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Health Care Systems in Transition

San Marino

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The European Observatory on Health Care Systems is a partnership between the World Health Organization Regional Office for Europe, the Government of Greece, the Government of Norway, the Government of Spain, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

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Foreword

The Health Care Systems in Transition (HiT) profiles are country-based reports that provide an analytical description of each health care system and of reform initiatives in progress or under development. The HiTs are a key element that underpins the work of the European Observatory on Health Care Systems.

The Observatory is a unique undertaking that brings together WHO Regional Office for Europe, the Governments of Greece, Norway and Spain, the European Investment Bank, The Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine. This partnership supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health care systems in Europe.

The aim of the HiT initiative is to provide relevant comparative information to support policy-makers and analysts in the development of health care systems and reforms in the countries of Europe and beyond. The HiT profiles are building blocks that can be used to:

- learn in detail about different approaches to the financing, organization and delivery of health care services;
- describe accurately the process and content of health care reform programmes and their implementation;
- highlight common challenges and areas that require more in-depth analysis;
- provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in the different countries of the European Region.

The HiT profiles are produced by country experts in collaboration with the research directors and staff of the European Observatory on Health Care Systems. In order to maximize comparability between countries, a standard template and questionnaire have been used. These provide detailed guidelines

and specific questions, definitions and examples to assist in the process of developing a HiT. Quantitative data on health services are based on a number of different sources in particular the WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) Health Data and the World Bank.

Compiling the HiT profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health care system and the impact of reforms. Most of the information in the HiTs is based on material submitted by individual experts in the respective countries, which is externally reviewed by experts in the field. Nonetheless, some statements and judgements may be coloured by personal interpretation. In addition, the absence of a single agreed terminology to cover the wide diversity of systems in the European Region means that variations in understanding and interpretation may occur. A set of common definitions has been developed in an attempt to overcome this, but some discrepancies may persist. These problems are inherent in any attempt to study health care systems on a comparative basis.

The HiT profiles provide a source of descriptive, up-to-date and comparative information on health care systems, which it is hoped will enable policy-makers to learn from key experiences relevant to their own national situation. They also constitute a comprehensive information source on which to base more in-depth comparative analysis of reforms. This series is an ongoing initiative. It is being extended to cover all the countries of Europe and material will be updated at regular intervals, allowing reforms to be monitored in the longer term. HiTs are also available on the Observatory's website at http://www.observatory.dk.

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The current series of Health Care Systems in Transition profiles has been prepared by the research directors and staff of the European Observatory on Health Care Systems.

The European Observatory on Health Care Systems is a partnership between the WHO Regional Office for Europe, the Governments of Greece, Norway and Spain, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

The Observatory team working on the HiT profiles is led by Josep Figueras, Head of the Secretariat and the research directors Martin McKee, Elias Mossialos and Richard Saltman. Technical coordination is by Suszy Lessof. The research director for the Slovenian HiT was Josep Figueras.

Administrative support, design and production of the HiTs has been undertaken by a team led by Myriam Andersen, and comprising Jeffrey V. Lazarus, Anna Maresso, Caroline White, Wendy Wisbaum, and Shirley and Johannes Frederiksen.

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Introduction and historical background

Political background

The Most Serene Republic of San Marino, conventionally known as San Marino, covers an area of 61 km^2. Roughly square-shaped with Monte Titano in the centre, it is surrounded by Italy, being bordered by two regions, Emilia-Romagna to the northeast and Marche to the southwest (Fig. 1). It is situated in the Apennines, slightly inland from the Adriatic Sea, near the city of Rimini. With an altitude varying between 50 metres and 749 metres (Monte Titano) above sea level, it has a temperate climate, without extreme heat in summer or cold in winter. The Sammarinese speak Italian and are largely Roman Catholic.

The total population, about 27 000 in 1999 (51% females, 49% males), is distributed across nine townships (*castelli*) or administrative districts: Acquaviva, Borgo Maggiore, Chiesanuova, Città di San Marino, Domagnano, Faetano, Fiorentino, Montegiardino and Serravalle (Table 1). Because of historical peculiarities in terms of traditions, geographic configuration and town planning, these townships have been designated for political and administrative purposes.

Since 1976, when the last census was taken, the overall population has increased by about 40%. Although the capital is Città di San Marino, or simply Città or San Marino, most of the population (about 32% in 1999) lives in Serravalle, the only other town.

The average population density is 440.5 inhabitants per km^2, varying from 809 in the Township of Serravalle to 128.5 in the Township of Faetano. The 61% of the population that lives in the central northern urban area probably do so because there is better road access because of the presence of a highway (1999). If the capital is included, this percentage rises to 78%.

Each township has its own council, chaired by a township captain. The resident population of the township elects the council every 5 years according to a pure majority system. The councils have deliberative, consultative and

Fig. 1. Map of San Marino[1] *(1)*

Table 1. Resident population according to township, 1976–1999

Township	1976	1980	1985	1990	1995	1996	1997	1998	1999
Acquaviva	982	1 054	1 148	1 175	1 268	1 269	1 289	1 353	1 434
Borgo Maggiore	3 553	3 777	4 341	4 769	5 238	5 365	5 435	5 559	5 615
Chiesanuova	626	687	712	750	863	884	903	904	915
Città di San Marino	4 279	4 359	4 201	4 185	4 357	4 372	4 407	4 432	4 464
Domagnano	1 438	1 772	1 840	2 021	2 171	2 228	2 310	2 367	2 411
Faetano	695	718	750	736	829	876	906	966	996
Fiorentino	1 191	1 356	1 477	1 576	1 763	1 820	1 855	1 859	1 849
Montegiardino	578	563	561	632	684	710	716	734	756
Serravalle	5 807	6 317	6 941	7 264	7 904	8 026	8 051	8 300	8 518
Total	**19 149**	**20 603**	**21 971**	**23 108**	**25 077**	**25 550**	**25 872**	**26 474**	**26 958**

Source: Secretariat of State for Health and Social Security *(2)*.

[1] The maps presented in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the European Observatory on Health Care Systems or its partners concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitations of its frontiers or boundaries.

promotional functions in supervising and managing local services. They can also promote referendums, intervene in matters of environmental protection and coordinate cultural and social solidarity initiatives.

San Marino has been shaped as it is today since 1463, after having acquired the townships of Serravalle, Faetano, Montegiardino and Fiorentino. Despite evidence of the existence of a partly independent community starting in the thirteenth century, its historical origins are steeped in legend, which says that a Christian stonecutter called Marinus founded San Marino in 301 A.D. Marinus escaped from the island of Arbe located in Dalmatia to avoid Diocleziano's persecution. This makes San Marino not only the smallest republic in the world but also the oldest one.

Even though the autonomy of San Marino has been endangered several times, the Sammarinese have always managed to keep their freedom. In 1797, Napoleon offered to extend the territory as a gift and as a sign of friendship with San Marino, but the Sammarinese refused any enlargement. In 1861, Abraham Lincoln wrote to the two captains regent to demonstrate appreciation for San Marino and its history. San Marino has always had a strong tradition of hospitality, as no one has been denied asylum or help in this land of freedom. In 1849, for example, Giuseppe Garibaldi, who fled from the enemy armies, was given shelter in San Marino. During the Second World War, San Marino hosted another 100 000 refugees. Currently, the independent Republic of San Marino is democratic and neutral and continues to live according to ancient traditions, being increasingly sensitive to the importance of liberty. Over the years, the small community of Monte Titano, in memory of the legendary stonecutter Marinus, was named the Land of San Marino and then the Community of San Marino and finally the Republic of San Marino.

San Marino is a multi-party democratic republic. Because of its small size, most citizens are actively politically involved. The three main political parties are the Christian Democratic Party of San Marino (Partito Democratico Cristiano Sammarinese, PDCS), the Socialist Party of San Marino (Partito Socialista Sammarinese, PSS), and the Democratic Progressive Party of San Marino (Partito Progressivo Democratico Sammarinese, PPDS), as well as several other smaller parties. Because of its size and population, it is difficult for any party to gain an absolute majority, and most of the time the government is run by a coalition. Following a period (1947–1957) of Communist-led coalition governments, a series of coalitions headed by Christian Democrats were in control until 1978, when a Communist-led coalition again came to power. A coalition of Communists (renamed the Democratic Progressive Party in 1990) and Christian Democrats governed the country from 1986 to 1992. The Christian Democrats then formed a coalition with the Socialists and are still in power today.

Initially, a social body was constituted to regulate the social and economic life of the community. Later, this simple social body was changed to a form of self-government ruled by an assembly called the Arengo (assembly place), consisting of the head of each of the families. The first statutes and laws on a democratic basis were a result of this assembly.

The powers of the Arengo were gradually delegated to the Great and General Council (Consiglio Grande e Generale), representing the legislative body of the state. This is also called the Council of LX (Consiglio dei sessanta), consisting of 60 members elected by universal adult suffrage every 5 years under a proportional representation system in all nine townships or whenever, for whatever reason, it loses half plus one of its members.

In addition to approving the budget, the Great and General Council nominates from among its members the Captains Regent (Capitani Reggenti) or Consuls. The Captains Regent are chosen from opposing parties so they can keep an eye on each other.

In 1243, the first two Captains Regent were elected to office for a period of 6 months; a twice-yearly appointment (1 April and 1 October) has been made regularly since then. Today the Arengo is simply the electoral body, usually convened twice a year on the Sunday after the transfer of power to the Captains Regent. During these meetings, the people have the right to present proposals and requests of public interest to the Great and General Council.

The legal system is based on civil law with influence from Italian law, but San Marino has not accepted Italian jurisdiction. Because of historical and social reasons, the administration of justice in San Marino is entrusted to foreign executives. The only exception are the Justices of the Peace who, by statute, could be of Sammarinese nationality and are mainly authorized to preside over civil suits up to a value of EUR 25 822. The chief organs of the magistracy of San Marino are:

- the Law Commissioner, who deals with all civil and criminal suits;
- the Judges of the Court of Appeals, who deal with civil and criminal proceedings;
- the Fiscal Attorney and fiscal judges, which are examining bodies;
- the Commissarial Magistrates, who assist the Law Commissioner with judicial enquiry functions;
- the Juvenile Court;
- the Administrative Judge of first instance;
- the Administrative Judge of the Appeals Court;
- the Council of Twelve (Consiglio dei dodici) elected by the Great and General Council among its 60 members and chaired by the Captains Regent for the duration of the legislative period, which is a political and administrative

jurisdictional body acting as a court of third instance for appeals of civil and administrative cases; and

- the Great and General Council, which judges only in extraordinary cases: nullifying sentences based on false evidence and restoring the initial situation if the trial itself was unjustified.

Executive power is wielded by the Congress of State (Congresso di Stato), currently composed of ten secretaries of state appointed by the Great and General Council from among its members at the start of the legislative period for its duration. The Congress of State, which is politically responsible to the Great and General Council, has the power to implement legislative initiatives. The Secretary of State for Foreign and Political Affairs has assumed many of the prerogatives of a prime minister.

Within limits and according to the directives of the Great and General Council, the Congress of State determines general government policies, establishes administrative guidelines and lays down San Marino's course of action at the international level.

San Marino's administration is split into ten departments. Each department consists of several offices or services (about 70 total) with similar duties and functions. Departments are run by coordinators, appointed every year by the Congress of State, following the proposal of the respective secretaries of state, with the possibility of renewing the appointment. Politically, each of the ten departments depends on the respective state secretary. For health and health care, the Department of Health and Social Security depends on the Secretary of State for Health and Social Security.

Without a formal constitution, the San Marino's institutional system is based on the Statute of 1599 and historical common law. These are both subject to an institutional system based on the Declaration of Citizens' Rights and Basic Principles of San Marino (known as the Declaration of 1974), which prevails over all contrary provisions.

In the past few years, there has been a debate between those who consider it indispensable to adopt a formal, detailed and rigorous constitutional charter and those who consider it is sufficient to complete the Declaration of 1974, just making some amendments to the current system.

Simplified administrative procedures, a direct relationship with the users and the quality of services provided make 80% of the population satisfied with how public administration is managed. Nevertheless, discussions on the need to reform the public administration are underway.

Since San Marino universally acknowledges its devotion to peace, there is no obligatory military service. Nevertheless, all citizens between the ages of

16 and 55 years may be called upon, under certain circumstances, to defend the state. Although San Marino is a neutral state, it possesses combined Voluntary Military Forces that ensure state independence. The existing armed services are:

- the Territorial Army, which participates in official ceremonies and collaborates with the police on certain occasions;
- the Guard of Honour, also called the Noble Guard, a special decorative corps of guards for the Captains Regent and the Great and General Council;
- the Fortification Guards, which are in charge of the San Marino artillery and are on duty at the Government Palace and at the frontier guard post;
- the Gendarmerie, the police corps in charge of law and order in the country; in matters of public order, the Gendarmerie depends directly on the Secretariat of State for Foreign and Political Affairs, whereas in enforcing the law it is under the direction of the Magistracy;
- the Civil Police, mainly in charge of road traffic and control of business activities; and
- the Guardia di Rocca, another kind of local police force, responsible for guarding the borders and institutional buildings.

Despite its small size, this little republic has suffered for many years from emigration. In the early 1800s, the Sammarinese used to emigrate towards cities in central and northern Italy such as Rome, Genoa and Florence; by the late 1800s, entire families emigrated overseas, mainly to the United States and Argentina. After emigration decreased during the First World War, it again increased in the 1920s because of fascism in Italy and, consequently, in San Marino. Only in the 1970s, thanks to economic renewal, did entire families return to San Marino. Today, more than 15 000 Sammarinese citizens are spread throughout the world, especially concentrated in the United States, France and Argentina.

People born in San Marino remain citizens and can vote no matter where they live. Throughout the 1990s, San Marino has taken a more active role in international diplomacy, establishing strong diplomatic and economic ties with a large number of other countries.

Economy

San Marino lacks mineral resources, excluding building stones, and the major activities have traditionally been cultivation, crop and sheep farming and stoneworking. Since the 1970s, San Marino has become highly developed and wealthy from a largely agriculturally based economy. Tourism, light industries, farming and the sale of postage stamps and duty-free consumer goods are its

chief sources of income. Major products include building materials, textiles, ceramics and wine. Most of the land is now used for grain, vines and orchards and rearing cattle and pigs.

Unlike other European countries, including Italy, an advanced tertiary sector (including finance and telecommunication) is developing because of strong financial incentives. Tax exemptions make it easier to obtain loans, and welfare support provisions stimulate the growth of small and medium-sized industries making ceramics, tiles, furniture, spirits, paint, fabrics and clothes. This helps to diversify the economy and make it less reliant on tourism, which plays a key role, as San Marino attracts more than 3 million international tourists each year. Industry and the advanced tertiary sector have replaced farming and have reduced unemployment to extremely low levels, such as 3.0% in 1999 *(3)*. The manufacturing industry employs 33% of the population, followed by the public sector, with 25%, while the commercial and service and transport sector cover 16% and 12%, respectively (1999). Agriculture (2%), the financial sector (3%) and the construction industry (9%) employ the remaining workers. In 1999, similar to previous years, unemployment among men was at a very low level of 1.8%. Unemployment among women, in contrast, seems unable to decline below 5.0%, illustrating the huge gap between men and women. The labour market heavily relies on cross-border workers (*frontalieri*), mainly from neighbouring regions of Italy. The proportion of these workers, who primarily work in commerce, construction and manufacturing, in the total employment in San Marino doubled from 11% in 1991 to almost 22% in 1998. This results from two factors: the positive economic trend and the willingness of firms in San Marino to pay wages above those in surrounding regions of Italy (while social contribution rates are about half those in Italy). Table 2 shows the main macroeconomic indicators during 1992–1998.

Table 2. Macroeconomic indicators, 1992–1998

Economic indicator	1992	1993	1994	1995	1996	1997	1998
GDP (millions of euros)	401	455	506	582	635	688	–
GDP per capita (euros)	17 000	18 700	20 500	23 200	24 800	26 500	–
GDP annual growth rate (%)	–	13.4	11.1	15.1	9.1	8.4	–
Unemployment rate (%)	4.1	4.9	4.5	3.8	4.9	4.2	3.8
Cross-border workers as a percentage of the labour force	13.7	15.2	17.0	18.6	19.1	20.1	21.7
Annual inflation rate	5.4	4.7	5.0	5.0	4.9	2.0	2.2

Source: International Monetary Fund *(4)*.
GDP: gross domestic product. The values in lire have been converted to euros at the exchange rate of Lit 1936 = EUR 1.

San Marino has enjoyed an extended period of remarkably strong economic performance, posting real gross domestic product (GDP) growth well above the levels recorded in neighbouring regions or in the European Union, low unemployment and declining inflation. At the same time, the country has become increasingly integrated with the world economy, as evidenced by trade and tourism, the rapid increase in the share of Italian commuters in the workforce and a rising intermediation of foreign savings by the banks in San Marino. With GDP per capita estimated at EUR 26 500 in 1997, living standards substantially exceed the average for European Union countries and are 10% higher than that in Italy's neighbouring Emilia-Romagna region. GDP grew in real terms by 9.1% in 1996 and 8.4% in 1997 (1.1% and 1.8%, respectively, in Italy).

Various factors have contributed to San Marino's outstanding performance, including a low tax burden together with a labour cost advantage over surrounding regions that have helped in attracting businesses and jobs. However, despite the positive economic developments, the central government budget has moved into a substantial deficit – estimated at about 2.5% of GDP in 2000 – because of rapidly rising outlays on generous entitlement programmes and difficulty in collecting taxes. This fiscal performance compares unfavourably compared with that of European Union countries, particularly the small, rapidly growing economies. Nevertheless, San Marino's public sector still has a comparatively favourable position in net foreign-exchange assets. The economic environment for implementing these reforms remains positive, but the downside risks to activity are growing, as global activity is slowing and asset markets are weakening. Few indicators are available on current economic developments in San Marino, but employment growth appears to remain robust and economic activity should benefit from relatively low real interest rates. However, San Marino's advantage in labour costs over neighbouring regions has gradually declined, and this poses risks for the medium term, even if it has not yet seriously affected the inflow of business. Moreover, the decline in tax burden, the improvement in public administration and the liberalization of labour and product markets planned by the Government of Italy could further increase competition.

The state has an important presence in San Marino. The central government is estimated to account for about 34% of gross domestic product (GDP), and the overall public sector, including public enterprises, employs about one fourth of the labour force *(4)*. Moreover, the government actively engages in industrial policy to limit unemployment and to promote economic development. The central government includes the central administration, the Social Security Institute (Istituto per la Sicurezza Sociale, ISS), the Autonomous Public Works

Company (Azienda Autonoma Servizi Pubblici, AASS), the Autonomous State Production Company (Azienda Autonoma di Stato per la Produzione, AASP), the Olympic Committee (Comitato Olimpico Nazionale Sammarinese) and the University of San Marino. San Marino has no local government as this is commonly understood.

