Online Access Portals in Healthcare

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For the last few years, the number of unnecessary clinic visits of patients in both primary and urgent care clinics has increased. The needs of pediatric patients can be met by maximum utilization of online access portals which enables direct communication with service providers. Currently, the field of information technology is drastically changing and offers a variety of challenges to the healthcare field.

The invention of the internet and EHR (electronic health record) has given opportunities to patients to actively participate in their healthcare. According to the United States Department of Health and Human Services (HHS), an online portal is a secure online website where patients can conveniently access their health information from any geographical location with the help of the internet. Besides, the online portal can be accessed via any device.

Online portals have various advantages in the healthcare field. Patients can use the portals to ask questions regarding their health, which reduces the costs of making appointments in medical clinics. The use of online portals saves time and reduces overcrowding in hospitals. The portals enhance the degree to which the patients get actively involved in matters relating to their health, hence improving patient engagement. Furthermore, online portals are more convenient because they can be accessed from any geographical location. The paper reviews the benefits of online access portals by analyzing the perceptions of mothers of pediatric patients aged 0-11 years attending private and public clinics in the same geographical area, specifically the Bay area.

Search Strategy

A search strategy refers to any organized method of searching information in the literature that plays a crucial role in identifying information suitable for the topic under study. The search strategy plays an essential role in supporting medical professionals who want to remain updated on the growth of evidence-based practices in the healthcare field. Evidence-based practice is a collection of evidence that enhances the quality of medical data and information related to the interests of the patients. A correct search technique is important because it aids in the efficient retrieval of data and information.

Formulation of a question is crucial for conducting an effective literature search. The question assists in sourcing answers from the selected databases. A database is a term that refers to a system of reviews containing electronic data collections that are well organized and can be easily accessed (De Braon & Smith, 2011). There are numerous search engines that facilitate literature searches. Each of the search engines has a unique approach to identifying data and data information.

Best Databases for Search

Various search engines were used for this study. These search engines include PubMed, Google Scholar, Cochrane, and CINAHL. However, among the databases mentioned, PubMed was commonly used in most parts of the research, the ones accounting for a minimal percentage. The main reason for depending on this particular database is because it offers a variety of information. PubMed is one of the primary sources of clinical information and is usually connected to a central medical database known as MEDLINE. The database can easily be accessed via the National Library of Medicine, and hence, it's a trustworthy site that can be relied on most of the time. Furthermore, it does not charge people to access its information; hence, unlimited quantities of information can be retrieved. Moreover, PubMed contains evidence-based articles, which justifies why this research used it as the primary source of information.

There are various strategies for searching for data and information from databases. A search strategy technique is made up of a list of databases and appropriate terms that form vital elements of the study (De Braon & Smith, 2011). As previously mentioned, formulating a suitable research question is an essential component of the search strategy. The problem, in this case, is "In mothers of pediatric patients, age 0-11 years old, what are the benefits of online access portals as compared to physically attending a clinic to obtain crucial information related to the health of their children? The problem only affects nursing. According to De Braon & Smith (2011), PICOT is the most suitable technique for managing the question. PICOT is an acronym for Problem/population/patient, Intervention, Comparison, Outcome, and Time respectively. In our case, the population is the mothers of pediatric patients, the intervention is the use of online portals, the comparison is physical attendance to a medical clinic, and the outcome is the results that arise from the use of online portals, for instance obtaining convenient information and the time frame is 0-11 years.

Inclusion, Exclusion, and Operating Delimiters

Inclusion, exclusion, and operating delimiters were used to set the boundary for the research. After formulating the research question, the next step was to determine the inclusion, exclusion, and operating delimiters criteria. Some of the things considered in the inclusion/exclusion criteria include date, geographical location, participants, type of journal that is whether it is peer-reviewed or not, setting, study design, exposure of interest, language, reported outcomes, and type of publication.

The study used articles that were less than five years old; hence, date was a crucial component of the inclusion criteria. The study was limited to the Bay area; hence, geographical location formed a vital component in the inclusion criteria. In terms of exposure of interest, the mothers of pediatric patients had experiences with the use of online portals and physical attendance of the clinics, and thus, they were considered in the inclusion criteria. The participants of the study used in the inclusion criteria were mothers of pediatric patients. The CINAHL and MEDLINE databases proved useful in this case

because their articles contained subject headings specifying the age group under study. Therefore, it was easy to retrieve articles for the mothers of pediatric patients. Although books were used, most of the literature included peer-reviewed journals because they contain reliable information. In terms of reported outcomes, the inclusion criteria considered outcomes of using online portals. The study included study designs in which the participants were reviewed at one point in time. The language of the participants was not important in the research; hence, it was excluded. The type of publication was vital, and the study excluded letters, reviews, and editorials. The study also excluded articles that were non-peer-reviewed.

