

PART II  
*Chapter 12*

**Trade in Health Care**

## Introduction

As defined in Chapter 4 “Global boundaries of health care”, the System of Health Accounts focuses on final consumption of health care goods and services by the *resident* population, irrespective of where this takes place. As a further qualification, this should also be irrespective of who is financing the goods or services consumed. Therefore, current health expenditure should include all final consumption by residents, both in the economic territory and abroad. This means the explicit inclusion of imports (health care goods and services provided by non-resident units, HP.9) and the exclusion of exports (those goods and services provided to non-residents by resident providers, HP.1-8) in order to correctly determine total health spending.

Past experience from international data collections<sup>1</sup> has shown that the consideration of the exports and imports of health care goods and services in the estimation of overall health spending has generally been weak, and the issue was not covered sufficiently in the first SHA Manual. At the same time, the changing face of delivery and payment mechanisms (for example, e-health, tele-diagnosis and Internet pharmacies) has also led to increased challenges in monitoring and tracking the great variety of transactions, as the traditional data sources used in the estimation of imports and exports (i.e. in the Balance of Payments) are less and less adequate.<sup>2</sup> A further factor complicating data collection for trade in health services is the widespread existence of third-party payments from public sources and private health insurance.

This chapter first considers the globalisation of health care and recent trends as a rationale for the need to improve the measurement of trade in this area. In order to meet the new requirements, the chapter sets out concepts and definitions of external trade in relation to health expenditure and, where applicable, the implications beyond this boundary. Where possible, links to existing concepts developed in the domains of international trade statistics and trade negotiations are exploited to ensure close synergy. There is discussion of the reporting of imports and exports as part of SHA tables, including supplementary trade tables, and their relation to other economic statistics. Finally, some preliminary ideas on guidelines and possible data sources for producing and improving estimates of trade in health care goods and services are discussed.

## Background and policy issues

The increasing importance of the health sector, together with the trend towards globalisation, which is being reinforced by the reduction of regulatory obstacles to economic activities, has fuelled a steady growth in international trade in health care goods and services, albeit from relatively low levels. Improved communications and transportation have also facilitated the movement of people, both as patients and independent service suppliers. While for the most part, individuals prefer to receive health care in their home country, under certain circumstances it may be more beneficial for a patient to receive treatment in another country, for example, when the nearest health

facility may be across a border, or when there is more expertise available, or if the same care can be provided sooner or at lower cost.

Travelling for health care is nothing new – since early times people covered long distances to seek cures and healing. Health care goods and services have traditionally been viewed as non-tradable commodities – amid national concerns regarding the sovereignty of public health provision – or in most cases as negligible in value and volume. In recent years, however, there has been a growing body of evidence that in many countries an increasing number of patients have been travelling across international borders specifically for the purpose of receiving treatment (commonly termed “medical or health tourism”), *e.g.* Thailand reported that over one million foreign patients were treated there in 2006 (Thai Board of Investment, 2008). Independent studies have provided wide-ranging estimates of the global level of activity. A report by Deloitte (2008) estimated that in 2008 the value of the world medical tourism market was around USD 60 billion, and it expected this figure to continue to grow at a double-digit pace over subsequent years. In this context, a number of countries have actively promoted their comparative advantage as medical travel destinations, hoping to attract patients from both neighbouring countries and further afield through the promise of high-quality, technologically-advanced and competitively-priced health services. Individual hospitals and clinics or clusters of health care providers have also sought international accreditation in order to put themselves on the map of the international health insurance and purchaser networks.

There have also been examples, particularly in the European Union, of cross-border contracting between health care purchasing authorities and foreign providers. One example of this was an agreement in 2003 between the NHS in England and various Belgian hospitals that aimed to reduce some of the waiting lists in England at that time (Glinosa *et al.*, 2010). Other regional contracting arrangements and cross-border co-operation have existed in various border regions, *e.g.* between the Netherlands and Belgium, France and Spain, and among the Nordic countries.

However, the consumption of health care goods and services abroad goes beyond planned care. Much of the activity between non-resident providers and residents can be of an unplanned nature, that is, the use of a country’s health system while temporarily in the country on business or leisure travel. In addition, the movement of short-term, seasonal or border workers is another important area to be considered. For some smaller countries or border regions that experience large flows of persons and workers across their borders, the import and export of health care goods and services can be significant. Increasing levels of travel and tourism can put strains on the health system of a country or region. For example, past agreements between the UK and Spanish governments resulted in lump-sum payments that were linked to the number of UK tourists travelling to Spain and were intended to cover their use of Spanish health care services (Legido-Quigley and McKee, 2006).

Rising health care costs at home and a lack of health insurance cover are among the major incentives for patients to seek treatment abroad, where procedures and treatments sometimes cost only a fraction what they would at home. But technological advances, market openings and obstacles to accessing health care treatment at home (for example, waiting times, quality of treatment and legal/ethical obstacles) have all been cited as factors behind the increase. Continuing economic and political co-operation between states is likely to lead to the increased movement of patients and health care professionals.

Indeed, past ambiguities regarding the right of European Union citizens to seek treatment in other Member States have helped to push the issue of cross-border health care towards the top of the European health agenda in recent years.<sup>3</sup> In summary, the flow of patients from one country to another has been increasing, sometimes as a matter of individual choice, sometimes organised through contracting abroad by purchasing authorities.

The regulatory liberalisation of health services may have important effects on a country's health system, offering new opportunities, but also posing risks. For example, foreign patients can provide considerable revenues for the receiving country, but they may also draw critical resources away from local patients, leading to a two-tier health service. Blouin *et al.* (2006) analysed in detail the possible implications of trade in health services on public health systems.

For exporting countries, there may be a risk that there exists high-quality richly resourced care for foreign patients in contrast to low-quality poorly resourced care for nationals, or that scarce public funds in the form of tax breaks, incentives and subsidies for private providers are diverted away from primary care needs. Another possible concern is the possible brain drain of trained health professionals from the domestic public health system to private providers, and from rural to urban areas.

Public health issues in the patients' countries have also been well documented. In addition to the possible indication of an inadequate domestic health system that is unable to meet the needs of its own population, there are questions over equity, as patients who can afford the expense are able to access certain services abroad or to jump waiting lists, and care sought abroad may be a substitute for needed health care reforms or investment in the domestic health system. There may also be concerns over the lack of controls or regulations on certain treatments abroad as well as question marks over the quality of treatment and aftercare, with the domestic system left to deal with any resulting complications or malpractice.

On the other side, there can be potential benefits of medical travel for both sides. For the recipient (exporting) country, there are foreign earnings from increased health and tourist flows and increased employment and improved infrastructure resulting from health provider investment. With the diffusion of new technologies and treatments, a "seepage" effect may be envisaged that helps raise the health standards of the local population. Some anecdotal evidence has also pointed to a "reverse brain drain" whereby health professionals return to their country of origin. For the importing country, there may be important economies of scale and cost savings to be made, and rather than a substitute for reform, it can be seen as a catalyst or a necessary introduction of external price competition in the domestic market.

Apart from the physical movement of patients between countries, trade in health services can also take other forms, notably the cross-border delivery of health care goods and services directly to patients or other health care providers. Technological advances, in particular the widespread use of the Internet, mean that individuals are able to seek out health information and to purchase medical goods and services remotely. A study of Internet use for health purposes in Norway over the period 2000-2007 showed a dramatic rise in usage, with 67% of the population using the Internet for health information in some way, and this is forecast to rise to more than 80% by 2010 (Wangberg *et al.*, 2009). While much of the on-line activity is to gather supplementary information regarding illness and health, there was also a tendency towards purchasing medicines or health-related

products, with almost a quarter of those who used the Internet for health purposes reporting this in 2007. Diagnostic services and health administrative services are also increasingly being outsourced, including to overseas organisations. The increase in the number of medical websites and Internet pharmacies has highlighted current gaps with respect both to existing legislation on the purchasing of prescription medicines and to the lack of data to monitor this trade.

Finally, trade can also involve the movement of health care personnel rather than the patient across borders. This can come under the scope of direct foreign aid in kind from governments or international organisations with the provision of medical teams to needy areas, but can also be linked to individuals or groups of health professionals who move independently across borders to provide health services to patients.

