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Civil war, contested sovereignty and the limits of global health partnerships: A case study of the Syrian polio outbreak in 2013

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Abstract

States and the World Health Organization (WHO), an *international* organization that is mandated to respect the sovereignty of its member states, are still the leading actors in *global* health. This paper explores how this discrepancy inhibits the ability of global health partnerships to implement programmes in conflict-affected areas that are under the de facto control of rebel organizations. We concentrate on a single crucial case, the polio outbreak in Syria in 2013, analysing a variety of qualitative data—twenty semi-structured interviews with key actors, official documents, and media reports—in order to investigate the events that preceded and followed this event. The WHO's mandate to respect the Syrian government's sovereignty inhibited its ability to prevent, identify and contain the outbreak because the Assad regime refused it permission to operate in rebel-controlled areas. The polio outbreak was identified and contained by organizations operating outside the United Nations (UN) system that disregarded the Syrian government's sovereignty claims and cooperated with the militants. Thus, we identify a serious problem with so-called global health partnerships in which nation states and international organizations remain key actors. Such initiatives function well in situations where there is a capable state that is concerned with the welfare of its citizens and has exclusivity of jurisdiction over its territory. But they can encounter difficulties in areas where rebels challenge the state's sovereignty. Although the response to the Syrian polio outbreak was ultimately effective, it was reactive, ad hoc, slow and relied on personnel who had little experience. Global health partnerships would be more effective in conflict-affected areas if they put in place proactive and institutionalized plans to implement their programmes in regions outside government control.

Keywords: Civil war, global health partnerships, polio eradication, sovereignty, Syria

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Key Messages

- The WHO's mandate to respect the Syrian government's sovereignty inhibited its ability to prevent, identify and contain the polio outbreak in Syria in 2013.
- The polio outbreak was identified and contained by organizations that disregarded the Syrian government's sovereignty claims and cooperated with the militants. Although these organizations were ultimately effective, they were reactive, ad hoc, slow and relied on with limited experience personnel.
- Global health partnerships would benefit from putting in place proactive and institutionalized plans to implement their programmes in conflict-affect areas that are outside government control.

Introduction

According to the most recent data, there were 39 ongoing civil wars in the world in 2014, the highest number since 1999, and these conflicts caused the largest annual number of deaths since the end of the Cold War (Themnér and Wallensteen 2015). It is widely acknowledged that intrastate conflicts pose major problems for public health: they divert resources away from healthcare, destroy healthcare infrastructure, and lead to forced migration into crowded and unsanitary conditions (Ghobarah *et al.* 2004). This paper considers a question that has been largely overlooked by public health scholars: How does the situation of contested sovereignty that arises in rebel-controlled areas affect the ability of global health actors to implement public health programmes? We analyse this issue by focussing on the events preceding and following the polio outbreak that occurred in opposition-controlled areas of Syria in 2013.

The article proceeds as follows. The rest of this section sets out how the current international-cum-global health system, in which national governments and international organizations remain key actors, is ill-suited to implementing public health programmes in areas controlled by militant groups that challenge the sovereignty of incumbent state. The second section discusses methods and case selection. Third, we analyse a variety of qualitative data to demonstrate that the Syrian government and WHO failed to prevent, detect or contain the polio outbreak that occurred in Syria in 2013. Rather, the polio outbreak was detected and contained by a variety of organizations that disregarded the Assad regime's sovereignty claims and cooperated with the rebels. We conclude by considering the policy implication of our analysis.

Sovereignty and public health

Sovereignty is a central tenet of international law and international relations (Brownlie and Baker 1990, Watson 2009). It refers to the idea that the state has a monopoly of the legitimate means of violence and exclusivity of jurisdiction in a particular territory (Weber 1968). The Westphalian system—the dominant, and until the last couple of decades unrivalled, model for international politics—is based on the idea that sovereign states are the only legitimate actors in international politics (Brownlie and Baker 1990, Watson 2009).

The international system of public health that evolved from the mid-19th century onwards embodied the core assumptions of the Westphalian system (Fidler 2003). The WHO, the key actor in international health since it was established in 1948, is a specialized agency of the UN. As such, it is mandated to respect the norm that national governments are the primary decision makers in international politics and the principal representatives of their populations' interests (Frenk and Moon 2013). The original (1969) International Health Regulations (IHRs)—the WHO's legal framework for governing infectious disease control—upheld the inviolability of its members' sovereignty even when this negatively affected the WHO's ability to detect and contain outbreaks of infectious disease (Fidler 2004). For example, the system of global epidemiological surveillance was not allowed to utilize information from nongovernmental sources (Fidler 2003, 2004). This inhibited the WHO's ability to respond to disease outbreaks in situations where a government refused to notify it (Fidler and Gostin 2006).

In the 1990s academics and practitioners began to argue that the Westphalian system of public health needed to be reformed because of the new challenges posed by globalization (Frenk and Moon 2013, Brown *et al.* 2006, Fidler and Gostin 2006, Fried *et al.* 2010, Yach and Bettcher 1998). These challenges are fundamentally related to sovereignty: the ability of the state and international organizations such the WHO to deal with health challenges were seen to have been undermined by the increasingly global flow of people and the growing strength of non-state actors such as multinational corporations, nongovernmental organizations and philanthropic foundations. This created a discrepancy between the WHO's mandate to respect the sovereignty of its member states and its mission to facilitate 'the attainment by all peoples of the highest possible level of health' (WHO 2006).

