Knowledge management in mental health services: the role of NHS libraries

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What is KM?

A re-working /re-thinking of familiar concepts:

- Information management
- The “learning organisation”
- “info-mapping”
- Resourced-based theories of the organisation

etc.

(Corrall 1999)

The roots of KM

Japanese management philosophies:

- Total Quality Management (TQM)
- *Kaizen*
- Just in Time

all rely on

- *Sharing of tacit and explicit knowledge*
- *Teamworking*
- *Management of change*
- *Exploitation of knowledge as a capital asset*

Keeling, Carole and Lambert, Siân (2000)

Definitions of KM (1)

"KM is a strategy employed by an organisation wherein its collective information resources, acquired knowledge and personal talents are shared and managed in order to increase productivity, create new knowledge and new value, and improve competitiveness"

(Lindsey-King 1998)

Definitions of KM (2)

- “Knowledge management involves efficiently connecting those who need to know, and converting personal knowledge into organisational knowledge”

(Godbolt 2002, after Yankee Group 2000)

Definitions of KM (3)

"Knowledge management is the task of developing and exploiting an organisation's tangible and intangible knowledge assets"

(DH 2001)

...but...

"People who define knowledge management are charlatans and carpetbaggers"

David Snowden, IBM Global Services

Aspects of knowledge (1)

- Data
- Information
- Knowledge
- Wisdom

…with apologies to T S Eliot

Aspects of knowledge (2)

- Explicit
- what we may “know about” via an articulated and recorded “body of knowledge”
- Tacit/implicit
- acquired through personal learning and experience
- reflected in an individual’s capacity for action
- could be articulated – but usually isn’t

Aspects of knowledge (3)

- Knowledge as individual or social construct
- The organisational environment in which people are encouraged to learn and to share knowledge
- Aspects of organisational “intelligence” that are amenable to planning and management processes

(Streatfield and Wilson 1999)

A caveat

- KM concept often associated particularly with the adoption of automated methods for capturing information and making it accessible

  BUT – *need to understand*:
- representation and organisation of knowledge
- behaviour of information users

  KM is *not* solely about IM&T
- (Perez 1999)

Aspects of KM (1)

- Content
- Infrastructure
- Skills
- Culture

(Haines 2001)

Aspects of KM (2)

Two different emphases:

- Codification
  - Accessing and re-using existing knowledge
- Personalisation
  - Capturing tacit knowledge

Aspects of KM and technology enablers

Existing KM technology enablers	
Codification strategy	**Personalization strategy**
Knowledge assets Intellectual capital management	Knowledge empowerment and Collaboration management
• Document management systems • Data mining systems • Knowledge inventory systems (search engines, knowledge mapping and information retrieval systems) • Data/information repositories (best practices, storytelling and lessons learned) • Online training systems • Electronic performance support systems • Database management system	• Help desk applications • Online workflow/document tracking • E-mail and messaging systems • Groupware • Group decision support systems • Yellow pages-directory of knowledge Sources and thought leaders • Communities of practice • Real-time data conferencing • Customer relationship management • Financial management systems • Executive information systems • Marketing information systems
Source: Charlie Bixler	

Basic KM technologies

- Intranets
- Relational databases
- Groupware (e.g. Lotus Notes)
- Document management systems
- Data mining/data warehousing

www.billinmon.com

Information retrieval system developments related to KM

- Automatic generation of Web page metadata (Dublin Core)
- Relevance ranking
- Use of “intelligent agents” for searching and current awareness
- Automated abstracting and indexing
- XML (interoperability, data exchange)

Cf. the (traditional) role of the information professional

- Acquiring and organising information
- Making it available for use
- Disseminating it
- Disposing of it

"Librarians have always been knowledge managers"
(Lindsey-King 1998)

N.B. the information worker's (tacit) knowledge...

- The organisational context of a practitioner's work
- The patient population
- What type of information would be relevant
- How the practitioner works
- How the information would be used

(Fennessy 2001)

NHS “knowledge paradox”

- Richness in content/poverty in infrastructure

  NeLH, guidelines output
  cf. access to NHSnet

- Richness in skills programmes/poverty of KM culture

  ECDL, CASP
  cf. lack of organisational development or HR policies to encourage knowledge sharing

  (after Haines 2001)

The “bad old days” (1)

Locating an answer to a clinical question required:

- A visit in person to the library
- A literature search using library facilities

- Locating articles/books within the stacks
- Placing an ILL request if the items not available locally

The “bad old days” (2)

Major disadvantages:

- Involved time away from the clinical area
- A poor use of a busy clinician’s time

Mooer's law

"An information retrieval system will tend not to be used whenever it is more painful and troublesome for clients to retrieve the information than to live without it"

The clinician as knowledge worker

- Data gatherer

  Capturing and storing data, e.g. admission histories

- Information user

  Using information generated and displayed by a clinical information system

- Knowledge user

  Using sources such as textbooks, research literature, clinical practice guidelines in interpreting clinical phenomena

- Knowledge builder

  Generating new domain knowledge via clinical research

(*after* Snyder-Halpern 2001)

Factors involved in seeking answers to clinical questions

- "Cost" factors (see previous)
- Urgency of a patient's problem
- Expectation that an answer exists

- KM skills
  literature searching
  critical appraisal
  bibliographic management
  -- a major issue

The national policy context

- *A First Class Service* 1997
  - Clinical governance concept
- *Information for Health* 1998
  - NeLH and VBLs
- *Building the Information Core* 2001
  - IM&T implications of NHS Plan
- *HSG(97)47* guidance on library services
- *Mental Health NSF*

Role of KM in EBP

As knowledge users, clinicians and managers have questions about:

- What is best practice?
- Is it effective?
- How do interventions compare in terms of their relative effectiveness?

