KEY CONSIDERATIONS FOR OUTBREAK AND EPIDEMIC RESPONSE AND PREPAREDNESS IN CÔTE D'IVOIRE
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In August 2021, a suspected case of Ebola was identified at a hospital in Abidjan, Côte d'Ivoire. The patient had recently travelled from Labé, Guinea to Abidjan by road and was admitted to a hospital after experiencing a fever.[1] If confirmed, this will be the first case of Ebola in Côte d'Ivoire since 1994[2,3] and is of additional concern due to the ongoing COVID-19 pandemic[4] and high regional and cross-border movement.

This brief draws on the technical paper for the Tackling Deadly Diseases in Africa (TDDA) programme (July 2021), to present key social science considerations for epidemic response and preparedness in Côte d'Ivoire, with relevance to the current situation. This updated summary includes new material from a rapid literature review and consultations with social science and public health experts in-country.

This brief was written for SSHAP by Firmin Kra (Chaire Unesco de Bioéthique/Université Alassane Ouattara and Laboratoire, Population, Environnement-Développement/Institut de Recherche pour le Développement); Megan Schmidt-Sane (Institute of Development Studies); and Tabitha Hrynick (Institute of Development Studies). It was reviewed by Juliet Bedford (Anthrologica). It is the responsibility of SSHAP.

KEY CONSIDERATIONS

- **Recognise community knowledge and action.** Communities are likely to mount their own response and organise in the face of an epidemic. Recognising and building on existing community knowledge and structures is essential and can help to ensure response activities are as appropriate, relevant, and contextualised as possible. Standard operating procedures for safe and dignified burials must be locally tailored and agreed with communities and faith leaders.
- **Engage locally.** Developing direct engagement with communities through trusted local figures – community and religious leaders, storytellers (*griot*), other influencers – is imperative to any response. Engaging vulnerable populations such as urban poor, northern Mande, Gur (or Voltaique), Senufo, and migrants will likely require specific attention given that they are marginalised and have been excluded from the country's recent economic growth and may further mistrust health services due to negative experiences and perceptions of corruption and risk. Efforts to purposively engage mobile population groups, including both forest people and international and domestic migrants, should be considered.

- **Leverage structures, networks and norms already mobilised for COVID-19 response** to support response efforts for Ebola or other outbreaks, particularly around infection prevention control and early detection and referral. Additional capacity and resources may be needed to ensure ongoing efforts against COVID-19 and other key health priorities are not jeopardised. Local structures, such as the *Comité de Gestion* (COGES - Health Facility Management Committees), may be especially important, and should increase community participation.
- **Engage health service providers of all types**, including private allopathic providers, community health workers, and informal and traditional providers. With training and support, different cadres can support across all pillars of a response including surveillance and contact tracing, referral, and communication. Working through the National Programme for the Promotion of Traditional Medicine (PNPMT) may be a constructive way to engage traditional practitioners, in readiness as well as response activities.
- **Ensure meaningful engagement and dialogue.** Facilitating the two-way flow of information is imperative and community-feedback mechanisms should be supported. In addition to providing key information regarding transmission, prevention and protection, key signs and symptoms and emphasising the importance of early treatment, effective dialogue can help reduce and mitigate the risk of stigma. Communicate through existing structures and proven modalities of sharing information (e.g., community-based discussion forums), including those initially focusing on strengthening peace and reconciliation.

COUNTRY CONTEXT

GEOGRAPHY AND INFRASTRUCTURE

Côte d'Ivoire is a crossroad of economic and cultural exchange due to its history and geographical location. Located in the sub-equatorial zone of West Africa, Côte d'Ivoire covers an area of 322,462 km². It is bordered to the north by Burkina Faso and Mali, to the west by Liberia and Guinea, to the east by Ghana and to the south by the Gulf of Guinea. The country has different climatic zones, including a humid equatorial climate in the south and a dry tropical climate in the north.[5] In the north, the rainy season is from June to October and the dry season is from November to May. The south experiences four seasons: heavy rains (May-June), shorter rains (Aug-Sept), short dry season (Oct-Nov) and a longer dry season (Dec-Apr).[6–8] Abidjan lies on the country's southern Atlantic ocean coast and is the country's largest city, followed by the inland city of Bouaké, and San-Pedro on the southwestern coast. Côte d'Ivoire has an extensive transportation system, including roads, railways, waterways, and airports (Abidjan, Yamoussoukro, and Bouaké). However, the 2002-2011 military-political crisis (discussed further below) hindered the maintenance and expansion of roads. Currently, there is one major highway between Abidjan and Yamoussoukro. Roughly half (12.5 million) of the population uses the internet and the country has more mobile connections (37.5 million) than population.[9] The country is connected to the SAT3 submarine cable, which offers relatively good Internet connectivity. But the cost of communication has remained four times higher than the average cost in other low- and middle-income countries (LMICs). Thus, during the Covid-