The fundamental aim of global health is to put the 'health needs of the people of the whole planet above the concerns of particular nations' (Brown *et al.* 2006). There is broad agreement that in a globalized world this objective can most effectively be achieved through a system of global health governance in which a variety of state and non-state actors work together to manage global health (Youde 2012). As a result, in the words of the 2010 *World Health Report*, global health governance 'entails a diminution of state sovereignty to benefit the world's population' (Gostin *et al.* 2010).

The WHO has attempted to adapt to this changing reality by revising the IHRs. After a ten year process the World Health Assembly (WHA) adopted new IHRs in 2005. They aimed to address concerns that the old regulations were not suitable for dealing with the resurgence of infectious diseases, especially in countries that did not have the capacity or political will to act (Fidler and Gostin 2006). The new IHRs subvert the sovereignty of member states in a number of ways. For example, they allow the WHO to use epidemiological information from non-state actors in order to improve the effectiveness of the global surveillance system (Fidler 2004, Fidler and Gostin 2006). Moreover, the new IHRs require member states to maintain core surveillance and response capacities throughout their territories, rather than just at points of entry and exit (Fidler 2004, Fidler and Gostin 2006). It is apparent that the new IHRs have attempted to improve effectiveness of the global system of infectious disease control by subverting Westphalian norms, both through embracing the inputs of non-state actors and setting out the domestic responsibilities of its member states.

The WHO has also had to react to challenges to its monopoly of authority over international and global health issues. Intergovernmental organizations such as the World Bank, influential donor states, most notably the USA, and nascent philanthropic funds including the Gates Foundation became dissatisfied with the WHO's horizontal, state-centred approach (Morse and Keohane 2014). These increasingly influential global health actors advocated vertical, disease-orientated approaches that made use of public-private partnerships and performance-based funding models. As a result, a variety of global health partnerships were created: for example, the Global Polio Eradication Initiative (GPEI) (in 1988), Global Alliance for Vaccines and Immunization (in 2000), and the Global Fund to Fight AIDS, Tuberculosis and Malaria (in 2002). Global health partnerships bring together traditional actors such as national government and international organizations with non-state actors such as corporations, NGOs and philanthropic foundations, in order to achieve specific targets. They have been credited with giving rise to new resources, business models and a sense of urgency in addressing specific global health problems (Buse and Harmer 2007). Thus, the WHO's role changed and it became "a coordinator, strategic planner, and leader of 'global health' initiatives" (Brown *et al.* 2006).

We have described how the WHO has adapted to a changing situation in which non-state actors' power has increased and states have been emasculated. Notwithstanding these changes, the global system of infectious disease control is still dominated by national states and the WHO, which is mandated to respect the sovereignty of its member states. The new IHRs allow the WHO to declare a

public health emergency of international concern but still the WHO can only issue states with *non-binding* recommendations regarding their response (Fidler and Gostin 2006). And although the GPEI includes a variety of private and public non-state actors, the World Health Assembly sets its agenda and its campaigns are, in theory at least, led by national governments (GPEI 2016). It is apparent that to a large extent the system of so-called global health governance remains beholden to Westphalian norms.

Global health governance in areas of contested sovereignty

It seems apparent that the global health critique of the international system of public health is overly narrow because, by identifying globalization as the principal challenge to Westphalian public health, it overlooks other important problems. The sovereign state is a concept that does not (and never did) accurately reflect the political reality in much of the Global South (Hansen and Stepputat 2001). This is important because less-developed countries account for a disproportionate amount of the global burden of disease and comprise the primary focus of global health (Brown 2006, Frenk and Moon 2013, Fidler and Gostin 2006, Fried 2010, Yach and Bettcher 1998). Colonial administrators imposed the structure of the modern state on territories that encompass a variety of ethnic, religious and linguistic loyalties. Many postcolonial states do not represent the interests of all of these groups and this leads to various forms of political conflict (Hansen and Stepputat 2001). In the most extreme cases the state's monopoly over the means of violence and exclusivity of jurisdiction is challenged by armed militant organizations, resulting in civil war—or what social scientists call dual or multiple sovereignty (Tilly 1978).

There is widespread agreement that civil war has negative health outcomes beyond the direct effects of violence (Ghobarah *et al.* 2004). But public health scholars have overlooked the manner in which the situation of contested sovereignty might reveal tensions in the international-cum-global health system. In rebel-controlled areas there is a distinction between the internationally recognized sovereign and the political organization that is actually in control of a territory. It seems likely that global health partnerships will encounter problems implementing public health programmes in areas where militants are the de facto sovereigns because of the continued dominant role of internationally recognized regimes and the WHO, which is mandated to respect their de jure sovereignty.

