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# Anthropology in public health emergencies: *what is anthropology good for?*

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## ABSTRACT

Recent outbreaks of Ebola virus disease (2013–2016) and Zika virus (2015–2016) bring renewed recognition of the need to understand social pathways of disease transmission and barriers to care. Social scientists, anthropologists in particular, have been recognised as important players in disease outbreak response because of their ability to assess social, economic and political factors in local contexts. However, in emergency public health response, as with any interdisciplinary setting, different professions may disagree over methods, ethics and the nature of evidence itself. A disease outbreak is no place to begin to negotiate disciplinary differences. Given increasing demand for anthropologists to work alongside epidemiologists, clinicians and public health professionals in health crises, this paper gives a basic introduction to anthropological methods and seeks to bridge the gap in disciplinary expectations within emergencies. It asks: 'What can anthropologists do in a public health crisis and how do they do it?' It argues for an interdisciplinary conception of emergency and the recognition that social, psychological and institutional factors influence all aspects of care.

### Key questions

**What is already known about this topic?**

- Anthropologists are potentially important players in emergency public health response, providing insight on the social dynamics of health, illness and disease transmission.
- Anthropological methods are quite distinct from and may be in tension with, other public health techniques.

**What are the new findings?**

- The recent large-scale outbreak of Ebola virus (2013–2016) saw anthropologists working in different capacities of the response. These interactions led to new insight on how anthropologists can function within public health emergencies.
- This paper outlines the methods and disciplinary abilities of anthropology and suggests how it may best be employed in the context of emergency public health response.

**Recommendations for policy**

- Public health responders must understand the nature and value of anthropological evidence and the roles anthropologists can and cannot play in emergency settings.

## INTRODUCTION

Social scientists, anthropologists in particular, have for some time been recognised as potentially important players in emergency public health efforts, particularly in outbreak response.[1 2] In 1996, Paul Farmer called for a 'critical anthropology of emerging infections',[3]—a new field that could identify the social, economic and political factors underpinning health emergencies and thus positively shape the course of health interventions. In the years that followed, Farmer's call was met by a contingent of researchers eager to use anthropological skills to support outbreak response.[2 4–8]

Recent large-scale outbreaks of Ebola virus disease (EVD) (2013–2016; Guinea, Liberia and Sierra Leone), Zika virus (2015–2016; North, Central and South America, Pacific Islands, Southeast Asia) and cholera (2017; Yemen) have brought renewed urgency to Farmer's call, highlighting the need to understand the social pathways of disease transmission and barriers to care. In the last 5 years, anthropologists have been particularly valued for their ability to assess these factors in local contexts. While anthropologists have been involved in disease outbreaks for many years, their role in emergencies seems likely to increase, given growing calls for greater integration of sociocultural approaches to health crises.[2 9–11]

Successful responses to public health emergencies often require collaboration between specialists such as clinicians, epidemiologists and social scientists. Yet different professions approach the same subject with different

disciplinary expectations, ethical codes, methodologies and vocabulary. Anthropological methods are quite distinct from, and may be in tension with, other public health approaches (see Bourgois[12] for an exploration of some policy consequences). Technical words do not hold the same meaning across disciplines and jargon may be confusing to outsiders. Divergence between approaches can be problematic, as distinctive values and assumptions may prompt disagreements over research and programmatic methods.[6]

A public health crisis is no place to begin to negotiate disciplinary differences.[6 13] As such, the emergency response community must be proactive in formulating a multidisciplinary approach to public health emergencies. This article is a primer on anthropological methods and how they can be applied in emergency. The paper summarises the methods and disciplinary strengths of anthropology. It outlines how anthropologists can be incorporated into public health emergency response and how, when properly integrated, they can significantly improve health outcomes and social conditions for populations in crisis.

