



## Introduction

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This edited book brings the voice of a diverse and multidisciplinary group of academics and practitioners who have lived and worked in the Arab world to regional and international audiences, emphasizing context and lived experiences. It aims to stimulate discussions about health in light of the demographic, epidemiological, economic, social, and political changes taking place. The editors hope that the book fills some of the gaps in an otherwise growing body of literature on public health in the region.

The book primarily targets academics, researchers, and students of public health, medicine, other health professions, and Arab/Middle Eastern studies. However, public health practitioners, health policy makers, and program managers are also likely to find the book useful because of its relevance to policy and practice. Personnel working with regional and international organizations involved in population health, development, and/or humanitarian aid will also recognize its benefits to their own work. Finally, this book is likely to interest general readers concerned with the Arab world; especially because public health in this region has not received the attention it deserves from scholars.

### The Arab World and Public Health

Different and overlapping terms are used to refer to this region of the world. The “Middle East” is most commonly used in the media and political literature to describe the Mashreq countries (Iraq, Jordan, Lebanon, Occupied Palestinian Territory, and Syria) and Arab peninsula/Gulf states, in addition to Egypt, Turkey, Iran, and Israel. The “Middle East and North Africa” is commonly used by the World Bank and other development agencies, and includes additionally the Arab states north of the Sahara desert. The “Eastern Mediterranean region,” used by the World Health Organization

(WHO) covers a wider area that includes 19 Arab countries (but not Algeria, Mauritania, and Comoros) in addition to Afghanistan, Iran, and Pakistan. Other UN agencies use additional terms and each includes a different set of Arab states. ESCWA and UNIFEM use “Western Asia” to refer to its 14 members, all Arab states. UNFPA, UNDP, UNICEF and UNESCO use “Arab states” to refer to almost all countries of the region.

This muddled representation of our region is perhaps a reflection of the way in which the Arab world has been defined for different purposes at different periods by different actors. This is precisely why we have opted to use the term “Arab World.” This term, preferred by many people in the region, recognizes linguistic, political, historical, and socio-cultural links among the Arab countries, and among both the Arab and non-Arab populations in these countries.

The “Arab world” includes the 22 member states of the League of Arab States. The League was founded in 1945 and includes Palestine, officially recognized in the UN literature as “Occupied Palestinian Territory (OPT).” Countries joined the League at different periods (see Web Appendix) with Comoros the last to join in 1993.

It is worth noting that, even though the different communities of the Arab world share a set of common features justifying their perception as a unity, the region is not homogenous. Diversity, in terms of culture, religion, ethnicity, economy, and political systems, are the defining features. This book attempts to expose both the commonality and diversity, especially in relation to public health, among Arab countries as much as possible.

The book addresses major political and social issues affecting health, as well as overall contextual developments in the region. Chapters discuss a range of problems of importance to public health such as foreign interventionism, war and occupation, the challenges of globalization, autocratic governance,

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tyranny and corruption, deteriorating economies, and weak social protection. This book was written before revolutions and protests broke out in several Arab countries forcing significant political changes including the bringing down of long-term presidents in Tunisia, Egypt and Libya. Chapters 2, 28, and 37 were modified at the time of submission to include perspectives related to these historic developments.

**Values and Frameworks**

There is agreement among the authors and editors of this book on the values that underpin this work. The starting point is seeing health as a right engraved in social contracts between the state and its citizens. Social solidarity, engagement of the public, and mobilization of community capacity are considered the most important mechanisms to promote health. Health promotion is seen within the context of work toward equity, social justice, and broader social change. Although these values do not emerge explicitly from every chapter, they form the basis for this collective endeavor.

At the outset, we had hoped that authors would agree on and utilize a common conceptual framework. However, it became clear during the writing process that this could not be achieved for various reasons. Different authors have different ways of conceptualizing social realities and, therefore, public health theory and practice. Quite often, there is indeed a need to resort to more than one framework and use more than one approach to suit the purpose and the intended messages of a given chapter. Some themes are better served by reporting quantitative materials, others require qualitative analyses, and yet others focus on theoretical discussions, reviews, or case studies. As things have evolved, we have become more aware of how contrasting views of public health may enrich scholarship. Although a range of approaches guided the writing of chapters, the book as a whole can be seen as presenting a population health perspective, where health is broadly conceptualized and where its social determinants take a central role in analysis.

