By now, I have a better idea of my research area of interest; the broad area is the utilization of Education Technology for Patient Education. The specific phenomenon of my interest is exploring if hospitals readmission rates can be significantly reduce by using education technology as part of the post-discharge care plan. If possible, I will narrow the scope of the project to focus on readmissions due to preventable adverse drug reactions due to drugs interaction in the population of patient 65+ with the ability to take care of themselves.

As stated in my previous assignment, high readmission rates in hospital produces a substantial increment in medical costs [1] and reduces quality of service and patient satisfaction. Some of those readmissions are not avoidable because they are product of the advancement of chronic illness or are dues to completely independent causes (for example: a patient is discharged from an asthmatic episode and 10 days after is readmitted for a broken hip); But, previous studies have demonstrated that a considerable number of readmission are due to AE and could be prevented [2].

Most of the efforts to remedy this situation had comes from medical and nursing schools and had focus on better training the healthcare providers to avoid AE. Medical and Nursing schools had implemented AE avoidance course as part of their curriculums. University medical centers and hospitals has implemented discharge procedures that include preparing personalized post-discharge plans, 1 to 1 training during the discharge, follow-up calls and home visits. Most of the post-discharge plans (a.k.a. care plan) include printed material like medication reconciliation, detailed care plan, information about the specific disease that produced the need of acute care, etc. A lot of medical information has been made publically available in static websites and printed booklets. Methods to verify if the patient understands the instruction in the post-discharge plan has been developed, by example, teach back [3] is a method that consists in requesting the patient to repeat the instruction as a mechanism of verification of his/her understanding of the post-discharge plan.

Most of the current online resources belong to healthcare organizations or pharmaceutical companies and consist on static webpages that do not have any verification method to determine the level of understanding of the visitor, or to guide the visitor to specific topic.

I also found that some good products that integrate Education Technology component to remedy this situation has been developed, two of the better are:

The Patient Education Institute (PEI), offer a product named **X-Plain patient education system**. X-Plain is an application that is available in many formats, including for tablet. PEI website claims that X-plain offers 3,000 discharge instruction and disease management topic, and more that 1,500 multimedia programs for patient education. The healthcare provider selects the desired health topic and the patient follows the prescribed learning path. PEI claims the use of moderns Education Technology tools and methods in their core five principles: addressing the needs of patients without computer experience, engage and encourage the patient to complete their assigned patient education program, adapt to the learning style and pace of the patient, verify understanding and correct misconceptions, and document the educational session events [4].

Vocera Communications, Inc. have a product named **Vocera Good to Go® Patient Discharge Communication** that the company claims that "*Improve patient satisfaction and reduce readmission rates by recording personalized discharge instructions and making them available to patients, families and other care providers to review at any time, on any device*". Using this product "*nurses record live discharge instructions and teach back sessions at the patient's bedside, as well as attach pictures, videos and personalized educational materials that can be accessed by the patient, family members and other caregivers on any device, at anytime, anywhere*" [5].

My next step is to dig deeper on those products (and any similar product discovered during my investigation) to better understand their capacities, verify if those companies has made available public data on the outcomes of the utilization of their product, and verify if previous papers has been written on the result of the utilization of those products. I will also investigate if Medicare readmission rates data can be correlated with the implementation of those product (or similar products) on different hospitals.

References

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[3] https://en.wikipedia.org/wiki/The_teach-back_method

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