19 pandemic, virtually all households were informed about the pandemic and the government's response through television and radio.[10] A KAP survey conducted by Yapi and colleagues (2021) indicated that traditional media were seen as reliable channels of information to support alternative sources including relatives and friends, community leaders and Facebook.[11]

POPULATION

In 2020, the UN estimated the Ivorian population to number approximately 26.38 million.[12] With French as its official language, Côte d'Ivoire has 60 ethnic groups divided into four main groups: Akan, Mandé, Krou, Voltaic. Christianity, Islam and traditional religions are all present.[13] The latest census (2014) shows that the population is young: 42% are under 15 years and 78% are under 35 years. Average life expectancy is 56 years.[14] Rapid urbanisation continues, with over 50% of the population residing in urban centres.[15] Yet, literacy levels remain relatively low, at around 45% of the population, but vary depending on the area of residence and level of income.[16] There is also a high level of immigration (more than 20% of the population are immigrants, mostly from other West African countries) and for many migrants, social integration is challenging: they are less likely to benefit from social protection and to attend school.

VULNERABLE GROUPS

Some population groups, particularly mobile groups, are likely to be more vulnerable during health emergencies, and may require specialised attention. Pastoralists, concentrated in the north, are more vulnerable to zoonotic disease, and move around on a seasonal basis, including across national borders. This makes it necessary to coordinate outreach and response efforts between countries. Forest populations in the south-central and southeast (e.g. Kweni ethnic group) are also highly mobile, and due to the Guinean forest environments in which they primarily live, are also vulnerable to zoonotic, water- and vector-borne disease. Their trust in the state has been severely damaged through forced evictions by forest conservation authorities, making it unlikely they will readily comply with public health interventions without meaningful engagement and trust-building. Internally displaced people and refugees leaving/returning to Côte d'Ivoire are also highly mobile populations. They face unstable housing conditions and struggle to secure their basic needs, making it imperative that emergency public health responses attend to their multiple needs. Another key vulnerable group are the urban poor who live in very dense housing with inadequate access to sufficient water, sanitation and hygiene (WASH) services. Emergency public health responses should be sensitive to their livelihood and economic needs.

ECONOMY AND LIVELIHOODS

Côte d'Ivoire has seen robust economic growth since 2012 and is Francophone West Africa's economic hub. Agriculture remains the mainstay of the Ivorian economy and is the source of income for two-thirds of households. Côte d'Ivoire produces gas and oil, and most of the mining activity is located in the central and northern part of the country.[17] Between 2012-2014, at the end of the

military-political crisis, real GDP per capita increased by more than 20%, and from 2015 to 2020, the poverty rate dropped from 46.3% in 2015 to 39.4%, mainly in urban areas.[10] Despite these gains, inequities in the standard of living remain and the rate of poverty in rural areas actually rose by 2.4% over the same time period.[10]

POLITICAL SITUATION

Côte d'Ivoire experienced a military-political crisis for nearly a decade (2002– 2011) which broadly impacted state capacity and public trust in the state. Military responses to uprisings by specific ethnic groups (e.g., the Krou) during this crisis contributed to heightened distrust of the state amongst the most vulnerable. Although the political situation remains fragile, there have been recent positive signs: legislative elections held in March 2021 were deemed to be broadly inclusive. The elections included participation from two main political parties, both of which had boycotted presidential elections in October 2020.[10] However, political violence reoccurred after the re-election of Alassane Ouattara in 2020.[18] Political differences often fall along ethnic and regional lines, and there has been a resurgence of intercommunal violence related to political tensions since 2019.[19]

CROSS-BORDER MOVEMENT

In many places, the borders are porous and border communities have close social and cultural ties that span national boundaries. Border areas are some of the country's most complex contexts. The military-political crisis led to the introduction of motorcycle cabs, which were initially used in rebel-occupied areas. Since then, this type of transport has continued to be used as a means of bypassing normal routes to avoid border military, police, and customs checkpoints. When the first suspected case of Ebola was reported, the Ivorian government announced an intense cross-border collaboration with Guinea, but during a visit to Ouaninou on 19 August 2021, the Minister of the Interior informed the population that the borders were closed due to the evolving situation. Border closures are economically and socially challenging but can be circumvented by local populations.

