mean that the family as a whole with large consolidated herds seeks remote places, and hence all family members have some access to livestock products such as milk, but it also means that visits to market to purchase maize meal are much less frequent. This is the case of the Turkana. The strategy of the Samburu is to separate men and herds from the home, leaving women with less access to livestock products (Pike, Straight, Oesterle, Hilton, and Lanyasunya, 2010). In the case of pastoralists and displaced families who are going through a process of destitution and sedentarisation (see more below), 'livestock [are] being pooled by sub-clan kinship groups, and camels being herded elsewhere by young men (not otherwise employed), while women, children, employed men, and elders remain year-round in rural communities' (Carruth, 2017).

Drought, conflict and food insecurity has been a recurrent phenomenon for decades. Communities however, at the end of each drought cycle, do not bounce back to where they were. **There is a progressive depletion of their assets and savings, their resilience is decreased in every drought recurrence.** What was perceived as an erosive coping strategy⁷ 20 years ago is now a normal routine activity: the poorer households are progressively slaughtering their animals and being unable to restock their herds, selling their female animals, undertaking deforestation for charcoal burning and frankincense, on occasions sex work, khat and alcohol trade (contribution Lind). While there is indeed a booming livestock export sector in the Somali regions (Scoones, Catley, and Lind, 2013), the trade has not prevented the livelihood crisis: due to high inequality, mostly elites have captured the benefits of that trade, and the commercialisation has shifted the assets from the poor to the wealthy. **There is a trend of people abandoning pastoralism as a way of life (contribution Lind) and many ex-pastoralist families end up in IDP camps where they are more exposed to illnesses related to poor water and sanitation such as cholera/AWD.**

Internal displacement has meant moving with relatives in towns into urban areas and joining existing settlements or creating new settlements on the periphery of towns (e.g. in makeshift camps around Bidaoua and Mogadishu), or alternatively to IDP camps. These movements mean overcrowding and stretching the capacity of the sanitation systems. **There is an established link between IDP camps and urban overcrowding with cholera outbreaks,** due to the fact that already inadequate sanitation services are overstretched and there is a low per capita availability of water (Crooks and Hailegiorgis, 2014). There is also a link between malnutrition and susceptibility to illness (Save the Children UK, 2007).

When the rains come, they will be a mixed blessing. While rains will be positive for the vegetation, they may bring a spike of cholera cases, as rainfall run-off carries the cholera bacteria to pool in lower areas and into water sources, thereby contaminating them.

Assessments of the recurrent droughts and cholera outbreaks in the region have highlighted the crucial lack of infrastructure, mainly in terms of water and sanitation, but also in terms of roads to enhance physical and economic access. Water and sanitation are 'two of the most crucial factors in health and nutrition, and yet they are among the least addressed, often falling into the cracks between the humanitarian and development portfolios' (Loewenberg, : 1025). Cholera, an entirely preventable disease, occurs because there isn't an appropriate

⁷ A coping strategy that undermines the long term sustainability of the household, e.g. sale of productive assets

sanitation infrastructure, hence there is run-off sewage, a lack of latrines and open defecation, a lack of piped water and water point availability for food and handwashing and so on. **The transmission of cholera is not primarily about 'behaviours', but around basic water and sanitation infrastructures** (Loewenberg, 2014; WHO, 2017b). For example, as will be shown below, Somaliland and Puntland have better outcomes in terms of cholera prevention and containment mostly due to relatively better infrastructure such as more piped water and sanitation (KAP 2017).

Recurrent humanitarian emergencies in Somalia mean that the humanitarian sector is enmeshed with the livelihoods of Somali people. **Social protection mechanisms, with in-kind or cash deliveries, are a significant contribution to poor people's incomes. Carruth indicates that due to the depletion of livelihoods and the protracted crisis, pastoralists are more likely to migrate to access aid distributions,** but are also 'increasingly likely to settle year-round in places where relief organisations operate or visit' (Carruth, 2017). Further, increasingly humanitarian workers and those engaged in humanitarian public works programmes are a mainstay for their extended families, providing incomes and knowledge/connections that allow for access of humanitarian services (*ibid.*).

The reluctance of State and humanitarian actors to acknowledge and speak of cholera contributes to the spread of the disease. There is one important factor to take into consideration with respect to cholera. It is no coincidence that we use cholera/AWD for this report. Cholera epidemics are perceived to be a product of government failures and in order to avoid public outcry, governments around the world have used labels that downplay the importance of the epidemic and to 'hide ineffective public health strategies' (Briggs and Mantini-Briggs, 2003; Carruth, 2017). The use of 'Acute Watery Diarrhoea' in Ethiopia (including the Somali region) is part of that attempt. Yet AWD includes other pathogens other than vibrio cholera, such as rotavirus and E.coli. The sensitive political nature of cholera/AWD means that messaging can downplay the real threats posed by a cholera epidemic to the public, and the secrecy which accompanies cholera/AWD surveillance might hinder knowledge sharing for timely responses. Vecchione has highlighted the negative consequences of this secrecy in Somaliland, reporting cases in which the Ministry of Health refuses to share information with WHO staff on the emergency, and refuses to collect data that would be necessary to manage the epidemic. Similarly, the government has applied pressure to downplay the appearance of cholera cases in Hargeisa (contribution Vecchione).

b. Somali social organisation and identity and implications for health systems

The Somali regions considered within this paper – the administrative areas of Somalia (de facto separate administrations of Somaliland, Puntland and South and Central Somalia) and the Somali region of Ethiopia – are populated mainly by ethnic Somalis.⁸ Somalis speak a common language, Somali, from the Cushitic branch of the Afro-Asiatic family. Despite living across several country administrations (a product of colonisation and decolonisation), Somalis share a common culture and are also significantly mobile between those countries. Somalis are Sunni Muslims. Islam entered Somalia through the coastal ports in the seventh century, and local customs merged with Sufi traditions which, until recently, yielded a moderate understanding of Islam (Tiilikainen, 2010).

In order to understand Somali social organisation, the social category of 'clans' have been used. According to clanship, a person's loyalty would reside to their clan (*qabiil*, in Somali) and family (*reer*). The clans are organised around a patrilineal, patriarchal, and segmentary kinship system. This means that people trace their family lines (and hence their allegiances) through their male descendants back to the founding fathers of the group and finally to the

⁸ There are also Somalis in Djibouti, and Northern Kenya.

Prophet Mohammed or to his disciples (Lewis 1961, 1999 in Carruth 2017).⁹ It is useful to visualise it (Moscona, Nunn, and Robinson, 2016) as in figure 2 below:

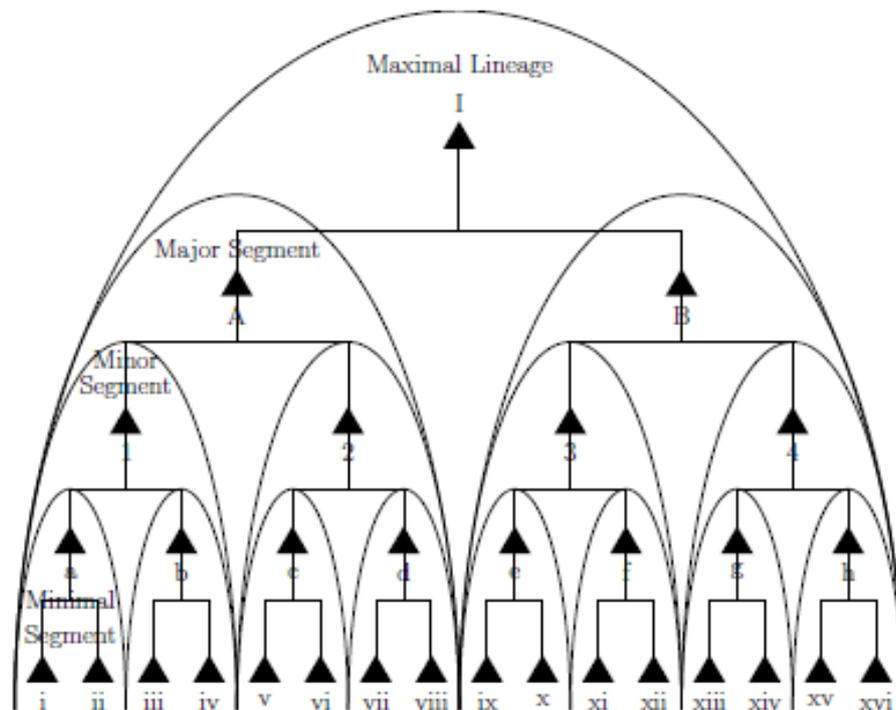


Figure 2. Visualisation of segmentary kinship (Source: Moscona et al. 2017)

The elaborate clan system has traditionally established the norms and rules that regulate communal access to water resources and allow for reciprocal and flexible access by different clans and by individuals, even non-members who are found to be in need of water. To understand access to water and hence the risk of having to rely on contaminated sources of water, one must understand the role of clan customary rules of access (and as will be shown, how these are being undermined by settlement and privatisation) (Beyene and Korf, 2008). Clan relations will also shape access to humanitarian resources (Sabates-Wheeler, Lind and Hodinott, 2013).

Kinship and clan has been used in the past to explain the disintegration of the Somali State and the reluctance to coalesce in larger polities. According to I. M. Lewis, kinship ties would be manipulated by powerful families to fight against other clans for struggles for natural and economic resources (cited in Carruth 2017). This notion of people only coalescing and mobilising politically according to kin as an unchangeable reality has been challenged. For example, it has been shown that this allegiance to your closest family or clan was different in the southern Areas of the Somali regions, as opposed to the northern regions. In the south, social organisation was much more flexible, with allegiances that would go beyond kinship, such as co-residence in cities and towns, cooperation in farming, adoption of newcomers and influences coming through the seaports (Hoehne and Luling, 2010: 5). (See Annex 3 for a map of the clan territories in the Somali regions.)

⁹ Please find in Annex 3 the distribution of clans in the Somali regions, yet bear in mind that these communities, particularly those who are nomadic pastoralists, move beyond their home areas to areas controlled by other clans.

Similarly, for the whole of the Somali group, **there is a newer understanding of clan and kinship as fluid and contingent. Identity changes according to circumstance and the emergent needs of people.** Reality cannot be explained solely by a kinship diagram but by the social dynamics that occur in a specific context. Somali identity is reconstructed by Somalis over time (Luling, 2006). Another issue that has been flagged has been the problems with the ideas of homogeneity of the Somali people. This is particularly so for those minorities that do not fit into the clan system, such as the Bantu Jareer and the Yibir, Gabooye, and Tumaal communities in Somalia, who are victims of racism because of their African origin (i.e. for being descendants of South-East African slaves). The Somalis, however, claim to be direct descendants of the Prophet and hence see their origins in Arabia (Eno, Eno, and Kusow, 2014). As shall be shown below, these minority groups are discriminated against and face social and economic exclusion (contribution Livingstone).

It is important not to see kinship relations through the prism of clan conflict, and in a negative light. Kinship is not the cause of conflict but rather a coping mechanism in an adverse institutional environment. Kinship groups have family members in rural areas in different zones/countries of the Somali region, and family in cities, in the diaspora, and so on. These regional networks play a key role in sustaining livelihoods and adapting to crises: 'Kinship structures within the *jilib* [sub-clan] are contingent, geographically dispersed, vital to Somalis' ability to survive recurrent humanitarian crises and necessary to make the most of sporadic employment and training opportunities these emergencies afford' (Carruth, 2017). As shown in section 3 on treatment seeking, social networks are also an important factor in whether someone seeks treatment, which treatment and where.