While much of the trade in health care goods and services remains marginal – for the most part, a direct patient-provider contact close to home is still the norm for most treatments – there are areas where consumption abroad or cross-border supply may account for an increasing part of care, such as in the area of dental care or fertility treatments. There is also a growing awareness in some countries that parts of domestic health service demand are increasingly being met by foreign providers of health care or vice versa – part of domestic health care provision is satisfying the health care needs of non-residents.

There is also a wider policy interest in trade in health services from the viewpoint of trade negotiations and the World Trade Organisation General Agreement on Trade in Services (GATS).<sup>4</sup> The interest from a number of countries in developing health service exports as a potential currency earner has also contributed to the need to better assess levels and trends in this trade. Policy makers and trade negotiators need reliable data to better understand the dynamics of trade liberalisation and the impacts on public health. This data would enable analysts to gauge trade flows as well as a country's openness to trade in health services. Most importantly, it would make it possible to assess the risks and opportunities related to liberalisation commitments on public health, and thus to craft appropriate policies in order to move towards coherent health and trade objectives.

## Basic concepts and definitions

The System of Health Accounts requires a conceptual basis for the reporting of imports and exports of health care goods and services that is in line with the boundaries of health expenditure. To ensure that SHA statistics are compiled on a basis that is in line with other macroeconomic statistics as much as possible, it is reasonable for SHA to take its lead from the standard definitions and concepts already developed within the System of National Accounts (SNA) and in the Balance of Payments and International Investment Position Manual of the International Monetary Fund (IMF), known as BPM6. The different perspectives can lead to different definitions of trade: on the one hand, trade that falls within the core framework of SHA, and on the other, trade in health care products in a wider economic sense.

In addition, reference is also made to the concepts and definitions outlined in Tourism Satellite Accounts (TSA), with an assessment of the existing survey instruments and methodologies employed in developing estimates of tourist consumption of health care goods and services.

Within the central accounting framework of SHA, health care goods and services are defined according to a clear set of criteria (Chapter 4) and delineated according to the

functional classification (Chapter 5). The same boundary considerations and treatment of borderline cases should therefore be applied in estimating the value of imports and exports of health care goods and services. Furthermore, in the interests of completeness, the universe of health care providers must include all providers irrespective of whether the provision of health care is a primary or secondary activity. One of the challenges, which is not limited solely to matters of external trade, is to adapt existing product and activity classifications to the functional classification of SHA. Additional consideration of extended boundaries so as to analyse the part of non-resident consumption in areas such as health education and training may also be of interest.

Key to being able to determine the level of international trade in health care goods and services are the concepts of economic territory and residence. The following definitions are for the most part in accordance with those set out in the BPM6,<sup>5</sup> where further detail and clarification can be sought.

### **Economic territory**

In its broadest sense, an economic territory refers to any geographic area or jurisdiction for which statistics are required. In the case, for example, where health systems are organised and financed at a regional level and the interest is in building regional health accounts, it could be desirable to define the territory as a sub-national region. On the other hand, the economic territory may consist of more than one country, for example, the Economic Union of Belgium and Luxembourg, or supra-national territories such as the European Union (EU). The definition of economic territory is important in determining resident and non-resident entities with respect to the consumption and provision of health services, and therefore what should be included or excluded in an estimate of health expenditure.

### **Residence**

The concept of residence is subsequently determined by the delimitation of the economic territory. A unit is said to be resident in a country when its “centre of economic interest” is situated within that country’s economic territory. BPM6 further defines: “The residence of each institutional unit is the economic territory with which it has the strongest connection, expressed as its centre of predominant economic interest.” Each institutional unit is therefore a resident of one and only one economic territory determined by its centre of predominant economic interest.

### **Households**

A household’s centre of economic interest is determined based on “when members of that household maintain, within a country, a dwelling or succession of dwellings that the members treat and use as their principal residence”. All individuals belonging to the same household must be residents of the same economy. It is important to make the distinction between the concept of residence in economic terms and concepts based on nationality or legal criteria. An individual considered to be a resident of a particular economy may not necessarily be a citizen of that country. A differentiation between the resident population and the covered or insured population is also of particular relevance to health care. Public health care insurance coverage may not cover the whole population or may extend beyond the resident population, *e.g.* cross-border workers who work in Luxembourg but reside outside the economic territory may be included in the insured population of Luxembourg,

or retired EU citizens who are still covered under their national insurance scheme but are resident in another EU country (see resident versus covered population).

The criterion for residence is nominally based on a period of one year, which can be seen as an objective, if arbitrary, benchmark for determining a person's status. Therefore, a member of a resident household who leaves the economic territory and returns to that same household after a limited period of time (i.e. less than a year) continues to be a resident even if that individual makes frequent journeys outside the economic territory. On the other hand, if an individual stays or *intends* to stay in an economy for a year or longer, he or she is considered a resident of that economy. If not, he or she is considered a non-resident. All such individuals are classified as being in travel status and as having their centres of interest outside the economies to which they have travelled. In the most obvious case, foreign tourists who visit for a short period (generally a few weeks) are not counted as resident. Similarly, seasonal workers coming from another country to work for a few months a year in a country are not regarded as resident.

Certain categories, such as diplomatic representatives, members of the armed forces, students and – of particular relevance here – patients undergoing medical care abroad, do not change their centres of interest and therefore remain residents of their home economies. Border workers – persons who cross the border between two economies on a regular, frequent basis because they work in one economy but have homes in the other – are classed as residents of the economy in which they have their homes and not of the economy in which they are employed. Persons living in Belgium but crossing daily into and out of France for work would continue to be regarded as residents of Belgium rather than residents of France.

Refugees are considered residents if they stay or, importantly, *are expected to stay* for one year or more in their host countries. Persons taking refuge in another country for only a short period remain residents of their home economies.

As stated, an exception to the one-year rule is made in determining the resident status of students and long-stay medical patients, because application of the one-year rule could lead to problems with the interpretation and availability of data. Students are generally expected to return to their home economies upon completion of their studies. However long they study abroad, students should be treated as residents of their countries of origin if they maintain economic attachments to their countries. The factors to be considered in determining whether such an attachment has been maintained includes whether a student is dependent on funds from his/her country of origin to finance his or her studies; whether he or she is funded by the host country under foreign aid or similar programmes; and whether he or she plans to return home upon completion of study. This is important to note regarding expenditure on health education and training of medical professionals abroad.

The same rules regarding residence apply to patients who are expected to return home after the period of treatment. That is, they are considered – regardless of the length of stay in the economies in which they are receiving treatment – to be residents of their economies of origin. While this is likely to be of significance only to a very small minority of medical patients, consideration should be given to the residential status of Long-term care patients in nursing care homes abroad, in light of the inclusion of such care boundaries of health under SHA. This is of relevance where persons from one country have retired to another country but continue to be covered under their “home” social security system. This is considered in the following section.

### ***Resident versus covered population***

Confining the boundary of health expenditure to that of the resident population has a number of direct consequences on the inclusion or exclusion of certain groups of the population, in particular, with respect to the financial obligations of social security and government spending. In some cases, the differences between the resident population and the insured population can be significant.

It may be the case, such as in the European Union, that persons receiving a state pension or other long-term benefit who reside in another country may still depend on their “home” nation for paying for their health care. This is also the case for those living abroad, but dependent on someone working in another member country. In this case the obligation of the home social security system covers a part of the non-resident population and vice versa – a portion of the resident population may be covered by a foreign government. In this case, adjustments may have to be made to conform to the definitions of residence above, which may not be wholly desirable in measuring the financial obligations of a country regarding their health spending.<sup>6</sup> Any deviations in this respect should be made transparent in reporting.

Another issue concerns refugees as well as those who may be defined as residents from the point of view of the Balance of Payments definitions but are not legally entitled to the benefits of public health insurance. This raises the question of where their consumption of health services is being captured. Given sizeable temporary flows of people between countries, both legal and illegal, the expenditure may also be sizeable. Coupled with the fact that in these cases the moral obligation and therefore the cost of providing health services falls onto the host country, it may be arguable whether such expenditure should in fact be deducted from the country’s health accounts as an export.

