



Unit 3: key concepts and definitions in health accounts

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Contents of the presentation

- Main aggregates of health and health-related expenditures
- The relationship between supply of and demand for health goods and services.
- Price and volume output measurement in healthcare.
- Comparing health goods and services prices across countries

Main aggregates of health and health-related expenditures

Main aggregates

Current expenditure on health: final consumption expenditure of resident units on health care goods and services

Resident unit: an economic entity within the economic territory of a country when it maintains a centre of predominant economic interest in that territory.

Final consumption: expenditures borne for final uses. Excludes intermediate consumption.

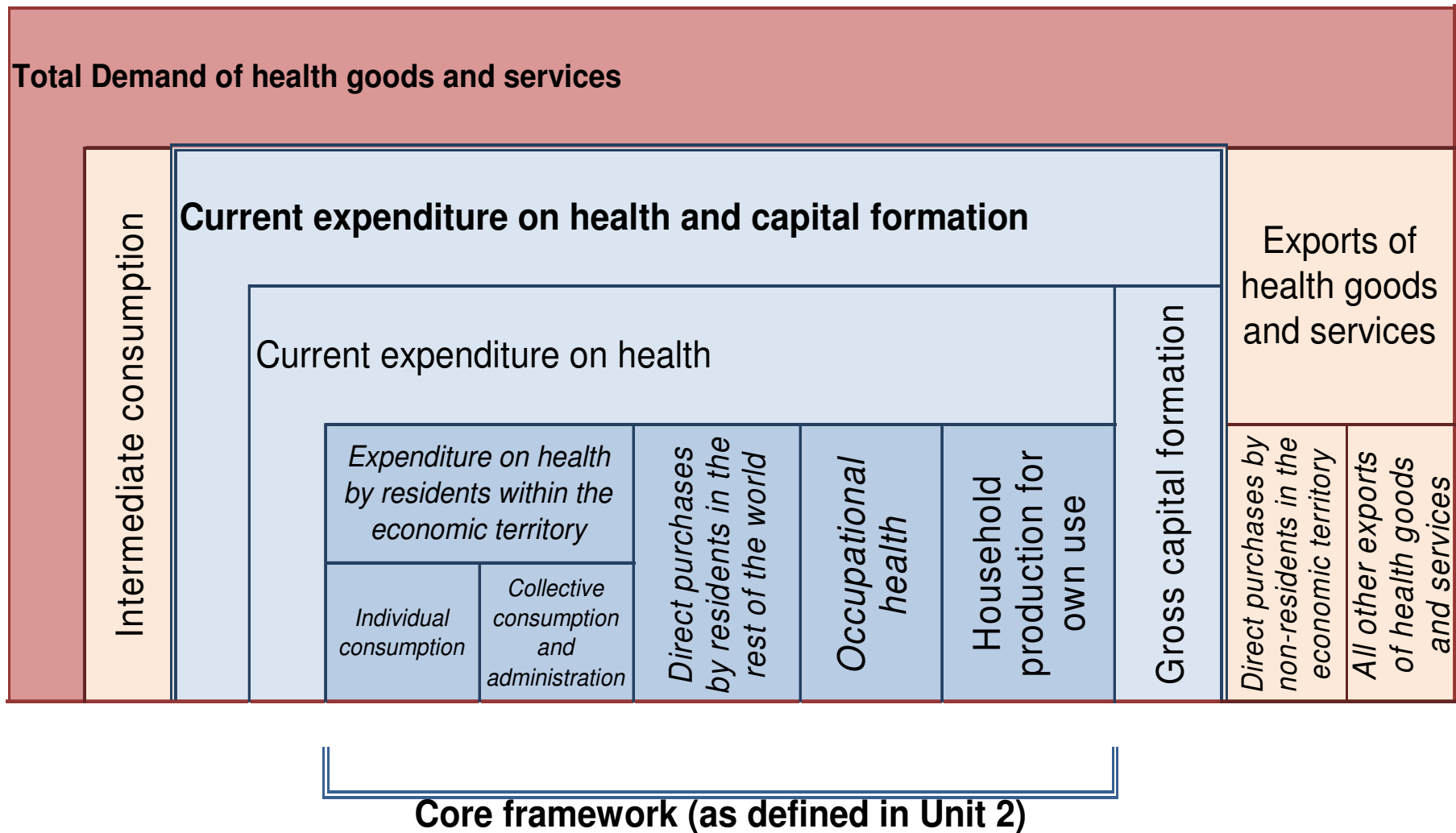
Main aggregates (cont)

Gross capital formation in health care industries:
sum of gross capital formation in the ICHA-HP units, where health care is the predominant activity

E.g. retail sale of medical goods (SHA 1 HP.4) is a supporting activity to health care and the capital formation in retailers of goods is excluded from capital formation of health care providers.