For Somalis, Islam plays a central role, but it is in flux: As mentioned above, traditionally Somali Islam (Sunni from the Shafi'ite school) was born of a merging of pre-Islamic Cushitic religious beliefs with mystical Sufism, making them moderate in their religious views. Since the 1970s, however, and more so in recent years, puritanical understandings of Islam have been promoted by Wahhabi and Salafiyya movements from Saudi Arabia. This has had an impact in terms of the types of spiritual interpretations of illness allowed, as well as gendered aspects to seeking treatment.

c. Livelihoods in the Somali region and Somalia

There are three different types of livelihood groups identified in Somalia with different health outcomes: pastoralists, agro-pastoralists and agriculturalists. Aid organisations tend to divide both Somalia and the Somali region of Ethiopia into livelihood zones according to these distinctions. Pastoralism is the most common livelihood, but the others are increasing in importance. For example, in Somali region, 59 per cent of the rural population is pastoralist. In Somalia, the main UN food security surveillance unit for the region, the Food Security and Nutrition Analysis Unit (FSNAU) divides the zones into Pastoralist zones (where local ecology can only support livestock herding); Agro-pastoralism, in semi-arid areas where the rainfall allows for agriculture, but herding remains the substantial source of livelihoods; Riverine Agriculture (including the irrigated zones along the Shabelle and Juba rivers), with cereals, horticulture and fruit grown; and finally coastal communities, where fishing is combined with pastoralism. Further, and importantly for cholera prevention, are the urban areas. FSNAU subdivides these livelihood zones further, as geographically rain patterns and trade are different between when moving further north or south. (See Annex 4 for the detailed map of livelihood zones of Somalia and the Somali region.)

Key livelihood groups and vulnerability to cholera:

- **Pastoralists** have better health and nutrition outcomes than settled communities, and their geographical dispersion reduces risk of epidemic contagion of cholera. When their movement is constrained or they are settled (by design through development projects or loss of cattle/destitution), the risk to cholera increases
- Due to settlement, **agro-pastoralists** and **farmers** are more likely to be infected by cholera, and the outcomes will depend on their level of nutrition, water and sanitation facilities and availability of health care
- **Riverine farmers** in times of drought are relatively more likely to depend on contaminated surface water, and hence are at high risk of cholera infection
- **IDPs** are likely to have poor access to poor water and sanitation facilities and, if crowded in camps or with family members in cities, they will be highly vulnerable to cholera outbreaks
- **Urban dwellers** are more likely to have better water and sanitation facilities and access to health clinics, although if there is overcrowding with a high influx of displaced people, the risk of cholera increases

There is a paradoxical situation in which pastoralists are wealthier than their non-pastoral counterparts but they are more vulnerable to livelihood shocks, both economic (e.g. blocks in trade, barriers to movement, etc.) and natural (droughts, etc.) (Devereux 2010). For example, livestock herders in the Somali region earn on average four times more income than their farming counterparts. They have higher incomes and also better indicators of wellbeing such as dietary diversity than agro-pastoralists and farmers (Devereux, 2006, 2010). Pastoralists are politically marginalised, and their livelihoods, while adapted to dry spells, are vulnerable to protracted drought, as well as to trade blockades in Arab countries (e.g. the United Arab Emirates) and, as we are indicating elsewhere, movement restrictions associated with conflict or State intervention (*ibid.*).

It is important to note that migration is not necessarily a sign of destitution, but a sign of adaptation; there are normal movements of people and cattle in the region following rain patterns and the availability of wells in the dry season. Somali pastoralists have traditionally moved their cattle in the dry season of *Jilaal* (January to March), engaging in long migrations. This movement allows for the home communities not to be overgrazed in the dry season (contribution Scott-Villiers) and to seek other pastures far afield. They return to their communities by the *Gu* long rainy season (April to June) and do not migrate. In the short dry season *Xagaa* (July to August), pastoralists are mobile but in a limited fashion, and subsequently keep their herds close to their communities during the short *karan* wet season (August to September), and the second *deyr* rains (October to December) (Ginnetti and Franck, 2014). So mostly it is in the long dry season of *Jilaal*, that pastoralists move further afield, seeking pastureland and transiting from well to well. Movement of herds occurs across borders, moving through the greater Somali region. This is the nomadic movement that is typical of normal times, and movement is a product of choice. In times of drought, migration routes are extended to seek more grazing zones (Watkins and Fleisher, 2002). Such movement to pursue grazing areas is also coordinated with movements towards ports to trade cattle. As will be shown, the (cross-border) mobility and the concentration of people and animals at markets and water points at particular times of the year are important

considerations in terms of public health e.g. for vaccination campaigns. (See Annex 5 for a map of grazing movements and trade movements¹⁰ of herds in Somalia.)

Schrepfer and Caterina (2014) **identify this ‘normal’ movement as nomadic movement, distinguishing it from two other kinds of movement: ‘migration as adaptation’, when drought or other circumstances push pastoralists to seek routes that they would not use otherwise in order to maintain their livelihoods, perhaps putting them at risk of conflict with other clans (Watkins and Fleisher, 2002); and ‘displacement’ where movement occurs under insufficient resources, depletion of livelihoods and collapse of support networks.** The complex emergency is forcing pastoralist livelihoods into ‘migration as adaptation’ and ‘displacement’. This means that the positive effects of population dispersion no longer hold, and pastoralists gather around the few available water sources for cattle and humans, and such concentration of people increases the chances of cholera transmission. These migration processes depend on access to land and pasture rejuvenation, and then on access to cash, either through livestock markets, cash remittances or other forms of assistance (Ginnetti and Franck, 2014).

Nomadic pastoralism, is a livelihood strategy in which groups travel far from each other, and this dispersion has traditionally made them less likely to be exposed to epidemic threats such as measles, cholera and helminth infections (Cummings, Wamala, Komakech, Malimbo, and Lukwago, 2014; Sheik-Mohamed and Velema, 1999). However, these same populations are more likely to suffer diseases associated with livestock (trachoma, brucellosis and TB). Comparing nomadism and agro-pastoralist and farming livelihoods, nomads tend to have better nutrition and health. Higher incomes and access to milk products make children in nomadic communities less prone to malnutrition, anaemia and diarrhoea than those in sedentary communities (Fratkin, Nathan, and Roth, 2006). Riverine farmers (for example, settled along the Juba and Shabelle rivers) are particularly at risk of cholera, since they are relatively more likely to depend on contaminated surface water, particularly in times of drought.

The beneficial aspects of nomadic pastoralism vis-à-vis settled communities requires that the droughts are not recurrent, to allow for restocking. In normal years, resilience and bouncing back in terms of nutrition is highest in nomadic communities: recovery of milk productivity is much quicker than recovery of cereal production, and hence a return to better nutritional outcomes is faster in pastoralist communities. However, in recurrent droughts, it takes much longer for restocking to occur, and people risk losing their stock altogether and ending up as IDPs (Sadler, Kerven, Calo, Manske, and Catley, 2009).

However, **sedentarisation occurring due to protracted conflict and droughts is a response for the depletion of herding livelihoods among the poorest farmers.** Livestock herding has only become profitable for rich herders – the poorer ones are falling out of herding and into other sources of income (contributions Lind; Carruth 2017). The animals that people raise have changed: nomads increasingly rely on camels and goats, and sedentarised communities mainly keep small animals.

People are progressively leaving herding as a viable livelihood (contribution Lind). Alternative livelihoods have been pursued, and one of them, charcoal making, is having massive environmental impacts, with widespread deforestation that in turn will impact water availability (and hence the spread of water-borne diseases such as cholera).

¹⁰ Please note the isolation of the Somali region of Ethiopia, and Somalia itself, from markets in the Ethiopia highlands. Livestock products are much more likely to be exported to the Gulf than towards Ethiopian markets. This market disconnection also brings the paradox of food surplus in the Ethiopian Highlands, with widespread famine in the lowlands, including the Somali region (contribution Ayele).

Sedentarisation, with its decreased dispersion, in the region is ultimately having consequences in the spread of cholera. There is a link between sedentarisation and spikes in cholera occurrences (Cummings et al., 2014). In droughts this is exacerbated, because pastoralists need to congregate around those wells that still have water, and hence contribute to the risk of contagion. UNICEF has attributed cholera cases to the ‘proximity of temporarily settled people with additional risk factors including shortage of water plus poor sanitation and hygiene practices.’ (UNICEF 2017a)

In the Somali region, there has also been heavy investments and pressures by the federal government to settle populations, through development programmes. However these programmes have also reshaped the access to water by pastoralist communities. The intention of these irrigation schemes is to provide farming livelihoods for pastoralists who have lost their livestock. As Jeremy Lind indicates, ‘the problem is, they’ve been developed in key resource areas. Pockets within the overall landscape that are disproportionately rivers, hilltop forest, salt-lens, wetlands – very important [in terms of resources] even if very small in territory.’ These resources were key for livestock keepers to move between these areas within a grazing cycle. **The conversion of these resources into ‘irrigation schemes, conservation zones, and farming ranches, is converting needed livestock resources, undermining customary systems’ of pastoralist livelihoods. Captured water sources for irrigation and new settled communities made less water available for people outside those areas** (contribution Lind).

In parallel there has been a privatisation of water resources and grazing lands in the whole of the Horn of Africa. What was managed by customary law and through norms of inter-clan relationships is increasingly managed as a commodity. Enclosure and subdivision is undermining ‘communally managed water resources and traditional practices of collective action within clans or kinship groups and cooperation between different clan and ethnic groups’ (Beyene and Korf, 2008: 305). Custom often regulated the use of water resources between clans, and ensured that even if people were not part of the clan system, they would be able to access water if they needed it. Privatisation and enclosure excludes ‘marginal households and individuals from access to pasture and water resources or confine them to a shrinking communal resource base’ (*ibid*: 305; see also Bogale and Korf (2007)). This further decreases the access of water, making people in drought rely on contaminated sources of water, as well as threatening the livelihoods of those pastoralists that are not wealthy enough to hire private grazing, tankers and so on. It is also an issue of inequality (contribution Lind).

Further, regardless of the settlement programmes, State provision of infrastructure and services, including health services, well and other water sources, and areas where humanitarian aid is distributed are encouraging settlement (Carruth, 2017). Note that there is a paradoxical situation in which sedentarisation increases the likelihood of cholera occurrence, but simultaneously sedentarised livelihoods make access to health clinics somewhat easier and enable people to seek treatment for cholera when it occurs.

Falling out of pastoralism does not mean people become immobile. Migration remains an important livelihood strategy. People depend on migration to seek education, to trade, to access aid distributions and medical care, temporary cash for work programmes, temporary work with aid organisations and so on (Carruth, 2017).

