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The perils of polycentric governance of infectious disease in South Africa

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ABSTRACT

In much of the developing world, a model of polycentric governance has become increasingly prevalent for the control of health and infectious disease – one in which a panoply of governance actors work concurrently on the same development projects, within the same localities. And yet, the question of whether polycentrism helps or hinders disease control/mitigation, or service provision more generally, has not been sufficiently studied. This article details findings from an exploratory case study of the polycentric governance of infectious disease in the Eastern Cape Province, South Africa. Combining analyses of an original survey of local councilors, structured interviews with relevant actors in four municipalities, and a national survey of South African citizens, the study finds a high degree of polycentric governance, and highlights associated accountability gaps and a series of constraints on effective service delivery. It concludes by identifying promising directions for future research.

Introduction

The twin processes of decentralization of state power, and the rise of domestic and international non-government actors in development, have transformed the governance realm for health, and especially for infectious disease. If we are to understand how governance affects the level and quality of services provided to citizens, it no longer makes sense to consider these sets of actors in isolation from one another. In this article, I highlight how "polycentric governance" (Ostrom, Tiebout, & Warren, 1961) – the coincidence of multiple, autonomous authorities, overlapping in jurisdictions, within a single sector and territory – usefully characterizes the structure of governance of infectious disease in many high-burden developing countries. Despite optimism concerning the potential to forge partnerships and to leverage citizen participation, my analyses of the polycentric governance of infectious disease in South Africa reveal many of the limitations of this increasingly prevalent model.

It is easy to understand the enthusiasm for polycentric governance, and global governance institutions, including the Global Fund for AIDS, Tuberculosis and Malaria (GFATM), have increasingly advocated this model as a best practice for improving service delivery and democratic participation in developing countries. However, we require greater theoretical and empirical scrutiny of polycentric governance as a normative model for infectious disease control, and for health and human development more generally.

Despite substantial progress in describing patterns of decentralization (e.g. Atkinson & Haran, 2004; Bossert & Beauvais, 2002), and research on a range of authorities that have taken on new roles with respect to health and infectious disease, including courts (Manfredi, 2002), foreign donors (Youde, 2010), civil society organizations (Rau, 2007), and traditional leaders (Ashforth, 2002; Steinberg, 2008), an integrated approach has been lacking. For the most part, studies investigating the determinants of service provision, for example levels of access to ARV treatment (Lieberman, 2009; Nattrass, 2006), have ignored the structure of governance as a possible determinant.

From a *health systems* perspective, several studies have described the challenges posed by decentralization and the rise of non-state actors, including in the South African context (Coovadia, Jewkes, Barron, Sanders, & McIntyre, 2009; McIntyre & Klugman, 2003; Schneider, Blaauw, Gilson, Chabikuli, & Goudge, 2006). Blaauw et al. (2003) highlight concerns about coordination problems in the South African health system for the management of HIV, and Schneider, Coetzee, Dingie, and Gilson (2010) argue that coordinated governance, the presence of semi-autonomous providers, and networks are some key factors that affect the implementation of antiretroviral therapy treatment (ART) across three South African provinces. However, these studies focus on health bureaucracies, with little-to-no explicit consideration of several central challenges of democratic governance: the potential tradeoffs posed by competing (i.e., non-health) priorities, and the preferences and strategies of elected leaders and citizens.

In this article, I seek to complement these findings. I provide a broader theoretical framework for understanding the incentives

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posed by polycentric governance, which helps to explain actor behaviors. I present a case study of the polycentric governance of infectious disease control in South Africa, which ultimately reveals many of the negative consequences of this governance model.

Theorizing incentives in polycentric governance

Governance is the practice of exercising authority over a particular domain, including making and enforcing rules, and directing efforts to manage the behavior and welfare of a set of constituents. This consists of the development of budgets, the written and verbal articulation of policies and practices, and the exchange of information between authority and constituents. Formal national and sub-national governments are governance authorities, but so are international institutions, such as the United Nations General Assembly, as well as traditional leaders with stable followers. A governance authority exists when there are accepted, even if unpopular, institutions for selecting leaders and a set of constituents recognize that authority. Governance authorities tend to emerge in isometric fashion such that we can speak of *types* of governance authorities, including national states, traditional leaders, or international organizations.

The *structure* of governance concerns the relationship between governance actors. While there has been a substantial scholarly literature investigating the effects of decentralization or the devolution of authority to local governance actors (e.g., O'Dwyer & Ziblatt, 2006; Rodden, 2006; Smoke, 2003), for the most part, the threat of infectious disease has never been a serious candidate for full devolution because of the potential for spread across localities. Thus, the realistic range of institutional variation falls between a centralized model (for example, in the case of Botswana), and some form of polycentrism. According to Ostrom et al. (1961), " 'Polycentric' connotes many centers of decision-making which are formally independent of each other." I define *polycentric* governance (PG) as the concurrent efforts of at least two governance authorities exercising their powers over a common group of people within a single sector or for a common problem. PG explicitly recognizes *overlap* in the form of partnerships, concurrent efforts, and/or unresolved competition about who governs (e.g. Andersson & Ostrom, 2008; Frey & Eichenberger, 2004).

The central question considered here is how the structure of governance affects the *accountability* and *performance* (Kaufman et al., 2009: 6) of actors for a given sector. I define accountability as the degree to which agreements between parties in a governance relationship – citizens and governance actors; and among governance actors – are transparent and enforceable, such that all parties have recourse to address a breach in that agreement. Performance is the degree to which actors deliver services suitable for achieving desired outcomes in a timely and efficacious manner.