The AASS is a state-owned company established in 1981. It is mainly responsible for providing water, natural gas and electric power and for all related maintenance work. The AASS is also responsible for public transport and managing the cable railway; managing the state car pool garage; the city hygiene service; and the public slaughterhouse service. The AASP is responsible for state staff management, for purchasing goods and services for public offices and storage and for managing public tenders. Among its main responsibilities are taking care of all public buildings, including those of the health care sector, and the road network.

In late 2001, San Marino decided to both turn the AASS into a joint-stock company (Law No. 119 of 20 November 2001) and to start to regulate public services in the areas of wastewater management, urban hygiene, public transport as well as electricity and natural gas provision by law (Law No. 120, 20 November 2001). The regulation aims at ensuring the provision of these public services at a suitable quality and at the best economic conditions for the whole system including families and firms. A tariff system scheme should follow in short time. As a consequence of that regulation, a Public Utility Authority will be constituted. It should work independently and autonomously following government policy trends. It will be a collective body composed by a president and two members, appointed by the General and Great Council on proposal of the Congress of State. An Authority Regulation Act should be presented for Congress of State approval within 90 days after the Authority members are appointed.

The report of the 2001 International Monetary Fund mission *(5)* concludes that, unless public expenditure is slowed, the objectives of at least balancing the central government budget and improving net foreign-exchange assets will be difficult to achieve over the medium term without a major increase in taxation. Moreover, the International Monetary Fund suggested reforming the public sector and public employment, even if important progress has already been made in this domain as a result of a hiring freeze, to reallocate staffing resources to areas of greatest need and to increase staff mobility. The International Monetary Fund report advised curtailing tax expenditure and subsidies and to put the pension system on a sound financial footing to allow state support for the ISS to be reduced over the long term. Pension benefits in San Marino are, in fact, among the most generous in Europe, in terms of a low average retirement

age, high statutory and average replacement rates and the short contribution period required. Thus, despite a 4 : 1 ratio between workers and retirees – one of the highest in Europe – the ISS requires considerable transfers from the state budget to finance pensions. These transfers would have to increase significantly in the near term to avoid widening ISS budgetary deficits. Following advice from the International Monetary Fund, improvement of the management of the pension fund has been planned and the retirement age has been increased to 65 years for people entering the workforce after January 2002 (Law No. 118, 20 November 2001). Nevertheless, those commendable measures are unlikely to be sufficient to remedy the medium-term problems.

Monetary agreements with Italy and the agreement on customs union and cooperation with the European Union (16 December 1991) have ratified the currency union with Italy and have eliminated barriers in the trade and goods market. The monetary agreement has allowed a third country such as San Marino to issue coins denominated in Italian lire and ensures that bank notes and coins issued by Italy are legal tender within San Marino. Thus, coins issued by San Marino have the same shape, size and composition as coins circulating in Italy. San Marino does not have a currency or central bank of its own even though the Instituto di Credito Sammarinese, created in 1991, performs functions similar to those of a central bank. Financial institutions located in San Marino do not have access to the refinancing facilities of the Bank of Italy.

Given the currency union with Italy and a monetary agreement with the European Community on 1 January 1999, San Marino has adopted the euro as its currency *(6)*.

Despite being a third country, it is taking part in a "virtual" way in the large single European market. This is because it is entirely surrounded by a European Union member, Italy, which requires trade agreements. The first agreement on trade exchange, which provided a strong economic boost, was produced in 1972 (agreement of 21 September 1972 between Italy and San Marino). This was subsequently confirmed and strengthened in 1991 by the agreement on cooperation and customs union with the European Union. These agreements allow the oldest republic in the world to stand virtually equal with the Member States without renouncing its distinctive traits and sovereign rights, especially financial and social rights.

Its unique situation as a small enclave bordered by the northern central regions of Emilia-Romagna and Marche makes its economic indicators similar to those of these neighbouring regions. In this context, the positive development of the industrial sector has led, among other things, to a steady increase in employment levels, which has indirectly benefited the surrounding regions, thus further confirming the existing integration between the economies of Italy

and San Marino. Because of the currency union with Italy, inflation in San Marino largely mirrors that of Italy, with San Marino's annual inflation rate exceeding Italy's by about 0.4 percentage points on average during 1992–1997.

Health status

Table 3 shows the main health status indicators for San Marino. San Marino's population is aging. In 1999, 15.9% of the total population was 65 years or older versus only 14.9% between 0 and 14 years. Over the last three decades, the ratio of people 65 years or older to those 0–14 years has changed from 36 : 100 to 106 : 100.

The population is aging in all industrialized European countries, but since 1997, only Italy and San Marino have more people 65 years or older than 0–14 years old (although San Marino's dependency ratio is lower than Italy's: 44.5% and 47.5%, respectively, in 1998).

In addition, the proportion of females is increasing in San Marino, currently 104.7 females to 100 males. This percentage is even greater among people older than 75 years: 159 women to 100 men.

Table 3. Health and demographic indicators, 1990–1999

Health indicators	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Percentage of the population aged 65 years or older	13.6	13.8	14.1	14.4	14.6	14.8	15.2	15.3	15.6	15.9
Dependency ratio	42.9	42.5	42.4	42.0	42.3	42.0	43.0	43.2	43.8	44.5
Birth rate (per 1000 population)	11.5	10.9	9.9	10.1	10.9	9.8	11.2	11.2	10.9	11.5
Death rate (per 1000 population)	6.7	7.3	7.2	6.0	7.5	7.5	6.8	6.9	7.3	7.5
Female life expectancy at birth (years)	–	–	–	–	–	–	82.5	82.6	82.6	82.6
Male life expectancy at birth (years)	–	–	–	–	–	–	75.9	76.4	76.4	76.4
Total fertility rate (children per woman 15–49 years)	1.3	1.3	1.1	1.1	1.2	1.1	1.3	1.2	1.2	1.3
Marriage rate per 1000 population	7.9	7.6	8.6	7.8	7.3	8.8	7.6	9.0	8.2	8.7
Divorce rate per 1000 population	0.7	1.1	0.7	0.6	1.3	1.1	1.7	1.3	1.4	2.2

Source: Secretariat of State for Health and Social Security *(2)*.

Although the birth rate increased slightly in 1999, the fertility rate has gradually declined over the long term (from 2.4 in 1969 to 1.3 in 1999). Besides aging and the declining birth rate, family size has decreased to an average of

2.6 people per family since 1995. Average life expectancy at birth reached 76.4 years for males and 82.6 years for females in 1999, both more than 1 year higher than the European Union average.

The perinatal and infant mortality rates are progressively decreasing because of the improvement in life conditions and progress in medicine. During 1995–1999, the perinatal mortality rate was 5.7 per 1000 births and the infant mortality rate 7.9 per 1000 live births, somewhat worse than in Italy (Table 4).

Table 4. Perinatal and infant mortality rate for 1970–1999 and current comparison with Italy

	Perinatal mortality per 1000 births	Infant mortality per 1000 live births
San Marino 1970–1974[1]	15.4	11.6
San Marino 1975–1979[1]	16.7	10.5
San Marino 1980–1984[1]	15.4	9.5
San Marino 1985–1989[1]	10.2	13.9
San Marino 1990–1994[1]	6.3	7.9
San Marino 1995–1999[1]	5.7	7.9
Italy (1997)[2]	5.7	7.2
Italy (provisional data for 1998)[1]	–	5.4
Emilia-Romagna (provisional data for 1998)[1]	–	5.9

Sources: [1] Secretariat of State for Health and Social Security *(2)*; [2] WHO Regional Office for Europe health for all database.

The main causes of death are cardiovascular diseases, which are responsible for 55% of all deaths, followed by cancer with 28%. A national register for data on cancer was established in 1997 to plan the best treatment. The evaluation of data coming out of the screening programme is useful both for international comparisons and for facilitating epidemiological activity. From 1995 to 1999, 278 people (65% male and 35% female) died from cancer.

Over the last 5 years, some infectious diseases such as measles and rubella have disappeared, at least officially, and others, such as chickenpox and scarlet fever, are gradually disappearing. In 1999, only two new cases of HIV infection were declared, amounting to 30 registered cases since 1985 and six deaths caused by AIDS.

Historical background

The origins of the health care system officially date back to 1950 when Law No. 10/1950 provided for a social security system to provide health care to all

workers unable to continue working temporarily or permanently. Before this time, a charitable institution (Istituto di Congregazione di Carita') ensured some basic health care services to Sammarinese citizens in general. Law No. 10/1950 also covered women workers in case of maternity and miscarriage.

The health care services provided consisted of:

- diagnostic check-ups;
- primary and specialized health care;
- medical and surgical care;
- hospital admissions (including into mental hospitals, which are outside the country); and
- drug supply.

A compulsory social security system was established afterwards by law in 1955. The system provides not only social security benefits to workers but also basic health care services, free of charge, to all citizens of San Marino and other people with a regular residence permit in San Marino lasting at least 1 year. The system, funded by general taxation and statutory health contributions, is based on the universal coverage of citizens, irrespective of their income or geographical location. Equity has ever since been one of the main principles underpinning the health care system, to provide the entire population with easier access to health care and to social welfare.

The system is operated by an autonomous institution, the ISS. It is responsible for:

- health care, including diagnostic check-ups, primary and specialized care and medical and surgical care according to the 1950 law, and the 1955 law also guarantees hospital admissions, care for tuberculosis, maternity care and prostheses;
- environmental health services and occupational health and safety;
- administration of the pharmaceutical service, including drugs free of charge, whereas in 1950 it was based on the payment of a fee depending on the price of the supplied drugs; and
- management of social services and structures, in which the health care services are directly supplied free of charge by the public hospital and the six state-run pharmacies.

Moreover, the ISS offers retirement pensions and several forms of income supplementation. As already mentioned, the ISS guarantees effective protection and safeguarding of citizens and workers by providing sick benefits, unemployment benefits, old-age pensions, benefits for occupational injuries, compensation for disability, family allowance and other social benefits.

In the 1970s, the ISS underwent structural organizational changes, with the institution by law of a Social Health Care Service (Servizio Socio Sanitario,

SSS). The main objective of the SSS was to deal with the psychological and social aspects of the people during the different stages of their lives by means of prophylactic, curative and rehabilitative activities. All these activities are aimed at recognizing and at enhancing human value, helping people to have an active social life in school, at work and elsewhere.

Law No. 21/1977, which established the SSS, provides for citizen participation, guarantees equity respective of needs and integrates social health care services within the ISS. The SSS is organized into three areas: Children's Services, Neuropsychiatric Services and Elderly Services.

In 1991, a major reform of the social security system brought about three changes. First, payroll contributions for particular components of social security were increased. Second, cross-subsidization among the various pension funds was eliminated, although surpluses in other areas, such as income supplementation, could still be used to cover pension fund deficits. Third, the practice of earmarking half of general income tax revenues for the ISS was abolished and replaced with explicit transfers from the central administration to finance health care (see section on *Financial resource allocation* for more information).

In conclusion, equity seems to be one of the main principles underpinning the health care system; the entire population has access to health care and to social welfare, and real efforts are made to improve the quality of life, illustrated through the targeting of certain groups, such as elderly people.

Table 5 summarizes the historical background of San Marino's health care system and its recent reform trend.

Table 5. The health care system: historical background and recent reform trends

Before 1950	A charitable institute provided basic health care services.
1950	Law No. 10/1950 establishes a social security system for all workers, managed by the ISS, for the first time.
1955	Law No. 42/1955 established a compulsory social security system. According to the law, health care expenditure was covered through a social security tax and a state contribution under the responsibility of the ISS.
1964	Law No. 37/1964 established a compulsory pension scheme as part of the social security system.
1967	The Laboratory for Analysis and Clinical Research, which was once state owned, came under the authority of the ISS. As a consequence, the state contribution for health care expenditure increased.
1977	The SSS was established.
1979	A unified national budget was built up.
1980	Nursery schools for children 0 to 3 years old were established under the ISS. San Marino became a Member State of WHO.
1982	Pharmacists became ISS employees.
1983	Institutional reform of the ISS (Law No. 39/1983), abrogated afterwards.

1983	Home care service was established for the first time.
1984	The social security tax was replaced by an general income tax collected by the state (Law No. 91/1984).
1989	Bill of rights and duties of ill people (Law No. 43/1989).
1990	The ISS was reorganized (Law No. 105/1990).The finance law changed the health care funding system: the central government became responsible for financing all public health care.The semi-residential psychosocial centre Il Libeccio and the drug and alcohol addiction service were established.
1991	The practice of earmarking half of general income tax revenues for the ISS was abolished and replaced with explicit transfers from the central administration to finance health care.
1992	A magnetic card, the Blue Card (Carta Azzurra), containing the entire clinical history of each resident of San Marino, was distributed.
1993	The elderly flat unit in Acquaviva was established.
1997	Reorganization of the General Medicine Directorate and of the Hospital and Specialized Care Service was started.The financial and management accounting system was changed and cost centres were introduced.
2000	A first National Health Plan was drawn up.

Organizational structure and management

Organizational structure of the health care system

Government bodies

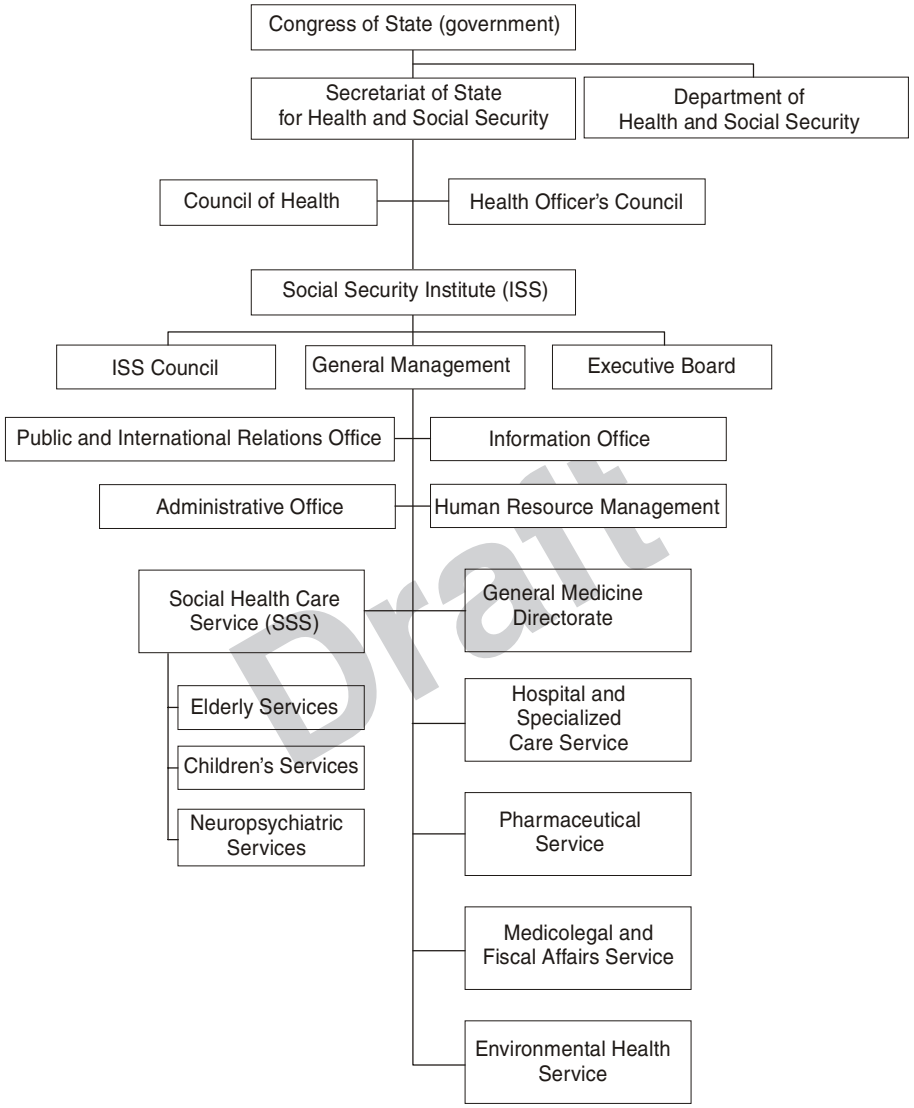
The Secretariat of State for Health and Social Security

The Secretariat of State for Health and Social Security (Segreteria di Stato per la Sanita' e la Sicurezza Sociale) is an autonomous government body responsible for social welfare, social security, elderly care and occupational health care and safety and environmental protection at the workplace.

It is equivalent to a ministry of health and welfare and is responsible for health care planning, although decisions are adopted either by the Congress of State or by the Great and General Council. Jointly with the Council of Health (Consiglio di Sanita') and the Health Officers' Council (Consiglio dei Sanitari), the Secretariat of State for Health and Social Security is responsible for financing and providing health care and social security for the entire population. Both councils support the general policies and priorities of the government. The Council of Health provides technical and scientific advice, whereas the Health Officers' Council focuses on services planning, human resources management and scientific research activities. The organizational structure of the Secretariat of State for Health and Social Security is shown in Fig. 2.

The head of the Secretariat of State for Health and Social Security is the Secretary of State for Health and Social Security (Segretario di Stato per la Sanita' e la Sicurezza Sociale), responsible for health-related activities, for all public health matters, including communicable diseases and environmental health services, and for allocating financial resources.

Fig. 2. Organizational structure of the health care system



The Commission for Health Care and Social Security supervises the Secretariat of State for Health and Social Security, which receives support from the Department of Health and Social Security.

The Department of Health and Social Security

The Department of Health and Social Security, established by law in 1995, is an autonomous body that, through the Council of the Department, coordinates the activities of the following.

Administration Service. The Administration Service includes General Management, the Information Office, the Public and International Relations Office, the Administrative Office, the Medicolegal and Fiscal Affairs Office and Human Resource Management.

Information Office. It processes health data to evaluate the efficiency and effectiveness of the health services. Moreover, it analyses, plans, develops and maintains the software related to health information. It organizes training courses for ISS workers.

Public and International Relations Office. This office deals with the organization of courses and conferences. With the Secretary of State for Health and Social Security and the ISS, it maintains international relations with WHO and the Council of Europe (since 1988).

Administrative Office. It is divided into six operative sections plus the treasurer's office and a technical office and carries out the ISS administrative activities.

Medicolegal and Fiscal Affairs Office. It ensures that welfare-related services are correctly supplied. Among other activities, it provides authorization for specific social security services, for the supply of health equipment and for therapeutic subsidies. Moreover, it is also the office authorizing treatment outside the country. It also gives medical advice to the ISS Executive Board.

Hospital and Specialized Care Service. It is responsible for all secondary and tertiary care. It includes all hospital services (hospital direction, public relations and training courses, as well as emergency ward, paediatrics, surgery, anaesthesia and intensive care, obstetrics and gynaecology, orthopaedics, psychiatry, general medicine, radiology, laboratory services, outpatient care and nutrition) providing inpatient acute and specialized care and the nursing school.

General Medicine Directorate. It supplies primary health care services through three primary health care centres spread out across San Marino: in Serravalle, Borgo Maggiore and Murata. Each centre supplies outpatient services through its ambulatory and home health care service. A director coordinates the activities.

