Pharmacy services in Turkey: Yesterday, today, and tomorrow

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Pharmacy is a four-year professional degree program in Turkey. Turkish pharmacists practice in a variety of settings, including community pharmacies, hospitals, the pharmaceutical industry, and government agencies. In 1999, there were 24,000 pharmacists in Turkey, 80% of whom worked in community pharmacies, 10.6% worked in public institutions and hospitals, 4.6% were employed in academia and research, 2.5% worked in the drug industry, and 2.3% worked in other settings.[1] These settings are similar to those in which American pharmacists practice. However, there are many distinguishing aspects of pharmacy practice in Turkey.

Demographic data. Between 1996 and 2001, 20,510 community pharmacies existed in Turkey.[2] This represents substantial growth, as the number of similar pharmacies was only 1845 between 1965 and 1970. Today there are approximately 3164 patients for every pharmacist.[3] There are some differences among the eastern and western portions of Turkey in terms of the numbers of pharmacies due to differences in economic development. According to one report, the western and southern regions of Turkey are locations into which people wish to immigrate, while the northern and eastern regions are areas from which people tend to migrate.[3] In addition, 41% of community pharmacies are found in three of Turkey's largest cities, where 23% of the population lives.[4]

According to the results of a study conducted by the Turkish Pharmacists Association (TEB), 53.3% of community pharmacists are women, 46.7% are men, 39.5% are 41–50 years old, 28.8% are 31–40 years old, 21.6% are 21–30 years old, and 10.1% are 51 years of age or older.[5] TEB is a professional pharmacy organization consisting of 39 district associations of pharmacists and has 21,000 enrolled members. Unlike the voluntary membership for pharmacy organizations in the United States, all Turkish community pharmacists are required to be a member of TEB. However, Turkish pharmacists may voluntarily join other specialty pharmacy associations. In terms of postgraduate degrees, 3.2% of Turkish community pharmacists possess a master of science degree and 0.6% have doctor of philosophy degrees.[5] Two thirds of Turkish community pharmacists work 11–13 hours each day, and 66.9% of these pharmacists report satisfaction with their jobs. Although some of the problems that Turkish pharmacists face are similar to those faced by American pharmacists (e.g., long workdays and problems with third-party reimbursement), the main problems they struggle with are "ethical erosion" and "pharmacy falsification." Ethical erosion is a long-standing problem in Turkey that centers on the unethical practices of some pharmacists to recruit new patients. For example, some Turkish pharmacists eliminate or reduce copayments as a means of gaining new pharmacy patrons. Pharmacy falsification describes pharmacies that operate without a licensed pharmacist on the premises.

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This was a common practice in Turkey until 2000 when pharmacy inspections became more frequent.[5] However, falsification continues to exist.

Medical insurance in Turkey. According to the Turkish government, virtually the entire Turkish population is covered by social insurance. However, there are claims that only 65–81% of the population have social insurance, while the remainder have private insurance.[6]

There are three main government-provided insurances for government workers and their families. In addition, Turkey has another insurance system, similar to the U.S. Medicaid system, that covers the poor, widows, orphans, the handicapped, and children who are otherwise unprotected. This insurance is financed by the state and its expenses are limited to 0.1% of the gross domestic product of Turkey.

One of the three social insurances, roughly translated as "Turkey's Safety Box General Directorate" (The Pension Fund for the Republic of Turkey), provides coverage to all civil servants and falls under the responsibility of the Finance Ministry. Similar to the American system of disability coverage, this insurance covers all types of illnesses and disabilities that civil servants and their families might encounter that would force them to temporarily stop working. According to the laws in Turkey, occupational injuries and diseases are recognized only in blue-collar workers.

Another state insurance system, called BAG-KUR, provides policies for self-employed workers, small-business owners, and pensioners. BAG-KUR is administered by the Turkish Ministry of Labor, and only a few hospitals and pharmacies participate in this plan. Individuals with this type of coverage can be seen in the government state hospitals as well, but their expenses have to be paid by the insurance carrier.

The biggest health insurance agency in Turkey is the Social Insurance Institution (SSK) and covers blue-collar workers. Every worker in Turkey must be a member of SSK. SSK renders health care services to insured persons and their spouses, children, and parents and to pensioners and their spouses, children, and parents.