Most scholarly treatments of multilevel or polycentric governance have focused on describing its relative advantages (e.g., Eggers & Goldsmith, 2004). Evans (1996) and collaborators focus on "state-society synergies," in the developing world, arguing that engaged and autonomous non-government actors can enhance the state's capacity to deliver. Because national states are often weak and distant from the societies they govern, the institutionalization of additional autonomy to alternative authorities can enhance accountability through trusted and more proximate relationships; and efficacy through the mobilization of additional and more appropriate resources. A polycentric model incentivizes governance entrepreneurs to identify complimentary skills and resources. Whereas traditional models of fiscal federalism would highlight the limitations of decentralization in countries where local governments are likely to have limited tax bases, a polycentrism that includes donors should ease resource constraints.

But as Williamson (2002) points out, absent hierarchy, one must consider the sources of contract breakdown in a system of exchange relationships. And if we assume that governance actors face a range of difficult decisions and tradeoffs concerning the allocation of financial and human resources; and that they are motivated to try to claim the most credit for action and success, while investing the fewest resources for any given task, we may predict much breakdown within a PG structure. For example, Dionne (2010) identifies a "Global-to-Local Supply Chain of AIDS Interventions," and she rightly emphasizes a fundamental principal-agent problem that exists between actors in a hierarchical model in which resources are passed down from international donors all the way down to village headmen. Hers is essentially a model of vertical delegation, with a single chain of command, and citizens ultimately come into contact with only a single governance authority. However, the normative PG model presumes a multi-actor division of labor, leading to additional principal-agent problems because any given principal may have multiple agents, and agents have multiple principals. And even if outputs were effectively measured, it would be difficult to agree upon a proper distribution of credit or blame. Absent a vertically-organized hierarchy or enforcement mechanism, and especially in a resource-constrained setting, governance actors may not have the capacity to address contract failures, and instead may find themselves paralyzed in the face of service deficiencies. In a system of democratic governance, where voters are meant to hold elected leaders accountable for (in)action on important issues, a panoply of governance actors can lead to confusion and loss of accountability. Governance actors may be more likely to attempt to "free ride" if they perceive others will do the work and/or they will not be blamed for inaction.

I have simply identified here two stylized implications of polycentric governance in the response to infectious disease. But this simple framework motivates an exploratory analysis and provides a baseline for additional theoretical refinements. In short, it suggests that we ought to critically examine the extent to which such a governance structure is associated with integrated and synergistic partnerships or coordination problems when addressing a particular challenge.

Case selection and research methods

I used a case study approach for this exploratory research, with the goals of making a preliminary "plausibility probe" of the core claims described above, and developing testable hypotheses, analytic constructs and measures for subsequent research (George & Bennett, 2005; Gerring, 2007). Because case studies are most useful when they put a spotlight on highly visible phenomena and relationships – rather than on more subtle patterns, which are better detected through analyses of larger datasets – I selected a problem and site for research in which relevant actors were likely to be conscious of the phenomenon under investigation: The governance of infectious disease in South Africa.

Indeed, South Africa is an extreme case: By 2009, South Africa was the epicenter of the world's HIV epidemic, with the largest number of HIV-positive individuals in the world, adult HIV prevalence of 17 percent and TB prevalence of 6.9% (Health Systems Trust, 2009), and substantial rates of co-infection. It is also an upper-middle income country, and a fairly robust young democracy, having completed several free and fair multiparty elections at all levels of government since its 1994 democratic transition. Political controversy was central to the response since early in the epidemic (e.g., Nattrass, 2007; Schneider, 2002), but by 2004, a public ART program had been launched, by 2007, the national government set a target of universal treatment access (Schneider

et al., 2010), and in September 2008, Barbara Hogan was appointed Health Minister, a choice that was widely viewed as a "new dawn" for a government response to HIV/AIDS, in conjunction with the increasing availability of domestic and international resources for infectious disease control.

During the past two decades, the country was unified under one government, but also underwent a process of political and administrative decentralization. Apartheid South Africa combined a unitary state that granted full citizenship to whites only, and aimed to locate black Africans in so-called independent homelands. During the transition to a multiracial government and society, which surrounded the 1994 elections, constitutional planners developed an integrated multi-tiered model (Pillay, 2001; Pillay & Marawa, 2000). By 2000, South Africa was divided into nine provinces, and below these, three types of local governments were created – Type "A" metropolitan municipalities or "metros," (in 2009, there were 6, and using 2001 census data, they contained approximately 32.9 percent of the population) and two-tier local governments everywhere else. In the latter, there exist 46 type "B" district councils, and below those, a total of 231 type "C" local municipalities. The vast majority of tax revenues are collected by the national government, which provides grants and transfers to lower tiers of government (and provinces, in turn make small transfers to local governments). Provinces generate little of their own revenues, mostly in the form of user fees; while local governments collect property taxes and surcharges on utilities.

Elections are held at all levels of government, using proportional representation (PR) and party lists. At the local government level, while half the council seats are allocated using PR rules, the other half are contested in single member ward elections in which individual candidates stand for election, though most run as party representatives. Thus, virtually all elected representatives are appointed by their parties, which are relatively well institutionalized and link organizations and leadership across levels of government. The African National Congress (ANC) party has been dominant nationally and in most provinces, but other parties have won elections in the Western Cape and Kwazulu-Natal provinces.

Four geographically proximate municipalities from the Eastern Cape Province – Ngqushwa, Ndlambe, Makana, and Nelson Mandela Bay Authority – were chosen as focus study sites (see Fig. 1 and Table 1) because they have sufficiently high rates of disease prevalence that we should have strong expectations of some type of response. (Because HIV prevalence data are only available for metropolitan areas and districts, for the 3 type "C" local municipalities, I report the district-level prevalence.) In 2000, within the Eastern Cape, the top three causes of premature death were HIV/AIDS, diarrheal diseases, and tuberculosis; followed by homicides, lower respiratory infections, and road/traffic accidents (Bradshaw et al., 2005: 501). Since 2006, the region has confronted a substantial number of cases of extremely drug resistant (XDR) tuberculosis.

