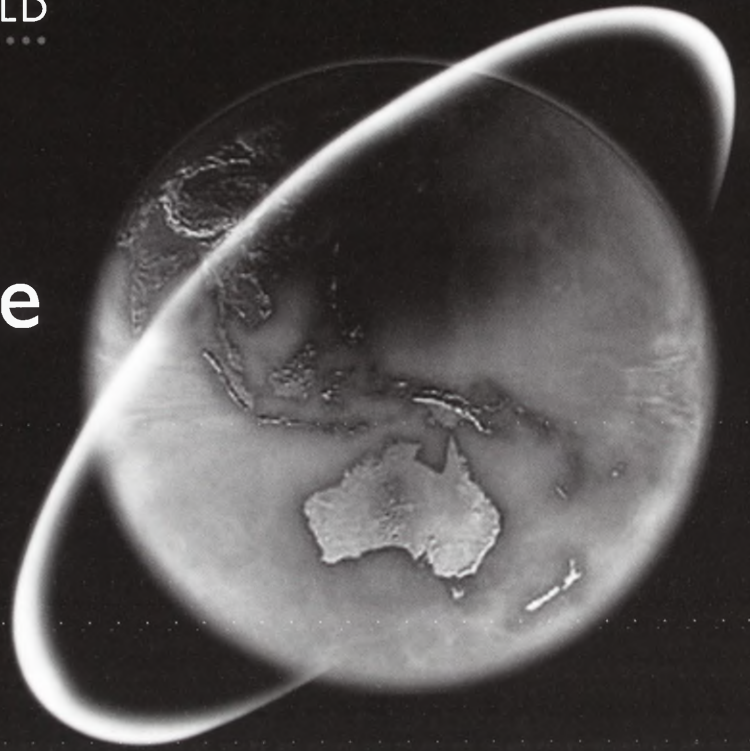


Basic medical research on the internet for lawyers



This article provides an overview of some useful sites for accessing health information, as well as some guidelines for approaching internet-based medical research.

ACCESSING HEALTH INFORMATION ON THE INTERNET

Advances in the way medical information is stored and retrieved have provided health professionals and consumers with ready access to a vast array of up-to-date information about health issues and best practices in health care. However, since anyone with access to the internet can develop a web page, many health-related sites contain little useful information. For this reason, the quality of health information available on the internet varies from excellent to poor. Whenever using the internet to obtain information, it is essential that: (1) the quality and credibility of the information source is considered; and (2) an efficient search strategy is employed.

APPRAISING THE QUALITY OF HEALTH INFORMATION

Judging the quality of internet-accessible health information is not necessarily a straightforward task. Kim et al¹ identified 165 criteria in the published literature to evaluate the quality of health-related websites. The most frequently cited

were content, design and aesthetics of the site, disclosure of authors, authority of source, ease of use, and accessibility and availability. Perhaps the most important of these criteria from the professional's perspective is credibility. As such, when considering the value of health information on the internet, questions which should be asked include: Is the information peer-reviewed? Does the site and the information source have credible and authoritative credentials? Is the site evidence based?

IDENTIFYING AN EFFICIENT SEARCH STRATEGY

There are three main sources of health information on the internet. *On-line bibliographic databases* provide access to citations for most original studies. *Consolidated databases* provide sources of health information that are pre-filtered, distilled and often appraised by experts in the field. These are in addition to the enormous range of *websites* that can be accessed by entering appropriate terms into the standard search engines on the internet.

However, before starting any search for health information, it is important to be clear about the specific type of information being sought, and to have a grasp of basic medical terminology. If using a bibliographic database, the index terms that have been developed for assigning articles in the database will be useful for this purpose. In MEDLINE, these are referred to as MeSH terms. Otherwise, use of a medical dictionary and drug guidebook may be necessary, since the spelling of med-

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ical terms and medication must be accurate in order to find the appropriate information. A useful electronic source for this medical and drug terminology is: www.myDr.com.au. This is a comprehensive consumer health website in Australia with free information covering a wide variety of diseases and conditions, tests and treatments, health and fitness issues, and medications.

BIBLIOGRAPHIC DATABASES

The most useful bibliographic databases for searching original scientific articles in the health field are:

- MEDLINE: This is produced by the United States National Library of Medicine and provides coverage for all areas of health care. It includes articles indexed from more than 4,300 journals.
- CINAHL: This concentrates on nursing, physiotherapy, occupational therapy, emergency care, and alternative treatments. It includes articles from more than 650 English language journals.
- EMBASE: This is a biomedical and pharmacological database.

