4. Regulation and planning

This chapter outlines the principles and practice of regulation and planning in the Turkish health care system. Table 4.1 outlines the main legislative arrangements upon which the health care system is based.

Table 4.1

Health system legislation in Turkey

Law	Year adopted	Details
Health Care Personnel Law	1928	Outlines the rules and working conditions of health care personnel
Pharmaceutical and Medical Preparations Law	1928	Regulates all rules governing the production, distribution and use of pharmaceutical or medical products
Law on Public Hygiene	1930	One of the basic laws of the health care system; it details the role of the Ministry of Health, control of infectious diseases, hygiene regulations and so on
Law on Establishment of the Central Hygiene Institute	1940	The institute was established to conduct scientific research and investigations, including laboratory diagnosis, for the protection and improvement of public health; the production and regulation of specific biological products; training; and research
Pharmacists and Pharmacies Law	1953	Sets out the rules governing pharmacists and the establishment of pharmacies
Revolving Funds Law	1961	Establishes revolving funds in public organizations and sets out their rules and regulations
Socialization of Health Care Services Law	1961	Outlines the principles and rules of the socialized health care system
Compensation and Working Conditions of Health Personnel Law	1980	Outlines the rules and regulations governing the payment and working conditions of health care personnel
Legislative Decree on the Organization and Functions of the Ministry of Health	1983	Establishes the structure, role and functions of the Ministry of Health and its departments
Family Planning Law	1983	Regulates the principles of family planning, abortion, sterilization, and procurement and manufacturing of contraceptives
Basic Law on Health Care Services	1987	Outlines the main principles of the provision of health care services
Law on Meeting the Health Care Expenditures of the Poor through the Green Card	1992	Outlines the eligibility criteria for the Green Card and sets the rules and regulations regarding health care expenditure
Social Security Institution Law	2006	Establishes the SSI and sets the rules for merging the main social security organizations (SSK, *Bağ-Kur* and GERF) under this new body
Social Insurance and General Health Insurance Law	2006	Outlines social security rules in general and the General Health Insurance scheme, in particular; law came into effect 1 October 2008

As can be seen from Table 4.1, some of the basic legislation used in health care is quite old; however, the dates mentioned are the acceptance dates of the laws and each has undergone several revisions over time, reflecting changes in the health care environment. In the Turkish health care system, decrees and directives also play an important role. Laws create the main legislative framework, and successive decrees and directives may be issued for the purposes of implementation.

4.1 Regulation

The parliament is the ultimate political decision-making authority in Turkey, whereas implementation of health care policies falls mainly under the responsibility of the Ministry of Health. The Ministry has sole authority in regulating both the public and the private health care sectors. Its role extends over hospitals, all health care units, all agencies that have an impact on health, the pharmaceutical industry and pharmacies. The Ministry of Health executes this regulatory function through its directorates and departments. In some cases, commissions are established to support the Ministry of Health in its activities, such as the commissions for the registration of pharmaceuticals. At the provincial level, the Ministry of Health undertakes its responsibilities through provincial health directorates. Another regulatory authority with growing importance is the SSI, established in 2006. With the implementation of financing reforms in late 2008, it has formally gained a monopsonic power to purchase and reimburse health care services through the GHIS. As the dominant purchasing authority, the SSI has become an influential partner in determining health care policies.

The third regulatory actor is the Ministry of Finance. This Ministry is responsible for the allocation and use of governmental budgetary resources. Currently, the health care expenditure for active civil servants and Green Card holders is covered through the government budget.

There is no single comprehensive health plan for health care services. In 1993 the *National Health Policy* document (Ministry of Health, 1993) was published based on the principles of the WHO Health for All policy, and this remains the most comprehensive policy document to date. The most recent health reform document dates back to 2003, although it does not cover health policies overall; rather, it focuses mainly on organizational and financial changes (Ministry of Health, 2003b). Turkey has also produced policy documents on the United Nations Millennium Development Goals and the WHO *Health21* objectives

(WHO Regional Office for Europe, 1999). In particular, the Ministry of Health has published a document analysing the current status and outlook for meeting the *Health21* objectives (Ministry of Health, 2007b).