BPM6 provides further detail on the status of other categories of persons, such as diplomats, employees of international organisations, military personnel, etc., which are also adopted by the System of Health Accounts.

To classify a provider of health care – whether government agencies, enterprises or non-profit institutions – as resident generally requires that they have undertaken activity in the territory over a period of time, usually interpreted as one year. Classifying a provider as resident or non-resident is synonymous with deciding whether or not the final expenditure by resident households on goods or services from these providers is classed as imports.

For the most part, the classification into resident and non-resident providers poses few problems, such as in the case of residents receiving care from hospitals or buying medical goods from pharmacies whilst abroad. The short-term provision of services to residents abroad, by health care professionals or as part of foreign government or international aid efforts may be less straightforward. Similarly, foreign-owned institutions and the use of commercial agents require careful consideration.

### ***Enterprises***

An enterprise has a centre of economic interest and is therefore a resident unit of a country (or economic territory) when the enterprise is engaged in a significant amount of production of goods and/or services there. This means that it maintains at least one establishment in the country and plans to operate that establishment indefinitely or over a long period of time (that is, one year or more). Other considerations – such as



whether there is a complete and separate set of local accounts, whether taxes are paid to the host government, or whether funds for the local operation are locally managed – must also be considered in determining the residence of an enterprise. In practice, these additional conditions are generally satisfied for enterprises engaged in longer-term activity.

The term enterprise includes 1) corporations, which are entities engaged in production for profit and recognised as legal entities separate from the owners, and 2) quasi-corporations, which are unincorporated entities owned by resident or non-resident institutional units and managed as separate entities, which is the case for many self-employed doctors and dentists.

### **Commercial agencies**

Agencies representing non-resident principals should be treated as resident in the economies in which they are located. For example, new burgeoning areas include health tourism facilitators and medical travel agents as well as commercial offices that have been set up abroad to represent medical institutions. Most agents charge the providers a fee for each client sent abroad based on a commission percentage of the package price or a set fee per patient. Other models are also possible, including a service fee direct to the client (patient) or a payment from a third-party payer as a share of the cost savings, i.e. the difference between the cost of the procedure at home and the cost abroad (Stephano and Cook, 2010). If the agent is a resident of the same economy as the patient, then the margin or commission is a resident-to-resident transaction. The net amount payable to service providers resident in other economies (after the margin or commission receivable by the agent is deducted) should be recorded as a resident-to-non-resident transaction. However, in other cases, the gross amount is payable to the non-resident provider, who subsequently pays the resident agent's commission.

### **Non-profit institutions**

Like enterprises, non-profit bodies are resident entities of the economic territories in which they are located or conduct their affairs. Non-profit bodies generally provide health and other social and community services free of charge or at prices that do not fully cover the costs of production. Examples of non-profit bodies can be private hospitals, churches, foundations, universities, colleges and charities such as the Red Cross.

In practice, the residence of the vast majority of non-profit institutions can be determined without ambiguity. However, when such an institution is engaged in charity or relief work on an international scale, it is necessary to specify the residence of any branches the institution may maintain in individual countries. In this case, it is appropriate to use the guideline of length of time to determine the residence of such branches. If a non-profit institution maintains a branch, or similar unit, for a year or more in a particular country, that branch should be considered a host country resident that is, however, financed largely or entirely by transfers from abroad. On the other hand, short-term medical emergency work or specific health campaigns in another country may be classified as being provided by non-resident units.

### **Government**

The general government agencies of an economy include all central, state and local government departments, establishments and bodies located in the economic territory

and all general government embassies, consulates, entities and military establishments located elsewhere. In the case of imports and exports of health services, the provision of medical treatment to residents abroad in foreign government health facilities and the provision of services by public health institutions to non-residents in the territory are the most obvious examples of imports and exports, respectively.

In the case of government agencies involved in foreign aid programmes, this type of expenditure comprises goods and services provided by foreign governments to resident units and *vice versa*. It should be reiterated that it is the provision of goods and services, and not the financing by the foreign government, that is important in determining whether this is an import or export. For example, if a government donates money to other countries or to international organisations, this amounts only to a transfer of funds. If, however, the government provides health care goods and services for final use directly to a foreign country, this will be a health export for the country and a health import for the foreign country (and should be reflected in that foreign country's health accounts). The core of this type of expenditure is represented by government aid programmes for enhancing health in foreign countries. It should be noted that if the provision is led by the military, for example, only health expenditures should be taken into account.

### ***International organisations***

International organisations and enclaves, limited to those created by governments (such as embassies), are resident in an economic territory of their own, and not of the economy in which they are physically located. This treatment applies to both international organisations located in only one territory and those located in two or more territories. Therefore any transactions with an international organisation or enclave should be treated as international trade.

### ***Rest of the world and trade in health care***

Having determined the residence status of all units, the rest of the world is thus composed of all non-resident units carrying out transactions with the reference country. Regarding trade in health accounts, the rest of the world comprises all non-resident units that provide health care goods and services to resident units (these transactions being imports) and the non-resident units that consume health care goods and services provided by resident units (these transactions being exports).

### ***Valuation***

In the case of transactions between residents and non-residents, the values of exports and imports denominated in foreign currencies should be converted into national currency using market rates of exchange. In principle, the most appropriate exchange rate to be used in converting transaction values from the currency of transaction to the currency of compilation is the market rate prevailing at the time that the transaction takes place. The use of a daily average exchange rate for daily transactions provides a very good approximation. If daily rates cannot be applied, average rates for the shortest period should be used.

With regard to the provision of non-market services to non-residents by general government or non-profit institutions,<sup>7</sup> such services should be valued consistently using the methodology in SHA Manual, i.e. by their total cost of production and not by the subsidised price (see Chapter 3).

SHA records expenditure on goods and services in purchasers' prices. It should be noted that total figures for imports and exports in the national accounts are normally reported at FOB ("free on board") prices, and detailed foreign trade statistics are valued at CIF (cost, insurance, freight) for imports and FOB for exports (see Box 12.1). The difference between the two can vary widely, but can be up to 10% (Eurostat, 2004). From this it would be expected that the import value would exceed the export value, but even this cannot be guaranteed. One reason is timing differences, whereby a basket of goods cleared as exports from one country in a particular year need not be cleared as imports into the receiving country in the same year.

Transactions in health services, for example between governments, should be recorded on a gross basis, that is, total claims and reimbursements should be separately compiled, rather than recorded net. One issue relates to the valuation of externally provided goods and services when there is a large differential between the valuation of the recipient (importing) and donor (exporting) country, *e.g.* health system consultancy services provided by a higher-income country in a lower-income country. In this case, in a departure with BPM6 (para. 3.75), the valuation should be made in terms of the recipient country's market prices. However, a memorandum item based on the donor country's market valuation is also deemed to be appropriate.

#### Box 12.1. The CIF/FOB adjustment in trade statistics

Imported goods registered by trade statistics are valued CIF (cost, insurance and freight) which includes three different components:

- Imported goods FOB;
- Transport services rendered by both resident and non-resident transporters;
- Insurance services rendered by both resident and non-resident insurers.

The two latter components represent services that can be rendered by either resident or non-resident units. If rendered by residents, this is domestic output and thus should not be treated as imports. If no adjustment is introduced, imports are obviously higher than they should be according to the total value of transport and insurance services rendered by both residents and non-residents. One must be careful about the treatment of the value of transport and insurance services rendered by residents on imports. If these services are bought and paid for by non-resident exporters to resident carriers and insurers, their value will be recorded as the export of services in the balance of payments, and therefore must be excluded from the export of services.

### Timing

In line with national accounting rules, exports and imports are to be recorded on an accrual basis, that is, at the time when a service is delivered or, in the case of medical goods, when the change in ownership occurs. There may be practical issues of data collection in that for the most part the movement of goods is a reasonable proxy for the change of ownership. However, in the case of patients travelling abroad to receive treatment, the fees may be paid in part or in full either before or some period after the service is consumed. Moreover, concerning bilateral agreements, there are often significant delays – sometimes a couple of years – between the time of treatment and the time of payment or claim for reimbursement.

