The "Arab Spring" has touched almost all countries in the Middle East and North Africa. While most attention has focused on security and political developments, there are significant consequences for population health. These include immediate problems, such as violent deaths and injuries, population displacement, and damage to essential infrastructure, but also longer term vulnerabilities not yet addressed by the political changes, including high unemployment, the low status of women, erosion of already weak welfare systems, and rising food prices. It will be important to tackle these underlying issues while not repeating the mistakes made in other countries that have undergone rapid political transition.

Political changes brought about by uprisings in the Middle East and North Africa (MENA) have created a great sense of optimism and hope for social and economic reform across the region. The unifying term "Arab Spring," however, masks distinctive changes in each country. In Tunisia, Egypt, and Libya, deeply entrenched leaders were toppled by popular movements, which—in the case of Libya—led to armed insurrection and international military involvement. In Syria, an initially peaceful uprising has been met with violent suppression, including artillery bombardment of civilian areas, attracting widespread international condemnation. In Bahrain and Yemen, protracted struggles for power continue with little possibility of a swift resolution in sight. Protests in Algeria have been suppressed, at least for now. Only monarchies in Oman, Morocco, Saudi Arabia, Jordan, and the remaining Gulf States have seemed able to forestall unrest by taking hesitant steps toward social, political, and economic reform—partly in response to changes elsewhere (1).
What can be said about the implications of the uprisings for population health, given such varied circumstances? In the short term, the most obvious consequences, especially in Libya and Syria, are the deaths and injuries from violence and the weakening of public health systems. But it is the indirect social and economic threats, many of which triggered the uprisings in the first place, that we contend are the principal long-term health vulnerabilities exposed by the uprisings, and these are common to countries across the region. The success or failure of the uprisings will largely depend on whether reformers are able to address these longstanding threats to stability and health.

This article first examines the short- and long-term health vulnerabilities of Arab countries currently experiencing change. Then, we draw on lessons about potential success and failure of transition from other large-scale social changes in Eastern Europe, South Africa, and Iraq to produce a series of recommendations and notes of caution for policymakers. In doing so, we hope to help promote a healthier series of social, political, and economic changes in MENA countries.

HEALTH, HEALTH CARE, AND THE ‘ARAB SPRING’: VULNERABILITIES OLD AND NEW

Short-Term Vulnerabilities

The short-term health implications of the uprisings will be familiar to many citizens of a region that has in recent years borne witness to frequent conflict, both regular and irregular. An immediate concern is that civic demonstrations and repressive government responses to them led directly to injuries and deaths of civilians and combatants. In Libya, an estimated 25,000 combatants and civilians have died (2); in Syria, the figure was thought to have reached 40,000 to 50,000 by December 2012, with the scale of violence increasing (3); and in Yemen, the death toll may be several hundred (4). In some cases, these clashes may develop into civil war, as seen first in Libya and now in Syria (5). This is a particularly worrying development given recent experiences in Iraq, where civilian casualties during the invasion and ensuing internecine conflict are now estimated to have been anywhere between 98,000 and 200,000 (6). Other consequences of these conflicts are more difficult to observe but have been reported by various human rights groups, including torture and imprisonment (7–9).

A second, major, short-term consequence is population displacement. Large numbers of people have been forced to flee, either from fear of violence or expulsion by opposing political groups. Syrians have been the worst affected: by September 2012, more than 294,000 people had reportedly entered the neighboring countries of Jordan, Turkey, and Lebanon, with more than 1 million people internally displaced (10). The United Nations High Commissioner for Refugees estimated that up to 2,000 to 3,000 people were leaving daily in mid-2012 and an
additional 500,000 Syrians were forced to flee the country by the end of the year. A wave of refugees also fled Libya, although many of those who left have now begun to return. It is too early to assess the full extent of displacement and its associated consequences for health. This movement of Libyan refugees, with access to large amounts of weaponry, has been implicated in the coup and subsequent de facto partition of neighboring Mali, which will have additional adverse consequences for health. In addition, thousands of Libyan rebel fighters were provided with free medical treatment and time away from Libya by the Jordanian government following the fall of Colonel Gaddafi. Evidence gathered by the authors has found that this has placed severe strain on the Jordanian health care system, with bills left unpaid and Jordanian nationals being denied treatment because of overcrowding (11).

