

**THE OECD SYSTEM OF HEALTH ACCOUNTS AND THE US NATIONAL HEALTH
ACCOUNT: IMPROVING CONNECTIONS THROUGH SHARED EXPERIENCES**

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Draft paper prepared for the conference on
“Adapting National Health Expenditure Accounting to a Changing Health Care Environment”
Centers for Medicare & Medicaid Services
21-22 April 2005, Baltimore

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ACKNOWLEDGEMENTS

The author of this paper would like to acknowledge the many individuals and organisations that are implementing national versions of the OECD System of Health Accounts: this study is based to a great extent on the experience accumulated by their work. The author is grateful to Marie-Clémence Canaud, Manfred Huber, Gaetan Lafortune, Katharine Levit, Peter Scherer, and Dan Waldo, who provided invaluable comments, to David Morgan for his comments, statistical and editorial support and last but not least to Victoria Braithwaite for her secretarial support.

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INTRODUCTION

1. Health accounting experts have been encountering growing expectations from policy-analysts, policy-makers² and the general public alike: reliable, timely, and comparable health expenditure data are indispensable for analysing trends in health expenditure and underlying factors of growth, for judging the “appropriate” level of health spending under specific socio-economic contexts, as well as making projections for future spending.

2. The US National Health Accounts (US NHA) and the OECD System of Health Accounts (SHA) constitute two comprehensive, multidimensional and consistent systems for reporting health expenditure data (CMS, 2005; OECD,2000). While most basic features of the two systems are in correspondence with each other, resulting in comparable values of total health expenditure, some differences in expenditure classifications hinder a more detailed comparative analysis of health expenditure.

3. The purpose of this paper is to stimulate the dialogue between health accounting experts in the interests of building such connections between the two systems that can appropriately serve better international comparison and national purposes alike. This process has already started: the boundaries of total health expenditure and some categories have been harmonised for *OECD Health Data* and a set of pilot SHA tables were produced for 1997 by US experts and presented at the 2001 OECD Meeting of Experts of Health Accounts (Levit, 2001).

4. Due to several factors, the development of the two systems has had partly different focuses. The primary concern of the conception and implementation of the SHA has been to facilitate international comparison of health expenditure³: to achieve comparability of data concerning the level of health expenditure, the ratio of health expenditure to GDP, as well as the functional structure of health expenditure across countries (Huber, 1999; Huber and Orosz, 2003; OECD,2003). Behind the appeal for a functional approach, both policy needs and methodological issues have been taken into account. European health care systems are predominantly financed from public money. As cost-containment policies have generated increasing tensions during the 90s, the interest of policy-analysts and policy-makers has intensified in getting more information about how public resources (both monetary and non-monetary resources) are utilised, including a fuller picture of the distribution of public spending among key areas of healthcare. In addition, European health policies have had a strong focus on supply side measures. Monitoring the effects of supply-side policies requires information about the changes taking place in the composition of services provided / consumed.

5. From a methodological point of view, a consensus developed in the mid-1990s among experts working with *OECD Health Data*, that the existing methods (*i.e.*, a provider approach in describing the structure of health spending) was insufficient to ensure the international comparability of health expenditure data. Consequently, at the heart of the SHA, a functional approach has been

2 The Communiqué of Ministers of Health in OECD countries (www.oecd.org/health/), issued at the end of their first-ever meeting on 13-14 May 2004, emphasised the further development and the implementation of the System of Health Accounts (SHA) in member countries as one of the key items in the future OECD Programme of work on health.

3 This remark is not intended to contrast national purposes and international comparison: OECD countries use international comparisons extensively for evaluating the national situation and possible policy options – therefore, reliable international comparability of health expenditure data can directly serve national policy-making.

constructed in defining the boundaries of the health system and in the classification of health expenditure. Thus, the SHA provides a more advanced methodology than the US NHA in analysing how the money devoted to health care is utilised; that is, how health expenditure is distributed across the main types of services (functions) and providers.

6. The development of the US NHA has primarily been to serve national purposes.. In the mid-1960s, a major argument for routinely producing National Health Expenditure estimates was to provide a consistent private-sector comparison of spending to evaluate the trends in the Medicare program. Due to the multiplicity of the US health care financing, the US NHA has paid more attention to providing information about the role of the different financing agents, that is, by disaggregating the data by financing source (financing agent), as well as obtaining information on “final payer” (burden of health care costs) (Cowan, *et al.*, 2002; Berman, 1999; Thorpe, 1999). Furthermore, compared to the SHA, the US NHA has more advanced methods for presenting changes over time, making projections and specialised estimates, such as expenditure by age groups, sub-national (state) level health accounts (Keehan, *et al.*, 2004; Long, *et al.*, 1999; Martin, *et al.*, 2002; Waldo, *et al.*, 1989.). Analysis based on the US NHA has been focusing on the trends and projections in growth of the national health expenditure and its major sub-components (Cowan, *et al.* 2004; Heffler, *et al.* 2005; Levit, *et al.* 2004; Reinhardt, *et al.* 2004).

7. The comparison above is not to say that “sources of funding” is not an important element of the SHA, and that “type of expenditure” is not an essential component of the US NHA. Rather, it was aimed to highlight that both systems could benefit from learning from each others’ experience. The OECD Secretariat’s SHA-related methodological work can learn from the US experience in, among other things, developing health-specific price indices, expenditure projections and estimates on expenditure by age groups.

8. One of the most important differences between the two systems is that the US NHA does not have a functional dimension. As emphasised in several publications, the data by “type of expenditure” are based on the revenues of health care providers (or establishments), and do not provide adequate information about the spending by type of service. “The most important changes noted were concurrent movements toward increasing vertical integration within the industry and continuing splintering of providers. Both changes will make the current disaggregation by type of provider, rather than type of service, more problematic.”(Haber and Newhouse, 1991, p 115.). The arguments for, and related methodological and data issues of, introducing “type of service” categories of health expenditure have also been put forward (Huskamp and Newhouse, 1999). To apply the basic categories of the SHA functional classification would be a possible option.

9. This paper first presents some of the key conclusions of a recent comparative study on SHA implementation. Then it addresses the key issues of harmonisation between the US NHA and the SHA. A third part summarises the steps taken so far to improve the correspondence between the US health expenditure data and the SHA-based definitions used by *OECD Health Data*. The concluding remarks put the proposed harmonisation between the US NHA and the SHA into a wider context.

LESSONS FROM SHA IMPLEMENTATION SO FAR

10. The OECD Secretariat - in co-operation with experts in member countries -, has developed a time series of health data⁴ of member countries going back to the 1970s, or in some cases to the 1960s⁵, which is updated on an annual basis. Until 2000, however, health expenditure data collection was not based on a consistent system, and therefore reflected the wide variations in boundary definitions of the health sector and in the institutional settings of the health systems across countries.⁶ Comparability of health expenditure data across countries and over time (and the related indicators, such as the ratio of health expenditure to Gross Domestic Product) had been a growing concern (Mosseveld, 2003; OECD 2001). In response to the pressing need for improving comparability, the OECD, in co-operation with experts from OECD member countries, developed the manual, *A System of Health Accounts* (SHA), releasing the initial 1.0 version in 2000. As a key component of the SHA, the International Classification of Health Accounts (ICHA) was developed.

11. Definitions of health expenditure categories and the overall boundary of total health expenditure in the *OECD Health Data* have been harmonised with the main (one or two-digit level) categories of the International Classification of Health Accounts (ICHA). Therefore, reporting of health expenditure data requires a mapping between definitions and classifications used in national statistics and those of *OECD Health Data* (based on SHA). While substantial progress has been achieved in recent years in improving the quality and comparability of health expenditure data, further effort is still required over the next few years to improve the country coverage, to complete a minimum data set on health spending in more countries, and to address the remaining methodological issues.

Basic features of System of Health Accounts

12. To produce internationally comparable health expenditure data requires consensus on the boundaries of the health system. The System of Health Accounts provides a consistent functional approach in order to define the boundaries of the health system. This approach is “functional” in that it refers to the goals and purposes of health care such as disease prevention, health promotion, treatment, rehabilitation and long-term care. The SHA requires accounting of expenditure spent on these functions regardless whether their providers are considered as health care organisations or institutions outside the health sector in national statistics. This wider definition⁷ of the health system includes long-term nursing care services that were traditionally considered as social services in many countries.

4 This activity was given considerable financial support by the Center for Medicare & Medicaid Services (CMS) under HCFA Contract Number 500-00-0010.

5 OECD Health Data is the most comprehensive international health database with over 1 000 indicators concerning health status and risks, the resources and activity of health care systems, and health expenditure and financing across the 30 OECD countries.

6 *E.g.*, different roles of hospitals in service provision, or different practices with respect to public providers of health care whose funding is not included in the health chapter of the state budgets, etc.

7 The SHA defines total expenditure on health as “the final use of resident units of health care goods and services plus gross capital formation in health care provider industries.” (SHA Manual, p. 57). It defines the functional boundaries of health care as follows: “Activities of health care in a country comprises the sum of activities performed either by institutions or individuals pursuing, through the application of medical, paramedical and nursing knowledge and technology, the goals of: promoting health and preventing disease; curing illness and reducing premature mortality; caring for persons affected by chronic illness who require nursing care; caring for persons with health-related impairment, disability, and handicaps who require nursing care; assisting patients to die with dignity; providing and

13. The SHA proposes an *International Classification for Health Accounts (ICHA)* that – in its 1.0 version - covers three dimensions:

- health care **functions** (ICHA-HC);
- health care **service provider industries** (ICHA-HP);
- sources of **funding** health care⁸ (ICHA-HF).