The relationship between supply of and demand for health goods and services

Product balance: Demand



Product balance: Supply

| Total Supply of health goods and services | | |
|---|----------------------------------|--------------------------------------|
| Total Provision (output) of Health Goods and Services | Taxes less subsidies on products | Imports of Health Goods and Services |

Product balance

Output + **Imports**

=

Intermediate consumption + Final consumption + Capital formation + **Exports**

Imports and exports involve:

- a transaction (sale, barter, gift, grant, etc) to/from residents from/to non-residents,
- but not necessarily movement of the good or service across a border.

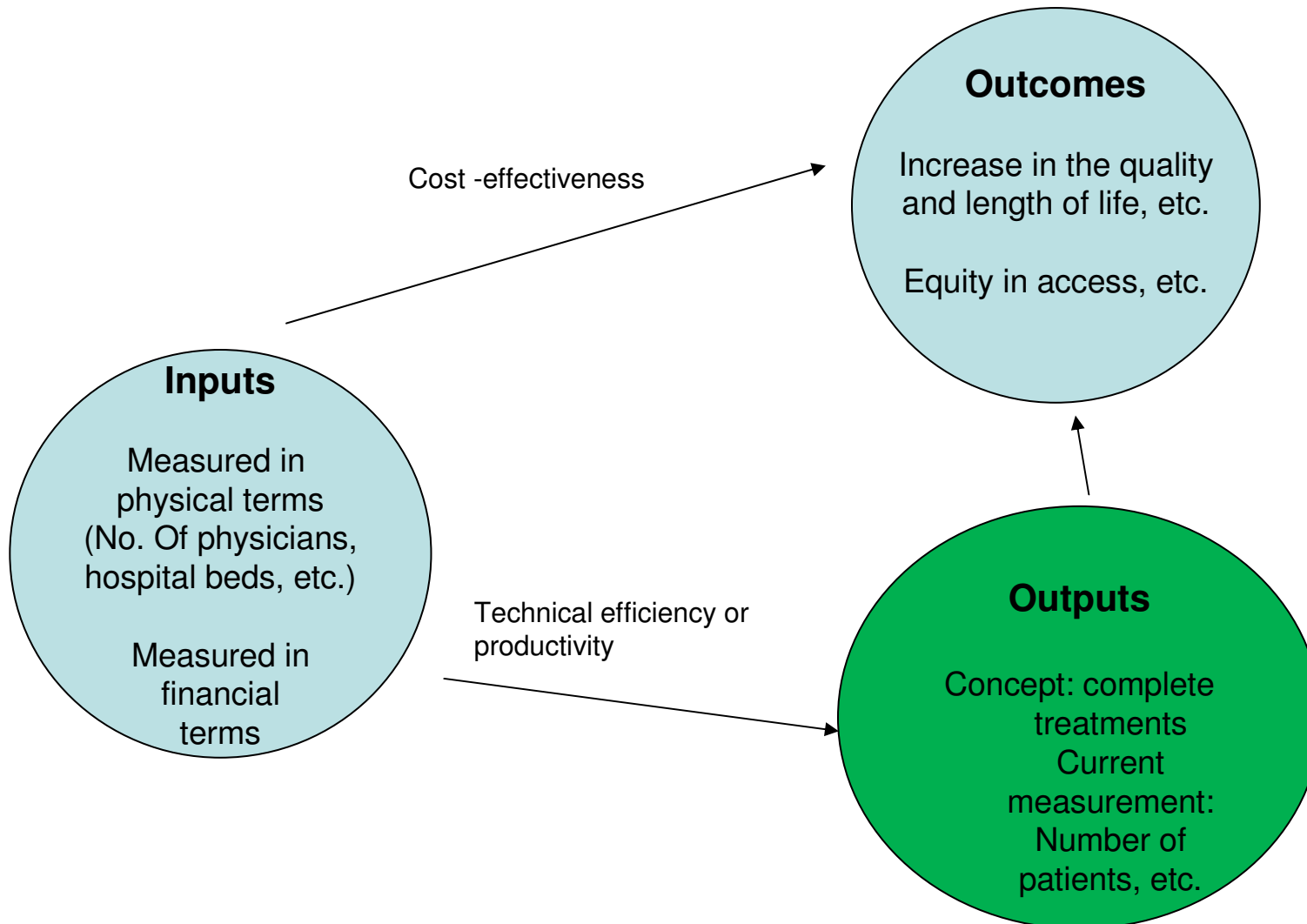
Relationship between SHA current expenditure on health and SNA aggregates

