MAT Medicine Anthropology Theory

THINK PIECES

Dr. Ram's triage

Categorization, speculation, and granting access to global health technologies in Indian private clinics

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Abstract

Triage is a process of categorizing potential health and guiding care. It is based on the idea that all bodies are equal while potential vitality is not. I examine the triage processes used by Indian physicians as they collaborated with global health researchers to identify patients for a free, cutting-edge tuberculosis test. As I argue, triage forms and reforms social difference within global health despite its aspirations of standardization and experimentality. Problematizing triage as part of global health's ordinary affect of affordability reveals local biologies, class biopolitics, and clinical speculation in the field. I conclude by considering new avenues of ethnographic inquiry that are opened by attending to the practiced and depoliticized biopolitics that occurs within clinics as everyday, nonreflexive decisions about how to organize resources and speculate on vitalities.

Keywords

global health, tuberculosis, biopolitics, affect, care

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My notes read:

> Dr. Ram's clinic, Sunshine Hospital, Hyderabad, 2:45 PM.
>
> 'I don't use it [Xpert, a genetic test for tuberculosis] as a screening test. It's very costly. So, I want to be reasonably sure that I'm using the test responsibly before I order it. Usually I ask for a TB [tuberculosis] skin test and want it to be positive alongside quite a few sentinel symptoms before I order. At the same time, if I have a positive skin test and a positive x-ray, then I don't need the Xpert test. I can save that money for another patient. Even if it's not the patient who pays, still I should be responsible with the resources we have and only order the test for those I think it might be most useful for'.

Dr. Ram's comment, which he made during a moment between two patient consultations on a sultry May afternoon in 2016, prompted me to think about triage. As I had observed in this busy private clinic, Dr. Ram and colleagues made split-second decisions as they triaged patients, ordering and fitting them into populations. In India, such private-sector consultations average from two to four minutes (Das et al. 2012; Irving et al. 2017). In these fleeting moments, triage is a constant adjustment in light of unfolding technical and social uncertainties (Solomon 2017). Physicians attempt to chart a course among many possible clinical actions: those determined necessary at all costs, or ideal, or perhaps avoidable, or impractical. Triage is, therefore, contingent as it guides a physician's clinical course of action differently for different patients.

Ethnographies of triage beautifully situate its contemporary form as an effect of global structures, such as humanitarianism, austerity, and transnational governance. Analyzing Médecins Sans Frontières, Peter Redfield (2013) reveals that humanitarianism's moral call to action depoliticizes triage's biopolitical questions about who receives care by answering them through mundane considerations of operability, logistics, staffing, finances, and management. Similarly, Alice Street's (2014) ethnography of a Papuan hospital shows how the hospital's scarce technologies prioritize the diseases identified in patient care and public health by furnishing evidence to guide a course of action. Studying Côte d'Ivoire-based HIV treatment programs, Vinh-Kim Nguyen (2010) finds that triage advances certain subjects and subjectivities that match institutional priorities toward life-saving treatment before others. He considers the political and biological effects of creating and triaging categories of subjects for whom care can be delivered to best effect.

I follow these interventions by attending to triage as a sociotechnical and political process shaped inside and outside of clinics. My encounter with Dr. Ram's triage, however, requires that I stretch this literature. I consider how depoliticized decisions about care unfold in a

clinical encounter and shape global health's tools for making sense of the world in the process. To interpret these encounters and their effects, I bring considerations of affect, speculation, and technology to bear on Dr. Ram's triage.

Organized around his 'responsibility' to parsimoniously prescribe free tests for sick children, Dr. Ram's clinical actions reveals that triage is a central node in his connection to global health. Triage, for both Dr. Ram and global health, manages scarcity by assessing and categorizing a patient's physical state before imagining her potential to maximize clinical or collective resources by regaining health.

Dr. Ram's connection to global health and his sense of responsibility to it began in 2014, two years before I met him. Researchers specializing in global health diagnostics had enrolled him, along with other physicians across four Indian cities, in a project to improve access to Xpert and evaluate the test's utility in India. Project researchers encouraged collaborating physicians to send as many children to Xpert testing as possible. When he and I met two years later, I learned that researchers had been calling and visiting physicians like Dr. Ram in their clinics since enrollment; they had also provided seminars and even invited physicians to lunch and dinner. As part of these interactions, researchers explained that Xpert machines screen all kinds of samples for TB genes to quickly identify TB and its drug resistance. They also emphasized that TB in children is ambiguous and the disease progresses rapidly toward debility and death. Ambiguous clinical presentation and rapid disease progression, they argued, meant that physicians often struggle to diagnose children until it is too late. They even cited data, like those published in 2019, showing that Indian physicians only identified 59% of children predicted to suffer from TB (Central TB Division, 2019 46). By liberally prescribing this test, the researchers suggested, pediatricians could quickly diagnose TB, alleviate suffering, and perhaps save young lives. Moreover, the test was free to patients.