Standard SHA tables cross-classify expenditures under these three basic classifications providing new and deeper analytic possibilities of how services are financed and provided.

14. The SHA allows for the incorporation of further dimensions of health expenditure into national health accounts: for example, regions, age and gender groups, and disease categories, in order to more adequately answer the question of “*Who gets what, where, and how?*”

15. One of the most important innovations of the SHA is the distinction made between function and provider, and the ability to cross-classify expenditure between them. Because of the country specific division of labour in health systems across health care providers, a provider category (for example, hospitals) may refer to a rather different set of activities in any country. There is no one-to-one correspondence between functions and providers: hospitals do not provide only inpatient care, providers of ambulatory care might provide in-patient care and pharmaceuticals, etc. Therefore, expenditure data by provider categories are, *in themselves*, less comparable across countries than the functions. Hence, cross-classification of the functional and provider dimensions in the standard SHA tables, contributes to a better description of the structure of a health care system.

16. In order to implement the boundaries of health care and develop comprehensive and internationally comparable data on total expenditure according to the SHA manual, the following requirements need to be fulfilled:

- (i) The functional classification of health care (ICHA-HC) is applied in an internationally harmonised way;
- (ii) Expenditure by all the financing agents defined by the SHA is accounted for;
- (iii) All primary and secondary providers of health care are included regardless of whether they are classified as health care institutions in national industry statistics or not. Furthermore, providers’ health, health-related and non-health expenditure are distinguished (and the latter two – except investment (HC.R.1.) - are excluded);
- (iv) Foreign trade of health services is estimated;
- (v) Common methods for valuation of health services are applied following the SHA framework.

17. OECD member countries are currently at varying stages of SHA implementation. In several OECD countries, SHA-based National Health Accounts have been institutionalised and also serve for data reporting to international organisations. (*e.g.* Germany, Hungary, Japan, Korea, Mexico, Netherlands, and Switzerland). Other countries produce estimates of total expenditure according to the SHA definition, but sub-categories of health expenditure are not adequately harmonized with the SHA or not available (*e.g.* United Kingdom, United States). In a few countries, a pilot SHA study has been

administering public health; providing and administering health programmes, health insurance and other funding arrangements” (SHA Manual, p. 42).

8 In fact “financing scheme” or “financing agent” would be a more precise term. (This issue is addressed in more detail in the section on key issues of harmonisation between the two systems.)

carried out, but since then, SHA work has not been continued on a regular basis. In several other countries, implementation of the SHA has been started, but as of February 2005, results have not yet been made available to the OECD Secretariat. Finally, according to the latest information available, implementation has not yet commenced in 4 OECD countries – mainly due to resource constraints⁹. Countries, where the SHA implementation has either not been started or is at an early or experimental stage, report data to *OECD Health Data* based on National Accounts or locally developed systems of health expenditure statistics. Comparability of these data with SHA-based health accounts is still restricted.

SHA-based National Health Accounts in thirteen OECD countries

18. The OECD Secretariat, along with experts from thirteen member countries, carried out a project to publish the initial results from the implementation of the System of Health Accounts. The results are presented in the *OECD Health Working Paper No 16 (SHA-based National Health Accounts in Thirteen OECD Countries: A Comparative Analysis)* and the *OECD Health Technical Papers No. 1 to 13 (SHA-based National Health Accounts in Thirteen OECD Countries: Country Studies)*¹⁰. (www.oecd.org/els/health/technicalpapers)

19. This comparative study included five non-European countries (Australia, Canada, Japan, Korea and Mexico), six members of the European Union with different health financing models (Denmark, Germany, Netherlands and Spain, including two new members: Hungary and Poland); as well as Switzerland and Turkey. Health expenditure to GDP ratio varied around twofold, with the lowest ratio in Korea (5.8% in 2001) and the highest 10.9% in Switzerland. The variation in overall health spending was wider: real per capita health expenditure of Switzerland was eight times that of the lowest spending country, Turkey¹¹.

20. With this paper the Secretariat has launched what is intended to be a regular series providing analysis and interpretation of systematic and comparable health expenditure data based on SHA-based health accounts. In addition, detailed results are presented on a country-by-country basis in thirteen Health Technical Papers, supported by detailed methodological documentation. The analysis of data availability and comparability shows where further harmonisation of national classifications with the International Classification for Health Accounts (SHA-ICHA) should be pursued.

9 Eurostat has announced that it will request EU member countries to supply data according to SHA guidelines for its end-2005 data collection, which will request data for 2003. Consideration is being given to requiring these data by EU regulation.

10 The major questions addressed in the study referred are the following: What differences can be discerned in the level and structure of health spending across countries? What differences exist in the role of public and private spending across countries (with particular regard to households' expenditure)? What kind of functional patterns of health expenditure prevail? How do the roles of the different providers differ across countries? How are the different functions financed? (- based on SHA tables cross-classifying health care functions and sources of funding); How does the spending structure of the particular financing agents differ across countries? How are the different providers financed? (- based on SHA tables cross-classifying health care providers and sources of funding); How are the different functions provided? (- based on SHA tables cross-classifying health care functions and providers). (OECD Health Working Papers No.16: www.oecd.org/els/health/workingpapers)

11 The study provides analysis of health expenditure as percentage of GDP, per capita expenditure on health (in USD PPP) and percent share of expenditure categories within total expenditure (or within relevant sub-aggregates). In this paper mostly the latter are presented.

21. The analysis which follows provides a picture of various health funding and spending patterns across the thirteen countries with a focus on how the main types of services (in-patient care, out-patient care and pharmaceuticals) are financed and provided. It highlights differences across countries in the public-private mix of financing, not only the health sector as a whole, but also the main types of services. This enables a better understanding of the role of the public and private sector. The study also gives a better picture about hospitals as multifunctional institutions. The results have been selected with a special focus on information that can only be obtained by applying a functional approach. (For more detailed analysis, see: Orosz and Morgan, 2004). The main purpose of this selection was to show some of the benefits which could be gained by introducing a functional dimension into the US NHA.

Health expenditure by function

22. The importance of a functional approach can not be overstated. It is indispensable, among others, for monitoring changes in the macro-structure of health services (and related resource use), relating monetary and non-monetary data in order to develop macro-level indicators of efficiency, etc. The functional approach – by distinguishing between curative-rehabilitative and long-term care – allows for a deeper analysis of different spending patterns of population groups by age; as well as a more appropriate examination of the effects of ageing on health spending trends.

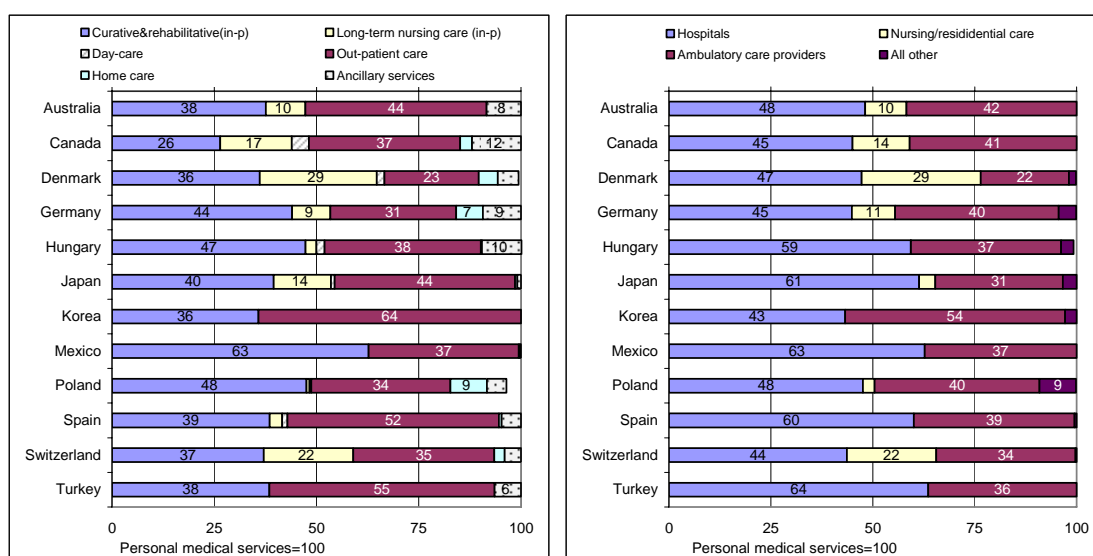
23. If properly classified, data by health care function are not biased by country-specific organisational settings, or organisational changes (for example, by separation of one-day surgery clinics from hospitals or merger of different providers into complex health centres). Therefore data by functional categories should be comparable across countries and over time.

24. Differences between the composition of expenditure by provider and the functional structure of health spending are well exemplified by Figure 1. It shows that if in-patient care is considered separately from hospital expenditure, and curative-rehabilitative and long-term care are separated within in-patient care, a far more accurate picture can be obtained. The figure shows that in-patient curative-rehabilitative care occupies a smaller share of health expenditure than is typically supposed: in fact, the share of out-patient expenditure¹² was higher than inpatient curative-rehabilitative care in half of the countries studied. For example, hospitals account for 48 percent of the spending on personal health services¹³ in Australia, and if one were to equate hospitals with inpatient care the implication would be that half of all spending were for this type of care. However, when a functional breakdown of all activities is performed, we see that only 38 percent of Australian personal health services expenditure is, in fact, for inpatient curative/rehabilitative care.

