Review Article

e-RESOURCE APPLIANCE IN MEDICAL SERVICES AND HEALTHCARE: A BIBLIOGRAPHICAL, FULL TEXT AND OPEN SOURCE DATABASES

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ABSTRACT

In the present age of World Wide Web, we are linked globally. As we are moving towards the modern era, the knowledge and information is growing in each and every field by the help of electronic sources. In the present scenario, electronics resources are playing an important role and providing unusual/surprising information which can be stored in an electronic device for further usage. Nowadays, online books, online journals and other electronic databases are expanding swiftly, almost in all fields of research and development. These electronic resources deliver functional bunch of information via multimedia tools in short time and space. The aim to write this paper is to educate about the e-resources, available in the world wide in medical and healthcare sector with emphasis over the categories of e-resources, its density, advantages, disadvantages, medical open source (free) subscription base and its components.

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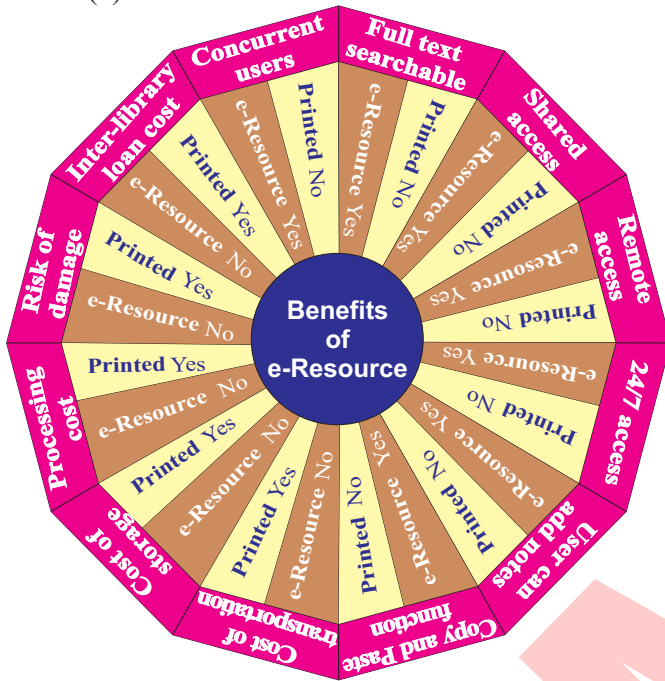Dept. Library and Information Centre
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Key words: Bibliographical, e-book, e-journal, open access, search engines, web resources.

INTRODUCTION

Nowadays, we are aware about the e-resources, it is common but most of user are unaware about them. Much of electronic resources are available on net but the user are not accessing due to lack of information. These are accessible in various shapes and forms like e-books, e-journals, and online database on different topics. With the efficient presentation by multimedia tools, electronic resources distribute the information on e-journals, e-discussions, e-news, e-data archives, e-mail on-line chatting, collectively termed as 'e-resources'. As the medium of communication, internet is more beneficial and it has become an imperative tool of delivering medical services and healthcare. Across the world, scientists use various databases, and other e-resources to search and use the latest information, such as, digital objects, including images, audio, video and

text material, digital resources have specific content management, user interface, user administration, System administration, interoperability and so on. The e-resource is known by various identical terms as online, paperless and virtual. Several experts regard e-resource that is produced, published, and distributed nationwide and transnational through certain electronic networking like internet. The web technologies have revolutionized the information-transmission vis-à-vis knowledge-connectivity, which has opened newer approaches and dimensions to the information systems. It is relatively analogous to a print material; its contents can be accessible in PDF or HTML format, through search engines (e.g. Google), library catalogue (OPAC) or publisher platform(1-3).

ADVANTAGES OF ELECTRONIC RESOURCES

- Hundreds of thousand article, research papers, monograms, multi-dimensional moving and still pictures can be seen by using electronic devices, connected via internet.
- An electronic resource is fast to browse information, which is available through various links.

FEATURES AND BENEFITS

E-resources provide positive features and benefits. The major benefits of e-resource ove printed are summarized below:(4)

Benefits of e-resources

Fig.1 Shows e-resource are most beneficial in the compression of print media.