Pharmacy services. All Turkish pharmacies must be overseen by a licensed pharmacist. Unlike individual state pharmacist licenses in the United States, Turkish pharmacist licenses do not have to be renewed. Because continuing-education (CE) programs do not formally exist as they do in the United States, pharmacists in Turkey are not required to obtain CE hours to remain licensed. To be a licensed pharmacist, a person must be a citizen of the Turkish Republic. While the work of licensed pharmacists is largely supported by nonpharmacist personnel (i.e., technicians), formal education of these individuals and technician licensure do not exist. According to Turkish law, a pharmacist can open only one pharmacy and cannot participate in another business or have another job. Regional pharmacy services are available 24 hours a day, seven days a week. When the pharmacist is absent from the pharmacy for less than 15 days and there is no other pharmacy in the region, another pharmacist or physician should be temporarily hired to manage the pharmacy, or the pharmacy will be closed. When the pharmacist must leave the pharmacy for more than 15 days, he or she must not only find a relief pharmacist to run the pharmacy but also contact the Provincial Health Administration (PHA) during his or her absence. Failure to inform PHA or hire a relief pharmacist will result in a fine.

Pharmacies are inspected twice a year by PHA. The inspectors are typically general practitioners or other physicians who are appointed to this duty. Pharmacies can also be inspected by health inspectors twice a year. Turkish regional pharmacy associations have just started a new process for pharmacy inspections that includes pharmacist inspectors, who are also practicing community pharmacists. If a regional association receives a request or demand to inspect a pharmacy, pharmacist inspectors conduct the inspection. Moreover, pharmacies can now be inspected whenever it is deemed necessary. Requests for pharmacy inspections can come from physicians, pharmacists, or pharmacy patrons.

Drugs and other supplies found in pharmacies should meet the Turkish Pharmacopoeia codes of 1970. Each pharmacy must keep a published list of the drugs and related substances that are warranted in emergency medical situations, which is annually determined by the TEB and Ministry of Health. These drugs are similar to those that American emergency medical personnel must keep on hand and include atropine, diazepam, digoxin, dopamine, lidocaine, morphine, nitroglycerin, and others. Further, pharmacies must have a refrigerator. Community pharmacies can be located in a basement but their entrance and exterior must be visible from the street. They cannot be located, for example, on the second floor of an apartment building.

The size of each pharmacy varies, but each must be at least 377 square feet (35 m^2) in size. Because of the small space required, it is easy for pharmacists to open community pharmacies virtually anywhere they choose. In addition to size requirements, the community pharmacist must maintain a laboratory and some raw materials needed for compounding, as well as other supplies, such as a scale and a mortar and pestle. In addition, Turkish pharmacy law requires a compounding table to be made of glass, ceramic, or marble. Active ingredients used for compounding must be stored in glass containers; those that can be degrad-

ed by sunlight must be stored in colored containers. The compounding area of the pharmacy is situated in a backroom, out of the view of patients. Turkish pharmacists consider the compounding area as "sacred ground," and patients are not allowed to view or enter it.

Although boxes and containers for virtually all drugs in Turkey contain the statement "a prescription is required," most of these items are available without a prescription. In contrast to the U.S. system, there is a pseudo-over-the-counter system in place for almost all Turkish drugs. Individuals purchase not only vitamins and cold and flu products without a prescription but also antibiotics. However, Turkey has a strictly controlled drug and narcotic system, and these agents can be obtained only with a prescription. The Turkish government has not taken any action to address the fact that many drugs are otherwise available without a prescription.

The community pharmacy is devoted to the sale and dispensing of medications, as well as pharmacist consultations. A patient with a prescription must pay full price unless exempted by insurance. Patients with insurance coverage have to pay a copayment of 20% of the total cost of the prescription. Patients who are retired and receive a pension pay only 10% of the total cost of the drug.

Computerized pricing methods and bar codes do not exist in Turkish pharmacies. When pharmacists dispense a drug, they remove the price label and affix it to the prescription. The pharmacist then calculates the total cost of the prescription. A copayment of 10% or 20% is charged to the patient, with the remainder being paid for by the patient's insurance company or employer. Similar to third-party formularies in the United States, Turkish insurance companies have a list of preferred drugs for which pharmacies can be reimbursed.