¹² By definition, including both ambulatory care and out-patient care provided by hospitals.

¹³ “Personal health services” does not include medical goods. Personal health services and medical goods together form the wider category of “Personal health services and goods”.

Figure 1. Health Expenditure on personal health services by function and provider



Health expenditure by function and financing agent

25. By **cross-classifying expenditure by function and financing agent**, SHA-based health accounts address two main issues: (i) How are the different functions financed? What roles do the various financing agents play in financing the main spending components of in-patient care, out-patient care and medical goods?; and (ii) How public and private expenditure (and their sub-components) are distributed among the different health care functions?

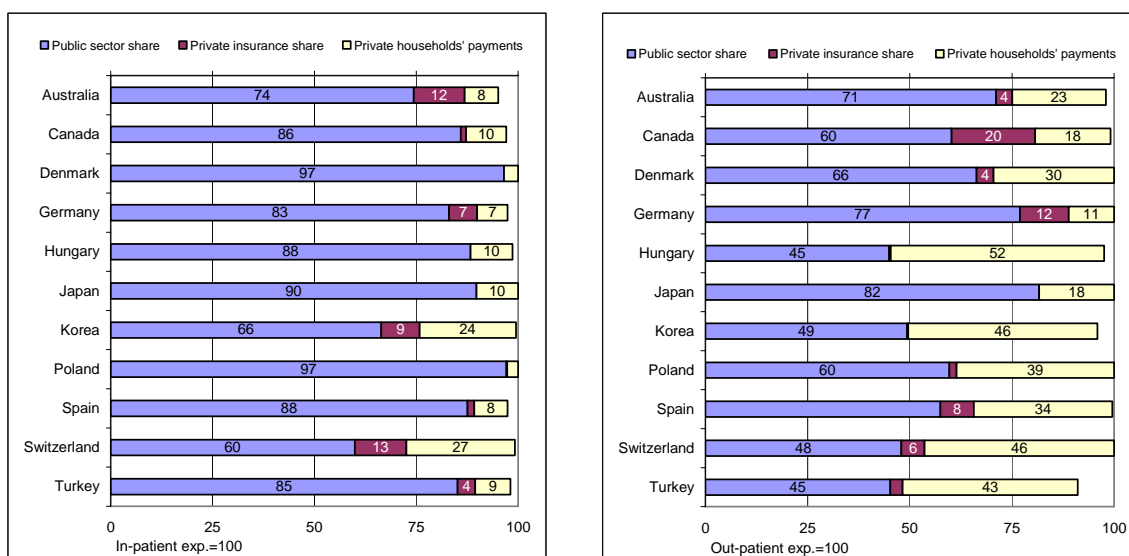
26. Perhaps, the most important result of the SHA-based health accounts is that they provide detailed information on how the different functions are financed.¹⁴ This provides, among other things, a better understanding of the role of both public and private sectors, and concerning the latter, the role of private insurance and direct out-of pocket spending by households.

27. Of the countries studied, public funds are the dominant source contributing, on average, 82% of *in-patient care* costs, leaving the private sector to fund the remaining 18%. Out-patient care is financed in a substantially different way than is the case for in-patient care. On average, across the countries, almost half (around 45%) of *out-patient care* was financed by private sources, and in the case of Hungary, Switzerland, Turkey, and, in particular, Mexico, private financing plays the greater role. In most countries, the role of private funding is still more important in financing medical goods than in paying for even out-patient care. In the majority of the countries, private funds financed almost half, or, in the case of Australia, Canada, Mexico, and Poland, more than half, of *medical goods* expenditure.

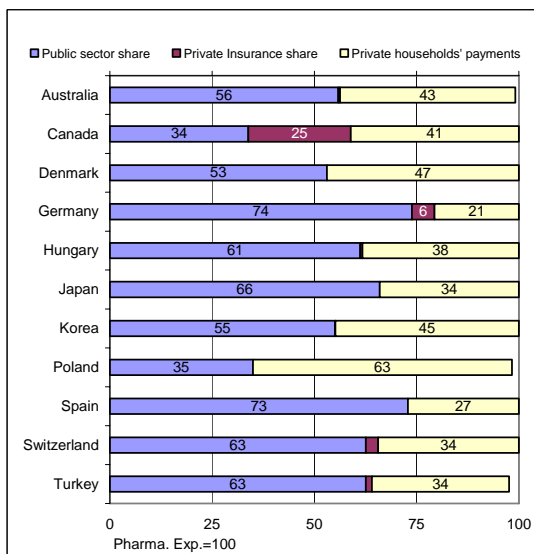
28. These results reveal that in many countries, the fact that the whole health care system is primarily publicly financed does not entail that public financing plays the dominant role in every area (Figure 2.) In only four of the thirteen countries covered in this study, namely Denmark, Germany, Japan and Spain, does the public sector play a dominant role in all three main areas (in-patient, out-patient care and medical goods).

14 Such information could not be obtained from pre-SHA health care statistics.

Figure 2. Share of public and private sector in financing in-patient, out-patient care and pharmaceuticals¹⁵



Pharmaceutical expenditure



29. The alternative question of analysing the distribution of health expenditure by function and financing agent is: *How do the particular financing agents utilise their resources? i.e., how is public and private expenditure (and their sub-components) distributed among the different health care functions.*¹⁶ The study showed that characteristics of public financing influence the functional

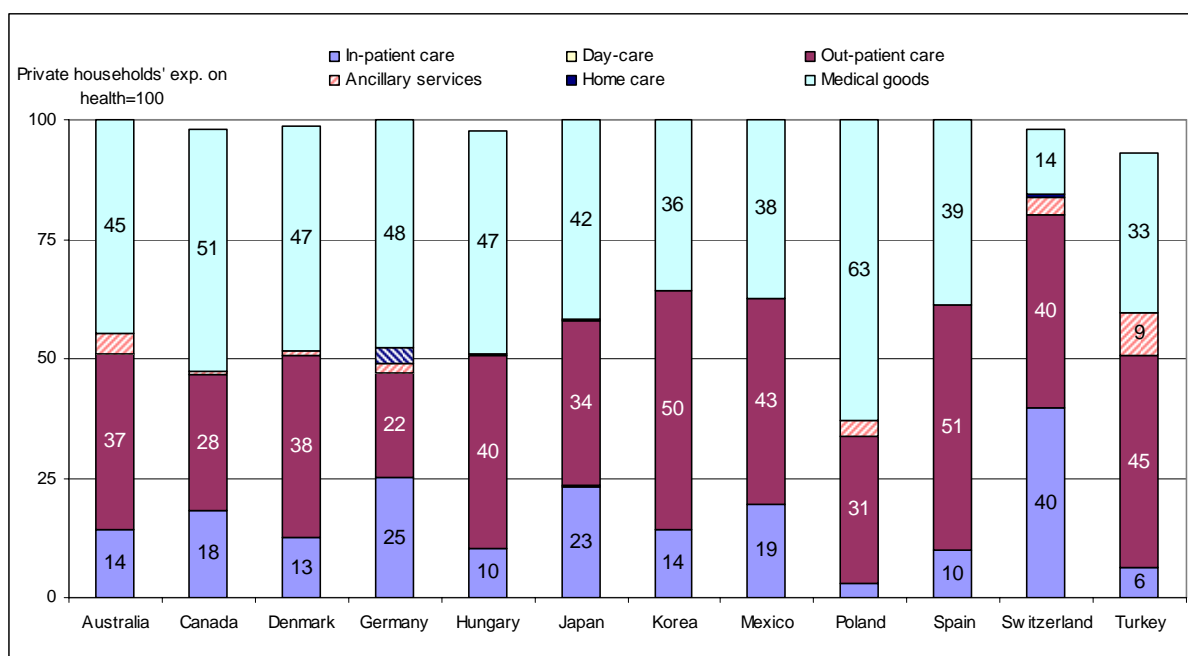
¹⁵ Note: The remaining part of the 100 percent is attributable to other private sources, namely corporations and non-profit organisations (other than health insurance).

¹⁶ This feature of health expenditure is partly a by-product of the way each function is financed. However, it is also influenced by other factors such as characteristics of health service capacities/provision and

structure of private spending to a great extent, resulting in a considerably different functional breakdown of the two sectors. Curative and rehabilitative in-patient care tends to account for 30-40% of public expenditure, on average, of the thirteen countries, but only around 11% of private spending. Medical goods show a different picture with 34% of private expenditure on average directed to medical goods as opposed to only 16% of public funds.

30. Functional structure of out-of-pocket payments reflects a combination of different factors: on the one hand, which type of services put the greatest burden on households due to limited public financing or lack of insurance, and on the other, individual preferences for services outside the publicly financed system.¹⁷ Typically between 40-50% of households' spending on health pays for medical goods, 35-40% for out-patient care and 10-15% for in-patient care (Figure 3.). The outlier is Switzerland with only 14% on medical goods, and around 40% both on in-patient and out-patient care. This structure is influenced by a high share of households' expenditure being devoted to long-term nursing care, and the inclusion of all such care in Swiss health accounts.

Figure 3. Private households' out-of-pocket expenditure by function¹⁸



consumption (e.g., over- or under-supply of hospital beds, population's pharmaceutical consumption behaviour, etc.); as well as the price structure of medical services and goods (especially pharmaceuticals).

¹⁷ To distinguish between these factors would require more information on the different sub-categories of out-of-pocket payments (namely, cost-sharing to social insurance and out-of-pocket payments for services not covered by social insurance), furthermore data by income groups of society. Such disaggregated data are not yet available in most countries.