Wider KM initiatives in health care: (1)

Many related to EBP, e.g.

- Specialised bibliographic databases
  DrugScope, HealthPromis
- Systematic reviews
- Secondary EBM literature

  Effective Health Care, evidence bulletins e.g. *Bandolier*, abstracting journals e.g. *EBMH*
- TRIP guidelines database
  www.tripdatabase.org.uk
- Clinical trials databases
- Research gateways e.g. TRIAGE

Wider KM initiatives in health care: (2)

- Centre for Evidence-Based Mental Health – gateway to evidence-based mental health resources www.psychiatry.ox.ac.uk/cebmh/
- Critically Appraised Topics: CATbank www.jr2.ox.ac.uk/cebm/docs/catbank.html
- InfoPOEMS clinical awareness system www.infopoems.com/index.cfm
- DIPEX patient experiences database www.dipex.org/
- CLIP: database of clinical effectiveness initiatives

  etc. etc.....

Priorities for information system and service development....

- locate decision support tools as near as possible to the clinical decision maker, so as to reduce the perceived resource costs
- provide reliable, high-quality information resources that are user-friendly and convenient
- integrate information resources with clinical information systems

The National electronic Library for Health (NeLH)

- Knowledge — Cochrane Library etc.
- Know-how
  - Explicit — Clinical guidelines
  - Tacit — (development process)
- Knowledge management

www.nelh.nhs.uk

The National electronic Library for Health (NeLH)

- Main NeLH
  to integrate with local intranet content
- Virtual Branch Libraries (VBLs)
  e.g. NeLMH, NeLLD, NeLKM
- Professional portals
  portals for PAMs and librarians now available

-- *Link to and support (*not *replace) existing NHS libraries*

NeLH developments

1999-2003

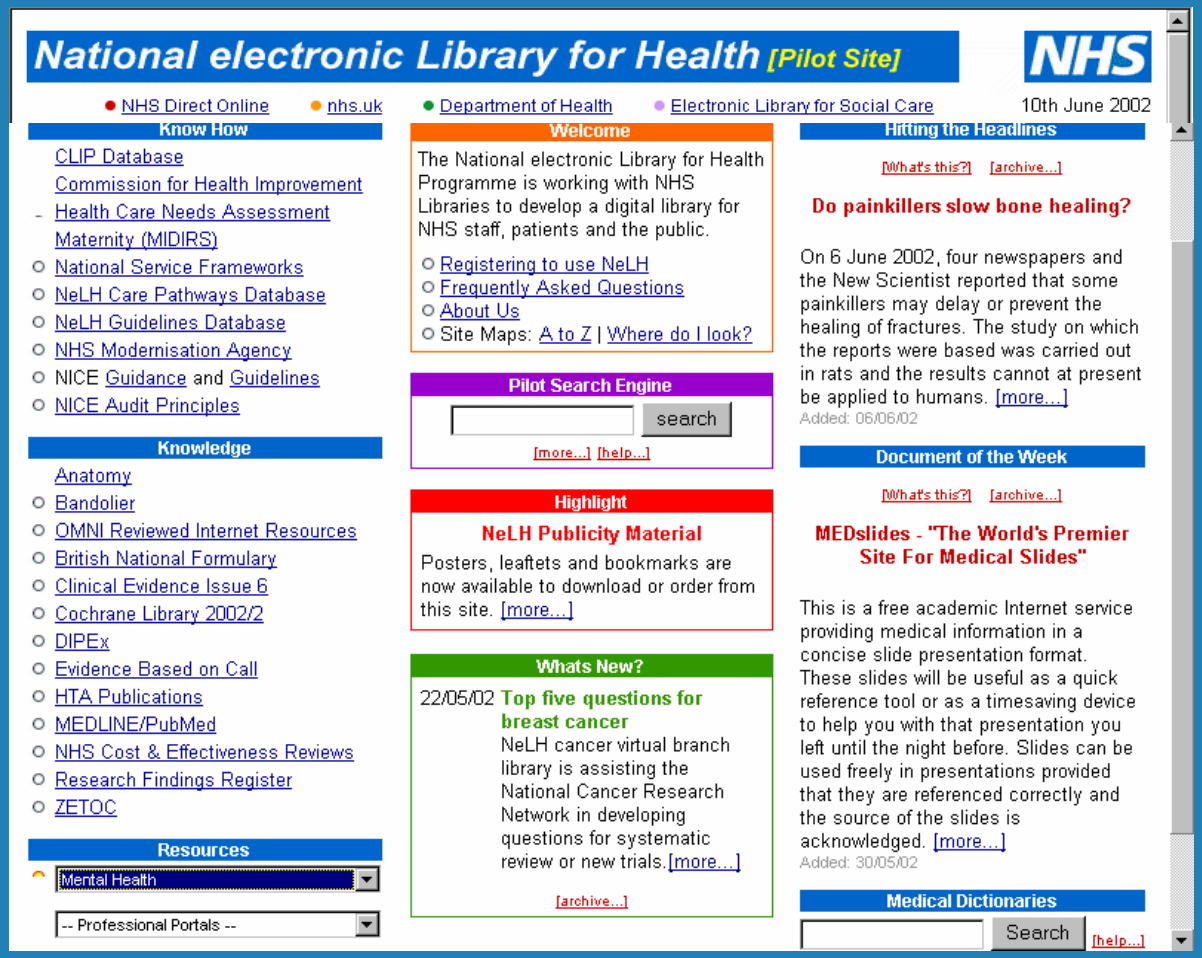
- Integrating knowledge resources at the point of care
- Access to answers to questions at the point of care from with the EHR/EPR