Section 2. 'Behaviours' and cholera transmission

Key insights into behaviours and practices related to cholera transmission

- Behaviours are a product of structural vulnerabilities – lack of water and sanitation infrastructure and lack of access to health services are the main culprits
- There should be hand washing facilities close to latrines and soap should be made available; there is a need to incorporate ablutions into prevention interventions
- Washing bodies in funeral rites can spread disease
- Open defecation due to lack of latrines is practised, especially in the case of nomads and IDPs, with gender specific challenges
- Risk of drinking 'sweet' water from rivers after the rains
- Somalis use Oral Rehydration Solution (ORS), either home-made or purchased
- People see the value of human vaccination, and campaigns which adapt to livelihoods are advised, for example provision through transit points for pastoralists, linked to livestock vaccinations, and at a regional, rather than national level.
- Lessons from other countries suggest including the humanitarian response into the epidemiology and acknowledging risks of cholera narratives to reproduce class, gender and ethnic divides

The sections above have shown that 'behaviours' are only the tip of the iceberg. Several of our interviewees highlighted that it is less a problem of awareness, but that people's agency is constrained by the infrastructure and health environment. Andy Caitlin summarises this well:

Somalis have a good understanding of the causes of human disease, disease transmission and the need to seek health care, and there is a high demand for both better water facilities and health care. Having lived in Somali pastoral communities, there are good local hygienic practices given the lack of facilities; people drink dirty water only if clean water isn't available; handwashing before eating is normal, if clean water is available. Somalis have very strong local knowledge on the characteristics and qualities of water from different sources (contribution Caitlin).

Acknowledging this reality, that cholera occurrence is primarily shaped by (i) the lack of access to water resources and health services due to conflict; (ii) erosion of livelihoods, settlement and enclosure; and (iii) a lack of investment in adequate water and sanitation facilities,¹¹ it is possible to identify social dynamics with the potential to maximise the impact of the immediate humanitarian response and give guidance to what kind of infrastructure

¹¹ There is no system for monitoring water quality in Somalia, and no enforcement of borehole-drilling standards. Regular monitoring and chlorination is only carried out in high-risk areas, such as Mogadishu. Public health departments don't take responsibility for ensuring that water supplies are safe for consumption. There is no capacity within government to take action on water supplies that do not meet drinking-water standards. (UNICEF 2016: 53)

would be most convenient to contain and prevent cholera epidemics. Of course, in the medium to long term, to avoid recurrent outbreaks of cholera, the higher level policy and investment aspects need to be addressed otherwise any successes in behaviour change will be short-lived and ineffective in controlling cholera.

a) Water sources

According to the Knowledge Attitudes and Practices (KAP) survey conducted for UNICEF in July 2015 (UNICEF and Farsight, 2015), 55 per cent of the population is using an improved water source (piped water plus well), and only 35 per cent are using piped water that is treated. There are significant regional variations however, with Puntland having relatively more piped water. IDP camps in South Central Somalia have relatively less piped water than those in Somaliland and Puntland, and depend on other water sources such as wells, rainwater and surface water. Nomads in South Central depend much more on trucked water (32 per cent) than nomads in Somaliland and Puntland, who have relatively more access to wells and do not require water trucking. In Somaliland, the access to improved water is higher, with potable water access in rural areas at 69 per cent in rural areas in Somalia, significantly under the Ethiopian average of 82 per cent (National Bank of Ethiopia 2015).

People understand the value of chlorination and use what is provided by humanitarian aid (contribution Carruth and KAP assessment). However, Balfour notes the preference to drink from rivers when the first rains come (contribution Balfour). The rivers start filling up, but they carry the run-off with cholera-infested sewage. People prefer river water because it is perceived to be 'sweeter'. UNICEF also adds preferences towards ponds and surface run-offs, with the notion that rainwater is 'sweet', whereas groundwater is not as preferred due to its salinity (UNICEF, 2016).

b) Open defecation

In Somalia, according to the latest UNICEF KAP survey 29 per cent of people practice open defecation. Prevalence however is highest in Nomadic populations (40 per cent) and IDPs (32 per cent) – the latter is more dangerous since these are defecations next to the house from which people do not move on. Open defecation is a significant problem for cholera transmission, since the 'the majority of open wells, *berkeds* (water cisterns) and even some shallow boreholes are likely to be contaminated'. Even privately owned shallow wells, frequent in urban areas such as Mogadishu, are 'usually not protected and the shallow groundwater means that the contamination from latrines and open defecation is very high' (ibid: 53).

Carruth highlighted a particular problem with babies' and toddlers' defecation. Recommendations for cholera are that these are put into a plastic bag and disposed of in a latrine, and the soiled area disinfected. In the UNICEF KAP survey 48 per cent reported disposing of children's faeces (UNICEF and Farsight, 2015). However, Carruth pointed out that the implementation of guidelines was virtually impossible with the use of cloth nappies with which there is much more spillage (and the unaffordability and lack of availability of any other form of nappies).

Women are reported to use open defecation more than men (Biran et al., 2012), but also they would prefer to use latrines provided they had them and these were adapted to their needs, not only in terms of urination and defecation, but concerning feminine hygiene (Thuita, Conn, and Wilson, 2017). They also face risks of sexual assault in open defecation (contribution Hammond and UNICEF (2016)).

Open defecation is also related to the availability of water near latrines. In Nancy Balfour's words:

Because water is part of the ritual ablution Somalis are reluctant to use latrines where there is no water provided (the majority of latrines built by aid agencies).

They will prefer to take their 3 litre jerrycan and go to the water source, collect water and go to the bush nearby. This explains the high levels of outdoor defecation around water sources such as *lagaas* (where they can get water from open wells and there is plenty of bush for privacy) and water pans and *berkeds* (underground storage tanks which are filled by runoff – open defecation is common in the runoff area because it is near the water and in a depression in an otherwise flat landscape and hence privacy). These practices greatly increase the contamination of unprotected water sources and hence the spread of cholera.

c) Handwashing

There is a lack of handwashing facilities in Somalia, with 56 per cent without facilities. Figures are worse for IDPs and Nomads (32 and 34 per cent respectively) and best in Somaliland. Somaliland and Puntland have relatively better water infrastructure than South Central Somalia. Even when there are handwashing facilities, these are not accompanied by soap or detergent (contribution Livingstone; UNICEF and Faresight, 2015). Offering soap for free in hygiene kits through humanitarian aid distribution translates into use: people value it and use it (Biran et al., 2012).

There are very few handwashing stations close to toilet facilities (12 per cent in total). A KAP study conducted by the Food Security Analysis Unit highlighted 'most children (more than 70 per cent) reportedly washing their hands before eating. It was also reported that most caregivers, particularly mothers (more than 75 per cent) from all livelihood zones also wash their hands before handling food' (Food Security Analysis Unit, 2007: 26). However, among the pastoralists, it is not a guarantee that children and caregivers will always wash their hands when there is no water (ibid). Livingstone flagged that poor hygiene is practised in restaurants and teashops in rural settlements and urban areas (contribution Livingstone).

Ritual ablutions are a point of high risk, according to Carruth:

Sanitation and hygiene – they are really important. One is ablution before prayers, there will be a latrine, and when you go to pray, you wash and then you pray. The plastic containers as they are used are shared by the people who are doing ablutions – and people don't usually use the soap. There normally isn't a sink beside it [the latrines]. An important solution is make sure that the ablution water is treated, that there is a handwashing facility with vessels available next to latrines and for ablution before prayer. Otherwise, there is the trickiness of bringing all the necessary items together – soap, water and vessels (contribution Carruth).

d) Oral Rehydration Solutions (ORS) and IV rehydration

There is widespread acceptance of the use of oral rehydration salts, and they are readily used by carers (home-made or acquired, see below) (Ibrahim, Aden, Omar, Wall, and Persson (1994), and Carruth and Scott-Villiers contributions). When diarrhoea occurs, people from urban communities are more likely to use purchased ORS, while others may give fluids based on 'food based juices, water with sugar, if available and sour fatless milk (*garoor*)' (Food Security Analysis Unit, 2007: 6).

When giving rehydration fluids, mothers carry on breastfeeding and with children, ORS is often combined with milk (either camel, goat, or sometimes Nido milk). There is no resistance to ORS or to intravenous fluids (contribution Carruth). In fact, in areas with no health coverage, there have been makeshift administration centres where rehydration solutions are purchased in local shops and administered intravenously by community health workers (contribution Balfour). Patients in the Somali region compare camel milk (a highly

valued food and medicine) to the intravenous glucose solution, as 'nutrition that is inserted into the body' (Carruth, 2014).

e) Washing dead bodies

Traditionally in Islam, the body after death is ritually washed and a perfume called *Adar* is applied. Women wash women and men wash men with a small cloth and perform prayers. In the case of children, either a man or a woman can wash the child's body. Children under 16 do not attend these rituals (Ethnomed website; Venhorst, Vanbrux, and Quartier (2011)). Mourning and washing the body contrasts with the UNICEF recommendations for cholera transmission (UNICEF 2017b), since dead bodies are highly infectious; while preventing contamination, the recommendations may portray the body of the loved one as toxic material to be disposed of. Rituals are not set in stone, however, and they can be transformed (although not dispensed with altogether) in different contexts. For example, Somali immigrants in the US and the Netherlands have incorporated disinfectant and gloves into the rites.

These experiences with Somalis in the US can be conducted in Islamic Centres (Ethnomed website; Venhorst et al. (2011)). During the Ebola outbreak in Western Africa, similar issues on funeral rites such as body washing were raised (Fairhead, 2014). During the Ebola epidemic there was partial success in improving safety in funeral practices, highlighting the role of fluids in contagion, incorporating disinfectant into washing rituals (by emphasising the symbolic nature of them) and incorporating the imam and assistance into the burial (Richards et al., 2015).

f) Cholera vaccinations

There is contradictory information regarding the degree to which Somali populations trust vaccination as a way to combat disease. While the KAP Survey carried out by FSAU in 2017 indicates that some parts of the population do indeed see vaccination as important for childcare, others (especially fathers) are less convinced (Food Security Analysis Unit, 2007). On the other hand the KAP survey performed for the 2013–2014 Polio outbreak highlighted a broad public awareness and acceptance of vaccination. This is compounded by the success of that campaign (UNICEF, 2014). The polio vaccination campaign included radio and mobile dissemination, and capacity building of health workers, but also advocacy through the Islamic Affairs Supreme Council, promoting the campaign through mosques (*ibid.*). What has been revolutionary has been the targeting of mobile populations through vaccination in mass transit points, overlapping it with animal vaccination points, and taking a regional (rather than a country) approach, since movement is often across borders:

...creating a network of informants and influencers, engagement with clan leaders, mapping of water points and livestock markets, forming a partnership with an animal vaccination program, cross-border coordination, and establishment of permanent transit vaccination points. [...] Results demonstrate that the proportion of these zero-dose children was reduced from 44.6% to 19.5% between 2014 and 2015 (Haydarov et al., 2016).

Oral cholera vaccines tested in sub-Saharan Africa have had high levels of acceptance.¹² Acceptance was linked to higher knowledge of cholera causation. Low literacy, rurality, social vulnerability and larger households were correlated with lower acceptance (Sundaram et al., 2015). Importantly, reliance on prayer could, depending on the country, lead to higher

¹² As part of the Africhol project, the African Cholera Surveillance Network, a multi-partner project aiming to tackle cholera in Africa, the Agence de Medicine Preventive (AMP) has been conducting anthropological research in East Africa, in partnership with local research teams. These studies were implemented prior to and during Oral Cholera Vaccine campaigns in 2016: in Malawi, in Mozambique and in Zambia. Study results are not yet published (two articles are under review).

or lower acceptance, showing that there is not necessarily a competition between prayer as healing and biomedical interventions. Catley also pointed out the success in HIV prevention messages through mosques (contribution Catley).

