Health care delivery and finance are closely linked. Changes to one often call for changes to the other. Just as budget cuts for instance may require adjustments to the nature and amount of health care services provided, so new scientific discoveries, new technologies, and new diseases or the proliferation of old ones may lead to changes in finance or insurance coverage.

US politicians have focused most of their attention on health care finance; they have given lesser consideration to its delivery. Yet the second is just as important as the first when it comes to increasing access to care, controlling costs, and improving quality. Access to health care services does not depend solely on insurance coverage; individuals with insurance must be able to use it, and use it effectively. Similarly, controlling costs and improving the health of populations are not simply or even principally about finance. The composition and configuration of a country’s health care industry largely determine what is possible – the type and range of services that can be provided and the amount of money needed to achieve certain results.

All countries with government-run or government-financed health care (collectively referred to as “universal health care countries”) oversee, monitor, and regulate both its finance and its delivery to varying degrees. Universal health care countries, for instance, often monitor and control the size of medical school classes and the proportion of doctors who provide primary and specialty care. Universal health care countries, moreover, frequently monitor and control the purchase of medical equipment, the building of new hospitals or additions to them, and the type of doctors who work in them. Universal health care countries also
typically monitor and control the geographic configuration of doctors and hospitals, and the conditions for gaining access to them.¹

The exception to the general rule is the United States. Not only does the United States lack universal coverage, it also lacks a system designed to provide basic services to all its citizens. While delivery systems in other countries largely have developed in tandem with expanded insurance coverage, US health care delivery has not. Instead, government programs to increase insurance coverage since 1965 (Medicare, Medicaid, and expanded versions of them) all too often have encouraged, rather than discouraged, high-cost specialty care. The result is that America’s health care industry is poorly equipped and designed to meet the challenges of universal access. Absent a significant course correction, universal health care will remain elusive, even if universal finance is achieved.

This chapter will examine the composition and configuration of America’s health care system and compare and contrast it with those in certain countries (Australia, Canada, France, Germany, and Britain).² Next, it will assess the approaches these other countries use to align finance and delivery. Finally, this chapter will seek to explain why the composition and configuration of the US health care industry is so different from those in other countries, and why this composition and configuration has led to higher per capita costs and often poorer results in terms of population health.

THE CENTRAL COMPONENTS OF UNIVERSAL HEALTH CARE DELIVERY

There are two significant differences in health care delivery between the United States and universal health care countries: (1) the emphasis on primary care and (2) the coordination and distribution of doctors, hospitals, and related health care facilities such as clinics and community health centers.

Primary Care

Primary care, the foundation of health care delivery in universal health care countries, is weakly rooted in the United States.³ Primary care has been defined as “the kind of care that is ambulatory and directly accessible to patients, with a generalist character, situated in the community that it serves and with a focus on the individual in his or her home situation and social context.”⁴ Countries with a strong foundation in
primary care require or encourage patients to register with a primary care physician (PCP), typically a general practitioner (GP), who acts as the initial point of contact in the delivery system. Primary care physicians practice in office-based settings, clinics, or health centers located in communities in which their patients reside. Primary care physicians provide comprehensive, whole person care; they do not specialize in a single body part or disease. Finally, primary care physicians are coordinators as well as providers of care; they act as gatekeepers to hospitals and specialists.

The importance of primary care has become more apparent in recent decades as chronic diseases have proliferated, straining all countries’ financial resources. Often defined as lasting more than three months, chronic diseases typically limit individual performance and require ongoing medical treatment and care. Leading chronic diseases or conditions (most publications treat the terms as interchangeable) include cancers, diabetes, hypertension, stroke, heart diseases, asthma, and mental disorders. Almost 44 percent of US citizens, or 133 million people, have experienced at least one chronic disease. That number is projected to increase to 171 million, or 48 percent of the population, by 2030. Many persons, moreover, suffer from multiple chronic illnesses or comorbidities, the number increasing as they get older. About two-thirds of US citizens over age 64 currently suffer from two or more chronic diseases.