The WHO's management of humanitarian emergencies has changed significantly in recent years. In 2013, the WHO published the Emergency Response Framework (ERF), which sets out how it should respond to all types of humanitarian emergencies—including civil wars (WHO 2013). The ERF was designed to learn the lessons from recent interventions in Haiti, Pakistan, Libya, the Horn of Africa, the Sahel and Syria. It reiterates the WHO's leading role in such situations, as set out in its constitution and various WHA resolutions. Its responsibilities include providing technical guidance on health issues, leading and coordinating the 'cluster' of health care providers, ensuring the provision of health services through partners, and acting as the health service provider of a last resort (WHO 2013). The latter role is becoming increasingly important given the decreasing number of healthcare providers willing to work in emergencies as a result of increased security risks and higher operational costs (WHO 2014).

The Syrian health crisis has been categorized as Grade 3 emergency by the WHO, the highest according to the ERF based on its scale, complexity, urgency, and political, social or economic impact (WHO 2013). A grade 3 level emergency denotes an event with substantial public health consequences that requires a substantial response from the WHO. In such situations the WHO are required to 'act with urgency and predictability to best serve and be accountable to populations affected by emergencies' (WHO 2013) .

The ERF overlooks the potential problems that the WHO might encounter when attempting to provide health programmes in areas controlled by rebel organizations. The ERF reiterates Westphalian norms, emphasizing the role of the internationally recognized regime in resolving an emergency: its stated aim is to support 'Member States to prepare for, respond to and recover from emergencies with public health consequences' (WHO 2013). On the other hand, the ERF aims: 'To ensure an effective and timely health sector response... with special attention to vulnerable and marginalized groups' (WHO 2013). These quotes emphasize *both* the WHO's duty to support its member states and its aim to protect the people most affected by emergencies such as civil wars. But they do not show any awareness that these aims might be incompatible in civil war affected regions where the vulnerable and marginalized populations live outside the control of the internationally recognized regime. Thus, the ERF does not address how the specific political complexities that occur in civil wars—*i.e.* the situation of contested sovereignty—will affect the WHO's ability to perform its roles. In doing so, it potentially sets the WHO up to contradict its own humanitarian principles of 'humanity, impartiality and neutrality' because it is structured in a way that favours communities living in areas that are under government control (WHO 2008).

Methods

Case selection

This paper investigates how the situation of contested sovereignty affects the ability of the international-cum-global health system to provide public health programmes in rebel-controlled areas. In order to understand this issue we concentrate on a crucial case, analysing the events that preceded and followed the polio outbreak that occurred in Syria in 2013. There are two main reasons why it is a crucial case for understanding this issue.

First, the GPEI is one of the biggest and most successful global health partnerships in history (UNICEF undated). In the mid-1980s, there were 350 000 polio cases each year. The GPEI was founded in 1988 with the aim of eradicating polio by 2000. The GPEI's strategy of mass immunization programmes, surveillance and mopping-up campaigns has not eradicated polio but led to a marked decline (GPEI undated b)—there were 359 cases in 2014 and 74 cases in 2015 (WHO 2015). Nevertheless, in the past few years the GPEI has struggled to eradicate polio in conflict-affected areas. The GPEI's literature states that it is 'a public-private partnership led by national governments and spearheaded by the World Health Organization (WHO), Rotary International, the US Centers for Disease Control and Prevention (CDC), and the United Nations Children's Fund (UNICEF)' (GPEI undated a). It now also involves partners such as the Gates Foundation. It should be noted that the GPEI's portrayal of the national governments' role may not be entirely accurate, especially in the cases of postcolonial states. For example, Lori Leonard analyses the GPEI in Chad and concludes that the polio eradication programmes are devised and driven by global health actors who pressure national governments with limited legitimacy, authority and ability to govern into compliance (Leonard 2011).

Second, the Syrian Civil War is the most destructive intra-state conflict of recent years and has resulted in the deaths of over a

quarter of a million people (UN Security Council 2015). The front-lines of the conflict are dynamic but it is clear that the internationally recognized regime has lost control of a significant proportion of its territory and population. In July 2015, President Assad claimed that the government no longer had authority over about two-thirds of the territory and half of the population (BBC 2015). The Syrian Civil War has brought about a situation of contested sovereignty in which government forces control the vast majority of the urban areas, the coast, the mountainous region bordering Lebanon and parts of the south while a diverse group of rebel organizations including the Free Syria Army (FSA), Islamists such as so-called Islamic State and Al-Nusra Front, and the Kurdish People's Protection Units are the de facto political leaders in the north, east and parts of the south (Slim and Trombetta 2014).

Data

In order to investigate this crucial case we analyse a variety of qualitative data. The events that preceded and followed the 2013 polio outbreak in Syria have been the subject of fierce debate between the WHO(WHO undated) and its critics in the media and academia who accuse it of colluding with the Assad regime (Coutts and Fouad 2014, Reuter 2013, Sparrow 2014). We consider both sides of the argument and attempt to clarify areas of contention. First, in order to get a broad overview of the Syrian polio outbreak, we conducted a desk review of articles on the subject that have been published in academic journals and appeared in the media, as well as documents produced by intergovernmental organizations such as the WHO and nongovernmental organizations operating in rebel-controlled areas of Syria. Second, we identified key informants and carried out semi-structured interviews with a purposive sample of twenty of them. The interviewees worked for organizations that are involved in the provision of healthcare in rebel-controlled areas of Syria. They had leadership roles and/or operational experience. Five of the interviews were with intergovernmental organizations (e.g. UN organizations), five were with international non-governmental organizations and ten were with local non-governmental organizations (i.e. organizations led Syrian diaspora). Half of the interviews were carried out in Beirut, Lebanon and the other half in Gazientep, Turkey. The informants asked to remain anonymous due to the sensitive and ongoing nature of the topic. We would like to have interviewed informants from the Syrian and Turkish state but the potential interviewees did not respond to our communications.