The four municipalities vary widely on a few key background characteristics (size, socio-economic and racial profiles), despite their close proximity to one another. While Makana, Ndlambe, and Ngqushwa are all mid-sized municipalities with population sizes between 50 and 90,000 people, they are spread across two districts with profound historical differences. The Cacadu and Amathole districts are divided by the Great Fish River, which during the 19th century, separated the Cape Colony to the West from the settled Xhosa nation to the East, and during apartheid, marked the Western boundary of the Ciskei "homeland." Today, Ngqushwa remains a virtually all-African, and much poorer municipality, where just 5 percent of households have flush toilets in their homes, and average household income is approximately one-third what is found in Makana and Ndlambe. Distinct from all three, the metropolitan area of Nelson Mandela Bay Authority, which incorporates the cities of Port Elizabeth and Uitenhage, is home to over one million residents, and generally higher socio-economic conditions. More like Makana and Ndlambe, it contains a sizeable white population, but unlike all the other three, it contains a very large coloured population, representing 23% of the total according to 2001 census data. The ANC governs all four municipalities, but only Ngqushwa lacks virtually any opposition councilors (just one of 24).

The data for this study were collected by five American and three South African students who were employed as research assistants during the period June–August 2009. Five of the eight were female; and among the South Africans, two were black

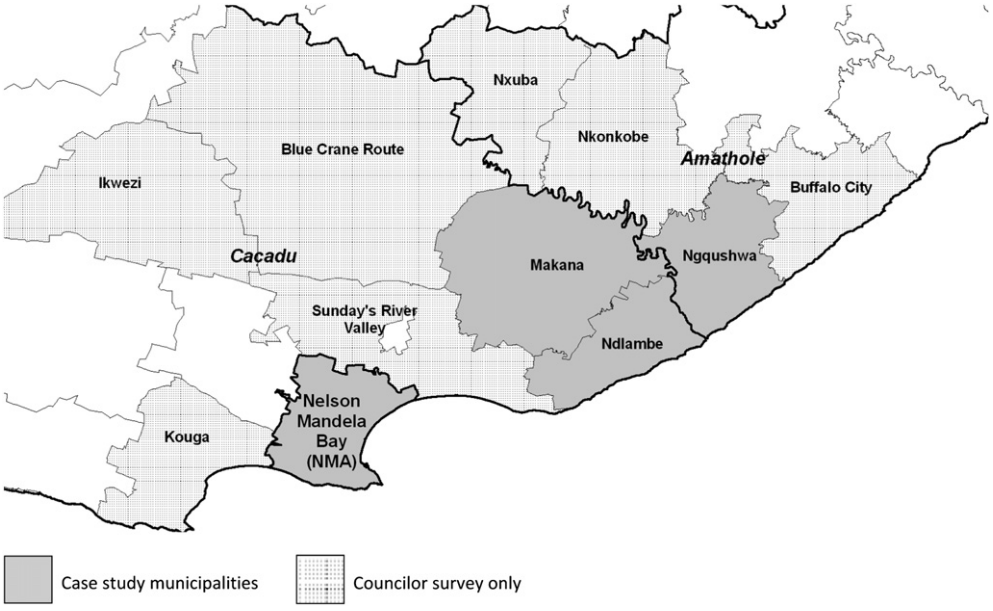

Fig. 1. Study municipalities in Eastern Cape, South Africa.

Table 1
Overview of in-depth case study municipalities.

	Makana	Ndlambe	Ngqushwa	Nelson Mandela metropolitan municipality (NMA)
District	Cacadu	Cacadu	Amathole	N/A (metro)
District HIV Prevalence 2008 95% confidence intervals (HST 2008-9)	17.7 −31.2	17.7 −31.2	23–30.3	23.4–35.4
African pop share (2001)	77%	79%	100%	59%
Coloured pop share (2001)	12%	7%	0%	23%
Indian pop share (2001)	1%	0%	0%	1%
White pop share (2001)	10%	14%	0%	17%
Race fractionalization (2001)	.38	.36	.01	.57
Percent flush toilet (2001)	37%	52%	5%	80%
Total population (2001)	75,305	54,714	84,236	1,005,777
Telephone access (2001)	95%	94%	85%	97%
Average HH Income ZAR (2001)	R42,347	R39,691	R13,788	R53,842
ANC PR Share (2006)	75%	67%	92%	64%
ANC Ward Share (2006)	92%	89%	100%	72%

Sources: IEC, 2009; Statistics South Africa, 2009 (2001 Census Data); Health Systems Trust, 2009.

African, and native speakers of Xhosa, the third was white and a native speaker of Afrikaans, and all spoke fluent English. Because issues of race and language are politically sensitive in South Africa, the diversity of our group provided good access to respondents. We carried out semi-structured field research in the four municipalities, and completed 84 in-depth interviews with a range of informants, who could speak to the structure of governance and service provision. We interviewed municipal councilors, especially those with a health portfolio, as well as hospital and clinic administrators, non-government service providers, political party leaders, academics and journalists, religious leaders, traditional leaders and healers, large businesses, and public law advocates, all of whom were selected based on referrals and identification on institutional websites. We asked a consistent battery of open-ended questions about relationships with other governance authorities, and we were careful to avoid biasing respondents towards positive or negative portraits of inter-governance relations. We attended council meetings as well as meetings of coordinating bodies to observe governance in a "natural setting."

All interviews and meetings were recorded in transcripts, which were subsequently disaggregated into sets of analytically distinct observations, each classified in terms of the particular efforts and relationships of governance actors and the consequences of those interactions. From this database of observations, I generated summaries of the governance processes taking place in each municipality. I returned to the research assistants to verify the accuracy of these narratives and to reflect on the interpretation of the facts and quotations associated with each municipality, and we reached a consensus on the validity of the individual case studies, including a calibration of substantive similarities and differences across municipalities. In the discussion below, I present the main findings from the comparisons across the four municipalities.