## ANTHROPOLOGY EXPLAINED

### What is anthropology?

'Anthropology is the study of what makes us human.'[14] Anthropology studies differences in humans (and other primates) through space and time. All humans share the same fundamentals of genetics, physiology and neurology. Similarly, they share the same basic needs for food, shelter, security, reproduction and social expression. However, the environments, mechanisms and interactions that humans use to meet their needs vary widely and manifest in surprisingly diverse social, ecological and epigenetic differences among and between individuals and populations. Anthropology starts from these shared fundamentals to examine diversity and variation. Anthropology encompasses many different subfields, from primatology to museum anthropology. What they have in common is the emphasis on understanding human social and biological variation through a holistic, that is to say multifactorial, perspective: accounting for the influences of history and people's natural, social and built environments.[14] Because of this holistic approach, anthropologists' subject matter (if not their methods) may overlap with history, economics, sociology, psychology and, increasingly, the health professions. Given the central importance of social practices in public health emergency (eg, health and hygiene behaviours), emergency responders will most frequently encounter *sociocultural anthropologists*, who study human social variation: differences in human behaviours, customs, values and outlooks. A subset of this group are *applied anthropologists*, who apply anthropological methods and knowledge to practical problem-solving in institutional or public settings.[15] They may be university based, work as professional consultants or be full-time members of emergency response teams.

### Anthropological methods

Most anthropologists share the same basic convictions regarding methods and the nature of evidence. Anthropology is fundamentally holistic and empirical; it is based on observed reality and insists human behaviour cannot be considered in isolation from institutional relations, biology or the environment.[14] Individuals, communities, institutions and environmental circumstances are coinfluential; thus, social phenomena can only be understood as a relation between individual attitudes and behaviour, mediated through institutional and material culture. This holistic understanding is best achieved through field studies. Anthropologists excel at field-based research; the discipline is predicated on it.[16]

*Participant observation* is sociocultural anthropology's principal field research method. As the term implies, the anthropologist plays two roles simultaneously, as both a member and observer of a subject group. This position is similar to that of a documentary journalist; both are embedded within a community, both strive to give an impartial, professional and faithful account of events. Participant observation entails the researcher's 'close acquaintance' and integration with everyday community activities over an extended period—days, weeks, months or even years.[16] The researcher's role is transparently acknowledged and their presence contingent on community acceptance. Over the course of participant observation, the anthropologist will generally conduct formal and informal interviews and may also undertake surveys, questionnaires or other activities depending on the questions being explored. Observation and description are central activities; the anthropologist will make highly detailed notes and normally keep a log of activities. Immersive observation permits understanding of daily and seasonal rhythms of life. It also permits the anthropologist to cultivate long-term engagements with study subjects. This allows interviews to be more in-depth, and enables the researcher to address follow-up questions and cross-reference information. In this way, anthropological practice is an iterative process; as research findings are assessed and analysed in the field, research questions can be refined and subjects approached anew. This process gives insight into beliefs and practices that cannot be obtained through short interview or survey methods.[16 17]

The material product of anthropological fieldwork is called an *ethnography*. Characterised by long passages of narrative description, ethnographies present evidence in a manner similar to documentary reporting. As such, anthropological writing follows an empirical logic: evidence is presented (often through narrative), arguments are made from the evidence and assertions must be supported by reference to ethnographic evidence or other research.[18] Well-reasoned, rational conclusions drawn from disciplined observation and comparison contribute to the evidence base that informs clinical and

public health interventions.[19 20] Some examples of how this can be achieved in public health emergencies are explored in section *What is anthropology good for?*

Obviously, a long-term participant observation approach may not be feasible in periods of acute public health crisis, but the anthropological method is flexible and adaptable. Anthropology's pen and notebook approach means the study focus can expand or contract as access, security or other external factors permit. Meanwhile, by maintaining contacts with individual key informants, the anthropologist can stay in touch with and study populations on the move. For an example of how this adaptive participant observation approach can be integrated into an emergency setting, see the protocol by Stellmach.[21]

In other circumstances requiring fast action, anthropologists may deploy existing assessment tools, such as Rapid Assessment Procedures, and Knowledge, Attitude and Practices surveys.[22 23] These tools are well used within the emergency community and their strengths and weaknesses are generally acknowledged. They are valuable for their ability to quickly produce baseline data but are not meant to replace primary research. They cannot account for the interlinked influence of biological, social and environmental factors in the way that in-depth anthropological approaches can.[22] Rapid assessment tools are frequently refined using insight gained from past interventions and anthropological perspectives contribute to these efforts. Médecins Sans Frontières (MSF), for example, have developed rapid assessment tools using qualitative methods to assess household, community and structural aspects in order to ensure a more comprehensive approach to understanding potential vulnerabilities for people in crisis.[24]

