

Assignment 5: Proposing Your Work.

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The project that my team - Project Livermore - follows the development track. The project will develop an application that will provide patient education that physicians can easily disseminate via their portals in order to provide more information to patients who have been diagnosed with various conditions. For this semester, this project will focus on liver conditions.

From personal experience and talking with other people I know, the experience of visiting with a doctor and receiving a diagnosis can be rather bewildering if the physician announces the condition and prompts you to schedule a follow-up visit to discuss options or even worse, has the nurse call you and announce the condition and then dispense a treatment regimen without explaining what the condition is, and then prompts you to schedule a follow-up visit. You check the physician's patient portal and no information is available there. The next option then is to surf the internet to get more information, but what happens sometimes is that the information is sometimes contradictory, misleading, or unclear.

This project intends to provide high quality educational instruction for patients and to facilitate the dissemination of instruction by providing a standards-based interoperable tool that can plug into a provider patient management system that makes it easier for the physician to disseminate the information to the patient and make it more possible to make patient education a priority. Featured below are the papers that describe the need for patient education, findings of the lack of patient education, and reasons for the lack of patient education. This tool attempts to address issues of organizational culture by integrating the information into the physician's software systems and making it easy to use as well as making the content engaging and available to patients in the form of virtual reality visualizations and disease progression simulations such that patients can develop an intuition for factors that influence the progress of their disease.

Chapter 1 in the book "Patient Education in Rehabilitation", indicates that it is of value to educate patients on their conditions because "Specific interventions aimed at increasing the patient's knowledge can improve the treatment outcomes of many acute and chronic illnesses". (Dreeben, 2010, p. 5). The chapter ends with a list in table 1-1 of the benefits of patient education which are as follows:

- *"Patient education enables patients to assume better responsibility for their own health care, improving patients' ability to manage acute and chronic disorders.*
- *Patient education provides opportunities to choose healthier lifestyles and practice preventative medicine.*
- *Patient education attracts patients to the provider and increases patients' satisfaction with their care, while at the same time decreasing the provider's risk of liability.*
- *Patient education promotes patient-centered care and as a result, patients' active involvement in their plan of care.*
- *Patient education increases adherence to medication and treatment regimens, leading to a more efficient and cost-effective health care delivery system.*
- *Patient education ensures continuity of care and reduces the complications related to illness and incidence of disorder/disease.*
- *Patient education maximizes the individual's independence with home exercise programs and activities that promote independence in activities of daily living as well as continuity of care."* (Dreeben, 2010, p. 8)

Apparently, patient health care education in the US appears to be a bit of a patchwork as some facilities like the Mayo clinic provide somewhat reasonable quality instructional materials, but many physicians and nurses appear to not even take the time to provide the patient with comprehensive education about conditions they've been recently diagnosed with. The paper "Differences in the Delivery of Health Education to Patients with Chronic Disease by Provider Type, 2005 - 2009" presents research on the lack of patient education provided by medical providers. (Ritsema, 2014). The conclusion was:

"Physician assistants and nurse practitioners provided health education to patients with chronic illness more regularly than did physicians, although none of the 3 types of clinicians routinely provided health education. Possible explanations include training differences, differing roles within a clinic by provider type, or increased clinical demands on physicians. More research is needed to understand the causes of these differences and potential opportunities to increase the delivery of condition-specific education to patients." (Ritsema, 2014)

An Iranian research study examines the issue of reasons for inadequate patient education in the context of hospital discharges which is an area that patient education should be vitally important. The paper titled "Factors influencing the patient education: A qualitative research" discovers a few important themes in the inadequate education of patients which as follows (Farahani, 2013):

"The major theme extracted in this study was the inappropriate organizational culture which includes eight categories listed as follows: Not putting value on education, non-professional activities, physician-oriented atmosphere, conflict and lack of coherence in education, inappropriate communication skills, ignoring patient's right in education, lack of motivation, rewarding system in the organization, and poor supervision and control." (Farahani, 2013)

There are an incredible number of tools that are available for the physician to use in the office to educate patients such as the tools recently released by the AMA (Physicians Weekly, 2017), but few provide the kind of standards-based interoperability that sends pertinent patient information (ex. prescription list and conditions) to a service that examines the information and provides personalized educational information for the patient. Most are either websites or downloaded software that don't provide standards based tie-ins to existing patient management systems. One that stands out is the WeVU tool (affiliated with InterSystems) that is a standards based tool that allows providers to work with patient records and record videos of personnel providing information to the patient that the patient can refer to at another time as needed as well as allowing the provider to customize educational materials. It also provides messaging services to alert the patient about upcoming procedures or information about a condition. (Intersystems, 2014).

References

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Farahani, M., Mohammadi, E., Mohammadi, N. (2013). Factors influencing the patient education: A qualitative research. Retrieved February 11, 2018 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3748569/>

Intersystems. (2014). WeIVU Achieves Breakthrough in Mobile and Web-Enabled Patient Engagement Using InerSystems HealthShare. Retrieved February 11, 2018 from <https://www.intersystems.com/news-events/news/news-item/welvu-achieves-breakthrough-mobile-web-enabled-patient-engagement-using-intersystems-healthshare/>

Ritsema TS, Bingenheimer JB, Scholting P, Cawley JF. Differences in the Delivery of Health Education to Patients With Chronic Disease by Provider Type, 2005–2009. *Prev Chronic Dis* (2014). 11:130175. DOI: <http://dx.doi.org/10.5888/pcd11.130175>. Retrieved February 11, 2018 from https://www.cdc.gov/pcd/issues/2014/13_0175.htm