www.nhsia.nhs.uk/nelh/

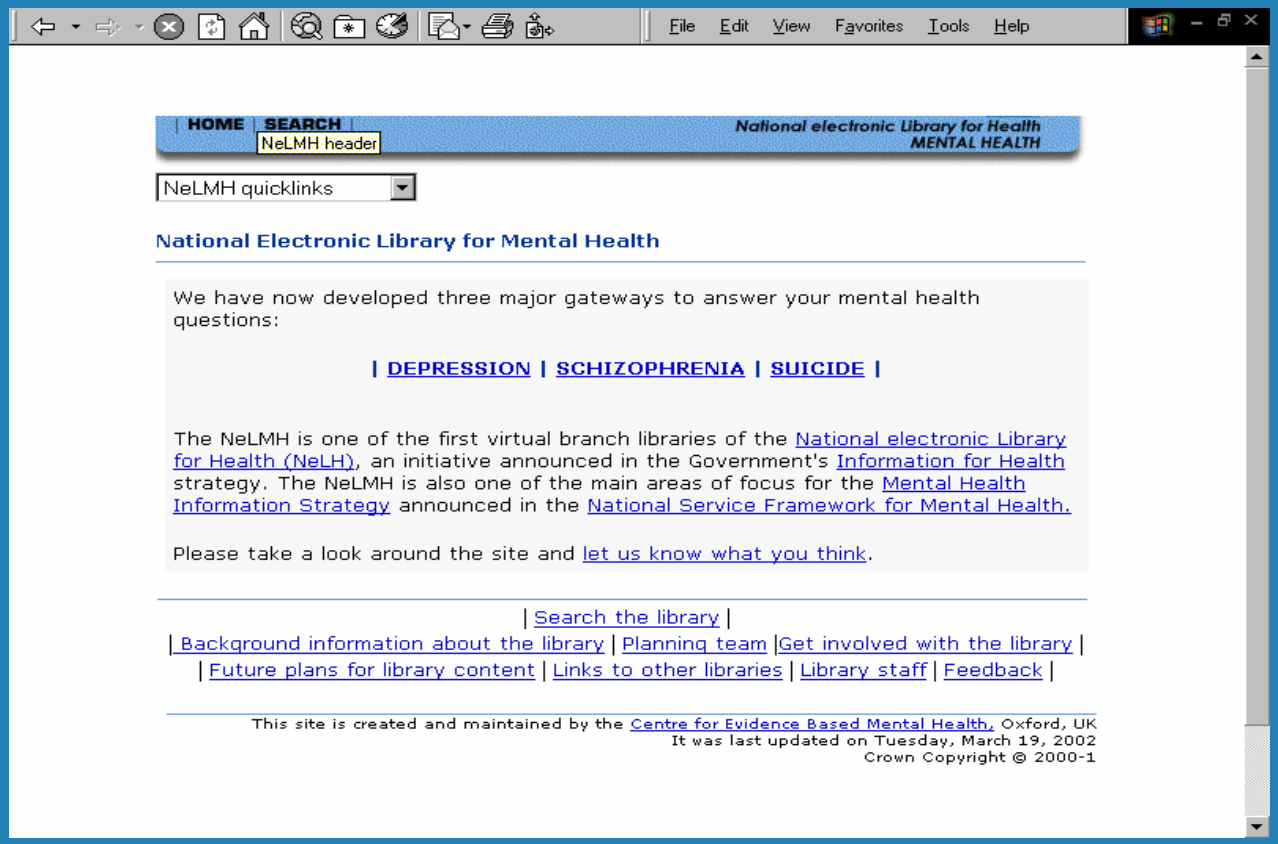
- National Knowledge Service

  Further integration of NeLH and nationally purchased information resources with NHS libraries

NeLH home page



NeLMH home page



Maximising access to explicit knowledge: the clinical intranet

- Organisational information

  generated locally – “corporate memory”

  - directories (e.g. services, courses)
  - databases (e.g. vacancies)
  - documents (e.g. newsletters, policies, protocols)
  - other systems (e.g. IT helpdesk)