3-OBJECTIVES

The key objectives of the present study are as follows:

1. To provide the awareness about available e-resources.

2. To provide the purpose and utilization of e-resources.

3. To provide period and frequency of using e-resources.

4. To provide limitations and problems of the users, while accessing e-resources.

5. To provide the level of satisfaction and coverage of e-resources.

6. To provide the right format for using e-resources.

7. To provide infrastructure and support to access e-resources.

TYPES OF ELECTRONIC RESOURCES

Electronic resource

There are several types of database and information resources which are being used worldwide.(5)

Figure. 2

Fig.2 **Presents the different types of e-resources and databases.**

Uses of e-resources in teaching

The educator, teacher, mentor, guide, researchers are using e-resources to make attractive, effective and interesting the classes, conferences, symposium, and seminars and so on (6-7)**.**
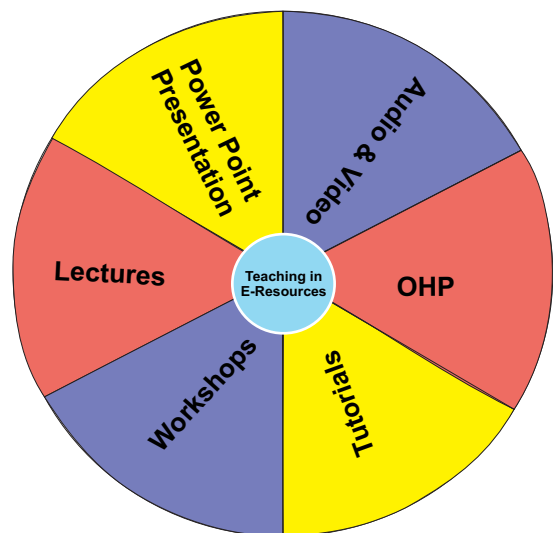

Figure. 3

Fig.3 **Presents different types of teaching e-resources and databases.**

- With the help of current technology, user can add various features in information, for making easily Comprehensive, attractive, such as animation, virtual reality and interactive mathematical charts and so on.
- It is quite cheaper than print resources.
- At present, space problem is quite crucial. Electronic resources provide appropriate solution for this problem. For the electronic information, there is no need for more space because vast Pool of information can be stored in a small electronic device.
- With the help of e-resources, the required information can be searched in a short span of time, it provides speedy traditional genre of information storage and retrieval systems.
- E-resource is downloadable and upload able (1,8-10).

DISADVANTAGES OF ELECTRONIC RESOURCES

- Newer versions of software constantly render older version's obsolete information, which relies in out-dated technologies, becomes inaccessible.
- Vendors/publishers do not permit the libraries to archive and do not guarantee maintaining archival copies of same products.
- In digital era, copyright is a major problem related to e-resources. Since fuller freedom, as downloading, copying material manipulated resources so on is not provided to most of the publishers and authors. One can only read the available information on the website.
- Most challenging problem with data security is related to e-resources. Due to this problem the master data storage server will be affected with virus, privacy, storage-device damages and other technological problems.
- Without electronic devices, can't interpret the information. Simply, it can be said that it depend upon specific devices.
- Without proper training, the user can't use better available database, so proper training should be offered to the professionals and users(8, 10-12).

E-RESOURCES IN MEDICAL SERVICES & HEALTH CARE: A BIBLIOGRAPHICAL, FULL TEXT AND OPEN SOURCE DATABASES

There are numerous e-resources associated with the medical service and health care, which are available on the websites, it is unattainable to study all related e-resources, so there are several selected bibliographical, full-text and open access database listed that will be used to know more in the field of medical services and health care(13-15).

Pub Med: PubMed is a free search engine accessing primarily the MEDLINE database of references and abstracts on biomedical and life sciences areas. The United States National Library of Medicine (NLM) at the National Institutes of Health maintains the database as part of the Entrez system of information retrieval. From 1971 to 1997, MEDLINE online access to the MEDLARS Online computerized database had been primarily through institutional facilities, such as university libraries. Pub Med, first released in January 1996, ushered in the era of private, free, home and office- based MEDLINE searching tool. The PubMed system was offered free to the public in June 1997 (16-18).

