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Introduction

The Syrian Civil War is a conflict of which the consequences will be felt for generations. It began in March 2011 during the Arab Spring protests against Syrian President Bashar al-Assad. Al-Assad and his father, Hafez, are Alawites, a minority Shi'a sect, ruling over the majority Sunni population of Syria since 1970. Rising income inequality as a result of Baathist statism, dissatisfaction with authoritarianism, increasing corruption, and a lack of jobs brought Syrians into the streets. There were nationwide demonstrations in major cities throughout Syria. In response, the Assad regime deployed the Syrian Army to quell the uprising with soldiers firing on demonstrators. After months of military sieges, the protests evolved into armed rebellion. On one side was the Baathist government of Assad, on the other were opposition forces composed of army defectors and civilian volunteers.

As the conflict grew, Al-Qaeda and ISIS made their presence known. Due to Al-Qaeda and ISIS involvement, the Syrian government lost large swaths of eastern Syria. Moreover, Hezbollah, Iran, Turkey, Saudi Arabia, and the Gulf Emirates, along with Russia and the United States, took interest in the sectarian struggle. By 2016, approximately 400,000 Syrians had been killed and more than 3.8 million Syrians fled as refugees.

The causes of the Syrian Civil War are publicly expressed as sectarianism, anti-authoritarianism, and poor economic and agricultural policies (Gleick, 2014; Lesch, 2017). Armed conflict can cause problems beyond regional instability, violence, and food insecurity, however. It can also impact the health of people living in the conflict-ridden countries, as well as people living in the countries hosting large numbers of migrants. The latter problem is the subject of this paper. With hundreds of thousands of people migrating from Syria into Europe, European governments are now facing challenges of how to deal with re-emerging diseases like cutaneous leishmaniasis. What impact will migration have on the presence of infectious diseases in the EU? How can EU member states simultaneously address security and public health concerns resulting from forced migration?

Drawing upon existing environmental security and public health literatures, we hypothesise that the increased prevalence of infectious diseases occurs as a result of public health breakdowns during and following armed conflict. Moreover, mass migration leads to the emerging and re-emerging of infectious diseases in a host country. While the Syrian refugee crisis has put real and imagined strains on EU member states' immigration systems, a coordinated policy response, as outlined below, will mitigate the crisis and offer solutions for a way forward.

Conflict and Health Literature Review

Political scientists have studied the impact that conflict has on a number of elements of the political sphere, including how it impacts the health of the individuals in the affected region. Armed conflict impacts health through destruction of infrastructure, flight of health care workers, interruptions in vaccination programs, disruption in infection control practices, and decreases in governmental health funding (Gayer, et al., 2007). These breakdowns do not only increase the risk of chronic diseases, they also open the door for problems with acute infectious disease outbreaks. Looking first at the problem of infrastructure destruction, many war-torn countries throughout the world have experienced the destruction of their health care facilities and supplies (Kalipeni & Oppong, 1998). This is particularly true in places that experience high levels of bombing, like Syria. In heavily bombed areas, health care facilities are fully or partially destroyed. Even if the facility is only partially destroyed, it may no longer be able to adequately function to care for patients.

This problem with a lack of access to health care can also refer to possible fear of traveling to a still existing health care facility because of a threat of violence. This means that many people wait until their disease has progressed significantly before seeking help. The longer an individual waits to seek treatment for an infectious disease, the more likely it is that the disease will spread. In some cases, they may even try to treat the disease themselves as Gele and Bjune (2010) found to be the case with tuberculosis patients in conflict zones. With almost all infectious diseases affecting conflict-ridden regions, it is not possible to treat the disease without seeking

professional medical care and failing to do so continues to put the infected individual and the rest of their community at risk.

In addition to the destruction of health care facilities and supplies, many countries affected by conflict lose their trained health care workers as they flee with other refugees and migrants (Kalipeni and Oppong, 1998; Gayer, et al., 2007). Once properly trained health professionals begin to leave the country, individuals still living in-country no longer have access to adequate care. This creates a different, but equally troubling problem. Even if the hospital or clinic is still functioning, individuals in the country are still not able to receive appropriate care. The personnel left working the hospitals and clinics may not be able to recognise many infectious diseases and, even if they can identify the disease, they may not have any knowledge about appropriate treatment procedures (Beracochea, et al., 1995; Thaver, et al., 1998). Inappropriate or incomplete treatment procedures, particularly ones that use antibiotics, can create anti-microbial resistant strains of the disease.