Results and Discussion

The Syrian Civil War

Modern Syria was created from the remains of the Ottoman Empire. In 1920, France was given the mandate over 'Northern Syria', a diverse territory including present-day Lebanon and Syria. At first the territories were divided along religious lines. With the exception of Greater Lebanon, which became present-day Lebanon, and the Sanjak of Alexandretta, which was transferred to Turkey, the states merged to form what became the independent Syrian Republic in 1946. It must be noted that the national borders of the modern Syrian state are a political construction that encompass a variety of religious groups, many of which have strong links with their coreligionists in neighbouring countries (Slim and Trombetta 2014).

Hafez al-Assad, who was Syrian president from 1971 to 2000, and his son Bashar, who took over after his death, have dominated national politics for four and a half decades. The Assads are members of the Alawite minority that accounts for a tenth of the Syrian population (Slim and Trombetta 2014). They maintained their control over Syrian society, which is 70% Sunni, with a combination of coercion and co-option: by controlling the Ba'ath Party, the state's security services and army through people who are tied to them by family or patronage links; and by co-opting rural Sunni leaders—although the Sunni leaders were increasingly sidelined by Bashar (Slim and Trombetta 2014).

The Syrian conflict began with peaceful protests in early 2011, which formed part of the so-called Arab Spring. The protests were driven by a variety of factors that generated grievances against the Assad regime's authoritarian rule. These included increased poverty as a result of the liberalization of the Syrian economy and cutting back of state subsidies, widespread corruption among the well-connected economic and political elite, and the state's failure to respond adequately to the severe drought that wrecked the livelihoods of hundreds of thousands of farmers in northeast Syria between 2006 and 2010 (de Châtel 2014). The Assad regime responded to the protests with violent repression. As a result, the uprising turned into a militarized conflict towards the end of 2011. The first major armed opposition group was the FSA, an umbrella movement that mainly consisted of Sunni defectors from the government's Syrian Arab Army (Slim and Trombetta 2014) .

From the summer of 2012 the armed resistance evolved into a sectarian conflict with regional dimensions (Matthiesen 2013, Slim and Trombetta 2014, UNHCR 2012). On the one side is the Alawite minority, supported by Shi'ia Hezbollah and Iran. Alawites are not Shi'ia but the Assad regime has formed a mutually beneficial relationship with Hezbollah and Iran that 'uses religious symbols and sectarian language but it is driven far more by geo-strategic interests than faith' (Matthiesen 2013). Since the start of the conflict the Syrian government deliberately attacked Sunni sacred places in order to give opponents the impression that they were Sunnis being targeted by an Alawite army (Matthiesen 2013). The other side is the Sunni majority, who receive financial, logistical and military support from institutional and private actors in the Arab Gulf countries including Saudi Arabia, Qatar, Kuwait and Turkey (Matthiesen 2013, Slim and Trombetta 2014, UNHCR 2012). Sunni Islamists have become increasingly dominant in rebel-controlled areas and this process accelerated in early 2013 when so-called Islamic State crossed from al-Anbar in Iraq into eastern Syria.

The Syrian health system

Prior to the onset of conflict Syria had a well-functioning health system (Sen and Faisal 2015). The right to comprehensive health coverage is guaranteed by the Syrian Constitution. Historically the state provided universal free access to healthcare and emphasized primary care, health promotion and disease prevention. At the time the conflict began, the government was in the process of privatizing the most profitable elements of the health system and introducing charges for public services (Sen and al Faisal 2012).

In 2011 Syria had some of the best health indicators of the region in relation to per capita expenditure (Sen and Faisal 2015). The conflict resulted in a complete reversal of health gains of the previous three decades. Life expectancy has fallen from 75.9 years in 2010 (one of the highest figures in the Middle East) to 55.7 years in 2014 (Syrian Centre for Policy Research 2013). There have been outbreaks of infectious diseases including polio, measles, typhoid, hepatitis, cholera, dysentery, tuberculosis, diphtheria, whooping cough and leishmaniosis (Cousins 2014, Sparrow 2014).

Most accounts see the Syrian health crisis as a result of destruction and disruption of the healthcare system and the displacement of a large number of people (Coutts et al. 2013)—i.e. the same factors

stressed by more general accounts of the health consequences of civil war (Ghobarah *et al.* 2004). These factors are certainly important. The civil war resulted in the collapse of the health system in rebel-controlled areas: by March 2014 an estimated 60% of hospitals had been destroyed and two thirds of health centres were not functioning (Slim and Trombetta 2014). To a large extent this was the result of a deliberate government strategy. Further, 11.5 million people—more than half the population—have been displaced and many of these now live in crowded and insanitary conditions (UNHCR 2015).