In addition, we administered a pen and paper survey to 166 local councilors in 11 municipalities in Cacadu and Amathole districts and in the Nelson Mandela Metropolitan municipality (Fig. 1). The survey questionnaire was developed in English, translated into Xhosa, and Afrikaans, and back-translated. It was distributed to all members of the 11 study councils. Sometimes, councilors filled out the survey prior to the start of a meeting, and at other times, they did this on their own time, within days of the survey being delivered to the council office. We provided a small, cash compensation to the administrators for the extra work involved, and as an incentive for completing it, we told councilors that all completed surveys would be entered in a lottery for an R1000 postal check cash prize, and this was paid to two councilors at the conclusion of the survey. We achieved a response rate of 42.1% overall, and on average, 56.6% of councilors in each municipality responded. Substantial political turmoil involving the recall of several top officials in Buffalo City Municipality during the summer of 2009 impeded the successful fielding of that survey. To a lesser extent, we also faced problems in Nelson Mandela – because we contacted the speaker to obtain permission to field the survey, we learned that some councilors feared the motivation of the survey was a test of "political alliances." Party in-fighting and protests shut down the municipal government in Sunday's River Valley which adversely affected the response rate. While there is some reason to believe that dissenting councilors were less likely to respond, it is not clear in what direction this may have biased the results.

Moreover, I draw on a nationally representative 2009 omnibus survey of 3504 South African adults for which I commissioned a question about perceived governance responsibilities for HIV/AIDS. For both surveys, I simply present the sample proportions for a series of response items as a strategy for describing the overall perceptions of councilors and citizens respectively.

Ethical considerations

Princeton University's Institutional Review Board concluded that this research did not present any undue risks to human subjects: The data collection carried out directly by myself and my research assistants was with elected leaders and policy elites, who would ordinarily speak publicly on the subjects discussed during our interviews. The national omnibus survey of ordinary citizens was conducted by a professional survey research firm (Markinor, South Africa), and that survey was carried out according to internationally accepted ethical guidelines, and the data were stripped of any identifying information. Princeton University reviewed their guidelines and found them to be acceptable. As a result, the research protocol was exempted from a full IRB review.

Extent of polycentrism

In order to classify the degree of polycentric governance of infectious disease, I considered legal guidelines and elite accounts of practice, both of which point to a high degree of polycentrism. Despite background differences across the four municipalities, with only a few noted exceptions, the structure of PG was largely similar.

In South Africa more generally, responsibility for the governance of infectious disease remains ambiguous and has shifted even in the past several years. According to the bill of rights, everyone has the right to access to health care services. Under schedule 4 of the 1996 constitution, health services are identified as one of many, "Functional areas of concurrent national and provincial legislative competence," while "municipal health services" (not explicitly defined) are identified in that schedule as a "local government matter." Although informed actors often describe the provinces as the lead authorities on health, according to the 2004 national health bill, "Every metropolitan and district municipality must ensure that appropriate municipal health services are effectively and equitably provided in their respective areas."

Traditional leaders, religious organizations, and international actors, especially donors, have also played substantial roles in the governance of infectious disease. For example, traditional leaders are constitutionally recognized (chapter 12 of the 1996 constitution) in a vague manner, such that, "National legislation may provide for a role for traditional leadership as an institution at local

level on matters affecting local communities," and many municipalities are officially recognized as concurrently governed by traditional leaders. Moreover, courts have made a series of critical rulings related to prevention and treatment, such that they also constitute an important governance actor.

On our survey, local councilors – who live and work in the areas studied – were asked to identify perceived governance responsibilities for a range of service sectors including HIV/AIDS, education, crime, illegal immigrants, housing, jobs, land, racism, tuberculosis and access to clean water. They were offered seven possibilities, including the three tiers of government – local, provincial, and national – as well as courts, traditional leaders, foreign donors, and civil society. In Fig. 2, I plot the average number of authorities mentioned for each task, and this ranges from a low of 2.28 authorities for the control of illegal immigrants to a high of 3.27 for HIV/AIDS. In Fig. 3, I plot the distribution of authorities selected for each.

Councilors identified a wider range of authorities being responsible for infectious disease than for other functions, identifying substantial roles for civil society and traditional leaders in addition to all three spheres of government. Although a greater share of councilors identified jobs, housing, and water provision as local government responsibilities, approximately 75 percent also identified HIV/AIDS and Tuberculosis as their responsibility.

All four municipalities exhibited a high degree of polycentrism, though in Ngqushwa there was simply less governance effort overall, and especially from its weak capacity local government.

The effects of polycentric governance on policy implementation

While my research design does not allow me to directly compare the effects of polycentric governance to that of a more centralized governance structure, process-tracing evidence in the form of elite actor responses helps to identify the effects of polycentrism on governance actor behaviors. For the most part, I find constraining influences on policy implementation.

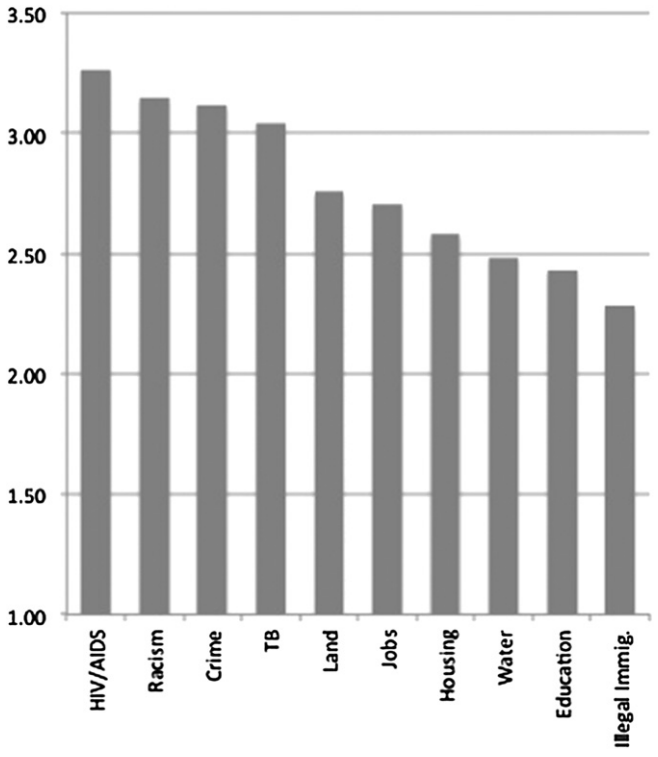

Fig. 2. Local Councilor Perceptions of Governance Responsibilities by Task (2009) – Average number of authorities mentioned. Source: Local Councilor Survey.