Environmental Health Service. Its main purpose is prevention, aiming at identifying, evaluating and removing dangerous risk factors. Environmental health is part of the overall health programme, and particular emphasis is given to:

- water pollution;
- food, hygiene and drinking-water control;
- hygiene at the workplace;
- pollution abatement and environmental protection; and
- research and development in environmental protection.

A database has also been established on toxic substances and their implications for health and is available on the Internet. A number of campaigns related to improving lifestyles are conducted at the national level and implemented at such settings as schools and the hospital.

Pharmaceutical Service. It distributes drugs and health equipment through its pharmaceutical centre and six pharmacies located throughout San Marino.

Neuropsychiatric Services. These services are in three main sectors: neurology; psychiatry; and drug addiction and other problems among young people.

Children's Services. These services focus on the mental and social health of children (0 to 18 years old) and disabled people in general. The following centres are included: Psychomotor Educational Centre (Centro di educazione Psicomotoria), two centres dedicated to disabled people called Colore del Grano and the workshop/atelier Le Mani, nurseries and a summer holiday house.

Elderly Services. Services for elderly people include home care, telephone assistance and social activities provided through community and residential care facilities (a rest home and five flats).

The last three comprise the SSS (see the section on *Social and community care* for more information).

Social Security Institute (ISS)

The ISS is an autonomous government body that supplies health care services, social services and social security services according to the policies set by the state. It is organized into three bodies: the Executive Board, the Council and General Management.

- *Executive Board*. In office for 5 years, the Executive Board comprises a president and 12 members, among which two are from the trade unions and two from the associations of employers.
- *Council*. The Secretary of State for Health and Social Security, the bodies belonging to the Department of Health and Social Security and the administrative bodies of the ISS discuss ISS activities in the Council. The representatives of the social organizations and the political parties, composing the Great and General Council, join the debate.

- *General Management*. General Management manages the budget, recommends the main criteria for the internal auditing and carries out its programmes. The General Manager runs and coordinates the entire ISS. A legal expert handles administrative questions and any disputes arising between the ISS and citizens.

Commission for Health Care and Social Security

A Commission for Health Care and Social Security (Commissione per l'Assistenza) oversees the ISS's activities. It introduces to the Congress of State the provisional annual sums to be allocated to the annual state budget to finance health and social security. Moreover, it is responsible for:

- auditing the ISS's budget and balance sheet and introducing them to the Congress of State, which then introduces it to the Great and General Council for its final approval;
- making suggestions to the Congress of State about the ISS's personnel nominations that will be eventually appointed by the Great and General Council;
- suggesting to the Congress of State the terms, conventions and regulations aiming to establish the relationships between ISS and personnel, both health personnel and other, either directly dependent or contracted; and
- declaring its opinions about administrative disputes related to ISS provisions.

The Great and General Council appoints three auditors who audit the budget and the balance sheet.

Private sector

Private health care providers mainly supplement the ISS rather than comprising an alternative to it. Dental care, cosmetic surgery, physical therapy and homeopathic medicine are largely provided privately. In the early 1990s, there was a privately owned service for eye surgery. This private facility no longer exists, and the hospital has provided this specialized surgery free of charge since 1995.

According to a national health survey carried out in 1999 by an Italian research institute *(7)*, 39% of the 800 interviewees – probably the highest percentage of a total national population ever interviewed about health care – said that they had turned to a private health care provider or physician at some point in their lives. More than half of these people spent an average of less than EUR 500 for this care, and 11% had private expenses of more than EUR 1550. The three main reasons for wanting private health care were: greater confidence in the private provider or physician (48%), emergencies (30%) and the lack or

scarcity of some health care specialists in the public facilities (13%). People interviewed complained in particular about how few dentists worked within public facilities.

Private health care providers must seek authorization. Requests must be addressed to the Congress of State. The Congress of State will grant the licence based on the positive recommendation of the director of the Environmental Health Service and the director of the Hospital and Specialized Care Service. The latter oversees the register of private providers of health care services. Once a year, all the private health care providers recorded must certify their activity by providing such information as the services provided and the personnel working within the facility.

Public participation and the role of user groups

As general policy is aimed at enhancing public participation, Law No. 42/1955 recognized and underscored the role of democratic control over all ISS activity through public assemblies and meetings, regularly held by the ISS, at which people can discuss and suggest changes.

In 1974, Law No. 43 provided some changes to the 1955 law. It provided for the establishment of special local committees elected by the assembly of beneficiaries to deal with the ISS. The ISS president, in cooperation with the township councils, convenes the assembly of beneficiaries each year before the end of October. Law No. 21/1977 added a further amendment, specifying the establishment of three committees to work on community, residential and home care service, respectively.

Voluntary sector

Two laws enacted during the 1980s in San Marino recognized and enhanced the voluntary sector: the voluntary participation of people in any field of public and social interest. In setting and planning the health and social care activity, the public administration carefully considers the fundamental role that voluntary associations can play.

At least 25 voluntary associations work in health and social care, supporting the delivery of community care such as in integrated assistance in daily living, housekeeping services and transport services for disabled or elderly people. The Sammarinese Voluntary Blood Association (Associazione Volontaria Sammarinese Sangue) and the Sammarinese Association against Leukaemia and Malignant Haemopathy (Associazione Sammarinese per la Lotta contro le Leucemie e Le Emopatie Maligne) are involved in public health services. The

former collects blood within San Marino and the latter manages the national register for blood marrow donors.

Planning, regulation and management

The health care system is highly centralized and regulated. Since the government is both the main provider and third-party payer, health care is provided using an integrated model.

The first National Health Plan (Piano Sanitario Poliennale) was drawn up in 2000. After it is approved, it is expected to be revised every 3 years. Nevertheless, the plan should be considered as a flexible tool rather than as a static one, with revisions as needed.

The National Health Plan is intended to lay down the main guidelines establishing a general framework to be implemented by the ISS. The ISS will also be responsible for monitoring it in collaboration with the Department of Health and Social Security, acting as an external auditor. The Council of Health, the body providing technical and scientific advice, is to prepare an annual report, representing a evaluation tool to determine whether the aims previously set in the National Health Plan have been reached or not. Based on the suggestions given by the annual report, the plan should be eventually reviewed and implemented by the Department of Health and Social Security.

The National Health Plan will represent a further step towards effective planning and management of the health resources and their allocation. The aim will be not only cost containment but also better planning of health care. It will represent the long-term planning and management control tool, and two further short-term reports are drawn up each year: an annual activity and investment programme and an annual accounts report. The annual activity and investment programme is a project management activity divided into four main intervention areas: primary prevention, territorial care, community social care and hospital and specialized care. The annual accounts report will specify the monetary flows expected by each project.

Changes in the financial and management account system since 1998 have represented a willingness to plan and rationalize the use of resources within the whole health care system. With this aim, cost centres are being established. After they are established, the resources in health care can be planned better and used more efficiently.

The Executive Board of the ISS is responsible for capital investment. A national list of health equipment purchased over the past 12 months is published

annually. The list describes the specific items and their total cost. Most of the investment is publicly provided but occasionally there are private donors, such as banks, which finance some of the capital used within public facilities, either partly or totally. Unfortunately, no inventory of equipment used within the private sector is available.

As the great majority of the staff within the ISS are civil servants, no incentive mechanism has ever been applied. The Department of Health and Social Security is planning to introduce this to increase the productivity of physicians and nurses.

The health care system is generally extensively regulated. One exception is the pharmaceuticals sector, in which no pharmaceuticals authority has yet been created. Thus, the six pharmacies are allowed to sell all kind of drugs that are legally approved and traded worldwide, receiving authorization by national pharmaceutical commissions. In addition, the ISS has a positive list for reimbursement.

Decentralization of the health care system

San Marino's size makes it unnecessary to have any regional or district level authority. That is why the health care system is highly centralized and regulated both financially and administratively. The recruitment process is also centrally governed. In fact, the government usually retains control over the appointments of key posts, such as chief executives and staff members working within the ISS.

Health care financing and expenditure

Main system of financing and coverage

Public health expenditure is covered by resources mainly made available by citizens through general taxation. The contribution of the national government comes from the tax revenue appropriated by the Great and General Council each year through the national budget.

Coverage is universal and guarantees a fairly comprehensive package of benefits, not formally defined, to all residents regardless of income. Public health coverage is not linked to employment but to citizenship and residence status. In fact, cross-border workers are presently not entitled to use facilities in San Marino, except for emergencies or job-related treatment, and their health care contributions are instead transferred to the Government of Italy. In 1997, fees for health services were introduced for non-resident Sammarinese citizens. In early 1997, an agreement was also signed stating that residents of Italy could use certain facilities in San Marino without prior authorization. However, the administrative agreement specifying exactly which facilities will be covered has not yet been completed.

Financing of the Social Security Institute (ISS)

As already mentioned, the ISS offers both retirement pensions and health care services. The ISS is financed based on the principle of solidarity. That means that beneficiaries should contribute to financing health care according to their means and should have access to health care services according to need and not according to their payments. The social security contributions of workers are 5% of gross wages paid directly by the employers. This means that health care financing is proportional, whereas the overall public financing is

progressive (with marginal rates from 12% to 50% across eight income brackets from EUR 0 to over EUR 232 000).

In 1991, after Law No. 156/1990 was passed, a major reform of the social security system instituted, among others, a change in the way the ISS is financed. The practice of earmarking one half of general income tax revenues for the ISS was abolished and replaced with explicit transfers from the central administration to finance health care. Moreover, the state must now cover any deficit created during the fiscal year.

Table 6 shows the percentage of total health expenditure financed by different sources. The state contribution accounts for the largest amount. More than 85% of total health expenditure was financed through the central government which, in accordance with Law No. 156/1990, has become responsible for balancing the budget.

In 1999, the central administration transferred to the ISS EUR 43 123 thousand, equivalent to 86% of the total expenditure, and the proportion of total health care expenditure earned from the sale of health care services,

Table 6. Main sources of health care financing, 1992–1999

Source	1992 (%)	1993 (%)	1994 (%)	1995 (%)	1996 (%)	1997 (%)	1998 (%)	1999 (%)	1999 (in thousands of euros)
State contribution	78.5	80.1	84.4	84.5	85.6	88.8	81.6	86.1	43 123
Fee for service	10.2	10.1	11.4	10.9	11.1	11.1	17.8	13.8	6 906
Donations (cash or in kind)	0.9	0.03	0.01	–	–	–	–	–	–
Other	10.5	9.8	4.2	4.6	3.3	0.2	0.6	0.1	54

Source: Secretariat of State for Health and Social Security, 1992–1999.
The values in lire have been converted to euros at the exchange rate of Lit 1936 = EUR 1.

provided mainly to Italian citizens, decreased from 18% in 1998 (when it was exceptionally high) to 14% in 1999. The peak in 1998 occurred mainly because Viagra® was available at pharmacies in San Marino and was not yet available in Italy.

The items in the "Other" category include minor and marginal activities mainly related to accounting, such as funds obtained from selling capital equipment, inventories, etc.

Complementary sources of financing

Out-of-pocket payments

No cost-sharing is currently applied to primary, outpatient and inpatient care. Beneficiaries do not pay co-payments for the drugs listed on the national positive drug list. Out-of-pocket payments mainly refer to payments for inpatient and outpatient care and drugs sold that are either not on the list or sold to foreigners (including tourists), mainly Italians, or cross-border workers.

Voluntary and compulsory private health insurance

Private health insurance accounts for a very small proportion of total health care financing. No data are available about the actual amount of money spent on private care or on the kinds of health care services used. Law 69/1995 established compulsory health insurance for people who refuse to take statutory vaccinations.

Payments for social health care services

Generally, social health care services are not provided for free. Once a year, the Congress of State fixes by law the monthly fee for each of the services provided. The home for elderly people calculates the fees for its services before the end of October according to the total expenses in the previous year. In addition, each year the ISS Executive Board determines the income threshold that entitles elderly people recovering within the facility to total or partial exemption from fees. The elderly flat unit located in Acquaviva, the nursery schools and all the social health care facilities are paid for on a fee-for-service basis.

Health care benefits and rationing

Theoretically, the ISS offers totally comprehensive services. Except for dental care for people 15 to 65 years old, no services are explicitly excluded from ISS coverage. Until now, the guaranteed benefits package has not been clearly defined, although the public authority and the political system are working on it. In addition, a charter of citizen's rights with an explicit list of all benefits guaranteed to the population is being planned.

Benefits covered by the ISS

The Declaration of 1974 (Law No. 59/1974), which serves as a de facto San Marino constitution, included the right to guaranteed social security, but it did not specify the terms or how this would happen.

The General Medicine Directorate covers primary health care and paediatric health care. It includes not only ambulatory care, provided through three health centres, but also a home for elderly people and home care services. In 1991, an obligatory vaccination list was created.

Some medical and surgical specialties are provided both on an inpatient and outpatient basis within San Marino. The specialties not provided within the inpatient and outpatient facilities are ensured outside San Marino through special agreements made with public or private health care facilities, clinics, laboratories and hospitals. Under certain conditions, stated by the ISS and specifically authorized, people can also be fully reimbursed for health care services received in health care facilities outside San Marino that do not have agreements with the ISS.

All of the approximately 1000 different kinds of drugs on a positive list are provided free of charge. Further, the general practitioner (GP) may prescribe some drugs not on the positive list free of charge. There is no co-payment for prescriptions, as in most European countries.

Social and community care includes nurseries for children and services for disabled and elderly people. This kind of care is mainly provided through the SSS. The users pay a monthly fee according to the service used, fixed yearly by law by the public authorities.

Complementary benefits include prostheses, orthopaedic products, wheelchairs and health care transport. Moreover, since 1992, general practitioners, specialist physicians and the Medicolegal and Fiscal Affairs Office may authorize treatment free of charge at spas that have agreements with the ISS. Dental care is provided for free for people under 15 years, retired people, people recovering within the health and social health care facilities and some people affected by specific diseases requiring specialist hospital care. The remainder receive a fixed amount per extracted tooth and a fixed amount for annual dental check-ups.

Electronic users' card

In 1992, the health authorities, the Secretariat of State for Health and Social Security and the ISS, launched a project aiming to create an electronic clinical

history for each health care beneficiary. During the summer of 1994, a magnetic card called the Blue Card (Carta Azzurra) was distributed to each health care beneficiary, about 25 000 people at that time. From that moment, all medical information, medical visits, laboratory analyses, certifications and drug prescriptions for each health care beneficiary were entered into the health care information system. When the project started, the information system consisted of about 120 computers, which were purchased with the financial help of a local bank. Today, the number of computers has doubled.

This card has several benefits.

First, the physicians and nurses have the complete clinical history of each patient readily available (previous physician visits, laboratory test results, specialized care referrals, drug prescriptions and hospital admissions), which can help them to make the correct diagnosis. Moreover, after each health care visit, the physician prescribing drugs or making referrals for specialized care continuously updates all the patient information.

Second, the information system prevents patients' time from being wasted by allowing further appointments to be scheduled immediately. Moreover, the results from any kind of analysis are electronically available on any computer connected to the central information system. In this way, each patient's clinical picture is continuously updated after each health care treatment. Thus, saving time and increasing quality should make each patient more satisfied with the operation of the health care system.

Third, the central administration should be able to better rationalize the use of resources, identifying critical areas for improving the provision of the services. This means more advanced cost control, a reduction in waiting lists and an increase in patient satisfaction.

In addition to these benefits, the users' card will soon provide further kinds of information that will improve the relationship between the public administration and patients. A health information system for automatic drug prescription was implemented in late 2001. This system is especially useful for people with chronic illness. It practically allows all chronic patients to receive the drugs they need in any of the six pharmacies without going to their GP for a prescription each time. In addition, electrocardiograms are expected to soon be available on line.

Aside from the health care benefits, patients can choose to use the Blue Card as a credit card because of special agreements with the Instituto di Credito Sammarinese, which is co-financing the start of this innovative project.

Health care expenditure

In 1999, total health care expenditure in San Marino was about EUR 50 million. Including social health care services, expenditure was about EUR 61 million. According to a study carried out by the International Monetary Fund *(5)*, health care expenditure was equivalent to 6.2% of GDP in 1997, or 7.7% including social health care services.

The main trends in health care expenditure during the past decade are shown in Table 7. Total health care expenditure as a share of GDP peaked at 7.8% in 1993 and decreased thereafter. This is the same trend that Luxembourg experienced during the same period (Fig. 4).

Table 7. Trends in health care expenditure, 1990–1999

	1990	1992	1993	1994	1995	1996	1997	1998	1999
Value in current prices (in thousands of euros)	18 057	30 729	35 312	35 398	37 739	40 097	41 896	49 000	50 086
Value in current prices per capita (in euros)	775	1 280	1 440	1 430	1 500	1 570	1 620	1 850	1 860
Health care expenditure as a percentage of GDP	NA	7.7	7.8	7.0	6.5	6.3	6.2	NA	NA
Public expenditure as a percentage of total expenditure	63.8	78.5	80.1	NA	84.5	85.6	88.8	81.6	86.1

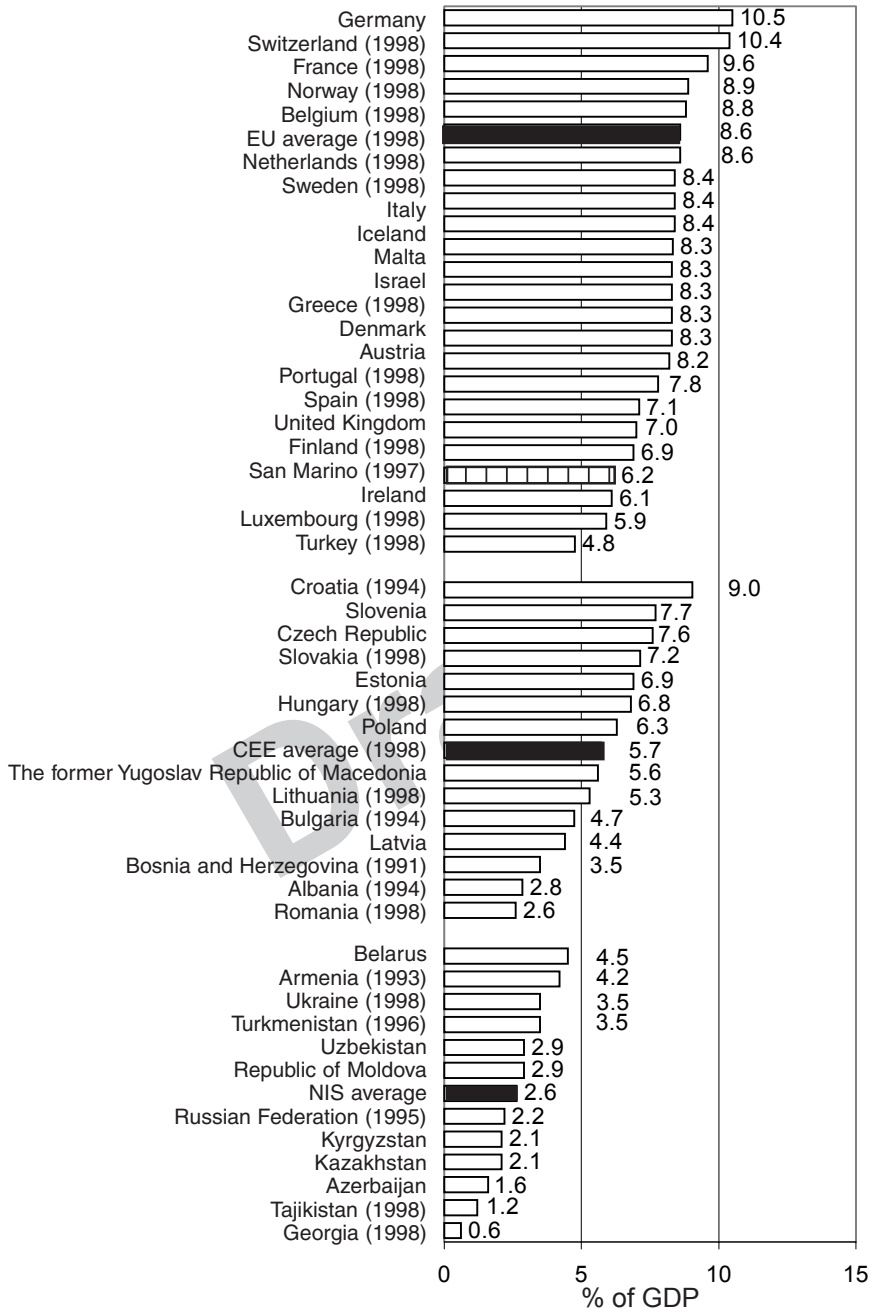
Sources: Secretariat of State for Health and Social Security *(2,8–17)* and International Monetary Fund *(4)*.