HEALTH SYSTEM

Public Health System

The health system brings together the public, private and community sectors, organised under 20 health regions (HR) and 83 health districts (HD).[20] It is based on a three-tiered health service delivery system (Figure 1).[21]

The first tier, *Établissements Publics Sanitaires de Premiers Contacts* (EPSC) includes *Centre de Santé Rurale* (CSR - Rural Health Centres), *Centre de Santé Urbaine* (CSU - Urban Health Centres) and other primary care units delivering basic curative, preventive, educational and promotional services.[21] Typically, these centres are a users' first point of contact with the public health system. Rural health centres include one maternity and one dispensary wing, usually staffed by nurses and midwives. They offer basic maternal and child health (MCH) services and outpatient treatment for a limited number of common infectious diseases (e.g., malaria).[22] Urban health centres are larger,

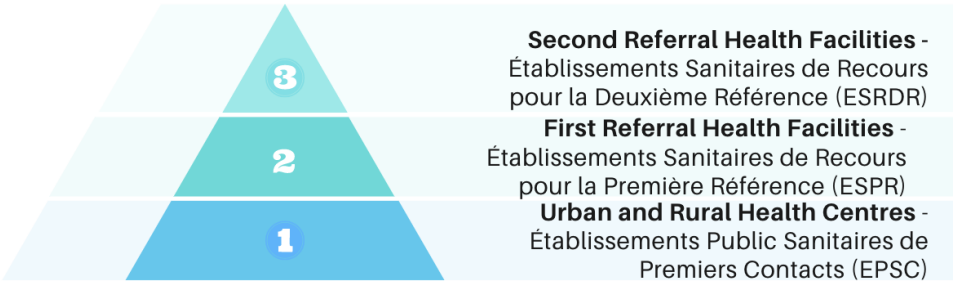
with 5+ nurses and midwives and at least one physician at each. They offer MCH and outpatient services as well as laboratory tests and diagnoses, basic surgery, and noncommunicable disease interventions.[22]

The second tier, *Établissements Sanitaires de Recours pour la Premiére Référence* (ESPR) includes facilities of first referral, with technical capacity to diagnose and treat cases beyond the competency of the primary level. Included are *Hôpital Général* (HG - General Hospitals), *Centre Hospitalier Régional* (CHR - Regional Hospitals) and *Centre Hospitalier Spécialisé* (CHS - Specialist Hospitals).

The tertiary level, *Établissements Sanitaires de Recours pour la Deuxiéme Référence* (ESRDR), includes a mix of more advanced hospitals, emergency care services, research and training institutes and laboratories.[14,23]

Decentralised structures such as *Union des Villes et Communes de Côte d'Ivoire* (UVICO-CI – Union of Cities and Municipalities – Côte d'Ivoire) and *Assemble des Départements et Districts de Côte d'Ivoire* (ADD-CI – Assembly of Departments and Districts of Côte d'Ivoire) also play important functions, as do the national health sector associations including *Association de Soutien à l'Autopromotion Sanitaire Urbaine* (ASAPSU – Urban Health Promotion Support Association), and *comité de gestion* (COGES - Health Facility Management Committees) which can facilitate effective community participation. All should be engaged during an outbreak response. [8]

Figure *1.* Public Health System in Côte d'Ivoire



The military-political crisis contributed to the deterioration of the health system across Côte d'Ivoire. Health facilities were looted or destroyed and there was a marked reduction in the number of health workers across both the public and private sectors, although the ratio between health service providers and the population has improved in recent years (see Table 1).[24,25,26] Still, there remain major inequalities in health system access, particularly between urban and rural areas. Of the total population, 32% live further than five kilometres from the nearest health centre and drug and supply chains are often characterised by stock-outs.