- Training delivery

  generated nationally or internationally

  - Virtual Learning Centre

The clinical intranet: cont'd

- "Soft" clinical information
  generated locally, nationally, internationally

  - Bibliographic databases
    PubMed, Cochrane Library etc.
  - Other research evidence
    BMJ Clinical Evidence, Bandolier etc.
  - Clinical databases **e.g. OMIM**
  - Reference sources **e.g. eBNF**
  - Clinical guidelines **e.g. TRIP**
  - Care pathways
  - Patient information leaflets

The clinical intranet: cont'd

- "Hard" clinical information: computerised patient record

generated locally

Clinical intranet provides *seamless access*

e.g Oxford Clinical Intranet

CCS soon to be available via SLAM intranet

The clinical intranet: future developments?

- How can clinical intranets provide context-sensitive linking to external information sources?
- How useful are decision support systems (DSS)??

Using and harvesting implicit knowledge

- Promoting collaborative working in project teams using networked applications
  - groupware
  - bibliographic management systems
- Fostering professional networks via communication facilities
  - web logs (“blogs”)
  - mailing lists/listservs
  - discussion boards
  - newsgroups
- Auditing skills/building expertise databases

(*after* Lacey Bryant 2001, Corrall 1999)

Roles of the librarian in supporting EBP

- Evidence locator
- Educator
- Disseminator
- Critical appraiser
- Resource provider
- Quality filter

After Booth (2000)

Common health library KM activities: (1)

Information services need to act as intermediaries between health practitioners and the knowledge available

- Working to improve networked access to the knowledge base, e.g. by building web/intranet sites
- Information skills training/outreach: locating and using clinical evidence

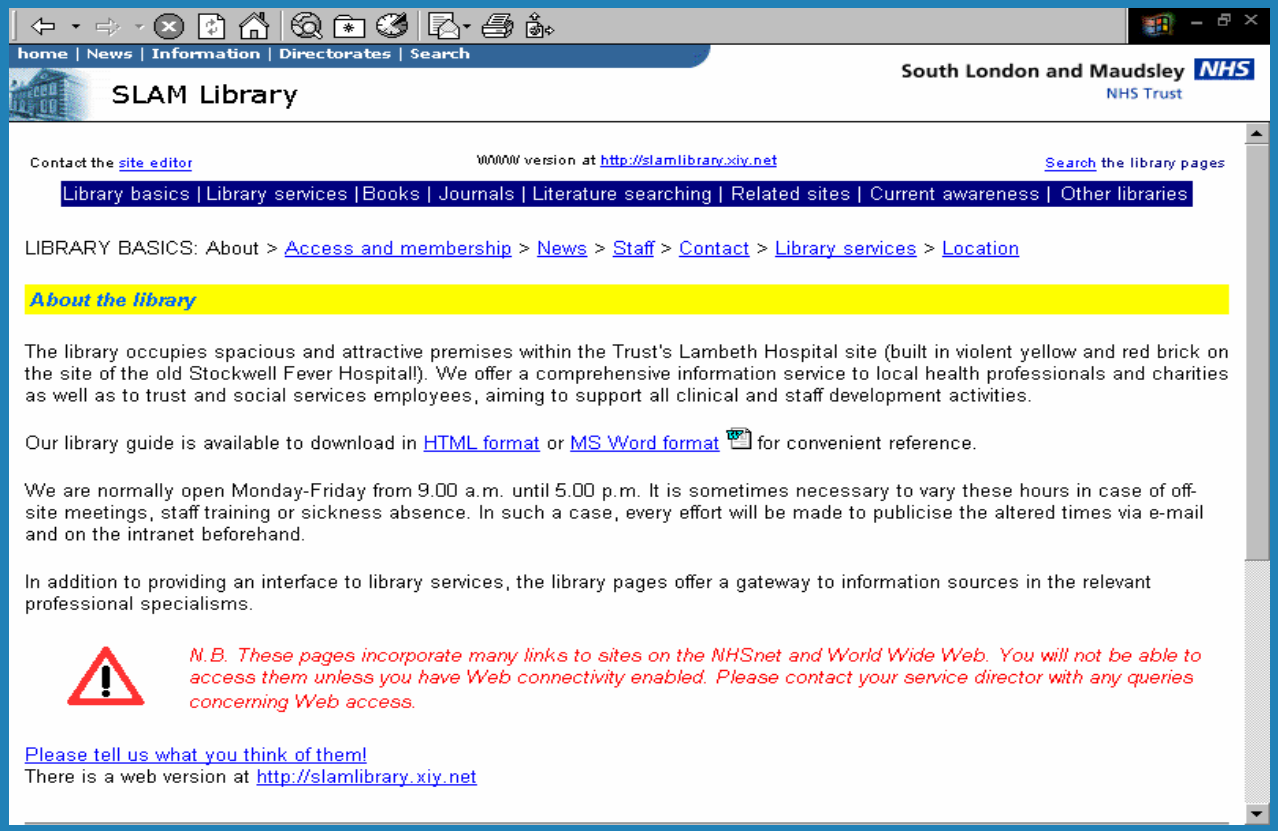
  --access to knowledge does not change clinician behaviour by itself
- Compiling lists of/guides to resources
- Providing current awareness services