Infectious disease also becomes a problem in countries with sustained armed conflict because fighting disrupts vaccination and infection control programs. Many developing countries have made great strides in improving vaccine coverage for diseases like polio; however, once armed conflict erupts it can be extremely difficult to continue regular vaccinations. This problem was seen after the 2001 US invasion of Afghanistan, where vaccination rates in areas of high conflict remain much lower than rates in the rest of the country because vaccine campaign workers are targeted by armed groups (Norris, et al., 2016). Even the simple logistical difficulties of a vaccine campaign in areas of conflict can make conducting the campaign

impossible. The logistical challenges of getting vaccines into areas of conflict has led to lack of vaccination in Somalia, Pakistan, and Ethiopia (Pallansch and Sandhu, 2006). As armed conflict leads to falling vaccination rates, more people begin suffering and dying from vaccine-preventable diseases.

Countries plagued with sustained armed conflict also see a decrease in the amount of government resources dedicated to health. “Long-term consequences of civil war can affect entire countries (such as Angola, the Democratic Republic of Congo, or Afghanistan) because of chronic lack of investment in health, education, and public works” (Gayer, et al., 2007, p. 1625). Money that may have originally been allocated for public health or infectious disease control programs can, and often is, redirected to the war efforts. What sometimes becomes a chronic lack of health funding only exacerbates the problems of infrastructure destruction, loss of trained personnel, and the breakdown of vaccine programs.

Although armed conflict has numerous in-country impacts, it doesn't only impact the internal health of a country. The movement of large amounts of the population leads to the development of refugee camps and a whole new set of infectious disease prevention challenges. Despite best efforts, many of the refugee camps are “fertile ground for outbreaks of re-surfing old scourges and newly emerging infectious disease” (Kalipeni and Oppong, 1998). The clustering of mass numbers of individuals that likely struggled for some time without adequate health care creates the perfect breeding ground for diseases like yellow fever, cholera, tuberculosis and Ebola. Refugee camps serve as a particularly good place for cholera outbreaks, due to the lack of adequate waste disposal.

Even if refugee camps are working to keep conditions as sanitary as possible and make sure incoming residents are properly protected through vaccination programs, the massive overcrowding that often exists in these camps can cause large outbreaks under the right circumstances. This was the case with a large measles outbreak that took place from 2000-2001 among four Burundi refugee camps in Tanzania. The four camps had been long closed to new refugees, but when fighting began to increase again, they opened their doors and began admitting new individuals. Shortly afterward, an outbreak of measles swept through the camps, eventually leading to over 1000 cases of the disease (Kamugisha, Cairns, and Akim, 2003). Although vaccination rates for measles in the camps were good, new arrivals did not have the same vaccination history and the outbreak was a continuation of the measles outbreak in Burundi that had begun a few months earlier (Kamugisha, Cairns, and Akim, 2003).

Finally, armed conflict often leads to the mass migration of individuals seeking asylum in other countries. Mass migrations are not just difficult for the health of the individuals traveling, but can have impacts on the public health of the host country as well. Most developed regions of the world no longer struggle with endemic disease, but, often, regions with sustained conflict have very high rates of diseases that are well-controlled or eliminated from developed countries (Gushulak and MacPherson, 2004). Pakistan experienced this effect in the late 1970s and early 1980s, when fighting in Afghanistan drove people over the border into Pakistan. At this time, malaria in the heavily migrated-to regions of Pakistan was well under control, but malaria in Afghanistan was endemic. These refugees brought malaria with them into the refugee

camps in Pakistan and, since there were no real borders around the camps, malaria was re-introduced into the Pakistani population of that region (Kazmi and Pandit, 2001). Another study by Lopez-Velez, Huerga, and Turrientes (2003) found high rates of infectious disease among immigrants living in Spain and a 2005 study by the Public Health Agency of Canada found that 65% of tuberculosis cases in Canada are found in the foreign-born population. Most recently, the WHO renewed their polio vaccination campaign in the Middle East after a cluster of cases appeared in Syria in 2013 (Friedrich, 2013). With the appearance of polio in Syria and the large amount of migrants into Europe, Europe began seeing cases of polio last year. These were the first cases on the continent since 2010.