4.1.1 Governance and regulation of third party payers

Organization

As outlined in Chapter 3, there are three main organizations purchasing health care services: the SSI, the Ministry of Finance (financing Green Card holders and active civil servants) and private health insurance companies. With the full implementation of the GHIS, all public funds have been merged under the SSI. The SSI is a public organization attached to the Ministry of Labour and Social Security but has financial and administrative autonomy. The organization has three organs: the General Council, Board and Presidency. The General Council comprises representatives from relevant public organizations, academics, trade unions and professional organizations; it meets once every three years. The Council mainly advises on social security policies, evaluates the balance of accounts, assesses performance goals and their attainment and selects the members of the Board. The Board is the ultimate decision-making authority and comprises the president of the organization and a vice-president; representatives from the Ministry of Labour and Social Security, Treasury and Ministry of Finance; and representatives from employers, employees, the self-employed, civil servants and retirees. The Board has 10 members and meets every week. The president has the highest managerial authority and is responsible to the Board for all of the SSI's activities. The president's main responsibilities are described in the legislation as follows: to manage the organization in line with the policies and strategies determined by the cabinet, national development plans and annual implementation programmes; to develop organizational policies and strategies and performance indicators; to prepare the budget; to coordinate, monitor and assess the SSI's activities; to implement the decisions of the Board; to represent the SSI at all levels; to determine the ethical rules to be followed by staff; to purchase goods and services up to a limit and make proposals to the Board for amounts exceeding this limit; to make public announcements regarding the employers with outstanding premium debts; and to cooperate with other related organizations.

The provision of VHI is overwhelmingly private and profit-making. The 2000 NHA study (Ministry of Health RSHCP School of Public Health, 2004) counted 36 private insurance firms operating in Turkey, accounting for a 3.6% share of total current health care expenditure. In 2010, there were 32 insurance companies in the health field with 1 792 007 insured people but 10 of these did

not collect premiums for health and worked in other branches such as accidents or fire (Prime Ministry Undersecretariat of Treasury Insurance Supervision Board, 2010).

Financing for purchasers

Those who were in the SSK and *Bağ-Kur* social security schemes prior to the enactment of the GHIS now pay their contributions to the SSI.[25] Also under the SSI, GERF receives its revenues from the contributions of active civil servants and public organizations as their employers.[26] However, in cases of budget deficit, the shortfall is covered by state sources. The expenditure for the Green Card and Active Civil Servants Schemes is fully met through the government budget. For these last two schemes and GERF, the government undertakes a risk pooling role for purchasers. The government, by deciding the rules and prices to purchase health care services, has extensive regulatory authority. This function is mainly carried out by the SSI in that the quantity and prices of the services provided are determined by the SSI in the HIG. As there are no explicit public health priorities within the system, they cannot be reflected in purchasing plans. All purchasing authorities are highly centralized as all rules and regulations are determined centrally.

As mentioned above, the SSI publishes its purchasing rules in the HIG. In the past, there were different rules and regulations for different purchasing agents, which led to equity problems. However, with the implementation of reforms, all groups now enjoy equal benefits. The HIG defines the package of services to be purchased and their prices. Since 2004, there have been rising concerns that these decisions are based mainly on cost-containment objectives. All public purchasing regulations and decisions are made nationally. There are still branches of SSK, *Bağ-Kur* and GERF at the regional and provincial level but they mainly act as liaison offices. Purchasing organizations are accountable to the Ministry to which they are attached, the cabinet and parliament. Their budgets are audited annually by the Turkish Court of Accounts (*Sayıştay*).

Private insurers are free to set their own rules and to enter into contractual arrangements with providers. They need only to comply with commercial law and relevant tax regulations.

[25] Although these contributions are pooled under the SSI, those making the contributions are still identified as SSK or *Bağ-Kur* members.

[26] The beneficiaries of GERF, retired civil servants, actually do not contribute revenues as this is an intergenerational scheme where active civil servants finance the fund on behalf of their retired colleagues.

For cross-border purchasing and provision, the HIG sets the rules and conditions for public purchasing agents. Turkish citizens covered by public schemes can go abroad for treatment if it is certified that treatment is not available in Turkey. The duration of treatment and coverage is for one year, but with certification from the foreign health care facility this can be extended to two years if necessary.

4.1.2 Governance and regulation of providers

Organization

There are both public and private organizations providing health care services. Among the public organizations, there are hospitals, family health centres, public health centres, family practitioners and dispensaries. Private organizations include hospitals, office-based physicians, laboratories, diagnostic centres, pharmacies and clinics. These are described in Chapter 6.