Scopus: Scopus is the major abstract and citation database of peer-reviewed literature, for example, scientific journals, books and conference proceedings. Deliver broad overviews of the world's research output in the fields of science, technology, medicine, social sciences, arts and humanities. Scopus features smart tools to track, analyse and visualize the research. As the research becomes increasingly global, interdisciplinary and collaborative, one can make sure that critical research around the world is not missed while preferring Scopus (16-18).

Wiley Online Library: Wiley is the international scientific, technical, medical and scholarly publishing business of John Wiley & Sons, with strength in every major academic and professional field and partnerships with many of the world's leading societies. It hosts the world's broadest and deepest multidisciplinary collection of online resources covering life, health*,* physical sciences, social science, and humanities. It deliver seamless integrated access to over 6 million articles from over 1500 journals, over 16,000 online books and hundreds of reference works, laboratory protocols and databases (16-18).

Lippincott Williams & Wilkins: Almost, 300 periodicals and 1,500 books in more than 100 disciplines are published under the Lippincott Williams & Wilkins (LWW) brand, as well as content-based sites*,* online corporate and customer services. Health professionals rely on information developed by LWW for the latest and most effective diagnostic and treatment options for their patients. Working with many of the world's leading authorities, LWW publishes leading references and handbooks in all of the major specialties in medicine and nursing. Grant's Atlas of Anatomy, Brunner and Suddarth's Textbook of Medical-Surgical Nursing, Stedman's Medical Dictionary and Memmler's

The Human Body in Health and Disease are a few of the reputed titles published by Lippincott Williams & Wilkins. Cancer: Principles and Practice of Oncology, The Washington-Manual of Medical Therapeutics and Nursing Drug Handbook are all considered to be leaders in their respective fields. LWW publishes nearly 300 practitioner journals and newsletters with LWW imprint, including American Journal of Nursing, Nursing, Annals of Surgery, Spine or Nursing Made Incredibly Easy! Its online service, Nursing center.com, is the leading provider of online continuing education for nurses (16-18).

Up to Date: Up to date is an evidence-based, physician-authored clinical knowledge resource*,* which clinicians trust to make the right point-of-care decisions. More than 5,700 world-renowned physician authors, editors and peer reviewers use a rigorous editorial process to synthesize the most recent medical information into trusted, evidence-based recommendations those are proven to improve patient- care and quality. More than 850,000 clinicians in 164 countries and almost 90% of academic medical centres in the U.S. rely on UpToDate and more than 30 research studies confirm the widespread usage of up-to-date and its association with improved patient-care and hospital performance, including reduced length of stay, adverse complications and mortality (18).

Science Direct: Science Direct is Elsevier's leading information solution for researchers, teachers, students, healthcare professionals and information professionals. It combines authoritative, full-text scientific, technical and health publications with smart, intuitive functionality; thus, no one can stay informed in their field and can work more efficiently. It is important full-text scientific database offering journal articles and book chapters from nearly 2,500 journals and 26,000 books (16-18).

Clinical Key: Clinical key draws answers from the largest collection of clinical resources, covering every medical and surgical speciality more than any conventional clinical search engine. It provides access to clinical information from Elsevier that physicians can trust in order to reduce clinical errors. The most relevant clinical answers from one online source reduce physician's search-time and increase the time, they spend caring the patients. It offer 400 Elsevier medical and surgical journals, 700 Elsevier medical and surgical reference books, Medical and Surgical Clinics of North America, all first Consult Point of Care clinical monographs, All Procedures Consult content and associated videos, 2500 medical and surgical procedure videos, Clinical Pharmacology drug monographs and all Elsevier-associated and supplemental images and videos (16-18).

Medknow: Medknow Publications is one of the wide open access publishers in the world; publish peer-review, online and print-plus-online journals in medicine. He operates the 'Platinum' model of open access publishing, providing immediate free access to online journals without any charge. Each journal has its own website, so that medical and scientific professionals working in this area can access the content easily. All journals use the open URL standard, making it easy for libraries to link users directly from citation to the full text of the article (16-18).

ProQuest Medical Library: ProQuest Medical Library database has over 1,250 titles, with more than 1,120 medical titles in full text with abstracts and indexing from the well-known MEDLINE^R database. ProQuest Medical Library database include most clinical and healthcare journals, charts, diagrams, graphs, tables, photos, and other Figurative inputs essential to medical research (16-18).