Migration From Syria and the Problem of Infectious Disease

Although the Syrian Civil War began in March 2011, with "...political, religious, and ethnic roots that go back thousands of years," the current conflict has its origins in 2006/7. Syria is located in the Fertile Crescent and it has been argued by Kelley, et. al (2015) that Syria has "(1) experienced the worst 3-year drought in the instrumental record and (2) the drought exacerbated existing water and agricultural insecurity and caused massive agricultural failures and livestock mortality" (p. 3241). Consequently, the most significant aspect of the drought has been the migration of close to 1.5 million people from the rural farming areas to the cities. The migration was also shaped by government agricultural policy. Hafez al-Assad ruled Syria from 1971-2000 and implemented policies to increase agricultural production, which included land redistribution, irrigation projects, quota

systems, and subsidies for diesel fuel. The hope was that the rural population would support the regime. The reality, however, led to the endangerment of Syria's water security "by exploiting limited land and water resources without regard for sustainability" leading to a decline in groundwater (Kelley, et. al., p. 3241). Syria, and the greater Fertile Crescent, then entered a period of sustained drought.

According to Kelley, et. al (2015), "Rural Syria's heavy year-to-year reliance on agricultural production left it unable to outlast a severe prolonged drought and a mass migration of rural farming families to urban areas ensued" (p. 3242). Those displaced by the drought have been estimated at approximately 1.5 million (Kelley, et. al., p. 3242). Another important factor to consider is the influx of refugees from Iraq since the start of the 2003 Iraq War. By 2010, internally displaced persons and Iraqi refugees made up approximately 20% of Syria's urban population. Kelley, et. al. (2015) note, "The total urban population of Syria in 2002 was 8.9 million but, by the end of 2010, had grown to 13.8 million, a more than 50% increase in only 8 years, a far greater rate than for the Syrian population as a whole" (p. 3242). Put simply, this created a strain on Syria's already fragile resources. The drought, along with internal migration, came up against already existing factors that contributed to the unrest that boiled over during the Arab Spring; namely, unemployment, corruption, and rampant inequality. In their study of the impact of climate change in Fertile Crescent, Kelley et. al. (2015) argue that the drought did not cause the violence, but it was a contributing factor. Climate expert Peter Gleick argues in a 2014 study in the journal *Weather, Climate, and Society*, "water and climatic conditions have played a direct role in the

deterioration of Syria's economic conditions" (Miller, 2015).

By March 2011, protests were occurring in Deraa, Damascus, and Aleppo. Similar to other Arab states caught up in the Arab Spring protests, Syria was caught up in, "[t]he perfect storm in the Arab world of higher commodity prices, which made basic items more expensive, and a youth bulge that created an irreparable gap between mobilization and assimilation threw into sharp relief the widespread socioeconomic problems (especially gross unequal income distribution and growing poverty), corruption, and restricted political space marked by *mukhabarat*-enforced (security/intelligence) political repression" (Lesch, 2017, p. 95). Assad, however, believed Syria was immune and could ride out the protests engulfing the other Arab states. Several factors were identified by Lesch (2017) which contributed to the perspective of the Assad regime:

- 1) The regime frequently portrayed itself as the only thing standing between stability and chaos given its turbulent political development.
- 2) The fate of the Syrian military and security services is closely tied to that of the regime.
- 3) The minority-ruled Syrian regime, infused as it is with Alawites in important positions, had always represented itself as the protector of all minorities in a country that is 65 percent Sunni Arab.
- 4) Basher al-Assad, prior to the uprising, was generally well liked in the country—or at least not generally reviled.
- 5) Syria's internal and external opposition prior to the uprising were often uncoordinated and divided, with no generally recognised

leadership, and this has carried over into the civil war itself (p. 95-97).

As a result, the Assad regime began to crackdown on the protestors and by the late summer and fall of 2011 the Syrian Civil War became a proxy war. The conflict "developed into something of a stalemate, where neither side had the wherewithal to land a knockout punch" (Lesch, 2017, p. 106). As the civil war escalated, the result was internal displacement of civilians and a growing refugee crisis requiring the attention of the international community. As with armed conflicts before it, the political in-fighting and social upheaval in Syria eventually led to full blown civil war and began to impact the health of Syrian communities. This problem has only intensified with each passing year of the conflict. We will now turn to the refugee crisis and discuss the potential impacts of a rise in infectious diseases.