A third consequence is damage to public health systems. While outright collapse of public health systems is unlikely in countries that have remained largely stable, it is more probable in Libya and Syria, particularly so in the latter, where large-scale conflict shows no sign of abating. According to recent field research by the authors in various cities in Syria, the public health system has ceased to be effective, particularly for those with chronic diseases and for the elderly, disabled, and pregnant. In addition, vaccination programs have completely stopped for infectious diseases such as tuberculosis, creating the conditions for epidemics to break out. This is caused by the fact that many physicians have left the country, so many primary health care facilities are either not fully staffed or closed. Available evidence on this front from Iraq after 2003 is not encouraging (6). Around 30 percent of primary care clinics were destroyed during, and in the immediate aftermath of, the invasion and looting of health facilities was widespread. Basic public services were badly affected, and functioning sanitation is still available to just 20 percent of the population. The population-level effects of all this—overlaying a legacy of more than 10 years of sanctions—have been stark, particularly for children, of whom more than one-third in Iraq are chronically malnourished. Nothing on the scale of the fighting after 2003 has emerged elsewhere in the region, but the Iraqi case nevertheless provides a salutary example of the potential effects of external intervention and civil conflict on population health (6). Similar lessons can and have been drawn from experiences in the Occupied Territories (12).

Long-Term Vulnerabilities

An exhaustive analysis of the structural vulnerabilities that contributed to recent political changes in the MENA is beyond the scope of this article and is a topic of heated debate elsewhere. Instead, we identify four interlinked problems—highlighted explicitly by the uprisings—that pose significant threats to population health across the MENA over the long term.
One major problem stems from high levels of unemployment and under-employment, particularly among youth, in settings of slow economic growth (13). Levels vary across countries, ranging from 2 percent to 25 percent of the workforce (13–15). About one in four Arab youth are unemployed, the highest recorded rate of youth unemployment worldwide. Many have been actively involved in the protest movements (14). This situation partly reflects the demographic structure where, in countries like Syria and Saudi Arabia, about three-fifths of the population are under the age of 25 (15). The adverse health effects of unemployment and underemployment are well-recognized (16, 17), affecting both mental and physical health in the short term and the long term through a range of mechanisms (18). Crucially, evidence from elsewhere has shown how these effects are exacerbated by the absence of comprehensive and functioning social protection and welfare systems (17, 19), as is the case in most of this region (15).

The status of women, who have enjoyed similarly prominent roles in many of the uprisings, is a related problem. Women suffer from high rates of illiteracy, and political and economic participation overall remains among the lowest of any region worldwide (15). As a result, health outcomes for women across the region are worse than for men, even controlling for deaths linked to pregnancy or childbirth (15). Poor educational access for women is also an important contributor to infant mortality rates in the MENA.

A third problem is the steady evisceration of welfare systems that could protect populations from the harms arising from stagnant economies and economic liberalization (15, 20, 21). The development of nascent welfare systems was an important commitment of post-colonial administrations in many Arab countries and a vital source of political legitimacy in the absence of adequate participation rights for citizens. But these systems have been under sustained assault for some time, first as a result of declining oil revenues from the mid-1980s onward and then through intensive structural adjustment at the behest of international financial institutions. In 2006, Egypt, for example, implemented a mass privatization program, transferring more than one-quarter of its assets to private ownership within a two-year period (22, 23). Syria also implemented liberalization programs, albeit to a lesser degree (24, 25). The result has been further increases in unemployment, inequality, limited opportunities for entrepreneurs, and a decline in government revenues required to fund comprehensive social protection measures such as universal health coverage and unemployment insurance (24).

Rapid rises in food prices in recent years have intensified the problems faced by economies already afflicted by stagnation and high levels of youth and female unemployment (15). Most Arab countries rely heavily on food imports, financed largely through the sales of oil (15). Global price shocks since 2008 left populations most dependent on imports vulnerable to food insecurity and hunger (26). Without reform to the food distribution system, and faced with further projected rises in global food prices, this issue will continue to pose a threat to social instability and health throughout the region.
The long-term legacy of current violence may well turn out to be among the most significant vulnerabilities, especially in countries like Libya and Syria where fighting has been particularly bloody. People who are displaced and exposed to conflict are at elevated risk of post-traumatic stress disorder, particularly children who witness fighting (27). But violence also may create longer-term social division and inequality. Rifts between pro- and anti-government groups, particularly if they fall along sectarian lines, may create persisting political cleavages that divide rather than unite (5). When these are not reconciled, they can sow the seeds of future conflict. Cleavages tend also to correlate with worse provision of collective goods such as social welfare and health care services (28). Ethnic and religious divisions have been invoked as impeding progress in Iraq and Lebanon (29, 30). It is too early to tell how big a factor the legacy of violence may be, but evidence from elsewhere (notably Iraq) outlined above is indicative.