Dyna Med: Dyna Med is a clinical information resource used by physicians to respond clinical questions quickly and easily at the point of care. It includes thousands of topics that provide clinicians and educators evidence-based informations they need to make informed decisions. Topics are updated daily, as new evidences are available (16-18).

Lexicomp: Pharmacists, physicians, nurses and dentists worldwide rely on Lexicomp's comprehensive point-of-care information to enhance medication safety, improve patient outcomes and enhance efficiency. Lexicomp's trusted drug information is accessible online, on the latest Smartphone/PDA devices and through integration with health information systems. An extensive library of print titles is also available (16-18).

Embase.com: Elsevier is a part of RELX Group plz, world-leading provider of information solutions to the professional customers across industries, enhancing the performance of health and science. Elsevier provide web-based, digital solutions among them Science Direct, Scopus, Intelligence and Clinical Key publish over 2,500 journals including 'The Lancet' and 'Cell' and more than 33,000 book titles (16-18).

BIOSIS Previews: BIOSIS Previews is an English-language, bibliographic database service, with abstracts and citation indexing. It is part of Thomson Reuters Web of Knowledge suite. It covers 5,000 peer- review journals and also comprise coverage of meetings,

meeting abstracts, conferences, literature reviews, U.S. patents, books, software, book chapters, notes, letters and selected reports, coverage is relevant discipline from botany to microbiology and pharmacology. This database contains more than 18 million records, about 500,000 records are added per year and back files are available from 1926 to the present time (16-18).

Ind Med: The purpose of IndMed is to index selected peer-review medical journals published from India. It supplements international indexing services like Pubmed. It covers about 100 journals indexed from 1985 onwards. IndMED has been produced under an ICMR funded project - "National Databases of Indian Medical Journals". Another resource produced under this project is a portal of full text articles (medIND) of selected Indian medical journals indexed in IndMED or PubMed (16-18).

Ovid: Ovid is an internationally recognized leader of electronic medical, scientific and academic research information solutions. Ovid Technologies offers more than 100 core databases to support a wide-range of disciplines including clinical medicine, pharmacology and many more. Ovid Gateway including a list of 3093. journals and thousands of Books and multimedia files including Videos and Images with innovative technology tools. It also offers specialized services to browse, search, retrieve and analyze critical information (16-18).

Free Medical Journals.com: Free Medical journals.com provides links to more than 4674 medical journals available on: http://www.freemedicaljournals. com/f.php?f=index

Free Fulltext.com: Free Full Text.com provides direct links to over 7000 scholarly periodicals, which allow some or all of their online content to be viewed by ANYONE with Internet access for free (though some may require free registration). The issue(s) are available for free and indicated for each title with alphabetical periodical lists. The design of this site is optimized for users seeking specific articles for which they already have the citation. If some of the needed articles are not available for free online, can be obtained with a fee through a document delivery service, such as Pinpoint Documents. If someone wishes to "search" for articles on a particular topic, PubMed may be used as bibliographic database. This site does not attempt to list all periodicals on the Internet, only those which offer free full-text content (16-18).

Public Library of Science: PLoS (Public Library of Science) is a non-profit open access scientific

publishing project aimed at creating a library of open access journals and other scientific literature under an open content license (16-18).

Directory of Open Access Journals: Directory of Open Access Journals (DOAJ) is an online directory that indexes and provides access to high quality, open access; peer-reviewed journals. DOAJ covers free, full text scientific and scholarly journals. There are 10601 journals and 1914303 articles; available now (16-18).

FreeBooks4Doctors.com: Over 300 free medical books and book-like websites available for Free subscription for the book alerts Free Books 4Doctors was created to encourage the free accessibility of medical books through the Internet (16-18).

Medline Plus: Medline Plus is produced by the National Library of Medicine. Medline Plus can be used to learn about the latest treatments, information on a drug or supplement, it also provides links to the latest medical research and clinical trials on a diseases or conditions. Medline Plus offers reliable, up-to-date health information, free and updated daily (16-18).

Pharmacy One Source: Pharmacy One Source helps clinical leaders with more than 1,200 healthcare organizations achieve their goals to improve patient safety, clinical outcomes, compliance and financial Issues. A comprehensive suite of HIPAA-compliant, web-based solutions provide the foundation needed to advance patient's surveillance initiatives, enhance regulatory compliance, streamline clinical workflows and improve medication tracking and management. The products include Sentri7, Simplifi797, Quantifi, Veriform, Schedule OneSource, and Amplifi (16-18).