### Ethics

Like all disciplines dealing with human subjects, the practice of anthropology is governed by a complex set of human research ethics. These concern issues such as safety, access, consent, intellectual property, confidentiality and anticipation of harm and benefit. Community trust and acceptance are key to an anthropologist's work, thus ethical guidelines place central emphasis on transparency, negotiated access and voluntary informed consent. In addition to gaining clearance from review boards, informed consent in the field is an ongoing process, daily reaffirmed in the researcher's actions and interactions.[25 26] While anthropologists will normally follow formal consenting procedures, the intimate nature of the research, where the researcher comes to be a feature of people's daily lives, means consent cannot be effectively granted by a one-time signature on a form. Rather, whether implicit or explicit, consent comes in the form of ongoing engagement, cooperation and collaboration from the community. Consent takes the form of a social relationship, rather than the bureaucratic one implied by formal procedure. Given this deep engagement, anthropologists will usually go to lengths to honour the trust of their research subjects and protect them from potential harm, disruption or interference. Research subjects are generally assured of confidentiality, although some research subjects prefer to go 'on record' and request attribution; research findings may also be coattributed, with authorship shared between the researcher and the community.[25 27 28]

Because they spend so long with their subject community and owe a primary research debt to that community, anthropologists may find themselves in a difficult ethical position when the vision of the research sponsor differs substantially from that of the community.[29] Such disagreements are bound to occur in public health crises, where dramatic action, such as quarantine and isolation, may be necessary but negatively perceived by the community. Thus, anthropologists may have to mediate or otherwise navigate between the separate interests of the community and the intervention. Faced with a conflict of interest, most anthropologists would assert their paramount moral obligation is to ensure the welfare of their research participants,[29] although how that welfare is best realised may be open to question.

## WHAT IS ANTHROPOLOGY GOOD FOR?

The previous sections outline some distinctive features of anthropology and give some intimation of why anthropological perspectives might be useful in public health crises. This section explores how to realise that potential in practice—how anthropologists can be incorporated into a public health emergency response and where they can fill specific roles.

Broadly speaking, anthropologists fit into three different intervention categories, depending on the needs at the time and the character and specialisation of the individual anthropologist: (1) programme design and formative research; (2) interpretation, investigation and response; (3) event analysis and post hoc assessment.

### Programme design and formative research

To paraphrase Jaffré, where epidemiology can describe *priorities*, anthropology can define *possibilities* for action on population health.[18] That is to say, anthropology can provide insight on why public health interventions succeed or fail: the gap between what is planned and what is realised on the ground and the unintended consequences that may result. People do not suffer from pathologies alone, but from a combination of pathology and the social and economic structures that predicate, enable or emerge from pathology. These can include, for example, social and economic conditions that place certain groups at greater risk and the deleterious impact of illness on family education and livelihoods.[30] Ethnography can reveal these structures in a manner that is practical and actionable.[18] So, for example, Jaffré investigated qualitative variables underlying maternal mortality in West Africa, Farmer[31] explored structural determinants of HIV infection in Haiti and Stevenson[32] examined

frustrated public health approaches to suicide prevention in the Canadian arctic. Each of these anthropological studies of health crises reveals the difference between what authorities planned and what was achieved; more to the point, they demonstrate how well-intentioned but uninformed professional intervention can have unintended consequences that result in avoidable morbidity or mortality.

These insights are vital at the programme design phase and have a specific contribution to make in regard to formative research. Formative research is targeted research directed at achieving specific outcomes to inform planning and design of health programmes. Generally making use of mixed qualitative and quantitative methods, it aims to shape programme strategies and communications.[33] Working together in research teams to ensure concept, design and analysis takes into account the value of both forms of evidence is essential. MSF, for example, have demonstrated this during the EVD outbreak in a practical way when combining the results of various studies to define health zones, review quality of surveillance and communicate better to follow-up families in the communities.[34]

In the absence of vital public health infrastructure, such as functioning civil or public health registries, anthropologists have collaborated with epidemiologists and others in the tracking of morbidity and mortality.[35] One innovative example of such a collaboration used qualitative and quantitative methods to triangulate informal and official reports to produce a historical study of violent mortality for Darfur, Sudan—an 'epidemiology of violence'—that tracked temporal and geographical trends in lethal force throughout the region.[36 37] Multidisciplinary teams in the field can access multiple information streams, both qualitative and quantitative. Ideally, the end result incorporates indigenous knowledge into effective local emergency strategy.