Public organizations are owned, governed and managed by public entities. Although there are some non-profit-making hospitals with foundation status, private organizations are predominantly profit-making in Turkey. Since the 1990s, there has been an explicit intention to transform public hospitals into autonomous entities. In 1987, the Basic Law on Health Care Services was passed with the aim to pilot such autonomy in some hospitals before extending the programme to the whole country. However, the Supreme Court cancelled some parts of the law as they were found to be in conflict with constitutional principles. The HTP launched in 2003 (Ministry of Health, 2003b) once again stated that transforming hospitals into autonomous organizations was an important component of the reform process. Although concrete developments have been achieved in other important aspects of the reform programme (such as establishing a family practitioner scheme and moving towards full implementation of the GHIS), this component has advanced at a slower pace.

Government plays an important role in relation to providers. In terms of provider organizations, the Ministry of Health is the sole authority that regulates and sets standards for public and private facilities. All private hospitals, diagnostic centres, clinics and laboratories have to be licensed by the Ministry of Health upon proof that they have met all the standards set in related regulations. Before February 2008, the private sector could establish a facility anywhere in Turkey provided that it met the relevant legislative standards. In February 2008, the Ministry of Health issued a new decree and restricted the geographical areas in which the private sector can invest. Accordingly, the Ministry will declare the areas eligible for private investment once a year

and facilities can be established only in these areas. With this measure, the government aims to regulate the unprecedented increase in private facilities and to control their distribution across the country.

The diplomas of health care professionals have to be certified by the Ministry of Health before they can start working in either the public or the private sector. All the relevant regulations and standards are publicly available but not any individual assessments and results. All facilities are periodically audited to monitor whether standards are being followed, and checks are also made if any complaints are received by purchasers. Penalties for not meeting the criteria include not allowing the facility to provide services or halting its services temporarily until it complies.

All medical devices and equipment require certification (a CE certificate and/or Declaration of Conformity) under a process detailed in a Ministry of Health decree issued in 2007. The Ministry of Health authorizes certain organizations to issue such certificates and these organizations provide CE (*Conformité Européenne*) certificates to manufacturers meeting the required standards. The General Directorate of Pharmaceuticals and Pharmacy of the Ministry of Health licenses all drugs to be sold in the Turkish market. Details are outlined in Chapter 6. Basically, pharmaceutical companies apply to the Ministry of Health, submitting documents outlined in the relevant regulatory framework, and after evaluation from various technical committees, the product is given market approval as well as its price.

Quality

Quality of care has been given a greater emphasis in the reforms introduced since 2003. The introduction of the performance-based payment system for health care personnel has strengthened this focus as quality indicators have become an important component of institutional performance. In 2006, the Ministry of Health issued a directive to regulate the quality improvement and performance-evaluation process in hospitals. Accordingly, quality units have been established at the ministerial, provincial and organizational levels. These units mainly provide two quality-related functions. First, health facilities are assessed in terms of institutional infrastructure and process evaluation criteria. The Ministry of Health has developed 150 criteria covering access to health care services, administration, information management, laboratories, radiology, operating rooms, clinics, patient and staff safety, infection control and prevention, intensive care units, dialysis centres, institutional safety, pharmacy, emergency room, kitchen, laundry, patient records and the mortuary. The Ministry of Health assesses hospitals three times a year according to these

criteria and through standard patient surveys, which are undertaken twice a year. The results form the basis of calculating institutional performance grades as part of the performance-based payment system. Currently, the results of these assessments and surveys are not made available to the public. Second, the units are involved in the design of a database to monitor quality improvement studies in hospitals and to register the results of hospital assessments.

In recent years, voluntary external quality assessments have also increased in both public and private facilities. Hospitals try to obtain International Organization for Standardization certification from the Institute of Turkish Standards, which confirms that the hospital meets nationally agreed quality standards. It is envisaged that, following full implementation of current reform proposals, there will be a more competitive environment among providers and this process of quality assessment will grow as facilities compete to attract more patients. Clinical quality assessments are not on the agenda at the moment.

Currently, there is no specific unit monitoring medical negligence and medical errors. There is a Higher Health Council within the Ministry of Health whose membership includes both medical and legal experts; this evaluates complaints concerning medical negligence and errors when such complaints are made. The Council's decisions are an important input in any litigation that may ensue. The new Legal Code enacted in 2004, which regulates all crime-related issues in Turkey, has introduced penalties for professionals' medical errors. However, the law has come under criticism by professional organizations. Cases are not systematically reported to the public but the media may report on a particular story. Currently, the Ministry of Health is working on draft legislation on medical malpractice in order to reduce the prevalence of such errors. However, it is not expected to be debated in parliament soon. As there are limited nationwide studies on this issue, the extent of medical errors in the country is not well known. In a study that reviewed 366 malpractice cases notified to the Higher Health Council by criminal courts between 1995 and 2000, 93 cases related to general surgery malpractice. Of these, 34.2% related to gynaecologists, 25.4% to general surgeons and 16.9% to orthopaedists (Tümer & Dener, 2006). Of the surgeons sued for malpractice, 50% were found not guilty by the Higher Health Council, indicating that half of the litigations were without legitimate grounds (Tümer & Dener, 2006). Should the Ministry of Health's malpractice law be enacted, a commission for malpractice monitoring and assessment will be established within the Ministry of Health and, in parallel, a quality assurance unit will be established within health facilities.