| <i>SNA 93 code</i> | <i>Description</i> |
|--------------------|--|
| P.41 | Actual final consumption expenditure on health by households and NPISHs |
| P.42 | Actual final consumption expenditure on health by general government |
| P.4 | Actual final consumption expenditure on health (= P.41 + P.42) |
| D.31 | Government subsidies to health care providers (net) in order to lower the price of output |
| P.41* | Occupational health care (intermediate consumption within establishments) minus an estimated share of occupational health in health providers' and other medical industries' net administration (= occupational health care) |
| P.41* | “Remunerated” unpaid household production in the form of transfer payments (social benefits in cash) for home care of sick, disabled and elderly persons provided by family members |
| P.4* | Adjusted total actual final consumption expenditure on health (= P.4 + D.31 + P.41*) |

(*): The production boundaries used in the SHA for the estimation of this item differ from SNA rules.

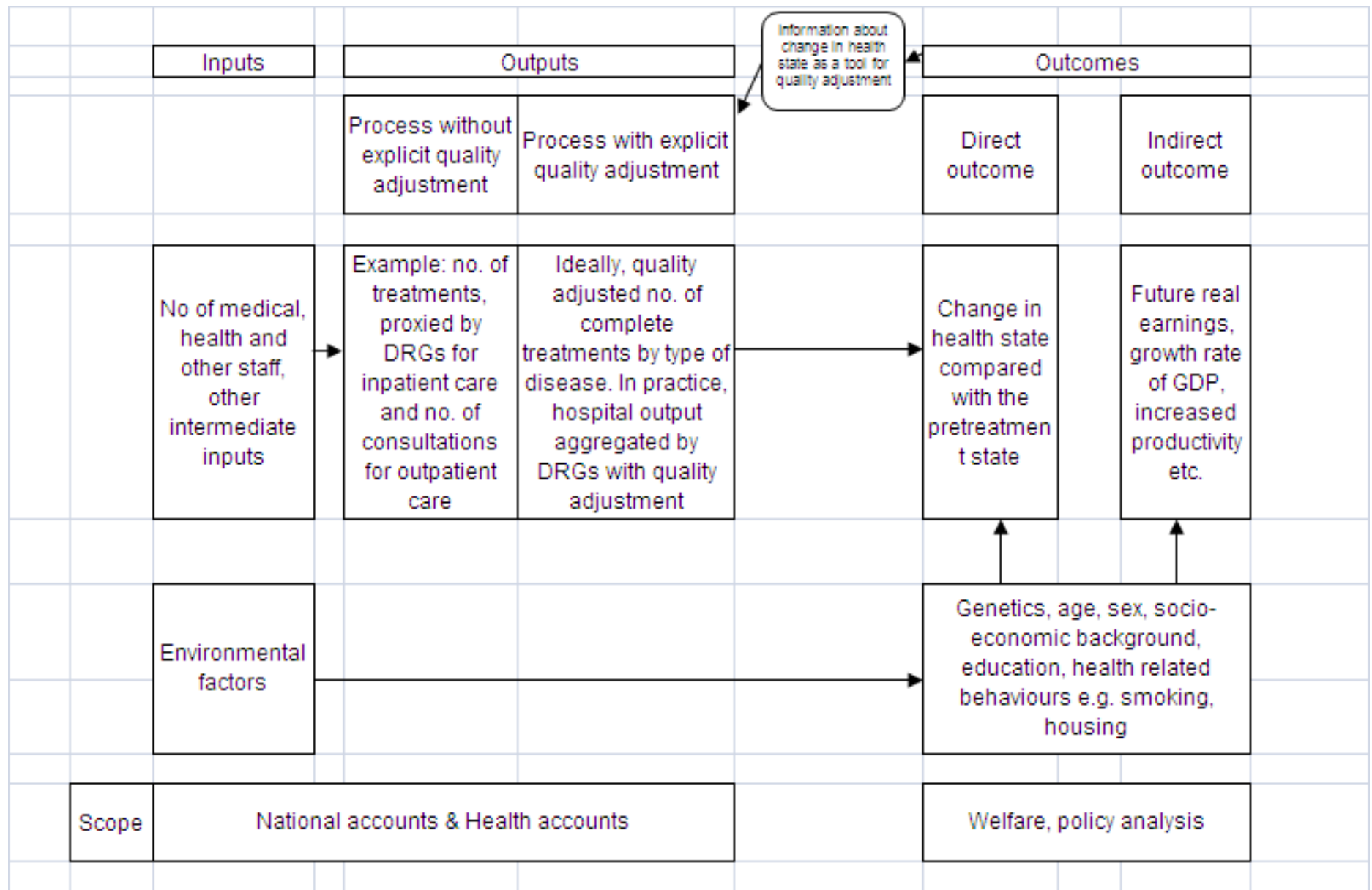
Price and volume output measurement in healthcare