For example, across the four municipalities, I found substantial evidence of inter-governance conflict owing to perceived reneging on stated commitments. In an interview, one civil servant working in primary health services for NMA described a TB control project that seemed to suffer from such conflicts: "health is currently a legal responsibility for the province. They carry the budget. The provinces are like the custodians… This metro is currently carrying out the provision of health care on an agency basis with the provincial level. Most things are done by the municipality in conjunction with the province. We have problems and contentions because there are two authorities. There are issues with who gives which instructions, and who has jurisdiction." Another local councilor explained: "If we don't run the programs, they will not happen. Because at the provincial level their delivery is nonexistent. We have been battling since 2000 to get the provincial government to hand over funding. We are building clinics and rolling out ARV's. The government has been in denial for a long time. They have come to realize that it must be done and is being done, but it is taking time. The local municipality has launched its own HIV/AIDS program in December a year ago to roll out ARVs. It is relying on the funding from provincial but is a national government program."

Actors from the smaller municipalities described challenges associated with inter-governmental relations, and a high-level local government administrator explained: "The big problem is unfunded mandates. What has happened is that the provincial government passes on money to the local levels to arrange funds. The whole system is quite a mess. There really isn't an integrated approach. There are these national departments (like correctional services) who need HIV-AIDS work but have no real connection to any HIV-work or the health department. I'm not sure how closely the health department works with the local groups. There is a big mess with regards to Inter-governmental relations and the whole idea of cooperative government. In the AIDS field, probably more than in other fields, there needs to be an integrated approach… ".

Moreover, governance actors often work as agents for one another carrying out distinct tasks from ordinary constitutional mandates. For example, Cacadu District government publicly claimed that it, "delivers Primary Health Care services as an agent for the Provincial Department of Health, as Primary Health Care is a function of the Provincial Government," describing a range of functions related to infectious disease control (Cacadu District, 2010). Councilors and other actors were largely unaware of the Cacadu district's work in this sector, and while some degree of delegation is ordinary practice across sectors, in an already confusing terrain, delegation across separately elected spheres of local government further reduces the prospects for transparent accountability.

In principle, institutional structures are in place to coordinate various governance actors: An inter-sectoral AIDS council was established in Port Elizabeth in 1999, and when that city was incorporated into the larger NMA, it was reconstituted as the Metropolitan AIDS Council (MAC) for the municipality. At the very least, the MAC serves as a forum for exchanging information across relevant actors. However, several respondents said this body was not very effective in coordinating. No agencies or service providers are compelled to report to the council so it does not emerge as a source of authority or accountability, and cannot resolve the types of breakdowns described above.

In Makana and in Ndlambe, some respondents spoke more positively about the role of local AIDS councils to integrate local stakeholders. There was consensus that meetings actually take