**Scope of Work**

The book covers some of the basic themes of modern public health, such as social determinants and population groups, and explores topics of emerging

interest, such as community resilience, participatory interventions, human security and health, and social change. This book is introductory and is by no means exhaustive as it omits or covers briefly other important topics because of the constraints of space and the unavailability of data and/or suitable authors. Some of these topics have been addressed across chapters. For example, tobacco use, of great interest to public health in the region, is discussed in several chapters rather than as the subject of a dedicated chapter. With more space, many topics would have received more attention because of their relevance to public health, such as public health ethics, the health of ethnic groups, consanguinity, and genetics. The book does not address issues related to two populations of interest that might be of interest to some readers: the Palestinian Arab population of historic Palestine, which is now part of Israel, and the Diaspora from Arab countries around the world.

Perhaps the greatest challenge that author teams have faced stems from the limited availability of high quality evidence or published work on key public health issues from a population health perspective. Gray literature is not easily accessible, and its quality is variable at best. Many regional health and development datasets are not available to authors or to the public. Comparability of data from different settings and years is questionable. This reflects the suboptimal quality of administrative registers and health information systems especially with regard to exposing inequalities.

**Section/Chapter Contents**

Section I of this book is devoted to the context of public health and describes the factors that have shaped health conditions, health systems, and public health. Chapter 1 presents a historical perspective. Longuenesse, Chiffolleau, Kronfol, and Dewachi discuss the influences of colonialism, independence, and the state-building project on the rise of the medical profession and the development of public health. They find that post-colonial Arab states with different political orientations have developed state welfare programs that have had a favorable influence on health. In Chapter 2, Jabbour, Yamout, Hilal, and Nehmeh examine the political, social, and economic determinants and conditions, and development patterns important to health and well-being. They find that factors such as poverty, unemployment, especially

among the youth, and social, economic, and political exclusion not only underlie public health problems but can also help explain the emergence of the revolutions and popular protests beginning in January 2011 in the region.

In Chapter 3, Tabutin and Schoumaker examine the remarkable demographic transitions since 1950 with falling mortality leading to increasing life expectancy but persistent population growth due to slower rates of fertility decline. They point to demographic phenomena of particular importance in this region, including population growth, ageing, large youth segments, and large-scale population displacement and migration. Such changes have important implications for health and health services. One of the most pressing issues related to population growth is the widespread environmental degradation and dwindling resources explored by Jurdi, Fayad, and El-Zein in Chapter 4. While some natural resources, such as oil and gas, are abundant, the region is the most water-insecure in the world. Diverse drivers impact environmental change through three main processes: resource depletion, rising consumerism, and conflict. Although environmental action is gaining strength, much remains to be done to slow and reverse environmental degradation.

Whereas Section 1 explores the broad determinants of health, Section 2 focuses on specific determinants. In Chapter 5, Khadr, Rashad, Watts, and Salem present evidence for health inequities using classical stratifiers, such as wealth, and consider less visible inequities related to clustering of disadvantage as well as less common stratifiers such as deprivation. Khadr et al present an original analysis of official health policy documents and find limited attention to health equity. In Chapter 6, Khawaja, Mowafi, and Linos introduce a framework that includes economic capital, social capital, and cultural capital to understand the relation between assets and health. They discuss methods for measuring social capital used in two large studies in Lebanon and the Occupied Palestinian Territory. The authors review evidence from the region linking different assets and health and conclude with a discussion of research and policy implications.

In Chapter 7, Yount examines gender disparities in health through the lifespan. Among children under 5, mortality rates and access to education, nutrition, and health care favor boys. Among adults, she finds more over-weight and obesity and more mental health problems among women. She reviews studies on

gender-based violence affecting both women and men. In Chapter 8, Rashad and Khadr wrap up Section II by proposing an agenda for research and action on social determinants. Acknowledging that health equity is not yet a priority in Arab countries, they stress the need for research and action to prioritize equity. There is a need for more research to improve the identification and monitoring of inequities. They propose policy reforms to frame health equity as a corporate responsibility of governments and discuss how to move from research into policy and action through, for example, learning from the experiences of development work.

The determinants discussed in Sections 1 and 2 are reflected in health outcomes, such as avoidable conditions, the focus of Section 3, and the health of population groups, the focus of Section 4. In Chapter 9, Myntti and Giacaman introduce Section 3 by suggesting that the standard approach of counting mortality and morbidity is insufficient to understanding health and disease. This approach does not incorporate non-professional sources of knowledge or insights into health as a positive construct. The authors stress the need to explore local meanings and practices of health and call for incorporating subjective approaches, such as self-rated health and quality of life measures, which include people's view of their own health, into assessments.