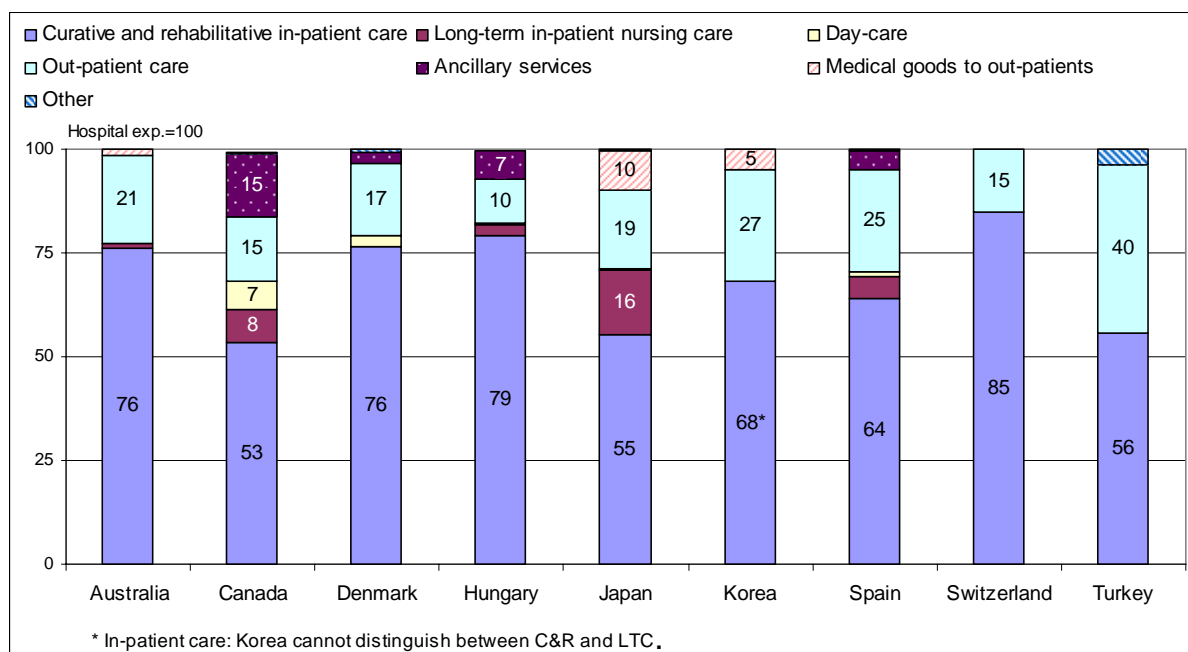
¹⁸ Note: The remaining part of the 100 percent is attributable to prevention and public health services, except Turkey having "non-specified" item of expenditure.

Current health expenditure by function and provider

31. Advances in medical technology influence structural changes in the way that health care services are delivered. An important and ongoing trend is the replacement of part of in-patient care by other forms of care, such as day care, out-patient care and home care. For example, an increasing number of surgical procedures are now performed on a day-case basis; and home care is playing an increasing role in long-term care. Changes in services structure are also taking place within the walls of hospitals. SHA-based health accounts will reflect these processes, as longer time series become available.

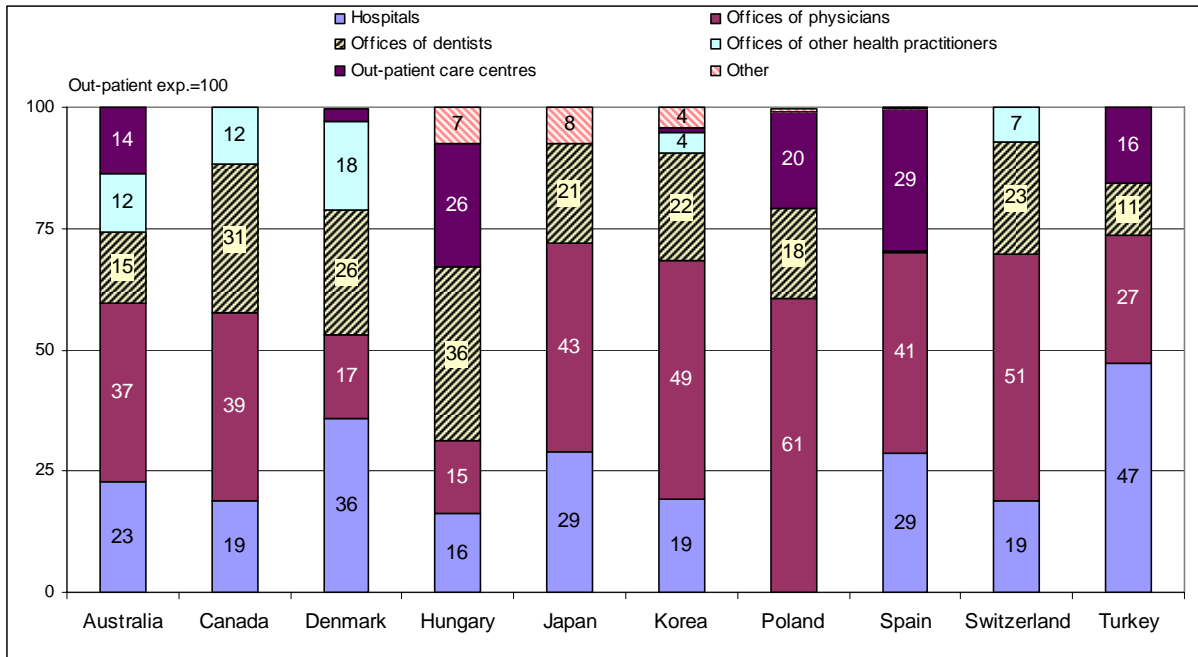
32. The **cross-classification of health expenditure by function and provider** shows the role each of the different industries (hospitals, offices of physicians, etc.) has in providing a particular health care function (inpatient care, day-care, out-patient care, etc.), and the functional structure of the different providers. In particular, an important new result provided by SHA is the in-depth information on the multi-functionality of hospitals (Figure 4.). The study shows a considerable difference in the hospitals' functional structure: for example, in-patient care represents around 70% or less of hospital expenses in five of the countries, while more than 85% of the hospital expenses in three countries.

Figure 4. Hospitals' expenditure by function



33. The other question addressed by the “function - provider” table is: *What roles do the different providers play in providing a particular type of function?* The study revealed the important role of hospitals in providing out-patient care in most countries (in particular in Denmark, Japan, Spain and Turkey) (Figure5.).

Figure 5. Provision of ambulatory and out-patient care



SHA-based National Health Accounts in thirteen OECD countries: methodological issues

34. A foremost question arising from the study is how comparable are the total health expenditures of the countries. In summary, SHA implementation has resulted in more comparable figures than was the case of pre-SHA systems. However, the results of any analysis may still be influenced by some differences in methodology. In the following sections, two issues are addressed in relation to the SHA-based estimates of total expenditure (THE): (i) the differences between THE and estimates of total health expenditure presented in national statistics; (ii) the compliance of the estimates of THE with the SHA definitions.

Differences between national and international statistics

35. Currently most countries use SHA-based estimates (THE) only for international reporting. For national statistics, pre-SHA figures of total health expenditure (NHE) or SHA-based figures supplemented with research and education (which are health related items according to the SHA) are used. Table 1 displays the differences between these figures. These differences are a good indication of the improvement in harmonisation of overall expenditure estimates that have been achieved with SHA implementation. In Hungary and Switzerland, SHA-based figures are used both for national purposes and international data reporting.

	Year	THE as % of NHE	Explanation for the differences
Australia	2000	99.4%	NHE includes all the 'health' and 'health-related' functional classifications, except HC.R.2 – 'Education and training of health personnel'.
Canada	1999	96.7%	NHE includes training of health workers; health research; non-health and health related activities performed in hospitals (social work, pastoral work, etc.); private sector expenditure on residents receiving only "non-health" services in residential care facilities.
Denmark	1999	124.3%	NHE excludes long-term nursing care.
Germany	2000	97.8%	NHE includes expenditure on R&D and education of healthcare personnel.
Hungary	2001	100.0%	No difference.
Japan	2000	127.4%	NHE excludes services not covered by public health insurance and services financed by long-term care insurance.
Korea	2000	83.2%	THE estimates for household expenditure are based on the "Health and Nutrition Survey" (interviewed household survey) as well as "general household survey" (diary household survey); whereas for NHE, it is based mainly on the latter. In addition, THE estimates eliminated double counting under the item of private health insurance in the case of NHE.
Mexico	2001	99.1%	NHE includes health related functions HC.R.2-5
Netherlands	2001	112% of NHE 78.0% of TCE	In national statistics "total health and social care expenditure" (TCE) is the starting point for both national and international reporting. Within that total health expenditure excluding long-term care and administration (NHE) is reported.
Poland	1999	108.3%	NHE excludes private insurance, non-profit institutions and corporations; as well as expenditure on household production (HP.7.2).
Spain	2001	99.7%	THE excludes Research and Development.
Switzerland	2001	100.0%	No difference.
Turkey	2000	95.7%	NHE includes health related functions HC.R.2-5

Compliance of SHA-based total health expenditure figures (THE) with the SHA definitions

36. The country studies and the comparative analysis have revealed a number of persistent departures of national SHA-pilots from the SHA-ICHA that call for further harmonisation. The most important factor affecting comparability is the different treatment of long-term nursing care (LTC) across countries. It has an effect on the overall magnitude of total health spending (and consequently on health expenditure to GDP ratio), the public-private share of financing, as well as the breakdown by function and provider. Different estimation methods of long-term nursing care may affect total health expenditure by up to more than 10%

37. Other items affecting the comparability of total health expenditure are: the services financed by non-profit institutions and companies (occupational health services) may not be included in total expenditure; and data on investments may not cover all components of investments (both public and private). These could affect total health expenditure by between 1 and 2% each.