Common health library KM activities: (2)

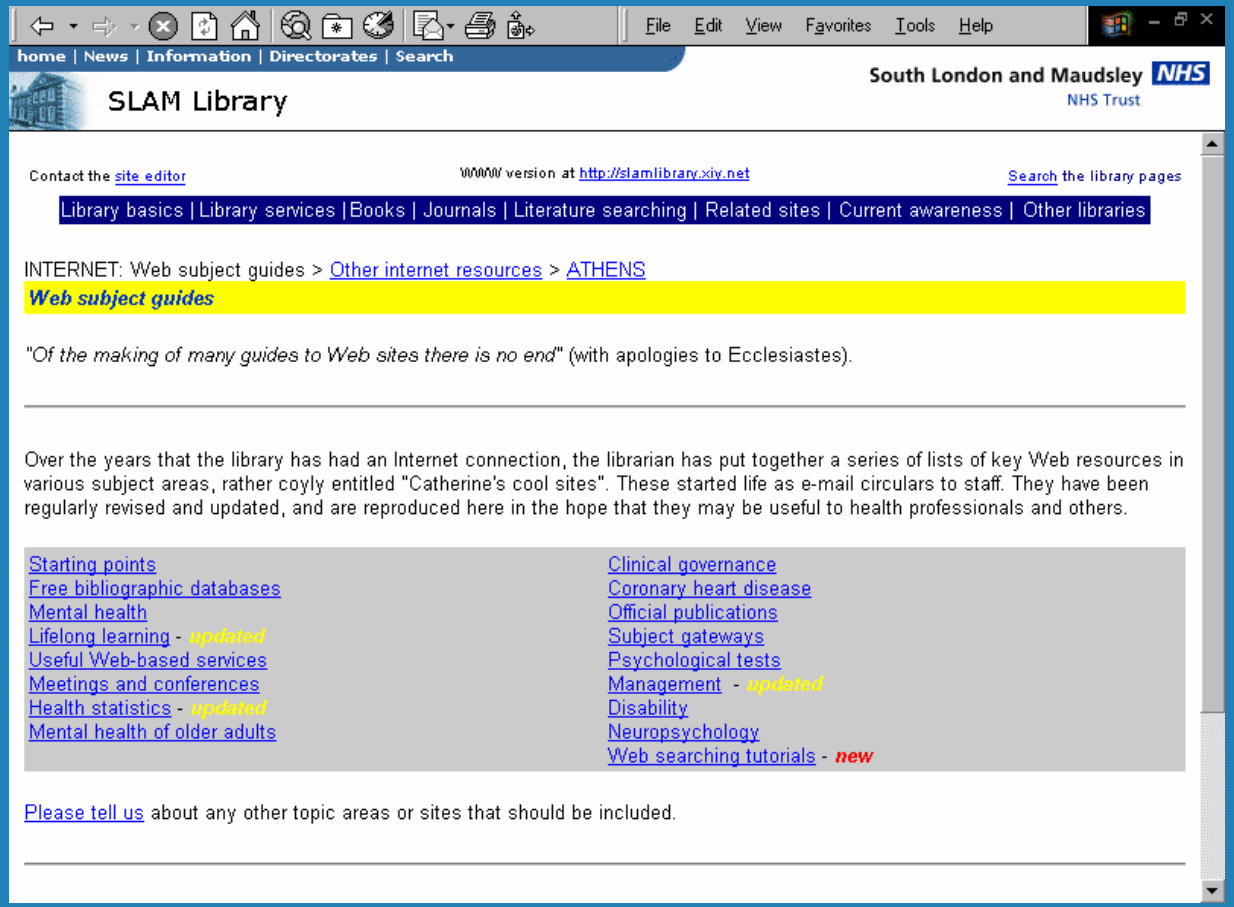
Reay House library intranet pages include:

- Web subject guides
- Lists of freely-accessible Web databases
- Presentations on health information topics
- Links to full text electronic journals and books
- Advice on sources of research information, critical appraisal, PDA use, pay-per-use document supply etc.
- Networked access to indexing/abstracting services (proposed) e.g. HMIC, EMBASE