The operating delimiters were used to refine the search. Various limiters were used to narrow the search. For instance, the “Full Title” option was used to limit results to articles with full text only. The “Cover Story” button was clicked to restrict the results to articles that were only available in the library. The “Abstract Available” button was used to limit the search results to materials that include abstracts that summarize the contents of the article. The “Peer Reviewed” option was employed to limit the results of the search to peer-reviewed journals only. Furthermore, the “Date published” button was utilized to obtain materials that were less than five years old.

Best Strategies for Searching

There are various words used to search for articles in a database. Some of the search strategies employed in this research include the use of keywords, thesaurus, exact phrases, Boolean logic, truncated and wildcard searches, citation searching, and subject headings. A keyword is a combination of free-text words and phrases. The search strategy applies a combination of subject headings and free-text words. The method of searching using keywords looks for the search terms in the title and abstract of reference material. Some of the keywords used in the search include online portals, benefits of online portals, and pediatric patient mothers’ perceptions of online portals. Thesaurus search entails searching for words with an associated set of phrases and synonyms to locate the most suitable search articles. For instance, in this research paper, the use of words such as “web-based portals” was used instead of online portals because the two phrases are closely related. The thesaurus search technique significantly reduces the results of the search, and this improves the chances of locating the required articles.

Quotation marks were used to ensure that words appeared next to each other in an exact phrase. For instance “online portals”, and “web-based portals” employed exact phrase search. The technique proved useful in decreasing the number of results, hence producing more relevant materials. The search also used Boolean logic, which involves a combination of words. The approach aided in improving the relevance of words in the PICOT question by the use of joining words like and, not, or with inverted commas and brackets. The use of AND in a search helps in displaying articles composed of both words. For instance, online portals and their advantages. On the other hand, the use of OR portrays the materials that constitute either word or both of them. For example, online portals or web-based portals. The joining word NOT restricts the search to the specified terms. For instance, I would

search for the Bay area, NOT other geographical areas.

Wildcard and truncation searches save time when conducting a literature search. Truncation involves the utilization of symbols such as asterisks (*), which minimizes the number of steps needed to complete the search. On the other hand, a wildcard search uses question marks (?), which assists in differentiating English spellings and handling plurals. Truncation search was used in various ways. For instance, keying the character child* in the search helped display articles related to pediatric patients, children, children, and childhood, among others. Above all, the inclusion, exclusion, and operating delimiters were used to refine the articles which met the required criteria. After refining the articles, only 16 materials were obtained, which is a manageable number. The materials were used to facilitate the rest of the research.

Level, Validity, and Quality of Evidence

Levels of evidence

Materials regarded as robust evidence in the study include CPG (clinical practice guidelines), individual RCT (randomized control trials), systematic reviews combined with meta-analyses, systematic reviews alone, and well-designed non-randomized control trials. The need to control bias and the notion of causation were the basis of the hierarchy of evidence.

Figure 1: Hierarchy of the study and the levels of evidence

Validity of Evidence

Validity refers to the degree to which a particular measurement, concept, or conclusion is well-founded and relevant to the real world. According to research, the scientific validity concept has proved useful in addressing the nature of reality, and thus, it is a philosophical and epistemological issue as well as a question of measurement. Various factors were considered in determining the validity of the references used. Some of these include the author, source of information, and the age of the publication. The research mostly used peer-reviewed journals related to the topic, which were less than five years old.

Quality of Evidence

According to GRADE (Grading of Recommendations Assessment Development and Evaluation), the quality of evidence is a reflection of the degree to which confidence in an estimate of the effect is sufficient enough to support a specific recommendation. Various factors were considered in determining the quality of evidence for this study. Some of the factors that reduce the quality of evidence include imprecision, limitations of the study, indirectness of evidence, publication bias, and

inconsistency of the results. Others increase the quality of evidence and include dose-recipient gradient and large magnitude of effect. Study designs are crucial in evaluating the quality of evidence. RCTs present stronger evidence than observational studies; hence, RCT articles were considered in writing the project. However, rigorous observational studies offer more robust evidence than uncontrolled case studies. According to GRADE, RCTs without limitations provide high-quality evidence, as these were also important in handling the paper. Besides, observational studies without special strengths were ignored because they presented low-quality evidence.