## Imports and exports under the System of Health Accounts

The SHA Manual establishes a conceptual basis for statistical reporting rules that is compatible with other economic and social statistics and that uses the International Classification for Health Accounts (ICHA), which covers three dimensions: health care by functions of care; providers of health care services; and health care financing. The System of Health Accounts (SHA) therefore follows a different logic than the one proposed in international trade statistics (that is, according to the type of service industry and mode of supply) (see Annex G).

In the System of Health Accounts, a category related to non-resident units exists in both the provider and financing schemes classifications. Both classifications refer to the “rest of the world”. However, with respect to the imports and exports of health care goods and services, it is important to clarify that it is the provision by non-resident units that is of relevance to trade, rather than the financing. For example, if a foreign government or NGO pays for services for residents, then these services are financed by the rest of the world but may still be provided by a domestic provider and are therefore not imported. If, however, the service is also provided by a foreign government to a resident (irrespective of who pays for it), then this is indeed an import.

The primary classifications of imports and exports under the System of Health Accounts are by function (purpose of consumption) and provider. The classification of functions distinguishes *inter alia* the different services of care<sup>8</sup> (e.g. curative, rehabilitative and long-term care), medical goods dispensed to outpatients as well as services delivered collectively to the population, such as health promotion campaigns and the governance of the health system. The main reconciliation of this definitional classification with the System of National Accounts at an aggregate level is via the “functional” or “purpose” classifications (COICOP, COFOG and COPNI). The corresponding provider classification is linked to the International Standard Industrial Classification (ISIC, Rev. 4). This is important in terms of source data since the ISIC provides the basis for business, survey, employment and census statistics. International trade statistics are more aligned with the analysis of production and as such, classifications are based on the standard classification of products (CPC).

### Examples of trade in health care goods and services under SHA

Imports and exports cover a wide range of health care goods and services for final consumption; coverage extends beyond the standard provision of medical treatment abroad, in line with the boundaries of the functional classification. It may be useful to consider the following examples, using the different modes of supply applied to both goods and services.

#### Individual health care services

Regarding the provision of health care services to individuals, this could be remote health counselling (which comes under many names, such as telemedicine, e-health, e-medicine, etc.) provided over the phone or Internet by a doctor in one country directly to a patient in another. This type of remote patient monitoring may involve a patient who has undergone surgery abroad and then returned to their home country. Note, however, that health care goods and services delivered from a provider in one country to a provider in another are considered as intermediate consumption and as inputs to a resident-to-resident service (e.g. diagnostic tests or blood products sent from a

laboratory abroad to a hospital in the patient's country) and are therefore not recorded as imports under SHA.

However, most of the relevant transactions relating to international trade in health care under SHA concern the consumption by patients who are abroad either due to planned treatment (e.g. dental treatment, knee surgery, rehabilitative stay, etc.) or as a result of an unplanned need while abroad. This could be a patient from Country A receiving planned medical treatment in a hospital in Country B. This would be an entry in the total health spending of Country A – treated as an export for Country B and an import for Country A. Similarly, the cost incurred by a tourist who purchases medicines while abroad or falls sick and visits a GP should also be included in the health spending of the tourist's home country.

The temporary movement of health professionals from one country to another is also an example of international trade in health services. This could be an individual health care professional or a team of doctors or specialists working for a non-resident provider fulfilling a short-term contract to deliver services in another country. This is also relevant in the domain of foreign aid programmes, where goods and services may be provided directly to residents by foreign governments or NGOs. Again, it is the provision and not the financing that is of importance here.

The temporary presence of health professionals can also lead to some grey areas regarding inclusion under trade due to the employment and/or resident status of the provider. This may be particularly difficult to establish in areas of personal care, for example, when non-resident caregivers may be providing long-term care services.

### **Medical goods**

With respect to medical goods, this could simply be the provision of health goods (pharmaceuticals, other medical non-durable and durable goods) directly to the patient/consumer from a non-resident provider by telephone, mail order or, increasingly, via the Internet. The rise of Internet pharmacies and the increased recognition of prescriptions and reimbursements across borders, i.e. in the European Union (Schmidt and Pioch, 2003), are likely to expand the range of delivery mechanisms for medical goods beyond the traditional local pharmacy.

Otherwise, the consumption of medical goods abroad is the main channel for trade. Much of this will be incidental purchases of tourists and visitors while abroad (which in terms of international trade statistics are reported under the "travel" category). Large price differentials and the liberalisation of prescription regulations between countries can also lead to large cross-border movements to purchase pharmaceuticals in neighbouring countries (Byrd and Law, 2009).<sup>9</sup>

### **Collective health care services**

The provision of health insurance to residents by non-resident insurance companies and *vice versa* should also be considered as examples of foreign trade under SHA. However, in line with the general SHA treatment of health administration and insurance, this includes only the service charge element of the premium paid by households. Any payments made by a non-resident insurer to or on behalf of residents for health care services would only be treated as foreign trade if the care is also provided by non-resident health-care providers. For example, if a US resident takes out health

insurance with a Mexico-based health insurance company and receives dental care from a Mexico-based dentist, then both the insurance service charge and dental care are regarded as imports.

In the realm of public health, and for certain aspects of health system governance and administration, it may be that some areas are outsourced or provided by non-resident entities. For example, health system planning and reform may be provided as consultancy services or may directly involve international organisations in public health and prevention measures. Similarly, part of in-kind technical assistance (TA) provided by a foreign entity would be considered as an import to the recipient country.

### **Borderline issues relevant to trade in health care goods and services**

There are a number of borderline cases that may be gaining in importance for trade in health services. It may be that a greater proportion of the treatments being received while abroad or delivered by foreign providers arise due to legal restrictions in the home country or the non-availability of certain specialist treatments or stigmas attached to them.

A higher proportion of *cosmetic surgery* may be performed abroad, partly to preserve anonymity. Cosmetic or plastic surgery may be for reconstructive purposes or purely for aesthetic reasons in special clinics. Even though treatments for aesthetic purposes are provided by health professionals using medical technology, they are considered outside the health boundary since the main purpose is not health (see Chapter 4). However, when it is not possible to separate the types of cosmetic surgery or there is a doubt about the purpose, it is recommended that all services of this nature be included under health spending and thus reflected in estimates of total imports and exports.

Another treatment area that tends to attract consumers from overseas is *assisted reproductive technologies* (ART). This is usually provided by *bona fide* institutions and professionals and the main purpose is for health reasons, therefore, it is recommended that this be included under health spending.

One major driver of “medical tourism” is the borderline area of *well-being* and health. Many tourists visit a country to take advantage of establishments that promote wellness. These can range from spa/fitness centres to hotel/resort spas to traditional-type spas linked to a country’s natural resources to more medical-type institutions employing healthcare professionals (SRI International, 2008). Often the distinction between health and well-being is not made in tourist surveys, but generally inclusion should be restricted to cases in which a clear curative, rehabilitative or preventive purpose can be identified.

Similarly, many visitors may be drawn to a country to take advantage of alternative therapies and *traditional medicine* unavailable in their home country. Reference should also be made to the section on TCAM in Chapter 5 regarding inclusion or exclusion in health spending and as a health-related item.

In terms of the consumption of medical goods, the same boundaries set out in Chapters 4 and 5 should be applied for trade in medical goods, whether these are purchased directly while abroad or delivered from overseas. This refers to recommendations regarding nutritional products and other “health” products, which should only be included on a restrictive basis – i.e. on the advice of health professionals, and vitamins and minerals in the case of prescription and distribution by health care providers. The exclusion of sun creams, for example, is a particular case, given the special link with holiday tourism.

Travel abroad for the specific purpose of receiving treatment incurs other costs that may or may not be linked to health care. One example is the linked *transport costs*, which may be particularly high if air travel is included. When travel is an integral part of the medical care “package” (for example, some UK residents are sent abroad by the National Health Service for certain operations) and covered by private or social insurance, then it should be included in the overall spending. However, the transport of a resident patient, if it can be separately identified, should not be regarded as an import if the service is provided by a resident carrier. In the case of private travel, or travel without the specific purpose of receiving medical treatment, then it is proposed that the transport costs should be excluded from health spending. Other costs may also be attached to medical travel that is organised through a medical travel agent or facilitator, as is often the case in the United States. Since such agents are normally resident in the patient’s own country, any fee or commission paid to arrange a medical travel package is a resident-to-resident transaction and should not be included as international trade.