The Rise of Infectious Disease

The conflict in Syria has resulted in a breakdown of healthcare throughout the country, contributing to a rise in infectious diseases (Petersen, et al., 2013). Diseases like polio, cholera, typhoid fever, tuberculosis, and leishmaniasis have re-emerged in Syria and with over 4 million Syrians crossing the borders seeking safety, EU health care professionals must be prepared to address these issues head on. Even rabies has re-emerged, due in large part to the decreased vaccination rates in the Syrian dog population. Although most cases of disease re-emergence were originally contained within Syria, the continuous increase in migration over the past several years has led to some degree of spillover.

In 2014 WHO reported that there were 37 cases of polio in Syria and they

confirmed regional spread when they discovered a case of polio in Iraq. The 2014 polio case was the first case of polio in Iraq since 2000 and genetic sequencing showed that it was a close relative of the cases in Syria (Lelebicioglu and Ozaras, 2015). Thus, it is fair to assume that the case of polio in Iraq was imported from Syria. In addition to the recent re-emergence of polio, Lebanon has seen an increase in tuberculosis and cutaneous leishmaniasis rates with the migration of Syrians into their country (Lelebicioglu and Ozaras, 2015). The problems caused by the breakdown of healthcare in Syria are now having a noticeable impact on the healthcare systems of countries taking in Syrian refugees.

An increase in cases of measles in countries hosting Syrian refugees has also been documented. The number of measles cases throughout Syria in 2014 was in the thousands and their mass migration across borders led to measles outbreaks in neighboring countries (Sharara and Kanj, 2014). For highly vaccinated populations, like Jordan, the problem was mostly confined to refugee populations, though it does demonstrate the importance of maintaining high vaccine coverage in countries accepting Syrian refugees. Countries with less uniform coverage, such as Lebanon, saw a growing rate of measles with the incoming refugees. This prompted the country to launch a national immunization campaign in 2014 (Sharara and Kanj, 2014).

While, to date, the re-emergence of previously controlled diseases has been seen mostly in states taking in the largest number of refugees like Jordan, Lebanon, and Turkey, it is not unrealistic to assume that the rest of Europe will face similar challenges with the influx of more and more refugees. Thus, the European health care system and health care providers must be

prepared for the appearance of these cases. Vaccination programs, increased disease surveillance, and health screenings can all help prevent diseases that may be traveling with Syrian refugees from entering the greater European public. We now turn to a discussion of the EU's efforts at confronting migration and the consequences of the EU's migration policy on the rise of infectious diseases.

Throughout 2015, a rise in migration to Europe from the Syrian Civil War, as well as conflicts in Afghanistan, Iraq, Libya, and Yemen, resulted in one million people entering Europe mainly crossing the Mediterranean (Collett, 2017, p. 150). Consequently, states in southern Europe were the frontline in the emerging crisis; namely, Italy and Greece. The reaction of Europe's politicians can be summarised as follows: "[A]s some governments scrambled to construct makeshift reception centers in resorts and army barracks, others looked on with indifference, and still more did so with alarm" (Collett, 2017, p. 150). In short, disagreement among European states came down to whose responsibility it was to shoulder the monetary, social and political costs of the spikes in immigration throughout 2015. Germany has taken in the largest numbers of refugees in absolute terms, while Sweden has more on a per capita basis. Moreover, Italy and Greece, as frontline states, have absorbed more refugees, often creating holding or processing areas. Migration expert Kelly M. Greenhill argues, "Brussels has been markedly slow in providing much needed aid to frontline states as well as in facilitating promised resettlement of migrants and refugees to other parts of the EU, creating bottlenecks and turning these ill-equipped states into vast holding camps, which Greek ministers refer to as 'a cemetery of souls'" (Greenhill, 2016, p.

319). Therefore, the refugee crisis has created a stark challenge for the liberal democracies of the EU: “Balancing humanitarian responsibilities with the need to manage migration, while heeding the desires and fears of European publics....” (Collett, 2017, p. 152).