38. Another fairly common departure from the SHA-ICHA framework is that the **export and import of health services** is not taken into account. According to the SHA, total expenditure should exclude exports of health services and goods (*i.e.* services provided by domestic providers to

foreigners and medical goods purchased by foreigners); but should include imports of health care, such as health spending abroad by residents when travelling abroad as tourists, or services provided abroad and financed by public or private third party payers. The import of services is only partly accounted for in Canada, Denmark, Germany, Hungary, Netherlands and Poland; whereas it is excluded in all other countries.

39. As a first attempt, the Working Paper was developmental in several respects. The country studies and the comparative analysis have made the differences in national health accounting practices and the departures from the SHA more transparent. Their presentation serves as input for further statistical work in member countries in order to better harmonise national practices¹⁹.

KEY ISSUES OF HARMONISATION BETWEEN THE US NHA AND THE SHA

40. Most countries introducing the SHA do not have a sophisticated accounting framework in place. In these countries the SHA can also be used to build up a national system that serves international comparability at the same time. In other countries – Australia, Canada, United States – where well-developed accounting systems are already functioning, harmonisation needs a partly different approach.

41. On the whole, the definition and valuation principles of **total health expenditure** in the US NHA and in the SHA are in accordance (meaning that US total health expenditure data requires only minor adjustment to be comparable with those from SHA-based health accounts). The two items treated differently are: (i) expenditure on research is included in National Health Expenditure (US NHA), but excluded from total expenditure on health (SHA); the export/import of health services is not taken into account in the US NHA.

42. The comparison of trends in total health expenditure across countries is indispensable for learning from international experience, but not sufficient in itself. The main argument for harmonisation at a more disaggregated level is the need for international comparison of how resources are utilised, and a growing demand for relevant indicators of health system performance. In addition, complementing the US NHA with a new dimension of health care function could also benefit US domestic analysis of health care expenditure.

43. The US National Health Accounts present health expenditure according to the following dimensions: “Type of Expenditure”, “Source of Funds”, “Sponsor” and age-groups. “Type of Expenditure” is based on the North American Industry Classification System (NAICS 2002). Categories of “Source of Funds” reflect the specific features of the US health care financing. As already mentioned, the International Classification for Health Accounts (ICHA), in the SHA Manual (Version 1.0), has three dimensions: function, provider and source of funding.

44. Regarding the presentation of data, the US National Health Accounts consists of two dimensional tables (matrices) presenting data for a given year²⁰ and one dimensional tables presenting data over time. The SHA Manual presents 10 standard tables, from which countries usually produce 3 to 5 tables. Most of these tables are two dimensional (cross-classifying financing agents, providers and

19 A key issue is how to interpret and present these departures of national health accounts from the SHA. It was agreed that the revealed departures do not question the meaningfulness of making comparative analysis, if it is accompanied with a transparent description of the limitations.

20 National Health Expenditure by sources of funds and type of expenditure; Personal Health Care Expenditure by sources of funds and type of expenditure; Expenditure for health Services and Supplies Under Public Programs, by type of Expenditure and Program.

functions). The 2005 SHA data collection by the OECD Secretariat introduced one dimensional tables presenting data over time. With the OECD Working Paper No.16 effort has been made to develop a standard set of comparative tables for the regular presentation by the OECD.

45. One of the major challenges for international comparison over time is to develop appropriate health-specific price indices. The SHA Manual addressed this issue only in a very theoretical way without providing practical guidance. Developmental work at the OECD in this field could learn from the US experience.

Correspondence between the categories of source of fund

46. Both the US NHA and the SHA apply the financing agent approach²¹. In fact, “financing scheme” would be a more precise term for the SHA. Programmes/expenditure financed from tax revenues or social insurance contributions are considered public spending, regardless of what organisation manages the given program (financing scheme). There is no one-to-one relationship between the financing schemes and financing agents. For example, a compulsory insurance program can be managed by both quasi-public institutions and commercial insurance in some countries; while social insurance organisations might also provide voluntary insurance²².

47. In addition, the US NHA has also developed measures of the burden of health care costs, that is, measures of spending by sponsors – business, households and governments. The SHA Manual contains a chapter addressing the relationship between final sources of health care funding and financing agents, but it does not provide a standard table and guidance for presenting the data concerned.

48. Table 2 presents the correspondence between the major categories of source of fund at two-digit level that is reasonable for international comparison.²³

49. The US NHA presents two types of aggregation: in the first, the two major aggregate categories are formed by Out-of-pocket payments and Third-Party Payments; while in the other, the two major aggregate categories are formed by Private and Public funds. The SHA applies only the second type of hierarchy.

50. Under the SHA, the private sector comprises: private insurance, private household out of pocket spending (with further sub-categories), non-profit institutions and corporations. Corporations (other than health insurance) is for the cases when corporations act directly as a financing agent, that is directly pay to providers for health services (*e.g.*, compulsory health checks) or directly operate occupational health care units.

21 There are generally two basic perspectives on the classification of health care financing: (i) The classification according to financing agents. Financing agents are the organisations or individuals that directly pay for the health care; that is third-party-payment arrangements and direct payments by households; (ii) The classification according to primary sources of funding bearing the ultimate burden of financing. In this kind of analysis, intermediary sources of funding (social security funds, private insurance and NPISH) are traced back to their origin.

22 For example, in Germany, the social insurance program can be managed by both public funds and private insurance companies.

23 Both systems have more detailed categories than presented in the table. The US NHA (Table 10) provides detailed categories for public spending, as does the SHA for private household out-of-pocket expenditure.

51. In the US NHA, the private funds comprises of consumer expenditure (including out-of-pocket payments and private health insurance) and Other private funds. The latter comes mainly from philanthropy and revenues of hospitals not related to patient care (“non-patient revenues”).

US NHA: Source of Funds		SHA ICHA-HF: Sources of funding	
National Health Expenditure			Total expenditure on health
All Private Funds		HF.2	Private sector
	Consumer (Total)		
	Out-of-Pocket Payments	HF.2.3	Private household out-of-pocket expenditure
	Private Health Insurance	HF.2.1, 2.2	Private insurance
	Other*	HF.2.4 HF.2.5	Non-profit institutions serving households (other than social insurance) Corporations (other than health insurance)
Public Funds		HF.1	General government
		HF.1.1	General government excluding social security funds
	Federal	HF.1.1.1	Central government
	State and local	HF.1.1.2, HF.1.1.3	State/provincial government; Local government
	(Medicare – included in Federal)	HF.1.2	Social security funds
		HF.3	Rest of the world

*/ includes also non-patient revenue

52. Taking into account past experience of SHA implementation, the creation of “Other private funds” in the SHA is currently being considered under the project on *Refinement and extension of the ICHA*. Under this solution, Non-profit institutions and Corporations should be distinguished only at the three-digit level. This would then ensure the correspondence between the US NHA and SHA at a two-digit level.

53. The other option is the mapping to the current categories of the SHA. This would require:

- Disaggregating the “Other” category of US NHA into its sub-components; and
- Finding a way to deal with non-patient revenues of providers under the SHA.

54. Experience in implementing the SHA shows that for national purposes countries might need more detailed categories of financing agents than those provided by the ICHA-HF. The US NHA also exemplifies this²⁴. Therefore, it has been proposed that international comparability of health accounts should be ensured at two-digit level²⁵; with country-specific categories defined below this level. The structure of the ICHA is currently under review from this point of view.

55. In implementing the SHA, countries usually use currently available sources of household out-of-pocket expenditure – that is, Household Budget Surveys (or related data from National

24 Table 10 in the US NHA presents public spending by type of expenditure and public programs. It gives a more detailed picture about the sub-components of public spending than presented by the SHA.

25 Hence national systems should try as strictly as possible to follow the definitions and categories of SHA-ICHA at this level.

Accounts) – and try to find new sources for other private expenditure (HF.2.4 and 2.5). However, it is widely recognized that: “*The fields of health and education are certainly those where the comparability of Household Budget Surveys’ data is the worst. ... Even if households in every ‘reimbursement’ system in an EU Member State were to correct their health expenditures for reimbursements, the comparability issue is not solved*” (EU, 2003, p.40-41). One of the key issues to improve quality of health expenditure data in OECD countries is to find additional sources for private expenditure (e.g., survey of providers). The use of non-HBS sources to impute health expenditure at household level is considered as a preferable method, for example, by the referred publication.

56. In the US NHA the main source for household out-of-pocket expenditure is the Census Bureau’s Services Annual Survey (SAS). In addition, data from several surveys are used.²⁶ Looking at the US experience could be very useful for other countries planning special surveys in the interest of improving reliability of private expenditure data in their health accounts²⁷.

Health expenditure by “type of service” and provider in SHA

57. The most crucial issue concerning harmonisation would be to transform the “Type of service” into two dimensions: provider and function. Because “Type of service” is in fact a provider approach²⁸, the mapping to the provider categories of the SHA (ICHA-HP) would be straightforward at the one-digit level (Table 3.). It would not be reasonable to attempt harmonisation at the two-digit level, until the refined version of the ICHA is issued.