In certain cases, patients travelling abroad may be accompanied by one or more persons (especially in the case of children requiring treatment). Often the costs involved will also be covered by public budgets or health insurance. Unless there is a particular medical role of the *accompanying persons*, it is suggested that such expenditure should not be included under health care but rather under a health care-related item – non-health travel-related services.

One area of growth in medical travel abroad has been *illegal or unethical trade* (e.g. organ transplantation). While such trade may be undesirable or illegal, if it meets the criteria of the health care boundaries then it should in principle be recorded in the accounts in the same way as legal actions. For example, although the provision of abortion may be illegal in certain countries, it is still provided, albeit illegally. In such circumstances, whenever the service is paid, which is most likely the case, the payment should be recorded in SHA. Other activities could be deliberately concealed from the public authorities, even though they clearly fall within SHA boundaries and are also legal.

### ***Intermediate use versus final use of health care goods and services***

The *final consumption* approach adopted within the SHA framework highlights a notable difference between the scope of external trade that is of primary interest to health accounts and the broader measure of trade in the balance of payments and national accounts. Even though international trade statistics do not make a distinction for imported health care goods and services destined for intermediate use (e.g. provided by a foreign provider as an input to a service provided to a patient by a domestic provider), they should be excluded in the case of health accounts.

The distinction between final and intermediate use becomes relevant only for goods and services delivered across borders, which currently forms a minor although expanding part of trade in health (through the development of e-health, Internet pharmacies, etc.). For the direct consumption by residents abroad (considered as imports of health services) and by non-residents within the country (considered as exports of health services), these are for all intents and purposes provided directly to patients (e.g. a planned visit by a non-resident to a specialist or hospital) and are thus considered as final consumption.

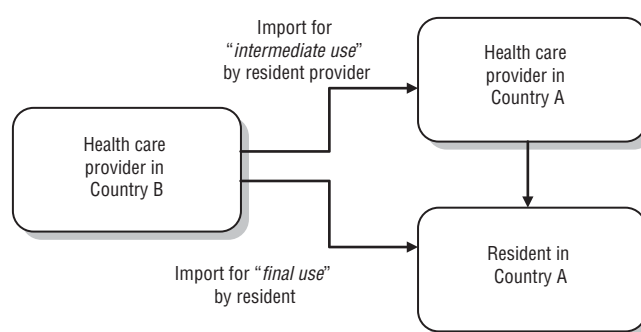
For health services delivered across borders, the situation may be different. Some of the recent growth in cross-border trade of health services has been in the provider-to-provider

category *e.g.* the provision of diagnostic services from foreign laboratories to resident hospitals, instead of delivery directly to the patient. For one country, the imports of medical services may be primarily destined for intermediate consumption, whereas for another, perhaps smaller country, the imports of health services for final use may well be relatively high. The difference in approaches between SHA and national accounts highlights two different concepts that may be relevant to imports of health services:

First, in SHA, occupational health is included in the national totals of health care spending. In SNA, this item is recorded as ancillary services and as part of the intermediate consumption of enterprises. Therefore, the use of non-resident health services by resident businesses for their employees (or the use of health services abroad by employees on business travel) would be counted under intermediate consumption in national accounts, whereas it should be included as final consumption and as an import under SHA.

Secondly, the view of consumption in SHA requires a different approach than the view of production in national accounts. National accounts make no distinction between medical goods imported by wholesalers and pharmacies and destined for sale and medical goods imported directly by households for own use. This approach contrasts with SHA, whereby only household purchases of medical goods from overseas retailers for personal consumption are treated as imports – imports by wholesalers and pharmacies are treated as inputs into the function of health care provision of medical goods and services of pharmacies and other medical goods retailers (Figure 12.1) (see Chapter 4).

Figure 12.1. **The treatment of imports under SHA**



Source: IHAT for SHA 2011.

These differences should be taken into account with regards to comparisons with import and export figures in the balance of payments and national accounts. However, in any further analysis it may be of interest to examine the total imports and exports within the health care system and reconcile the figures with international trade figures.

### Data sources for estimating international trade in health services under SHA

For the most part, the data sources used to compile international trade and balance of payments statistics will be the principal sources of information for health accountants to estimate flows of health care goods and services between countries, despite the minor conceptual differences outlined above. Indeed, the “health-related travel” and “health services” components of the EBOPS classification (see Annex G) theoretically provide a



good starting point to estimate a large part of the trade under SHA. Moreover, EBOPS 2010 future reporting recommendations will further group together and isolate “health services” from other travel-related consumption, which will help to further harmonise the definitions with SHA.

That said, current data on trade flows in health services remain quite sparse, with gaps in country coverage and likely under-reporting. The quality of existing data varies considerably from country to country and according to the mode of delivery. One of the main purposes of this section is therefore to give guidance on how to collect and improve data on trade in health services by reviewing existing standard sources of information and identifying new potential sources. Improving trade statistics in the health area should be viewed not just in terms of how this benefits health accountants, but instead as a collaborative venture aimed at improving the measurement of international trade in general, so as to assist compilers of balance of payments and health accounts alike. That said, for the most part the value of the imports and exports of health services is still relatively marginal for most countries and for most types of health care, which means that the investment of resources to identify or develop new data collection tools and instruments needs to be considered carefully. This also has to be reviewed in the light of international reporting obligations and perceived trends.

The compilation and data sources for the EBOPS health categories and for imports and exports under SHA share many common features, but as has been seen, there are also some differences in concepts and boundaries that should be kept in mind. Health accounts require additional information and detail over and above that needed for balance of payments, but one of the guiding principles should be to show the clear links and correspondence between the different systems for their mutual benefit.

As in many areas of health accounts compilation, the measurement of international trade in health services presents many challenges. The choice of the best data sources is very much linked to the organisation of the health care system. No one data source will fit all needs. In addition, different approaches will be required to estimate imports and exports. In the case of exports, generally, but not always, information from foreign providers will not be available. Typically, estimates of imports and exports are compound statistics that do not come from single sources but rely on a number of different sources, and in many cases on assumptions and hypotheses.

One of the initial tasks in compiling estimates of imports and exports of health care goods and services should be to inventory the current and available data sources and to assess whether they are suitable and sufficient. In an ideal situation, they should match the definitional, geographical and/or temporal (i.e. period of residency) scope outlined in this chapter and elsewhere in the Manual. In reality, however, existing data is unlikely to be fully concordant with the compiler’s needs. For example, tourist surveys may not make the necessary distinction between “tourists” and other non-resident categories, such as border or seasonal workers, or they may include medical care and well-being within the same activity. As a minimum requirement, differences should be well-documented. Otherwise, it may be necessary to adjust or calibrate data using other information and sources, including non-financial data. However, there is a need for care in handling the trade-off between forcing a breakdown into detailed categories and the resulting validity and quality of the estimates.

In the first instance, no separation by the mode of supply is made, although this may be desirable as an additional reporting item for national purposes. The structure of SHA

requires in the first instance a breakdown of imports by function (HC) and by financing scheme (HF) and then if possible by mode of supply. From the point of view of exports, the primary dimension may be by function (HC) and provider (HP), with mode of supply again secondary.

Different compilation approaches can be taken, reflecting the different data sources, so as to achieve a full disaggregation between functions and providers. In some cases this might involve a top-down approach, so that there is a degree of confidence in the overall estimate, but with a distribution applied, using information from a different source or year to allocate across other categories. In other cases, where there are a number of different valid data sources covering the components, the total can be built up using a bottom-up approach. Finally, the most likely outcome is a mixed approach, where some parts of the puzzle might be available from detailed administrative data and other parts may be missing.

### ***Enterprise and business surveys***

From the point of view of services provided by domestic health care providers to non-residents, enterprise or business surveys can be useful. These can vary from small irregular sample surveys to more exhaustive annual administrative data collections with mandatory reporting by providers.<sup>10</sup> One could conduct a short intensive study on a sample of representative providers, find out how many foreign patients have been treated and how much their treatment has cost, how it has been paid, etc. An estimate for the national level could be obtained from this sample. Alternatively, if the provision of health care goods and services is concentrated in a few providers, the results of a study of these few providers would constitute the national estimates. Non-monetary information, such as numbers of non-resident admitted patients, may be all that is available. In some cases, it may be valid to assume that the cost per treatment does not vary between resident and non-resident patients, thus allowing for an estimation of the total cost.