In what remains of this section we consider an issue that has been largely overlooked by accounts of the Syrian health crisis as well the more general accounts of the effect of civil war on health outcomes: whether the situation of contested sovereignty impaired global health actors' ability to prevent, detect and contain infectious diseases in rebel-controlled areas. We analyse the events that preceded and followed the 2013 polio outbreak in Syria, concentrating on the GPEI's strategy of mass immunization programmes, surveillance and mopping-up campaigns.

Mass immunization programmes

A cornerstone of the GPEI's strategy is to ensure high immunization coverage (GPEI undated b).

Broadly speaking, children do not contract polio where vaccination programmes are carried out. As noted above, the WHO has a close relationship with its member states. WHO Syria's offices are located within the Ministry of Health (MoH) building in Damascus and its staff are former employees of the MoH (Coutts and Fouad 2014). Until the beginning of the uprising in 2011, the Assad regime worked with the WHO to provide universal and free vaccinations through the Expanded Programme on Immunization (Sparrow 2014). This was successful at minimizing the incidence of vaccine-preventable diseases—for example, there had been no new polio cases in Syria since 1999 (WHO 2015).

The close relationship between the WHO and its member states is potentially problematic in conflicts in which the state is a warring party. The Syrian government has maintained its pre-2011 policy of tightly controlling the operations of non-governmental and intergovernmental organizations throughout the country, and it has consistently limited humanitarian access to rebel-controlled areas (Slim and Trombetta 2014). In 2012, the Syrian Government and UN agencies agreed that the Syrian Arab Red Crescent (SARC) —whose leadership is appointed by Assad—would coordinate the humanitarian response in all of Syria (Slim and Trombetta 2014). This arrangement gave the Syrian government sole authority over the provision of humanitarian supplies and excluded the possibility of UN agencies collaborating with the de facto political leaders in rebel-controlled areas. In theory the SARC allowed humanitarian aid, including medical supplies, to be transported into rebel-controlled areas across the frontlines. But in practice this was difficult due to bureaucratic obstacles put in place by the SARC and the intensity of the conflict. The SARC would not, however, allow the transportation of humanitarian aid across international borders into rebel-controlled areas (Slim and Trombetta 2014). The reluctance to authorize the cross-border movement of humanitarian aid reflects the Assad regime's concerns about its sovereignty being subverted. But it does not reflect the reality that it would be most effective for humanitarian organizations to cooperate with rebel organizations and supply opposition-held areas from neighbouring countries. Nor does it reflect the fact that there is a long history of movement of people and goods across the Syrian border: for example, between

the eastern region of Deir ez-Zor with al-Anbar in Iraq and the northern areas of Aleppo, Raqqa and Idlib with southern Anatolia (Slim and Trombetta 2014).

The government claimed that it continued to carry out vaccinations in rebel-controlled areas after the civil war began (Whewell 2014, Roberts 2014, WHO undated). A number of investigative journalists and public health scholars argue that the vaccination programmes ceased to operate when the government lost control of these areas (Coutts and Fouad 2014, Reuter 2013, Sparrow 2014). None of my interviewees could confirm the government account but several interviewees who had worked extensively in rebel-controlled areas categorically stated that the government did not conduct vaccination campaigns in areas under opposition control. What is more, the Assad regime refused to allow the WHO and other UN agencies to operate in rebel-controlled areas. The WHO complied because as Elizabeth Hoff, head of WHO Syria, points out, 'WHO within a sovereign country has to accept the government's position' (sic) (Sparrow 2014). This quote neatly illustrates the WHO's structural inability to distinguish between the de jure and de facto sovereigns in the rebel-controlled areas of Syria. Bruce Aylward, the WHO Assistant Director-General for polio, states that the 'WHO doesn't make decisions about who gets vaccinated where. These are national decisions by governments' (Roberts 2014). This demonstrates the WHO's impotence to act to benefit the health of marginalized communities in situations were the internationally recognized regime is unwilling to cooperate.

Statistics on vaccination coverage are problematic because of the enormous numbers of people displaced by the conflict. Nevertheless, the available UN and MoH data suggest vaccination rates dropped markedly after the onset of conflict. UNICEF and WHO estimate that the polio vaccination rate for two-year-olds fell from 83% at the outset of the conflict in 2011 to 52% in 2012 and MoH figures suggest that the vaccination rate has dropped from 99% to 68% in this period (Sparrow 2014). The vast majority of this fall in vaccination rates is accounted for by unvaccinated children in rebel-controlled areas (Sahloul *et al.* 2014). In October 2013 the International Monitoring Board of the GPEI stated that Syria was at 'highest risk of a polio outbreak' (International Monitoring Board 2013). In the same month, it was confirmed that there was a polio outbreak in the militant-controlled governorate of Deir ez-Zor in eastern Syria. Polio spread to other parts of northern and eastern Syria. All cases occurred in rebel-controlled areas where the national government and the WHO had ceased to operate (Roberts 2014, Sparrow 2014). According to official WHO figures the outbreak consisted of 36 cases (WHO 2015), although the actual number is contested as the surveillance system was not functioning perfectly and the WHO policy of defining a polio case as a laboratory confirmation is not appropriate in a civil war context (Sparrow 2014, Roberts 2014). It has been argued that the actual number of cases is probably at least three times that figure due to underreporting by the Syrian government and WHO (Sparrow 2014).