Almost all prescriptions are written by the provider rather than being telephoned into pharmacies. Most prescriptions are nonrefillable, even those for chronic conditions and maintenance medications. However, if a patient has an official written report from a hospital documenting his or her disease, the medication can be refilled. For example, patients with diabetes can obtain a written report about their condition that is prepared by a team of specialist physicians. This report will document that a patient requires uninterrupted treatment for diabetes. Prescription refills can be obtained by presenting this report to a pharmacist.

Turkish pharmacists are required to counsel patients about their prescriptions. However, it should not be assumed that counseling occurs on a routine basis, as this is often not the case. In contrast to brand-name drug product equivalents in the United States, there are no generic products currently available in Turkey. In addition, most drug products are unit-dose packaged, such that a prescriber's order may read "Dispense one box."

According to 1997 data, US$2.3 billion was spent on drugs in Turkey, and the per person annual drug consumption cost was US$37.[7] There are currently 5600 available drug products in Turkey. Drug expenses account for 34% of Turkey's total health expenditures.[8]

A study conducted by the Office of Health Project General Coordination, a division of the Ministry of Health, found that the total health expenditure for Turkey was 561.8 trillion Turkish lira (TL) (US$5396 million) in 1996, while being TL 41.5 trillion (US$4973 million) in 1992. This figure may partly reflect the increasing rates of inflation over the past few years. The share of the government in whole drug expenditures is 88%. Drug expenditures in the private sector decreased from 53% to 12%.[9] The results of this study have also yielded information on specific classes of drugs consumed: 21.11% of consumed drugs were antibiotics, 14.6% analgesics, 8.7% cold and cough products, and 56% of drugs were in categories too diverse to be reported. In 1995, available drugs included 754 different antibiotics, 561 analgesics, and 174 vitamins. Interestingly, three fourths of all prescriptions in Turkey are for antibiotics, and 48% of these drugs are not used properly.[10]

Evaluation of community pharmacy services. In 1997, 127 community pharmacists in Ankara agreed to participate in an evaluation of the quality of the community pharmacy services available.[5] In general, community pharmacy services contradicted the standards of good pharmacy practice. The community pharmacists surveyed were commonly not fulfilling their role in the rational use of drugs. In addition, the structural layout for community pharmacies, in most cases, was not favorable for counseling. Only 6.3% of pharmacies have a private area for counseling. Computer usage is not common and is not commonly used for pharmaceutical care activities. In fact, 70% of community pharmacies in Ankara have no computers.[11] Nationwide, only 59.4% of Turkish pharmacies had a computer system in 1999, and only 12.5% of these had an Internet connection. In addition, 50.7% of community pharmacies do not have a fax machine.[5]

Sources for drug information are inadequate in most pharmacies. Almost 8% of community pharmacies in Ankara have no professional drug information resources.[11] Pharmacists are not provided with sufficient on-the-job training programs. Half of the community pharmacists named communication skills among the abilities they wished to improve. Community pharmacists and auxiliary personnel did not use their professional time effectively, as the use of technology to manage patients and inventories was reported by only 11% of them. Of the drugs requested by patients, 46% were prescription

drugs. Of the drug requests, only 60% were filled under the supervision of the pharmacists themselves. Written and oral counseling was provided for only 16.68% of drugs. Information about drug storage and adverse drug reactions was rarely included in counseling sessions. Professional activities concerning drugs occupied only 18% of pharmacists' time.[11]

The Pharmacist Image Study, conducted in Istanbul in 1996, surveyed 350 people and found that respondents perceived the pharmacy to be the place where drugs are sold but not where patients could be counseled for disease states.[12] Respondents ranked pharmacists as the third most frequently contacted source (14%) for information about diseases (64% sought health information from physicians and 20% asked a relative or friend). Half of all respondents obtained drugs from one specific pharmacy, especially those with insurance. Of those surveyed, 25.4% cited professional knowledge and compatibility as necessary attributes for pharmacists, as well as friendliness and a smile. Overall, pharmacy was found to be an ideal and respectable profession.