The Blood and Blood Products Law (2007) regulates blood supply issues for both the public and private sector. The Law defines three main types of unit: regional blood centres, transfusion centres and plasma product manufacturing units. The Red Crescent (*Kızılay*) has played a pioneering role in establishing regional blood centres. The other two units can be situated in either public or private institutions. Private blood centres have to be registered by the Ministry of Health upon proof of meeting the conditions and standards determined in the Law. In the HIG, providers are urged to acquire their blood and blood product supplies first from the Red Crescent, but in cases where this is not possible private providers can be used to meet demand. The Red Crescent tests blood supplies for HIV, hepatitis B and C and syphilis before releasing it for public use. Blood suppliers in either the public or private sectors must ensure the safety of the product and keep records for 30 years.

Continuing professional education and development is left to the individual health professional's choice, as there are no compulsory programmes for continuing professional education as part of the accreditation process of health personnel. In-service training is carried out in some cases by the Ministry of Health or professional organizations (see Chapter 5).

4.1.3 Governance and regulation of the purchasing process

Third party payers enter into contracts with private providers and sign protocols with public providers. Contracts are usually treatment based; that is, the purchaser buys specific services (specific operations or diagnostic and laboratory tests, etc.) with predetermined prices. Contract prices are based on the HIG prices published by the SSI. The SSI has a standard contract that it uses for all private providers. While contracts usually do not define quality indicators, only licensed facilities are eligible to enter into contracts. Currently, there is no systematic review process to monitor the quality of services. However, the bills from providers are thoroughly examined to avoid fraud and contracts can be cancelled if evidence of such is detected. In this regard, the introduction of the MEDULA electronic information management system in 2007 (see section 4.2.2) is a watershed in that all invoices for services are processed online, making the monitoring of bills much easier than in the past. There is no competition between purchasers and providers for contracts, but the internal market envisaged by the most recent reform proposals on giving autonomous status to public hospitals is expected to make this a significant factor in future.

Public providers sign protocols with the SSI, with services supplied at prices published in the HIG. Currently, there are no quality monitoring mechanisms between the parties.

4.2 Planning and health information management

Health care and services planning falls under the responsibility of various organizations. The Ministry of Health is the dominant actor followed by the SPO. However, the Ministry of National Education, SSI and Higher Education Council also have some responsibilities. Public sector investment plans on capital investments are prepared by the SPO using a set procedure. The SPO disseminates the *Rules of Investment Programme Preparation* annually to all public institutions in June. Institutions with forward investment plans prepare investment proposals and feasibility reports according to the principles in this document and submit them to the SPO. These investment proposals are then analysed and assessed throughout August and September while, concurrently, the Ministry of Finance, SPO, Treasury and Central Bank collaborate on determining the overall budget size and balances for the forthcoming investment programme. At the end of this process, the SPO finalizes the annual programme covering all sectors and sends it to the Higher Planning Council for approval. Budget allocations for public investments are made within the framework of this programme.

Policies are developed by parliament, Ministry of Health, Ministry of Finance and the SSI. There is no explicit priority-setting process. The Ministry of Finance and the SSI have started to play an important role in this area, implicitly through the purchasing guides where reimbursement conditions for therapies and drugs are determined for the public sector.

4.2.1 HTA

HTA has a limited place in the Turkish health care system. HTA was introduced initially as part of the reform package of 2003, but practices have progressed at a slow pace and mainly in the pharmaceutical sector. One of the reasons for the late introduction of HTA principles lies in the historic lack of health system goals, such as emphasizing efficiency, performance and effectiveness. In the past, the health care system has not been systematically held to account for its reportedly low performance and inefficient use of resources. The budgets for institutions are set on a historical basis, with adjustments for inflation and new investment requirements, with financial deficits covered by the Treasury.