58. Personal Health Care in the US NHA consists of the following categories: Hospital care, Professional Services, Nursing Home and Home Health, Retail Outlet Sales of Medical Product, Government administration and Net Cost of Private Health Insurance. The SHA applies the following provider categories: Hospitals, Nursing and residential care facilities, Providers of ambulatory health care, Retail sale and other providers of medical goods, Provision and administration of public health programmes, General health administration and insurance, Other industries (rest of the economy), Rest of the world.

59. Rest of the economy (HP.7) comprises private households as providers of (health) care services at home and secondary providers of health care, for example, occupational health care, military health services that are not provided in separate health care establishment.

60. Rest of the World (HP.9) is for providers rendering services used by resident population abroad (that is for providers of import). As already mentioned this item of expenditure should be included in SHA-based health accounts.

26 Medical Expenditure Panel Survey – Household component (Agency for Healthcare Research and Quality) National Medical Expenditure Survey (National Center for Health Services Research),

27 For example, in the US, one source of private health care reimbursement is non-health insurance that takes the form of liability insurance for automobiles, homeowners and businesses.

28 In fact “Type of service” is somewhat of a misnomer: the name suggests a functional classification, while in fact the actual classification is primarily a classification by service provider. It has been noted by Peter Scherer that this is similar to the problem in US labour statistics, in the early decades of the twentieth century, of blending what are now respectively called “industry” and “occupation”.

Table 3.		
Comparison of the US NHA and the SHA: Type of service versus Providers of health care		
US NHA: Type of service	SHA ICHA-HP: Health care providers	
National Health Expenditure		Total expenditure on health
Health Services and Supplies		Total current expenditure on health
Personal Health Care		Personal medical services and goods
Hospital Care	HP.1	Hospitals
Professional Services*	HP.3*	Providers of ambulatory health care
Physician and Clinical Services	HP.3.1 HP.3.4 HP.3.9	Offices of physicians Out-patient care centres Medical and diagnostic laboratories
Other Professional Services	HP.3.3	Offices of other health practitioners
Dental Services	HP.3.2	Offices of dentists
Other Personal Health Care*	HP.7* HP.3.4* HP.3.9	Other industries Out-patient care centres Other providers of ambulatory health care
	HP.3.5	Medical and diagnostic laboratories
	HP.3.9	Other providers of ambulatory health care
Nursing Home and Home Health		
Home Health Care	HP.3.6	Providers of home health care services
Nursing Home Care	HP.2	Nursing and residential care facilities
Retail Outlet Sales of Medical Products	HP.4	Retail sale and other providers of medical goods
Prescription Drugs	HP.4.1	Dispensing Chemists
Other Medical Products	HP.4.2-4.9	All other sales of medical goods
Durable Medical Equipment		
Other Non-Durable Medical Products		
Government Administration and Net Cost of Private Health Insurance	HP.6	General health administration and insurance
Government Public Health Activities*	HP.5*	Provision and administration of public health programmes
	HP.7	Other industries (rest of the economy)
	HP.7.1	Providers of occupational health care
	HP.7.2	Private households as providers of home care
	HP.7.9	All other industries as secondary producers of health care
	HP.9	Rest of the world
Investment*		

* indicates mismatch
Professional Services includes providers that are reported under HP.7 in the SHA
In the SHA, HP.3.9 Includes: Ambulance services; Blood and organ banks;

61. Mapping between the US NHA and the provider dimension of the SHA at the one-digit level would require mainly reorganising and renaming of categories (apart from the incorporation of “Rest of the world”):

- Modifying the US NHA categories in order to ensure that the categories refer to providers (establishments). In most cases this would require only a renaming. Furthermore, expenditure on investment should only be reported under the functional classification.
- Changes in the placement of home care: (i) reporting home care under Professional Services in the US NHA; or (ii) putting home care under HP.2 in SHA and renaming it accordingly (e.g., Nursing care facilities and providers of home care)

- Incorporation of “Other industries” into the US NHA and reporting of industrial in-plant services under this category. This would require separation of industrial in-plant services from “Other personal health care”.
- Incorporation of “Rest of the world” into the US NHA, however, is a far more difficult issue. This would require treating foreign trade similarly to the SHA (discussed previously).

Health expenditure by “type of expenditure” and functions in SHA

62. The greatest challenge of harmonisation between the two accounting systems would be the introduction of the functional dimension into the US NHA. As already mentioned, recommendations for disaggregating expenditure by service category instead of provider category have been put forward by previous NHA Conferences (Haber and Newhouse, 1991; Huskamp and Newhouse, 1999). Lessons from SHA implementation in OECD countries have shown the advantages of producing expenditure data by both function and provider and cross-classifying expenditure by these two dimensions. Expenditure data by function, for example, can provide far more adequate information for analysis of changes in the role of the different components of health care in growth of total health expenditure. In contrast, expenditure data by provider hide the fact that the share of different types of services (inpatient care, out-patient care, home care etc.) within provider institutions (hospitals, nursing homes, etc.) might change considerably over time. Cross-classifying expenditure by function and provider can give in-depth information about how health services are provided.

63. Presenting expenditure by function would require the disaggregation of several categories of “type of expenditure” into their sub-components, reflecting the services they provide. Levit (2001) demonstrated the resource and data constraints for this.²⁹ First of all, the introduction of the functional dimension of expenditures for the US system is complicated by the complex nature of the US health care system – both for payers and providers. Levit pointed out that private payers are not inclined to supply data tailored to the needs of the health accounts. Therefore, much of the information for the US NHA comes from providers of services. While for hospitals, there are some sources that could be used to produce some of the breakdowns that SHA requests, little similar information exists for the rest of the medical sector. These systems would need to be developed.

64. Table 4 outlines the key items for mapping the categories of “type of expenditure” to functional categories of the SHA. The most important issue is to disaggregate expenditure currently reported under “Hospital Care” and “Professional Services” into their sub-components. Furthermore, all *inpatient care* - both that provided by hospitals and physicians’ offices - should be reported under Curative-rehabilitative inpatient care or Long-term inpatient care (Table 4.). In-patient care should include all services provided during inpatient episodes regardless whether the components of care are paid separately to hospitals or physicians. Also, In-patient long-term care should include all long-term care regardless whether provided in hospitals or nursing homes. This would require separation of curative-rehabilitative and long-term nursing care within inpatient care provided by hospitals³⁰.

29 Katie Levit has raised these issues in her comments on an earlier draft of this paper, for which I am indebted.

30 The Canadian country study provides an instructive description of mapping country-specific categories to the ICHA-HC (Fortin,2004).

Table 4.		
Comparison of the US NHA and the SHA: Type of service versus functions of health care		
SHA ICHA-HC: Functions of health care		US NHA: Type of service
<i>In-patient care</i>		
Curative and rehabilitative inpatient care	HC.1.1; 2.1	Hospital Care Physician and Clinical Services
Long-term inpatient care	HC.3.1	Hospital Care Nursing home care
<i>Services of day-care</i>		
Curative and rehabilitative day care	HC.1.2; 2.2	Hospital Care Physician and Clinical Services
Long-term nursing care: day care	HC.3.2	Hospital Care Nursing home care Other Personal Health Care
<i>Ambulatory and out-patient care</i>		
Basic medical and diagnostic services	HC.1.3.1	Hospital Care Physician and Clinical Services
Dental care	HC.1.3.2	Dental Services
All other specialised health care	HC.1.3.3	Hospital Care Physician and Clinical Services
All other ambulatory care	HC.1.3.9, 2.3	Hospital Care Other Professional Services Other Personal Health Care
<i>Home care</i>		
Curative and rehabilitative home care	HC.1.4; 2.4	Hospital Care Nursing home care Home Health Care
Long-term nursing care: home care	HC.3.3	Hospital Care Nursing home care Home Health Care Other Personal Health Care
<i>Ancillary services to health care</i>		
Clinical laboratory	HC.4.1	Hospital Care Physician and Clinical Services
Diagnostic imaging	HC.4.2	Hospital Care Physician and Clinical Services
Patient transport and emergency rescue	HC.4.3	Other Personal Health Care (?)
All other ancillary services	HC.4.9	
<i>Medical goods dispensed to out-patients</i>		
Pharmaceuticals and other medical non-durables	HC.5.1	Prescription Drugs Other Non-Durable Medical Products
Therapeutic appliances & other med. durables	HC.5.2	Durable Medical Equipment
<i>Total expenditure on personal health care</i>		
Prevention and public health services	HC.6	Government Public Health Activities Other Personal Health Care
Health administration and health insurance	HC.7	Government Administration and Net Cost of Private Health Insurance
<i>Total current expenditure on health</i>		
Gross capital formation	HC.R.1	
<i>Total expenditure on health care</i>		
<i>Memorandum items: Health-related functions (see paragraph 72)</i>	HC.R.2-7	

65. Similarly, all *ambulatory care* – whether provided by hospitals or physicians’ offices – should be reported under the relevant sub-category of “Ambulatory and out-patient care”. In mapping the US NHA to sub-categories of *out-patient care*, the ongoing refinement process of the ICHA should be taken into consideration. Due to different roles of general practitioners and specialists across OECD countries, the sub-categories of HC.1.3 out-patient curative care need reconsideration³¹.

66. *Day care services* constitute a separate category under ICHA-HC. Formation of Day care under the US NHA would require the separation of day cases from Hospital Care and Professional Services. The importance of a separate category for day care is underlined by the need to monitor changes in the way that health care services are delivered. For example, - due to advances in medical technology - an increasing number of surgical procedures are now performed on a day-case basis. SHA-based health accounts will be able to exhibit this process, as longer time series become available.