The values in lire have been converted to euros at the exchange rate of Lit 1936 = EUR 1.
NA: not available.

In absolute terms, health care expenditure increased by more than 2% in 1999, which was low compared with the increase in Italy in the same period, which was about 5%. In part, this resulted from the successful attempts at rationalizing services in San Marino. Nevertheless, per capita public health spending (EUR 1600) still exceeds the level both in Italy as a whole (EUR 1041) and in the neighbouring region of Emilia-Romagna (EUR 1173). This phenomenon is probably associated with the diseconomies of scale in the smaller size of the domestic market and the superior benefits, such as the absence of any co-payments *(18)*.

Fig. 3 shows San Marino's position in health care expenditure, as a percentage of GDP, within the WHO European Region. The percentage of GDP devoted to health care in 1997 is below the European Union average but close to Ireland and Luxembourg (with which San Marino also shares a similar trend over time (Fig. 4)).

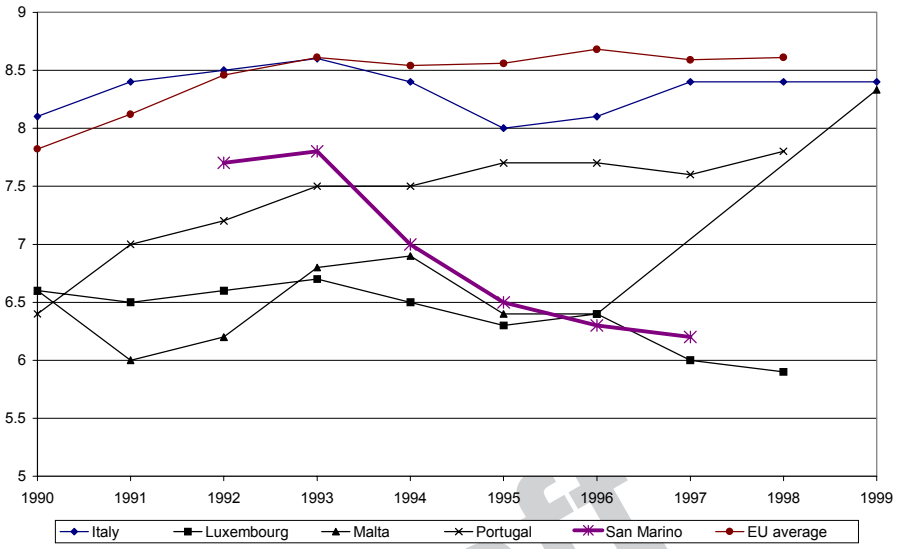
Fig. 3. Total expenditure on health care as a percentage of GDP in the WHO European Region, 1999 or latest year (in parentheses)



Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

CEE: central and eastern Europe; NIS: newly independent states of the former USSR.

Fig. 4. Trends in health expenditure as a percentage of GDP in San Marino and selected western European countries, 1990–1999



Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

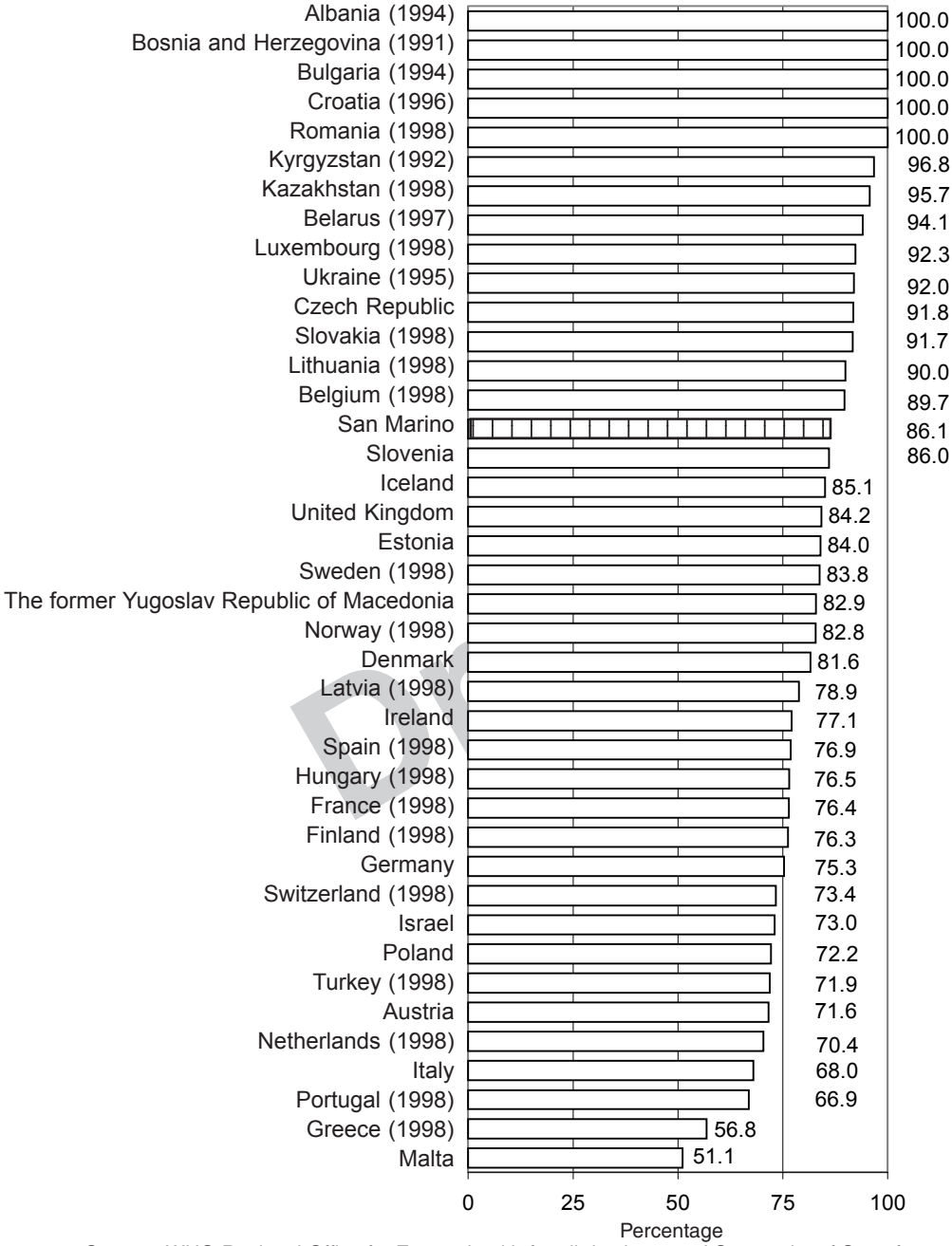
Public expenditure comprises about 86% of total expenditure, which is high position compared with western Europe and well above the other countries in southern Europe (Fig. 5).

The 2001 International Monetary Fund report *(5)* suggested controlling health care expenditure to at least balance the central government budget and improve net foreign-exchange assets. The health care system performs well but expenditure has accelerated rapidly, and the International Monetary Fund recommended that the ISS needs to rely less on state funds. The planned separation of health care management within the ISS and the tightening of budget constraints should help to contain expenditure pressure.

Table 8 does not contain any expenditure for care provided by the SSS, which includes neurology and psychiatry. This complicates comparisons with other countries, which are already difficult because the definitions underlying health statistics, as well as accounting practices, vary between countries. Moreover, health expenditure depends largely on the economic status of a country and varies significantly within the WHO European Region.

Nevertheless, inpatient and specialist care absorbs many of the resources destined for the whole health care system: about 50% of total health care expenditure. The second most expensive item is that of services abroad,

Fig. 5. Health care expenditure from public sources as a percentage of total health care expenditure in countries in the WHO European Region, 1999 (or latest available year)



Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

accounting for 17%. General activities account for less expenditure: less than 4% of the total versus 6% in Italy. Even in this case, an international comparison is difficult, however, because of the heterogeneity of the accounting systems. Per capita pharmaceutical expenditure, one of the most important components of variable costs, is only slightly higher than that of Italy in 1997 (EUR 243 versus EUR 211), fully in line with the amounts elsewhere in the European Union.

Table 8. Health care expenditure according to category as a percentage of total expenditure on health care, selected years 1990–1999

Categories	1990	1992	1993	1995	1996	1997	1998	1999
Hospital and specialized care	54.0	46.3	46.6	49.0	50.1	50.2	47.1	50.6
Primary health care	7.4	6.1	6.1	6.3	6.4	7.8	7.4	7.5
Pharmaceuticals	20.6	17.2	17.3	18.3	18.2	14.5	19.9	17.2
Environmental health services	3.4	3.0	3.4	4.0	4.3	4.3	3.8	3.6
Medicolegal and Fiscal Affairs Office	–	–	–	–	–	0.5	0.4	0.5
Services abroad	14.6	23.1	22.5	17.1	18.2	19.2	17.8	17.3
Shared general activities	–	3.7	4.1	5.3	2.9	3.5	3.6	3.5

Source: Secretariat of State for Health and Social Security *(2,8–17)*.

Health care delivery system

The health care delivery system is composed of a state hospital with 138 beds, three health centres, six pharmacies, six nursery schools for children under 3 years of age, one home for elderly people and one home for disabled people. An oncological hospital with 90 beds will be opening soon.

According to a survey carried out in 1999 by an Italian research institute *(7)*, 93% of the 800 respondents were satisfied with the operation of the health care system. Only 5.5% expressed clear dissatisfaction.

Primary health care and public health services

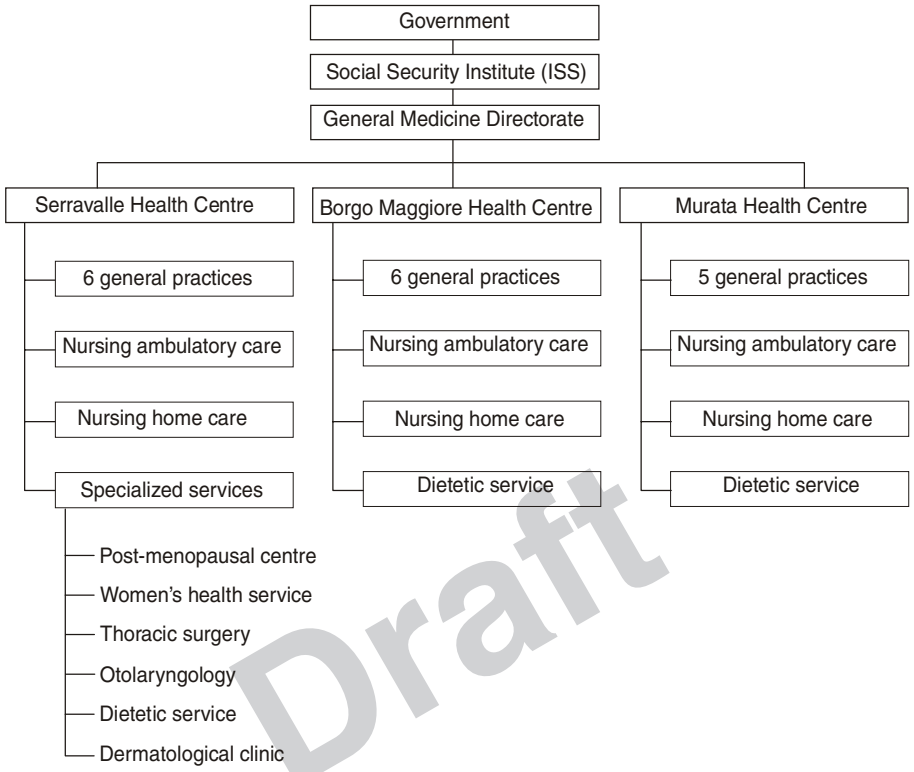
Primary health care in San Marino is delivered through three health care centres that are publicly funded and managed. Each covers an average of 8000 people. Besides 17 general practitioners, the health care centres employ some specialists, professional nurses and administrative staff. Moreover, the Serravalle Health Centre also provides a limited range of specialized care. General medicine corresponds to primary health care and covers general practice, community care, home care and immunization (Fig. 6).

Primary care by health centres

Primary health care is offered for the whole population free of charge at the point of delivery from three health centres. General practitioners, nurses and other non-health personnel are based in each of the three health care facilities. The number of personnel varies depending on the catchment area (Fig. 7).

Each health centre provides the following services: first aid, preventive services, medical examinations, maternal and child health, family planning and counselling and home care. Health centres also provide certification of

Fig. 6. Organizational structure of the General Medicine Directorate

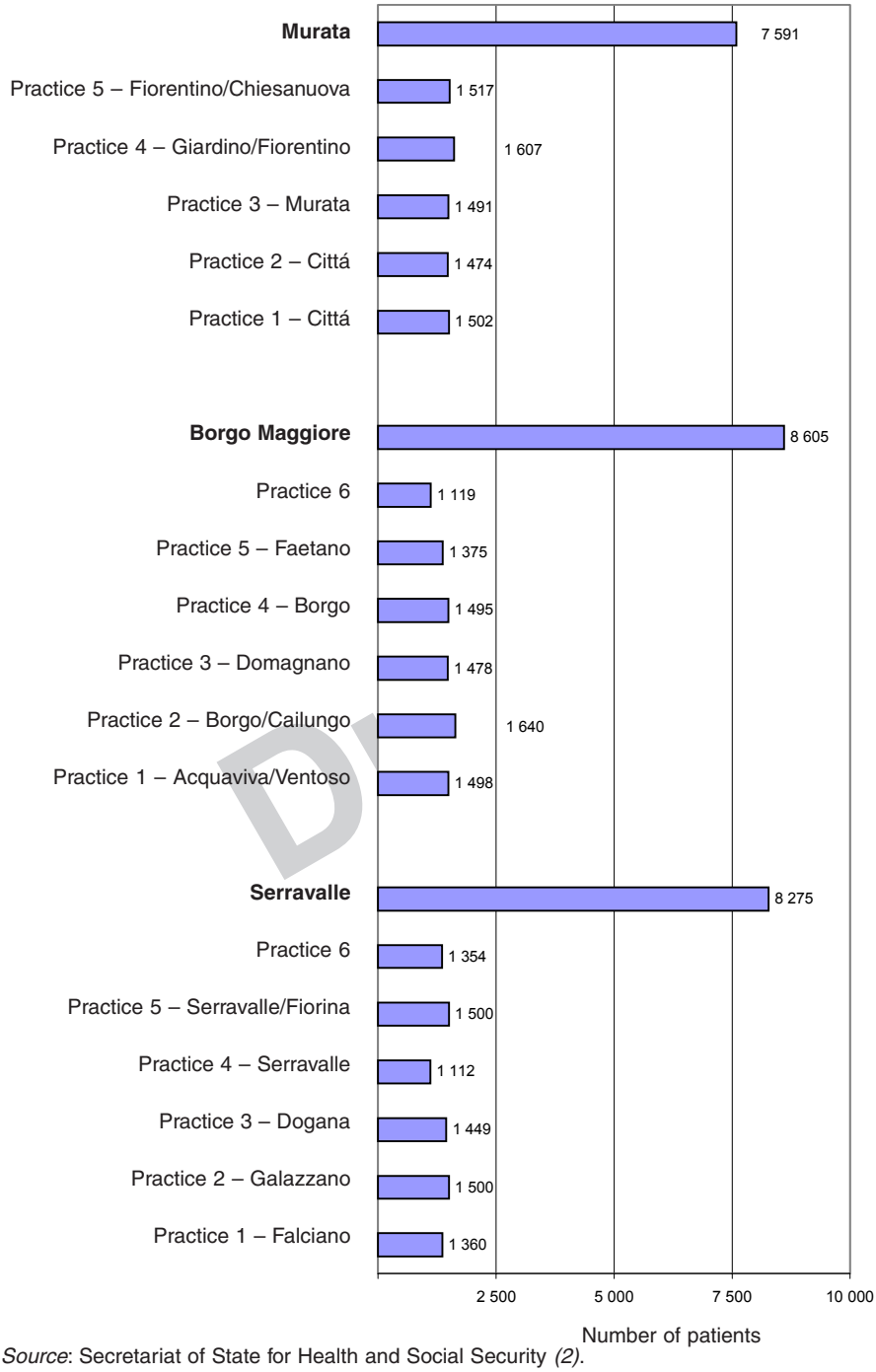


incapacity to work and nutritional advice. The Serravalle Health Centre, besides providing basic general services, includes some specialized health care such as dermatology, otolaryngology, gynaecology, maternal and child health, family planning and counseling and post-menopausal care. Highly qualified physicians and nurses provide specialist advice and testing in postmenopausal illnesses such as osteoporosis. This centre also carries out research in osteoporosis, epidemiology and endocrinology.

Professional nursing staff help general practitioners provide health care services and they run a home care service, clearly playing a key role in determining the quality of services supplied and, consequently, patient satisfaction. In 1999, 87% of the respondents surveyed were satisfied with the operation of the primary health care service *(7)*.

The General Medicine Directorate directs primary health care, managing and coordinating the services, planning and implementing health education, providing medical check-ups required for driving licences, blood donors' visits,

Fig. 7. Beneficiaries per practice within each health centre as of 31 December 1999



Source: Secretariat of State for Health and Social Security *(2)*.

examinations, certifications and health booklets. Moreover, it coordinates the activities among the three health centres.

All health centres are generally open during working days and hours. Patients can easily access these health facilities through a telephone booking system, avoiding any waste of time. Such a system guarantees a visit within a week from the time of reservation. Urgent cases do not require previous booking. Further, a house call is provided in case of urgency, acute illness or to routinely check elderly and immobilized people.