Though Xpert was free to patients as part of the project, Dr. Ram and his colleagues knew that the test was available on the market for 2000 rupees (US$28). Dr. Ram reasoned that the researchers must pay for tests at that cost, which was, respectively, ten and twenty times higher than the X-ray and TB exposure tests he used to diagnose TB. In an attempt to help conserve resources, he decided to continue to rely on these less precise tools to determine whom he would enroll in the project.

The researchers, on the other hand, wanted to prove that Xpert was superior to older methods of diagnosing TB in children. For them, more patients and samples tested meant increased statistical power, humanitarian action, and the potential for global scale-up. Paying for the test, they reasoned, was the cost of these outcomes. Nonetheless, free-of-cost

services imbued their medical research project with a philanthropic aura of urgency and gifting (McGoey, Reiss, and Wahlberg 2011; Birn 2014; McGoey 2015).

Anthropologists have described interventions designed to simultaneously test and implement global health technology, like this one, as a form of global heath governance called 'experimentality'. Critiques of experimentality suggest that research on the efficacy of drugs, diagnostics, or interventions is a central way of extending routinized forms of care and governmentality to patients and physicians on the biomedical periphery (Sunder Rajan 2006, 2017; Petryna 2009; Nguyen 2009). In this case, researchers used the experimental form – complete with control areas, detailed evidence making, cost efficacy analysis, and tours by circulating expert publics – to increase knowledge about the tool's utility as well as to increase access to it (Shapin and Schaffer 1985; Knorr-Cetina 1992; Rheinberger 2001). The project gave Indian children access to a cutting-edge diagnostic tool that many of their families could not easily afford and the state would not readily provide. In return, the researchers studied the test's ability to identify disease, documented its effect on clinical care, and published their findings. Experimentality had two clear results: first, the strong connection researchers and clinicians made between experimental form and rationality tempered potential concerns about testing technology on poor children. Second, experimentality folded the kinds of difference that Dr. Ram used to triage those 'most needing' a philanthropic and experimental project into global health's seemingly universal categories.

Observing Dr. Ram and others reserve global health resources for patients who, as he put it 'really needed philanthropy', I realized that processes of triage and graduated care linked technological imaginaries, biological futures, and social categories. Dr. Ram and his colleagues – using their clinical sense, low-cost screening tests, and intuitive assessments of socioeconomic class – reserved the free advanced global health diagnostic for a specific group of patients they judged to be poor. Specifically, they reserved free tests for patients who had not, when tested with cheaper tools, received a definitive diagnosis.

Dr. Ram made triage decisions both before and after inconclusive results obtained from inexpensive technology. In these decisions, Dr. Ram used class-like categories to identify families that might need global health researchers' free services. He compelled to the market those patients for whom other tools were inconclusive and seemed able to afford Xpert (Li, 2014). All things being equal, it was Dr. Ram's affective impression of each patient's ability to pay that shaped his decisions about triage.

Anthropologists worry that knowledge practices central to global health, such as pilot projects and systematic trials, standardize and financialize human life. Have these worries led us to overlook the new bodily and social experiences that triage creates when global health,

physicians, and patients meet? When determining possible clinical actions – like referral to a global health project – Dr. Ram combined global health and his own economic, biological, cultural, technical, and medical categories. The intersection of local and global categories occurs in triaged bodies, where they produce a diversity of illness experiences, disease presentations, and ways of doing medicine. What might the persistence of social categories in Dr. Ram's triage processes say about the forms of difference that occur when experimentality reigns? Can examining triage move beyond worries about the global standardization of bodies and disease experiences to focus anthropological energies on how global health revitalizes and naturalizes categories like class, caste, nation, or even race?

Affective action

I was reminded of Dr. Ram a few months later when chatting with Dr. Shyam in his own Mumbai-based private clinic. Dr. Shyam explained his process for selecting patients to enroll in another major global health-sponsored TB intervention using Xpert. He said, 'I send all of my nonaffording patients to the project's services. The others I send to specialists without telling them about the free services'. I was accustomed to the phrase 'nonaffording' and had observed a tendency among physicians to send patients they identified as such toward global health interventions. Yet, even after months of ethnography I could not understand how physicians assessed 'affording' and 'nonaffording'.