Table *1.* Medical staff per population in Côte d'Ivoire

Indicator	*Statistic*
Doctors	1 doctor per 7,390 population (2019)[31] 3,886 total doctors (2019)[31]
Nurses	1 per 3,069 population (2011)[26] 1 per 1,193 population (2016)[31]

	11,259 total nurses (2019)[31]
Midwives	1 per 2,270 population (2011)[26] 1 per 995 population (2016)[31] 5,601 midwives (2019)[31]

The quality of public health care is very low. According to IHME's Healthcare Access and Quality (HAQ) index (2015), the country ranked 187 out of 195 countries in terms of the prevalence of preventable mortality.[22] Other research has highlighted shortcomings in the care received by pregnant women.[27] It has been reported that corrupt practices among health workers and administrators (absenteeism, theft of medical supplies, informal payments, fraud, opaque procurement procedures and misappropriation of funds) are common, and may negatively influence people's trust and willingness to attend facilities.[28]

Private health system

Private health facilities are mainly located in larger cities.[14] There is an association of private clinics, *Association des Cliniques Privées de Côte d'Ivoire* (ACPCI), but in 2017, the Ministry of Health reported that around 800 private health facilities had been found to be operating without a licence.[14] In addition, the Ministry of Health recorded a decline in performance and professional behaviour that has become problematic with absenteeism, deviations from professional ethics, racketeering practices, etc.[14] Despite regulatory provisions that set out the necessary conditions for the authorisation and registration of health professionals in the private sector, there is insufficient regulation and little collaboration with the public sector.[29]

Pharmacies

The pharmaceutical sector occupies an important place in the health system, providing 80-90% of the drug supply.[15] The World Health Organization (WHO) notes that generic medicines are more available in the private sector compared to the public sector.[15] This partly explains the high cost of care among poor people in particular, as studies have shown that the prescription of generic medicines help to reduce the cost of care.[30]

Traditional medicine

Traditional medicine also plays an important role.[29] In Côte d'Ivoire, the practice and organisation of traditional medicine and pharmacopoeia are regulated by law.[31] According to the Ministry of Health, there are more than 8,500 Traditional Medicine Practitioners (TMPs) identified through the National Programme for the Promotion of Traditional Medicine (PNPMT). People often seek 'conventional' biomedicine (through the public sector and/or private sector) and traditional medicine consecutively or in parallel for any given condition. Whilst engagement with different parts of the formal and informal health sector are fluid and not uniform, traditional healers provide frontline care to much of the population, and they should be fully engaged by response partners. In addition, local traditional-religious societies play an important role in communities (e.g., amongst the Senufo) maintaining a positive relationship with their ancestors. Female-only *Sandogo* and male-only *Poro* societies can also be highly influential, particularly in the north of the country.

EBOLA PREPAREDNESS STRENGTHENING

The 2014-16 West African Ebola epidemic placed the region on high alert and in recent years Côte d'Ivoire has made great strides in improving national epidemic preparedness and response, particularly as one of six West African countries scaling up Ebola response in partnership with the World Health Organization. Increased Ebola readiness includes surveillance and screening at border crossing points and in high-risk communities, deployment of rapid response teams as needed, and scaling up testing and treatment facilities.

During the peak of the 2014-16 Ebola epidemic, the Côte d'Ivoire National Institute of Public Health (INSP) mobilised a One Health cross-sectoral collaboration in the country's western regions that bordered Ebola-affected countries and that can be leveraged during an outbreak.[32] This included the establishment of committees to address the epidemic at the local level and enabled the delivery of response services directly to communities. Technical advisors were also placed at regional health offices to support integrated supervision visits, data validation workshops, coordination and communication.[32]

In tandem, the USAID-funded Leadership, Management, and Governance (LMG) project which began in 2011 was expanded in 2015 and trained intersectoral stakeholders from a One Health approach, including regional and district health offices, hospitals, health centres, and the water, sanitation, agriculture, animal and fishery sectors.[33] This contributed to decentralised decision-making and management, shifting power toward regions and districts and bringing important health decisions closer to the community level. The Ministry of Health now has ownership of the programme and is scaling it up.

FURTHER RESOURCES

Key Considerations for Epidemic Response and Preparedness in Côte d'Ivoire: https://www.socialscienceinaction.org/resources/key-considerations-for-epidemic-response-and-preparedness-in-cote-divoire/

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CONTACT

If you have a direct request concerning the response to COVID-19, regarding a brief, tools, additional technical expertise or remote analysis, or should you like to be considered for the network of advisers, please contact the Social Science in Humanitarian Action Platform by emailing Annie Lowden (a.lowden@ids.ac.uk) or (oliviatulloch@anthrologica.com).

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