Inputs, outputs and outcomes : key concepts



Inputs, outputs and outcomes

A framework for analysis



Current and constant prices

- Current prices:
 - Aggregation of the transactions that has taken place
- Constant prices:
 - Describe an economic situation of a particular year in the prices of another year
- **Value index = price index x volume index**

Price and volume output measurement

Volume output indices

To measure volume output (indices), there are two basic options:

- deflation of values by a price index
- construction of a direct volume output index

N.B. SNA boundaries for health industry in ISIC and SHA boundaries for health care expenditure differ to some extent

Price and volume output measurement

Deflation by a price index

- Medical services part of the Consumer Price Index
- Disease specific price index
- “Quasi price” index

Price and volume output measurement

Direct volume output index

A direct volume output index is average of proportionate changes in the quantities of a specified set of goods or services between two periods of time.

Quantities must be
for homogeneous items and
weighted by their economic importance.

Price and volume measurement

Product definition

Health care output: number of complete treatments (capture quality change and new products).

A complete treatment: a pathway that an individual takes through various institutions in order to receive full and final treatment for a disease or condition.

Price and volume measurement Product definition (cont)

- In practice, “complete treatment” is difficult to implement:
 - most data retrieval systems not able to link treatment of individuals across institutions
 - beginning and end point of treatment not always observable

Price and volume measurement Product definition (cont)

Rather than use complete pathways of treatment, the output measures proposed are best thought of as episodes of treatment of particular diseases as provided by a given institutional unit.

Price and volume measurement

Product definition (cont)

Feasible measures:

- episodes of treatment of particular diseases as provided by a given institutional unit

Quality adjustment in output measurement

A first step towards capturing quality change is correct stratification (i.e., products with same or similar characteristics).

- Quality constant: if products in a stratum are relatively homogenous.
- Quality change is captured by changes in product mix

Quality adjustment of output measurement (cont)

A second way: the compliance rate with established procedures by country and disease group.

Changes reflect new treatments and improvements in the existing practices.

A third aspect of quality: the impact/contribution of health services on health outcomes.

Comparing health goods and services across countries

Comparing health goods and services across countries

Volume comparisons at a point in time between countries:

- directly comparing volumes of health services; or
- by deflating current values with **health-specific Purchasing Power Parities (PPPs)**.

Comparisons within a country over time and comparisons between countries at a particular point in time are consistent.

Comparing health goods and services across countries (cont)

Comparisons of volume over time:

product taxonomy has to be stable.

Each country can use its own classification to identify and measure products.

Comparisons across countries,

consistency in health product definitions among countries.

Necessary to define a common sample of health products

OECD PPPs project (*Now in second stage*)

Sample of representative hospital products

| <i>Case type number</i> | <i>Case type description</i> | <i>Codes</i> | <i>Rules</i> |
|-------------------------|------------------------------|---|---|
| IM01 | Acute myocardial infarction | I21; I22 | No operating room procedure is performed. |
| IS02 | Appendectomy | 47.01; 47.09; 47.11; 47.19 | Any principal diagnosis code. Includes incidental appendectomy |
| OS03 | Cataract surgery | 13.1; 13.2; 13.3; 13.4; 13.5; 13.64; 13.65; 13.66; 13.69; 13.7; 13.8; 13.9 | Any principal diagnosis code. |

IM: inpatient medical
 IS: inpatient surgical
 OS: outpatient surgical

Discussion

Points for discussion

- 1) Do you agree with proposal to stop using the term “total health expenditure (THE)”?
- 2) Should the aggregate - formerly known as THE = current expenditure on health plus gross capital formation of health providers still be retained but with a different name? or should the two components be kept separate?
- 3) The separate recording of expenditure on R&D as component of gross capital formation is suggested. How does your Region/Country view this?
- 4) Is Figure on slide 10 above indicating the connections between SNA and SHA health aggregates useful?

Points for discussion (cont)

- 5) The relationship between health care goods and services's supply and demand is suggested as a framework for analysis. Do you agree with this proposed framework?
- 6) For transparency and to allow for reconciliation with the production account, exports should also be reported as a memorandum item. Can your Country/Region implement this proposal in your current health accounts?
- 7) The output measures proposed are best thought of as episodes of treatment of particular diseases as provided by a given institutional unit. Do you agree with this standpoint?