All UN agencies faced problems with moving aid across the frontline into rebel-controlled areas, but the WHO has come in for particular criticism (Coutts and Fouad 2014, Coutts *et al.* 2014, Sahloul *et al.* 2014, Sparrow 2014, WHO undated). It is interesting to note the World Food Programme (WFP) has been relatively more effective at reaching conflict affected areas. For example, although they also faced occasional interruptions due to the security situation, the WFP was able to deliver cross-line aid to Deir ez-Zor throughout 2012 and 2013. At the same time the WHO failed to deliver aid to the same area because it claimed that the majority of the population

had 'relocated to other areas' (Coutts and Fouad 2014). The reason for this inconsistency is unclear, but it has been suggested that the relative closeness of the WHO to the Syrian government made them more likely to follow their diktats to the letter and therefore less able to act in the best interests of the population in rebel-controlled areas (Coutts and Fouad 2014, Sahloul 2014).

Surveillance

An effective surveillance network is crucial for polio eradication because it allows health authorities to detect, respond to and control outbreaks (GPEI undated b). Prior to the onset of civil war Syria had an effective surveillance system (Sen and Faisal 2015). As a result of the health challenges posed by the civil war the WHO and MoH established an early warning and response system (EWARS) to 'strengthen the national surveillance system' for infectious diseases including polio in 2012 (Muhjazi 2013). The WHO and MoH claimed that EWARS functioned across all 14 governorates of Syria (Muhjazi 2013). Nevertheless, several interviewees suggested that EWARS did not operate in areas outside of government control. This is corroborated by the fact that in Spring 2013 a variety of actors helped to set up another early warning system to identify outbreaks of infectious diseases—this time called EWARN—in rebel-controlled areas. The leading organization was the Assistance Coordination Unit (ACU), which was formed in December 2012 by an alliance of moderate opposition groups that includes the FSA in order to organize humanitarian efforts in areas outside the control of the Syrian state (ACU 2015a). EWARN received funding from the Gates Foundation and Italian and Qatari governments, and technical assistance from the CDC (ACU 2015b). Several interviewees informed us that the WHO also provided technical assistance, but we have not come across written evidence of this—most probably because the WHO wanted to maintain a low profile in order to avoid upsetting the Assad regime. In June 2013 the EWARN surveillance system was launched in opposition-held areas of north and areas of Syria (ACU 2015b). (It continues to operate in rebel-controlled areas, including those controlled by so-called Islamic State.) The presence of two surveillance systems, EWARS in government controlled areas and EWARN in areas outside of government control, lucidly demonstrates how the situation of contested sovereignty brought about by the Syrian Civil War has impacted the public health system.

Doctors working for the EWARN identified several cases of acute flaccid paralysis around Deir ez-Zor in September 2013—*i.e.* two months after the system was set up (Reuter 2013). Field officers are provided with satellite telephones to report information from the sentinel sites in Syria to the EWARN headquarters in Gaziantep, southern Turkey (Reuter 2013). In cases of acute flaccid paralysis they also sent a short video via WhatsApp to the headquarters. An ACU emergency response team travelled from Gazientep to the area to gather stool samples, which were then taken to be tested in a hospital in Gaziantep that was recommended by the CDC. It is alleged that the WHO forbade the hospital from testing the samples, ostensibly because they had been taken out of the Eastern Mediterranean region without the government's permission (Reuter 2013). The WHO's response to this allegation was opaque and framed in terms of respecting the wishes of the Syrian state (WHO undated). The Turkish government stepped in and organized for the samples to be analysed in Ankara with the assistance of CDC, who confirmed the presence of polio on October 17th (Sparrow 2014). The MoH then acknowledged the outbreak and the WHO followed suit twelve days later. Genetic analysis suggests that the virus had been circulating

for up to a year before it was detected (International Monitoring Board 2014).

It is apparent that the Syrian government and the WHO did not help to detect the Syrian polio outbreak. Polio was only identified because a variety of actors—the insurgent-run ACU, the CDC, Gates Foundation, Qatari government and Turkish authorities—disregarded the Syrian state's claims to exclusivity of jurisdiction by setting up a surveillance system in rebel-controlled areas, and then taking and testing samples in order to confirm the polio outbreak.

Mopping up

Mopping-up campaigns—targeted immunization drives in polio-affected areas—are another pillar of the GPEI's strategy (GPEI undated b).