Effective prevention and treatment of chronic diseases calls for regular and continuous monitoring, coordination, and concerted management on the part of primary care physicians, nurses, pharmacists, and other health care providers. Unfortunately, the US path of increasing specialization is at odds with the trajectory of chronic disease escalation. Stressing primary care and public health promotion, health systems in other countries have adapted more quickly and more seamlessly to the century-long shift from acute to chronic diseases. These countries achieve better results than the United States when it comes to controlling costs and obtaining good outcomes on measures of population health, such as life expectancy and infant mortality.

Coordination and Distribution of Health Care Services

The second distinguishing feature of US health care delivery is the lack of a uniform strategy for rationalizing, coordinating, and distributing health care services throughout the entire nation. According to Daniel Fox, President Emeritus of the Milbank Memorial Fund, twentieth-century health planners held firm convictions about proper health system
Fox coined the term “hierarchical regionalism” to describe the pyramidal shape that many planners prescribed. By “hierarchical regionalism,” Fox meant the geographic alignment of doctors and hospitals from small towns to big cities along a continuum of increasing task complexity – from primary to secondary to tertiary care.

Lord Bertrand Dawson, England’s first Minister of Health, was an early proponent of hierarchical regionalism. In a famous 1920 report (known as the “Dawson Report”), the Medical Consultative Council, which Dawson chaired, provided the blueprint for Britain’s National Health Service (NHS). Figure 4.1 reproduces the diagram contained in the Dawson Report showing the recommended locations and linkages among primary centres, secondary centres, and teaching hospital centres. Primary centres, the report stated, “would be staffed by general practitioners.” Secondary centres, on the other hand, would “be situated in towns where adequate equipment and an efficient staff of consultants and specialists exist . . . [T]heir services would mainly be consultative; they would receive cases referred from the primary centres for diagnosis and special treatment.” Finally, teaching hospital centres, the report indicated, “would receive cases of unusual difficulty requiring specialised knowledge and equipment, and its laboratories and special departments would be a court of reference.”

All universal health care countries have implemented hierarchical regionalism to varying degrees. Physicians with salaried hospital positions are specialists in most countries, while those who provide ambulatory care in private offices or community clinics most often are generalists. In several countries, patients must register with a general practitioner who provides first-contact care. Unless the situation is emergent, patients often need a referral from their GP in order to see a specialist. Known as “gatekeeping,” the requirement of a referral accomplishes several purposes. It promotes hierarchy by coordinating and managing access to services of increasing task complexity; it advances regionalism because generalists are responsible for the health of populations in local communities; and it bolsters primary care because it officially sanctions the role of generalists in health care delivery.

The closest America has come to using gatekeeping on a wide scale was in the 1980s and 1990s. Private health insurers initiated gatekeeping and other cost-cutting measures (known as “managed care”) in order to control expenditures. These efforts encountered heavy resistance from doctors and consumers. By the mid- to late 1990s, the political headwinds became too strong for most insurers, causing them to roll back or mitigate
Figure 1.1 Lord Dawson’s hierarchical system of medical administration. 
Gatekeeping was drastically curtailed. As a result, most Americans today see a specialist with few restrictions. Gatekeeping was drastically curtailed. As a result, most Americans today see a specialist with few restrictions.

Neither “hierarchy” nor “regionalism” has been implemented systematically in the United States, though some have tried. Some of the multi-hospital systems that have emerged in recent years contain features of hierarchy and regionalism, albeit to varying degrees. While this may be promising, multihospital systems and their component facilities largely respond to economic, not social, cues. Whether for-profit or nonprofit, their main goals are to capture market share and increase revenues. Seeking to enhance income and market position, hospital systems generally organize and expand in regions of the country where large numbers of patients with comprehensive insurance coverage reside. Few hospital systems have established clinics or primary care practices in poor city neighborhoods or small rural towns.

**HOW OTHER COUNTRIES ADVANCE PRIMARY CARE AND COORDINATE HEALTH CARE DELIVERY**

As indicated, countries that furnish health care to all persons not only provide a way to finance it, they also further the means to deliver it. Countries typically advance primary care and coordinate health care delivery in two ways. First, they seek to maintain an equivalent ratio of generalists and specialists, usually one-to-one. Second, they seek to uphold traditional boundaries between primary and specialty care, between care that generalists provide in the community and care that specialists provide in the hospital.