In Chapter 10, Musaiger, Ghattas, Hassan, and Obeid discuss nutrition and food security. Various Arab countries are at different states of the nutrition transition and shoulder a double nutritional burden with both under-nutrition and over-nutrition becoming important public health issues. Food insecurity, already a serious challenge especially in countries in conflict, promises to worsen over the ensuing decades due to shrinking land and water resources and inadequate investments in agriculture. In Chapter 11, Hajjeh, Talaat, and Jumaan discuss the unfinished agenda of infectious diseases, including those of epidemic potential such as tuberculosis and vaccine-preventable diseases such as polio and measles. They also discuss emerging threats such as HIV/AIDS and health care-associated infections. They propose an agenda for action that includes addressing the social determinants of infectious diseases, health system strengthening, surveillance, and human capacity building.

In Chapter 12, Alwan, Alwan, and Jabbour review the increasing burden of non-communicable diseases (NCDs): 5 of the top 10 killers in the region are NCDs.

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The public health response in Arab countries has been inadequate. Considering that the top NCDs share common determinants and risk factors such as tobacco use, Alwan et al propose an integrated approach to NCD prevention and control that builds on local evidence and international experiences as part of a global strategy for NCD prevention and control. In Chapter 13, Ben Romdhane, Hussein, and Jabbour expand the discussion through focusing on the NCD associated with the highest burden, cardiovascular disease (CVD). They show important inequalities in CVD and its risks. They also explore the thorny issue of appropriate care for CVD and its risk factors, identifying missed opportunities for prevention. They highlight data showing over-utilization of invasive approaches in CVD diagnosis and treatment fueled by the oversupply of technology.

In Chapter 14, Karam, Salamoun, Jaalouk, Shabb, and Moussaoui carry out an epidemiologic review of mental disorders, including in different age groups, their determinants, and assess the situation of mental health services. They identify problems faced in the management of mental disorders. They contrast the high prevalence rates with the “limited mobilization and policy laziness” in addressing mental disorders as reflected in the limited resources devoted to mental health. In Chapter 15, Ismail argues for the need for an alternative framework in approaching and addressing mental health, especially in the context of conflict where aid agencies and NGOs rush to provide mental health interventions based on Western models and diagnoses. Such a framework should consider context, avoid pathologizing suffering and medicalization, and examine conditions that increase the resilience of people and communities.

In Chapter 16, Barss concludes Section 3 by focusing on injuries. Intentional injuries form a major burden in conflict situations, whereas road traffic injuries are the most important in non-conflict settings. Barss’ review includes conditions such as torture and gender-based violence. Advocating a broad public health framework, Barss stresses the need for multidisciplinary and multisectoral approaches to injury prevention, building and expanding on the classical Haddon matrix of injury.

Section 4 focuses on the health of population groups. In Chapter 17, Shawky, Yamout, Halileh, and Salem review child health. Taking a social-determinants-of-health framework, they examine disparities, intermediate determinants (such as child feeding practices), and

structural determinants (such as conflict). They also review health services, such as immunization, and child health systems. They propose a way forward that stresses primary health care, work on determinants, and coordinated policy. In Chapter 18, Afifi, DeJong, Bose, Salem, Awad, and Benkirane focus on youth, a group they note has recently received world attention. They discuss factors such as the youth “bulge,” high unemployment, and globalization as presenting unique challenges. They review health status, risk factors and types of behaviors, protective factors, and health determinants, realizing that health issues among young people have not received due attention. They convey messages using the voices of youth themselves and review promising youth programs.

In Chapter 19, DeJong, Bashour, and Kaddour focus on women. They warn of generalizations about women’s health across the diverse region. They review measurement issues and specific health conditions such as maternal and reproductive health and then proceed to examine the links between women’s health, social practices, and the social roles of women. A particular feature of this chapter is a review of health policies and services for women and the rising civil society activism on women’s health. In Chapter 20, Sibai, Tohme, Yamout, Yount, and Kronfol examine the health of older people. They emphasize the need to see this group within the cultural context of Arab societies where older people have traditionally had a special status. Changes such as urbanization, nuclearization of the family and economic stresses have threatened this status and, consequently, the resources and care available for older people. State security and care systems have not kept up with these changes.