The situation of dual sovereignty meant that the WHO was unable to access areas affected by the polio outbreak. In early 2013 it became apparent that cross-line movement of humanitarian aid from regime-controlled areas to those held by the rebels was ineffective (Slim and Trombetta 2014). The Assad regime continued to refuse the WHO permission to access to these areas from neighbouring countries. Both Valerie Amos, the UN's humanitarian chief, and Bruce Aylward, explicitly state that cross-border aid was not possible because it was a 'red line' for the Assad regime (Reuter 2013, Sparrow 2014). It is interesting to note that beginning in November 2013 the WHO vaccinated over 23 million children in government-controlled areas of Syria and neighbouring countries (WHO 2013). This has been described as the 'biggest polio outbreak response ever attempted in the Middle East' (Roberts 2014). It demonstrates that the WHO acted decisively to stop the outbreak spreading in countries and areas where the national government allowed it to operate.

Efforts to contain the polio outbreak within rebel-controlled areas were carried out by organizations that worked outside the restrictive structures of the UN system. The Polio Control Task Force (PCTF), an *ad hoc* coalition led by the ACU and consisting of several NGOs, such as the Syrian American Medical Society, was formed in November 2013 to coordinate the response to the outbreak (Cousins 2014, Root 2014). Several of my interviewees reported that a handful of WHO staff were present in Gazientep to provide technical support to the PCTF at the beginning but that they did not make their presence public in order to avoid provoking the Assad regime.

At first the PCTF's activities were hindered by lack of vaccines. It is alleged that the Assad regime, the WHO and UNICEF all refused to provide vaccines, and that when the Dutch chapter of *Médecins sans Frontières* attempted to buy vaccines directly from the manufacturer on the PCTF's behalf, UNICEF, under pressure from the Assad regime, blocked the transaction (Sparrow 2014). It has been reported that the Turkish government overcame the impasse by facilitating the provision of polio vaccines in the first instance (Roberts 2014, Sparrow 2014). But several interviewees stated that UNICEF was ultimately responsible for supplying the vaccines—and continued to provide them for subsequent rounds of vaccination.

The immunization campaign in insurgent-controlled areas began on 2nd January 2014. Thus, it was not until more than two months after the polio outbreak was confirmed that an effective response was organized (Motlagh 2015, Root 2014)—compared to about two weeks in government-controlled areas and neighbouring countries where the WHO could operate unimpeded. The Turkish Red Crescent transported the vaccines over the Turkish-Syrian border to the PCTF central warehouse in Syria. From there the vaccines were distributed via a cold chain network that operated across the seven

rebel-controlled governorates through warehouses in each Governorate and District. The vaccines end up at Team Support Centres from where they are distributed by the 7,000 vaccinators, who were paid $42 for a six day week (Coutts and Fouad 2014).

The PCTF can only operate with the agreement of the various rebel organizations that exert political power at the local level. Their cooperation is achieved in several ways. One is the decentralized model for hiring vaccinators. The vaccinators are not, generally speaking, medically trained but are educated people who are recruited from the local area. One of the most important criteria is that they must be trusted by both the community and the militants. Another is the way in which the PCTF employed different strategies to deliver the vaccines depending on which rebel group was in control. In non-IS areas the vaccinators went from door-to-door offering to vaccinate children. This is seen as best practice. But IS would not allow the PCTF this freedom, so they had to inform local inhabitants that they would be offering vaccinations at specific centres. In this situation the PCTF-employed community mobilizers play a crucial role in informing the parents of the location of the vaccination centre and persuading them to bring their children.

Broadly speaking, the insurgent organizations—even Islamic State—allowed polio workers to operate unhindered (Motlagh 2015, Root 2014, Sparrow 2014). By April 2015 the PCTF's claimed to have carried out eight rounds of vaccinations, immunizing between 1.3 and 1.4 million children and achieving coverage of 90% (Motlagh 2015, ACU 2015c). The PCTF's activities were successful—the last confirmed polio case was reported on 21st January 2014 (Syrian Interim Government 2015). This outcome was only possible because a variety of organizations disregarded the Assad regime's claim to sovereignty and worked together to implement a mopping up campaign in rebel-controlled areas.

Epilogue

In July 2014 the UN Security Council passed Resolution 2165, which allowed the movement of aid across international borders and conflict lines without the agreement of the Syrian government (UN Security Council 2014). This was initially for a period of 180 days, but was extended by Resolutions 2191 and 2258. The legislation came too late to allow the WHO to play an active role in the efforts to prevent and contain the polio outbreak. It can, nevertheless, be interpreted as an admission by the UN that its mandate to respect the Syrian government's sovereignty has been detrimental to the provision of public health programmes and other humanitarian assistance in insurgent-controlled areas. My interviewees reported that the legislation has made it much easier for the WHO because they now have an official right to assist with the efforts to rebuild the health system in rebel-controlled areas of Syria. The WHO plays a key role in the health cluster—the umbrella organization that coordinates the activities of various actors working to improve the health system in rebel-controlled areas of Syria. The health cluster is led by WHO staff and their meetings take place at the WHO's new offices in Gazientep. This is highly significant because WHO officials based in Turkey are finally disregarding the sovereignty claims of the Assad regime to lead cross-border initiatives in opposition-held areas of Syria. In other words, the WHO is now putting the health needs of marginalized communities in Syria ahead of the sovereignty claims of the Syrian government.