Thus, anthropologists can assist with accelerated planning and design of a public health response. Their expertise lends itself to designing strategies that are cognisant of the local context, socially relevant and therefore likely to be adopted by affected communities in a timely manner. Anthropological insight can contribute to risk assessment activities, community engagement, communications and health messaging, as well as understanding local perceptions and acceptance of the response.[4 6] The latter is important to ensure that a response is agile, responds to community needs and perceptions and supports accountability towards affected communities. It should be noted that, while these investigations are critical at the programme design phase, they need not end there, but can happen in an iterative manner, allowing programmes to be adapted and refocused midstream.

The incorporation of anthropology in the planning and design phase plays to the pre-eminent strengths that anthropologists bring to emergency response: a high-resolution focus on the local and an appreciation for a bottom-up approach to analytical evaluation.[16]

### Interpretation, investigation and response

'Interpretation' is perhaps the role that first comes to mind for anthropology in emergencies: making sense of local norms in the context of international emergency response. However, many anthropologists would see this characterisation as problematic. This is because 'culture', invoked in the context of public health intervention, often carries negative connotations (culture as an obstacle, rarely an enabler). To frame anthropologists as 'cultural interpreters', 'translators' or 'brokers' characterises them as scouts employed to lead teams around the obstacle of culture.[38]

This is problematic for a number of reasons. Public health intervention generally plays out along the lines of existing power relationships. Many public health emergencies unfold among people who suffer acute disparities in wealth, power and social status—both internally (in relation to members of their own society) and in relation to the broader world.[39 40] These disparities are normally the product of historical, asymmetrical—even exploitative—social, economic and governmental relationships.[41] Such conditions are simultaneously precursors to and enablers of present-day crises.[31] Against this background, seemingly irrational behaviours often attributed to culture, superstition and ignorance can perhaps better be understood as an animated response to historical and contemporary inequalities.

Acute power differentials, historical and social complexity make cultural interpretation an inadequate concept. The notion is ultimately flawed because the process—coming to understand how others think and value—is not one of transliteration. The benefits of medicine are not always obvious and universally accepted,[6] nor do indigenous ideas always have equivalent concepts in English.

In the early months of EVD in West Africa, responders devalued community understandings of the disease and customary funerary rites. Response strategies centred on what was scientifically proven about viral transmission and control.[42 43] The 'politics of knowledge' surrounding EVD recognised a hierarchy of expertise: medical knowledge was promoted without attempts to understand local perspectives and histories. In other words, action based on accurate medical knowledge was considered to be all that was needed to combat EVD; meaning quarantine and rapid, contagion-free burial. The forceful implementation of these practices, and the stigmatisation of community practices, had substantial consequences. People were unable to care for dying relatives. Individuals fearing quarantine fled to their home villages. Communities, already mistrustful of government intervention, hid patients and burials. As a result, the epidemic, already unprecedented in scale, was further exacerbated. It was effectively combatted when community perspectives were integrated into safe care and burial practices.[42–44]

Anthropologists played a pivotal role in this process. Many could act as networkers to bring health officials into contact with key individuals at the community or

national level.[35 45] But more importantly, anthropologists drew attention to the role of history, the pervasiveness of narratives and the use of mismatched assumptions that influenced both local people and the responders. Community engagement that accounted for complex social and political realities on the ground was key.[43] (For an overview of anthropological approaches to EVD, see Moran and Hoffman.[46] For specific case examples, see Abramowitz and Bedford,[47] recent special editions of *Anthropology in Action*[48] and *Anthropological Quarterly*.[44])