CONCLUSION
It is obvious that in the light of credibility, internet and e-resources have transformed the ways as people acquire, communicate, interact and share knowledge-pool. e-resources provide manifold opportunities to medical physicians, researchers. Different publications provide bibliographical, full text and open access database through the URLs in the world. Open access publications provide immediate free access without any charges. A statistical analysis of the use of internet and e-resources has become a crucial issue. It is an efficient tool for finding latest news and views, events and intellectual's ideas with experts. The internet has attracted the attention of the users as an easy source for accessing information and e-resources as evident from the study. This paper explains about e-resource on medical science and highlights the features, benefit, advantages, disadvantages and numerous e-resources

and their web sites, Google and other search available on health care and medical services. This paper might be helpful for those who may be interested in knowing and implementing modern technology. User can access any time, anywhere by using the computer, smart phones; thus, we can say that e-resource is the digital version of the printed text and its contents are available in PDF or HTML format. There are many websites selling e-resources where they can be bought and loaded on electronic devices such as PCs, Laptop, handsets and whatever chosen. There are paradigm shift from print to electronic/digital form. A majority of the users found that limited access of computers being the problem to use e- resources and indicated their willingness to get trained to learn more about using the internet and e-resources. The library should play a key role in facilitating the students and the teachers; organize awareness and training programs and seminars to educate the users on seeking information from e-resources and to maximize the use of library resources and associated services.

CONFLICT OF INTEREST
The authors declare that they have no competing interests.

e-Resources At Glance (16-18)

e-Resources	URLs
1-Pub Med	http://www.ncbi.nlm.nih.gov/pubmed
2-Scopus	http://www.scopus.com/scopus/home.url
3-Wiley Online Library	http://onlinelibrary.wiley.com/
4-Lippincott: Williams & Wikins LWW)	http://www.lwwindia.co.in/
5-Up to Date	http://www.uptodate.com/home
6-Science Direct	http://www.sciencedirect.com/
7-Clinical Key	http://www.clinicalkey.com/#!/
8-Med know	http://www.medknow.com/
9-ProQuest Medical Library	http://proquest.umi.com/login
10-Dyna Med	http://www.dynamed.com/home/
11-Laxicomp	https://online.lexi.com/crlsql/servlet/crlonline
12-Embase.com	http:/www.embase.com
13-BIOSIS Previews	http:/scientific.thomson.com/products/bp
14-IndMed	http://indmed.nic.in
15-Ovid	http://www.ovid.com/site/index.jsp
16-Free Medical Journals.com	http://www. freemedicaljournals.com
17-FreeFulltext.com	http://crl.du.ac.in/Publication/E-Resources%20in%20 Public%20Domain-Final/E-
18-Public Library of Science	http://www.plos.org/
19-Directory of Open Access Journals	http://www.doaj.org/
20-FreeBooks4Doctors.com	http://freebooks4doctors.com/
21-Medline Plus	http://www.medlineplus.gov
22-Pharmacy one Source	http://www.pharmacyonesource.com/
23-free Medical Journals	http://www.freemedicaljournals.com/
24-NLM Electronic Resources	http://wwwcf2.nlm.nih.gov/nlm_eresources/eresources/ search
25-OpenMED	http://openmed.nic.in/

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http://elsevier.co.in/ClinicalKey/, http://,
http://www.dynamed.com/home/about/dynamed,
http://www.wolterskluwerhealth.com/ourbrands/
pages/Ovid.aspx,
http://www.wolterskluwerhealth.com/OurBrands/
Pages/Lexicomp.aspx,
http://www.wolterskluwerhealth.com/ourbrands/
pages/LWW.aspx,
http://www.wolterskluwerhealth.com/OurBrands/
Pages/Medknow.aspx,
http://www.wolterskluwerhealth.com/OurBrands/
Pages/PharmacyOneSource.aspx,
http://www.wolterskluwerhealth.com/ourbrands/
pages/UpToDate.aspx,
http://olabout.wiley.com/WileyCDA/Section/id
390001.html.