In most cases, designing a new questionnaire or study may not be a viable option, which means that the use of existing surveys and data collections may need to suffice. While such data may be available for large providers such as hospitals and clinics, it may be more problematic to obtain data for smaller and individual health care providers, such as private dentists<sup>11</sup> and specialists – often people travelling for health reasons buy goods and services from specialised private health clinics. Some information may be available on an ad-hoc basis through umbrella and trade organisations, charity groups, etc. This may be the case regarding health and travel insurance services provided to non-residents for the estimation of administrative services provided to non-residents.

Other specific surveys may focus on obtaining data from NGOs and charities that perform a role in providing health services to persons in irregular situations, such as refugees and immigrants. Data will typically be of a non-financial nature (Médecins du Monde UK, 2007).

### ***Retail industry and e-commerce (see OECD, 2009)***

Information on the total revenue from dispensing chemists and the retail sale of suppliers of optical glasses, hearing aids and other medical appliances may be available from administrative tax statistics. However, these data sources do not normally include any hints about the share of revenues stemming from the purchases of non-residents. Any use of pharmacy sales data should also take account of increasing parallel imports and exports of medical goods.

Significant pharmaceutical price differentials between countries belonging to free trade systems, such as in the EU, have led to a rapid increase in what are called “parallel” imports and exports. Intermediaries, such as wholesalers, pharmacies and other traders, can take advantage of these price differences to buy up prescription medicines from pharmacies in countries where they are cheaper and then resell them still below the official price in the countries to which they import. In the EU, it has been estimated that this accounts for a tenth of the European medicine trade (FT.com, 7 June 2010).

Much of the information on purchases of goods abroad will come from visitor and tourist surveys and perhaps be applied to information on the total revenues of retailers.

For individual members of households, e-commerce presents an alternative method of purchasing (and increasingly selling) goods and services for private use. The statistical and policy interest for the household sector concerns the use of the Internet for such transactions, with particular interest in purchase rather than sale transactions. Surveys of ICT use in households typically collect information on individual purchasing activity via the Internet, with details often including the nature of the goods and services purchased, the value of those purchases, the value of online payments and/or the barriers to purchasing over the Internet.<sup>12</sup>

The reliability of the reported value of online sales has long been a concern to statisticians. As with purchasers, the split of Internet commerce transactions by the customer's location (international versus domestic) is similarly problematic. Evidence indicates that businesses have trouble reporting these splits as, firstly, they will not necessarily know the destination of their sales, and secondly, even if they did, they would not necessarily record this information in a way that is readily retrievable.

Since, for the most part, information from foreign providers regarding health care goods and services will not be available, the main source of information will be linked to the financing of consumption abroad – notably, reimbursements by public and private insurance.

### **Government administrative sources (*liaison offices*)**

Government sources may maintain data and records on services provided both to non-residents by resident health providers and to residents (or insured persons) by non-resident providers. In countries where bilateral or regional agreements are in place, data may be available on the numbers and expenditures both of residents abroad and of non-residents in the country. Where lump-sum transfers are made between countries based on waiver agreements, these should be taken as the gross payments and not the net transfer. Where bilateral or regional agreements exist (such as EU citizens' entitlements to benefits in kind during a stay in another EU Member State), administrative data may be obtained by the various ministries (Ministry of Finance or Health or another relevant ministry that keeps track of the health care imports and exports, as specified by regulations). In some countries, data may be available from the health insurance funds (both public and private) where reimbursements for foreign-provided health care have occurred.

### **Social security schemes and international liaison offices**

The records of the social security liaison offices are a potentially rich source of information about the health care goods and services consumed by the insured population. The information available is increasingly detailed in terms of type of treatment and

country for both insured persons abroad and non-residents in the country.<sup>13</sup> However, these institutions handle only the claims based on certain international legislation and bilateral agreements. Claims for reimbursement by patients addressed to health insurance funds based on national legislation are not recorded by the liaison offices, and this will need to be supplemented with information from the health insurance funds themselves. However, an important qualification is needed regarding the records in both cases, in that at the base level the information reflects the insured population rather than the resident population. The insured population is not necessarily identical with the resident population as defined under SHA.<sup>14</sup> Without controlling for expenditure caused by non-residents, the use of the financial records will lead to an overestimation of the consumption of health care goods and services abroad.

Another point to bear in mind is that the information relates to the reimbursement of treatment abroad rather than to the full cost. In optimal cases, additional information may be available on the total cost of services allowing assumptions to be made regarding the cost-sharing or direct out-of-pocket element. In most cases though, travel and household surveys may need to be used to obtain more information about private insurance reimbursement and out-of-pocket payments.

### ***Other administrative sources***

In some countries, public health care purchasing authorities and ministries of health have organised contracts with non-resident health care providers, under which patients are sent for certain treatments abroad. Annual reports at an individual purchasing authority level or nationally should be available to give patient numbers and costs.

Further administrative information may also be held in various ministries on the “free” treatment of some particular population groups, such as refugees, and of other non-residents in countries with universal health care systems and no payment at the point of delivery. Expenditures abroad for military personnel, overseas embassy staff,<sup>15</sup> etc., may be collected separately. Data on overseas assistance may also be available from development agencies and ministries.

### ***Private health insurance***

The financial records of private health insurance companies that provide primary or complementary insurance (including travel insurance) may be a potential source of information on the number of claims by insured persons abroad. This depends very much on the statutory obligations to provide data, and the detail of the data regarding a split into type of treatment and country will vary accordingly. The national association of private insurers may have the responsibility for collating and publishing data from its members.<sup>16</sup>

### ***Household and tourist surveys***

The basic data sources for private out-of-pocket payments are usually household surveys. These surveys can be institutionalised household budget surveys or specialised household surveys that rely on self-reported information and are typically provided on a voluntary basis.

Caution must be exercised when analysing self-reported data on expenditure as to whether the reported amount spent is the gross or net value. People with primary private health insurance typically have to cover the costs of medical treatment upfront and get the

total costs or parts of the costs reimbursed by their insurance company. Not deducting reimbursement by other schemes is a potential source of double-counting and overestimation of private out-of-pocket payments. What makes correct accounting even more challenging is the fact that usually some time passes between the payment of the bills and their reimbursement, i.e. the two payments can occur in different accounting periods. Furthermore, information on health spending abroad may not systematically be requested or may result in unrepresentatively low samples. The addition of new questions to existing surveys (e.g. Health expenditure surveys, Household budget surveys, etc.) would be more cost-effective and easier than building a whole new questionnaire. Additional questions may only need to be asked fairly infrequently, as an add-on module, which would reduce extra costs further.

Travel or tourist surveys are conducted in various forms by many countries to measure the activities of travellers.<sup>17</sup> Some surveys may be designed purely to meet balance of payments requirements for measuring travel and, possibly, other forms of expenditure and income. In most cases the information is unlikely to meet the needs of SHA exactly and should be adjusted or noted. Travellers can be surveyed when they arrive or depart or sometimes after they have returned to their home countries, thus providing the possibility for information on both imports and exports. Surveys of arrivals measure actual expenditures abroad of residents returning home and anticipated expenditures of non-resident visitors. Conversely, surveys of departures measure actual expenditures of departing non-resident visitors and anticipated expenditures of departing resident visitors. Some surveys of returned travellers collect data from residents some time after they return. Surveys often include a category for purpose, including for “health and medical” reasons, and for how much was spent on treatment. Again, care should be taken in analysing spending to avoid double-counting with later reimbursements.

Additional information can also be found from patient surveys conducted by health insurance groups. In a prime example, TK (Techniker Krankenkasse), one of the main insurers in Germany with over 7 million insured persons in 2009, carries out a regular annual survey of its patients that provides detailed information on cross-border care (Techniker Krankenkasse, 2009).

### **Other sources**

In some cases, data published by other countries (mirror statistics) may be used, possibly to reconcile or validate other data, or as a source for exports. This may be the case for some of the claim and reimbursement data compiled under international and bilateral agreements.