It is useful to know that information flows very quickly and efficiently in the Somali regions, with implications for messaging for cholera awareness and vaccination campaigns. In Livingstone's words:

The Somali language media reach well beyond their immediate listenership and viewership. Principal media – radio (BBC Somali Service, Voice of America Somali Service, Radio Hargeisa), three Somali-language TV stations, five major online newspapers (widely accessed through Facebook links), text messaging services provided by the two major phone companies, whose mobile phone networks cover the entire country. In the digital age, social networks extend to the diaspora. Somalis in the diaspora are also important providers of cash to pay for medical services. But they are not yet a major source of health-related knowledge or new practices (contribution Livingstone)

There is potential to tap into these information networks in cholera campaigning. A recent study conducted by the Somali Region Health Bureau, the US Centers for Disease Control and Prevention (CDC) and WHO in the current cholera epidemic found most people in Jigjiga town where the study was carried out relied on information from neighbours and community leaders about AWD much more than radio or television. According to this study, community health workers at local level can raise awareness of cholera transmission risks and promote behavioural change (WHO, 2017d). The study, however, shows that on occasions greater biomedical knowledge does not necessarily translate into behavioural changes (*ibid*), a finding consistent with other health communication initiatives (Chandler et al, 2014). Whilst there is a degree of impact in behaviour change through communication for development initiatives (UNICEF, 2015) the expectations must be realistic. In the case of the study on Cholera/AWD, the discrepancy between information and behaviour change is explained due to lack of adequate water and sanitation facilities and the extreme scarcity of water that obliges people to prioritise drinking over other risk prevention behaviours, such as washing (WHO, 2017d).

g) Lessons from other cholera epidemics

Past cholera outbreaks have provided insights into structural and behavioural factors which need to be addressed for an effective cholera intervention, including: the potential for transmission via humanitarian actors, internal migration, rapid urban settlement, and the risk of stigmatising those who are sick.

The humanitarian response has to be considered in the overall epidemiological picture. For example, UN troops from Nepal brought cholera with them when they came in response to the earthquake in Haiti (Robbins, 2014). Rapid migration into urban areas and displacement camps in Haiti meant overcrowding and pressure on water and sanitation infrastructure: making cholera more likely. This appears to be the case in Somalia too (*ibid.*). Furthermore, internal migration might spread cholera, particularly if it occurs in an IDP camp and people leave as a result of fear of contagion (Schuller, 2011: 13).

Cholera control and messaging risk stigmatising those who are sick. Identifying the causes of cholera and seeking solutions can get mixed in with class, gender and other social differences and prejudices based on them. Particularly in circumstances in which cholera appears in an unequal society with higher impacts on the poor and marginalised, there is a risk of messages that blame the victim. This occurred in Brazil, where cholera occurrence and stereotypes of the poor as 'filthy' were conflated, further discriminating against them (Nations and Monte, 1996). A similar process occurred in Venezuela in terms of race and

ethnicity when the services and information provided by the State had been really poor, and blamed the victims (Briggs and Mantini-Briggs, 2003).

Section 3. Patient relationships with a pluralistic health system (including the emergency health intervention)

Pluralistic health systems

- Somalia has a pluralistic health system, with public and private biomedical clinics coexisting with home remedies, herbalists, traditional healers, shopkeepers and pharmacists
- People seek simultaneously or in close succession the advice of these different health providers
- Herbalist, traditional and religious healers combine their practices with biomedical practices, for example in the use of drugs (antibiotics, purges, etc.)
- Purchase of drugs in shops and in medical centres is common
- Somalis, regardless of whether they prefer biomedical or herbal treatment, often frame their illness in spiritual/religious terms
- The flow of 'humours' (bile, stool and blood) and spirits are ways to explain disease and wellbeing
- Low availability and access of health clinics due to lack of investment and protracted conflict restrict movement

Cholera diarrhoea and labelling

- Caregivers differentiate well between physiological and pathological diarrhoeas; and if cholera is identified treatment in a health facility is usually sought as soon as possible and ORS is administered
- Labelling cholera as AWD (rather than the local word for cholera) in Somali greatly diminishes the impact of campaigns

Health care and treatment seeking

- People have very good ideas about quality of care, and will gauge experience, available drugs and equipment (laboratory, x-rays, and so on) to decide where to go, choosing to travel far to seek quality treatment
- Clan and family relations are key to accessing health care, and to supporting the high associated costs and logistical needs

Challenges

- Trust in the health provider is key, and this is built both through quality of care and social relations and interactions with health workers
- Successful patient–health worker relationships are those that mimic and build on the socialisation practices of care and reciprocity of clan/family relations
- When language is a barrier and Somalis are attended by non-Somalis who are not culturally aware, the trust relationship with the health facility suffers
- Women are on average less likely to receive treatment and more prone to disease due to inadequate nutrition in adolescence and pregnancy

a. A pluralistic health system

Biomedical services – health outposts (including cholera treatment units) and humanitarian clinics – are not the only health providers available, they coexist with other health providers: home remedies and prayers, traditional healers, herbalists, pharmacy shopkeepers, Islamic healers. Somalis draw on multiple strategies simultaneously or in close succession to treat commonplace diseases. The relative weight of each is shaped by access (physical, social and economic), perceptions of quality and success, the ailment, spiritual understandings of disease, and others. **Health-seeking for cholera will be based on a complex set of decisions, and there is evidence that, if quality health care facilities were available and accessible, people would use oral rehydration salts and go to treatment facilities if needed since they understand the severity of the disease.**

Health systems in Somalia are hence a combination of public and private health providers. Private health services predominate over public services: this is primarily because private pharmacies are included in the accounting for private services. The majority of private clinics are clustered in cities and only available to those who can afford them (Mazzilli, Ahmed, and Davis, 2009). The public sector is operated jointly between the Ministries of Health, NGOs and UN agencies. According to the Health Cluster, in Somalia in June there existed 385 health centres, 78 hospitals/referral centres, although 65 per cent of these health facilities are described as ‘not functioning properly’ (Somali Health Cluster, 2016). Health clinics in rural areas are very scarce, and even when they do exist, they are not as well used as one might expect, due to a perception of poor quality provision. Public health services ‘operate at a low level; they are open for short periods, have low levels of drug stocks and frequent stock outs, have poorly trained, motivated and supervised staff, offer a low range of services and are not highly trusted’ (Mazzilli et al., 2009: 13).

A similar reality of inadequate health provision is seen in the Somali region of Ethiopia, where clinics are not available in local communities, and in rural areas attending them requires significant travel (particularly for pastoralists). In terms of quality, Carruth differentiates between the Ethiopian State health clinics and the NGO/UN Somali-manned mobile health clinics, the latter being perceived as higher quality and more readily attended by patients (Carruth, 2016). This public–private reflection should not distract from the point that people seek other kinds of treatments beyond the biomedical (religious, traditional, herbalists, and so on) and that they are not exclusive – people seek different options rather than one exclusively. The combination or succession of health providers and treatments chosen will be different depending on the patients’ preferences and the illness (see below for example for a local understanding of disease and diarrhoea). Further, Carruth has signalled that even within this medical pluralism, people are increasingly trusting medical facilities, particularly if they provide good service and have appropriate facilities (e.g. laboratories) and equipment. (See Annex 6 for regional breakdown of health seeking according to source.)

Treatment-seeking behaviours are shaped most importantly by availability and access; these factors are more important than individual choices (contribution Carruth). We have already explored the factors that constrain movement of people and humanitarian services above. This is particularly challenging in the case of pastoralists, whose mobile livelihoods are not adapted for conventional approaches to health provision (Watkins and Fleisher, 2002). **Mobile clinics for pastoralists partly address this, but are not the panacea. Since trust and social connection is paramount in successful patient–health provider relations, it is unlikely that this trust can be built if ‘strangers [...] appear for a few days in the grazing lands’ and ‘will not appear particularly approachable’** (Helander, 1990: 129).

Further, access has to go hand-in-hand with quality. It is erroneous to assume that people in the rural areas, whether they are nomadic or settled, are just passive recipients of health care and that they will just gladly receive whatever is given to them. On the contrary, people

in the villages and in the pastures make an active selection among the output of health resources. Their perception of their own needs and their estimation of the ability of various alternatives to respond to that perception, is what in the final instance determines the outcome of health programmes.

Biomedicine is part of a system of health providers that are subsumed within a broader spiritual notion of illness. Many Somalis, regardless of whether they trust more herbalists or medical doctors, 'acknowledge the divine of all illnesses, the influence of supernatural beings on the physical bodies of humans, as well as the necessity of Qur'anic healing in response'. (Carruth 2014: 162). This notion of illness as God's will as something that is written can bring with it a sense of fatalism, in which people can think that regardless of what treatment is sought (and by whom), if it is God's will for a particular child to die, that child will still die (Food Security Analysis Unit, 2007: 30). Livingston reported that a decade ago in a UNDP water and sanitation project, 'local people across the country were accepting of and philosophical about high diarrhoea-related death rates among under-fives' attributing it to 'Allah's will' (contribution Livingstone).

There is an important gendered dimension of health seeking behaviours: women are on average more neglected in health terms than men, treatment is sought less often, with significantly higher mortality and morbidity rates among Somali women (contribution Catley and Aden et al. (1997)). This is compounded by women's relatively poor nutrition in adolescence and pregnancy.

Family networks are crucial in order to take someone to the doctor or healer. Contacts through social networks yield the knowledge of which practitioner to choose and the access to them. Particular reputed members of a family (often those more educated and linked to the humanitarian industry) will play the role of translator/mediator between the patient and the health provider. In the Somali region, real translation is required, in those health centres or treatment units that deploy Amharic speaking staff. This mediating role is a family responsibility and a source of status (Carruth, 2017).

Further, kinship and clan responsibilities are central to paying for and enabling access to different kinds of medicine. Families 'frequently and informally redistributed monetary and livestock holdings within subclan, close cousins (*ilma addeero*) and restitution (*mag* – "blood money") units to pay for medicines, hospital visits, Qu'ranic healing, or more rarely, travel abroad for care'. (Carruth, 2015: 66). Close family step in to provide the logistics support and advice. Further, when seeking treatment outside one's community (the most likely scenario in rural areas), people depend on food and lodging by extended family. **People who do not have extended family will be unable to pursue health care when referred to other regions (*ibid.*).**

b. Local understandings of disease

Traditionally many illnesses are associated with spirits and 'evil eyes' (*wal koraad*): 'modalities used to treat illnesses normally include fire-burning, herbal remedies, casting and prayer. Illnesses like headache, fever, dizziness and weakness are believed to be caused by spirits (*Jinn*). Treatment therefore involves reading the Koran, eating special food and burning incense (*myrrh*)' (Food Security Analysis Unit, 2007: 18). Many illnesses that are not well understood, including strong malaria, are believed to be caused by the evil eye (*ibid.*).

