Contribution of innovative approaches to health systems’ sustainability: Health Technology Assessment and Chronic Disease Management

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Universal coverage, appropriate entitlements, limited cost-sharing

Professional (re-)certification
Provider (re-)accreditation

Health Technology Assessment
Concentration of services

“Do the thing right“:
Registers; benchmarking

Population health status (need)

Human resources
Technologies
Financial resources

Environment
Nutrition/ agriculture
Other sectors

Patients: demand, access
Structures and organisation
Process

Health care outcome: satisfaction, complications etc.

Health gain/ Outcome

“Do the right thing“: *ex ante* Disease management programmes/ guidelines/ reminders; *ex post* Review

Health care system
The goal of HTA is to provide input to decision making in policy and practice.“ (Henshall et al. 1997)

- IF somebody asks!
HTA and Policy

Fig. 4.2 General model of coverage decisions

How (methodology)?

Who?

Relevance of HTA vs. other influences?
What? ”Technologies” in hTa

- The interventions (drugs, procedures, complex multidisciplinary activities) which can be provided / reimbursed within the system when delivering health services.

- The interventions applied to the system to organize service delivery, access, financing, payment of providers, etc.
An example

Practical Purpose
„improving survival after myocardial infarction“

Technologies
- Aspirin
- Stent
- Early rehabilitation

Disease Management Programme
Payment for Performance
Health Technology Assessment: Efficacy vs. Effectiveness

**Efficacy**
- Licensing
  - highly selected populations
  - comparator: placebo
  - outcomes: clinical, morbidity, mortality, adverse effects
- Evidence Gap
  - ‘what it says on the packet’

**Effectiveness**
- Coverage
  - pragmatic trials
  - comparator: ‘current (best) practice’
  - outcomes: patient-focused, downstream resources

**Evidence Gap**
- Licensing
- Evidence Gap
- Coverage
Role of HTA within "knowledge value chain"

Fig. 8.1 Knowledge value chain in the health sector

SRs and HTA

Health Technologies

Research | Synthesis | Appraisal | Decision | Dissemination Utilization | Evaluation

(Primary) Research Assessment (SR & CEA) Impact & Applicability appraisal

Decision-making | Dissemination Utilization | Evaluation Monitoring
BEST PRACTICE IN UNDERTAKING AND REPORTING HEALTH TECHNOLOGY ASSESSMENTS

Working Group 4 Report

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Technologies and the "knowledge value chain"
The roles and responsibilities of NICE since 1 April 2005

NICE produces guidance in three areas:

**Public health** – the promotion of good health and the prevention of ill health for those working in the NHS, local authorities and the wider public and voluntary sector

**Health technologies** – the use of new and existing medicines, treatments and procedures within the NHS

**Clinical practice** – the appropriate treatment and care of people with specific diseases and conditions within the NHS.
Impact?

**Fig. 6.1** Hierarchical steps of the impact of HTA reports
• Policy processes and HTA
• Health systems, health policy and HTA
• HTA producers
• Impact of HTA
• Needs and demands of policy-makers
• Future challenges for HTA in Europe
Disease management programmes: key elements

- comprehensive care: multidisciplinary care for entire disease cycle
- integrated care, care continuum, coordination of the different components
- population orientation (defined by a specific condition)
- active client-patient management tools (health education, empowerment, self-care)
- evidence-based guidelines, protocols, care pathways
- information technology, system solutions
- continuous quality improvement
DMPs are popular – at least in Germany, where they were tied to financial incentives until 2008

<table>
<thead>
<tr>
<th>DMP</th>
<th>Number of patients enrolled in DMP 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes mellitus type 2</td>
<td>2,708,154</td>
</tr>
<tr>
<td>Diabetes mellitus type 1</td>
<td>93,357</td>
</tr>
<tr>
<td>Coronary heart disease</td>
<td>1,221,374</td>
</tr>
<tr>
<td>Asthma</td>
<td>313,914</td>
</tr>
<tr>
<td>COPD</td>
<td>264,299</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>100,499</td>
</tr>
</tbody>
</table>
| **Total**                  | **4,701,597** (7% of all insured)**
DMPs: How effective?

- Crucial and weak point!
- Most publications report on relatively small-scale interventions without control group or inadequate control (e.g. no randomization, no risk adjustment)
- (As for pharmaceuticals etc.:) the weaker the study design, the larger the published effects
- Logic of Evidence-based Medicine applies: best available evidence counts
How effective are Disease Management Programmes?