Health services provided by professionals abroad could be delivered by either non-migrants (going abroad for less than one year) or short-term migrants (admitted in another country for at least three months, but less than 12 months). In order to fall within the boundary of imports or exports, the health service professionals need to supply a health service abroad without seeking access to the employment market of the host country. The data collected should include the number of health service providers, the type of health services delivered, the occupation of the health professionals, and their length of stay. Helpful sources to collect this data could be professional registers, hospitals, industry surveys or government agencies that issue working permits.

The supply and use tables of national accounts describe in detail the sale and purchase relationships, both final and intermediate, between producers and consumers,

either in terms of industry or product outputs. A supplementary table that on the face of it could be of use to the compiler of health accounts is the use table for imports, which is compiled to separate the use of imported goods and services from domestically-produced goods and services. Such a table is not necessarily a core feature of the input-output framework and therefore is likely to be available only for a reduced number of countries.<sup>18</sup> A number of important points need to be taken into consideration when assessing information from supply, use and input-output tables:

- First, the difference in the concepts and definitions of imports in national accounts and SHA. As noted in the previous section, with regard to goods, SHA has a much narrower definition of imports, which is restricted to medical goods imported directly by households for own use. Thus, information on total imports of pharmaceuticals and the split between intermediate and final use from import matrices will be of limited value. In the case of health services, the different treatment of imported occupational health needs to be considered, in that in the national accounts this will typically be treated as intermediate consumption, whereas under SHA this should be accounted for as final consumption.
- There is a separate treatment for the direct purchases of goods and services abroad by residents on personal trips. In practice, most countries are not able to break these expenditures down into product types without using stylised assumptions that preserve input-output balances that are of questionable analytic value – and so they are often shown in a single adjustment row in the supply table to arrive at total imports and are added to household final consumption in the use table.<sup>19</sup> Any spending on health services by business travellers is treated as intermediate consumption and in theory is allocated to the branch of activity as *imported* intermediate consumption, rather than final consumption.
- Similarly, purchases in the domestic territory by non-residents are treated as exports and deducted from households' final consumption expenditure. Thus the corresponding total is entered in the exports column with a positive value and deducted in the same amount in the column of final consumption expenditure of households. Methodologies vary considerably on how to break down this total spending by non-residents amongst products. For example, the expenditure of foreign visitors to the United Kingdom was analysed in a special survey. Although this gave only broad expenditure headings, it was possible to sub-divide them further using the expenditure patterns of UK residents on similar groups of products, although the results therefore had a relatively weak basis (UK Input-Output Balances: Methodological Guide, 1997).
- Directly collected information for compiling import use tables is rare. Thus, in most cases assumptions must be made and various modelling techniques may be used to populate the tables. Very small values may be estimated in certain cells, but the statistical accuracy of these data cannot be verified. Often countries will make use of the import proportionality assumption in the construction of their import matrices. This technique assumes that, for any product, the share of total expenditure on that product that is made up of imports is the same for all consumers, whether final demand or intermediate – with the share determined by the contribution imports make to the total supply of the product in the economy. For example, if 10% of all health services sold within an economy is imported, it is assumed that the share of expenditure on health services that is made up by imports is 10% for any consumer.

- Finally, the set of supply and use tables may sometimes, albeit infrequently, be available only at basic prices, whereas SHA tables require purchasers' prices.

### ***Other balance of payments data sources***

Compilers of balance of payments statistics use many of the data sources and methods listed above, some of which can be particularly relevant to compilers of health accounts. However, the conventional information coming from International Trade Statistics and International Transactions Reporting Systems are unlikely to provide the sufficient detail necessary for health accounts purposes.

**International trade statistics.** The traditional source of information for international trade statistics (ITS) regarding the movement of goods between countries has been the custom records. For the European Union, procedures have been developed for enterprises to make direct declarations for intra-union trade. ITS provides little information of direct use to SHA, since it covers in principle the movement of all goods in and out of a country and conforms to the wider concept of trade. In principle, this should include postal items. However, for the most part individual consignments of, for example, mail-order pharmaceuticals are generally not considered significant and are not subject to declaration and will be neither recorded nor separately identifiable.

Individuals arriving in a country are also required to complete a customs declaration for ITS purposes. Again, individual purchases of pharmaceuticals or medicals goods are unlikely to be captured in such statistics and in any case would be recorded under the travel services item of the balance of payments.

Detailed as trade statistics might be, there still remain some serious shortcomings that will affect their usability for estimating exports and imports of health care goods in the SHA framework:

- Imports are valued with their CIF-price, which excludes taxes. SHA requires goods and services to be valued at the purchaser's price, which includes value added taxes.
- With regard to intra-community (e.g. within the EU) trade, private households are exempt from the obligation to provide information about exports and imports for trade statistics purposes. Likewise businesses are exempt from this obligation, if their exports and imports do not exceed a volume of EUR 400 000 per year.
- The available information from trade statistics do not allow for splitting the traded commodities based on use in final consumption or intermediate consumption.

**International transactions reporting systems.** An ITRS includes individual cash transactions between resident and non-resident banks. Data is collected from forms submitted to banks and forms submitted directly from enterprises. The forms will likely include information on the value and purpose of the transaction and the country. However, a number of problems arise. Firstly, the classification conforms to the BOP classification and is therefore insufficient for SHA needs. The data will cover transactions involving intermediate goods and services, and again certain thresholds apply such that many private transactions are not considered separately but are part of a sample survey. There is also a question of the timing since payment may not coincide with the timing of service delivery.

## Reporting of trade in health care goods and services under the SHA framework

In SHA table HCxHP, the classification of health care providers (ICHA-HP) contains a category HP.9 Rest of the world for “non-resident units providing health care for final consumption to resident units”.<sup>20</sup> Thus, health care goods and services from non-resident providers are explicitly recorded and can be classified according to the various functions – since the same boundary of health care applies for those goods and services consumed by residents abroad (Figure 12.2). Similarly, cross-classification of the provider and financing classifications provides a breakdown of who is paying for the function (e.g. government, private insurance, out-of-pocket, etc.).

Exports are not included, since the health expenditure of an economy is restricted to consumption by its residents only. In practice, from the provision perspective the direct purchase of health care goods and services by non-residents will need to be explicitly excluded from domestic provider revenues. For reasons of transparency and to allow the compiler and user to report consumption by non-residents, such exports should also be recorded. Therefore, goods and services consumed by non-residents could be reported under a supplementary table.

Figure 12.2. **Health care goods and services from non-resident providers in the HCxHP table**

HCxHP		Providers of health care (ICHA-HP)			
		Resident providers			Non-resident providers HP.9
		HP.1	...	HP.8	
Functions of health care (ICHA-HC)	HC.1				Health services and goods (HC.1 to HC.9) to residents by non-resident providers (imports)
	..				
	HC.9				

Source: IHAT for SHA 2011.

### Supplementary tables and reporting

The supplementary tables on trade provide further information on health care goods and services consumed by residents abroad and the provision of health care goods and services to non-residents (Tables 12.1 and 12.2). For imports, there is a cross-classification of imported health care goods and services by the financing scheme. For exports, since the prime source of information is resident health care providers, a table cross-classifying the function of health care by provider is recommended.

To reflect the areas of main policy interest as well as possible data limitations, the HC categories are limited to the main categories of individual health care services (HC.1-4), medical goods (HC.5), preventive care (HC.6) and governance and health system and financing administration (HC.7), with selected categories for inpatient, outpatient and dental care, as defined in Chapter 5.