After the 2003 reforms, health expenditure increased dramatically, with increases in access and coverage. This led to new measures aimed at containing costs and making effective and efficient use of resources. As outlined in detail in Chapter 6, radical changes were made in the pricing and reimbursement policies for pharmaceuticals. In February 2005, an interministerial Reimbursement Commission, mainly responsible for determining reimbursement rules, was established. The SSI coordinates the Commission, which has members from the Ministry of Health, SPO, Treasury, SSK, GERF, *Bağ-Kur* and the Ministry of Labour and Social Security. The Commission's terms of reference were given by the General Directorate of Budget and Fiscal Control (*Bütçe ve Mali Kontrol Genel Müdürlüğü*) (General Directorate of Budget and Fiscal Control, 2006):

- to assess the drugs that will be included or excluded from the positive list based on the decisions of the technical committee (a subcommittee established under the Commission with representatives from universities and specialists);
- to eliminate uncertainties regarding discount rates, registration dates and reference pricing;
- to assess and implement additional discount requests by pharmaceutical firms;
- to undertake assessments on drug equivalence groups and to assess the market share and period of the cheapest drug on the market that will be the basis for setting the ceiling price;
- to demand pharmacoeconomic assessment reports for drugs from selected firms and internationally accepted institutions when needed;
- to make recommendations on prescription rules;
- to present reports and recommend precautionary measures on developments in public pharmaceutical expenditure;
- to ensure common action by reimbursement agencies on reimbursement rules and contracts with health care, pharmaceutical and medical product providers; and
- to determine views on the reimbursement methodologies for drugs on the positive list and make proposals to relevant ministries.

As can be seen, this Commission has been established as the main body responsible for determining and implementing reimbursement rules for pharmaceuticals and it decides the content of the positive list. The Commission meets monthly and evaluates applications for inclusions in the

positive list. In 2007, a technical subcommittee, the Medical and Economic Evaluation Committee, was established to describe the rules and principles of reimbursement applications. The committee decided that pharmacoeconomic assessment reports would be mandatory for all applications starting from 20 October 2008.

There are different requirements for the assessment reports on generics and for original pharmaceuticals. Generics only need to show the cost-reduction effects they will have by entering the positive list while originals need to demonstrate their pharmacoeconomic benefits. Only cost-minimization and cost–effectiveness analyses are accepted by the evaluation committee; cost–utility analysis, based on an analysis of quality-adjusted life-years, do not form a compulsory part of the evaluation process but can be submitted as supporting evidence for cost-minimization or cost–effectiveness analyses. Pharmacoeconomic analyses are not mandatory for orphan drugs, different forms or dosages of pharmaceuticals that are already in the positive list, the co-marketing of pharmaceuticals or new indications for pharmaceuticals. Assessment reports are submitted by pharmaceutical companies for their products and are evaluated first by the technical subcommittee and then by the Reimbursement Commission. However, a lack of expert knowledge within both the pharmaceutical industry and within the Reimbursement Commission, coupled with an overall lack of data required for economic evaluation, has raised some concern over the viability of such procedures in the short term.

The HTP introduced two new organizations that potentially can have a leading role in HTA in future: the National Pharmaceutical Institute and the National Medical Devices Institute. These organizations will have autonomous status in order to avoid any potential political pressure. The National Pharmaceutical Institute will be responsible for determining pharmaceutical policies, licensing of drugs, regulating production, drug promotion, sales, and research and development of pharmaceutical products. Special emphasis has been placed on the public sector purchasing drugs on the basis of pharmacoepidemiological and pharmacoeconomics assessments. The National Medical Devices Institute will be responsible for the standardization and supervision of medical devices in the health care sector. At the time of writing, the legislative process to establish these two organizations is still in the initial stages and it is difficult to comment on their role in the future. The most recent discussions centre on whether or not the two bodies should be established as a single organization.

Clinical practice guidelines in primary care represent another practical initiative in HTA in Turkey. Developed in 2003 by the Ministry of Health (Ministry of Health, 2003a), the main aims behind the guidelines are:

- to constitute the basis for rational drug utilization;
- to increase efficiency in primary care;
- to increase the quality of patient care; and
- to develop scientific and evidence-based general guidelines needed by physicians.

During the development stage of the guidelines, the Ministry of Health took the leading role and coordinated a consultation process with a wide group of stakeholders. Several working groups for diseases that are frequently diagnosed and treated within primary care were established and these groups determined the basic rules for diagnosis, treatment, monitoring and referral principles in each category. Currently, implementation of the guidelines is not compulsory and is left to individual physicians.