The 17 general practitioners are directly employed by the government and are paid by a mix of salary and capitation fee. Beside the daily hours, a general practitioner is available in each health centre 24 hours a day, 7 days a week.

People must register with a general practitioner and are theoretically free to choose. There are no statutory limits on how often someone may change his or her GP. Nevertheless, people can only choose a GP in the health centre to which they belong, and provided that the physician has not yet reached the maximum, which is 1500. The ISS has actually planned that each GP should work with an average patient list of 1200. Despite this planning, the actual average number of patients per GP is far above 1200. When this is the case, GPs receive a monthly incentive of EUR 3.1 per additional patient over 1200 up to a maximum of 1500 patients.

People wishing to select another GP apply to the ISS. Authorization must be issued if the new GP has less than 1500 patients. Authorization cannot be refused if the new GP is already the GP for an applicant's family member, even if the GP already has more than 1500 patients.

Children from 0 to 6 years old can receive outpatient paediatric care at the hospital, and children between 7 and 14 years old can choose to have either a paediatrician or a GP.

As already mentioned, a project to reorganize primary health care has been underway since 1997, and there are plans to hire another GP in the Murata Health Centre, which has five, whereas the other two have six each. Beneficiaries will be redistributed from the existing 17 GP practices when the eighteenth is created. A department within the ISS Administration Service registers the patient lists.

GPs act as the gatekeepers for secondary care. As the GPs make the initial assessment of the patient, the health authority recognizes and enhances their key role within the health care delivery system as the initial point of contact between patients and the health care system.

The GPs are responsible for keeping people healthy through routine examinations and necessary drugs, health education, necessary counselling,

injections, vaccinations, home visits, rehabilitative care, human and medical advice and research and teaching. The official number of outpatient contacts per person was 2.15 in 2000, well below the European Union average of 6.1 (Fig. 8). The Secretariat of State for Health and Social Security, in fact, is aware that these kinds of data are underestimated. The Secretariat hopes to improve the accuracy of reporting data in the yearly report about the health status of the population.

Each health centre employs nurses, and their number varies according to the characteristics of the territory served. Nurses provide basic health care services: assistance, information, education in the health care facilities and at home as well as home visits. The nursing home service is available only at the request of a GP and includes treatments such as blood tests and blood pressure tests. Nurses are also responsible for collecting statistical data and for maintaining and registering case histories and drug prescriptions.

Prevention and health promotion

The Secretariat of State for Health and Social Security is responsible for planning and managing health promotion at the national level, although decisions are adopted either by the Congress of State or by the Great and General Council. The General Medicine Directorate is involved in planning and organizing prevention programmes and health promotion campaigns in collaboration with schools, health and social professionals.

Health programmes mainly focus on primary health care services, with a strong emphasis on prevention and on health outcomes. The major public health problems in San Marino concern cardiovascular diseases, risky lifestyle behaviour leading to increased risk of cancer (mainly smoking), alcohol and drug abuse.

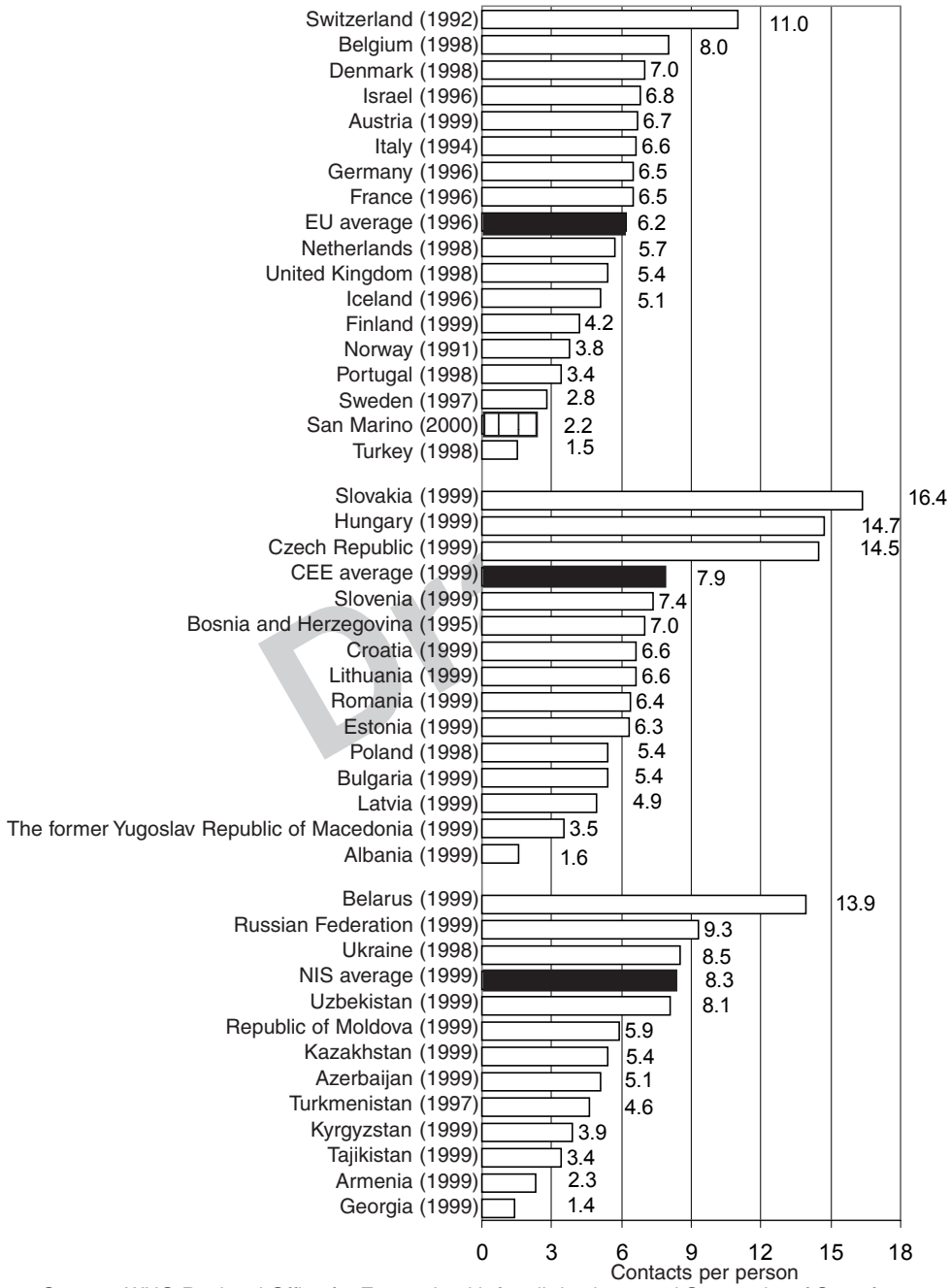
Immunization

The General Medicine Directorate is responsible for national compulsory vaccinations and, together with the rest of the ISS, is charged with planning and managing immunization programmes at the national level.

Since 1995, a national immunization calendar has been created. In 2000 the immunization calendar considered compulsory immunization against the following diseases: poliomyelitis, diphtheria, whooping cough, tetanus, measles, hepatitis B, rubella (only for females), parotitis (only for males) and *Haemophilus influenzae* B.

People with diseases that might be incompatible with the vaccination serum are exempted from the compulsory vaccinations. Although these vaccinations

Fig. 8. Outpatient contacts per person per year in countries in the WHO European Region, 2000 or latest available year (in parentheses)



Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

are obligatory, the public health authorities recognize people's right to refuse them. In this rare case, the ISS provides for a compulsory insurance policy for potential infectious diseases. In 1999, 97% of the population was immunized against measles, well above the western European average (Fig. 9).

Preventing blood-related diseases

Programmes for preventing communicable diseases such as AIDS and HIV infection, as well as blood transfusion control programmes, are carried out at the national level. The Sammarinese Voluntary Blood Association collects blood. The programme is strictly regulated to minimize all kinds of risks of infection from blood transfusions. Unlike the situation in Italy, blood donations within San Marino are enough to meet all national needs for blood.

The Sammarinese Association against Leukaemia and Malignant Haemopathy maintains the national register of bone marrow donors, representing one of the 40 computerized national bone marrow registers worldwide. So far, 550 people have been recorded and a further 100 will soon be included. The Association also promotes public health campaigns such as conferences and sport events to increase the number of donors.

Preventing abuse of alcohol, drugs and tobacco

San Marino is moving towards a joint approach to issues related to alcohol, drugs and tobacco. Collaborative education programmes exist for alcohol and drugs. Neuropsychiatric Services deals with these two substances; there are joint treatment services for alcohol and drug addiction, and there is joint training of staff for preventing problems related to alcohol and drugs. Public campaigns against drug abuse have been disseminated through a local radio station, aiming to reach young people.

Information on the per capita consumption of alcohol is not available for San Marino. In the context of the European Alcohol Action Plan, San Marino considers that its alcohol policy covers only some aspects of this issue. The priorities of the last few years have been to encourage lighter drinking in work settings, such as schools and workplaces, including health care establishments; to increase the role of primary health care teams in the prevention and early detection of alcohol problems; to develop the role of the social welfare system and of the criminal justice system in preventing and managing alcohol problems; and to address specific problems related to alcohol, such as drinking and driving and alcohol intake among young people.

A database has also been established on toxic substances and their implications for health, and it is available on the Internet. A number of

Fig. 9. Levels of immunization for measles in the WHO European Region, 1999 or latest available year (in parentheses)

Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

San Marino

campaigns to improve lifestyles are conducted at the national level and are implemented in such settings as schools and the hospital.

A survey conducted in the early 1990s among people older than 14 years found a smoking prevalence of 23% (28% among men and 17% among women), and the prevalence was higher among people with less education. In 1993, the Secretariat of State for Health and Social Security implemented a national campaign to promote tobacco-free lifestyles (San Marino without Tobacco).

Other priority initiatives

Screening programme. A national campaign against breast cancer was launched in 1993, and screening is the main tool. As the number of women screened is increasing and the mortality rate is declining, the result can be considering satisfactory. A national register for collecting data on cancer was initiated in 1997.

Preventing cardiovascular disease. A database on cardiovascular diseases has been established, and evidence shows that the prevalence rates of ischaemic, cardiac and myocardial diseases have been reduced. A current initiative to prevent and control fat metabolism disorders is being coordinated via national programmes to monitor and control the levels of cholesterol and hypertension in the population.

SMOOTH programme. A programme to promote healthy lifestyles called SMOOTH (San Marino Observational Outlooking Trial on Hypertension) was initiated in 1999 by monitoring, treating and providing rehabilitation for people with myocardial infarction. The epidemiological study has involved about 4600 people aged 40 to 75 years.

The Cuore project. The Cuore project started in collaboration with the Instituto di Credito Sammarinese and the department of cardiology of the hospital to monitor the phenomenon of premature deaths. Soon 30 defibrillators will be distributed to public facilities such as health centres, sport facilities and the police. Personnel have been trained, and a population information campaign has been completed.

Women's health. After the successful establishment of a postmenopausal centre, initiatives to promote women's health are increasing. The most recent project involves collaboration with the University of Ferrara in Italy and aims at improving the prevention of the most prevalent postmenopausal diseases, such as osteoporosis. This is a 5-year project and involves the participation of women aged 40 to 70 years.

Environmental Health Service

Environmental health is part of the overall health programme. It consists of various activities to monitor and improve the environment, with a specific focus on public health concerns. Particular emphasis is given to food quality control, environmental hygiene, water management and waste management.

Four departments and two laboratories of the ISS comprise the Environmental Health Service.

- The environmental hygiene department is responsible for recognizing, evaluating and removing environmental risk factors and pollution. The department is also responsible for ensuring that safety measures and quality standards are applied.
- The food safety department is responsible for protecting public health through preventive and supervisory activities in the production, distribution and trading of food.
- The veterinary department is responsible for making hygienic and health checks on slaughtering and animals.
- The activity of the occupational health department is aimed at improving the working environment in relation to health. It also comprises a wide variety of health services, such as environmental protection at the workplace and accident prevention. It is responsible for carrying out epidemiological studies for work-related diseases to elaborate guidelines and keep these diseases under control.

Two laboratories conduct all the necessary chemical and microbiological analyses to support environmental health services. After a reorganization of functions, the Environmental Health Service is the only service within the ISS for which the expenditure on health personnel has been cut by 5%.

Medicolegal and Fiscal Affairs Office

The Medicolegal and Fiscal Affairs Office was established in 1997 and is located in the hospital building. The main activities are:

- ensuring the correct supply of social security services;
- providing for medical visits to determine the temporary causes of work inactivity;
- authorizing specific social security services;
- authorizing the supply of health equipment;
- authorizing health and social services outside San Marino; and
- giving medical and legal advice to the ISS Executive Board.

Three physicians work at the Office: a neurologist, a forensic physician and an occupational medicine physician. They conduct medical examinations to determine eligibility for a pension or to check a worker's health status.

Links between primary and secondary care

The health centres represent the first point of contact within the public system. As GPs are expected to act as gatekeepers, people should not have, at least theoretically, direct access to secondary care. In reality, most people who experience acute symptoms bypass their GP and go directly to the hospital emergency care unit. According to recent estimates, a large number of people admitted throughout the emergency department do not actually need immediate care. The hospital has no admission unit, so people go directly to the ward or to the emergency department.

Secondary and tertiary care

Secondary and tertiary care is mainly provided within the hospital although, as discussed above, the Serravalle Health Centre provides some specialized ambulatory services. In the near future, a hospital will open that specializes in oncology.

This section focuses on inpatient care provided through the sole state hospital as well as outpatient specialist services. Like GPs and all workers in primary care, the staff employed in these facilities are salaried state employees.

Hospital care

Hospital care is provided by one state hospital managed by the ISS. There are no private hospitals because the law does not allow this. Hospital care is guaranteed free of charge to the whole population regardless of their income.

The hospital provides basic care as well as specialized care. The San Marino Hospital is primarily engaged in providing medical, diagnostic and treatment services that require physicians, nurses and other personnel required by inpatients. Fig. 10 illustrates the organizational chart of the San Marino Hospital.

Hospital admission is generally provided for acute care, for people who cannot be cured through home care or when surgery is necessary. All hospital admissions except emergencies must be requested by the GP for the patient and require authorization from the ISS.

Fig. 10. Organizational structure of the San Marino Hospital

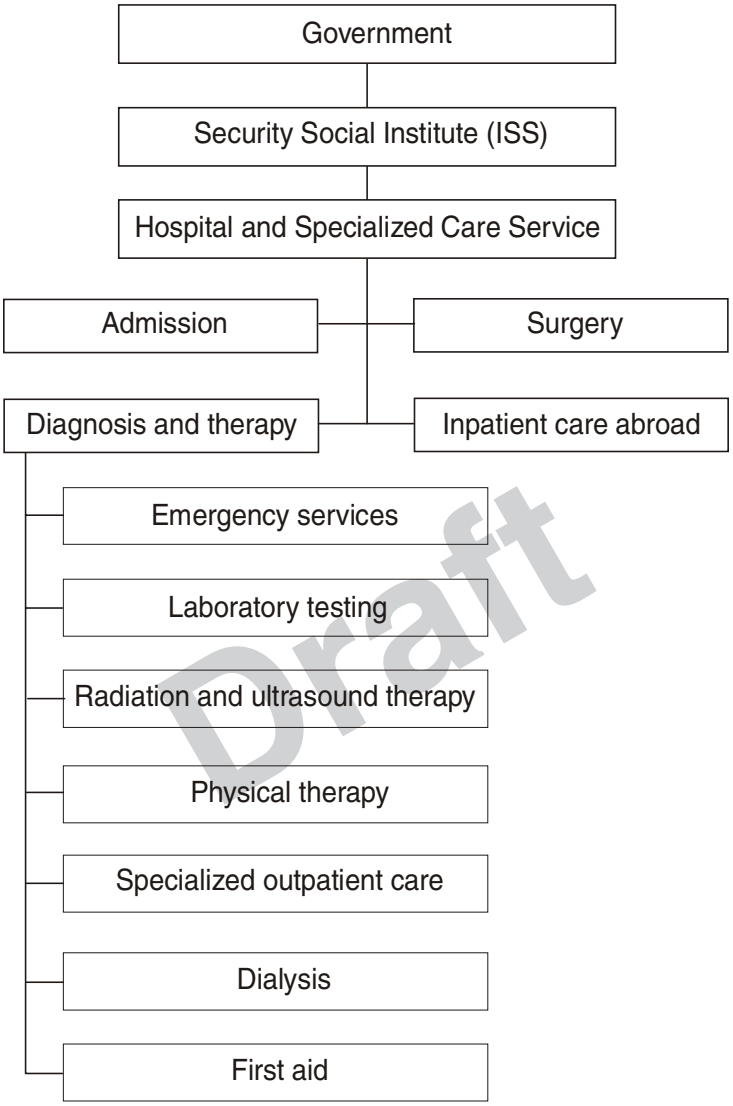


Table 9 shows the main indicators over the last decade. In 1999, San Marino had 138 inpatient acute care beds and 23 day-care beds. The health authority is trying to reduce inpatient care, which is responsible for a great part of health care expenditure, and strengthen outpatient care. Though hospital day care has effectively increased, the average length of stay has not yet satisfactory declined. The bed occupancy rate was about 55% in 1999, varying from 78% in the general medicine unit to 36% in the intensive care unit.

Table 9. Utilization and performance of inpatient facilities, 1990–1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Hospital beds	162	158	157	154	154	153	153	153	142	138
Hospital beds per 1000 population	6.9	6.6	6.7	6.3	6.2	6.1	6.0	5.9	5.4	5.1
Admissions per 100 population	18.5	19.0	22.0	20.6	19.2	19.4	19.6	19.1	19.4	18.0
Average length of stay in days	7.7	7.3	6.8	6.8	6.6	6.8	6.2	6.0	6.0	5.7
Turnover rate per year	27	29	33	33	31	32	33	33	36	35
Bed occupancy rate (%)	56.8	58.1	61.9	61.4	56.3	59.8	56.0	53.8	59.5	55.3

Source: Secretariat of State for Health and Social Security *(2,8–17)*.

Admissions rates per 100 population (18.0 in 1999), hospital beds per 1000 population (5.1 in 1999) and the average length of stay (5.7 in 1999) place San Marino in an intermediate position within western Europe (Table 10).

Between 1990 and 1999, the trend in the number of beds has been consistent with the experience elsewhere in Europe, even if the number of acute hospital beds per 1000 population continues to be relatively high compared with western European countries (Fig. 11 and Fig. 12).

Besides inpatient care, outpatient care is also available within the hospital. In particular, it provides for emergency care, clinical laboratory services, radiology and ultrasound services, physiotherapy, outpatient specialized care, outpatient operating-room services and dialysis services. The hospital's operative units and specialized services make it absorb the majority of the ISS's financial and human resources.

Currently, the oncology ward of the hospital is being enlarged by 90 beds. In the near future, a new hospital specializing in such care will be opened. An agreement between Italy and San Marino was signed in 2001 to admit Italians into San Marino's hospital. It is, in fact, part of the future health care policy to expand the use of health care services to Italian citizens, not only to increase revenues but also to reap economies of scale. Moreover, the new highly specialized hospital will become a training and research centre in oncology, attracting specialists from specialized institutes in Italy.