Carruth also highlights the importance of humours in Somali understandings of health and wellbeing (*ladnaan* or *caafinmaad*); in terms of seeking an appropriate quantity and flow of bile (*dacar*) and flow of blood. If digestive bile levels are too high, malnutrition, illness and infection by germs are seen to be more likely. Bile levels are targeted through changes in nutrition (including the consumption of camel milk) and other pharmaceutical aids to promote

digestive movement (e.g. purgants) (Carruth, 2014). For a summary of treatments comparing traditional and modern, see Annex 7.

c. Local Somali understanding of diarrhoea (including cholera), treatments and health seeking

Somali people are able to distinguish (through colour and texture) pathological diarrhoeas (*shuban*, *daacuun*, see below), from those that are normal, regulating and cleansing. For instance, a green diarrhoea, is the product of drinking camel milk with the objective of regulating bile (*dacar*), purging germs and worms and resuming gastrointestinal movement (Carruth, 2014). Also teething diarrhoea, of a yellowy colour, is considered normal, and traditionally it was thought that the diarrhoea was due to the ‘fox teeth/red worm’, the canine lower cusp responsible for constant irritation in the mouth. Mothers would take their children to traditional healers who would remove the teeth, a practice called *Ilko dacowo* (Moe, 2016).

Somalis distinguish (at least¹³) three types of pathological diarrhoea, which have different treatments and determine different treatment-seeking behaviours. Note that malnutrition and pathological diarrhoeas are linked, with two-directional causality: malnourished children are more likely to fall ill with diarrhoea and diarrhoea means children become undernourished because malabsorption of nutrients (Kinyoki, Berkley, Moloney, Kandala, and Noor, 2015).

***Shuban* (normal diarrhoea)**

‘Normal’ or ‘Soft’ diarrhoea; or when watery, *shuban biyoot* (watery diarrhoea). Traditionally this did not have the connotations that AWD has today; it was a clarification of consistency of faeces. *Shuban* is treated with ORS, and with recitations of the Koran and Prayer. If it does not work, lemon juice, and then, when there is improvement, lots of other fluids (sugar water and salt, lean meat, rice water or sour milk without fat). Fresh milk is withheld, but breastfeeding is continued. If home cures do not work, they are taken to another facility, either biomedical or traditional where herbs and prayer would be used (Food Security Analysis Unit, 2007). Urban, settled educated mothers are more likely to use ORS. Women who have a stronger position in the household are also more likely to seek treatment for their children (Ibrahim et al., 1994). In urban areas families are more likely to use ORS and modern medicine from private facilities to manage diarrhoea.

Typical treatment seeking process: normal diarrhoea treatment starts with traditional home treatment, if it fails, then a traditional healer is sought and if that fails, the child is brought to the health facility.

***Shuban Dhiig* (dysentery – literally bloody diarrhoea)**

Recognised as diarrhoea with blood and mucus. The treatment in rural areas is the use of ghee/fat from sheep and special nutritious soups. In urban areas also water melon juice, fermented milk (*garoor*), and medicinal roots are administered. If in three days there is no improvement, the patients are taken to the health facility.

Typical treatment seeking process: first traditional treatment and if that fails, a health facility.

¹³ Other diarrhoeas are *geed sare*: “literally translates as, “tree top,” but refers to common, “soft,” (compared to watery) and darker colour diarrheal disease in children. It is often treated with teas made from the leaves harvested from the tops of trees. The most common treatment is to put cook and/or mashed leaves from the top of the qood tree on the child’s fontanel or the top of their head.” And *Laan*: diarrhoea in children that is dark in colour. The most common treatment is either to give the child fresh camel milk or to feed them camel milk plus cook and/or mashed leaves from the qood tree on the child’s fontanel or the top of their head.” (Carruth, 2011: 354)

***Daacuun* or *Kaloraa* (Cholera)**

The whitish colour as that of the water of cooked pasta is clearly identified by mothers as cholera. Mothers understand the urgency of the situation, seeing cholera diarrhoea as a mortal threat to children and adults (Carruth, 2011: 218). Mothers react by swiftly seeking treatment in a health facility, and unlike the other two diarrhoeas, traditional home practices and traditional healing are not prioritised (Food Security Analysis Unit, 2007). If they cannot access a health facility, families will give home-made or purchased rehydration fluids to cholera patients.

Main types of diarrhoea in Somali:

Shuban – normal diarrhoea

Shuban biyoot – literally watery diarrhoea (it is a merely descriptive term, not the emergency connotations that AWD carries in humanitarian contexts)

Shuban Dhiig – dysentery, literally bloody diarrhoea

Daacuun or *Kaloraa* – cholera diarrhoea, whitish like the colour of water after boiling pasta.

Source: Carruth 2011, 2014

The importance of labelling diarrhoeas for cholera prevention messages is crucial. In her fieldwork in the northern Somali region, Carruth saw how radio messaging by the government to stem an outbreak of cholera/AWD was done using the word *Shuban Biyood* (literally watery diarrhoea), instead of the word commonly used for life-threatening cholera diarrhoea: *daacuun* (or more rarely *kaloraa*). People assumed the problem was a small one, due to the wording. In Carruth's words:

Because aid and governmental agencies resisted publicly defining AWD as “cholera” or even suggesting a connection between the two, the translation of AWD into *shuban biyoot* elided the potential urgency of a cholera epidemic among the local populations involved, and left unexplained to them the rationale behind such dramatic media attention and dramatic changes in humanitarian programming (Carruth, 2011: 219).

In future messaging, either the word *daacuun* should be employed, or messages have to convey that the AWD they are referring to is life-threatening. Messages should build on the recognition of symptoms as defined by the audiences to enhance treatment seeking behaviour.

d. Health providers and treatment seeking

Herbalists (*geedole*) (who can simultaneously be healers, see below)

Herbalists have herbal remedies for the majority of disorders, using both local and imported plants. Herbalists along the rivers will use a greater diversity of medicinal plants. Remedies

are often used in conjunction with prayer. There are around 500 plants used in Somali traditional medicine of which about 200 are botanically classified (Ahmed, 1988).

Some herbal remedies are used to treat cholera diarrhoea, and some of them have been proved to have effects against the hypersecretion provoked by cholera toxins (Claeson and Samuelsson, 1989).

There is an interesting type of herbalist called *baxaar* who can prevent harmful animals entering the river, for example preventing against crocodile attacks (Ahmed, 1988).

Both herbalists and *baxaar* are the only ones who traditionally can cut plants to be used as treatment. If others without the specific knowledge cut the plants, they might cause themselves harm and the plants will have no effect (Ahmed, 1988).

Traditional healers (*saancole* or practitioners; *dhakhtar baaddiye* or rural doctors; *Qofka sameeya dawo dhaqmeedka*, traditional medical practitioner or healer)

Relative to biomedicine (including pharmacies) and home remedies, traditional healers are less prevalent than in the past, although this depends on the illness: normal diarrhoea, gastritis, measles and gonorrhoea are commonly treated by traditional healers. Respiratory infections are also treated initially by healers, and if they are not resolved in a few days, they are referred to a clinic. Headache, stomach and chest/heart pain have also traditionally been cured by traditional healing.

Traditionally healers are an integrated part of society, practising farming or herding and assisting patients when they were needed (Ahmed, 1988). Healers distinguish between

...treatments that focus on “natural” illnesses and pragmatic problems and treatments that focus on illnesses caused either by supernatural agents such as spirits or by problems in social relationships (e.g. evil eye). The first category includes treatments such as cupping, burning and bone-setting, and the second treatments such as recitation of the Koran and spirit possession rituals. (Tiilikainen 2014).

Burning (*Gub*) would be used in areas where they are affected (e.g. chest area for pulmonary TB) as a way of making the bodily flows (bile and blood) resume. This method is quite common in the Somali region (Carruth, 2011). Scarification – with small cuts in the body – and bloodletting, were also practised for the same reasons (Ahmed, 1988). According to Livingstone, traditional practices are often quite effective, as in the use of the Acacia tree bark (suspended in a bottle of water for a few hours) for stomach upsets, although this effectiveness might hinder people from seeking help from other health providers for other illnesses (contribution Livingstone).

Evil eye is treated by burning elephant faeces, donkey hooves, hyena skin, garlic and ubuore leaves, and steaming the bewitched child in the smoke. The emission of liquid through sweating, sneezing and mucus through the nose are a sign that the evil is leaving the body, clearing the child’s brain and returning the child to calm (Food Security Analysis Unit, 2007: 34).

Please note that these traditional practices ‘often included concurrent uses of pharmaceuticals and diagnostic technologies as well as considerations of how these practices tackled contagion (*isqaadsiin*) and germs (*geermis*)’ (Carruth 2014: 407).

Religious healers (*wadaaddo*)

Religious healers have traditionally healed through a reading of the Koran and blowing it on the patient. Also Ahmed mentions Tahlil in which the suras of the Koran are either blown into water, or written in a solution of saffron or milk blackened with charcoal on a board, and then washed with water – and then the water is given to the patient to drink. Amulets consisting of a piece of paper with verses of the Koran, hung on the neck, arm, leg and hips are also used.

Islamic clinics (*cilaaj*) are a more recent phenomenon in Somalia that has grown since the 1990s with the spread of Wahabbi Islam. They separate themselves from the Sufi traditions of religious healing that involved spirit possession, magic and ritual slaughter (Tiilikainen 2010). They also involve recitation of suras of the Koran, sprinkling holy water, and inhaled ingredients, as well as herbal medicine and pharmaceuticals. They treat patients with jinn, evil eye or witchcraft but also natural/physical illnesses. Tiilikainen highlights how these clinics use modern technology and elements of biomedicine to enhance their symbolic power vis-à-vis their clients. These clinics are very well respected: ‘healers provide patients with meaningful cultural and religious illness explanations. Moreover, a healer may be part of the kinship network of a patient and/or live nearby, which entails easy access’, and even though they can be more expensive than private clinics, people attend them (Tiilikainen 2014).

People who seek help from an Islamic healer, in the Somali pluralistic health system, would often combine it with biomedical treatment; for example a woman who struggled with infertility would ask a mullah to exorcise a jinn and simultaneously get an ultrasound in a hospital (Carruth, 2014: 4).

Shopkeepers/pharmacists

As mentioned above, **shopkeepers and pharmacists are the most popular source of treatment in Somalia. They are pervasive, present in nomadic and settled rural areas, as well as in urban areas** (Mazzilli et al., 2009). Self-medication is common within pastoralist communities, with people self-medicating, and asking family members going to health centres to purchase particular drugs (e.g. antibiotics) for them (contribution Scott-Villiers).

Unlicensed pharmacists offer diagnosis and recommend treatment, and people seek out those pharmacists whom they trust to have some knowledge of disease, and they evaluate their success from treating previous ailments (contribution Lind, and Carruth (2014)). For example, a successful drug dispenser would be someone who had worked with aid organisations and had received informal training on first aid and monitoring courses of drugs (*ibid.*).

Biomedical treatment seeking

Due to the prolonged presence of the humanitarian health world there is a higher appreciation of biomedicine, particularly when the quality of care is good and the perceived necessary equipment (such as laboratory or sonogram) is available. **People can differentiate between qualities of health provision and will travel to those clinics that provide good care** (Lind, Carruth, Scott-Villiers contributions).

Yet the crucial problem is poor availability and access. In the Somali pastoral areas of Ethiopia for example, only 12 per cent of the population reported a health clinic in their community, with the nearest average distance of the clinic being 36 km away. Only 24.4 per cent of children were fully vaccinated compared to 49.4 per cent of children in urban areas (Devereux 2006). Lack of access is compounded by the project-based emergency-based provision. Health clinics open and close continually, there is no continuity (Carruth, 2016).