Prior to the creation of the EU, migration policy was coordinated at the national level. However, “migration policy only started to concern [the] EU, in legal and political terms, since 1997 with the Treaty of Amsterdam which integrated into the EU body of law all the migration legislation made by member states of the Schengen Agreement” (Zodian, 2015, p. 298). Visa, asylum, and immigration laws would now be coordinated supranationally with the ratification of the Lisbon Treaty in 2009, “complet[ing] the political and legal inclusion of the migration policies within the EU treaty framework” (Zodian, 2015, p. 299). Member states eliminated border controls to improve labor mobility, but there were labor mobility restrictions put in place on Central and Eastern European countries joining the EU during 2004 and 2007. While migration has been part of global life for many years, Europe’s view of migration and immigration can be summed up as follows: “Europe has no Statue of Liberty. It is chiefly a continent not of immigrants, where all citizens can trace their ancestry to somewhere abroad, but of discrete peoples’ troublesome pride, and the wars it long spawned, was the reason behind the EU, first conceived decades ago to provide a unifying identity that erased borders and shared the wealth” (Vick, 2015, p. 11-12).

From May until September 2015, the EU sought to improve coordination of immigration policy and respond to the crisis by developing operational, budgetary, and legal measures as part of a 4-point plan dealing with “irregular immigration”:

“protecting the EU borders by strengthening Frontex, establishing a European Border and Co[a]st Guard; a long-term, EU-wide system...[of] resettlement and reallocation; a credible and effective return policy...[and] opening legal channels for migration” (Zodian, 2015, p. 302). At the supranational level, human rights have historically been given credence in policymaking, but more recently member states “are split on how to respond to these refugees, and these splits are growing more acute over time” (Greenhill, 2016, p. 324). The rise, recently, of far right nationalism in Europe led to many unilateral, national responses over universalistic, supranational responses (Greenhill, 2016, p. 324). For example, in November 2016, the European Commission President Jean-Claude Juncker unveiled an asylum sharing plan to deal with the 120,000 refugees in Greece, Italy, and Hungary and have the refugees shared among the EU’s 28 member states. Hungarian Prime Minister Viktor Orban responded stating, ““We have to take care of the problem where it exists....If Greece is not capable of protecting its borders, we need to mobilise European forces to the Greek borders so that they can achieve the goals of European law”” (Jahn, 2015). Greenhill (2016) argues that responses such as Orban’s denote buck-passing or the embracing of beggar thy neighbor policies (p. 324).

In response to the disparate nationalist sentiments expressed by Orban and other Eastern European leaders closer to the frontline of the crisis, the EU sought to develop migrant deals with individual states to improve coordination. The EU Commission created Partnership Frameworks with the ultimate aim that the EU and its Member States acting “in a coordinated manner putting together instruments, tools and leverage to reach comprehensive partnerships (compacts) with

third countries to better manage migration in full respect of our humanitarian and humanitarian and human rights obligations” (EU document, 2016, p. 581). The EU and Turkey signed a Partnership Framework on March 18, 2016. The Framework initiated two processes: the return of refugees from the Greek Islands to Turkey to “make clear that this is a dangerous route and the wrong route” and the resettlement of Syrian refugees from Turkey to Europe (European Commission, p. 2016). According to the European Commission, “So far, 511 Syrian refugees have been resettled [as of June 2016] from Turkey to Europe. The return of 462 migrants who had not made asylum applications in Greece has been carried out from the Greek islands to Turkey...In the weeks before the implementation of the Statement, around 1,740 migrants were crossing the Aegean Sea to the Greek islands every day. By contrast the daily arrivals since 1 May are down to 47, a decrease of over 95%” (European Commission, 2016).

The implementation of the Framework is handled by the European Commission with the EU pledging to pay Turkey 3 billion Euros, allow visa free travel to Europe for Turkey’s citizens, and restart accession talks for Turkey to join the EU in exchange for Turkey agreeing to take back migrants and refugees who arrive in Greece via Turkey (Kern, 2016). Turkish President Recep Tayyip Erdogan, however, has come out against the migrant deal arguing that “EU leaders are dishonest....We have stood by our promise. But have the Europeans kept theirs?” (Kern, 2016). Erdogan was unhappy that Turkey had only received 2 million Euros of the promised 3 billion Euros. Erdogan’s critics charge that he “is exploiting Europe’s strategic weaknesses to advance Turkish imperialism and his goal of Islamizing the continent....since Erdogan

sees himself both domestically and internationally as a religious cultural warrior—as the patron saint of Islamist expansion” (Kern, 2016).