Chapters 21 and 22 discuss two population groups not defined by age or sex but where age and gender dynamics are also important. Both chapters focus on workers, albeit from different perspectives. In Chapter 21, Abdulrahim and Abdul Malak address female migrant domestic workers, the largest group of unprotected workers in the region. There is limited literature on the health of this group but their social conditions point to adversity. They share the results of in-depth interviews with a group of such workers in Lebanon about their health care choices. The authors stress the importance of human agency in the lives of these workers. In Chapter 22, Habib, Fathallah, and Nuwayhid examine the broader category of workers’ health. They distinguish between a narrow focus on occupational health and safety,

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which is still neglected by policy makers, and a broader perspective that considers determinants such as the legal framework, social exclusions, unemployment, and globalization. They examine health issues in selected groups such as agricultural workers and conclude by proposing expanded research and emphasis on workers' health as a social agenda.

Section 5 explores a major issue in this region, public health in war and violent conflict, using country examples. In Chapter 23, Mowafi and BuHaka introduce the section by reviewing the key issues concerning conflict and health with emphasis on insecurity. They examine the characteristics of humanitarian emergencies and explore how conflict, displacement, and health are related. They review direct and indirect impacts of conflict on health and the challenge of measuring these impacts and advocate for building community capacity to address the impact of conflict. In Chapter 24, reproduced from the 2009 *Lancet* series on health in the Occupied Palestinian Territory, Giacaman, Khatib, Shabaneh, Ramlawi, Sabri, Sabatinelli, Khawaja, and Laurance describe health status and health services under Israeli occupation. Over 50% of the population is under the national poverty line. The authors use both conventional and subjective measures to describe health status. They find disjointed and inadequate public-health and health-service response to pervasive health challenges.

In Chapter 25, Rawaf and Rawaf describe the health conditions and suffering in Iraq over three decades due to wars and sanctions. They show the progressive decline and destruction of the health system across time and different eras, including most recently during the US-led invasion and subsequent occupation in 2003. They review recent efforts to rebuild this system and propose a public health framework that focuses on policy and organizational development along with reform of financing, services, and regulation. In Chapter 26, published with permission from *Global Public Health*, Nuwayhid, Zurayk, Yamout, and Cortas discuss community resilience observed among displaced Lebanese people during the summer 2006 war. They add to prior literature by linking community resilience with political, historical, cultural, ideological, and religious factors. They propose a framework of analysis and discuss how public health needs to learn from such experiences.

Section 6 provides an entry to understanding the complexity of health systems. In Chapter 27, Jabbour and Rawaf introduce the section by asking questions

and pointing to major problems in system set-ups. For example, they wonder whether what we have can be described as "systems" in light of the disjointed nature of its parts, and whether the widespread primary care network can be inaccurately described as primary *health* care in the Alma Ata spirit. In Chapter 28, Siddiqi and Jabbour focus on health system governance (HSG) and policy making, situating these within the broader governance in the region. They discuss a framework for analyzing HSG developed regionally and used in a six-country study and reflect on the results. The authors examine the response of Arab countries to governance challenges such as trade in health service and contracting and conclude with a set of recommendations to strengthen HSG.

In Chapter 29, Sabri, El-Idrissi, and Mataria discuss health system financing and link it at the outset to the struggle for the right to health. They note inadequate spending on health in many countries, inequitable structures of health care expenditures, and poor social health protection. They propose financing arrangements according to national income category. Moving forward requires generating evidence, increasing health investments, designing sustainable financing arrangements, and building capacity. In Chapter 30, El-Jardali, Longuenesse, Jamal, and Kronfol examine the health workforce. There are limited data on the public health workforce, as compared to the biomedical workforce. The region has the second lowest health workforce density after Sub-Saharan Africa. There are disparities in the distribution of this workforce by national income, physicians, and urban areas. Major challenges include planning, development of appropriate policies and coordination among ministries, management, and education.

In Chapter 31, Kronfol and Jabbour discuss healthcare delivery. They emphasize diversity of delivery systems and progress made in expanding delivery networks but see challenges in ambulatory and hospital care, such as inequalities, quality of care, patient satisfaction, and inefficiencies. They identify governance/policy, health system, and social/structural barriers to access and utilization. They discuss delivery reform initiatives and identify actionable priorities, foremost of which being ensuring equitable access. In Chapter 32, Khatib, Mirza, and Mataria discuss the challenge of ensuring access to essential medicines. They examine and find major deficits in four key areas: rational selection and use of medicines, affordable prices, sustainable financing, and



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reliable health and supply systems. They review case studies from several countries noting important experiences on which the region can build. They stress the need for regional collaboration, for example in procurement.