The availability of and access to good treatment will determine the outcomes of cholera infection: the case fatality rate for cholera is under 1 per cent when health care is accessible. However, limited access to proper health care services for the most vulnerable and insufficiencies within the health care systems brings a higher fatality rate (Mutonga et al., 2013). As mentioned above, lack of access is also shaped by the complex emergency, and hence close physical proximity does not mean access. In Yusuf Dirie's words:

Responding to need isn't often a case of lack of capabilities or trained personal. To return to the case of Mogadishu there are a lot of trained doctors, and in the town of Afgoyee which is about 30 km away there was a cholera outbreak. However, due to the security situation and the politics the simple solution of sending the doctors there to help out suddenly becomes a very difficult if not impossible task (contribution Dirie).

Yet the problem isn't solely a question of quantity and physical access. People have very clear notions of quality and technology, and will migrate significant distances to seek the best possible care and the technology they seek. People value having labs and equipment for appropriate diagnoses. This means that people might not choose to go to the closest health facility but travel farther afield. For example, people may choose to go to a better clinic in Somaliland (and wealthier Somalis might fly out of Somalia altogether) (contribution Healey; (Mazzilli et al., 2009)).

Costs are another limiting factor. Yet **it is not only the cost of seeing a biomedical health provider, which may be very high in the case of private clinics in the cities (Food Security Analysis Unit, 2007), but the associated costs:** one needs to add the cost of transport (there are almost no Ministry of Health ambulances), purchase the medicines and supplies, seek accommodation or pay for a hospital bed, and provide food for the journey. On most occasions, someone needs to accompany the person travelling, who will also need to be fed and paid for, as well as forgoing several days of work (Carruth, 2011).

In nomadic communities, pastoralists might choose to go to the doctor in the region where they are from, rather than attend the clinic in the grazing area where they are herding their cattle at that particular time. This is particularly because **a social connection with the health provider is preferred, since health provision is entangled with ideas of trust and the social structure (Carruth, 2017; Helander, 1990).**

Gender relations in the household may shape when treatment is sought. In more patriarchal households, women often wait for a male relative in order to seek biomedical treatment for themselves or their children (Helander, 1990; UNICEF, 2014). However Carruth indicates that plenty of women do not need men to take their children to the clinic. Perhaps accompaniment is sought if the woman is a young unmarried woman. But despite the puritanical trends of Wahhabism, the more lax Somali understanding of women under Islam still is present. When accompaniment is sought, one often relies on a relative who has familiarity with the health system and the aid industry, with connections and capacity to translate (Carruth, 2017).

Families' incomes and livelihoods are being squeezed by the protracted drought and conflict, with an important psychosocial impact on mothering and childcare. Women are impacted psychologically by the conflict and the depletion of livelihoods means that women need to pursue more paid work and so have less time for childcare (Food Security Analysis Unit, 2007).

In the Somali region, there are significant problems and misunderstandings when Somali laypersons seek medical care from expatriate or non-Somali Ethiopian health professionals.

Clinics and treatment centres provided by the Ethiopian Ministry of Health are often managed by *habashas* – non-Somali, Amharic-speaking Ethiopians. There is a language barrier, but there is also significant prejudice and discrimination against the Somalis. Somalis are often perceived and treated as backward or ignorant by the *habasha* doctors. This patient–doctor relationship cannot be separated from the broader conflict occurring in the Somali region with the Ethiopian military and police. The repression following the Oromia protests has translated into violence towards Somalis in the region, and it inevitably taints the health relationship, particularly since clinics are part of government compounds (Carruth and Dirie contributions).

Somalis do not appreciate the prejudices they confront and would rather go further afield if needs be. When they do use the clinics, they do so for minor ailments and to get medication (contribution Carruth; Carruth (2016)). Somalis would prefer to be seen by a Somali health worker, and by a woman for women patients, particularly in the case of gynaecological concerns.

However, nurturing good social relationships within the clinic can help heal social and cultural differences in the Somali region. Traditionally there has been a tension between Somalis from the Ogaden clan and Bantu Somalis (see Section 1 above). Yet Carruth reports of a successful ‘health diplomacy’ that healed the rift between Ogaden Somali doctors and Bantu Somali patients in a UNICEF mobile clinic, when the doctors engaged socially with their clients: ‘because of their affability, alacrity, their efforts to bend patterns of triage to better match local assessments and their willingness to forge familiar care-giving relationships outside the walls of clinical spaces [the doctors] Abdul and Hussein were interpolated into community life’ (Carruth, 2016: 193).

There are contradicting narratives in terms of competition with the grazing objectives of the family.

It is extremely rare to terminate grazing just to allow for a sick member of the herding encampment to return to the home. Often this is simply not possible because as waterholes being to dry up towards September October, the routes open for migration are limited to more densely populated areas with drilled wells. Taking a herd of animals through such an area, while avoiding upsetting farmers by having one’s animals walking astray, is hardly an ideal task if one of the herders is sick. Rather, consultation with PHC facilities are postponed until it is necessary to return, anyway. (...) Their reasons for this do not only relate to the distances that may separate a herding encampment from health workers (Helander, 1990).

However, according to Patta Scott-Villiers, this prioritisation of cattle before members of the family is a misinterpretation:

Be careful of framing the idea as patriarchal, as if husbands were delaying taking them to the clinic. They care intensely for everyone in the family, it is not that they neglect. They assess the situation – looking at the likelihood of success of going to the hospital, you might think it is a dangerous venture. You care, but according to your system of doing things. They are maximising their care for others (contribution Scott-Villiers).

Therefore it is important not to think solely in terms of ‘individuals’ or even ‘women plus husband’ seeking help but also the priorities that are taken as a family unit with a cluster of interests.

Vecchione and Hammond highlight in their contributions the importance of notions of strength and stigma. Vecchione mentioned that men will not seek medical health due to the idea that they must be tough, that there is social stigma in seeking health services and this

may affect health-seeking for cholera. Also particular illnesses are stigmatised, not children's diarrhoea or cholera, but tuberculosis, and mental health and reproductive health issues.

The capacity to respond to health emergencies such as cholera is low. As mentioned above, the Health Cluster declares that 65 per cent of Somalia's health facilities are not functioning properly. Vecchione, who works in hospital in Hargeisa, reports that 'government clinics and hospitals in the cholera affected regions do not have the medications or supplies to treat the cases who arrive there. Our director recently visited a clinic with 20 cholera cases and no supplies so we donated from our stock to help them.' This disrupts the trust in the clinics; if people die in a clinic due to lack of supplies, family members will not seek treatment in those facilities in the future (contribution Vecchione). Health staff require training to handle cholera and other infectious diseases. According to Vecchione, staff themselves require more knowledge of the transmission of disease in order to follow protocols more effectively. Further, isolation isn't managed properly, and staff aren't successfully separating measles from cholera cases. Vecchione reports cases of contagion within health facilities due to inadequate isolation and protocol follow-up. The knowledge of these inadequacies of care discourages people from seeking cholera treatment in these facilities.

Section 4. Practical implications/recommendations for humanitarian interventions

a. Advocacy to decrease vulnerability to cholera

A focus on behaviour must acknowledge that people do recognise cholera and know what to do; it is more a question of appropriate infrastructure and services. Longer term interventions need attention to balance the focus on individual behavioural change, which seems to be the trend in humanitarian action. In Andy Catley's words:

I'm seeing a "behaviour change movement" and set of beliefs now among health and water agencies, which at worst, places blame on poor nutrition and health on local people, and diverts attention away from the inconvenient truths, and the failures of those responsible for basic service provision (contribution Catley).

We have flagged these structural constraints around infrastructure and health service provision and we recommend addressing them through the advocacy work of humanitarian organisations. Recommendations about behaviours that drive cholera transmission, care-seeking patterns, and how to promote cholera prevention and response in the ongoing emergency in the Horn of Africa follow the sections on advocacy.

It is important to incorporate the humanitarian sector into the analysis: humanitarianism is inevitably caught up in the politics of the conflict; is a fundamental mainstay of incomes for many Somalis; is crucial for health service delivery and the networks that access it; and humanitarians can also be the source of disease, including cholera (as happened in Haiti).

There is a need to ensure humanitarian access: making sure humanitarian organisations can move, but also allowing the movement of people to seek health care and water. Ensuring adequate funding and the neutrality of aid agencies in the Somali conflicts is paramount (Maxwell and Fitzpatrick, 2012).

Investment in water and sanitation and health facilities and infrastructure

State and development agencies must invest in water and sanitation infrastructure that is resilient to drought and includes a holistic understanding of their use; users should be involved in their design in order to ensure their appropriateness (for example, in terms of ablutions, gendered safety concerns and specific needs and so on). Interventions can range from simple short-term solutions such as steps to protect *berkeds* (the concrete water cisterns relied upon for domestic water) and valley dams from contamination by animals (contribution Livingstone), medium-term investment such as enhancing access to improved water and latrification, to broader long-term public work projects such as water piping.

Social protection and livelihoods

People seek treatment not as isolated individuals but as people enmeshed in social networks.

Advocacy programmes could incorporate the promotion of social protection and social insurance mechanisms that stop the depletion of livelihoods. These programmes will avoid people falling into destitution (e.g. selling their livestock and settling into IDP camps); and settling into camps and crowded urban and peri-urban areas with lack of water and sanitation facilities where they are at risk of cholera infection during droughts.

In the case of pastoralists, development programmes should address inequality and protect livelihoods, for example, ensuring that the benefits of livestock trade are shared by poorer herders.

Privatisation and government settlement programmes have allowed the capture of water sources and undermined access. Humanitarian actors should consider exploring water management systems that allow pastoralists and others to access water points they have lost access to, or which could be under threat.

The paradox of settlement and cholera transmission should be addressed. Infectious diseases are more prevalent in settled communities than nomadic ones, but access to health facilities to treat illness is easier for settled communities. Nomadic livelihoods require protection, and settlements need better health prevention. Otherwise, as is the case for many today, people suffer the epidemic maladies of sedentarisation but have inadequate water, sanitation and health facilities to avoid contagion or treat them.

b. Recommendations for emergency response

Working within local understandings of cholera and enhancing transparency with the public

There should be enhanced transparency and open communication about cholera and about what is being done to stop its spread:

- Communication and messaging should use Somali word for cholera. The governments should use messaging that highlights the gravity of the situation; the use of AWD in Somali *shuban biyood*, does not achieve that. Either *daacuun* or *kaloraa* (Somali words for cholera) should be used instead or the messaging should highlight that it is a life-threatening kind of AWD. It should be acknowledged that key information might not be solely from radio or television, but in also face-to-face exchanges with neighbours and community leaders, particularly clan and religious leaders and elders (Benjamin, 2017; Tiilikainen et al., 2016: 5)
- To ensure transparency and open communication about cholera, ministries of health and humanitarian actors should make more efforts to lift the secrecy from AWD/cholera surveillance to enhance knowledge sharing
- Messaging should highlight the problem of drinking 'sweet' water when the first rains arrive
- Interventions should be relevant to different livelihood groups. For example, maximising impact among pastoralists in cholera vaccination: using mass transit points, linking it to livestock vaccinations and using a regional (rather than national) approach.