As a consequence, the EU will confront some fundamental questions in the coming year. As Collett (2017) notes, “Will the EU remain committed to its founding liberal principles? Can the EU preserve freedom of movement without reaching common ground on asylum policies? And what is the future of the global system of international protection for refugees, as some of the strongest champions of the current approach start looking seriously for alternatives?” (p. 154). These questions have come up due to the newer EU member states, known as the Visegrad Four—the Czech Republic, Hungary, Poland, and Slovakia—repudiating their commitment to the 1951 UN Refugee Convention. These four states have said hosting refugees is not for them despite the fact they signed up to do so under the Common European Asylum System when they joined the EU in 2004 (Collett, 2017, p. 154). Collett (2017) continues, arguing “If member states cannot trust one another to assume similar responsibilities with respect to border management, asylum, immigration, and security, they will be more likely to prioritise narrow national interests, as they did when they reinstated temporary border controls across the EU in 2015” (p. 154). States such as Austria, Germany, Italy, and Malta, in response, proposed “external processing” which “corral[s] people in neighboring countries and offering resettlement to those deemed worthy, thereby providing refugees with safer, legal routes to Europe,” but has come under increasing pressure by human rights groups saying that the process would be at risk of being more vulnerable to political pressure and to exploitation by leaders, such as

Erdogan, who seek to exploit to their advantage (Collett, 2017, p. 154-6).

Recommendations for Counteracting Disease Spread through Migration

As we discuss in the previous section, the mass migration of people from Syria has put significant strain on the European Union. There has been increased economic pressure from supporting thousands of new arrivals, challenges with housing and community integration, and lastly new health issues that stress the public health infrastructure and put the health of citizens and refugees at risk. Many Syrians have traveled long distances, are malnourished, and may not have had appropriate vaccinations or access to any form of health care for long periods of time. We provide three recommendations for addressing the health issues posed by refugees coming into the EU from Syria that we believe can help mitigate the introduction of diseases.

The first recommendation is to provide training of local health care practitioners. Most of the diseases that Syrian refugees are bringing into the EU are not common to Europe, but they are common in Syria. The most common disease coming into the EU from Syria is cutaneous leishmaniasis, but it is not the only one. Educating health care professionals in Europe about the signs, symptoms, and method of transmission for the most common diseases appearing with the movement of Syrian refugees would help clinics to be better prepared to diagnosis and treat the diseases when they identify their symptoms. Knowledge about the diseases would help eliminate delay in diagnosis and treatment and eliminating this delay could prevent a large-scale outbreak. If health care

professionals are given all the tools they need to fight the new diseases, the threat to the European public and the refugee communities will be greatly reduced.

Our second recommendation is to provide health screening upon entry for those refugees entering the EU through formal channels. These screenings should include a routine medical examination, appropriate vaccinations, and testing for infectious diseases common in Syria. If infectious diseases are identified, the refugee should be started on the proper treatment and contained at the port of entry until the treatment protocol is complete. Once the treatment is complete they will be allowed to be integrated into the community. The purpose of the entry health screenings is to identify and treat diseases before they have an opportunity to spread into the population. European Parliament, the European Council, and the European Commission have all recognised that the health of refugees can no longer be ignored. Both Parliament and the Commission have committed millions of Euros to supporting the healthcare of migrants and have discussed the importance of identifying diseases and other conditions as they enter the EU.

Lastly, because large amounts of Syrian refugees are not entering the EU through formal channels, health outreach must be conducted in refugee communities, regardless of their legal status. Funding should be secured for health care teams to go out into refugee communities on a monthly basis offering free medical care, vaccinations, and infectious disease diagnostic test. This will help the EU identify diseases that may be circulating in refugee communities and prevent them from finding their way into the larger population. Additionally, it provides refugees who may be afraid to seek health care because of their illegal status, the opportunity to be treated.

Health care teams could also offer education and training regarding some of the most common diseases in the communities.

Conclusion

The EU's refugee crisis came to a head in 2015. EU member states were beset with a host of political and social issues. An important issue that has not received enough attention has been the potential for infectious diseases as a result of increased migration from crisis. This paper examined the extent of the crisis and specifically how Europe responded. We hypothesised that the increased prevalence of infectious diseases occurs as a result of public health breakdowns during and following armed conflict. The Syrian refugee crisis put huge strains on EU member states' immigration systems, which often lacked coordination among the states confronting the crisis. In short, at the supranational level there was little coordination, despite efforts in 2015 and 2016 to address the coordination problem.