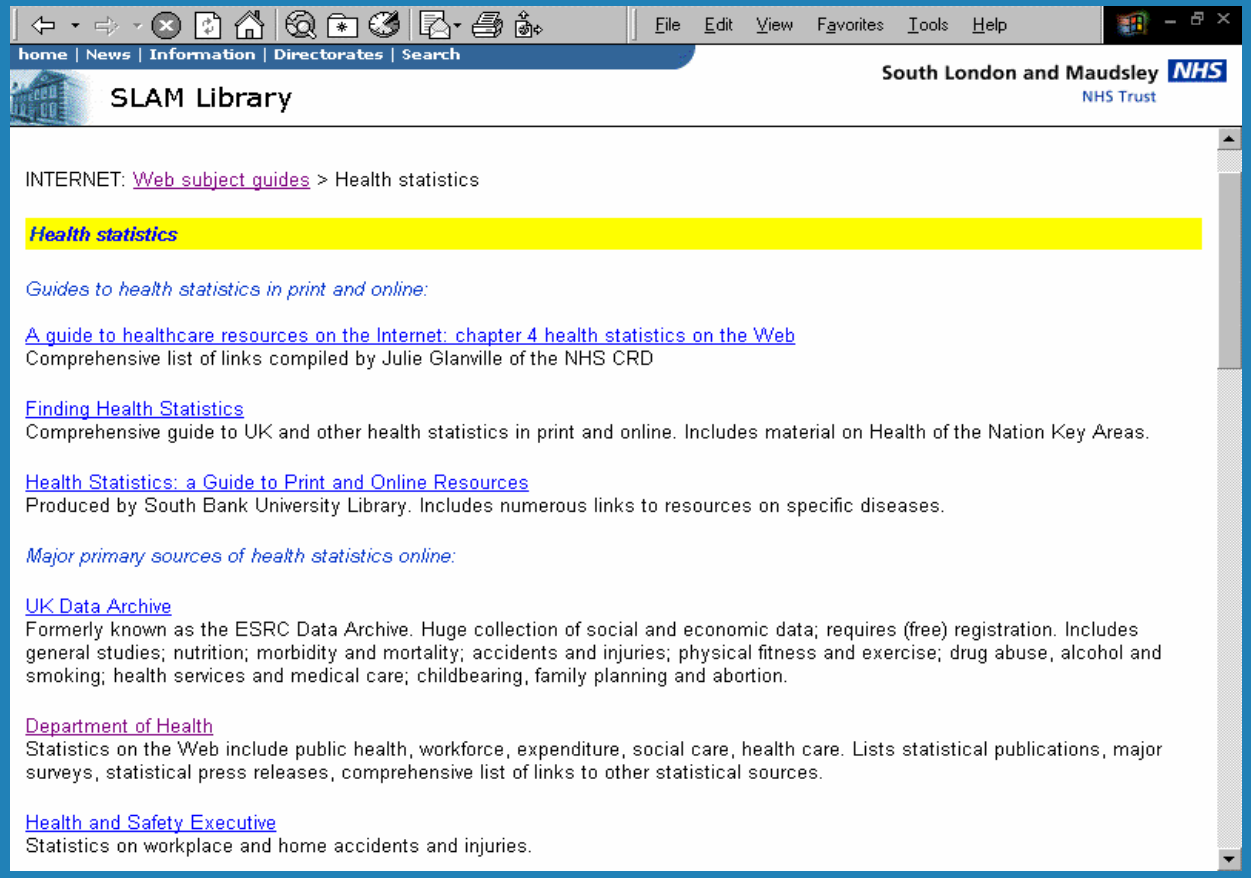
Library intranet: home page



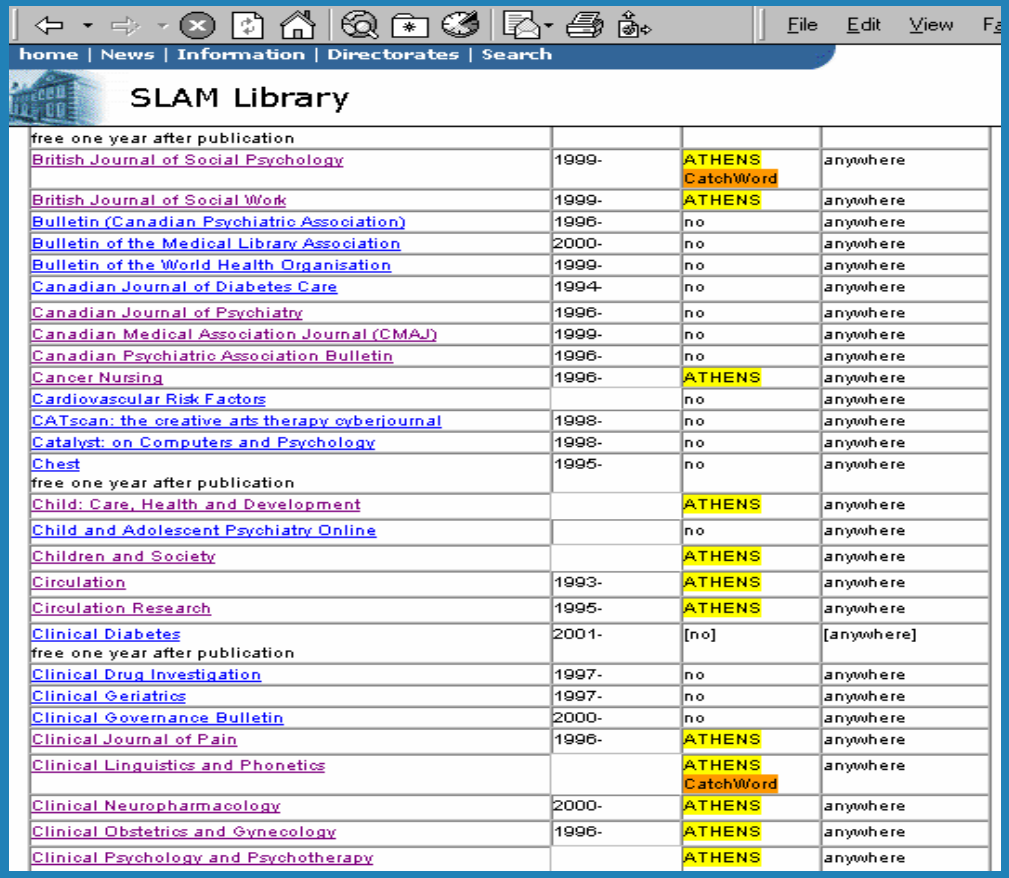
Library intranet: web subject guides



Library intranet: health statistics



