MEASURING PHARMACEUTICAL SECTOR EFFICIENCY

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Joint OECD Meeting of Heath Accounts Experts and Health Data Correspondents
12-13 October 2016
Measuring pharmaceutical expenditure is easy but has comparability issues
Pharmaceutical spending accounts for nearly one sixth of the health budget

Expenditure on pharmaceuticals* as a share of health expenditure, 2014 (or nearest year)

* Includes prescribed and over-the-counter medicines and other medical non-durables

Source: OECD Health Statistics 2016
There is wide variation in spending per capita

Expenditure on pharmaceuticals* per capita, 2014 (or nearest year)

* Includes prescribed and over-the-counter medicines and other medical non-durables

Source: OECD Health Statistics 2016
Consumption of medicines continues to increase

Antidiabetic drugs consumption, 2000 and 2013 (or nearest year)

Antihypertensive drugs consumption, 2000 and 2013 (or nearest year)

Defined daily dose, per 1 000 people per day

Source: OECD Health Statistics 2015
Measuring quality and outcome indicators attributable to the pharmaceutical sector can be difficult.
Pharmaceuticals play some role in preventing hospital admissions

Diabetes hospital admission in adults, 2008 and 2013 (or nearest years)

Source: OECD Health Statistics 2015
Measuring efficiency in pharmaceutical spending
Inefficiencies in pharmaceuticals can cost billions of dollars

Avoidable Costs in USA
(213$ Billion)

Avoidable Costs in France
(26$ Billion)

Proposed quality & efficiency indicators

- Share of generics in market
- Antibiotics consumption
- Inappropriate prescribing of benzodiazepines among elderly people
- Polypharmacy (>5; >10 prescriptions) among older adults
- Adherence to treatment for chronic diseases
  - Hypertension & Diabetes
- Doctors use of e-prescribing
- Pharmaceutical prices

Quality indicators ("Choosing Wisely")

New indicators
Generic substitution: A potential still to be fully exploited

Share of generics in the total pharmaceutical market expressed in volume, 2014 (or nearest years)

1. Reimbursed pharmaceutical market
2. Community pharmacy market

Source: OECD Health Statistics 2016
Variation in antibiotics prescribing suggests inappropriate overuse

Overall volume of antibiotics prescribed, 2014 (or nearest year)

Source: OECD Health Statistics 2016
Overprescribing of benzodiazepines increases possibilities of adverse events

Elderly people prescribed long-term benzodiazepines or related drugs, 2013 (or latest year)

Per 1,000 persons aged 65 years and over

Source: OECD Health Statistics 2015
Polypharmacy rate among older adults

- Polypharmacy is a major public health issue in terms of quality and efficiency of care and health expenditures
  - significant link between polypharmacy and the emergence of adverse effects, drug interactions, falls and even increased mortality
- Elderly population most affected by polypharmacy and its consequences
- Proposed indicator:
  - % of elderly on 5 or more prescriptions and on 10 or more prescriptions
Polypharmacy difficult to compare across countries

• Polypharmacy among elderly:
  – France = 33%
  – New Zealand = 35%
  – Sweden = 12.3%
  – United States = 47.5%

• **BUT** comparability issues:
  – age of elderly differs >65 in NZ & US, >75 in France, >80 in Sweden
  – polypharmacy definition differs >5 in NZ & US; >10 in France & Sweden
Medication adherence - National figures

- 50% of the 3.2 billion annual prescriptions dispensed in US not taken as prescribed
- Approximately 125,000 deaths per year in the US are linked to medication non-adherence
- Total cost is ranging from $177 to $213 billion (€158 billion) each year

- 30-50% of patients are not adherent to their medicines in France
- Approximately 8,000 deaths per year and 1.1 million hospital days
- Total cost estimated to $26 billion (€19 billion) each year

Source: Bosworth H et al. (2011) Medication Adherence: A Call for Action
Medication adherence: hypertension and diabetes

• Proposed indicator: Proportion of newly prescribed patients dispensed one script only for
  – antihypertensive medication
  – diabetes medication

• Comparisons:
  – Australia
    • 19% for antihypertensive medication
    • 11% for diabetes medication
  – United States:
    • 10% for diabetes medication
Doctors use of e-prescribing

Percent of primary care physicians reporting they are able to electronically transfer prescriptions to a pharmacy, 2015

Source: 2015 Commonwealth Fund International Survey of Primary Care Physicians in 10 Nations
There is significant variation in prescription drug prices

Pharmaceutical retail price comparison for brand name drugs under patent protection, 2010. (U.S. set to 100)

Issues for discussion

• Comment on the **proposed additional measures** to measure efficiency
  – Polypharmacy among older adults
  – Adherence to treatment for chronic diseases - Hypertension & Diabetes
  – Doctors use of e-prescribing
  – Pharmaceutical prices

• Comment on proposal to **pilot test data collection** on the first 2 measures in OECD Health Data questionnaire 2017