Addressing multiple care-seeking options

- Recognise the role of religion and religious beliefs and build on those – for example, working with religious leaders in promoting safe practices for cholera prevention and response
- Engage with pharmacists and traditional and Islamic healers to promote cholera prevention and control, getting messages through them, as well as providing health training for referral to biomedical clinics when necessary
- Communicate the type of services/quality of care that families will receive if they need to go to health facilities. People would be more likely to attend their local clinic if they were informed about the existence of laboratory and equipment facilities as well as qualified staff, to prove it meets people's standards of quality. If these demands are not met, it is less likely that people will attend and they will instead seek treatment in trusted places

Recognise and incorporate religious and spiritual practices when addressing care seeking and giving recommendations around burial practices and ablutions

- Build infrastructure to facilitate safe ablutions – for example, water points for handwashing with soap and treated water for ritual ablutions
- Promote safety procedures within funeral practices while incorporating the religious and spiritual needs of mourners. When preparing the body for burial in a biomedical setting, promote the incorporation of particular practices (use of disinfectant, gloves) within a spiritual framework of cleansing, maintaining and reproducing the ritual element, bringing in a sheikh, and so on.

Build trust and social capacity of care providers

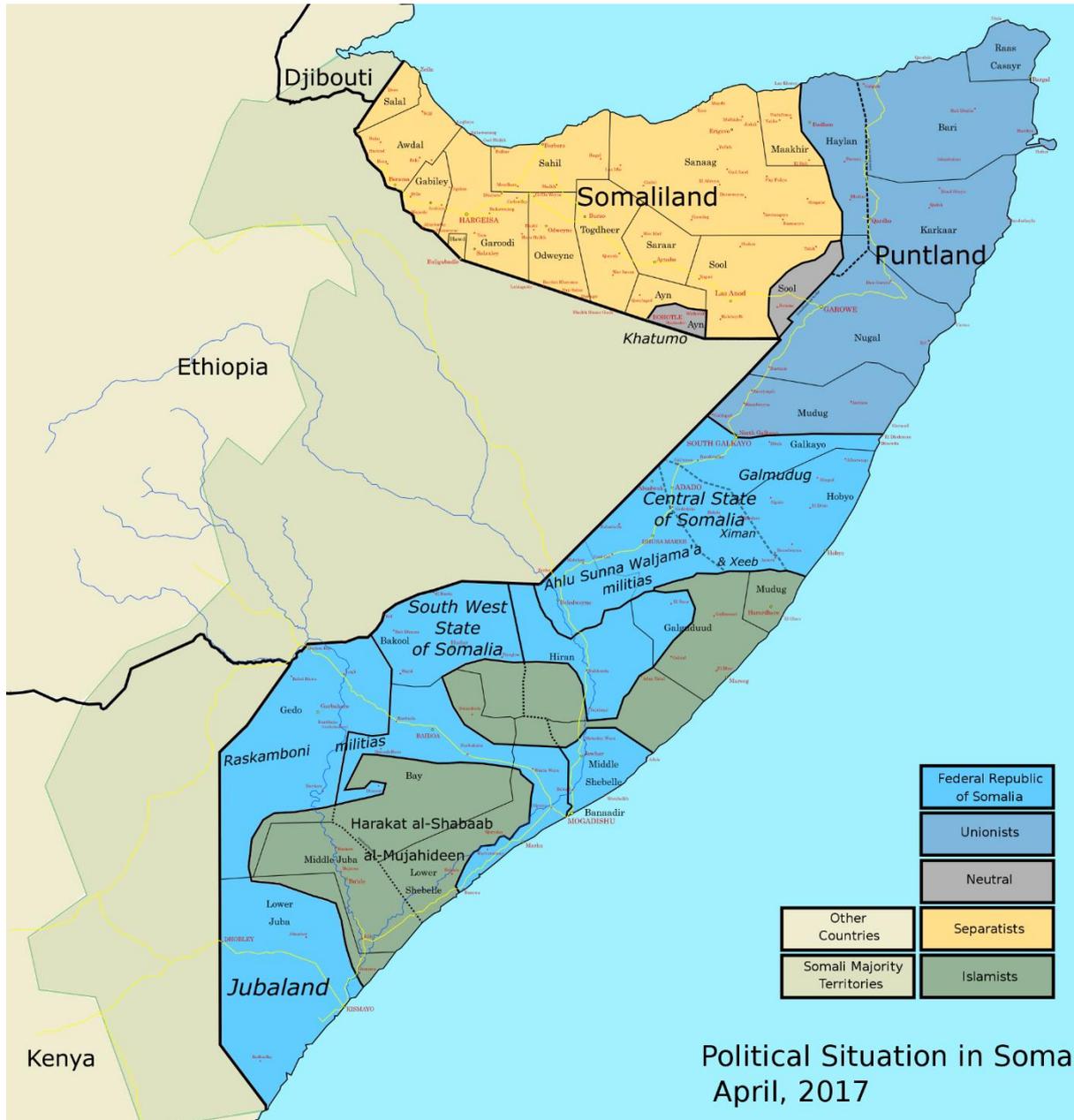
Humanitarian interventions need to incorporate the importance of intra-community dynamics and to build health staff skills in interpersonal communication and sociocultural understanding to ensure people use treatment facilities. Cultural and language sensitivities are needed:

- It is important for clinics in the Somali region of Ethiopia to use either Somali staff, or if they are to be *habasha* (Amharic-speaking Ethiopians), for them to receive training on dealing with Somali clients to shed the misconceptions they may have. Translation services should be offered in the latter case. There should be female Somali staff for Somali women
- Incorporate social relations into health provision, which work best when ‘modelled on the supportive features of clanship, including a sense of duty to care for family and obligations to share resources and skills within flexible kinship groups’ (Carruth, 2015: 69). Patterns of triage and resource distribution can be reconfigured to highlight this duty of care (*ibid*). Seeking and celebrating links of common ancestry (rather than divisions), personal engagement, staff participating in community gatherings, treating and handing out medicines outside the formal remit recalling notions of reciprocity and clan safety nets, e.g. to older people and young women and children, have proved successful in UNICEF mobile clinics (*ibid.*).
- Building trust is key, and it should be built on the acknowledgement that people live in a pluralistic health system: patients trust and rely not only biomedical treatment, but also traditional healers, herbalists, pharmacists, religious healers and so on. The humanitarian response will be more likely to succeed if it acknowledges this and adapts to it, rather than resisting or overlooking it. Understanding which health providers people trust and how people frame their disease experiences will help with appropriate messaging and establishing alliances
- Avoid stereotyping. Messaging explaining the causes and transmission of the epidemic must not reinforce class, ethnic or gender stereotypes, and must steer away from blaming the victims

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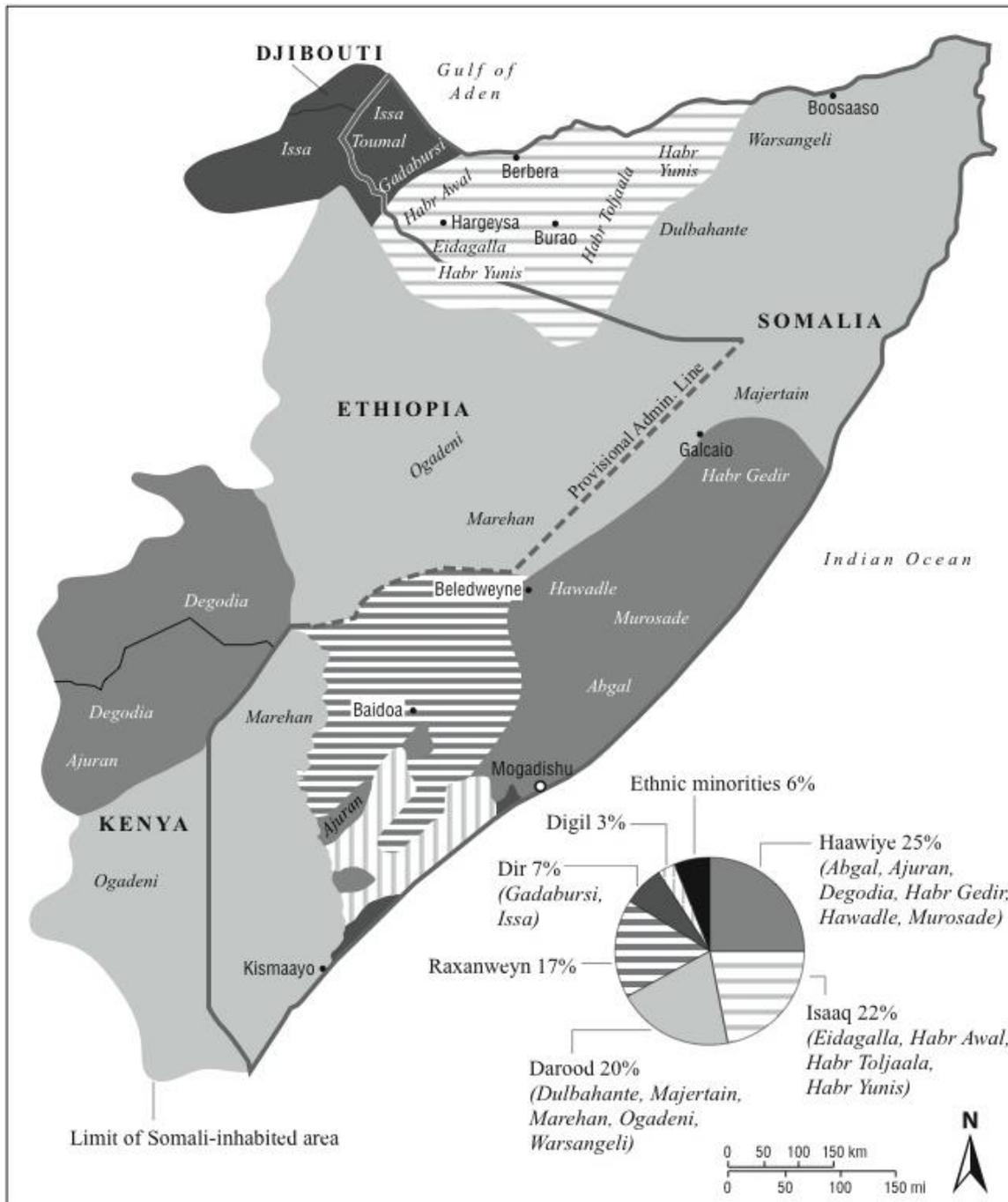
Annex 2. Areas under effective Al-Shabaab control