Library intranet pages: list of electronic journals



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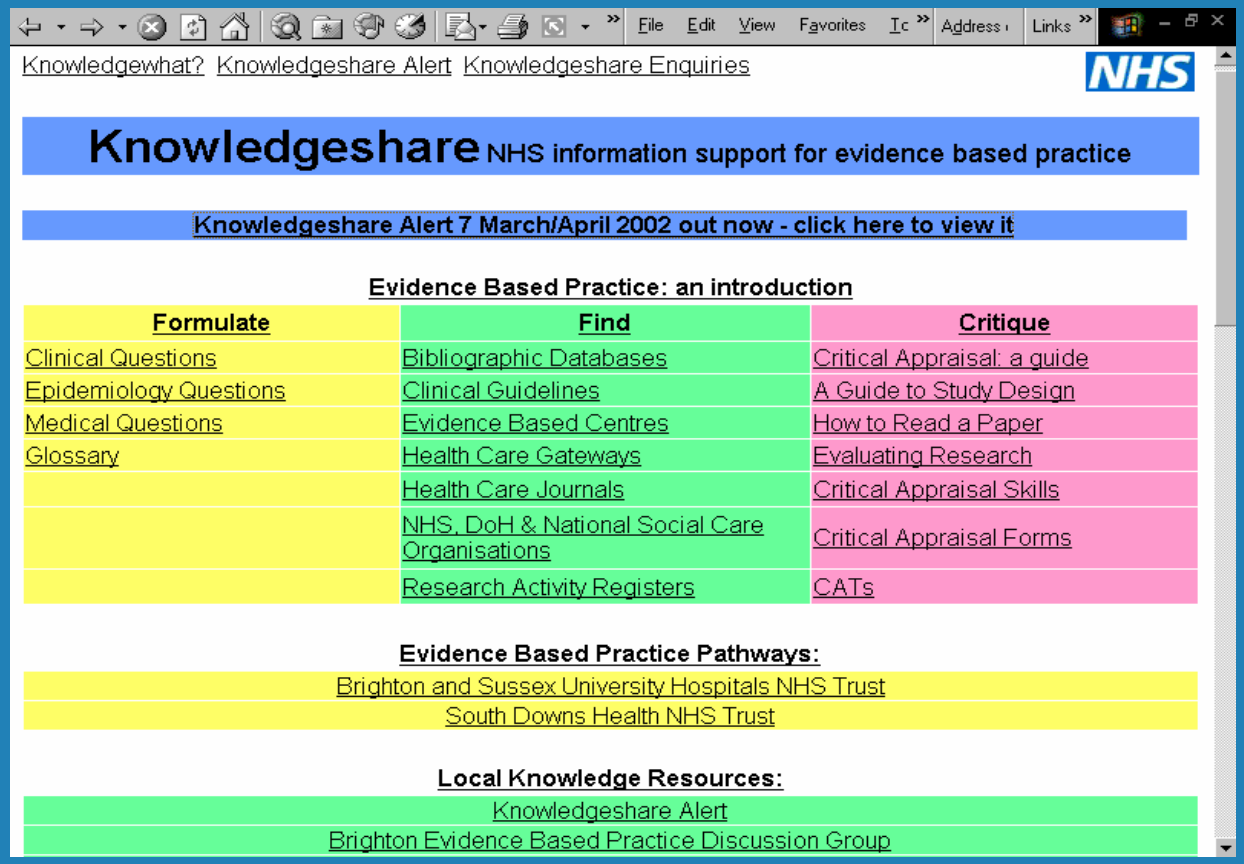
SLAM Library