Since riots, rumours, refusal of services, non-compliance and other 'irrational' reactions often have their roots in relationships predicated on racialism, marginalisation or exploitation[4 31 46 49] anthropology in emergency can help field response teams to more readily ingest knowledge about communities' understanding of disease, their priorities and potential behaviours (of both community and responders) that might impact response. The heterogeneity of beliefs in the community and the changes in beliefs that might occur may become more apparent. This enables a conceptual and methodological shift: teams will work *within* participating populations rather than *upon* them.[13] Documenting and understanding phenomena from the patient or community perspective shifts the sociopolitical dimension of health in humanitarian settings beyond traditional public health approaches.[18] Anthropological knowledge, generated and disbursed locally alongside that of public health experts and epidemiologists, helps bridge gaps in social understanding.

### Event analysis and post hoc assessment

During the international EVD outbreak, anthropologists and related disciplines built international research collaborations, including the Ebola Emergency Anthropology Initiative (a message board and Listserv: https://lists.capalon.com/lists/listinfo/ebola-anthropology-initiative) and the Ebola Response Anthropology Platform (a weblog and information clearinghouse: http://www.ebola-anthropology.net/). By making use of online technology, these collaborations took place in real time. This made for forums that were engaged, interactive and iterative, permitting the real-time 'mobilization of local research' and knowledge, including analysis, recommendations and technical advice.[47] Similarly, the online environment allowed a leading anthropology blog to carry ongoing analysis of the epidemic as it spread and developed (*Somatosphere*'s 'Ebola fieldnotes' series: http://somatosphere.net/series/ebola-fieldnotes), while online social research journals fast-tracked publishing of social analysis.[50]

These real-time, transnational research collaborations—that follow the progress of a public health emergency as it happens—illustrate the potential power of rapid collective social science analysis: where academic methods, data and theory might be put into service to direct action, policy formulation or advocacy.

This converts anthropology into a resource in and of itself. Rather than an instrument of public health, it can also be a mirror on the practice of public health. Anthropological analysis can help reveal assumptions inherent in public health practice and programme design; it can similarly assess outcomes (eg, why do we count lives saved, when at best they are lives temporarily prolonged?).[17 50] It also helps us understand emergency response as part of a global practice and through its local particularities.[51] This analysis, whether part of a formal evaluation or not, is a potential source of strategic insight for practitioners and institutions.

## WHAT IS ANTHROPOLOGY NOT GOOD FOR?

While professional anthropologists can add value and improve the response to public health emergencies, there are instances when an anthropological presence might not be useful or a priority. These might include situations of immediate and extreme crisis—for example, the first hours after a mass casualty disaster, when patient recovery, triage and surgical care are of the highest priority.[52] It also includes situations of very high insecurity; despite their connections with local communities, if a circumstance is deemed unsafe for health personnel it is likely not substantially safer for anthropologists.[53] In a similar vein, just as health campaigns have been poorly managed, misused or abused,[54 55] so the clumsy or unethical use of anthropology can poison perceptions and cause psychological or physical harm.[38] The misuse or misrepresentation of anthropology, in ignorance of professional codes of conduct, can have real consequences for individuals and health interventions. As such, the potential benefits of anthropology in public health emergencies can only be realised through appropriate expectations, realistic terms of reference and professionalism.

## CONCLUSION

Recent high-profile public health crises have led to greater integration of sociocultural understanding into emergency response. With their specialist focus on everyday life, regional knowledge and ethnographic methods, it is logical that anthropologists undertake this effort. Additionally, while this paper has focused specifically on emergency, many of the anthropological resources discussed here can also serve in non-emergency, or postemergency, health interventions (see, for example, the work of Briggs and Nichter following 2009's H1N1 outbreak,[5] or Farmer in Haiti[31 41]).

This paper gives a basic introduction to anthropological methods and mindset. It hopes to harmonise disciplinary expectations by illustrating what anthropologists can do in public health crisis and how they do it. It attempts to summarise ways in which anthropology has been applied to public health crises in the past and imagines possible future roles for anthropology. By demonstrating how anthropologists are employed in emergency operations—contributing to a variety of apparatuses and

structures—it highlights how hidden social aspects of clinical and public health intervention can be brought to the fore and acted upon for the benefit of all.

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