**The Close-to-Even Split between Generalists and Specialists**

As shown in Table 1.1, countries with a strong foundation in primary care have a close to even split of generalists and specialists. In the United States, on the other hand, specialists significantly outnumber generalists. Moreover, there are far fewer generalists in the United States based on population density than in the other countries listed in Table 1.1. While there are approximately 0.30 generalists per 1,000 persons in the United States, the range in other countries is 1.15 (Canada) to 1.61 (Germany), a difference of more than fivefold at the higher end.

Table 1.1 is based on data compiled by the Organisation for Economic Co-operation and Development (OECD). The distinction between “generalist” in the OECD database and “primary care physician,” the
preferred designation in the United States, calls for clarification. While the OECD’s definition of “generalist medical practitioner” includes only general or family practitioners, the US definition of “primary care physician” typically includes general internists and general pediatricians as well as family practitioners.\(^5\) If general internists and general pediatricians are counted as “generalist medical practitioners” in the OECD database, then the US share would increase to about one-third. A ratio of one-third PCPs to two-thirds specialists is consistent with most US compilations and estimates.\(^4\) Unfortunately, OECD data do not provide information on each country’s number of general internists, though the OECD does separate out pediatricians. Consequently, comparisons among countries using the US designation for PCP would be imprecise.

Rough estimates based on existing data suggest that PCPs comprise close to one-half of the physician workforce in Australia, Canada, France, and Germany.\(^6\) Despite these discrepancies, however, the point remains – the ratio of PCPs to specialists is much lower in the United States than in these other countries.

Because governments in universal health care countries pay all or a substantial portion of medical education, they can closely monitor and regulate student enrollments, residency placements, and practice locations.\(^6\) In America, where many medical schools are private institutions and most students pay for all or a substantial portion of their medical school education, often accumulating large debts in the process, the federal government’s influence over enrollments, residency placements, and practice locations is relatively weak.\(^7\)

Britain uses quotas to fix medical school enrollments.\(^8\) Following undergraduate medical study, students in Britain enter “vocational training,” commencing with a two-year Foundation Programme or series

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Physicians</th>
<th>% Generalists</th>
<th>% Specialists</th>
<th>Density per 1,000 Generalist/Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>73,980</td>
<td>47.31</td>
<td>49.47</td>
<td>1.57/1.64</td>
</tr>
<tr>
<td>Canada</td>
<td>74,526</td>
<td>46.98</td>
<td>53.02</td>
<td>1.15/1.30</td>
</tr>
<tr>
<td>France</td>
<td>199,920</td>
<td>47.28</td>
<td>52.72</td>
<td>1.56/1.74</td>
</tr>
<tr>
<td>Germany</td>
<td>312,695</td>
<td>41.86</td>
<td>58.14</td>
<td>1.61/2.23</td>
</tr>
<tr>
<td>United States</td>
<td>767,792</td>
<td>12.14</td>
<td>87.86</td>
<td>0.30/2.16</td>
</tr>
</tbody>
</table>


Note: “Generalist” is equivalent to family medicine practitioner in the United States.
of specialty rotations. After completing the two-year program, doctors pursue clinical training as generalists or specialists. Successful completion of generalist clinical training and examination leads to inclusion on the General Practice Registrar. GPs can practice independently at this point. Completion of training and examination in a particular specialty leads to inclusion on the Specialty Registrar. Only doctors on the Specialty Registrar can receive appointments as hospital consultants.  

France controls physician supply by restricting the number of students who can enter the second year of medical school (an approach known as *numerus clausus*).  

In addition, French authorities allocate residency placements by area of specialization and training location. Australian national, state, and territory governments also restrict medical school enrollments. These governments further influence where students can practice after graduation. Though Germany does not impose restrictions on medical school enrollments, “the number of practice permits for ambulatory care physicians in a specific region is limited, based on a national service delivery quota.” Physicians need to obtain a permit to be reimbursed by the statutory health insurance,” according to a 2014 OECD report on geographic imbalances in German doctor supply.  