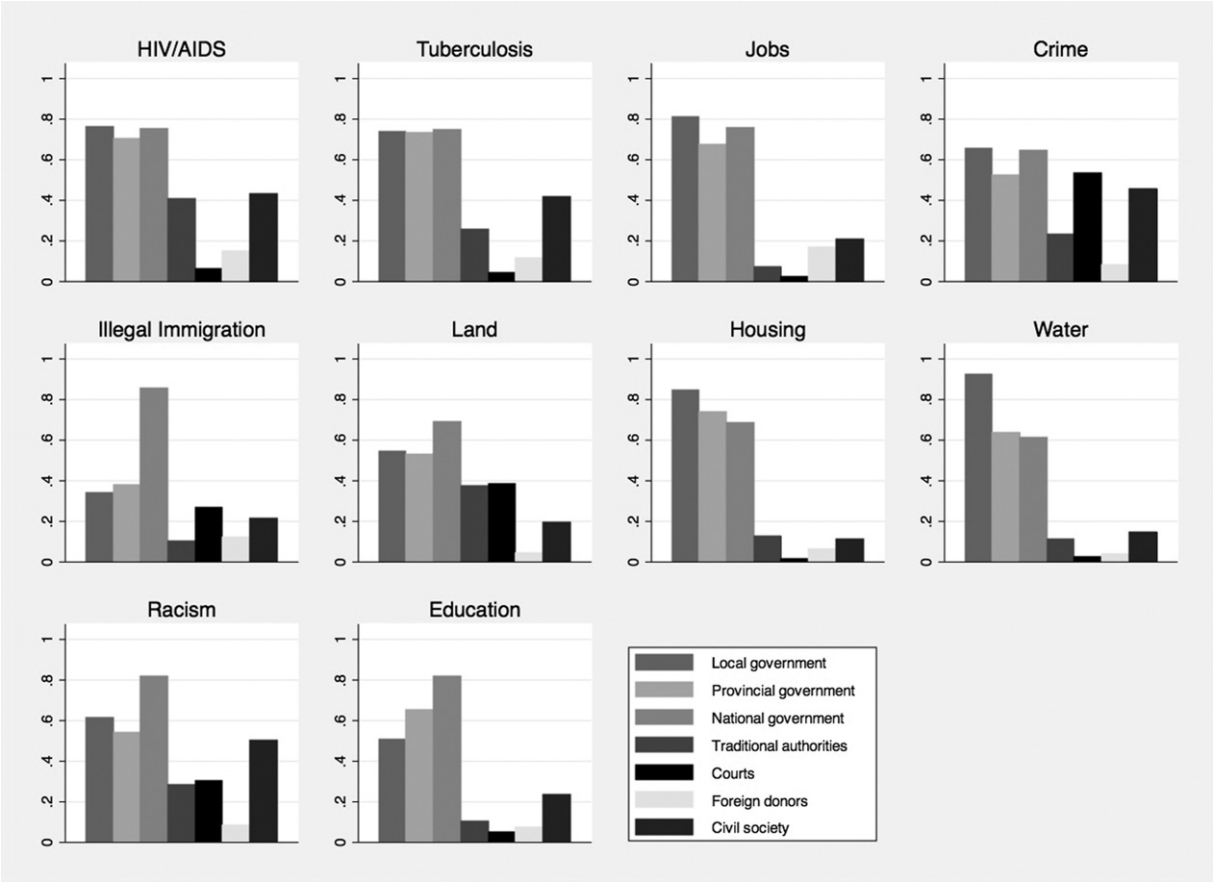

Fig. 3. Local Councilor Perceptions of Governance Responsibilities by Task (2009) – Percent mentioning each authority. Source: Local Councilor Survey.

place and strategies and programs are developed cooperatively between the local government and various civil society organizations, albeit with minimal follow-up and no enforcement. By contrast in Ngqushwa, there is a smaller and more impoverished civil society sector, and it has little relationship with the municipal government. More generally, there is little evidence of the local government doing very much on HIV/AIDS, with one report of an annual budget of R20,000 (less than US$ 3000 at the time) for AIDS-related programs. Indeed, even a leading councilor reported, "To be honest with you, [HIV/AIDS] is not a big concern. Our most concern is about service delivery" (most likely referring to housing, water, and electricity.) The councilor reported that outside organizations would sometimes come to Ngqushwa to organize one-off events related to AIDS prevention, for example on World AIDS day, and the council would help with logistics, but these were not ongoing relationships, nor were they examples of attempts to govern.

With relatively weak coordination, it should not be surprising that many efforts appear duplicated. For example, two types of local clinics – those run by the municipality, as well as those run by the province through the district health system, resulted in some duplication of services as well as political conflict, especially because provincial clinics were generally better resourced, while municipalities, with very limited tax bases, depend on the provinces for funding. These findings echo Pillay's (2001: 761), which identified provinces that did not want to decentralize health services to municipalities for fear of lack of capacity and municipalities that did not want to be stuck with "unfunded mandates."

A Nelson Mandela municipality councilor suggested that this state of affairs had an adverse impact on efficacy: "at various clinics we are understaffed and the nurses are on temp status. We can't employ them on a permanent status because I can't make them permanent until the funding gets here from the provincial government. So the staff is understaffed and under motivated. There is a person who waited from 9 in the morning to half past 4 until they get serviced. I know this because she called me to complain about the problem. They had three qualified people to serve everyone all day. They are battling because of the limited resources. If you want to devolve the responsibility, the money must also follow."

And because there is not a centralized coordination of non-government governance actors, this presents additional challenges for accountability and efficacy. For example, one high-level local government authority explained that while the patchwork aspect of PG has allowed some governance actors to fill gaps where others fail, he highlighted unexpected relationships that circumvent democratic accountability mechanisms. "We have developed a dependency on PEPFAR (The United States' President's Emergency Program for AIDS Relief) and all those kind of funding. This is not supposed to be the case because the province is supposed to be giving us money. But in fact most of our programs are also PEPFAR funded… Also at times NGO's that are PEPFAR funded would also come and assist us in some programs that we run, although they have got different MOU's (memorandums of understanding). For instance ICAP (an international donor) has agreed that they will help us. They will give us staff to assist us in the programs that we run according to the need that we might have for staff. Thus according to that MOU which I have never seen they are supposed to give us staff."

He also pointed to the addition of services that might not be available in the absence of multiple governance actors: "In addition to the assistance that we get from PEPFAR there is also a European Union (EU) fund. This fund also has done a lot to assist the department. For instance through this fund they managed to gather together a team of retired nurses in the metro who trace the defaulters (referring to people that default in taking their HIV/AIDS/TB… treatment). This team of retired nurses then goes out into the community to visit the defaulters and to establish why it is that they do not go to the clinics to get their medicines."

And yet, NGO representatives expressed several concerns about donor relationships. First, there have been conflicts over resource allocations, as NGO leaders have charged that USAID, for example, slashed prevention campaigns because it was too difficult to measure results. Second, they complained about the amount of time wasted on reports and paperwork to comply with PEPFAR. While other studies have also highlighted the negative effects of donor relationships (e.g. Brautigam & Knack, 2004; Youde, 2010), these can be exacerbated in the context of a high degree of polycentrism, where information asymmetries are likely to be greater, and where fragmented recipients are in a weaker position to negotiate their needs. (Again, by contrast, in Botswana, virtually all donor funding is coordinated through the National AIDS Control Program.)

Only in Ngqushwa did municipal councilors appear to consult traditional leaders on matters of infectious disease control, and not extensively. Notwithstanding, traditional *healers* are prevalent throughout the region, and citizens often approach such healers first when they fall ill. In interviews, some local councilors mentioned that they try to discourage individuals from using traditional healers for infectious disease counseling; others mentioned programs to try to train healers to refer HIV-positive individuals or those suspected of being sero-positive to clinics for testing or care. One municipal health administrator said, "We have trained like 200-300 healers on STIs and TB and we have trained them to recognize the symptoms and procedures for screening and registering. We are not stopping them from giving treatment but we are asking them to refer patients." Municipal clinics have also tried to work with *Ingcibi* – the traditional healers who perform circumcision rights – to carry out their work in a way that would not put initiates at risk of contracting HIV.