<table>
<thead>
<tr>
<th>Disease</th>
<th>Clinical Processes</th>
<th>Health-related</th>
<th>Disease Control</th>
<th>Clinical Outcomes</th>
<th>Healthcare Utilization</th>
<th>Financial Outcomes</th>
<th>Patient Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adherence to Evidence-based Guidelines</td>
<td>Changes in Behaviors</td>
<td>Changes in Intermediate Measures</td>
<td>Inconclusive evidence</td>
<td>Improved</td>
<td>Reduced hospital admission rates</td>
<td>Inconclusive evidence</td>
</tr>
<tr>
<td>CHF</td>
<td>Improved</td>
<td>Inconclusive evidence</td>
<td>Improved</td>
<td>Inconclusive evidence</td>
<td>Improved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAD</td>
<td>Improved</td>
<td>Evidence for no effect</td>
<td>Improved</td>
<td>Evidence for no effect</td>
<td>Inconclusive evidence</td>
<td>Inconclusive evidence</td>
<td>Insufficient evidence</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Improved</td>
<td>Evidence for no effect</td>
<td>Improved</td>
<td>Insufficient evidence</td>
<td>Inconclusive evidence</td>
<td>Inconclusive evidence</td>
<td>Insufficient evidence</td>
</tr>
<tr>
<td>Asthma</td>
<td>Inconclusive evidence</td>
<td>Inconclusive evidence</td>
<td>Inconclusive evidence</td>
<td>Evidence for no effect</td>
<td>Inconclusive evidence</td>
<td>Evidence for no effect</td>
<td>Insufficient evidence</td>
</tr>
<tr>
<td>COPD</td>
<td>Insufficient evidence</td>
<td>Insufficient evidence</td>
<td>Insufficient evidence</td>
<td>Insufficient evidence</td>
<td>Insufficient evidence</td>
<td>Insufficient evidence</td>
<td>Insufficient evidence</td>
</tr>
<tr>
<td>Depression</td>
<td>Improved</td>
<td>N/A</td>
<td>Improved</td>
<td>Inconclusive evidence</td>
<td>Increased utilization</td>
<td>Increased cost</td>
<td>Improved</td>
</tr>
</tbody>
</table>

Codes: N/A: not applicable, as no relevant health-related behaviors for depression exist.
Disease-end point combinations in which disease management seems to achieve the intended result are shaded.
Source: RAND analysis using identified articles.
CHF indicates congestive heart failure; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease.

DMPs: how costly and how cost-effective?

- Even less published evidence; if costs are reported in evaluations, the methodology is usually flawed!
- On macro-economic implications, we have to rely on models and projections!
- Managing CD costs additional money (→ not effective for cost-containment in short run), but may be cost-effective (data missing!).
DMPs are only one component of dealing with chronic disease.

**Burden of Chronic Disease**
- Epidemiologic Burden
  - Prevention and Early Detection
  - New Provider and Qualifications

**Economic Burden**
- Disease Management Programmes
  - Integrated Models of Care

**CDM Strategies**

**Dimensions of CDM**
- New Pharmaceuticals and Medical Devices
- Financial Incentives
- Cooperation and Coordination
- Information and Communication Technology
- Evaluation Culture
Shaping the future of managing chronic diseases in Europe

- **New pharmaceuticals and medical devices** may help to improve CD -> but critical assessment regarding patient benefit, based on accepted methodology, crucial
- Right mix of **financial incentives** very important (for insured/ patients, payers, providers …)
- Strengthen **coordination** (in access, orientation, provision of information, continuity/coordination/communication among professionals)
- Elaborated **information and communication technologies** crucial, but agreement on international technical standards necessary
- Establish **evaluation** culture without exceptions
Weaknesses of traditional ways of paying providers for chronic care

Fee-for-service
* Ill patients usually attractive
* Overprovision of services
* Underreferral
* No incentive for high quality

Case payments
* Very ill patients not attractive
* Tendency to average provision
* Weak quality incentives

Capitation
* Ill patients not attractive
* Underprovision of services
* Overreferral
* Quality: bad results -> more work

* No incentives for appropriate continuity of care across providers
Examples of new payment measures

• ‘year of care’ payment for the complete service package required by individuals with chronic conditions (DK)
• per patient bonus for physicians for acting as gatekeepers for chronic patients and for setting care protocols (F)
• bonus for DMP recruitment and documentation (D)
• 1% of overall health budget available for integrated care (D)
• boni for reaching structural, process and outcome targets (UK)
• ‘pay-for-performance‘ boni (US - Europe)
Chronic patients‘ cost-sharing – traditional approaches

• no co-payments for services related to their disease, e.g. ‘ALD’ (30 mainly chronic diseases) in France
• lower annual limits on co-payments
• certain drugs require lower cost-sharing if the indication is deemed serious
Chronic patients‘ cost-sharing – newer approaches

• ‘ALD’ exemption only if care protocol is established for each patient by their GP and signed by patient (France since 2004)
• cost-sharing may be reduced or waived if patients enrol in DMPs
• patients with chronic conditions/complex needs managed via a care plan/ inscribed in DMP receive rebates (Australia) or additional services (Germany)
• ‘ALD’ exemption only if protocol is presented to every treating physician at each visit (France)
• lower cost-sharing limit applies only if patient is compliant (Germany since 2007)
Evaluation culture

• Many aspects of managing chronic disease are not properly evaluated -> effectiveness and cost-effectiveness of various prevention and treatment interventions not well established.

• Policy-makers are therefore not best equipped to make informed “HTA” decisions.

-> Policy-makers must ensure that evaluation based on rigorous methodology is an integral part of all strategies. Existing data should be made available for research and review across different technologies, settings and providers.
This presentation and more material can be found on the following websites:

http://mig.tu-berlin.de

www.euro.who.int/observatory