WAYS FORWARD

Clarifying the options available to policymakers in the region to help address these vulnerabilities is challenging at a time when change is occurring so rapidly. In the near term, much will depend on how far it is possible to restore stability to those countries most affected by conflict. But addressing longer-term vulnerabilities requires action across a range of fronts.

An important source of guidance for Arab countries undergoing change comes from historical social, economic, and political transitions. These include the transitions in Eastern Europe, South Africa, Iraq, and Latin America during the past three decades. It is clear from these experiences that transition creates both major challenges and opportunities for reform and, while there are important similarities and differences, we can identify some broad lessons that reformers will need to take into account to ensure an equitable political, social, and economic transition in this region.

1. Ensure adequate resources are devoted to public health system development.

A major lesson from Eastern European transitions from 1989 onward was that the failure to sustain public health services exacted a high toll (31). The “Arab Spring” transitions present policymakers in countries like Egypt, Libya, and Tunisia with a historic opportunity to guard against this by investing in the future health of their populations. This will not be easy, for three reasons.

First, existing public health capacity in many Arab countries is acknowledged to be weak. This stems in part from chronic underinvestment (32): between 1990 and 2006, MENA governments invested between 1.7 percent (International Monetary Fund [IMF] data) and 2.8 percent (World Health Organization data) of gross domestic product (GDP) into health, making the region an outlier globally
for its low spending, despite its upper-middle-income status (20, 21) (see Figure 1). Public health concerns have also been marginalized by health system reforms in recent years that have focused overwhelmingly on issues of financing and service organization (33). The absence of a strategic view of public health challenges in many Arab countries is a notable problem, compounded by weak health surveillance and data-gathering functions (to which we return later) (6). Strengthening public health systems across the region must therefore begin from a relatively low base.

Second, making the case to citizens for increased public funding for public health systems will be challenging. Political commitment to health as a human security issue is given little regard in most Arab countries (34). Added to this are the very low tax rates, made possible in certain countries by high oil revenues (15, 35). Low taxes and government spending are, in turn, depriving health systems of resources needed for expansion. Starved of resources, health care systems in the region provide low rates of coverage and have relatively high out-of-pocket expenditures (60% in Egypt and 70% in Yemen and Syria of total health spending) (20). Despite this, surveys indicate a low willingness by citizens in Arab countries to pay increased taxes to support service development. This may stem partly from high income inequality, with the rich feeling little incentive to contribute to a system from which they have nothing to gain (36). In any event, low levels of public support will constrain the ability of newly elected governments to raise funding for service development for the foreseeable future.

Finally, re-prioritization of government expenditure toward public health will necessitate difficult reductions elsewhere, including defense. Given that six of the
2. **Guard against rapid socioeconomic change.**

Emile Durkheim noted that “whenever large-scale changes take place, men are more inclined to self-destruction and anomie” (37). In the Eastern European countries, political reformers were concerned that if radical free-market policies were not implemented, the communists might return to power (38). These maneuverings, however justifiable on political grounds, increased risks of suffering to ordinary people. While the economy could be reworked with the stroke of a pen (39), people were not so quick to reallocate and adjust from a system to which they had given most of their working lives (40). Not only did these policies lead to economic involution and major declines in GDP (39), they also led to a devastating rise in mortality (41). The Arab world will be protected to some extent because of the absence of vast amounts of cheap alcohol that played such an important role in Eastern Europe, but there are signs that the changes occurring in Arab Spring countries are proceeding at a rate neither protestors nor the former heads of state anticipated (42).

3. **Tackle vested interests seeking to co-opt** transition through neoliberal policies.

Not long after the coalition of domestic rebels and North Atlantic Treaty Organization forces toppled Qaddafi’s regime in Libya, multinational corporations in security, construction, and infrastructure turned their sights from Iraq and Afghanistan to Libya. As documented by Naomi Klein, and theorized by political scientists (43, 44), multinational companies are often eager to tap these emerging markets and often face little opposition, as people are distracted by concurrent political and social upheavals. Regime change is big business, and the Middle East has been no exception (44). Many MENA countries have undergone experiments in structural adjustment similar to those in Latin America in the 1980s, Eastern Europe in the 1990s, and East Asia in the late 1990s to early 2000s—notably including Egypt and Tunisia—with disastrous results for population health.