free one year after publication			
British Journal of Social Psychology	1999-	ATHENS CatchWord	anywhere
British Journal of Social Work	1999-	ATHENS	anywhere
Bulletin (Canadian Psychiatric Association)	1996-	no	anywhere
Bulletin of the Medical Library Association	2000-	no	anywhere
Bulletin of the World Health Organisation	1999-	no	anywhere
Canadian Journal of Diabetes Care	1994-	no	anywhere
Canadian Journal of Psychiatry	1996-	no	anywhere
Canadian Medical Association Journal (CMAJ)	1999-	no	anywhere
Canadian Psychiatric Association Bulletin	1996-	no	anywhere
Cancer Nursing	1996-	ATHENS	anywhere
Cardiovascular Risk Factors		no	anywhere
CATscan: the creative arts therapy cyberjournal	1998-	no	anywhere
Catalyst: on Computers and Psychology	1998-	no	anywhere
Chest free one year after publication	1995-	no	anywhere
Child: Care, Health and Development		ATHENS	anywhere
Child and Adolescent Psychiatry Online		no	anywhere
Children and Society		ATHENS	anywhere
Circulation	1993-	ATHENS	anywhere
Circulation Research	1995-	ATHENS	anywhere
Clinical Diabetes free one year after publication	2001-	[no]	[anywhere]
Clinical Drug Investigation	1997-	no	anywhere
Clinical Geriatrics	1997-	no	anywhere
Clinical Governance Bulletin	2000-	no	anywhere
Clinical Journal of Pain	1996-	ATHENS	anywhere
Clinical Linguistics and Phonetics		ATHENS CatchWord	anywhere
Clinical Neuropharmacology	2000-	ATHENS	anywhere
Clinical Obstetrics and Gynecology	1996-	ATHENS	anywhere
Clinical Psychology and Psychotherapy		ATHENS	anywhere

Knowledgeshare home page www.knowledgeshare.nhs.uk



Knowledgewhat? Knowledgeshare Alert Knowledgeshare Enquiries

NHS

Knowledgeshare NHS information support for evidence based practice

Knowledgeshare Alert 7 March/April 2002 out now - click here to view it

Evidence Based Practice: an introduction

Formulate	Find	Critique
Clinical Questions	Bibliographic Databases	Critical Appraisal: a guide
Epidemiology Questions	Clinical Guidelines	A Guide to Study Design
Medical Questions	Evidence Based Centres	How to Read a Paper
Glossary	Health Care Gateways	Evaluating Research
	Health Care Journals	Critical Appraisal Skills
	NHS, DoH & National Social Care Organisations	Critical Appraisal Forms
	Research Activity Registers	CATs

Evidence Based Practice Pathways:

Brighton and Sussex University Hospitals NHS Trust

South Downs Health NHS Trust

Local Knowledge Resources:

Knowledgeshare Alert

Brighton Evidence Based Practice Discussion Group

Knowledgeshare newsletter

Knowledgeshare NHS information support for evidence based practice

Knowledgeshare Alert 7 - March/April 2002:

Bi-monthly bulletin outlining the latest information in evidence based practice available from health care libraries in the East Sussex region, collated by the Knowledgeshare project, The Library, Sussex Postgraduate Medical Centre, Brighton.

Contents:

NICE News

Web Alert - recommended web sites

Book Alert - latest books

Journal Alert- latest journal articles

Events and Courses - provided by East Sussex Health Care Libraries

NICE News

The National Institute for Clinical Excellence/ NICE has issued guidance in the following areas:

Appraisal consultation document: computerised cognitive behaviour therapy.
http://www.nice.org.uk/article.asp?a=29161

Appraisal consultation document: surgery for people with morbid obesity.
http://www.nice.org.uk/article.asp?a=28700

Guidance on the use of entanercept for the treatment of juvenile idiopathic arthritis.

References

Berkman, Eric. (2001) When bad things happen to good ideas. *Darwin Online*, April. At http://www.darwinmag.com/

Bixler, Charlie. KM in ever-changing times. *Application Development Trends* October 2001. At http://www.adtmag.com

Corrall, Sheila (1999). Are we in the knowledge management business? *Ariadne* 18. At www.ariadne.ac.uk/issue 18/

Fennessy, Gabby (2001). Knowledge management in evidence-based healthcare: issues raised when specialist information services search for the evidence. *Health Informatics Journal* 7 4-7

Godbolt, Shane (2002) Knowledge management: a practical approach. Presentation given at Research, Evidence and Knowledge in Health conference February 2002. At http://www.londonlinks.ac.uk/

References (cont'd.)

Graeber, Stefan and Geib, Dieter. Clinical workstations supporting evidence based medicine. In Hasman, A ed. *Medical Infobahn for Europe.* IOS 2000; pp. 14-17.

Haines, Maggie (2001) Knowledge management in the NHS – platform for change. Presentation given at NHSIA conference, Birmingham, 26/11/01. At http://www.nhsia.nhs.uk

Keeling, Carole and Lambert, Siân (2000). Knowledge management in the NHS: positioning the healthcare librarian at the knowledge intersection. *Health Libraries Review* 17 136-143

Lacey Bryant, Sue (2001) Putting the knowledge base to work. *Clinical Governance Bulletin* 2(5) 14-15)

Lindsey-King, Cathy. Knowledge management: your link to the future. *Bibliotheca Medica Canadiana* 20(2) 74-75

References (cont'd.)

Perez, Ernest (1999). Knowledge management in the library – not. *Database* 22(2) 75f.

Shortliffe, Edward H (1999). The evolution of electronic medical records. *Academic Medicine* 74(4) 414-419

Streatfield, David and Wilson, Tom (1999). Deconstructing 'knowledge management'. *Aslib Proceedings* 51(3) 67-71

Snyder-Halpern, Rita et al. (2001) Developing clinical practice environments supporting the knowledge work of nurses. *Computers in Nursing* 19(1) 17-26