Mayo Clinic: A Website Evaluation

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Abstract

The World Wide Web has provided the public with the ability to research any topic with the click of a button. Patients and families can research online their medical condition along with the associated treatment modalities in order to become more educated and involved in their healthcare decisions and care plans. They put their trust into the information provided online which places them at risk for researching information that is not accurate and reliable. The DISCERN tool is a rubric that has been created to help individuals determine the effectiveness, reliability, and trustworthiness of a website. The following analysis will study the Mayo Clinic website using the rubric laid out by the DISCERN tool in order to assess the validity of the information available on the Mayo Clinic website. As a result, the website scored poorly as it does not provide a clear aim, lacks evidence based research references, updated information, and an explanation of the effects of treatment options. As a source of information for patients and their families the Mayo Clinic web site has been deemed untrustworthy, and unreliable.

*Keywords: Mayo, Clinic, Website, Evaluation, DISCERN, tool,*

**Mayo Clinic: A Website Evaluation**

 Web based information is readily available to anyone who has the interest in performing a search on the internet. As a result, patients are taking a more active role in their medical journey as they are enabled to learn more about their medical condition in order to make educated decisions for their own health care plan. Providing reliable information will help the patient understand their care plan which can have a positive effect on the patient’s psychological and treatment outcomes (Charnock, Shepperd, Needham, & Gann, 1999). Unfortunately, the majority of the medical information that can be found on the World Wide Web is inaccurate and misleading for the patient (Kaicker, Debono, Dang, Buckley & Thabane, 2010). The end users of these websites place their faith in the presented information expecting it to be accurate and trustworthy. As a result, each user must decide for themselves whether the presented information is reliable. There are many tools which analyze the design, readability, clinical evidence, and accuracy of information as determined by research that can assist the user in determining the accuracy of the information presented on a website. This paper will focus on the DISCERN tool and how it is utilized to analyze the quality of the medical website built by the Mayo Clinic.

**Understanding the DISCERN Tool**

 Reliable information detailing disease state and treatments is vitally important in the modern world as information is readily available to all at the click of a button. Accurate, up to date information is essential as healthcare teams become increasingly patient centered as they involve the patient in their treatment plan discussion (Vahdat, Hamzehgardeshi, Hessam, & Hamzehgardeshi, 2014). Patients seek information from the searches they perform on the internet leaving them vulnerable and at risk to unreliable, incomplete information not supported by research based best practice. The DISCERN tool has been designed to assist the patient in determining the accuracy of information available on the website so that they can actively participate in their care planning (Charnock & Shepperd, 2004). The DICERN tool can also be used as a guideline for healthcare providers who are building educational websites for their patients. DISCERN uses a rubric based on 16 different questions and characteristics. It is the first quality index that has been standardized for use by all those interested in determining the validity of health information related to treatment choices (Charnock et al., 1999).

 Questions 1 to 8 allow the user to determine whether or not the web site can be trusted. They address the reliability of the information detailing treatment options. Question 9 to 15 relate to the actual treatment options provided by the web site and question 16 allows the user to determine an overall quality rating based on the overall results stemming from questions 1 to 15. Each question is rated on a scale from one to five. Five is awarded when a definite “yes” is answered and a one is assigned if the user rates the questions as a definite “no”. Two to four points are scored if the user determines that the criteria are partially covered. The last question (16) is scored independently of all the previous questions using the same rubric of 1 to 5 (Charnock, 1999). All questions utilized by the DISCERN tool must be used in order to provide a reliable investigation of the web site under review (Khazaal, Chatton, Zullina, & Khan, 2012).

**Scoring via the DISCERN Tool**

The Mayo Clinic website was chosen for this exercise as it is well known and believed to provide best practice information. One person reviewed the site and scored each question according to the instructions provided by the DISCERN tool handbook (Charnock, 1999). Table 1 highlights the ratings recorded for each of the DISCERN tool’s questions. Questions 1 to 8 generated a score of 13 out of a possible 40. Question 9 to 15 scored a 13 out of 35 total points and question 16 was allotted 2 of the possible 5 points. An overall DISCERN tool score of 28 was achieved for the review of the Mayo Clinic website. Som & Gunawardana (2012), state that the overall score would result in a poor rating for overall trustworthiness, quality and reliability of the Mayo Clinic website (excellent = 63–75; good = 51–62; fair = 39–50; poor = 27–38; very poor = 15–26).