Conclusions

This paper began by pointing out that the leading actor in *global* health—the WHO—is an *international* organization. We then considered how this discrepancy affected global health partnerships' ability to provide health programmes in conflict-affected areas where militants challenge state sovereignty. Our analysis demonstrated that the WHO's mandate to respect the de jure sovereignty of the Assad regime inhibited its ability to prevent and contain the polio outbreak that occurred in insurgent-controlled areas of Syria in 2013.

Both before and after the outbreak the WHO was unable to undertake vaccination programmes in rebel-controlled areas because the Syrian government refused it permission to operate there. Polio was instead identified and contained by organizations working outside the UN system that disregarded the Syrian government's claims to exclusivity of jurisdiction over rebel-controlled areas and cooperated with the insurgents. The surveillance system set up by the ACU, with the support of the CDC, Gates Foundation, and Qatari and Italian governments identified the first suspected polio cases. The samples collected by ACU doctors were confirmed to be polio because the Turkish authorities and CDC arranged for them to be tested. The outbreak was contained because the ACU, with the help of the Turkish government, Turkish Red Crescent and a variety of local NGOs, organized an immunization campaign in rebel-controlled areas.

On the whole the GPEI must be considered a remarkable success. Since it began in 1988, polio cases have fallen by 99%. But the GPEI has struggled to eradicate the final 1% of cases. The areas where polio remains endemic—northwest Pakistan, eastern Afghanistan—and those that have experienced recent outbreaks—such as northern and eastern Syrian and southern Somalia—have been under the control of militants (Kennedy *et al* 2015, Kennedy and Michailidou 2015). This paper demonstrated that the GPEI is not suited to the provision of healthcare programmes in militant-controlled areas. This is because the GPEI, as well as other so-called global health partnerships, still rely on national governments and international organizations such as the WHO to implement their programmes. This is not a problem where the state has a monopoly of the means of violence and exclusivity of jurisdiction. But it is highly problematic in conflict-affected areas where armed militants challenge the state's sovereignty. In such situations, there is a discrepancy between the mission of global health—to facilitate the attainment of the highest possible level of health by all people regardless of where they live—and the mandate of its lead-organization—the WHO—to respect the de jure sovereignty of its member states. This mandate also inhibits the WHO's ability to act in accordance with humanitarian principles of "humanity, impartiality and neutrality" because it restricts the WHO's ability to provide health programmes to communities living in militant-controlled areas.

A variety of actors eventually stepped in to fill the void created by the unwillingness and inability of the Syrian state and international actors to operate in rebel-controlled areas. But the response was reactive, ad hoc, and relied on personnel who had little experience. The response was much slower in these areas than those where the WHO could operate unimpeded. The people we interviewed who worked to rebuild the health system in rebel-controlled areas seemed to be well meaning but admitted to having little or no experience of administering NGOs when the conflict began and complained that, at least in the beginning, they only received sporadic support from global health actors.

It seems apparent that global health partnerships should learn from the experiences of the Syrian Civil War and put in place proactive and institutionalized plans to implement their programmes in conflict-affected areas where they cannot rely on the assistance of national governments or the WHO in its present state. The aim must

be to enable global health partnerships to fulfil the mission of global health and improve the health of all people regardless of whether they live in peaceful or conflict-affected areas. This might entail changing the WHO's charter so it has more autonomy to engage with de facto political leaders in areas where sovereignty is contested. If this is impossible, the responsibility for infectious disease control in conflict-affected areas could be given to non-government organizations that are not under the same pressures to respect the sovereignty of international recognized regimes.

It would be interesting to analyse situations in which UN agencies have successfully managed to provide humanitarian assistance to communities in areas outside of government control. For example, Operation Lifeline Sudan (OLS), a UN-led initiative that coordinated the provision of humanitarian aid to populations in conflicted-affected areas of southern Sudan during the Second Sudanese Civil War (1989-2005). OLS was the first humanitarian programme that aimed to assist civil war-affected civilians within the affected country, as opposed to refugees beyond its borders (Karim et al. 1996, Maxwell et al. 2014, Taylor-Robinson 2002). It was an unwritten agreement, that allowed the UN to transport humanitarian aid throughout the deal with all organizations that exerted control over the territory through which aid had to pass or be delivered—*i.e.* both the state and militants (Taylor-Robinson 2002). It has been argued that the regime in Khartoum accepted this agreement as a result of 'international pressure' (Moon et al. 2016). But without further study it is not clear why international pressure had an effect on the Sudanese government but not on the Syrian government.

Civil wars are the most extreme example of state failure in the postcolonial world. But in many cases postcolonial states that are not affected by armed conflict are weak (Hansen and Stepputat 2001). For example, state incapacity and international intransigence were major factors in the failure to contain the Ebola epidemic in West Africa in 2014 (Moon *et al.* 2015). The epidemic once again exposed the inherent inability of the WHO to operate effectively in countries where the national government was unable to fully exert control over its territory. The problem could be overcome if the global system of infectious disease control more accurately reflected the reality of politics in the postcolonial world and worked with all actors that have the ability to exert power and influence. This would require forward thinking policy design because it is incongruous with the current system of international law and politics, which is based on the inviolability of nation states. But surely global health actors should not prioritize upholding the sovereignty of governments regardless of the health consequences. Rather, they should do whatever it takes to prevent and contain epidemics.

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