Section 7 wraps up the book by providing an outlook for public health seen within the larger social agenda for equitable development and change. In Chapter 33, Zurayk, Giacaman, and Mandil propose a vision for graduate education in public health that is based on the comprehensive approach to population health. They review regional programs and use case studies of three institutions to discuss the progress made toward the comprehensive approach. They advocate for the model of independent schools of public health. They discuss challenges facing universities and health system constraints facing public health education and call for collective action. In Chapter 34, Afifi, Nuwayhid, Nehlawi and Assai discuss participatory community interventions emphasizing that these are grounded in equity, mutual respect, and trust. They review the literature on the conceptual basis of these interventions and what they can or cannot offer. They review case studies in communities in Egypt, Syria, Lebanon, and Morocco and provide a critical analysis of lessons learned and the ethical and political ramifications. They conclude with a discussion of the way forward.

Chapters 35 and 36 discuss approaches to health within the wider social and political scope. In Chapter 35, Wick argues that scholarship on health in the region constructs not only its own interpretation of health but also of what the Arab world means. She reviews articles on health in the region that have appeared in *Social Science and Medicine* since its inception and finds that only a few articles have explored critically the political and socio-economic causes of ill-health and inequality representing a “de-politicization” of scholarship.

In Chapter 36, Dewachi, Jabbour, Yassin, Nuwayhid, and Giacaman provide a regional perspective on health and human security. They discuss that this concept features prominently in the international development literature but there is limited attention to its public health dimensions or applications in the region. The authors trace the shift from national to human security, review ways of defining and measuring human security, and examine the relevance of human security to understanding public health.

Chapters 37 and 38 discuss mobilization for change. In Chapter 37, Shukrallah and Khalil link the health care crisis in Egypt with the broader societal crises perpetuated by the regimes of Sadat and Mubarak. With the support of international financial institutions, the government pushed liberalization and privatization reforms. They describe civil society mobilization that opposed the neoliberal reforms and managed to block the passage of ministerial decrees that would have changed the face of health care in Egypt. In Chapter 38, reproduced from a 2006 special issue of the *British Medical Journal* on the Middle East, Jabbour, El-Zein, Nuwayhid, and Giacaman advocate that action in the health arena can contribute to political and social reform. While acknowledging limited public debate on health in the region, they see opportunities for action. They describe examples of successful initiatives and stress that health professionals advocating change must start from within the health sector but push for broader mobilization.

In the Postscript, the editors discuss the implication of the protests and revolutions unfolding in several Arab countries beginning in the winter of 2010–2011 for public health, as this book was written before the onset of these events.

Note: The views expressed herein are those of the authors and do not necessarily reflect the views of the United Nations.

## Section 1

## The Context of Public Health

## Chapter

## 1

**Public Health, the Medical Profession, and State Building: A Historical Perspective**

Elisabeth Longuenesse, Sylvia Chiffolleau, Nabil M. Kronfol,  
and Omar Dewachi

As the opening chapter in this volume, it is perhaps appropriate to look at history, as this can provide insights about the progress that public health has made, the challenges that it still faces today, and the options for future action. This chapter traces the main contributions to the development and evolution of public health policies in the Arab world. In so doing, several key themes, among many others, emerge: the impact of colonialism and encounter with Western medicine, the relation of public health to the state building and modernization project, the role of the medical profession, and changing policies in relation to changing political and economic realities. We intend to develop these themes and show their complex interactions in laying the foundations for modern public health.

We will argue that public health was a principal tool in the modernization project (seen as an ideological and socio-political project) which emerged in the late Ottoman period, and later subjected to the interests of colonial powers. The newly independent Arab states relied on promoting social “progress” and providing access to benefits of development, with health at the heart, as a foundation of legitimacy. This is translated in health system financing and organization and education, regulation, and large scale employment of health professionals. We focus on the medical profession, as it played a central role in both the public health and modernization projects. As champions of health, physicians have gained immense prestige commensurate with their responsibilities and their relation to the state and its political choices.

