In the perspective of access, cost and quality, value is the balance of quality with cost. In other words, value equals quality divided by cost. Access is assumed to remain constant for this determination because without continued access there can be no value. Value can be increased either by increasing the quality or decreasing the cost. In order to determine value we must be able to measure quality.

As discussed in Section 3, health outcomes are one way to measure quality for healthcare providers. Patient satisfaction, time off work and quality of life may be different ways patients measure quality. Since quality can change by perspective, value changes as well. For example, a treatment for cancer may continue to decrease the size of a tumor but the quality of life provided during that treatment may not be worth it to the patient. In the first part of this example, value as measured by the oncologist is determined by the decrease in tumor size divided by the cost of the medication and any health care provider fees. In the second part of this example, value to the patient is quality of life is divided by the cost of the medication and any health care provider fees. There may come a point at which the patient feels the value assessed by the health care provider, decreased size of tumor, is less than the value to them in terms of quality of life.

Different pharmacoeconomic evaluation methods are used to measure quality and value for patients and health care providers. Through provisions of the Affordable Care Act, the Centers for Medicare and Medicaid Services (CMS) developed a payment option for acute care hospitals that bill CMS for services provided to Medicare patients. This is called hospital value-based purchasing.¹⁻³

Value-based purchasing rewards hospitals based on the quality of care they provide to patients, how closely recommended guidelines are followed and the extent patients are satisfied with their hospital experiences.¹ Previously hospitals were paid by Original Medicare on a fee for service basis as explained in Section 1, Chapter 1. This means they were paid for the quantity of services they provided (paid for each service provided). The movement away from quantity and towards value pays hospitals on the quality of the care they provide and the value they provide to patients. There are many criteria in which quality and value are measured which is beyond the scope of this chapter. Hospitals can chose to participate in these new payment models. If they do each hospital receives a score on these
different measures. The results are compared to other hospitals and provided publically. Data on hospitals participating in this model is provided on the CMS website. The score is also used for each hospital by comparing yearly performance to a baseline score for that specific hospital. This allows hospitals to demonstrate improvement.

The incentive for participating in the value-based program is initially financial. At the start of this initiative CMS reduced the payments to hospitals for the care they provided to Medicare patients. The score is then used to redistribute the money back to those hospitals with the highest score. Therefore, the hospitals that do well receive more payment for services than those who do not score well. An added benefit for those hospitals that don’t just score well but who make a noticeable improvement from a patient perspective is that those patients may refer other patients to that facility. Increasing the revenue for that hospital. Since different patients and communities may view improvement differently, health systems may need to consider the communities they serve. Physician practices have a similar program to the acute care hospital value-based purchasing program. This program, currently referred to as the Quality Payment Program (QPP), provides incentives for physicians and clinics to be rewarded for quality and value to patients.

While healthcare providers have always been focused on caring for individual patients, value based changes have the potential to change how care is delivered to all the patient served in a specific office or hospital. One example of value is electronic prescribing. Electronic prescribing allows pharmacists to receive prescriptions quicker and often more legibly than before. This improves health outcomes. Patients receive value because the prescription can be sent to the pharmacy before the patient leaves the clinic and the prescription is more likely to be ready when they get to the pharmacy. Despite the work involved in purchasing and learning new computer software, the subsequent value associated with this change has changed how pharmacy services are provided. Looking back at our earlier example, if all practitioners changed how they viewed value for cancer therapies it might change how we approach cancer therapy especially in end of life decisions. Therefore, value based changes made by multiple offices or hospitals can lead to changes for an entire population of people.

**POPULATION HEALTH**

The education of healthcare providers is focused on preparing providers to serve the needs of individual patients. However, sometimes the needs of one patient may be applied to multiple patients within an institution or practice. If this need impacts the community as a whole, a public health concern might arise. This is especially important if the condition impacts others either because it can be easily transmitted to others or it uses significant financial
resources. The connection between public health and healthcare delivery is hundreds of years old. Initially, focused on communicable diseases, public health means so much more today and is sometimes referred to as population health. However, population health usually relates to large efforts by an institution such as a health systems or health care payer whereas public health is more general. As mentioned above, as quality and value are improved for patients, facilities, and communities, the impact continue to expand to new populations. These initiatives and innovations can impact a single state or in the case of the value-based program the entire United States population.

While the value-based program is one example of a population-based initiative, many different population-based local, state, and federal initiatives are taking place. The use of healthcare information technology is one source of information for population health initiatives. This includes patient care electronic medical records, insurance based electronic claims transmissions, and pharmaceutical and device company data collection. The analysis and use of these large databases of information are often referred to as data analytics. For example, data collected primarily from health insurance claims allows payers for health care to determine how best to spend their money.

Expanding the view of healthcare beyond the patient-provider relationship, expands our discussion of value. Payers must consider value for the health care they purchase. Medicare was the payer in the value-based program mentioned earlier but state Medicaid programs and private insurance companies are also interested in establishing payment based on value. As more payers seek value, healthcare providers will need to continue to justify value in their daily operations. This perspective can be applied to pharmacy practice as well.