Government authorities have tried to co-opt the traditional sector in order to harmonize information and services, but this implies an investment of resources that would not have been necessary if a single governance authority retained greater control. For example, the leader of one local traditional healers' association concurred, "The government said that traditional health practitioners must be destroyed because we are dangerous, but the people want *sangomas*. [So the government and the healers] built an association to clean their names. [Now] some *sangomas* work with traditional and health department." Reflecting the perceived need to pay respect to the traditional sector, in a 2007 Eastern Cape meeting of the traditional healers association, a Makana mayoral representative, "urged *Sangomas* to continue their research to finding a cure for AIDS" (Lekotjolo, 2007). The association leader concurred, "We are currently engaging with the government to open the doors of clinics and hospitals to have access to our clients."

The civil society sector, including religious organizations and other autonomous civic organizations, plays a substantial role in addressing the threat of infectious diseases. Such non-government organizations have been routinely heralded in their role in the global fight against HIV/AIDS. It was relatively easy to identify a range of NGO's, such as Olive Leaf, which provides prevention and treatment services. They consult with local government, work together on community projects and "AIDS day presentations." Church offices even received instructions directly from the Eastern Cape Department of Health (ECDOH) with directives for particular prevention campaigns.

But the question remains whether these grassroots organizations actually provide a vehicle for *responding to citizen needs* and if their inclusion in the broader governance realm is ultimately beneficial relative to the scenario of having more resources dedicated to a single government entity. A manager of one relatively well funded NGO (a branch of an international NGO) explained that it responds to what funders want them to do, and meanwhile the local government, "wants to be part of our program for their own statistics. They make use of our statistics and they use our work as their work." Meanwhile, that administrator pointed out that funders set different types of goals. For instance, that individual highlighted that the global fund and PEPFAR like to see numbers of outcomes (i.e., number of condoms distributed, people on ARV's, etc.) with little qualitative evaluation, whereas United Nations programs provide disbursements that allow local decision makers greater autonomy. Meanwhile, Eastern Cape representatives of the highly influential activist NGO, the Treatment Action Campaign (TAC), explained that their regional office was to be closed down due to lack of donor support.

The assistant director of another local NGO identified challenges and advantages associated with polycentrism. On the one hand, she explained that inter-government relations were fraught with political competition: "We work with provincial level... (and) in this area there is the district and then there is the municipal level and it is challenging because they each have their own politics. So they have even divided up the clinics so that some report to different people. In the Nelson Mandela area there are district and municipal, provincial and local. The local ones have the political issues… Because of the history, the district was in charge, then the municipality came in. It has to do with Apartheid… It is challenging because sometimes you do not know who the right person to talk to is. Accountability is a challenge overall…" But that same individual highlighted some productive inter-governance relationships: "we do have relations with the district level (a reference to the *provincial* district health provider) Department of Health. We have very good relations, (they) used us to create (a) TB and HIV steering committee. They come out here and do site visits. We just developed a steering committee. Town members and department of health are there, we work closely, but it also depends on the people…It depends a lot on the person if that person leaves sometimes you are literally starting all over."

Even the more optimistic comments suggest that the fragmentation of authority leads to an increased reliance on individual skills and personal relationships, and to a de-institutionalization of professional channels. PG, in allowing for some ambiguities in the assignment of responsibilities may actually place greater demands on the individual professionalism of bureaucrats and service providers than what would be required in a more centralized structure.

Can citizens hold governance authorities accountable?

When confronted with poor services, democratic theory suggests that citizens ought to be able to play an important role in addressing governance failures. But PG may affect citizens' abilities to appropriately credit or blame relevant governance actors. This is consequential for at least two reasons. First, particularly for the control of infectious disease, in order for most policies and actions to be effective, they require a degree of citizen compliance or even sacrifice (Lieberman, 2009). Citizens may need to submit themselves to invasive monitoring procedures, sometimes-undesirable behavior changes, and even temporary loss of liberty. And