**Approach**

Health and disease are socially constructed concepts that vary in time and place based on the experiences, practices, and representations of social and professional groups, including physicians (Becker et al 1961; Freidson

1970; Boltanski 1971). Such concepts are useful in observing social change (Augé and Herzlich 1983). In many industrialized countries, research has examined the representation of health and disease, health systems organization, hospital management, medical practice, and the inter-relationships among health professionals, patients, and governments. Foucault’s work demonstrated medicine’s role in society, disciplining the body as an instrument of power.

In the Arab world, research on the history and sociology of health and medicine remains limited. While medieval Arab medicine has long interested historians of science, the history of modern public health in the region has received less attention. Researchers have examined epidemics (Watts 1999) and changes in medical practice during the nineteenth century (Gallagher 1983; Jagailloux 1986), colonial times (Turin 1971), and in the twentieth century (Chiffolleau 1997). Several other volumes and research studies, referenced throughout this chapter, have attempted to fill the gaps. This chapter builds on prior works to provide a socio-historical perspective of the social, economic, and political processes that have greatly influenced health, and the development of public health, in the Arab world. This has led us to recognize several distinct, but overlapping rather than discontinuous, eras and corresponding processes.

Historians might argue, perhaps rightly, that in the Arab world, like other regions and cultures, modern public health has old historical seeds (Watts 2003). Obviously, this would depend on what we assign to the definition of public health. For example, management of disasters of public health proportion was done well early in the Arab-Islamic civilization. Health systems, including hospitals for the mentally ill (bimaristans), and healthy administration of public space were reasonably developed in the peak of the Arab-Islamic empire. The principles of social justice and the right

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of all to protection are enshrined in religious principles and organizational set-ups in the region.

While recognizing the importance of these historical seeds, our analysis is grounded in seeing public health as a modern development, emerging principally in reaction to health problems associated with urbanization and industrialization in nineteenth century Europe, and thus rooted in social reform movements and emergence of modern states. Public health in the Arab world developed in relation to, and sometimes in conflict with, European powers and their public health.

The latter, argues Camau et al (1990), “as a system of distinct roles is a feature of the modern state.” Medicine and the medical profession were central to the emerging public health. The French Revolution placed medicine at the service of its utopian vision to eradicate human ills produced by an unjust society. This led, Foucault observes, to “the birth of two great myths: the myth of a nationalized medical profession, organized as clergy; and the myth of a total disappearance of diseases” with society “amended back to its original health” (Foucault 2003 p. 36 [first published in 1963]). Therefore, there was a political dimension to the tasks of physicians.

Later in the nineteenth century, poor environmental conditions and rising poverty in urban areas forced governments to intervene to prevent epidemics and ameliorate health conditions through sanitation and urban planning measures. Public health was variably defined as *environmental sanitation*, *preventive medical science*, and *the promotion of positive health* (Suchman 1963). The state entrusted health teams, predominantly physicians but also other professionals, such as labor inspectors and engineers (Gaudin 1987), to implement measures to protect public health while serving multiple goals: economic (maintaining a healthy workforce), political (preserving the urban order), social (promoting well-being), and imperial (controlling the colonies). The latter goal, as we will discuss later, was an important feature of the Arab counter with Western colonialism and a defining aspect of public health development in the region.

A note of caution is worthwhile here. Although Arab countries share broad trends of relationships among state projects, citizens’ expectations and behaviors, and professional interests, each country has marked its own specific path. We will not deal with all Arab countries but seek instead to show, through examples based on available data, how these relationships have evolved.

## Health and Medicine in the Nineteenth Century Reforms

Both the Ottoman Empire and Egypt under the reign of Muhammad Ali faced the economic and imperial penetration of European powers; aware of their “backwardness,” they tried to catch up through top-down reform policies borrowing the techniques of Western modern science. In the field of health and medicine, the introduction of European medicine did not lead to an abrupt break with established traditions as both Arabic and European medicine shared the same ancestry of ancient Greek medicine. Representations of the body and disease in the Arab world in the early nineteenth century were based on the theory of “tempers,” hardly different from those prevailing in *Ancien Régime* (defined as the old socio-political regime before eighteenth and nineteenth century revolutions in Europe and the establishment of the modern nation state). Europe. Arab populations had a multitude of healthcare options, the dominant one being traditional medicine, a modified form of classical Arabic medicine. Patients had freedom of choice and autonomy but illness and health care were considered private matters. Therefore, the state’s increasing involvement in health and healing must have appeared as a radical novelty.