When I asked Dr. Shyam how he did so, he told me, 'Most of them [patients] I have known for years'. I said I imagined it was challenging to know intimate and shifting details about a particular family's economic state in Mumbai's large and diverse slums. He responded, 'Sure, but I know how big their family is, usually, where they work. And, you know, I can see how they dress and hold themselves. I can understand it in the questions they ask. Like, if they ask a lot about cost, probably they are not affording. If they carry a fancy phone or have nice jewelry, probably they are. Don't forget that knowing people is my job here too'. Indeed, this physician's analysis of a family's ability to pay was a combination of aesthetic assessment, local context, and his own affective sense. He 'just knew'.

Dr. Shyam could 'simply tell' who might be a global health patient. Global health's resources, he assumed, should be reserved for patients whose symptoms were of interest to global health's cost-over-global-epidemiological-effect calculus (Reubi 2018). But as importantly, global health patients were people who could not afford, in economic, social, or temporal terms, to access the market. Determining ability to access the market was a central part of Drs. Shyam and Ram's triaging patients to or away from global health programs. If the patient would pay for Xpert services on the market, then the test's effect would be the same.

The cost in global health resources, however, was far higher. If the patient could not access the market, then the cost to global health resources would be justifiable or 'responsible'.

Intuitive determinations of 'affording' and 'nonaffording' patients alongside the intuited impetus to act responsibly with global health money are examples of Kathleen Stewart's 'ordinary affects'. 'Ideologies happen', she writes. 'Power snaps into place. Structures grow entrenched. Identities take place. Ways of knowing become habitual at the drop of a hat. But it's ordinary affects that give things the quality of *some*thing to inhabit and animate' (Stewart 2007, 15).

Triage is an ordinary affect, an unreflexive decision about who to protect and who to compel to the market, that helps Drs. Ram and Shyam 'inhabit and animate' global health. Triage makes global health and experimentality localizable, knowable, and rational. Neither of the men read global reports or sit at tables in Seattle or Geneva. They sense their way through the complicated work of 'global health' to identify maladies and populations that might be managed by the market and those that represent risks best not exposed to market competition. NGO staff visit physicians' clinics with targets, promises of free services to certain patients, and information about new global health priorities. By using their sense of need to triage patients toward and away from NGO workers' global health interventions, the doctors become part of or animate one of global health's ordinary affects.

Global health's triage is not a purely clinical practice. Affective senses of who may not be able to access the market also inflect global discussions of Xpert's costs. At a global meeting of TB experts, in a European capital in 2017, many test developers and intervention scientists considered the US$35 cost per test too expensive for a global scale-up. Like the terms 'affording' and 'nonaffording' in Mumbai, intuitions about 'affordability' circulated as test designers, epidemiologists, and interventionists speculated about the amount governments, the market, and global philanthropy institutions were willing to pay per test. Conversations that unfolded in expert meetings around questions of price and value have rather swiftly turned into practices of triage in Dr. Ram's clinic.

Projects, like those that enrolled Drs. Ram and Shyam, allow Indian private-sector physicians to inhabit global health and its ordinary affects. Triage, affordability, scarcity, and 'need' are connective tissues that join situated physicians and mobile researchers. Michelle Murphy describes a similar assemblage of experimentality and audit that connects family planning interventions in Bangladesh and its projected global effect. She argues that 'the epistemic infrastructures of surveillance that generated such numbers were as much projects of statistical rationality as they were of affective rearrangement. … Affect does not just animate numerical sums; it was purposively propagated by that infrastructures that do the counting' (Murphy 2017, 60). Like Murphy's historical actors, Drs. Ram and Shyam are enmeshed in

an infrastructure that is permeated by affects of affordability. Ordinary affects of affordability rearrange relationships that once prioritized care over counting and cost, allowing the two doctors to inhabit and practice calculi that privilege the assessment of care's utility through cost and accessibility on the market. They do so by aligning with a familiar cognate of prioritization: triage. In triage, physicians unreflexively follow global health's guide when making very political divisions about who can and should receive care.

Certainly, a physician would not consciously deny the best possible care to a patient who may have a life-threatening disease. And yet, they often do. Drs. Ram and Shyam affectively animate and inhabit global health's discourses of scarcity. They make them real in triage.