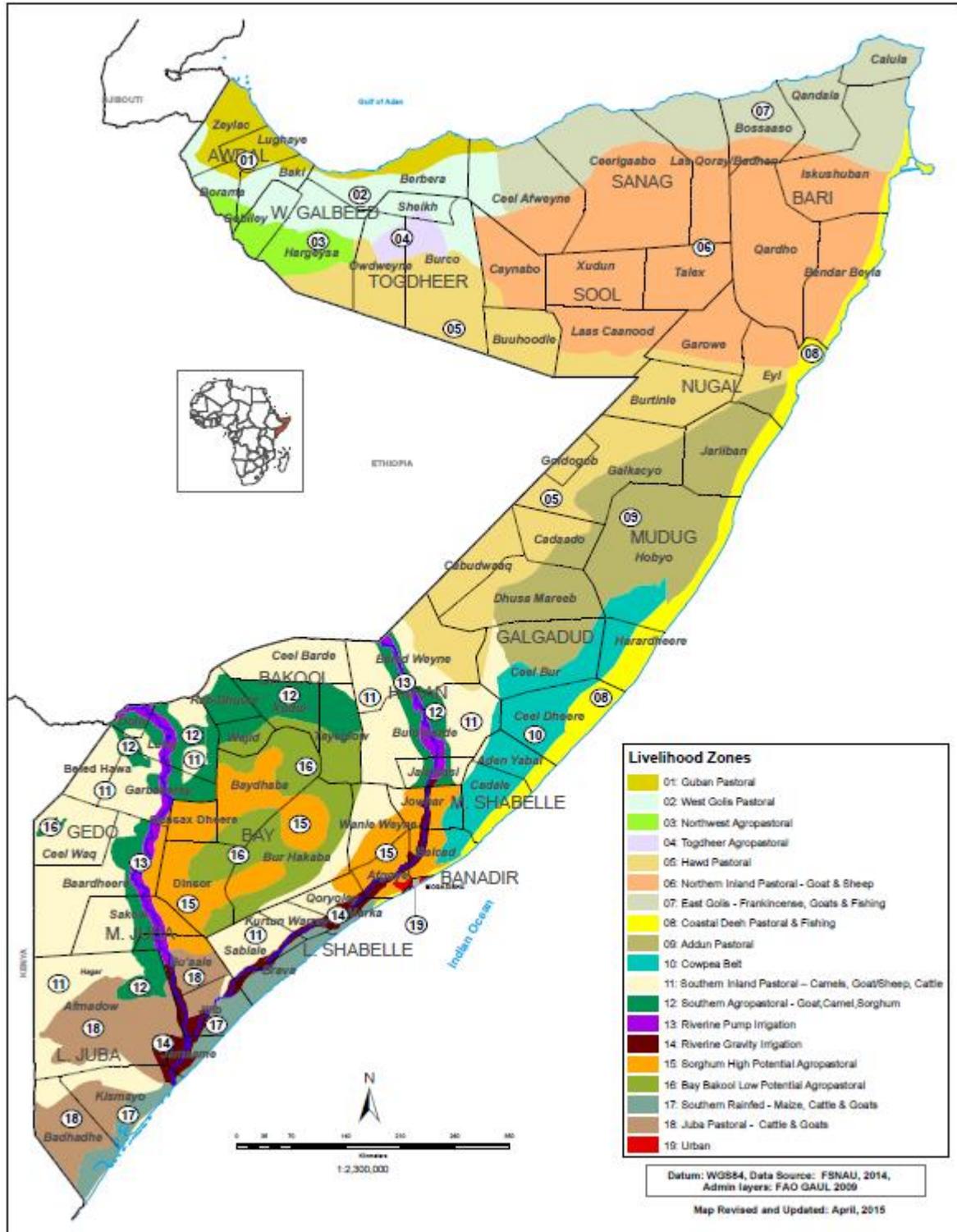
Political Situation in Somalia
April, 2017

Annex 3. Clans and Somali territory

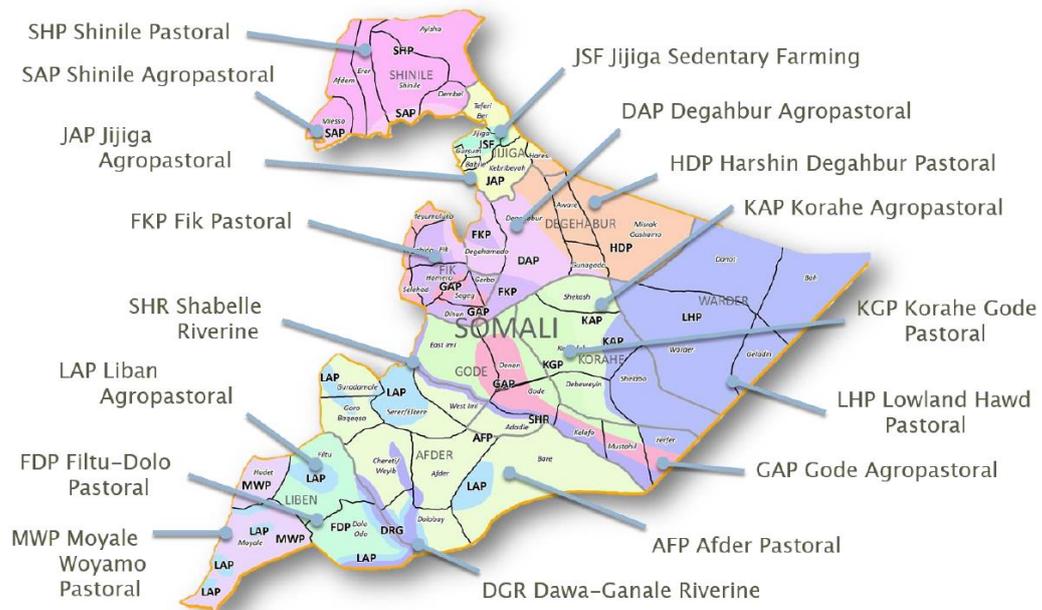
Source: Kaplan, 2008.



Annex 4. Livelihood zones in Somalia and the Somali region of Ethiopia

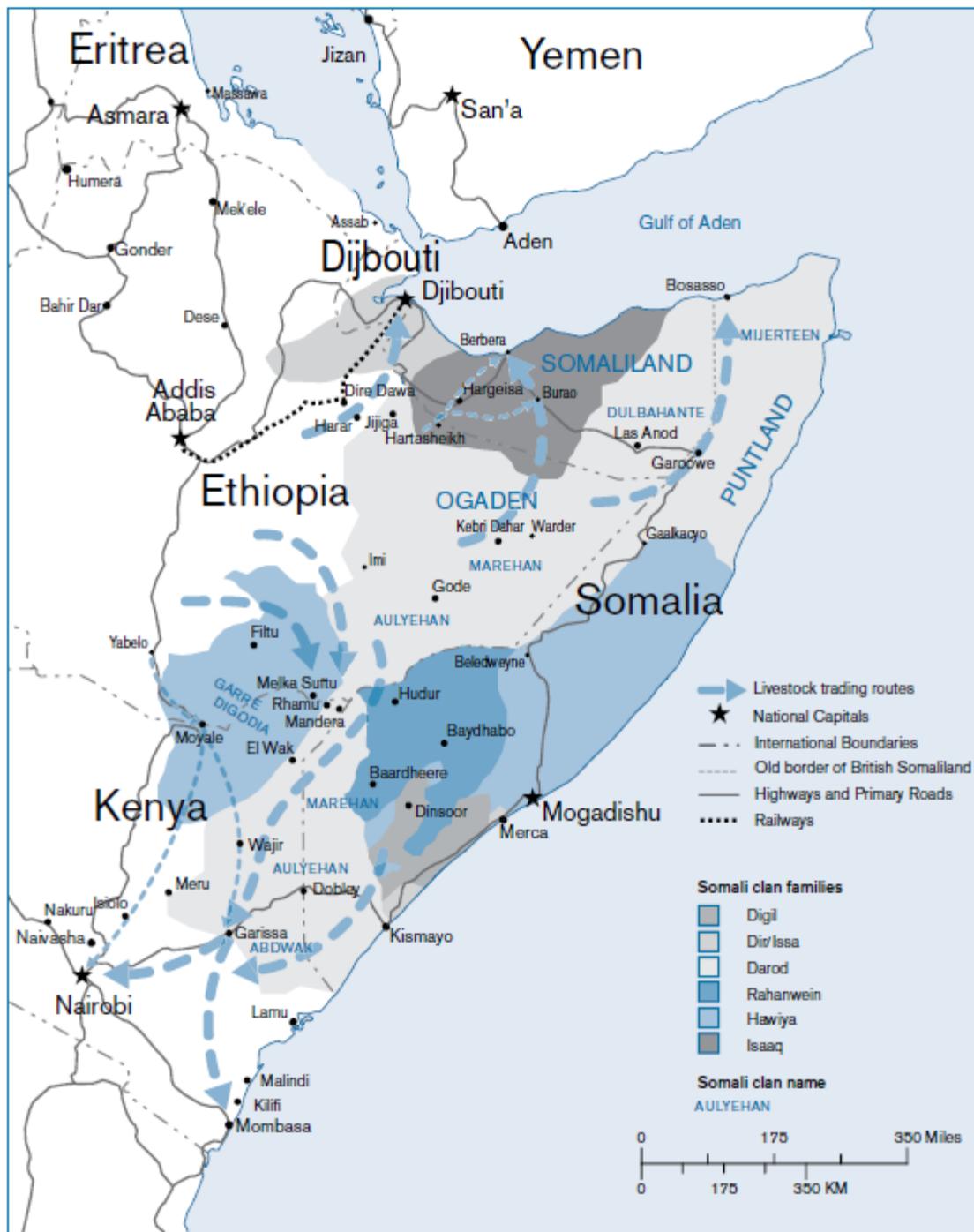


Livelihood zones in Somalia (Source: FSNAU 2015)



Somali region in Ethiopia – livelihood zones (Source: FEG 2015)

Annex 5. Grazing and trading routes in the Somali regions



Source: Based on Food Security Assessment Unit/United Nations Development Programme map of livestock trading routes from the *Atlas of Somalia*, UN 2004, and United Nations Office for Coordination of Humanitarian Affairs/Data and Information Management Unit map of the Horn of Africa, 2007. The boundaries and names shown and designations used on this map do not imply endorsement or acceptance by the author or Chatham House.

Annex 6. Health care seeking by area and health provider

Source: Mazzilli and Davis (2010: 11)

Healthcare seeking for recent child illnesses, 2006-2008 averages (% of caregivers)					
Cross-sections of Somalia	Private	Public	Own medicine	Traditional	Not sought
South Central Zone	25.8	24.7	11.6	8.3	27.3
North West Zone	33.1	14.7	5.5	12.9	18.2
North East Zone	36.1	29.6	6.1	4.4	33.4
Pastoral – all zones	32.0	19.5	9.6	8.5	30.1
Agro-pastoral – all zones	22.4	25.1	12.0	9.0	31.3
Riverine – SCZ	29.1	32.0	10.2	5.4	23.5
IDP - all zones	27.4	41.7	7.7	1.95	24.9

Note: Not all populations are represented in these averages. This table serves only to register trends and comparisons. Figures cannot be used to describe any actual population group.

Annex 7. Modern and traditional treatments for common illnesses in Somalia

Source: Food Security Analysis Unit (2007)

Please note that in practice treatment seeking pathways may not be so clear cut.

Illness	Modern Treatment	Traditional Treatment
Diarrhoea (Normal)	ORS or Ringer's Lactate → Health Facility → Prayer	Lemon Juice (no sugar as it aggravates diarrhoea) Herbal Treatment → Sour milk without fat,
Diarrhoea associated with teething	None exists	Removal of teeth (<i>Iligow</i>)
Cough	Buy cough syrup	Goat soup → Eggs → Traditional healer → Recite Koran → Health facility
Dysentery	Ringer's Lactate	Sheep fat or soup.
Intestinal Parasites	De-worming medicine	<i>Hildid</i> ; Sheep fat/oil/wool
Tonsillitis	Modern drugs	Cutting of uvula
Measles	Vaccination (Not popular)	Smear child with Blood or liver & cover child with goats skin to keep warm → Goat milk drink
Pneumonia	Antibiotics	Burning of points in the chest as first aid
Malaria	Modern Drugs	Camel milk as laxative to clean stomach Neem Herb; Dacaar herb
Malnutrition	Modern drugs to treat illnesses	Give More food, burning of swollen sites (if kwashiorkor with oedema)
Fever	Buy Tablets → Health Facility	Fevers that are not understood are cured by traditional healers
Skin Infection	Buy Medicine → Pray	Read Koran/pray → Buy Medicine

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