Brian is a 55 year old patient with multiple sclerosis. Because of his condition, he requires a high cost injectable medication that has side effects. Brian gets this medication from specialty pharmacy X. His medication is paid for by insurance company Y. The medication is made by pharmaceutical manufacturer Z. Because of the high cost of the medication, the value of paying for this medication has to be determined by insurance company Y. If the medication keeps Brian, and others like him, from incurring other medical expenses, there is likely a value for insurance company Y to pay for Brian’s medication, as long as the cost does not outweigh the benefit. The insurance company however does have to consider that the more medications it covers, even if they all add value to their patients. This means it will add cost to the plan which will likely result in increased premiums or co-insurance rates for all patients being served by that insurance company. All the patients served by that insurance company would be the “population” served by their insurance company.
Pharmaceutical manufacturer Z has to be able to demonstrate that value, determined by the payer, to justify the price they place on their medication. This could change the strategy of pharmaceutical manufacturer Z; not only do they need to show that their medication is effective but they need to show that the medication produces appropriate value. Assuming that manufacturer Z is able to demonstrate value to insurance company Y, then the patient will be able to order the medication from the specialty pharmacy X.

When Brian begins treatment and obtains the medication from the specialty pharmacy, specialty pharmacy X must demonstrate that they are providing Brian the medication in a timely manner, without interruption, and that they are supporting Brian through his treatment, such as answering questions and addressing side effects. The reason that the specialty pharmacy needs to demonstrate this is because the payer and the manufacturer have a role in determining which specialty pharmacy will supply the medication to the patient. If the specialty pharmacy wants to maintain that business, they need to demonstrate their value to the payer and manufacturer.

If the patient is not adherent or successful on the medication due to preventable causes, such as delay in receiving treatment or misjudging a potential side effect, the money that has already been spent on that medication was wasted. This wasted money reduces the amount of money available to be spent on other patients in the population of that insurance company. In the case of wasted dollars, money for no value.

**ADVOCACY, PUBLIC POLICY, POPULATION HEALTH AND VALUE**

Every day that pharmacists care for patients, they advocate for their success. This may include discussing a medication change with the prescriber based on a new study, negotiating coverage with the insurance carrier based on patient experience, or providing advice on proper medication disposal. The development of policies for a practice site may include establishing guidelines for antibiotic use or setting prescribing guidelines for a new formulary agent. When these policies extend beyond individual advocacy they serve as advocacy of the site population. When multiple advocates seek for higher level population changes, such in the form of laws or regulations, this is referred to as public policy.

Public policy development involves the creation of laws and regulations as well as identifying the necessary budgets and resources necessary to make them a reality. For example, **Section 1: Chapter 3** discusses the growth in ambulatory care, the need for provider status and the importance of billing for services. Different legislation and regulation is needed at the federal and state level to support provider status to allow pharmacist to be recognized as health care
providers who can bill for their services. Without the approval of federal funds to support payment to pharmacists, which is based on the demonstrated value of pharmacists, the proposed legislation would not be implemented.

The process of public policy development can be divided into three phases: 1) formulation, which involves deciding what to focus on, 2) implementation, which involves executing the policies, and 3) modification, which involves reviewing current policies and identifying areas for improvement. At each stage different special interest groups may demonstrate a voice. For healthcare policy, these may include employers, payers, providers, consumers, etc.

Public policy efforts initiated by volunteers or members of an association that are advocating for themselves is often called grassroots efforts. Public policy efforts initiated by paid individuals is called lobbying and these “lobbyists” register with the government entity they serve. For example, state and national pharmacy associations are involved in many kinds of advocacy and policy development. The participation of their members is considered grassroots but they may also hire paid lobbyists to assist with the cause.

The target of public policy may be legislators or one of many government agencies that make decisions on health policy. Locally, this may include the state department of health, board of pharmacy, department of insurance, etc. At the federal level, regulatory agencies include the Department of Health and Human Services (DHHS), Centers for Medicare and Medicaid Services (CMS), Food and Drug Administration (FDA), National Institutes of Health (NIH), Centers for Disease Control and Prevention (CDC), Agency for Healthcare Research and Quality (AHRQ), etc. In addition to government agencies, several non-government (private) groups are influential in setting health care policy. These include the Institute of Medicine (IOM), The Joint Commission (JTC) and the American Medical Association (AMA).

Policy decisions are often supported by data collected by individuals who do health services research. These researchers examine the influence that pharmacists and other health care providers have on patients and the health care system. This is a robust field in the current environment of frequent health care reform.

CONCLUSION

The authors of this text expect that many changes will continue to happen with healthcare reform in the United States over the next several years. While the authors cannot predict these changes, the fundamentals of health care reform presented in this book are likely to remain: the focus on access, cost, and quality. And specifically, the renewed focus of value will continue to evolve the health of patients and populations.
REFERENCES