Provincial governments in Canada oversee medical school enrollments and residency placements for the stated goal of maintaining an “equivalent proportion” of generalists and specialists. To advance this goal, Canadian “[m]edical schools offer roughly half of all training opportunities in family medicine.” Canada also has policies in place that seek to address geographic shortages in rural and remote areas.  

The generalist/specialist mix in the United States has not always been different from those in other countries. In 1963, the proportion of PCPs to specialists in the United States was about 1:1. By 1988, the proportion of PCPs to specialists was about 1:2. Almost coincident with this shift, health care costs began increasing in the United States well above those in other countries. Table 1.2 shows the growing divide in per capita spending between the United States and certain OECD countries.  

Some analysts drew a connection between surging costs and disproportionate numbers of PCPs and specialists in the United States. They noted that as the spending gap between the United States and other OECD countries was expanding, so was the ratio of generalists to specialists. In 1986, Congress tasked the US Council on Graduate Medical Education (COGME) with examining the situation and recommending any solutions. After about six years of study, COGME proposed that
Table I.2  Per capita health expenditures for select countries, 1970–2014

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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>223*</td>
<td>401</td>
<td>615</td>
<td>880</td>
<td>1,153</td>
<td>1,555</td>
</tr>
<tr>
<td>Canada</td>
<td>289</td>
<td>476</td>
<td>769</td>
<td>1,236</td>
<td>1,694</td>
<td>2,002</td>
</tr>
<tr>
<td>France</td>
<td>193</td>
<td>365</td>
<td>655</td>
<td>1,012</td>
<td>1,412</td>
<td>2,053</td>
</tr>
<tr>
<td>Germany</td>
<td>263</td>
<td>567</td>
<td>960</td>
<td>1,400</td>
<td>1,757</td>
<td>2,251</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>142</td>
<td>265</td>
<td>429</td>
<td>629</td>
<td>852</td>
<td>1,143</td>
</tr>
<tr>
<td>United States</td>
<td>355</td>
<td>605</td>
<td>1,108</td>
<td>–</td>
<td>2,843</td>
<td>–</td>
</tr>
</tbody>
</table>

* 1971 amount.

Sources: OECD Health Stats 2015; Centers for Medicare and Medicaid Services, Trend Tables, 2016.

All other figures are from OECD.
50 percent of all practicing physicians in the United States should be engaged in primary care and the other 50 percent in specialty and subspecialty care. In support of its recommendation, COGME stated:

Increasing subspecialization in U.S. health care escalates health care costs, results in fragmentation of services, and increases the discrepancy between numbers of rural and urban physicians. A rational health system must be based upon an infrastructure consisting of a majority of generalist physicians trained to provide quality primary care and an appropriate mix of other specialists to meet health care needs. Today, other specialists and subspecialists provide a significant amount of primary care. However, physicians who are trained, practice, and receive continuing education in the generalist disciplines provide more comprehensive and cost-effective care than nonprimary care specialists and subspecialists.

In another part of its report, COGME emphasized the link between overutilization of services and America’s highly specialized physician workforce. “[P]atients undergo more intense medical services per visit because of the exceptionally high proportion of nonprimary care specialists in this country,” it stated. Nor were higher spending and more specialty services producing better results, the Council observed. “Despite all the billions spent on health care and the remarkable increase in expenditures for biomedical research, new technology, and medical care, the United States has a rather dismal health status scorecard.” By “health status scorecard,” COGME meant America’s weaker results compared with OECD countries on certain key measures of population health – life expectancy and infant mortality.

Over the course of the next several years, Congress sought to bolster funding for the education and training of primary care physicians, while decreasing it for specialists. Nothing really changed, however. Market forces, not the federal government, dictated the course of events. “[T]here seems to be little support in the marketplace for the goal of half of new graduates being in primary care specialties,” analysts said. “[E]ven in New York, where 68 percent of practicing physicians are non-primary care and, in California, with its high level of managed care penetration, the job market [in 2000] appears stronger for non-primary care physicians than for primary care physicians,” researchers observed.

Primary Care Gatekeeping and Practice Location

Just as governments in universal health care countries manage the production and placement of generalists and specialists, so they regulate