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Knowledge Management & Healthcare

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Knowledge Management

Knowledge management involves efficiently connecting those who know with those who need to know and converting personal knowledge into organisational knowledge

Yankee Group

The Economist **18 November 2002**

Knowledge Management

Knowledge is power, which is why people who had it in the past often tried to make a secret of it.

In post-capitalism, power comes from transmitting information to make it productive, not from hiding it!

__Managing in a time of Great Change__

Peter Drucker

Knowledge Management

A major business strategy involving people, process and technology

A conscious strategy for getting the right

knowledge to the right person at the right time!

Characteristics of Knowledge

tacit knowledge : **a valuable form of clinical knowledge acquired through experience. It is often unarticulated and unrecorded. It should be investigated, shared and contested**

explicit knowledge

   articulated but not recorded

   - daily exchange on ward rounds

   articulated and recorded

   - medical records or databases, library resources

Medical Knowledge

medicine lacks a modern information infrastructure that rigorously and efficiently connects all those who produce and archive medical knowledge to all those who need the proper application of that knowledge

Weed, L. New connections between medical knowledge and patient care BMJ 1997 315 231-235

Medical Knowledge

Medical practice relies too much on the human mind for its knowledge

Relevant information outside specialised knowledge is often not sought, which on occasions leads to serious errors

Clinical Knowledge

10,000 different diseases and syndromes

3,000 different types of drugs

1,100 different types of laboratory tests

400,000 articles added per annum to the biomedical literature

Sources of Knowledge

reports, databases, software, audits, libraries, manuals, policy documents, guidelines and protocols, individuals' memory, know-how, experience, teams, communities, groups, networks, meetings, training materials and management information

21ST CENTURY HEALTHCARE

Need more effective management and dissemination of medical knowledge derived from biomedical research

Need the dissemination of innovative medical procedures and best practice throughout healthcare organisations

Healthcare Organisations

Spiralling healthcare costs

Emphasis on accountability and transparency

Need for integrated healthcare information

Innovative use of information systems to support organisational strategy

Healthcare Organizations

Rigidly bureaucratic, hierarchical and discipline-fragmented?

Many are ignoring KM for dealing with the flood of information available

Improvement in clinical quality creates competitive advantage

Healthcare Culture

Culture of not sharing information: everyone is too busy!

Create an environment that is conducive to sharing and receiving other people's knowledge for patient care

Healthcare Organizations

Hospitals : professional bureaucratic organizations (Mintzberg)

Depend on the independent professional skills of those who deliver the services to patients

Importance of teamwork between doctors,

Knowledge for Clinical Decision making

Need to retrieve and organize information in a usable format to improve clinical decision making

Still need judgement based on relevant information

to arrive at a clinical decision

Healthcare Professionals

A need to capitalize on the wealth of expertise scattered across healthcare organizations

Too much knowledge lying idle in healthcare organizations - do not use staff efficiently

Healthcare Professionals

Are involved in systematic clinical problem solving

Experiment with new approaches and initiatives to care

Aim to transfer knowledge quickly and efficiently for patient care purposes

Healthcare Professionals

Traditional professional divisions run deep

Lack of appreciation of the different perspectives of doctors, nurses and other healthcare workers

Importance of multidisciplinary teams working

within clinical directorates

Barriers to Integrated Healthcare

Fear - patient confidentiality, job security

Territorial protectiveness

Insufficient customer/patient focus

Lack of common IT standards and connectivity

IT Departments

Role:

Essential to leverage the collective clinical knowledge that healthcare organizations acquire on a daily basis

Such clinical knowledge could be applied to elevate productivity

Better resource utilization and changing behaviour of healthcare workers by using clinical and best practice guidelines

Healthcare Information Technology

Paradox of healthcare technology

- Sophisticated diagnostic tools

- Medical records, lab. Reports. Often forms continue to be available in print format!

- Information exchange between doctors, labs, pharmacies and hospitals is often done on paper!

Hospital IT Systems

Should help to reduce practice overheads by improving efficiency, effectiveness and quality care

Need high quality electronic medical records

Need for clinical leadership in development and procurement of IT in healthcare organizations

Hospital IT Systems

Should integrate basic care data across hospital business systems to create a complete picture of what was done to the patient, ascertain who did it, and at what cost

Importance of clinical data regarding outcomes

Gather longitudinal data - can lead to more fundamental care delivery re-design

Knowledge Management strategies

Codification strategy: knowledge is codified and stored in databases

Personalization strategy: knowledge is shared through person-to-person contacts

Knowledge Management Tools

Intranets

Document management systems

Data warehousing

Data filters

Software agents

Roles for Librarians

Knowledge Management resource

a repository of :

- **best practices**
- **competitive intelligence**
- **policy and strategy documents**
- **guidelines and protocols**
- **books & journals**
- **electronic resources**

Evidence Based Healthcare

Changing way healthcare is undertaken

Clinicians are relying more on the medical literature for clinical decision making

Librarians play an important role in the spread of Evidence Based Practice

Knowledge Base of Healthcare

QuickTime™ and a
Photo - JPEG decompressor
are needed to see this picture.

Evidence Based Healthcare

Strong movement to develop clinical guidelines using the evidence base for clinical practice

Guidelines requires the cooperation of staff working in both secondary as well as primary care

Drivers for Healthcare KM

Insufficient evidence based decision making

Information overload

- **despite increased availability of information and communications technology!**

IAMS Model - USA

IAMS - *Integrated Advanced Information Management systems*

Importance of the Hospital Library as a key component or focal point of a hospital information system

Role of Information Technology

Need to remember that technology is a commodity

Source of competitive advantage is how IT is used to

leverage information and knowledge

Technology should be flexible, functional,

manageable and affordable

Hospital Information Management Systems

Billions has been invested in IT with very little results
Due to a failure to focus on productivity?

Not very flexible or amenable to integration or

external linkages

Networking - not as simple as it looks

Knowledge Management Programs

CKO - Chief Knowledge officer

Knowledge team with representatives from a variety of disciplines

Develop collaborative technologies
e.g. Intranets & document management systems

Focus on identifying and auditing intellectual capital

Critical Success Factors

A knowledge champion and support of top management

Shared vision and personal commitment

Interpersonal trust and respect

Creation of a culture to support learning and knowledge sharing

Develop team based financial incentives to encourage doctors to work in teams and less as "lone rangers"

Six Steps to develop a successful KM Programme

1. Appoint a Chief Knowledge Officer (CKO)

2. Set up an Advisory group

3. Conduct an Information/Knowledge Audit

4. Recommend an approach for KM

5. Implement a KM management system

6. Create a skills directory/yellow pages to find subject experts within the organisation

Benefits of Healthcare Knowledge Management

Improved access to high quality information for patient care leading to increased patient satisfaction

Greater efficiencies, co-ordination and cost reduction

Enables Evidence based decision making to improve quality of health outcomes

Knowledge Management Quotation

"the future of knowledge management in health is bright. We already have adequate technology in the shape of the Internet and a good intellectual framework in evidence-based health, which are being used to improve each other. We also have many health librarians who are knowledge management professionals."

Jeremy Wyatt 2001

Knowledge Management

- Issues for librarians:
  - How can we begin to manage knowledge better within our organisations?
  - How can we manage knowledge better within our libraries?
  - Will librarians have specialist roles in managing knowledge for our institutions?

References

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Probst, G et al. *Managing Knowledge* . 2000

Virtual Library on Knowledge Management
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