These databases are readily accessible in many health libraries, with individual and institutional subscriptions also available.

For those without easy access to a health library, PubMed, a service of the US National Library of Medicine, provides access to over 12 million MEDLINE citations back to the mid-1960s and additional life science journals. PubMed includes links to many sites providing full text articles and other related resources. To access PubMed, visit: www.nlm.nih.gov.

SOURCES OF CONSOLIDATED INFORMATION

The explosion of scientific and medical knowledge has required the development of more effective means for presenting summarised, distilled or consolidated information. Two important types of consolidated information are especially useful: systematic reviews and evidence based clinical practice guidelines.

Systematic Reviews

Systematic reviews are systematically collected, appraised and synthesised reviews of multiple primary studies. Their main benefit is that they provide the reader with a summary of the best available evidence about specific health care interventions.

The Cochrane Collaboration provides a useful source of systematic reviews of literature on specific research topics. The collaboration is an international not-for-profit organisation established by a company limited by guarantee and registered as a charity in the United Kingdom. There are currently over 1,500 completed reviews and another 1,000 in progress, with about 60 new titles being added to every quarterly update of the library.

In Australia, national provision to the Cochrane Library was officially launched by the Minister for Health and Ageing in October 2002. As such, all Australians now have access to

the Cochrane Library. If you are using a computer with an Australian registered IP address, you should be able to gain access to the Cochrane Library simply by logging on anonymously. The website address is: www.cochrane.co.uk.

In addition, the National Institute of Clinical Studies (NICS), an initiative of the federal government, established in 2000 to close the gaps between evidence and clinical practice, has developed *The NICS Guide to the Cochrane Library* to help introduce people to the library and provide some initial guidance on how to find information within it. This is located on the Australasian Cochrane Centre website address: www.cochrane.org.au.

The NICS website itself also has a range of other useful links to Australian and international sites with an interest in evidence-based health care. To access the NICS site, go to: www.nicsl.com.au. The useful links are listed on the resources page.

Clinical Practice Guidelines

Clinical guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.

Australia's National Health and Medical Research Council (NHMRC) has published a number of documents which specify how clinical practice guidelines can be developed. Externally

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developed guidelines must meet certain requirements and standards in order to be approved by NHMRC. As such, guidelines endorsed by NHMRC would be expected to be amongst the most authoritative and credible sources for determining standards of practice. Information on NHMRC publications can be located at: www.health.gov.au/nhmrc.

An Australian publication of interest on the National Breast Cancer Centre website is a report entitled: 'Medico-legal implications of clinical practice guidelines in the diagnosis and treatment of women with breast cancer'. This can be located at the website: www.nbcc.org.au.

If seeking a more comprehensive source of clinical practice guidelines, The National Guidelines Clearing House provides a comprehensive database of evidence based clinical guidelines throughout the United States. The web address is: www.guidelines.gov. A similar site from the American Society of Internal Medicine has guidelines that focus on cardiology, neurology, and cancer. This site can be located at: www.acponline.org/sci-policy/guidelines.

USEFUL WEBSITES FOR HEALTH INFORMATION

The information below provides a list of additional website addresses that may be useful for obtaining information about specific health issues.

General Sites

Better Health Channel
www.betterhealth.vic.gov.au

This site provides simple yet reliable health information. Check the links 'common conditions' under the link 'topics' to find detailed information on common health conditions. A useful site for starting a search for medical information.

Food Standards Australia and New Zealand
www.foodstandards.gov.au

This site covers food standards for composition, labelling and contaminants, including microbiological limits, that apply to all foods produced or imported for sale in Australia and New Zealand. It is a site full of complex information, however it does provide basic fact sheets on food safety via the link 'information service'.

Health Insite
www.healthinsite.gov.au

Through this site you will find a wide range of up-to-date and quality assessed information on important health topics such as diabetes, cancer, mental health and asthma.

Medical Journal of Australia
www.mja.com.au

This site has some good articles that are released fortnightly

on all topics relating to medicine and health. Check the link 'search this site' to quickly find information required. Additionally, check the link 'clinical guidelines' to find information on topics such as indigenous health, cardiology, women's health, infectious diseases, general medicine and psychiatry.

Asthma

National Asthma Council
www.nationalasthma.org.au

This site is an excellent source of consumer information on asthma. Check the link 'asthma facts' to retrieve basic information sheets and brochures on triggers for asthma, action plans and management. Additionally, check the link 'links' for each of the state's asthma organisations to find further information on asthma.