Ottoman and Egyptian authorities did not initially plan to provide broad population health services (despite their importance in the Islamic tradition, hospitals had become mere charitable institutions rather than dedicated to the art of healing). Instead they first focused on sanitary reforms and quarantines to protect armies from epidemics. Establishment of medical schools in Cairo and Istanbul (1827), whose graduates were mainly absorbed into the army, supported this system. The Egyptian army’s demobilization after defeat in Syria in 1840 led Muhammad Ali to appoint military doctors to civilian institutions, thus extending the benefits of modern medicine. Clot-Bey, a French doctor residing in Egypt for nearly 40 years, established a provisional health care system whereby health officer graduates from the medical school in Cairo worked in hospitals of major regional cities and disseminated rules of environmental hygiene and smallpox vaccination, often with the help of barbers.

During the reign of the Ottoman Sultan Abdul Hamid II (1876–1909), the authorities expanded medical care and public health measures in the Arab provinces, for example, increased the number of



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municipal hospitals and multiplied the posts of civilian sanitary doctors and stations to ward off cholera and other infectious epidemics from overseas ships.

During the last third of the nineteenth century, community hospitals initiated by Christian missionaries emerged, significantly enhancing health care provision, especially in the southern Levant (Bourmaud 2008; Chiffolleau forthcoming). The Mashreq presents thus the originality of having introduced modern medicine and public health without the pressure of external force.

Fighting epidemics coming from abroad remained a priority. Plague had disappeared from Europe but was everywhere in the East until the mid-nineteenth century. Cholera was not endemic but the region witnessed many outbreaks due to international trade with the East since 1831. It was above all to try to stop the ravages of cholera that Ottoman *Tanzimat* (Turkish for “organization”) and Muhammad Ali established a network of “lazarets” and sanitary offices managed by indigenous officials and consular representatives of Western powers. Quarantine measures for pilgrims were also used extensively by the British in Iraq and the Gulf until the early twentieth century. Those institutions were called the Health Administration of Alexandria and the Health Council of Constantinople (Panzac 1985). But since these local quarantine measures hindered trade and navigation, Western powers launched international sanitary conferences to redirect health systems to their advantage. Twelve such conferences were convened from 1851 to 1938 and can be considered the first attempt at a coordinated international health policy. At the turn of the twentieth century, the progressive elaboration of an international health legislation led to the disappearance of quarantine measures in Europe. The global spread of epidemic cholera that started in the pilgrimage of Mecca in 1865 reversed the earlier liberal emphasis of these conferences in the direction of more severe measures against the “risk group”: religious pilgrims. In the East, a large health control operation was built up with the Ottoman and Egyptian authorities fully participating through the joint Health Councils of Alexandria and Constantinople.

## Colonial Health Policies and Medicalization of the Society

Western colonialism of the Arab region occurred over a long period. It started much earlier and lasted

longer in North Africa, especially in Algeria (occupied in 1832), but came later and was shorter in the Levant and Mesopotamia, which came under “mandates” imposed by the League of Nations. Independence granted by Britain to Egypt (1922) and Iraq (1932) did not free these countries from foreign domination, although it resulted in a reorientation in social and health policies (see Box 1 and Chapter 25). The effects of colonial orders were quite different in different Arab regions and countries, depending on pre-colonial experiences of modernization and the nature and policies of colonial powers. But everywhere, social and health policies were determined above all by the interests of the colonizers, for whom trade and export of agricultural products were priorities. These policies were implemented in authoritarian ways. Sanitation became a means of controlling a population considered backward, ignorant, and dangerous (Camau et al 1990; Arnold 1993; Rivet 1995; Mitchell 2002).

### Box 1. Mandatory Inoculations and the Cholera Epidemic in Iraq, 1923

On August 3, 1923, three cases of cholera were reported among Indian workers living in a secluded camp of the British India Steam Navigation Company on Shat-el-Arab River below Basra. Within days, deaths spear outside the Basra municipal area leading the Health Directorate in Baghdad to cordon off affected areas and halt travel from Basrah to prevent the spread of infection by road or river, but these measures were too late. Within weeks, cholera spread to all provinces south of Baghdad. Sanitation and quarantine strategies were no match against the rapidity of circulation and mobility of both people and the bacterium. The rapid spread of the epidemic was a symptom of the developments in Iraq under the British mandate (1920–1932).