Emergency department and first aid station

In 1999, the emergency department provided services 18 275 times, about 10% fewer than the previous year. On average, services are delivered 1523 times per month, peaking during the summer, mainly because of tourists. The staff

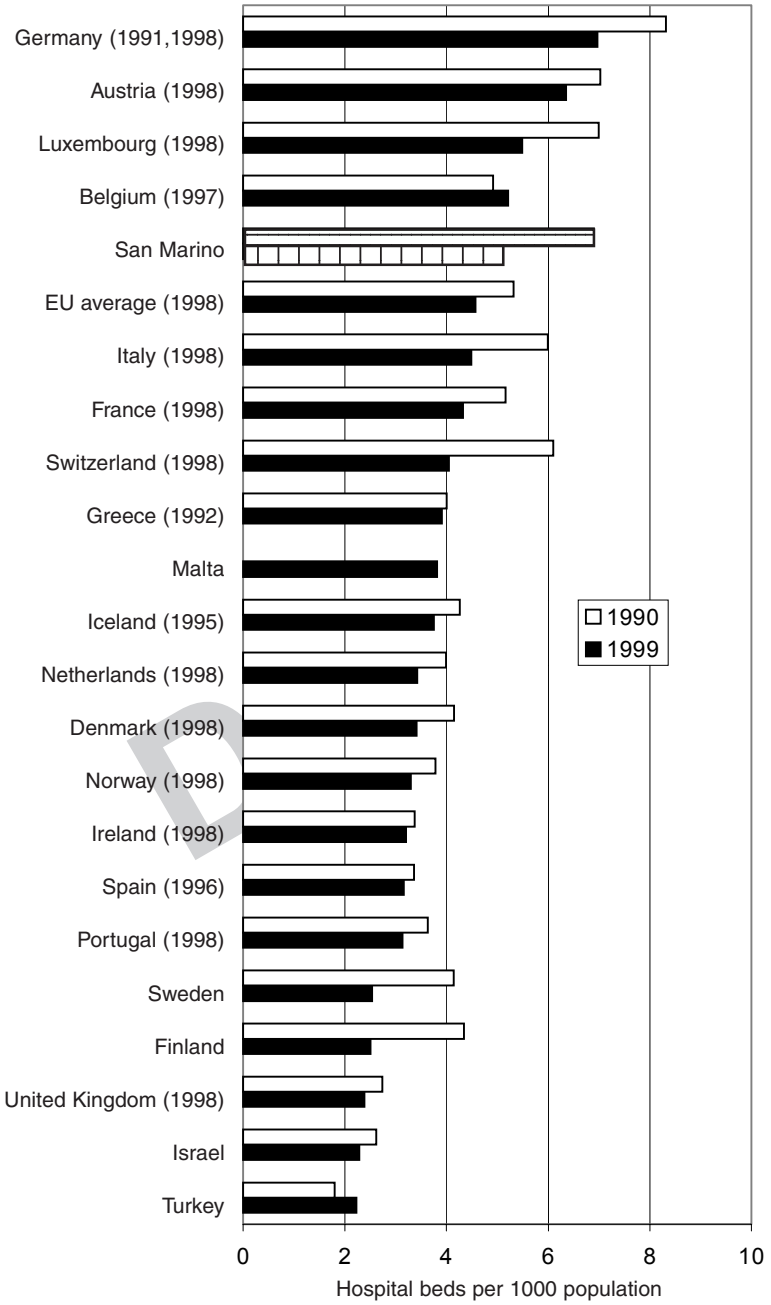
Table 10. Inpatient utilization and performance in the WHO European Region, 1999 or latest available year

Country	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Western Europe				
Austria	6.4[a]	25.8[a]	6.8[a]	75.4[a]
Belgium	5.2[b]	18.9[c]	8.8[b]	80.9[c]
Denmark	3.4[a]	18.7	5.7	78.3[a]
Finland	2.5	19.7	4.5	74.0[d]
France	4.3[a]	20.3[d]	5.6[a]	75.7[a]
Germany	7.0[a]	19.6[b]	11.0[a]	76.6[b]
Greece	3.9[g]	–	–	–
Iceland	3.8[d]	18.1[d]	6.8[d]	–
Ireland	3.2[a]	14.6[a]	6.8[a]	84.3[a]
Israel	2.3	17.9	4.3	94.0
Italy	4.5[a]	17.2[a]	7.1[a]	74.1[a]
Luxembourg	5.5[a]	18.4[e]	9.8[c]	74.3[e]
Malta	3.8	–	4.2	79.3
Netherlands	3.4[a]	9.2[a]	8.3[a]	61.3[a]
Norway	3.3[a]	14.7[c]	6.5[c]	81.1[c]
Portugal	3.1[a]	11.9[a]	7.3[a]	75.5[a]
San Marino	5.1	18.0	5.7	55.3
Spain	3.2[c]	11.2[c]	8.0[c]	77.3[c]
Sweden	2.5	15.6[a]	5.1[c]	77.5[c]
Switzerland	4.0[a]	16.4[a]	10.0[a]	84.0[a]
Turkey	2.2	7.3	5.4	57.8
United Kingdom	2.4[a]	21.4[c]	5.0[c]	80.8[a]
CEE				
Albania	2.8[a]	–	–	–
Bosnia and Herzegovina	3.3[a]	7.2[a]	9.8[a]	62.8[d]
Bulgaria	7.6[c]	14.8[c]	10.7[c]	64.1[c]
Croatia	3.9	13.2	9.4	87.2
Czech Republic	6.3	18.2	8.7	67.7
Estonia	5.6	18.4	8.0	69.3
Hungary	5.7	21.8	7.0	73.5
Latvia	6.3	20.0	–	–
Lithuania	6.4	20.6	9.1	78.8
Slovakia	7.0	18.4	9.6	69.8
Slovenia	4.6	16.0	7.6	73.2
The former Yugoslav Republic of Macedonia	3.4	8.8	8.8	63.0
NIS				
Armenia	5.5	5.6	10.4	29.8
Azerbaijan	7.5	4.7	14.9	30.0
Belarus	–	–	–	88.7[e]
Georgia	4.6	4.7	8.3	83.0
Kazakhstan	5.8	14.0	12.3	92.6
Kyrgyzstan	6.1	15.5	12.8	92.1
Republic of Moldova	6.8	14.4	14.0	71.0
Russian Federation	9.0	20.0	13.7	84.1
Tajikistan	6.1	9.4	13.0	64.2
Turkmenistan	6.0[b]	12.4[b]	11.1[b]	72.1[b]
Ukraine	7.6[a]	18.3[a]	13.4[a]	88.1[a]

Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

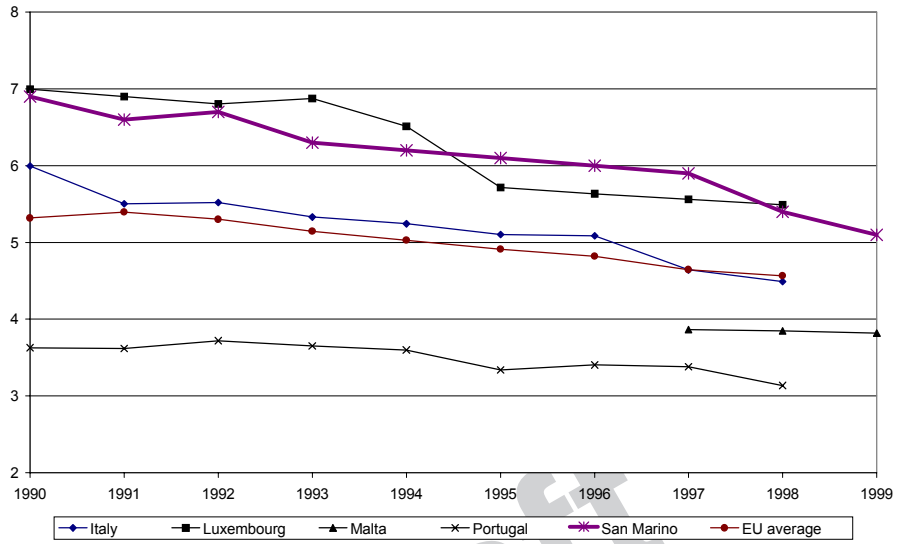
Note: [a] 1998, [b] 1997, [c] 1996, [d] 1995, [e] 1994, [f] 1993, [g] 1992. CEE: central and eastern Europe; NIS: newly independent states of the former USSR.

Fig. 11. Hospital beds in acute hospitals per 1000 population in western Europe, 1990 and 1999 (or latest available year)



Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

Fig. 12. Number of hospital beds in acute hospitals per 1000 population in San Marino and selected countries, 1990–1999



Sources: WHO Regional Office for Europe health for all database, Secretariat of State for Health and Social Security *(2)* and Muscat *(19)*

comprises 7 physicians (8 during the summer), 1 department head, 17 professional nurses, 3 assistants, 9 ambulance drivers and 11 other employees. Emergency care is also provided through first aid stations within the three health care centres.

Laboratory testing and transfusion centre

During 1999, the laboratory analysed 1.1 million blood tests, of which about one third were from the transfusion centre. In 2000, transfusions declined by 2.5% from 1999. Nevertheless, more and more blood has been donated in recent years, which produces an excess blood supply in San Marino. There are aims to export blood to Italy. However, there is a gap in legislation between San Marino and Italy, which makes it impossible to use plasma for industry in Italy.

The laboratory is implementing a project to improve quality in order to meet the European quality certification of ISO 9002. In addition, San Marino's national register for blood marrow donors has been set up with the help of the Sammarinese Association against Leukaemia and Malignant Haemopathy.

The staff includes 7 physicians, 1 biologist, 15 technicians, 1 medical assistant, 4 secretaries and 5 assistants.

Outpatient care

Most patients who do not require inpatient treatment receive outpatient care. The range of outpatient services includes outpatient surgery, maternal and paediatric care, dialysis care and orthopaedic services.

Table 11 displays all the services provided through ambulatory care. Outpatient surgery showed the highest increase in activity from 1995 to 1999, about 66%. This shows how San Marino has increased day hospital activities to reduce health care costs, while trying to increase quality and thereby patient satisfaction at the same time. The day hospital was also introduced within paediatric care, clearly to strengthen the ambulatory care service. Since 1995, paediatric care activity has also included home care during the day and night for children 0 to 6 years old who need acute and urgent care.

Maternal and paediatric care is provided on an outpatient basis at the hospital, which complements this kind of care provided at the three health centres.

In 1999, the dialysis care centre provided 2218 sessions, a 24.7% decrease compared with 1997. Twenty-three per cent of the patients undergoing dialysis were Italian and 10% were occasional tourists from the Adriatic coast. As the ISS Executive Board recently increased the fees for the use of this service by nonresident Sammarinese citizens, a further decrease is expected in the number of patients using this service from outside San Marino.

Specialized care provided abroad

Because of its small size and the geographical peculiarity of San Marino as an enclave within Italy's territory, it is understandable that some residents of San Marino decide to receive specialized health care outside of San Marino.

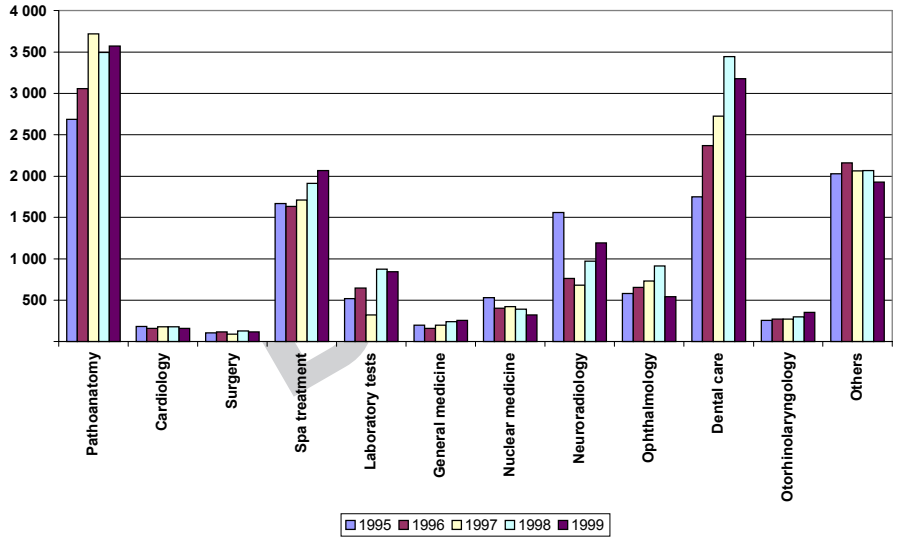
Table 11. Ambulatory services provided by hospital physicians according to category, 1995–1999

Category	1995	1996	1997	1998	1999	Percentage change from 1995 to 1999
Surgery	4 853	5 294	5 941	7 310	8 069	+66.3
Orthopaedics	11 492	13 346	12 120	15 802	16 006	+39.3
Obstetrics and gynaecology	19 824	21 687	23 110	21 968	22 289	+12.4
General medicine	19 975	18 076	17 585	18 070	20 475	+2.5
Paediatrics	13 375	15 354	16 195	17 723	18 622	+39.2

Source: Secretariat of State for Health and Social Security *(2)*.

Thanks to special agreements set up with Italy's National Health Service, mainly at the local level, 14 523 people (representing 52.7% of San Marino's population) received specialized care outside San Marino in 1999, 20.5% more than in 1995. This is necessary because some specialized health care services are not available in San Marino. Most people are seeking specialized care such as pathoanatomical care (histological tests) (39% in 1999), spa treatments abroad (39% in 1999) and dental treatment (22% in 1999) (Fig. 13). Dental treatment includes reimbursement for services provided by independent dentists in San Marino (Decree No. 37/1996).

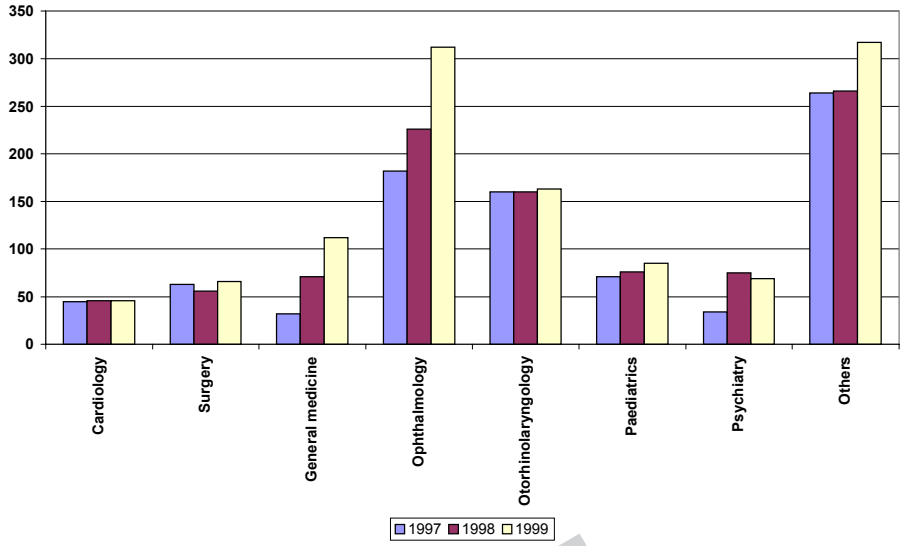
Fig. 13. Number of specialized treatments provided outside San Marino according to type of treatment, 1995–1999



Source: Secretariat of State for Health and Social Security, 2000 *(2)*.

Special agreements between San Marino and the Government of Italy allow residents of San Marino authorized by the ISS to receive inpatient care services in Italy free of charge at the point of delivery. In 1999, the ISS issued 1170 authorizations for admission and free treatment at facilities in Italy, both hospital and ambulatory, for a total of 1507 person–days (Fig. 14). The length of hospital stays in Italy's facilities increased by 5.8% in comparison to 1997 and by 14.5% in comparison to 1998, and the number of admissions increased over the same period.

Fig. 14. Number of authorized hospital admissions outside San Marino according to type of treatment, 1997–1999



Source: Secretariat of State for Health and Social Security *(2)*.

According to a 1999 survey *(7)*, 53% of residents turn to providers abroad, whereas just 17% of residents take out health insurance on a permanent basis (4%) or a temporary basis (13%). About 70% of the people interviewed believe that the public health authority should offer at least partial reimbursement for the cost of health care abroad (47%) or that they should increase the number of special agreements, especially with European Union countries (36%). The 1999 survey has also highlighted the existence of a lack of communication between citizens and the public health authority: more than one third declared that they did not know how and to whom to address their request for health care services not provided within San Marino. In addition, most residents would like more freedom of choice between private and public providers, both inside and outside San Marino. In order to enjoy this freedom, 35% are willing to pay a co-payment. In this case, they preferred the following payment systems: a flat fee irrespective of personal income (42%), an income-based co-payment (41%) and health insurance with tax-deductible contributions (17%).

Social and community care

The ISS has particularly developed social care services in San Marino. As already mentioned, the SSS was set up by law in 1977. Its institutional aim is to provide for community care, aiming to cover not only people's health but also the psychological and social dimensions.

Through preventive care interventions and rehabilitative care, the ultimate aim of the SSS is to protect the health and social status of the weakest members of society: children, elderly people and disabled people. As equity is the main focus, all citizens are considered equal under the law irrespective of income. All SSS planning activity is based on need and includes public participation.

Elderly people, children and disabled people are not the only potential beneficiaries of the numerous services provided by the SSS. In fact, services also cover several categories of people needing care, such as families with children, alcoholics and people with mental and emotional disorders.

The number of services provided has increased during the last two decades. In 1980, nursery schools were established. A few months later, a law was enacted to defend the rights of disabled and developmentally disabled people. In 1983, a home care service was established. Three years later, family legislation was reformed. In 1993, a project called elderly flat unit (*gruppo appartamento*) was initiated to improve the living conditions of elderly people. The project enables autonomous elderly people to live in flats in the same building to help them socialize and cope with everyday life.