Table 1: Scoring with the DISCERN Tool

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| # | **Question** | **Rating** |
| 1 | Have explicit aims | 2 |
| 2 | Achieve its aims | 3 |
| 3 | Be relevant to consumers | 3 |
| 4 | Make sources of information explicit | 1 |
| 5 | Make date of information explicit | 1 |
| 6 | Be balanced and unbiased | 1 |
| 7 | List additional sources of information | 1 |
| 8 | Refer to areas of uncertainty | 1 |
| 9 | Describe how treatment works | 3 |
| 10 | Describe the benefits of treatment | 2 |
| 11 | Describe the risks of treatment | 1 |
| 12 | Describe what would happen without treatment | 1 |
| 13 | Describe the effects of treatment choices on overall quality of life | 1 |
| 14 | Make it clear there may be more than one possible treatment choice | 3 |
| 15 | Provide support for shared decision-making | 2 |
| 16 | Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices | 2 |

**Looking at the Mayo Clinic Website: The DISCERN Tool at work**

**Part One: Can the site be trusted?**

 The main page for the Mayo Clinic website depicts a large image with a heartwarming picture of two young boys. There are links provided that will bring you to other pages within the website such as appointments, find a doctor, contact us, and a patient and visitor guide. As one scrolls down the page the user can opt to utilize a symptoms checker or research specific disease states. Further, the Mayo Clinic home page provides an overview of why the Mayo Clinic should be the hospital of choice. There is an option to click on a link that provides more information about the Mayo Clinic itself but does not offer information detailing who the information is for, what the site is trying to accomplish, and it lacks a clearly stated aim for the website in its entirety. The apparent aims laid out by the Mayo Clinic include the ability for patients to receive effective treatment, seamless care options, and unparalleled expertise.

 As an industry leader the Mayo Clinic site does accomplish its goals by allowing patients and families to research their areas of interest while providing detailed explanations as to what to expect from the physicians, diagnostic procedures, and treatment plans. Although, all of the information related to the treatment options is relevant and clearly defined, the information provided is not backed by scientific evidence. Each page clearly states that it was written by Mayo Clinic Staff. No other reference is used to provide evidence in the use of best practice medicine throughout the entire site. Also, the information provided does not have an associated date stamp to provide the patient with information regarding how recent the material was uploaded onto the site.

 Several different treatment options for all disease states are outlined on the site. These treatment options are biased to promote Mayo Clinic physicians and their technologies as sole treatment options for the patients. Additional resources are not available to the patient to assist them in making an educated decision regarding all options of care. There is no indication of best practice as the site does not utilize references. The site also sensationalizes their physicians, equipment and facility. The information bias of the site is evident as it does not offer additional references to treatments that are not offered at the Mayo Clinic but may be available elsewhere.

**Part Two: Quality of Information Regarding Treatment Options**

 Bergus, Levin, and Elstein (2002) state that patients should receive a balance of information that includes both the benefits and the risks to all medical treatments in order to allow patients to make an educated decision as to their desired plans of care. Treatment options outlined on the Mayo Clinic website do not include detailed information on how the treatment works. This lack of information does not ensure that the patient fully understands the treatment and why it is used for the disease state. To a limited extent, the benefits of the treatment are briefly touched upon on the Mayo Clinic website but there are no risks identified. All risks are essential in enabling the patient to consider every aspect related to their condition. Going one step further, information related to the absence of treatment should also be provided (Charnock, 1999). The Mayo Clinic website site does not address how the patient’s choice will eventually affect day to day activities.

**Impact of DISCERN Tool Scoring on Site Effectiveness and Trustworthiness**

 The Mayo Clinic claims to be a trusted leader in best practice medicine. It is advertised as an institution that many visit to **o**btain a second opinion regarding their diagnosis. In general the medical profession is one of the most trusted professions (Collier, 2012). As a result, patients and their families trust information received from these institutions as they are perceived to be leaders in their field. The Mayo Clinic has a positive reputation for delivering state of the art care. When a patient uses their website to research their disease and the associated treatment that can be provided, they are expecting the information to be readily available, accurate, and research based. They are not expecting the information to be biased or inaccurate. The Mayo Clinic’s website does a fantastic job of gaining the reader’s attention. The esthetics of the site are visually pleasing and the lay out provides just enough information on each page. This provides the optics of a well-built website which would make the reader believe they are reading the most up to date material related to best practice treatments. Although, the Mayo Clinic may be a leader in modern medicine, the poor results obtained using the DISCERN Tool indicates that their web site should not be trusted to give up to date accurate and unbiased information related to health care and treatment options.

**Conclusion**

Patients and their families may look to the internet for help in understanding their disease state and its associated treatments. The DISCERN tool is an established rubric that assists patients, families and medical professionals in determining whether or not information provided on a medical website is reliable and can be trusted. The Mayo Clinic is a renowned institution known for state of the art equipment and best practice medicine. Patients will seek out information on the Mayo Clinic’s website in order to be well versed and ready for any decisions required regarding their treatment care plan. There is a plethora of information available on the website but it scores poorly as a site that is trustworthy and reliable. Obtaining a score of 28 out of a possible 77 using the DISCERN tool, indicates that the Mayo Clinic website lacks a clear aim, proper referencing of research based medical journals, and updated best practice information. Thus, the Mayo Clinic website has been deemed untrustworthy and unreliable as a source of information for the public.