These concerns are made more real by the fact that the same reformers who were involved in ex-communist countries’ radical path to market capitalism are now guiding policy developments in countries affected by the uprisings, many of which now find themselves in dire economic straits. Jordan, Morocco, and Tunisia recently joined the European Bank for Reconstruction and Development, which oversaw the mass privatization process in Eastern Europe (45). Egypt recently undertook a US$3 billion loan from the IMF, on the condition that the country introduce austerity measures to curb inflationary pressure and fiscal deficits (46).
Domestic vested interests may also seek to gain. Within the health care systems of numerous MENA countries, vested interest groups have historically been a particular problem, stifling reform and accountability (15). Small syndicates of medical doctors dominated hospitals and health care with little regard for the introduction of preventive public health measures and universal coverage (35, 47). The dissidents who participated in the Arab Spring have hoped to oust political insiders who have long disenfranchised their populations. But the experience in ex-communist countries highlights the consequences of failing to address weaknesses in the health care workforce (48) and shows how powerful groups can take advantage of neoliberal economic reforms to reproduce their authority successfully in the new free-market environments. Similarly, in South Africa, apartheid-era reformers had great hopes to achieve economic gains but, while making strides politically, have done little to address a highly unequal and unfair legacy of apartheid in health care allocations across its provinces.

Challenging deeply entrenched elite interests both outside and within Arab Spring countries will be crucial to ensure that real and democratic change is achieved (15, 40).

4. Increase transparency and monitoring through surveillance systems.

Understanding of the health and social challenges facing the region has improved, but difficulties remain because of the poverty of surveillance data (15, 20). Over the last 30 years, many regimes either refused to collect standardized data or altered them beyond recognition because of political, security, and moral exigencies—particularly those surrounding the labor market and health issues such as HIV/AIDS and women’s health (15). This gap in knowledge has been compounded by the ineffectiveness of United Nations agencies in pursuing governments to reform data collection systems. Basic public health surveillance is still largely absent in many countries, making it difficult to design and target preventive policies. This situation is unlikely to change without a reversal of chronic underinvestment in research (at 0.2% of GDP in Egypt and Tunisia, respectively, compared with 1.8% in the United Kingdom) and the historic under-privileging of public health and prevention research across the region (49, 50).

GROUNDs FOR OPTIMISM

Despite signs of caution and concern, there are many positive features that predispose the region to a healthy set of reforms. First, there is deep popular distrust of Western international financial institutions, particularly the IMF and the European Bank for Reconstruction and Development, which have been criticized for their rapid free-market interventions in Tunisia, Egypt, and Lebanon and for lauding governments on their economic performance just months before the uprising (51–53). Expressing this view, the Muslim Brotherhood in
Egypt did initially suggest that “U.S. money was being spent to destroy Egypt and ruin its society” (54). However, at the time of publication, the Egyptian government has seemingly reduced its antipathy toward the IMF and is now in the final stages of accepting a US$5 billion dollar loan package program. Indeed, some commentators have suggested that the Arab Spring is, in part, a “revolution” against the radical privatization and liberalization reforms implemented at the behest of these institutions (55).

Second, although several countries are engaging with Western-dominated international financial institutions, it seems unlikely that a full set of radical shock therapy policies to shatter domestic institutions will be implemented in this region, as a gradual process of reform seems to be taking hold in all but those societies paralyzed by violence and internal political conflict. Furthermore, as noted above, the limited access to alcohol will make it far more difficult for desperate people to access the means of self-harm, as tragically occurred in the ex-communist bloc (56).

Finally, the rapid increase in satellite television coverage and, more recently, innovative media like Twitter and Facebook have helped ensure that transparency is increasing. Early evidence from Egypt and Tunisia, in particular, suggests that highly mobilized civil society activists are placing those responsible for Arab Spring reforms under greater scrutiny than ever before. Given the leading role played by young people in these forms of social mobilization, despite the considerable physical risks involved, this seems likely to continue.

Whether new governments of the Arab Spring can address these longstanding threats to stability by serving the people who have, in some cases, given their lives, or whether they ultimately are co-opted by vested interests seeking personal financial gain, will crucially determine prospects for health in the region for decades to come.

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