Determinants of health care provider practices.

K. Danishevsky
Approaches to Evidence-based Medicine

• summarized knowledge: protocols, standards, algorithms, recommendations

OR / AND

• teaching health professionals research methods and critical reading
• Factors driving the behavior of health professionals

• Methods to improve health services / effectiveness of health care
Frameworks used

- “Practice styles” and clustering of practices (McPake, 1992)
- Classification by nature of evidence, context and promotion technique (Kitson A, 1998)
- Appraisal at the stage of pre-introduction and role of social capital (Rycroft-Malone J, 2002)
- Four stages of translating science into practice – introduction, adaptation, implementation and practice (Simpson D, 2002)
Lessons of Behavioral Theory

- Commonly applied to study the behavior of users, who are effected by preventive program, but can be used to study the behavior of providers
- K - knowledge
- A - attitude
- B - belief
- P - practice
The Cochrane Library, Improvement of clinical practice
Cochrane Classification for Systematic Research

- Training and quality assurance
- Financial methods
- Organization
- Regulation and management
Basic Medical Education

Clear association between the time after graduation of physician and mortality rates from avoidable causes of the patients: mainly studied for hypertension.
Continues education and quality assurance

- Dissemination of educational material;
- Face-to-face training activities (lectures, training sessions and workshops);
- Consensus building at the local level;
- Educational outreach visits;
- Local opinion leaders;
- Patients mediated interventions
Continues education and quality assurance

- Clinical audit and feedback;
- Reminders, including computer-aided ones;
- Social marketing;
- Mass media interventions;
- Multidisciplinary education;
- Continuous quality improvement;
Another possibility is provision of training to physicians on information sources and appraisal of publications, i.e. what we essentially call “evidence-based medicine”
Financial Drivers of Clinical Behavior

• Financial Methods Targeting Health Care Practitioners

• Financial Methods Targeting Patients
Financial Levers Targeting Health Care Practitioners

- Payments: fee-for-service; capitation; salary;
- Target payments;
- Organizational level incentives;
- Individual penalties;
- Organizational level fines;
- Formulary
Financial Levers Targeting Patients

- Bonuses or payments / subsidies / compensation of expenses
- Co-financing, paid health care services;
- Fines and penalties;
Organizational Methods

- Targeting health service providers
- Targeting patients
- Structural
Organizational Methods
Targeting Providers

• Revision of professional roles
• Developing multidisciplinary teams
• Formal integration / isolated vertical service provision
• Changing skill mix (numbers and skills of the staff)
Organizational Methods
Targeting Providers

• Continuity of care
• Satisfaction of health workers with work conditions and compensation
• Communication and case review between remote health professionals
Structural Organizational Steps

- Changing the location / conditions of service provision
- Changing physical structure, health facility, equipment
- Changing record management
- Changing the mix and nature of benefits / services
- Building or changing quality monitoring system
- Ownership, accreditation, cooperation of health facilities
Training and Quality Assurance  
- Strength of evidence

<table>
<thead>
<tr>
<th>Basic medical education</th>
<th>+++</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of educational materials</td>
<td>+</td>
</tr>
<tr>
<td>Educational meetings (including lectures, workshops and traineeships)</td>
<td>+</td>
</tr>
<tr>
<td>Educational outreach visits</td>
<td>+/-</td>
</tr>
<tr>
<td>Interprofessional education</td>
<td>-</td>
</tr>
<tr>
<td>Teaching methods of critical appraisal of evidence is considered as a separate approach</td>
<td>+</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Continuing education</th>
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<tbody>
<tr>
<td>Local consensus processes</td>
<td>+</td>
</tr>
<tr>
<td>Use of local opinion leaders</td>
<td>+/-</td>
</tr>
<tr>
<td>Patient mediated interventions / patient pressure</td>
<td>++</td>
</tr>
<tr>
<td>Reminders (including computerised decision support systems)</td>
<td>+</td>
</tr>
<tr>
<td>Audit and feedback</td>
<td>+</td>
</tr>
<tr>
<td>Marketing</td>
<td>+/-</td>
</tr>
<tr>
<td>Promotion through mass media</td>
<td>+</td>
</tr>
<tr>
<td>Continuous quality improvement</td>
<td>+</td>
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</tbody>
</table>
## Financial Incentives - evidence

<table>
<thead>
<tr>
<th>Provider</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Modes of payment: fee-for-service, capitation, provider salaried service</td>
<td>+</td>
</tr>
<tr>
<td>Target payment or provider oriented incentive</td>
<td>+</td>
</tr>
<tr>
<td>Incentives on institutional level</td>
<td>+/-</td>
</tr>
<tr>
<td>Provider and institution penalty</td>
<td>+</td>
</tr>
<tr>
<td>Formulary</td>
<td>+/-</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Premiums, patient incentives</td>
<td>+</td>
</tr>
<tr>
<td>Co-payment, user fee</td>
<td>+</td>
</tr>
<tr>
<td>Patient penalty</td>
<td>-</td>
</tr>
</tbody>
</table>
## Organization and regulation - evidence