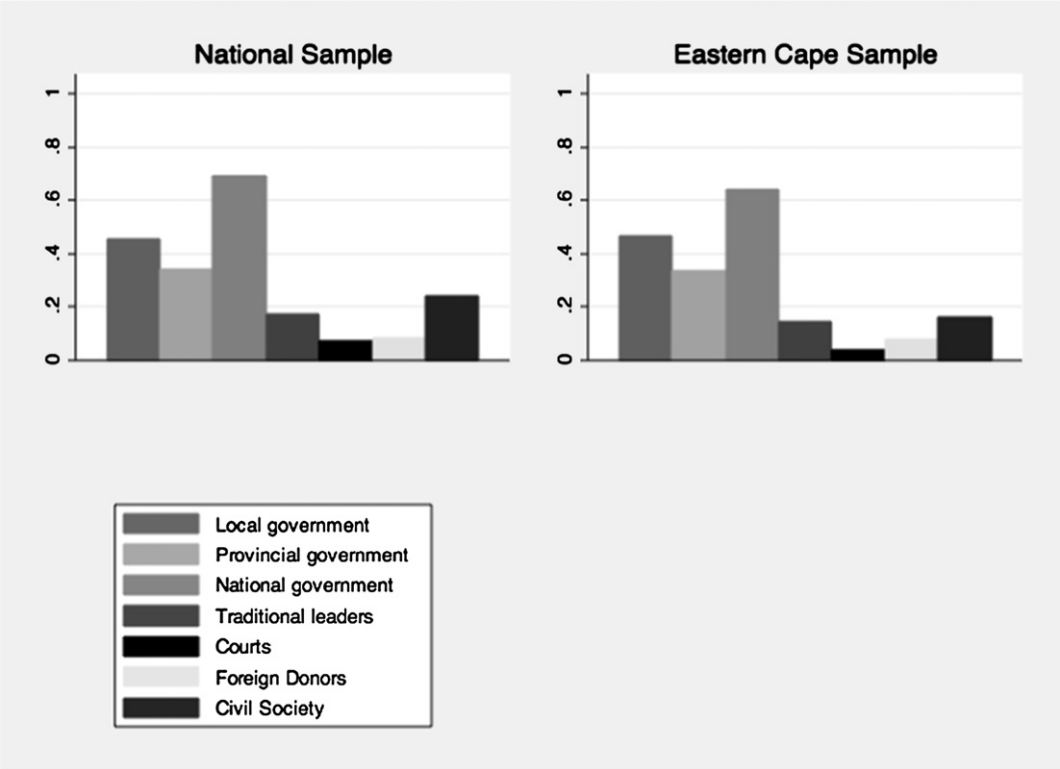

Fig. 4. Citizen Views of Responsibilities for Governance of Infectious Disease Percent of South African Citizens Mentioning a Governance Authority in Response to the Question, "Which authorities should be responsible for addressing HIV/AIDS?" Source: Author analysis of contributed question to 2009 Markinor Omnibus Survey.

citizens are not likely to accept these intrusions from an authority that they do not trust or believe ought to be carrying out that task. Second, and more simply, if citizens engage the wrong authority, they are very unlikely to obtain the intended impact on services.

In order to learn about citizen views on this subject, I submitted the question, "Which authorities should be responsible for addressing HIV/AIDS?," for inclusion on an omnibus (face-to-face) survey conducted by South Africa's leading survey research firm, Markinor. (Sampling procedures, as described by Markinor, are available upon request). The survey was conducted in October 2009 with a nationally representative sample of 3504 adult citizens, and respondents were provided with the same seven options as the councilor survey, and instructed that they could select all that applied.

In Fig. 4, I plot the percent of respondents mentioning each of the authorities as part of their response. This analysis suggests that citizens generally prefer fewer governance authorities than the actual number exerting influence. On average, citizens mentioned only 2.04 authorities nationwide and 1.86 in the Eastern Cape Province out of the seven possible. Moreover, they overwhelmingly responded that addressing HIV/AIDS should be a national government responsibility, with local government as the second most important, despite the fact that provincial government is meant to be the lead sphere for governing health matters. Although foreign donors and civil society play very large roles in governing infectious disease, less than 20 percent of Eastern Cape residents identified them as appropriate authorities.

When viewed in the context of the other findings, this implies that there is a mismatch between how PG functions in South Africa, and what citizens expect. In other contexts, this has proved problematic: For example, in a study of Canadian voters evaluations of healthcare performance by just two governance actors – federal and provincial governments, Cutler (2004) finds that confusion impedes the ability of voters to hold leaders accountable. The situation in South Africa appears much more confusing, and it stands to reason that even in one of the most well functioning democracies in Africa, citizens would have a tough time holding the appropriate leaders accountable for their (in)actions.

Conclusions and future research

Given South Africa's staggering disease burden, it would be tempting to assume that more governance effort in the form of additional governance actors would have positive consequences, particularly in light of other research highlighting the synergistic benefits of related governance structures for other sectors and in other places. And yet, analysis of the governance of infectious disease in South Africa's Eastern Cape Province has put into relief some crucial pathologies associated with polycentrism: Governance actors have strong incentives to free ride on the efforts of others, it is difficult to hold them accountable because multiple actors are responsible for the same tasks, and citizens are ill-informed about who to credit or punish for efforts and outcomes. Simply by pursuing the incentives of career advancement, and trying to solve ongoing problems of balancing resource constraints, even highly professionalized governance actors in a polycentric context may be induced to engage in non-cooperative behavior. Across four distinct municipalities, interviews and news reports revealed numerous examples of service failures, and tendencies likely to exacerbate existing inequalities. Approximately one year following the conclusion of our research in the Eastern Cape, the Provincial government announced its intention to take control of the municipal health clinics, further reflecting the failings of polycentric governance in this context. While the research presented here is insufficient to generate sweeping conclusions about the effects of polycentrism, this study advances extant research on health management by placing a greater focus on citizens and a fuller range of governance actors, especially elected representatives. As an

institution, polycentrism creates several perverse incentives and arrangements.

But much more research is needed to estimate the effects of this institution independent of and in interaction with other variables. Of course, South Africa is a unique case in certain ways, but that could be said about any case, and the challenge is to identify through research which factors are influential and why. By way of conclusion, I identify a few suggestions for further inquiry:

Using surveys similar to the ones developed here, alongside reviews of governance arrangements, one could classify the extent of polycentrism for various sectors across much larger numbers of localities and across countries. With a full range of covariates, performance measures of service delivery, and surveys of accountability perceptions, one could conduct quantitative extensions of the case study presented here. Among the additional factors that would need to be considered in such analyses include: *Fiscal arrangements* – specifically, would PG work differently if governance actors had greater responsibility for securing their own resources? *Political institutions* – would PG work differently in an electoral system where politicians were more directly accountable to voters, and parties had less control? Or could other arrangements be developed to ensure concurrent accountability? T*he ethnic and cultural composition of the polity* – would PG work differently in a more homogeneous setting? *Sectors* – would PG work differently in sectors where the problem is not stigmatized, or where the problem is more obviously "shared," such in the case of natural resource management or transportation?

At the individual-level, using survey, laboratory and/or field experiments, one could test the effects of varying the number of governance authorities on an agent's likelihood of exhibiting cooperative behavior. We also require more research on the perspective of citizens, and how they come to trust some governance authorities and not others for particular tasks.

The challenge of gathering relevant data on governance efforts for multiple actors for a large number of localities is substantial, but will be necessary to better understand the important relationship between governance, health, and human development.

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