References

 Bergus, G., Levin, E., & Elstein, A. (2002). Presenting risks and benefits to patients: The effect of information order on decision making. *Journal of Internal Medicine, 17*, 612 – 617. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495093/pdf/jgi_11001.pdf>

Collier, R. (2012). Professionalism: The importance of trust. *Canadian Medical Association Journal, 184*(13), 1455-1456. <https://doi.org/10.1503/cmaj.109-4264>

Charnock, D. (1999). The DISCERN handbook. *Radcliffe Medical Press*. Retrieved from <http://www.discern.org.uk/discern.pdf>

Charnock, D., & Shepperd, S. (2004) Learning to DISCERN online: Applying an appraisal tool to health websites in a workshop setting. *Health Education Research,19*(4), 440-446.
<https://doi.org/10.1093/her/cyg046>

Charnock, D., Shepperd, S., Needham, G., & Gann, R. (1999). DISCERN: An instrument for judging the quality of written consumer health information on treatment choices. *Journal of Epidemiology & Community Health, 53*, 105–111.
[https://doi.org/10.1136/jech.53.2.105](https://doi.org/10.1136/jech.53.2.105%22%20%5Ct%20%22_blank)

Discern Online. (n. d.). *Background*. Retrieved September 28, 2018, from <http://www.discern.org.uk/background_to_discern.php>

Kaicker, J., Borg Debono, V., Dang, W., Buckley, N., & Thabane, L. (2010). Assessment of the quality and variability of health information on chronic pain websites using the DISCERN instrument. *BMC Medicine, 8*(59). <https://doi.org/10.1186/1741-7015-8-59>

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| Khazaal, Y., Chatton, A., Zullina, D., & Khan, R. (2012). HON label and DISCERN as content quality indicators of health-related websites. *Psychiatric Quarterly, 83*, 15–27<https://doi.org/10.1007/s11126-011-9179-x> |

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Mayo Clinic (1998-2018). Home page. Retrieved from <https://www.mayoclinic.org/>

Som, R., & Gunawardana, N. P. (2012). Internet chemotherapy information is of good quality: Assessment with the DISCERN tool. *British Journal of Cancer, 107*(403). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3394968/>

Vahdat, S., Hamzehgardeshi, L., Hessam, S., & Hamzehgardeshi, Z. (2014). Patient involvement in health care decision making: A review. *Iranian Red Crescent Medical Journal, 16*(1).
[https://doi.org/10.5812/ircmj.12454](https://doi.org/10.5812/ircmj.12454%22%20%5Ct%20%22_blank)

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Criteria | Max. mark | Your mark | Grade | Not Yet Competent | Competent | Proficient | Exemplary |
|  |  |  |  | 54% to 65% | 66% to 73% | 74% to 89% | 90% to 100% |
| Rationale for selection of website to review | 6 | 5.5 | Exemplary (-) | Rationale is neither clear nor concise. Very hard to follow. | Rationale is either unclear on rambling. | Rationale is generally clear and concise. | Rationale is clear and concise.  |
| Rationale for selection of evaluation criteria | 6 | 5.5 | Exemplary (++) | Rationale is neither clear nor concise. Very hard to follow. | Rationale is either unclear on rambling. | Rationale is generally clear and concise. | Rationale is clear and concise. |
| Quality of evaluation criteria | 6 | 5.5 | Exemplary (-) | Not appropriate for this type of website. | May be appropriate, although validity or reliability not established. | Excellent, but not generally used for health websites. | Excellent; widely accepted for health websites; valid and reliable. |
| Application of evaluation criteria | 6 | 5.4 | Exemplary (--) | No criteria used. | Criteria not always used appropriately. | Criteria generally used appropriately. | Effective application of criteria. |
| Interpretation of results | 6 | 5.4 | Exemplary (--) | Both your description and interpretation of the results are unclear or incorrect. | Portions of your description or your interpretation of the results are unclear. | Your description of the results is clear, but your interpretation needs strengthening.  | Interpretation of evaluation is accurate, clear and concise. |
| Presentation of evaluation | 6 | 5.5 | Exemplary (-) | Poorly written with grammar and spelling errors throughout. | Some writing issues (comprehension) and a number of grammar or spelling errors. | Mostly well written with some grammar or spelling errors. | Well written with minimal grammar or spelling errors.  |
| Penalties or bonuses -10 +10 |  |  |  |  |  |  |  |
| Totals | 36 | 32.8 |  |  |  |  |  |
| Percentages | 100% | 91.1% |  |  |  |  |  |
| Mark for this assignment | 20 | 18.2 |  |  |  |  |  |
| Grade for this assignment |  |  | Exemplary(-) |  |  |  |  |