<table>
<thead>
<tr>
<th>Provider</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Revision of professional roles</td>
<td>+/-</td>
</tr>
<tr>
<td>Clinical multidisciplinary teams</td>
<td>+/-</td>
</tr>
<tr>
<td>Formal integration of services vs. isolated vertical provision</td>
<td>+/-</td>
</tr>
<tr>
<td>Skill mix changes (changes in numbers, types or qualifications of staff)</td>
<td>+/-</td>
</tr>
<tr>
<td>Continuity of care</td>
<td>+</td>
</tr>
<tr>
<td>Satisfaction of providers with the conditions of work and its material and psychic rewards</td>
<td>+</td>
</tr>
<tr>
<td>Communication and case discussion between distant health professionals</td>
<td>+/-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Structural</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Changes in the setting/site of service delivery</td>
<td>+/-</td>
</tr>
<tr>
<td>Changes in physical structure, facilities and equipment</td>
<td>+/-</td>
</tr>
<tr>
<td>Changes in medical record systems</td>
<td>+</td>
</tr>
<tr>
<td>Changes in scope and nature of benefits and services</td>
<td>+/-</td>
</tr>
<tr>
<td>Presence and organisation of quality monitoring mechanisms</td>
<td>+/-</td>
</tr>
<tr>
<td>Ownership, accreditation, and affiliation status of hospitals and other facilities</td>
<td>+/-</td>
</tr>
</tbody>
</table>

| Regulation                                          | -          |
Basic Medical Education

- Clinical practice were shown to be associated with content of textbooks which were used by physician during medical studies.
- Strict hierarchy makes it even more complex as physician’s behavior depends on the textbooks used by the head of department or deputy head of the health facility, responsible for clinical practice.
Dissemination of educational material

• Commonly used method of passive dissemination of information;
• Most surveys report low effectiveness of the method, but national standards may have a medium effect provided context is conductive to change

Dissemination of Educational Material

Effectiveness depend on:

- Characteristics of intervention;
- Characteristics of the service provider;
- Characteristics of the behavior targeted;
- Characteristics and content of the organization.

Dissemination of Educational Material

Influence of the educational materials dependant upon:
Subjective opinion of a physician on a credibility of the source and the channel;

- Credibility of the authors, attractiveness of the proposed methodology, quality and structure of the material, simplicity, clear evidence, logically and clearly presented results, familiarity of subject, not require new knowledge and skills, meets current professional values and patient expectations, simplicity

Dissemination of educational material

Scientific style

or

Commercial advertisement style

Brochures, leaflets, or books

Short-term Training

• Small effect of interactive workshops and discussions on practice change is evident;
• Monologue lectures and sessions are unlikely to change practice
• Possibly effects are short-term anyway;
• Probably more effective if used in combination
• More effective if used in combination

Teaching Basis of Evidence-based Medicine: searching information and critical reading

• Effective if supported by all the other required components such as quick access to literature, reading time, incentives

Quality Improvement Methods

• Consensus building – ambiguous evidence

• Educational outreach visits could be effective in a combination with other methods
Quality Improvement Methods

Patient pressure – could have a strong impact though sometimes negative; often dependent on type of treatment, diagnoses and methods of health care financing/payment


Local opinion leaders – mixed effect


Audit and feedback – medium or weak effect; physicians tend to adapt;

Quality Improvement Methods

• Mass media interventions – some evidence of effectiveness, but details are unclear

• Interprofessional education – generally, physicians of different disciplines do not cooperate well
Reminders

Good evidence is available for effectiveness, in particular, where additional incentives are used

Media

• Paper-based
• Paper-based computer-aided
• On-screen reminders
Reminders

- Cue sheets – non-patient specific list or sequence of activities;
- Check lists – a set of tick boxes or lines to complete, non-patient specific
- Patient profile – to-do-list for a given patient without fields to fill out
- Profile checklist – patient specific checklists and have fields to fill out
Continuous Quality Improvement

• Comprehensive methodology based on management of process quality improvement;
• Process is a set of quantifiable steps involving the entire staff of the health facility to address a quality improvement target;
• Monitored targets are subject to change;

Financing
Revenue Generation Process

• Options:
  – Taxes – ear-marked and unmarked
  – CMI
  – VMI
    - supplement or substitution
  – Community financing
  – User payments
    • formal
    • informal

• Mostly mixed and not “pure types”
• All the finances come from taxpayers / citizens
Reforms of GP Hospitals in Hungary

Introduction of PPS

Discharge/100

Average stay

Beds/100


Койки на 1,000
Выписки на 100
СПП
Bed/day Payment

Reimbursement

Day

Health Facility Expenses
Conclusions

- Basic medical education and patient pressure are major factors influencing health care providers behavior.
- Disseminating educational material and short-term training activities alone usually do not change clinical practice;
- Clinical recommendations development is also not a self-sufficient methods to promote effective treatment technologies;
- Financial incentives are needed, but are not a panacea;
- Complex approach required.