Speculative imaginaries

Medical anthropology characterizes global health as a set of epistemes and practices designed to understand human life in terms of comparable biology and risk at a planetary level (Biehl and Petryna 2013; Crane, 2013; Adams 2016; Packard 2016). The discipline's examination of global health's use of and influence on biomedicine leads me to consider the effects of triage on the forms of human life that global health fosters. Though global health's assumptions of globally uniform humanity repudiate biologized racism and ethnic difference, its practice of identifying populations particularly at risk for or afflicted by individuated diseases builds collectivities of difference. In his patient triage practices, Dr. Ram created diversity by identifying unique populations that corresponded to the different manifestations of TB that could be identified by inexpensive X-ray or skin tests and expensive Xpert technologies. Furthermore, global health hierarchically organizes disease categories by their urgency for human economic and physical vitality at a global scale (World Bank 1993). This categorization and prioritization is triage, and though triage in Europe and North America is largely confined to emergency care, austerity policies propagate forms of triage also in nonemergency settings in medical systems there, too (Kentikelenis 2015; Chabrol, David, and Krikorian 2017).

Fundamentally, triage allows a depoliticizing embrace of human equity. Medical determinations of who can wait and who is too sick to effectively use treatment have origins in late eighteenth-century European battlefields, French egalitarianism, and Benthamian utilitarianism (Mitchell 2008; Redfield 2013). Triage was originally used to categorize injured soldiers based on an intervention's likelihood of success as well as the soldier's condition, ability to wait, and possible return to battle. Prioritizing soldiers' care by health instead of social status, French surgeons enacted republican equality. In its idealized form at least, triage used medical assessments of care's urgency and potential effect; these superseded social categories, hierarchy, and politics.

Triage left the battlefield when operations research and systematic prioritization entered discourses of health and development after World War II (Mahalanobis 1955; Andersen 1964). It shifted from managing individual patients in emergency to guiding the care of populations toward future increases in vitality. Off the battlefield and in the bureaucracy, triage inflects how physicians like Dr. Ram see and react to the people in their care. Nonetheless, categorizing who needs care or health resources in contemporary India is a complex process. It includes assessing the level of need, cost of care, and clinical utility in the context of a patient's imagined future of vitality or death.

Today, as on the battlefield, triage is both pragmatic and future oriented. It uses possible, imagined futures to determine pragmatic action in the present. As such, triage is speculative (Peterson 2014). As Dr. Ram speculated about his patient's bodily future in an attempt to determine which resources to mobilize, he enlivened the categories that are part of the enterprise of triage. Though categorizing a patient's financial and physical possibility is a small and unreflexive part of a clinical encounter, it guided his clinical decisions about which patients to send to his global health collaborators. More precisely, Dr. Ram's situated categorization of patient needs and futures affected global health's evidence. By sending only a small portion of his patients to the project, he localized the sample that global researchers will use to make claims about its technical and global utility. Including only particularly poor patients or those with nonspecific disease presentations in a global health experiment builds and rebuilds populations of difference in global health's aspirationally postracial, postclass equality. Experimentality even inscribes these differences in its technical possibilities.

Triage is a speculative form of biopower. It operates by deciding whose lives should be fostered and whose should be allowed to die through state or social neglect (Foucault 1978), but it makes such decisions by speculating on the potential cost and population-level effects of a fostered or neglected life. Though the effect of providing a test can never be known before the result and patient's response to treatment, physicians aim to predict the test's result and its broader impact as part of their triage. At the same time, Dr. Ram's work shows that even though biopolitical processes are political acts in which justice, resource distribution, and rights are at play, they are often experienced and lived as if they were apolitical, objective, or simply practical (Ferguson 1994; Harper and Parker 2014). Dr. Ram's biopolitical actions played out in his subjective, intuitive assessments of need, triage, and operability.

The politics of life are thus reduced to matters of triage rather than requiring a decision about rights, justice, and life itself. Depoliticizing health care decisions via triage does not just happen in moments when metrics determine intervention priorities through costs and effects. It also occurs when a decision assessing the need for care in a global health intervention is made on moral grounds or its grounds are left unconsidered.

Technical triage

As part of an experimental research program, Dr. Ram's assumptions about nonaffording patients and his choice to send them to the project were taken up into global heath's published conversations about the test's capabilities, target populations, and key beneficiaries. Dr. Ram' perspectives – that global health resources should be spent on the poor, that drug resistance in children is limited, that poverty has a clinical presentation, and that limited global health resources can be apportioned in the clinic – inflected his triage of patients to and from the project designed to assess the potential of Xpert technology.

Triage and technology came together in Dr. Ram's clinic as he rationed global health's philanthropic capital. Global health discourses of scarcity, risk, and prioritization have hailed Dr. Ram. Like many of the hundreds of Indian physicians I observed and interviewed about TB diagnosis and drug resistance, he assessed the cost and effectiveness of diagnostic technologies as part of his regular clinical routine. Before joining the Xpert project, Dr. Ram used his clinical sense and tools like X-ray and the tuberculin skin test on all patients. In the new context of the project, Dr. Ram reorganized the impressionistic, clinical, and economic blueprint he used to speculate about a test's likelihood of clinically actionable information, his patients' need for that test, and their ability to purchase it. He directed those patients for whom Xpert information was essential but too costly to the program. He referred those who needed Xpert testing and who could access it in the market to the market. For those he could diagnose without Xpert testing, he began treatment, unless they could afford Xpert and insisted on its precision.