At present, HTA does not extend to other components of "health technology" and is only mandatory for pharmaceuticals. Moreover, economic evaluation is mandatory only for new drugs and there are no plans to extend the practice to pharmaceuticals already available on the market.

4.2.2 Health Information systems

The Ministry of Health introduced the Basic Health Statistics Module (*Temel Sağlık İstatistikleri Modülü*) in 1996 with the aim of monitoring and managing health care services in rural areas. In 1997, an information system, comprising four components – human resource management, materials management, financial management and pharmaceutical management – was introduced and this is used by all non-urban hospitals.

Since 2004, a number of initiatives have been introduced to improve the health care information system. In parallel with the overall improvements, both the Ministry of Health and the SSI are designing new information systems with the aim of monitoring different functional levels of the health care system and improving financial management.

An integrated health information system is required to harmonize all the components of the HTP. To this end, the Ministry of Health developed an e-health project: *Sağlık-NET* (Health-NET). Work then started on developing the National Health Information System. The Ministry of Health initiated

e-health activities based on the Turkish Health Informatics System Action Plan launched in January 2004 (Ministry of Health, 2006b). In 1996, a Basic Health Statistics Module was developed and began implementation through the Internet after 2005. In this module, all provinces send their data from the health centres and the Ministry can follow all health activities at that level monthly. In 1997, a core resource management system was developed to manage the Ministry of Health's human, material, financial and pharmaceutical resources and the system started to be used through the Internet in 2005. The system has several subsystems that cover different areas such as medical equipment and materials recording, Green Card information, performance monitoring and hospital information forms. Other initiatives include the publication of the *National Health Data Dictionary* in 2008 as the basis for all information system procedures and minimum health data sets.

The Ministry introduced the Family Medicine Information System (*Aile Hekimliği Bilgi Sistemi*) in 2006 to monitor the performance and activities of family practitioners. Family practitioners periodically send information on their activities through the Internet, which allows their performance to be thoroughly examined. The system covers patient-based information on age, gender, place of residence, social insurance status, risk assessment, mortality rates, diagnosis (ICD-10), treatment procedures, follow-up of women aged 15–45 years and of pregnancies and babies. In addition, there are some studies aimed at introducing tele-medicine practices into the health care system. The Tele-Medicine Project was developed to cover the gap in human resources in radiology, to meet the need for second consultations in complex medical cases, to increase patient satisfaction and to undertake correct diagnosis and treatment procedures. The pilot project, covering 18 hospitals, was completed in December 2007; based on the assessment of the pilot, the project was enlarged to cover the whole country in the second half of 2008. Hospitals provide Internet-based information about their activities to the Ministry of Health on a quarterly basis using standard forms designed for this purpose. The information gathered through this process is used internally by the Ministry of Health and is not made available to the public.

The SSI has started to play an important role in the health care system as the main reimbursement agency. It has introduced the MEDULA information system, which will be used in reimbursement procedures. Currently, all facilities at the secondary and tertiary care levels providing services to the SSI can be reimbursed only through this Internet-based information system. Although the main aim of the system is to monitor reimbursement practices, health utilization data are also collected independently from reimbursement

data. MEDULA provides information on age, gender, insurance status, provider, type of service (inpatient, outpatient), diagnosis (ICD-10), referral, expenditure, status of discharge, co-payments, and so on. When a patient visits a health care facility, the provider institution should use this information system to confirm the insurance status of the patient and receives an ID number to follow all the procedures related to the visit. The provider agency can only be reimbursed after procedures end and approval of all expenditure has been given by the SSI. The system currently covers only the population under the SSI, and Green Card holders are not yet included. After the full implementation of the current reform programme, the entire Turkish population will be covered by this comprehensive information system.

4.2.3 Research and development

Research and development is mainly undertaken in universities and the private sector. Universities undertake research mainly using private sector funds and research budget grants sourced from universities' own research and development funds. Currently, 10% of all revenues generated by universities are transferred to the research and development budget and universities support scientific research from these resources. As the research fund capacities of all universities are not equal, this may cause inequalities among them. A government agency, the Scientific and Research Council of Turkey (*Türkiye Bilimsel ve Teknolojik Araştırma Kurumu* (TÜBİTAK)), also provides grants for scientific studies. In the private sector, as in all other countries, the pharmaceutical industry is the leading actor for health care research. However, because of strict rules and considerable bureaucracy, this capacity is not used to its full extent in Turkey.