67. By definition, *ancillary services* only includes ancillary services provided to out-patients; whereas in-patient curative-rehabilitative expenditure covers all services provided during an episode of in-patient care, including pharmaceuticals and ancillary services. This is justified by the fact that ancillary services and pharmaceuticals are integral parts of an episode of in-patient treatment. Ancillary services may be provided by separate health care organisations (laboratories, diagnostic centres) or may be activities performed in complex health care organisations. In the latter case, expenditure on ancillary services should be separated from revenues of hospitals or providers of out-patient care. Having a separate expenditure category for clinical laboratory and diagnostic imaging can contribute to better information on the role of medical technology.

68. *Home care* includes all home care services regardless whether they are provided by independent home care organisations or other providers (e.g., hospitals). This category also includes services provided within households by family members, in cases where these services correspond to social transfer payments granted for this purpose.

69. *Medical goods* are treated in the same way in the two health accounts: this category (and its sub-categories) only includes pharmaceuticals and therapeutic appliances and other medical durables provided to out-patients. Pharmaceuticals and therapeutic appliances used in inpatient treatments are included in inpatient expenditure. In the interest to obtain information on total pharmaceutical spending, the modified SHA tables used for 2005 SHA data collection contains a memorandum item line for Total pharmaceutical expenditure including, not only pharmaceuticals provided to out-patients, but also pharmaceuticals used in inpatient care and day cases.

70. Expenditure on *prevention and public health services* include only preventive services provided in the form of organised programmes (public or private, including occupational health checks), that is, expenditure on collective prevention; whereas “personal prevention” related to the individual initiatives of doctors or patients is included in curative-rehabilitative care³². Therefore, this category does not reflect the total amount spent on prevention by a society. Furthermore, in many

31 It might be reasonable to distinguish at the three-digit level only between physicians’ services, dental care and other out-patient services (and then at the four-digit level to distinguish between basic medical services and specialised health care).

32 Expenditure on diagnostic procedures initiated by patients for preventive purposes cannot normally be separated from diagnostic procedures performed as part of a curative treatment.

countries the distinction between curative-rehabilitative and preventive care - even in this narrow sense - is difficult or impossible to make in the statistical system of providers.

71. Health-related functions concern activities that can be very closely linked to health care in terms of operations, institutions and personnel, but do not belong to health care as defined by the SHA. These are: HC.R.2: Education and training of health personnel; HC.R.3: Research and development in health; HC.R.4: Food, hygiene and drinking water control; HC.R.5: Environmental health; HC.R.6: Administration and provision of social services in kind to assist living with disease and impairment; HC.R.7: Administration and provision of health-related cash-benefits. Health policies, usually, concern these areas, therefore the SHA intends to present basic information about expenditure devoted to them.

72. The **Canadian Country Study**, presented in the previously mentioned series of “SHA-bases Health Accounts in 13 OECD Countries”, demonstrates how demanding task is the mapping to the ICHA-HC. The study concludes: “The ICHA-HC classification of functions incorporates two dimensions: functions and modes of production. The mapping to the ICHA-HC is made particularly difficult by the fact that the available expenditure data must correspond to both dimensions, and at the same time be broken down by source of finance (a third dimension). For example, expenditures for the category “hospitals”, which represents the largest share of total health expenditure (31.4%), were mapped to 17 categories of the ICHA-HC using data extracted from the Canadian MIS Database (CMDB). ...” (Fortin, 2004). Table 5 shows the correspondence between the main categories of “Use of Funds” in the Canadian Health Accounts and the ICHA-HC.

**Table 5.
Correspondence Between Uses of Funds in Current Canadian Health Accounts and ICHA-HC**

Uses of Funds in Canadian Health Accounts	ICHA-HC	
<p>Hospitals Canadian hospitals report their expenditures to the Canadian Institute for Health Information according to the MIS (Management Information System) Guidelines. A mapping from the MIS accounts to the functional classification was prepared and is available from CIHI upon request.</p>	HC.1.1 HC.1.2 HC.1.3 HC.1.4 HC.2.1 HC.2.2 HC.2.3 HC.3.1 HC.4.1 HC.4.2 HC.4.3 HC.5.2 HC.6.4 HC.R.2 HC.R.3 HC.R.4 HC.R.5	In-patient curative care Day cases of curative care Out-patient curative care Services of curative home care In-patient rehabilitative care Day cases of rehabilitative care Out-patient rehabilitative care In-patient long-term nursing care Clinical laboratory Diagnostic imaging Patient transport and emergency rescue Therapeutic appliances and other medical durables Prevention of non-communicable diseases Education and training of health personnel Research and development in health Food, hygiene and drinking water control Environmental Health
<p>Other Institutions Type I and lower care was excluded. Expenditures for Type II and Type III care were put under HC.3.1. Expenditures for care above Type III were put under HC.1.1</p>	HC.1.1 HC.3.1	In-patient curative care In-patient long-term nursing care
<p>Physicians The National Physician Database at the Canadian Institute for Health Information contains fee-for- service payments by provincial medical care plans, grouped by type of service according to the National Grouping System (NGS). A mapping from the NGS to the functional classification was prepared and is available from CIHI upon request.</p>	HC.1.1 HC.1.2 HC.1.3 HC.1.4 HC.3.1 HC.4.1 HC.4.2	In-patient curative care Day cases of curative care Out-patient curative care Services of curative home care In-patient long-term nursing care Clinical laboratory Diagnostic imaging
<p>Other Professionals The sub-category "Vision Care Services" includes expenditures for eyeglasses and contact lenses. These expenditures were put under HC.5.2.1 when they could be identified separately from professional services.</p>	HC.1.3.2 HC.1.3.9 HC.5.2.1	Out-patient dental care All other out-patient curative care Glasses and other vision products
<p>Drugs</p>	HC.5.1.1 HC.5.1.2 HC.5.1.3	Prescribed medicines Over-the-counter medicines Other medical durables
<p>Capital</p>	HC.R.1	Capital formation of health care provider institutions
<p>Public Health and Administration</p>	HC.6	Prevention and public health services
<p>Other Health Spending</p>	HC.3.3 HC.4.3 HC.5.2 HC.5.2.3 HC.6 HC.6.5 HC.7 HC.R.2 HC.R.3	Long-term nursing care: home care Patient transport and emergency rescue Therapeutic appliances and other medical durables Hearing aids Prevention and public health Occupational health care Health administration and health insurance Education and training of health personnel Research and development in health Undistributed
<p>Source: (Fortin, 2004)</p>		

Status of the US health expenditure data in *OECD Health Data*

73. The previous chapter comparing basic features of the US NHA and the SHA-ICHA addressed the international comparability of US health expenditure data at a theoretical level. This chapter summarises the concrete steps already taken in linking the US health expenditure data to the definitions used by *OECD Health Data*. Also, the most important differences between the US health expenditure data as presented in *OECD Health Data* and as presented in the US NHA, ensuing from partial harmonisation, is discussed.

74. As already mentioned, definitions of the health sector's boundaries applied in the US NHA and in the SHA are, on the whole (with the exception of two items), in accordance. To adjust US health expenditure to the SHA, research is excluded. Therefore, total US health expenditure data for 2003 in *OECD Health Data*, was 2% lower than the value of national health expenditure in the US NHA (Table 6.).

75. The US **total current health expenditure** presented in *OECD Health Data* can be considered fairly comparable. Comparability of **total health expenditure** (including investments) is affected by an additional factor: the US investment data only include the value of new construction put in place for hospitals and nursing homes. (Non-structural equipment such as CTs and beds, and investment by outpatient providers are not included.) It should, however, also be noted that investment data are also partial in many other countries.

76. In order to relate the US data by type of expenditure to the relevant provider categories in *OECD Health Data*, the following adjustments have already been taken:

- In order to match "Professional Services"(US NHA) to Providers of ambulatory health care (HP.3), three items from Other Personal Health Care (Maternal & Child Health, School Health, and Occupational Health) are removed and moved to the "Prevention and Public Health" (HP.5).
- In the US NHA "Home health care" is a sub-category in "Nursing home and home care", so, at this moment, Home health care is reported under HP.7: Other industries in *OECD Health Data* ³³.

Since these changes did not result in substantial changes, the values of the main types of expenditure in the *US NHA* and that of providers' categories in *OECD Health Data* are very similar (Table 6.).

77. In response to the request by the OECD Secretariat, an important new step in harmonisation was made in 2003. In order to map the US data to the functional categories of *OECD Health Data*, "hospital care" was split between inpatient care and outpatient care with the latter reported under "all other out-patient services" (HC.1.3.9)³⁴. As a consequence, inpatient curative-rehabilitative care (in OECD HD) is lower by 35% than the hospital care (in US NHA). Expenditure on out-patient (in OECD HD) care is 32% higher than "professional services" (in US NHA) (Table 7.).

33 It should be noted, however, that according to the ICHA-HP classification, HP. 3.6 Providers of home care services belongs to HP.3 Providers of ambulatory health care.

34 Inpatient/outpatient ratios from community hospitals were used to estimate the splits for hospital care.

78. However, an important deviation remains: independently billing physicians rendering care in hospitals are still included in physician service,³⁵ resulting in a considerable underestimation of inpatient care.

79. *OECD Health Data* presents “ancillary health services”, with a subcategory of “clinical laboratory services and diagnostic imaging service” expenditure. Currently there are no separate categories for these services in the US NHA, so expenditure is included within hospital care and physician service expenditure.