Dr. Ram's striated use of technology for different patients created three populations where before only one had existed. The first group, by far his largest, were patients he diagnosed with the older logarithm of skin test and X-ray. Without access to the Xpert test, they had no evidence of bacteria in their bodies, no definitive proof of TB, and no information about the probable utility of the standard TB treatment. As X-ray and skin tests cannot confirm bacteria or know its susceptibility to drugs, these patients will not enter the global group of TB sufferers, regardless of the presence or absence of disease. Even after many months of pharmaceuticals, determining the effect of treatment is difficult because the absence of never-identified bacteria does not evidence a change of state from infected to cured. Identifying and treating TB on the basis of X-ray and skin test results alone leads to the missed diagnoses and advanced disease in children that the use of the more sensitive Xpert technology promises to prevent.

Dr. Ram's triage, however, separated those patients he sent for Xpert testing into two different populations. Patients in both populations learned of the presence or absence of

bacteria in their bodies. They also knew if their treatment was likely to work, because Xpert provides information about the bacteria's ability to resist certain pharmaceuticals. They are not a single population, however, because those patients sent to the program entered into a community of people on whose data global health knowledge is made, while those who accessed the market did not. Patients enrolled in the project, their disease, and their data joined an experimentality that creates knowledge to be used all over the world. They became at once part of a population that is the global standard and the exception. Those who accessed the market entered a population that avoided becoming points to be averaged into the globally standard data, but not totally, because global health's experimentality and affects of affordability shaped this practice throughout. Their status as a population for global health was not fully formed.

Dr. Ram's triaged access to testing produced several new, local TBs in the same moment as it inflected the global standard away from easily diagnosed cases and TB among the rich. It created a local biology by identifying and bringing to global biopolitics those children whose bodies have also been marked by poverty (Lock 1993). In the bodies of children who receive treatment without testing to establish drug resistance, this approach to triage grows local microbiologies by haphazardly exposing bacteria to antibiotics (Koch 2011). In other words, by triaging affording and nonaffording patients in and out of standardized care, Dr. Ram not only altered the standard and what global health may know about TB; he changed the bacteria themselves. By haphazardly exposing bacteria in some patients to ineffective pharmaceuticals while systematically eradicating bacteria in others, he fueled and dampered bacterial evolution. At the same time his triage, through its connection to experimentality, inflected assumptions about how Xpert works, where services should be located, who might be ideal patients, and how to use the test to best effect the world over.

In this kind of frugal experimental global health, triage categorizes disease states and organizes technical action while changing both of them. By providing differentiated care, Dr. Ram naturalized analytical categories like 'affording' and 'nonaffording', as global health actors identify their population of concern and their most effective tools. In the process, certain premises become self-fulfilling prophesies: that drug resistance is rare, that forms of pulmonary TB easily detected by cheap tests like X-ray and skin test are rare in children, that hard-to-diagnose forms of TB requiring Xpert testing and drug resistance are common in the poorest patients, and that Xpert may be more expensive than useful.

Feeling triage(d)

Attending to Dr. Ram's experienced (if not imposed) responsibility to manage cost, his mobilization of the class-like categories 'affording' and 'nonaffording', and his assessments

of 'affordable' and 'expensive' helps make connections among global health's many scales. These connections also highlight ways that speculation, experimentality, and affect create forms of triage that make withholding higher-quality diagnostics both normal and moral. This is a conclusion in and of itself, but its implications for the anthropological study of global health are key. Attending to triage as an affective, speculative, and experimental practice suggests that a second body of ethnographic work might emerge alongside the nuanced studies examining the reflexive knowledge processes that global health institutions use to know their objects, set goals, and measure successes and failures. This research must consider nonreflexive, intuitive, or affective ways of knowing in global health. It must analyze intuitive processes' parallel effects on experimentality, institutions, and bodies.

Considering Drs. Ram and Shyam's triage provides one example of the ways global health might be understood and theorized, by considering the categories it takes for granted and disseminates affectively. By attending to affective aspects of categorization, new forms of connectivity, speculation, and the technological sensing of potential health come to the fore. From a critical consideration of categories and their affective aspects, important nodes of connections among global health institutions, experimentality, and clinical care practices can emerge for analysis.

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