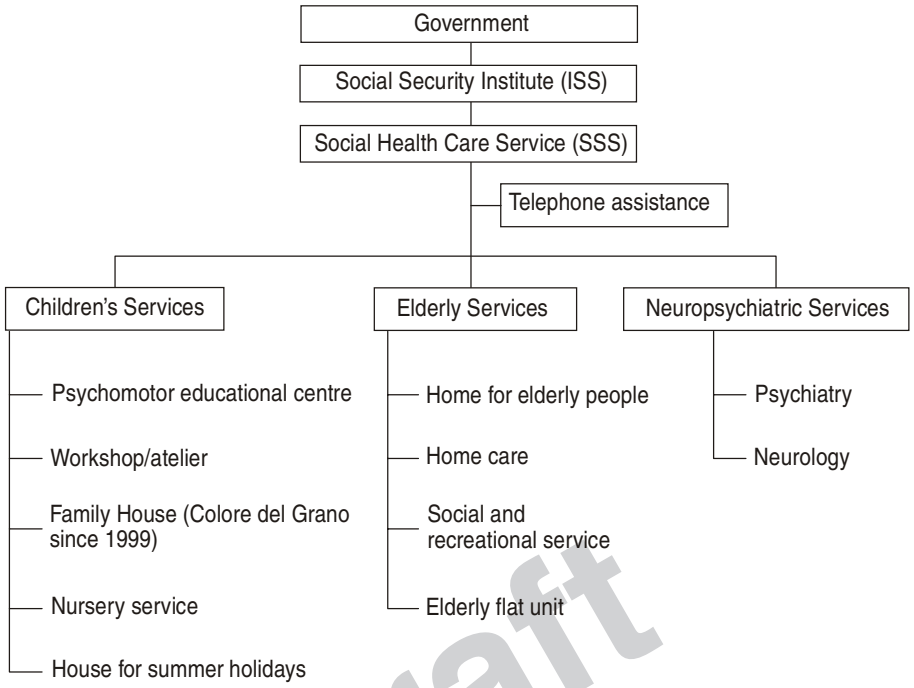
The SSS is organized in three main fields of activity (Fig. 15): Children's Services, Neuropsychiatric Services and Elderly Services.

Staff employed within the SSS comprise mainly two professional groups: one specializing in health care activity as physicians, psychologists, professional nurses and physical therapists and the other specializing in social care activity as social workers, sociologists, educators, entertainment organizers and social employers. The SSS employs 283 people distributed among the three fields of activity as following: 149 within Children's Services; 102 workers within Elderly Services; and the remaining 32 within Neuropsychiatric Services. Their work is organized according to the principles of interdisciplinary and team work.

Children's Services

The Children's Services (0–18 years old) was established for the first time by law in 1977. In specific cases, it also takes responsibility for disabled people

Fig. 15. Organizational structure of the Social Health Care Service (SSS)



over 18. It mainly focuses on the following activities: psychomotor education, manual activity in specific workshops (ateliers) as well as assistance and rehabilitative services to disabled people living in their own homes. Moreover, the services provided aim to help neglected children or those with serious social and mental problems.

The main issues are preventing problems, providing care and rehabilitating children so that they can become actively involved within society. With this aim, in 1971, a special school instituted for these children was closed in favour of integrating them into ordinary schools in a "normal" context. The Family House, established in 1977, provided hospitality to neglected children during its first year, and now it provides assistance to disabled children. In 1999, the Family House moved to a new location, called Colore del Grano, housing nine children full time and 28 children part time, all of whom have been active in specific workshops. In addition to the Family House, since 1979 workshop activities have been taking place during the day aimed at helping people with limited functional working ability.

The nursery services include six facilities with a maximum capacity of 195 children aged 3 months to 3 years. In 2000, 315 children received this service. As demand is higher than facility capacity, the public health authority is planning to open other facilities in the future. The house for summer holidays is a seasonal service, from June to September, mainly targeting elderly people and children but is also available for families. In 2000, 827 people benefited from this.

Table 12 displays the complete picture of the services provided and number of beneficiaries.

Table 12. Number of beneficiaries of the Children's Services according to type of activity, 1995–2000

	1995	1996	1997	1998	1999	2000
Psychological services during the age of development	172	183	218	283	277	289
Social assistance	32	46	46	75	75	75
Speech therapy	63	66	71	77	99	190
Physical therapy (number of therapy sessions in brackets)	85 (220)	108 (202)	110 (279)	90 (481)	90 (453)	98 (462)
Hydrotherapy	74	70	64	57	59	61
Family House Day time	6	7	9	7	7	–
Full time	10	9	16	9	9	–
Workshop	31	28	21	21	21	21
Nursery school	144	143	173	198	271	315
House for summer holidays	791	801	736	750	827	827

Source: Secretariat of State for Health and Social Security *(2)*.

Neuropsychiatric Services

Neuropsychiatric Services, established by law in 1977, includes two main sectors of activity: neurology and psychiatry.

Neurology includes preventive services, diagnosis and care for patients affected by diseases of the nervous system through daily outpatient services, hospital departments' advice and home care. The outpatient service has a clinic specializing in diagnosing and caring for neuroimmune diseases that can function as a day hospital service and admit patients needing specialist treatment to the geriatric ward of the hospital. In addition to these daily working hours, the services can be accessed 24 hours a day. Three neurologists and two neuropsychiatric technicians compose its staff. Each year at least four training workshops are organized with the participation of well known specialists.

Psychiatric services are mainly related to mental health promotion, diagnosis and care for adults. As the Neuropsychiatric Service, psychiatric services are available 24 hours a day. The staff includes a multidisciplinary team: psychiatrists, psychologists, sociologists, social workers, educators and nurses. Psychiatric services include three specialized fields of activity: psychiatry, physical rehabilitation and drug and alcohol abuse.

Psychiatry. Psychiatry includes a district service including both home care and ambulatory care. The hospital has no psychiatric ward, and patients with mental health problems are admitted to a clinic or hospital outside San Marino. Nevertheless, discussions regarding the possibility of creating a small department of neuropsychiatry within the hospital are underway.

Mental rehabilitation. Mental rehabilitation has a multidisciplinary team managing a semi-protected flat that can host up to four patients, two workshops producing and selling pieces of pottery that are also sold through a shop located in a part of San Marino with many tourists and three working groups responsible for maintaining public parks and gardens. A semi-residential centre, Il Libeccio, organizes therapeutic groups on a regular basis, coordinates all mental rehabilitation activity with the medical and pharmaceutical treatment and gives professional training courses.

Drug and alcohol addiction. The drug and alcohol addiction service cares for and rehabilitates addicted people and prisoners. Its multidisciplinary team also manages a national observatory on youth problems to eventually refer young people to therapeutic communities.

Because of a new public health policy orientation, the role of outpatient activity is increasing, which is why ambulatory activity increased in 1999 by 30% compared with the previous year. In 1999, the cost of this service increased by 11% compared with 1998, although the number of personnel decreased from 36 in 1998 to 32 in 1999. The reason is probably expenditure for services outside San Marino. The current accounting system does not calculate the exact amount of money spent on neuropsychiatric services abroad.

Elderly Services

As San Marino has been coping with the aging of society, Elderly Services is of particular importance among the services delivered by the SSS. It is organized into four areas: the home for elderly people, home care services, social and recreational services and the elderly flat unit.

Home for elderly people. The home for elderly people can house a maximum of 72 elderly people. Despite the implementation of home care services, the waiting list for access to the home is long. At the end of 1999, the centre

housed 28 men and 48 women aged 76–84 years. Sixty per cent stay for less than 5 years, and 33% are there for more than 6 years. The remaining 7% have moved in within the last 6 months. Since 1997, the nursing home has been reorganized into two levels of care. The first-floor unit houses non-self-sufficient elderly people needing a high level of health care and assistance, and the second-floor unit houses elderly people needing a moderate level of care. A third unit, the recreation department (Centro di Animazione) includes residents from both units during the daytime hours for both social activity and mealtimes.

Home care services. Home care services especially target elderly people who are physically and mentally healthy enough to be able to live alone or to be assisted by the family. In 1999, the public health authority tried to involve active public participation, including not only the immediate family, but also neighbours, friends, etc. In 1999, 299 elderly people received home care services (73% women and 27 men), with a total of 21 116 service units provided.

Social and recreational services. The social and recreational services target all retired people. Currently, 300 people use this service, which includes joint social events, summer holidays etc.

The elderly flat unit. The elderly flat unit was established in 1992. It is a building with five flats in the township of Acquaviva. Since its establishment, it has housed six people: one couple and four single people. The main goal is to guarantee a certain degree of autonomy even within an organized facility.

At the end of 1993, the ISS Executive Board approved a telephone assistance project. Each elderly person was provided with a special telephone line through which he or she can be addressed if necessary or if psychological support is needed. Routine phone calls are made to check on the person's health or mental status. The low utilization, by about 30 people, may be explained by the resistance of elderly people to using new technology.

Human resources and training

Health care staff comprise three categories:

- university-qualified health care personnel, such as physicians, dentists, pharmacists, biologists, chemists and psychologists;
- intermediate-level health care personnel, such as social workers, professional nursing staff, midwives, physiotherapists, occupational therapists, technicians and auxiliary staff; and
- other personnel, such as technical, special service, maintenance and administrative staff.

According to the latest ISS report, 1024 health personnel worked within the San Marino health care service in 1999, including temporary workers and people under private contract. The breakdown according to service is shown in Table 13.

Table 13. Number of ISS personnel and cost according to service, 1998 and 1999

	1998			1999			
	Number of personnel	Personnel cost, in thousands of euros	Percentage of total	Number of personnel	Personnel cost, in thousands of euros	Percentage of total	Personnel cost increase from 1998 to 1999 (%)
Administration Service	120	1 718	5.4%	116	1 749	5.1%	1.8%
Pharmaceutical Service	52	1 608	5.0%	55	1 788	5.2%	11.2%
General Medicine Directorate	77	3 205	10.0%	76	3 277	9.6%	2.3%
Hospital and Specialized Care Service	445	16 546	51.6%	457	17 832	52.1%	7.8%
Environmental Health Service	35	1 566	4.9%	37	1 487	4.3%	–5.0%
Social Health Care Service (SSS)	267	7 439	23.2%	283	8 103	23.7%	8.9%
Total	996	32 082	100.0%	1 024	34 236	100.0%	6.7%

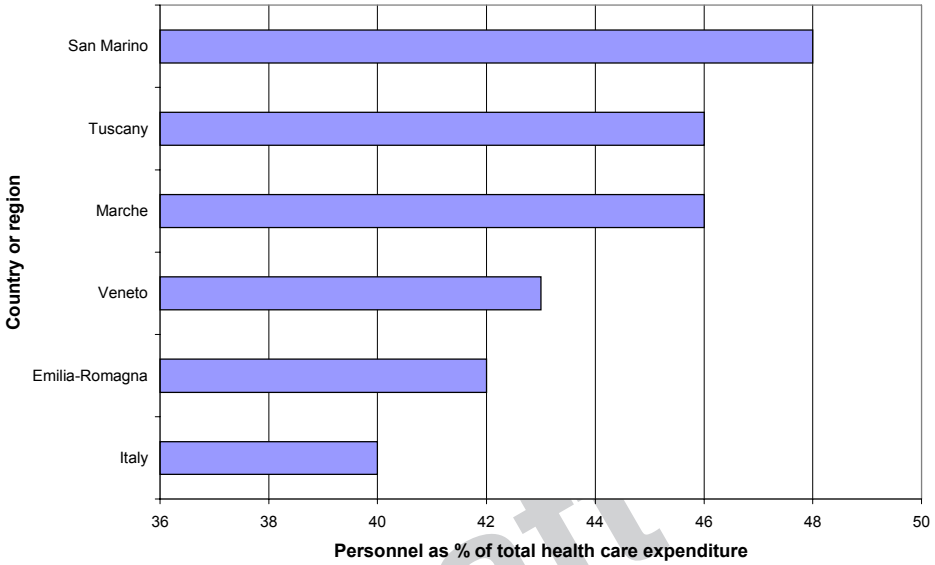
Source: Secretariat of State for Health and Social Security *(2)*.
The values in lire have been converted to euros at the exchange rate of Lit 1936 = EUR 1.

The ISS health care staff increased by 2.8% from 1998 to 1999, and health staff expenditure increased by 6.7% during the same period. Health care personnel account for 48% of total health care expenditure. Fig. 16 compares San Marino and the neighbouring regions of Italy on the percentage of total health care expenditure accounted for by personnel.

Workers hired under private contracting are growing as a result of a private bargaining policy started in 1999. This policy means that unemployed people, depending on their studies and professional experience, can be hired temporarily or permanently by the ISS without any official competition. That has reduced the hiring time and increased the flexibility of the ISS as well as all the public administration.

The increase in the labour force within the SSS mainly resulted from the opening of a new centre for disabled children called Colore del Grano and the doubling of the size of the nursery school in the Township of Dogana. The number of personnel in the Hospital and Secondary Care Service increased because of the opening of a semi-intensive therapy service and an oncological

Fig. 16. Health care personnel expenditure as a percentage of total health care expenditure in San Marino and selected regions of Italy, 1999



Source: Secretariat of State for Health and Social Security *(2)*.

day hospital. Table 14 shows how the ISS personnel are organized within the national health care service.

All staff members, excluding workers under private contract, have a status similar to that of civil servants. In both cases there is no incentive scheme. The ISS is planning to apply some incentive mechanism schemes to increase the productivity of physicians and nurses.

In 1999, according to a national database, San Marino had 4.6 physicians and 9.8 nurses per 1000 population. The relative number of physicians is the second highest in western Europe after Italy, whereas the number of nurses ranks lower (Fig. 17).

Training

Physicians

Physicians go through three main educational stages: university education, postgraduate education and continuing education during their professional careers. San Marino has no medical university.

Table 14. Health care personnel, included contracted personnel, as of 31 December 1999

Service	Physicians	Other health personnel	Auxiliary and technicians	Social workers	Administrators	Total
Administration Service						
General Management	–	–	13	–	9	22
Information Office	–	–	–	–	6	6
Public and International Relations Office	–	–	–	–	4	4
Administrative Office	–	1	22	–	56	79
Medicolegal and Fiscal Affairs Office	2	2	–	–	1	5
Hospital and Specialized Care Service	81	221	139	–	16	457
General Medicine Directorate	21	42	4	–	9	76
Environmental Health Service	6	4	23	–	4	37
Pharmaceutical Service	24	–	27	–	4	55
Social Health Care Service	8	28	2	237	8	283
Total	142	298	230	237	117	1024

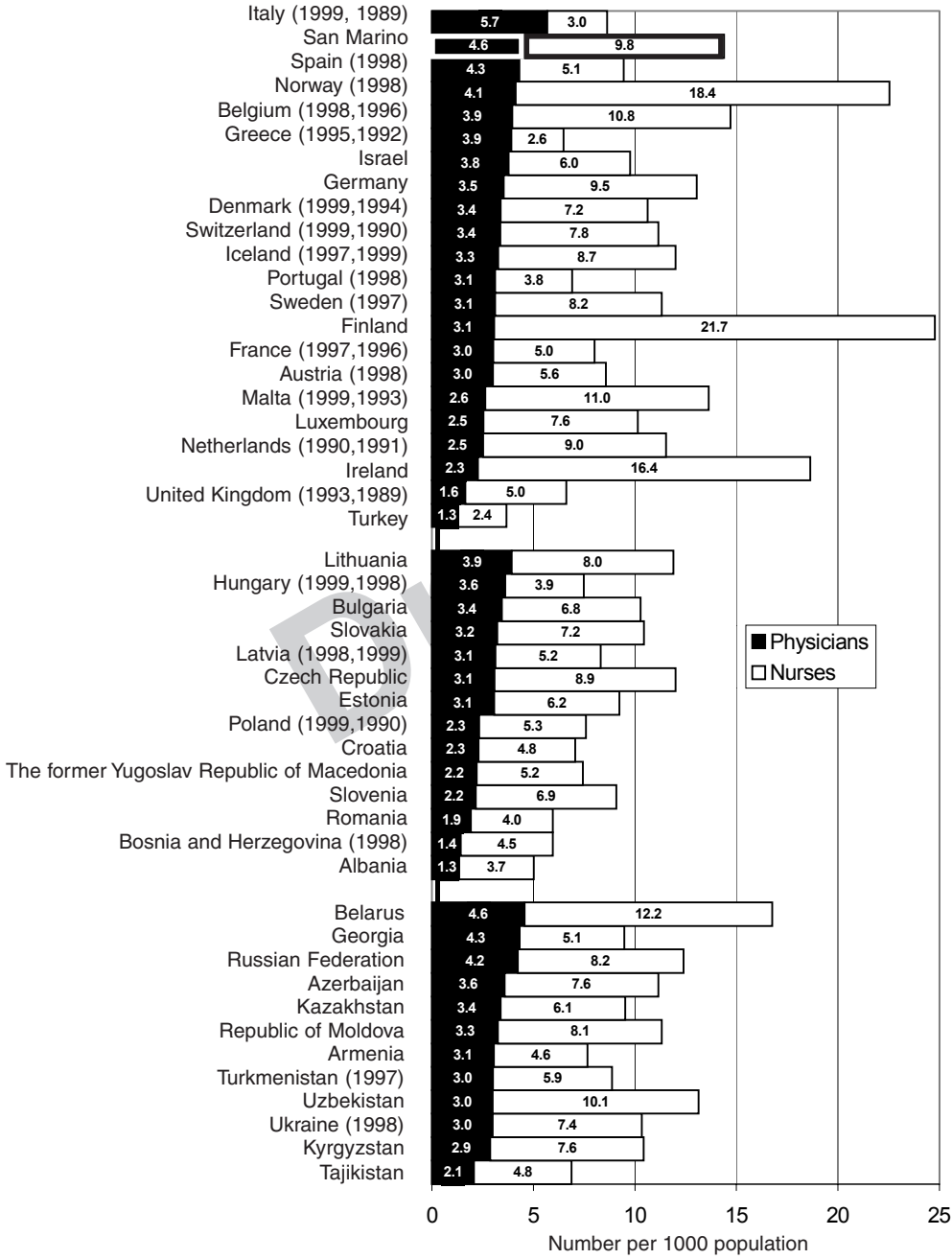
Source: Secretariat of State for Health and Social Security *(2)*.

Although the public authority recognizes the validity of all health degrees acquired within the European Union, most physicians, pharmacists and veterinarians working in San Marino graduated from a medical faculty within Italy. The undergraduate programme in Italy, with theoretical and practical classes, lasts at least 6 years. Medical students must have at least 6 months of hospital work experience to obtain the final degree. After passing a state examination in Italy, the medical graduate can practice as a physician or decide to attend postgraduate school to become a specialist in any medical field.

According to a law enacted in 1992, all physicians, pharmacists and veterinary physicians must have postgraduate training within ISS facilities before being permitted to work in San Marino. For physicians, the postgraduate period is equivalent to 2 years of postgraduate training. The first year they must work in medicine, surgery, primary health care and environmental hygiene services, and the second year they can choose their field of specialization according to their preferences. Pharmacists must train for at least 6 months in a pharmacy and veterinary physicians 6 months in the veterinary service.

As salaried state employees, health personnel must work within San Marino and in ISS facilities and cannot work in private practice. A specific medical association does not exist in San Marino, but some physicians have created

Fig. 17. Number of physicians and nurses per 1000 population in the WHO European Region, 1999 or latest available year (in parentheses)



Sources: WHO Regional Office for Europe health for all database and Secretariat of State for Health and Social Security *(2)*.

medical associations according to the field of specialization. The following have been recognized by law: the Psychologists' Association (in 1995) and the Association of Surgeons, Physicians and Dentists (in 1996). The Association of Sammarinese Pharmacists is linked to the Italian Pharmacists' Association. An association of general practitioners is currently being developed.