Table 12.1. **Expenditure on health care imports by function and financing scheme**

Financing schemes		HF.1	HF.1.1	HF.1.2	HF.1.3	HF.2	HF.3	HF.4	
Functions	Million of national currency	Governmental schemes and compulsory contributory health financing schemes	Governmental schemes	Compulsory contributory health insurance schemes	Compulsory Medical Saving Accounts (CMSA)	Voluntary health care payment schemes	Household out-of-pocket payment	Rest of the world financing schemes (non resident)	TOTAL
<b>HC.M.1-4</b>	<b>Curative/rehabilitative/long-term care (health) and ancillary services</b>								
	<i>Of which:</i>								
HC.M.1.1/2.1/3.1	Inpatient care								
HC.M.1.3/2.3/3.3	Outpatient care								
	<i>Of which:</i>								
HC.M.1.3.2	Dental care								
<b>HC.M.5</b>	<b>Medical goods (non specified by function)</b>								
<b>HC.M.6</b>	<b>Preventive care</b>								
<b>HC.M.7</b>	<b>Governance, management and health system administration</b>								
<b>HC.M.9</b>	<b>Other health care services not elsewhere classified (<i>n.e.c.</i>)</b>								
	<b>TOTAL</b>								
<b>Memorandum items:</b>									
HC.RI.M.2	Traditional, Complementary and Alternative Medicines (TCAM)								

Source: IHAT for SHA 2011.

Because of the relative importance of some health-related items in imports and exports, it may be of interest to report expenditure on TCAM as a reporting item, possibly supplemented by additional items, such as “spa and well-being” and “non-health travel-related services”.

Spas encompass a myriad of different services and providers, making international comparisons difficult, but in general they can be defined as “establishments that promote wellness through the provision of therapeutic and other professional services aimed at renewing the body, mind and spirit” (SRI International, 2008). However, where a clear curative, rehabilitative or preventive nature can be identified, either through a prescription and/or provision by a health professional then this should be included in health spending. For example, some “medical spas” operate under the full-time on-site supervision of a licensed health care professional.

“Non-health travel-related services” refers to expenditure that is incurred as part of travel abroad to seek care but is not directly related to the patient’s health. This may include additional travel and accommodation costs of the patient plus the expenses of accompanying persons such as relatives.

On a national level, it may also be desirable to produce tables according to the mode of supply, specific trading partners or regions (*e.g.* in the case of EU countries – separating intra-EU and extra-EU trade) or sub-national regions.

Table 12.2. **Expenditure on health care exports by function and provider**

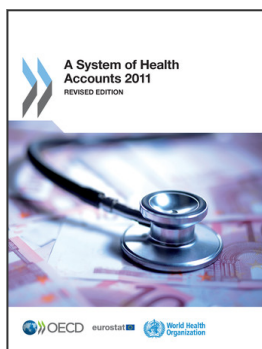
Providers		HP.1	HP.2	HP.3	HP.4	HP.5	HP.6	HP.7	HP.8	
Functions	Million of national currency	Hospitals	Residential long-term care facilities	Providers of ambulatory health care	Providers of ancillary services	Retailers and other providers of medical goods	Providers of preventive care	Providers of health care system administration and financing	Rest of economy	TOTAL
HC.X.1-4	Curative/rehabilitative/long-term care (health) and ancillary services									
	Of which:									
HC.X.1.1/2.1/3.1	Inpatient care									
HC.X.1.3/2.3/3.3	Outpatient care									
	Of which:									
HC.X.1.3.2	Dental care									
HC.X.5	Medical goods (not specified by function)									
HC.X.6	Preventive care									
HC.X.7	Governance, management and health system administration									
HC.X.9	Other health care services not elsewhere classified (n.e.c.)									
	TOTAL									
Memorandum items:										
HC.RI.X.2	Traditional, Complementary and Alternative Medicines (TCAM)									

Source: IHAT for SHA 2011.

## Notes

- For example, the Joint OECD, Eurostat and WHO Health Accounts (SHA) Data Collection – JHAQ (2006-2010).
- The main data sources for Balance of Payments statistics are traditionally the International Transactions Reporting System (ITRS) and Enterprise surveys. Other sources used in country estimations include tourism and visitor surveys, household expenditure surveys and government administrative sources, *e.g.* information on government health services provided to non-residents.
- A proposal for cross-border healthcare in the European Union was first discussed by the College of Commissioners on 25 June 2008 as part of the social agenda package, and it is hoped that the report will provide a new legal framework for the area in order to meet European Court of Justice rulings (Kohll-Decker Ruling C-120/95 [1998] and C-158/96 [1998] European Court of Justice) on cross-border access to care, as well as to ensure that e-Health or telemedicine services can be supplied from one country to another safely and efficiently.
- See Annex G “International standards and classifications of trade and tourism”.
- The same concepts and definitions are adopted in the System of National Accounts.
- When the health spending of certain groups of the population (*e.g.* those retired or living abroad) is still covered by their country of origin, then the transfers made from the country of origin to the country of residence will be shown in the table HFXFS of the receiving country; the revenue of the financing scheme will be either FS.2 or FS.7.1 (see Chapter 8). From the point of view of the reimbursing country, the sectoral account of the “Total health-related revenues and expenses of government” can detail the payments made to foreign governments for non-residents (see Annex D).
- In the absence of any reimbursement of this cost/expenditure, this may result in reported deficiencies in the providing country, as the consumption of resources does not match the capacity and consumed resources. Hence it will be under-reported or not reported at all.
- In addition, the basic functions of care can also be classified by the mode of production (*e.g.* inpatient, day care, outpatient and home care).
- The study by Byrd and Law highlights the practice of US residents crossing the border to purchase antibiotics, which are available without prescription in Mexico.

10. In Korea, for example, Article 27-2 of the Medical Affairs Act stipulates that a medical institution intending to treat foreign patients should register with the Minister of Health and Welfare and report to the same on the results for the previous year by the end of March each year, providing detailed information on each treatment, including nationality, age, sex, type of treatment, period of treatment and cost.
11. To compile the Austrian balance of payments, a survey of dentists near the Austrian border with Hungary was used to model cross-border flows. *Source:* Balance of payments country notes ([www.esds.ac.uk/international/support/user\\_guides/imf/bops.asp](http://www.esds.ac.uk/international/support/user_guides/imf/bops.asp)).
12. The collection efforts of OECD countries vary in this area. In particular, because of changes to Eurostat's model household survey, fewer European countries are collecting the value of purchases over the Internet. The 2005 OECD model survey has nominal value of purchases as a non-core question reflecting the low priority and difficulty respondents have in recalling the value of purchases. In addition to purchasing activity, the model questionnaire asks individuals whether they have sold over the Internet, for example, using auction sites. It also asks about the types of products purchased over the Internet and about barriers to Internet purchasing.
13. For example, the EU liaison offices CLEISS in France and DVKA in Germany provide information on the claims of the health insurance funds for the treatment of non-residents on behalf of where the person is insured (export of services) and claims from international liaison offices for the treatment of persons insured in Germany abroad on behalf of the German health insurance funds (import of services).
14. In the case of the German statutory health insurance scheme, close to 300 000 people who are covered under it and therefore cause expenditures borne by it are non-residents (e.g. a German pensioner spending his retirement in Spain). Unfortunately, expenditure caused by non-residents cannot be separated from expenditure caused by residents.
15. The Balance of Payments Compilation Guide includes a model collection form to collect expenditure information from embassies and international institutions on various services.
16. For example, in Germany the PKV, the association of private health insurance companies that organises 46 private health insurers. It provides the combined financial results of the primary and complementary health insurance branches of the organised insurers and can provide information on claims abroad for categories such as inpatient, ambulatory and dental services.
17. For an example of a Household Travel Survey for Ireland, see Ireland Central Statistics Office (2009).
18. The OECD Input-Output Database provides input-output tables for an increasing number of OECD and non-OECD countries on a harmonised basis, that is, industry-by-industry, basic prices and industry classifications. See OECD (2006a), document DSTI/DOC(2006)8.
19. ESA 1995 recommends that direct purchases abroad should be broken down by product.
20. The distinction between the "rest of the world" category under the financing scheme classification should also be made. For example, if a foreign government or NGO pays for health services consumed by residents, then these services are financed by these non-resident units but may still be provided by a resident entity and therefore not an import.



**From:**  
**A System of Health Accounts 2011**  
Revised edition

**Access the complete publication at:**  
<https://doi.org/10.1787/9789264270985-en>

**Please cite this chapter as:**

OECD/Eurostat/World Health Organization (2017), "Trade in Health Care", in *A System of Health Accounts 2011: Revised edition*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264270985-14-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org). Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at [info@copyright.com](mailto:info@copyright.com) or the Centre français d'exploitation du droit de copie (CFC) at [contact@cfcopies.com](mailto:contact@cfcopies.com).