Mitigating the crisis will take a coordinated effort and, given the importance of public health, we offer a small part of what will need to be a multipronged approach by addressing what can be done to better prepare the EU for what will likely be continued migrants. Our recommendations were: 1) Local Training of health care practitioners; 2) Provide health screening upon entry for those refugees entering the EU through formal channels; and 3) Health outreach in refugee communities in Europe

and in the country of origin. Since 2015, the European Parliament, the European Council, and the European Commission have committed large amounts of resources. Despite resistance from Turkey, and far-right parties in Europe, the issue of refugee migration is not dissipating.

As the Syrian Civil War approaches year six, a coordinated policy, taking the concerns of EU members, both those footing the bill and those accepting refugees, into account could serve as a template for the international community on how to effectively deal with large-scale humanitarian crises moving forward. Collett (2017) puts the stakes for the EU in the years ahead nicely: "[I]t must remember that any fundamental overhaul of asylum policy will require detailed planning, a long-term commitment to resettlement, and a recognition that such a policy will yield broader geopolitical consequences. And Europe's leaders must not forget the principles of human rights that have underpinned their countries' asylum policies for decades—and that lie at the core of the European project itself" (p. 156). A health policy regarding infectious diseases will be the first in a series of steps to mitigate a crisis with regional and global implications in the years ahead.

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Christine Crudo Blackburn

Dr. Blackburn received her Ph.D. in 2015 from Washington State University as part of their Individual Interdisciplinary Doctoral Program. This program requires specialization in a minimum of three fields, of which Crudo chose Political Science, Communication, and Veterinary Clinical Sciences/Global Animal Health. For her doctoral work she constructed a mathematical model that allowed for quantified policy and communication inputs to determine how different disease intervention policies and communication strategies impacted the spread of disease outbreak.

Following the completion of her doctoral degree, Blackburn worked as a postdoctoral researcher in the Field Disease Investigation Unit laboratory in the Washington State University Veterinary School of Medicine. During this appointment she worked on a variety of projects, including seasonal prevalence of *E. coli* bacterium in dairy and beef cattle, health differences between feeding dairy calves milk replacer rather than actual milk, and the impact of *Bifidobacterium* to the health development of dairy calves.

Dr. Blackburn is currently a postdoctoral researcher with the Snowcroft Institute for International Affairs in the Bush School of Government and Public Service at Texas A&M conducting research on various aspects of pandemic disease policy and control.

Paul E. Lenze, Jr.

Dr. Lenze received his Ph.D. in Political Science from Washington State University in 2011. His doctoral work focused on civil-military relations in “Islamic democracies.” Specifically, Dr. Lenze examined the elements of military withdrawal and intervention. This included work included comparative case studies of Algeria, Pakistan, and Turkey.

Dr. Lenze held an Instructor position at the University of San Diego before moving to a position at Northern Arizona University.

Dr. Lenze is currently a Senior Lecturer at Northern Arizona State University where he teaches both undergraduate and graduate level classes in the Department of Politics & International Affairs. He published a book in 2016 titled, “Civil-Military Relations in the Muslim World.”

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Mark Welsh, Dean and Holder of the Edward & Howard Kruse Endowed Chair

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The School is ranked in the top 12 percent of graduate public affairs schools in the nation, according to rankings published in U.S. News & World Report. The School now ranks thirty-third among both public and private public affairs graduate programs and twenty-first among public universities.

The School's philosophy is based on the belief of its founder, George H.W. Bush, that public service is a noble calling—a belief that continues to shape all aspects of the curriculum, research, and student experience. In addition to the Master of Public Service and Administration degree and the Master of International Affairs degree, the School has an expanding online and extended education program that includes Certificates in Advanced International Affairs, Homeland Security, and Nonprofit Management.

Located in College Station, Texas, the School's programs are housed in the Robert H. and Judy Ley Allen Building, which is part of the George Bush Presidential Library Center on the West Campus of Texas A&M. This location affords students access to the archival holdings of the George Bush Presidential Library and Museum, invitation to numerous events hosted by the George Bush Foundation at the Annenberg Presidential Conference Center, and inclusion in the many activities of the Texas A&M community.

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