Cancer

National Breast Cancer Centre
www.nbcc.org.au

This comprehensive site is designed to be a one-stop site for information about breast cancer in Australia. Check the link 'information' under contents to find useful information about risk factors, early detection, treatment, research, statistics and resources. Check the link 'glossary' under 'contents' for common cancer-related terms. This site includes ready access to a range of clinical practice guidelines of relevance to the diagnosis and management of breast cancer.

Australian Cancer Network
www.cancer.org.au

The Australian Cancer Network (CAN) has developed and disseminated evidence based clinical practice guidelines for several areas of cancer management, including melanoma, breast cancer and cancer genetics.

Cardiovascular Health

Baker Medical Research Institute
www.baker.edu.au

This site covers research into heart disease as well as providing information on healthy hearts. Check the link 'healthy heart and clinics' to find very comprehensive information on risk factors for heart disease, major types of cardiovascular disease, prevention measures and warning signs. This site is mainly aimed at researchers and students although it does provide some basic information for the public.

National Heart Foundation of Australia
www.heartfoundation.com.au

This site is a very good starter to find information on cardiovascular disease, rehabilitation and nutrition. Check the links 'health professional's information' and 'general heart

health information' to find useful information on everything related to heart health and disease. The icon 'links' down the bottom of the homepage provides links to both national and international sources.

Child and Adolescent Health

Sids and Kids Online
www.sidsaustralia.org.au

This site contains information and publications on Sudden Infant Death Syndrome (SIDS). Check out the links 'publications' and 'reduce the risk' to find information on the management and prevention of SIDS.

The Children's Hospital at Westmead
www.chw.edu.au

This site contains very useful information about common childhood illnesses, injury and disease, nutrition, safety, procedures and surgery. Check out the link 'parents' for fact sheets on numerous topics related to children. Check out the link 'professionals' then 'services' for information on rehabilitation.

Diabetes

Diabetes Australia
www.diabetesaustralia.com.au

This site contains information on the different types of diabetes as well as providing a link 'map of Australia' to the state associations. On the homepage, click on the link 'please enter Diabetes Australia' as some links on this homepage are unavailable. The most useful link on this site is the 'map of Australia'. On this map of Australia, click on the QLD, NSW and VIC associations to find out more about this disease and its management.

Drug and Alcohol Abuse

Centre for Education and Information on Drugs and Alcohol
www.ceida.net.au

This site is an excellent site for fact sheets and information about specific drugs. Check the link 'medical practitioners' for useful supplements on addiction, withdrawal and treatment as well as the link 'tools for frontline workers' for valuable fact sheets. Additionally, the links icon will take you to numerous Australian and international websites on services and resources.

The Australian Drug Information Network
www.adin.com.au

This site provides a central point of access to quality internet-based alcohol and drug information provided by prominent organisations in Australia and internationally. It has some excellent search engines and fact sheets. Check the link 'online databases' for useful Australian and international websites.

Injury

Disability Online
www.disability.vic.gov.au

This site is useful for finding information on physical, intellectual, sensory and neurological disability. Although it is aimed at providing information for people with disability and their families, it does provide some valuable information. Check the link 'disability topics' for articles.

Research Centre for Injury Studies
www.nisu.flinders.edu.au

This site has been developed to provide wider access to published reports, datasets and general information about injury in Australia. Check the link 'site map' to best find your way around this site and find reports on relevant topics related to injury.

Victorian Injury Surveillance and Applied Research System
www.general.monash.edu.au/muarc/visar

This site provides accurate and up-to-date information on injury statistics and prevention measures for the coroner, policy makers, standards authorities, the media, the public, safety experts, researchers and organisations for improving safety. It is a comprehensive site that provides key links to other safety organisations. Click on the link 'hazard' then 'hazard index' to find a list of publications on various injuries and recommendations for prevention.

Mental Health

Beyond Blue
www.beyondblue.org.au

This site is a useful site specifically for depression information. Check the 'depression resources' link for patient resources and research reports.

Mental Health and Wellbeing
www.mentalhealth.gov.au

This site is an excellent starter for finding information related to mental health illnesses such as depression, bipolar disorder, schizophrenia and anxiety disorders. Additionally, it has information on the rights and responsibilities, as well as national standards and consumer outcomes, for mental health in Australia. Check the 'publications and resources' link for legislations, brochures and reports, strategy documents and action plans, and promotion, prevention and early detection. **PL**

Endnote:

¹ Kim P, Eng TR, Deering MJ, Maxfield A., 'Published criteria for evaluating health-related web sites: review', *Br Med J* 1999; 318:647-9.