The mandate authorities carried out were major urban development and transportation projects. As both a state-building and empire-building project, the railway expanded between Basra and Baghdad along the Euphrates, with extensions to other areas. The railway played an important role in connecting different territories of the new Iraqi state, facilitating the mobility of goods and people, as well as linking the territories with other parts of the empire. The British were most interested in securing the movement of military supplies, creating a network for the circulation of goods (especially grains) for export and within different regions of Iraq, and facilitating the movement of pilgrims to religious sites in Karbala,

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Box 1. (cont.)

Najaf, and Samara – a major source of economic income to the state, the Holy Cities, and the British-controlled railway company. During the 1920s, both road and river traffic increased substantially. Iraq was on a rapid track toward commercial and economic development, which Iraqi and British officials saw as crucial to the creation of the state. Ironically, the very geographic realities that seemed to promise a successful state were the nightmare that haunted the newly established Health Services.

In the past, local epidemic outbreaks were more easily contained through closing off infected areas from road and river routes. However, with the rapid mobility of people and products and connections with the other parts of the British Empire, vectors and carriers of diseases were also being offered an express ride. Cholera, which was endemic in India, arrived in Iraq much faster through ships and newly developed pilgrim routes. In case of plague epidemics, which usually hit the major cities of Baghdad and Basra, it was train cars stocked with grain, which offered rats a comfortable ride between different cities and aided in the spread of the epidemic. According to one health report, epidemics threatened the economic order of things in the new state:

“The solution to prevent the spread of infectious disease by complete closure of traffic routes was suitable to the Turkish administration, but can no longer be employed in a country which is rapidly developing and whose commerce, the motive power of its development, depends so vitally on the freedom of its traffic routes”.

The need to preserve the economic vitality of the new state became pronounced during the cholera epidemic of 1923. By September of that year, anxiety was widespread among Health Services officials as this was the time when thousands of Shi’a pilgrims flock into the Holy City of Karbala. The thought of thousands of people moving from all over the country, as well as neighboring Iran, into the heart of the epidemic south of Iraq was apocalyptic. This was a true test for the Iraqi government and the British civil administration. The Iraqi government had decided earlier that year to delegate control of local dispensaries and hospitals to provincial authorities, despite objections from British officials and the Ministry of Interior. The epidemic forced the suspension of the decentralization process and put these dispensaries under the control of the central government and the central Health Directorate.

At first, health authorities made a futile proposition to the government to forbid the Shi’a pilgrimage to Karbala that year. Officials were very reluctant to do so for fear of a backlash from the Shi’a community, especially with the recent memory of uprising and unrest in 1920, which had put the British political administration under scrutiny by the public, both in Iraq and Britain. As a compromise, the Iraqi government gave the Directorate a carte blanche to “adopt any measure of prevention, short of stopping the pilgrimage.” A massive door-to-door campaign was ordered to inoculate all the inhabitants of Karbala and Najaf. Inspections and inoculation posts were established on all bridges crossing the Euphrates at cities and towns of Twairij, Musayib, and Najaf. Inoculated persons were given a certificate. Every traveler between Baghdad and the Holy Cities passing any of these stations was inoculated if he/she could not produce a certificate. About 90,000 people made the pilgrimage that year; only a small percentage escaped inoculation. Roughly 300,00 inoculations were performed by the health services.

At first authorities had to request the vaccine from India because of the need for such large quantities. They quickly realized that, with the extension of the epidemic, there would still be a shortage of vaccine. Steps were taken to begin manufacturing the cholera vaccine on a large scale in the small Central Laboratory at Baghdad. Strains were flown in from Cairo, and isolated locally. Vaccine production started at 2,000 doses a day and reached 10,000 to 12,000 doses a day within weeks. Along with the supply from India, this was enough to meet the needs.

The management of the cholera epidemic in Iraq in 1923 sheds an important light on the complex process of nation and state building under the mandate. For the first time, a massive invasive medical intervention was introduced in epidemic management and pilgrimage, going beyond roadblocks, quarantine, and isolation. With absence of census and accurate vital statistics, health cards, death rates, and registrations became a technology, through which the new state created the conditions for its sustainability and legitimacy. The beginning of house-to-house inoculations exemplifies how, in addition to its health benefits, public health was a tool of the political project, closely associated with the management of population mobility and security, sustaining economic circulation, and legitimizing rapid urbanization.