Nurses and other health personnel

The Hospital and Specialized Care Service is responsible for training nurses. A nursing school was established at the end of 1988 by a resolution signed by the Congress of State and regulated afterward by a law enacted in 1991 with the approval of the Great and General Council. Through the end of 1999, 74 students had received a nursing degree from the school.

Since 1999, important changes in the European nursing sector convinced the health authority to undertake reforms. Reforms were made, mainly driven by the willingness to be aligned with the legislation of Italy and the European Union in such an important field. In 1999, at the end of the old nursing school programme, 7 students became nurses, whereas under the new nursing school programme, 10 people have already started classes. The new nursing school programme, the first university nursing degree, is being carried out in collaboration with the University of Ferrara in Emilia-Romagna and is based in the Department of Biomedical Studies at the University of San Marino.

In 1999, after the change in the nursing school programme, a resolution by the Congress of State established the Public and International Relations Office within the ISS dealing with anything related to the training activity such as courses or conferences.

Besides the nurses' training, the school has started training courses addressed to form a new health care profession: a social health care technician (*operatore tecnico addetto all'assistenza sanitaria e socio sanitaria*). The social health care technician should be able to deal with basic patient needs: home and environmental hygiene interventions, transport and assisting the nurses working within the social health care service.

Moreover, in 1998, a training course for volunteers started in the hospital, specifically requested by some of the volunteer associations, to prepare volunteers providing assistance and care to people needing hospital care and to elderly people living at home.

Pharmaceuticals and health care technology assessment

Pharmaceutical Service

The Pharmaceutical Service consists of six pharmacies spread throughout San Marino, about one per township, and one pharmaceutical centre, which acts as the national central warehouse, receiving and distributing drugs to the pharmacies. The pharmaceutical centre and one of the pharmacies are located within the hospital building, where the offices of the Secretary of State for Health and Social Security are also situated. All pharmacies are open during working hours, and the pharmacy in the hospital is open 24 hours per day. All pharmacies are owned by the ISS, which means that they are state owned. Since 1995, when the last private pharmacy was closed, operating a private pharmacy has been explicitly forbidden by law.

There are no restrictions on selling drugs produced outside San Marino. Thus, many Italians buy drugs in the pharmacies that are not sold within Italy either because Italy's health authorities explicitly prohibit them or because the approval of a special drug commission is required. An famous example was the drug Viagra®, which was sold in San Marino 1 year before being sold in Italy.

Drug prescription

San Marino's pharmaceutical expenditure in 1999 was about 17% of total health care expenditure (excluding expenditure on the social health care service). Total drug sales in 1999 were about EUR 7.2 million (about EUR 270 per capita), a decrease of 12.1% compared with 1998 (explained by substantial Viagra® export in 1998).

There is a positive drug list, and all prescribed drugs on the list are dispensed free of charge. Although a positive list exists, there is an exception through which people can also receive drugs not on the list free of charge. When someone urgently needs a drug, the prescribing physician assumes responsibility and can immediately communicate the reasons to the Pharmaceutical Service for drugs not on the list. The public health authority has provided computers to all physicians and pharmacists to manage drug prescription better. It is hoped that the introduction of a computerized system will produce good results, contributing to a decrease in the consumption of prescribed drugs.

The total number of prescriptions in 1999 was 243 583, increasing steadily in recent years (Table 15).

Table 15. Pharmaceutical services, 1995–1999

	1995	1996	1997	1998	1999
Pharmacies	6	6	6	6	6
Prescriptions	198 670	206 010	225 841	238 500	243 583
Prescriptions per inhabitant	7.9	8.1	8.7	9.1	9.1
Total expenditure for prescribed drugs (excluding the hospital), in thousands of euros	2 663	2 916	3 380	3 757	3 951
Per capita expenditure for prescribed drugs (excluding the hospital), in euros	106	114	130	143	148
Average cost per prescription, in euros	13.40	14.10	15.00	15.80	16.20
Pharmaceutical expenditure as a percentage of total health expenditure	18.3%	18.2%	14.5%	19.9%	17.2%

Source: Secretariat of State for Health and Social Security (2).
The values in lire have been converted to euros at the exchange rate of Lit 1936 = EUR 1.

Of the total drug sales, 15% is for the treatment of cardiovascular diseases, which cause the majority of deaths in San Marino, followed by gastrointestinal drugs (10%) and chemotherapeutic ones (9%) (Table 16).

Hospital drug use

Whereas prescribed drug use decreased from 1998 to 1999, hospital drug use increased by about 25%, from EUR 1.001 million to EUR 1.251 million. The department of internal medicine has the highest level of drug use (about 53% of the total hospital drug use), followed by the department of surgery, accounting for 15% of the total drug use. Through its central warehouse, the Pharmaceutical Service distributes drugs within the hospital departments according to need. Over the last few years, an information technology system has been implemented to provide better pharmaceutical management, and the results will be able to be evaluated in the next few years.

Table 16. Expenditure for prescribed drugs according to type of disease or drug, 1997–1999

	1997		1998		1999	
	Expenditure in thousands of euros	% of total drug expenditure	Expenditure in thousands of euros	% of total drug expenditure	Expenditure in thousands of euros	% of total drug expenditure
Cardiovascular	600	18.8	702	14.5	778	14.7
Gastrointestinal	445	13.9	485	10.0	540	10.2
Chemotherapeutic	523	16.4	537	11.1	498	9.4
Blood and blood-forming organs	269	8.4	290	6.0	289	5.4
Endocrine	235	7.3	349	7.3	364	6.9
Nervous system	319	10.0	352	7.3	380	7.2
Bronchopneumonia	199	6.3	254	5.3	261	4.9
Anti-inflammatory	229	7.2	292	7.2	309	5.8

Source: Secretariat of State for Health and Social Security *(2)*.
The values in lire have been converted to euros at the exchange rate of Lit 1936 = EUR 1.

Health care technology assessment

San Marino has no agency to promote the dissemination of health care technology assessment. The public health authority is currently postponing consideration of this issue.

Financial resource allocation

Third-party budget setting and resource allocation

The ISS budget is set annually by the state, based on historical spending and the plans put forward by the Secretary of State for Health and Social Security. The ISS General Management is responsible for financial management within the Secretariat of State for Health and Social Security. It prepares the estimates, detailing the resources required to support planned activities.

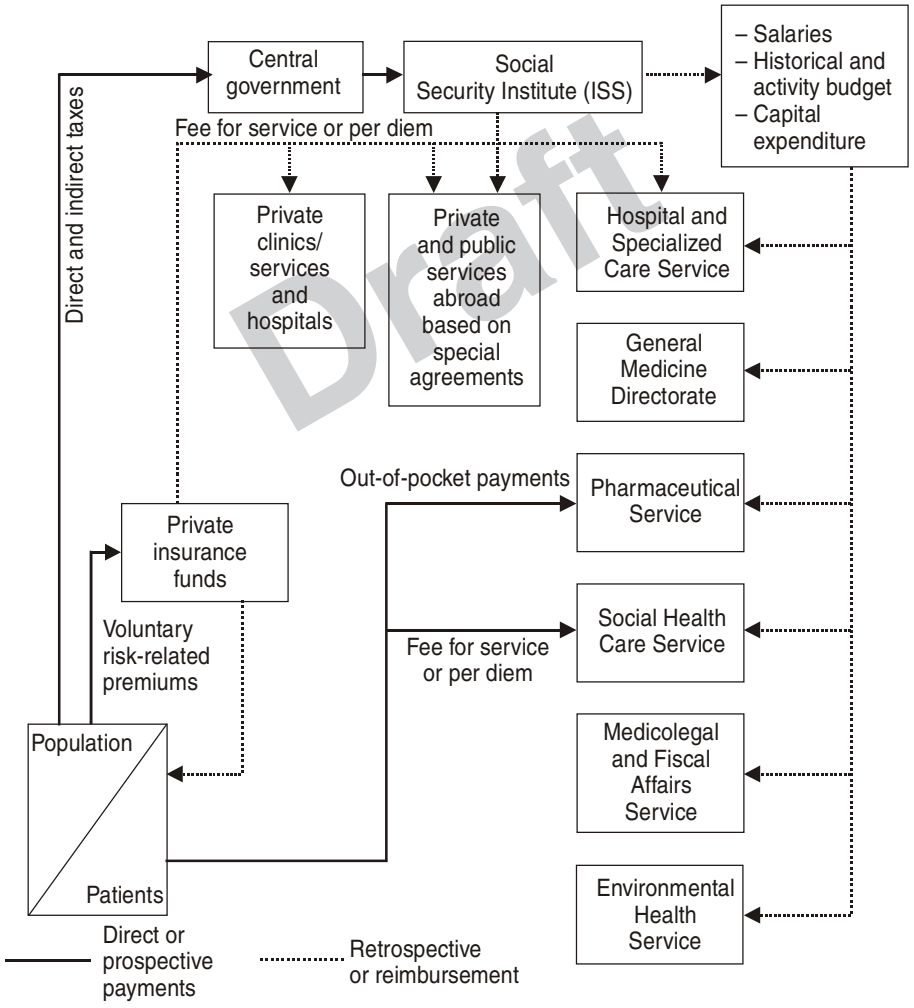
Since 1955, when the ISS was established, the financial resource allocation system has changed several times. The law of 1955 stated that the health care expenditure must be covered through social security taxes and a state contribution.

The social security tax consisted of two parts: a proportional tax applied to income and a progressive tax (the percentage being established by the law of 1922 establishing income tax for the first time in San Marino). The state contribution increased in 1967, after the Laboratory for Analysis and Clinical Research came under the control of the ISS.

A fundamental change took place in 1984 when the previous fiscal rules stipulated by the laws from 1922 and 1955 were both repealed. As a consequence, the social security tax was replaced by a general income tax collected by the state. Without the establishment of any health care fund, the state must finance all social security services provided through the ISS: health care services, social health care services and social services. The solidarity principle was thereby confirmed, ensuring equal treatment for equal need regardless of income or financial contributions. Article 62 of Law No. 91/1984 states that 50% of the total general income tax revenue should be distributed to the ISS. The ISS, in turn, allocated 76% of this amount to the health care service and the remaining 24% to the social health care service.

In 1990, a further public financing law contributed to changing the health care funding system. This time, special lines within the state budget were established. The 1990 law stated that all taxes that were previously allocated to the ISS must be contained within these special lines. This meant that the central government has become directly responsible for financing public health care and is committed to balancing the budget on a yearly basis. The financial resources are allocated on a historical basis. Fig. 18 shows the ISS's financing flows.

Fig. 18. Financing flows of the Social Security Institute (ISS)



Payment of hospitals and health centres

The San Marino Hospital is financed through a global budget drawn up and allocated by the Secretary of State for Health and Social Security and disbursed through the ISS. At present, the budget is mainly based on historical data and not yet on diagnosis-related groups. However, since a management accounting system has been implemented for 2 years based on cost centres, a system with codes similar to diagnosis-related groups has been introduced for hospital surgical services and diagnoses. In late 2001, a reimbursement system based on diagnosis-related groups was to be fully introduced according to a new hospital reorganization policy aiming to improve the use of resources.

Like the hospital, the three health centres are financed through a global budget disbursed through the ISS. They are financially and administratively dependent on the ISS. Since they are directly financed by the ISS, no attempts are made to keep costs under control.

Payments for health care services provided within Italy and vice versa

In theory, the ISS offers totally comprehensive health care services, but in reality, not all health care services are provided within San Marino. Special agreements with health care facilities in Italy have been implemented accordingly. The agreements can be at the regional level, such as with Emilia-Romagna, but also with individual health care facilities, both private and public. Emilia-Romagna has been preferred mainly because it is easily accessible and because it can provide almost all health care services not available within San Marino.

In 1999, most hospital admissions abroad were requested within the following specialties: ophthalmology, otolaryngology and cardiology (Fig. 14).

When health care in a public or private clinic or hospital in Italy becomes necessary, the patient or the GP must ask the ISS for authorization. The office dealing with this is the ISS Medicolegal and Fiscal Affairs Office, which evaluates the request and enacts the authorization to be presented to the health care facility in Italy. If the ISS has no special agreement with the facility, the patient pays the bill and is later reimbursed by the Medicolegal and Fiscal Affairs Office. Two possible scenarios are likely depending on whether the health care facility is private or public. Private health care facilities present a bill to be reimbursed by the Medicolegal and Fiscal Affairs Office. Public

facilities will ask for reimbursement through Italy's Ministry of Health, which will ask, in turn, for reimbursement from the Medicolegal and Fiscal Affairs Office. This latter process is likely to take some time.

Moreover, payments for hospital services in Italy are based on diagnosis-related group reimbursement, whereas San Marino has not yet implemented the diagnosis-related group system (the ISS has introduced a system with codes for hospital surgery and diagnosis similar to diagnosis-related groups). This makes communication between San Marino's and Italy's health care systems difficult. The same difficulties occur when San Marino delivers health care to Italian patients, resulting from bureaucracy and different payment systems.

Payment of health care professionals

Physicians

All physicians and pharmacists working within the health care system are salaried government employees. The fixed salary is paid according to a matrix, linking professional category, time and service, independent of any assessment of productivity. ISS salaries (similar to other public salaries) are about 50% higher than public salaries in Italy. This might be partly explained by the fact that physicians in San Marino are forbidden by law to work privately out of the ISS' s facilities.

In addition to the fixed monthly salary, the primary health care sector provides incentives for physicians through capitation payments. The 17 GPs are supposed to provide basic health care services to a maximum of 1200 patients who are on their list. Since, on average, they have more than 1200 patients, they receive a fixed amount of money as a financial incentive for each beneficiary who exceeds their list over 1200 to a maximum of 1500. The health authority is planning on increasing the number of GPs to improve follow-up of patients.

Dentists, unlike physicians, work within the public contractual schemes as well as within their own private clinics.

Nurses and auxiliary personnel

Like physicians, professional nurses are state employees, paid according to a matrix linking professional category, time and service, independent of any assessment of productivity. Also similar to physicians, their wages are higher than those prevailing in Italy.

Health care reforms

Aims, objectives and content of the reforms

As San Marino's health care system has always provided universal public coverage, health care reforms have mainly focused on modifying health care financing mechanisms. Nevertheless, since 1997, the health care delivery system has also been reformed to strengthen it more.

Reform implementation

As previously mentioned in the section on *Financial resource allocation*, since the ISS was established in 1955, health care financing has changed several times. The initial social security tax and the state contribution were replaced by a unique general income tax–based contribution in 1984. Since 1990, special lines were established within the state budget. Financial resources continue to pass through the ISS treasury, but the central government has taken over the responsibly for balancing the yearly budget.

Accounting methods have also been changed and reorganized. During the early years, the ISS accounting system was double entry based, any kind of budget was prepared and the government financed the deficit according to the final amount resulting at the end of the fiscal year. In 1979, a unified national budget was created, showing the accounts of each public body in addition to the government's. In 1980, a new accounting system was introduced, turning from an economic model to a financial one. This involved the introduction of a long-term budget, an annual budget and a final balance sheet, and eliminated the profit-and-loss sheet. The method was first used in 1982 and was in effect until 1990, when the economic accounting model was introduced again. The financial method has now become a tool for supporting expenditure decisions and authorization.

The primary health care service began to be reorganized in 1997, to improve the quality of health care. The public health authority tries to do this, for example, by reducing the ratio of beneficiaries to GPs, improving accessibility to care in each of the three health centres. In accordance with the latest suggestions of the Great and General Council, primary health care is in the process of being strengthened and developed. Such reorganization has involved an overall rationalization of operating activity: working hours, citizen access and human resource management. Apart from urgent cases, which have absolute priority access, medical visits are obtained through a telephone booking system that has actually reduced the average waiting time. In fact, people seem to be satisfied with this booking system and also with the quality of services provided by the nursing staff working in the health centres (1999). Such reorganization of the system has become necessary to meet growing demands and needs for health within the framework of limited resources and with the understanding that equity in health is not only an ethical requirement but also a rational and efficient way of allocating resources.

As already mentioned, a new hospital specialized in oncology will open soon, and thanks to an agreement already signed between Italy and San Marino, it will become a top training and specialized research centre in oncology. This means that it hopes to attract both human and financial resources from abroad.

The first national health care plan was adopted in 2000 and will run over 3 years. It represents a clear attempt to make the health care system oriented towards quality and the needs of patients (for further information, see the section on *Planning, regulation and management*).

Health for all policy

In an effort towards achieving health for all in 1994 and 1996, San Marino signed an agreement with WHO to strengthen cooperation, with the aim of achieving the 38 European targets for health for all. The agreement focuses on preventing and reducing the causes of chronic diseases, promoting healthy lifestyles and combating the use of harmful substances, such as tobacco and alcohol. San Marino signed the St Vincent Declaration on reducing the causes and effects of diabetes *(20)*.

Conclusions

When the health care system was founded in 1955, it was envisaged that it would provide universal and comprehensive coverage to all citizens, free at the point of use. This model is a universal health system based on equity and solidarity, considering health as a fundamental human right irrespective of the economic, social and cultural conditions of each citizen. Through public resources, the national health service guarantees equal opportunities for accessing health services as well as uniform and essential levels of health care throughout San Marino.

The health care system performs well but expenditure has increased, possibly more than GDP over the last few years. Part of this increase might be artificial, for example, resulting from the sudden increase in the purchase of pharmaceuticals in 1998 by Italians, which, because of the accounting system, leads to both higher expenditure and higher out-of-pocket income.

Even if containing health care costs has been not as urgent a priority in San Marino as in other countries, the actors in public health services have already started to take precautionary measures to control the likely growth in expenditure, especially that related to the aging population. The 2001 International Monetary Fund report *(5)* suggested controlling health care expenditure to reduce transfers from the central government to the ISS. Achieving this might require defining a benefit package to which continued free access – one of the strengths of the system – should be ensured.

The planned separation of health care management within the ISS and the tightening of budget constraints should help to contain expenditure pressures. Because the management and financial accounting system is still being changed, analysis of the efficiency of health care in San Marino can only be partial. The recent implementation of an information technology system makes it too early to gather data on the efficiency and quality of health care services. This will be of interest to follow in the near future.

The population rates both universal coverage and equity of access highly. In fact, 93% of the 800 respondents to a survey carried out in 1999 expressed satisfaction with the operation of the health care system. Only 5.5% were clearly dissatisfied *(7)*. Nevertheless, according to the survey, the public authority should take into account that 22% of the respondents were interested in being able to seek inpatient and specialized care abroad or in private health care facilities. In fact, 44% of those interviewed believe that introducing freedom of choice between public and private providers would increase the performance of the whole health care system. San Marino's health care planners should monitor the possible implications of this survey and develop evaluation and accreditation standards to be able to demonstrate the quality of the health care system to their citizens. According to *The world health report 2000 (21)*, the overall performance of San Marino's health system is ranked third after France and Italy, and its performance on disability-adjusted life expectancy was ranked fifth.

In conclusion, the health care system continues experiencing incremental changes aiming for more efficient and rational use of the financial and human resources employed within the whole health care system. The establishment of cost centres will enable better planning and more efficient use of resources.

The development of the user card (Blue Card), the reimbursement of most health care services received abroad and several agreements with health care providers in Italy make San Marino's health care system an interesting case study.

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