The results of the Turkish Demand for Service Correlation study, conducted in 2001, found that 225 (25%) of 900 participants asked for a pharmacist's advice about drugs and other health matters.[13] The rate of those seeking pharmacist consultations was lowest in rural regions, eastern Turkey, women, and geriatric respondents. Also, women consulted pharmacists more for services not related to drugs, such as women's health issues. When rural participants do seek pharmacy consultations, they are more likely to have questions pertaining to disease information versus urban participants who are more likely to consult a pharmacist for drug information. Results also demonstrated patients' need to be in close physical proximity to the pharmacy and for face-to-face interaction with the pharmacist. Internet and mail-order pharmacy services do not exist in Turkey. In addition, no retail pharmacy corporations or nursing home settings exist in Turkey. This study found a weak correlation between pharmacy services versus demand and the provision of these services by pharmacists.[13] The results of this study revealed the large need for increased pharmacy services in Turkish pharmacies.

The future of Turkish pharmacy. To meet the needs of a culturally diverse nation, the practice of pharmacy in Turkey must now shift its focus from being a drug-centered profession to a patient-centered profession. The concept and initiation of pharmaceutical care should be encouraged. Because pharmacy laws in Turkey have changed little since their initiation in 1954, pharmacy rules and regulations must be revised to reflect the issues facing pharmacists today. The last significant change in pharmacy rules and regulations was the inclusion of good pharmacy practice in 1999, which was to be a stepping stone to pharmaceutical care. It may be that the first steps to changing these regulations cannot meet all of the needs for improvement of pharmacy services and practice, but revisions are encouraged to reflect the overall vision of the profession. Such changes should improve patient outcomes as well.

Changes to pharmacy rules and regulations that address the ethical and moral issues facing Turkish pharmacists today should also be encouraged.[7] For example, Turkish pharmacies must be more closely inspected, and tighter regulations and penalties should be established and enforced to resolve the problem of pharmacy falsification. Pharmacists should also be encouraged to avoid unethical practices, such as altering copayments as a means of attracting patients to their pharmacies, and appropriate penalties should be given to pharmacies that engage in this unfair practice. Pharmacists should be made to uphold high moral standards that reflect the "Oath of the Pharmacist" (developed by the American Association of Colleges of Pharmacy Council of Deans and the American Pharmacists Association Academy of Students of Pharmacy Task Force on Professionalism).

While undergraduate pharmacy education falls below the international standard, strategies should be developed to revise and improve the existing academic structure of Turkish pharmacy schools.[14] Courses must be introduced that focus on communication and counseling techniques as a way to integrate pharmaceutical care concepts into the curriculum.

Computer technology should be acquired and used appropriately in all pharmacy settings. To advance the profession in terms of providing pharmaceutical care and reducing medication errors, computers must be integrated into everyday practice. Appropriate Internet use should be encouraged to decrease the pharmacist's feelings of alienation in the profession and increase the number and quality of drug information and international references available. Other problems that must be addressed include long workdays, substandard research and drug development, and the uneven distribution of pharmacies in metropolitan versus rural regions.

In Turkey, acceptance rates to pharmacy school and other professional degree programs are developed by the Higher Education Council, who uses a centralized and bureaucratic structure to determine these rates. However, according to Turkey's five-year long-term strategic plan (2001–2005), an unbalanced distribution of health personnel and infrastructure still exists, and there is often a lack of coordination and cooperation among the country's institutions.[15] In addition to this imbalance, the pharmacy profession and schools of pharmacy must address

inflation rates and the increasing cost of prescription drugs.

According to the study results in Ankara, pharmacists perceive the quality of their services to be good, which is contradictory to the amount of time they actually allocate to patient counseling.[5] The results from a correlation study of services versus demand have shown that patients' demands are not being met by the pharmacy services that are currently available. On the other hand, the community still believes that pharmacy is a respectable and ideal profession. Almost one third of the Turkish population seeks help from the pharmacy if they have a health problem. This presents a good opportunity to pharmacists to develop advanced pharmacy services.

Conclusion. The future of pharmacy in Turkey seems to lie within the individual pharmacist's motivation and desire to change the face of the profession. It is our hope that pharmaceutical care and technology will flourish in Turkey such that clinical pharmacy services would be applied in all health systems in which Turkish pharmacists work. Further, by the standards of good pharmacy practice, Turkish pharmacists should eventually assume a larger role in health promotion, patient counseling, and disease management.

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