80. In summary, the US health expenditure by functional categories as presented in *OECD Health Data* is not adequately comparable. In fact, the US health expenditure data by function represent a mix of expenditure by provider and expenditure by function due to the fact that harmonisation between the two health accounting systems has only been started. Disaggregating “Physician and clinical services” into inpatient and outpatient expenditure could considerably improve comparability.

Table 6. US health expenditure: Type of expenditure (US NHA) versus expenditure by provider in *OECD Health Data 2004*

U.S. NHA			OECD Health Data 2004 (HD)			
Type of Expenditure	2003	% NHE	Expenditure by Provider	2003	%TEH	HD/US NHA
Amount in Billions						
National Health Expenditures	1,678.9	100%	HP.1-7, HC.R.1 Total expenditure	1,638.7	100%	98%
Health Services and Supplies	1,614.2	96%	HP.1-7 Total current expenditure	1,614.2	99%	100%
Personal Health Care	1,440.8	86%				
Hospital Care	515.9	31%	HP.1 Hospitals	515.9	31%	100%
Professional Services	542.0	32%	HP.3 Providers of ambulatory health care	533.0	33%	98%
Physician and Clinical Services	369.7	22%				
Other Professional Services	48.5	3%				
Dental Services	74.3	4%				
Other Personal Health Care	49.5	3%				
Nursing Home and Home Health	150.8	9%				
Home Health Care	40.0	2%	HP.7 Other industries (rest of the world)	40.0	2%	100%
Nursing Home Care	110.8	7%	HP.2 Nursing and residential care facilities	110.8	7%	100%
Retail Outlet Sales of Medical Products	232.1	14%	HP.4 Retail sale and other providers	232.1	14%	100%
Prescription Drugs	179.2	11%				
Other Medical Products	52.9	3%				
Durable Medical Equipment	20.4	1%				
Other Non-Durable Medical Products	32.5	2%				
Government Administration and Net Cost of Private Health Insurance	119.7	7%	HP.6 Administration	119.7	7%	100%
Government Public Health Activities	53.8	3%	HP.5 Prov. & admin. of public health programs	62.8	4%	117%
Investment	64.6	4%				
Research ¹	40.2	2%	HC.R.3 Total exp. health R&D	40.2	n.a.	100%
Construction	24.5	1%	HC.R.1 Total investment	24.5	1%	100%

35 The expenditures for services provided by residents, interns, and other physicians who are employees of hospitals (typically emergency room physicians and pathologists) are included with hospital spending

Table 7. US health expenditure: Type of expenditure (US NHA) versus expenditure by function in OECD Health Data 2004

U.S. NHA			OECD Health Data 2004 (HD)				
Type of Expenditure	2003	% NHE	Expenditure by Function		2003	%TEH	HD/US NHA
Amount in Billions							
National Health Expenditures	1,678.9	100%	HC.1-7, HC.R.1	Total expenditure	1,638.7	100%	98%
Health Services and Supplies	1,614.2	96%	HC.1-7	Total current expenditure	1,614.2	99%	100%
Personal Health Care	1,440.8	86%	HC.1-5	Personal health	1,431.8	87%	99%
Hospital Care	515.9	31%	HC.1.1, HC.2.1	Inpat. C&R care	332.9	20%	65%
Professional Services	542.0	32%	HC.1.3, HC. 2.3	Outpatient care	716.0	44%	132%
Physician and Clinical Services	369.7	22%	HC.1.3.1, HC.1.3.3, HC.2.3	Physician services	369.7	23%	100%
Other Professional Services	48.5	3%					
Dental Services	74.3	4%	HC.1.3.2	Dental services	74.3	5%	100%
Other Personal Health Care	49.5	3%	HC.1.3.9	All other.out-patient services	253.2	15%	512%
Nursing Home and Home Health	150.8	9%					
Home Health Care	40.0	2%	HC.1.4, HC.2.4	C&R home care	40.0	2%	100%
Nursing Home Care	110.8	7%	HC.3.1	Inpat. long-term nursing	110.8	7%	100%
Retail Outlet Sales of Medical Products	232.1	14%	HC.5	Medical goods	232.1	14%	100%
Prescription Drugs	179.2	11%	HC.5.1.1	Prescription	179.2	11%	100%
Other Medical Products	52.9	3%					
Durable Medical Equipment	20.4	1%	HC.5.2	Therap.appl&med.durables	20.4	1%	100%
Other Non-Durable Medical Products	32.5	2%	HC.5.1.2, HC.5.1.3	OTC and other non-durables	32.5	2%	100%
Government Administration and Net Cost of Private Health Insurance	119.7	7%	HC.7	Hlth.admin&insur.	119.7	7%	100%
Government Public Health Activities	53.8	3%	HC.6	Prev.,pub.health	62.8	4%	117%
Investment	64.6	4%					
Research ¹	40.2	2%	HC.R.3	Health R&D	40.2	n.a.	100%
Construction	24.5	1%	HC.R.1	Total investment	24.5	1%	100%

CONCLUDING REMARKS

81. This paper was intended to stimulate the dialogue on further harmonisation between the US NHA and the SHA. The paper has not addressed all relevant questions of harmonisation, and only listed those issues where the refinement of the SHA can learn from US experience. Instead, it has focused on the importance of the functional approach, and on what information SHA-based health accounts can provide for policy-makers. By applying a functional approach (distinguishing between function and provider), the SHA allows a deeper analysis of how health services are financed and provided (how resources are allocated among functions and service providers). Due to this characteristic, the SHA will allow – as longer time series become available – deeper analysis of changes in composition of spending; factors that drive growth in health spending; differences across countries in expenditure growth and composition of expenditure; as well as for monitoring the effects of particular health reform measures over time. As the share of GDP devoted to health care further expands in the United States, this type of information will be more and more essential to support policymakers' decisions.

82. Despite the fact that the SHA is a relatively new system, a wealth of experience has been accumulated in a number of OECD countries during the process of SHA implementation, and several

national publications have already been issued.³⁶ Experience has shown that SHA implementation and its stable institutionalisation are of vital importance for improving the availability and comparability of health expenditure data across OECD countries. The SHA Manual now serves as a quasi-standard for health expenditure reporting. This role is also acknowledged by the NHA guide,³⁷ published by the WHO, World Bank and USAID, which recommends the SHA Manual as the basis for health accounting in developing countries. Furthermore, in the interest of harmonisation of health data within the European Union, the Statistical Programme Committee of the EU has attached high priority to the implementation of the SHA in EU countries.

83. OECD member countries expect the Secretariat to further encourage the implementation of SHA and the harmonisation of national health accounting practices, as well as to further develop health accounting methodology. Depending on the status of the pre-SHA statistical systems, institutionalisation of SHA can mean different things: countries may choose to use the SHA for both national and international reporting of health expenditure, or restrict its use to the latter. In this respect, establishing a better connection between the US NHA and the SHA through the introduction of the functional dimension into the US NHA would be a great achievement.

84. In the long run, it is the intention of the OECD that all health expenditure data (Parts 4&5) in *OECD Health Data* are fully based on SHA; that is all OECD countries use the SHA to report health expenditure data in international statistics. In addition, it is the aim that health service statistics in *OECD Health Data* become harmonised with the SHA. Logically, the term “SHA” also refers to future versions of the System of Health Accounts: as in every statistical system, the SHA needs to adjust to changing reality and development in methodology.

85. Experience has shown that several details in the SHA Manual and of its *International Classification for Health Accounts* (ICHA) apparently require amendment and further clarification. The actual accounting practice in OECD and non-OECD countries has in many cases come up with concrete proposals of how to tackle difficulties and to fill gaps where the SHA manual is not offering all the detail needed for implementation. It should, however, be emphasised that the work of *Refinement and extension of the International Classification for Health Accounts (ICHA)* [OECD document: HS(2004)6] - started under the current 2005-2006 work program of the Health Division at the OECD - does not concern the basic characteristics of the System of Health Accounts.

86. The major issues covered by this work can be summarised as follows: more precise guidelines on health care boundaries (in particular interpretation of and estimation methods for long-term care); review of some two- and three-digit level sub-categories of expenditure in order to ensure international comparability at two-digit level; better clarification of definitions of health care financing (namely ultimate sources of funding, financing schemes and financing agents). Extension of the ICHA with new dimensions - (ultimate) financing sources, beneficiary population (by age and gender), disease-categories and resources (used to produce health services and goods) - also deserves consideration. Last, but not least, a major challenge is to develop reliable health-specific price indices and health-specific purchasing power parities to make as reliable as possible comparison of trends in

36 Numerous sources of the relevant information could be mentioned: country reports presented at the Meetings of Health Accounts Experts since 2001; the SHA-based health accounts country studies published in the OECD Health Technical Papers; the reports of several EU sponsored SHA-related projects.

37 World Bank, World Health Organization, The United States Agency for International Development: Guide to producing national health accounts with special applications for low-income and middle-income countries. Geneva. 2003.

consumption of health services over time and across countries³⁸. This work could benefit a lot from learning from the US NHA experience.

38 Due to limited availability of reliable health price indices, economy-wide (GDP) price indices are used in OECD publications (e.g., in *Health at a Glance*, 2003). For comparison of per capita health spending across countries, the economy-wide (GDP) PPPs are used as the most available and reliable conversion rates. Thus, more accurately, the resulting figures reflect the opportunity costs of health care consumption, rather than the differences in health care consumption.

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