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Causes of 30-day Readmission and Methods to Reduce it

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Abstract

When a patient is readmitted within 30 days of discharge, the hospital is required to pay for the hospitalization, and the patient is at risk for poor outcomes. Many factors can increase a patient's risk for readmission, including culture, fall risk, age, and social factors. Many hospitals have created a system to combat and reduce 30-day readmissions. These methods include assessing patient's acuity for readmission, using home visits or phone calls, remote monitoring, creating better environments for workers, and more. The results of this literary review emphasize the need to assess patients for their readmission risk and the effectiveness of implementing programs to reduce readmission in hospitals, no matter how basic.

Keywords: 30-day readmissions, teams, non-compliance, culture, cognitive

When a patient enters into the hospital, he/she is putting his/her health and wellness into the hands of the healthcare providers that work there. He/she expects to receive the necessary treatments and care to recover fully from any ailments and to be taught how to manage it from home. However, many patients are leaving hospitals, seemingly, without the proper tools to manage their conditions from home, forcing them to return to the hospital within weeks of being discharged. On average, 14.9% of patients are readmitted to the hospital within 30 days of being discharged (United Health Foundation, 2020). This implies that hospitals are failing to provide complete care to almost 1/6 of patients. In this literature search and review, causes of readmission will be reviewed, methods to prevent readmission will be discussed, and different programs instituted to combat 30-day readmissions will be scrutinized.

While 30-day readmissions may appear to be a relatively benign issue, it is a crucial problem to be solved for a multitude of reasons. An obvious reason is that the patient who is readmitted has declined in health and must spend more time in the hospital. According to research published in 2019 by McCormick, Rao, Kressin, Balaban, and Zallman, patients who are readmitted within 30-days often have worse health outcomes due to their illnesses being left unmanaged for longer and increased exposure to nosocomial infections. Thirty-day readmissions also can illuminate errors and missing pieces in care by the hospital and workers, which may reflect negatively in yearly reports and performance reviews. Furthermore, when a patient is readmitted within 30 days, the hospital is responsible for covering the cost of that patient's stay. This costs hospitals $14,400 on average per readmission (Hanlon, 2019). Without a doubt, those millions of dollars that hospitals spend on readmissions each year could be utilized in a significantly more productive manner. Overall, 30-day readmissions strain the health of the patient, reflect negatively on the care provided by hospitals and healthcare workers, and waste millions of dollars each year.

Methodology

To find articles regarding 30-day readmissions, the nursing data base called Cumulative Index of Nursing and Allied Health Literature (CINAHL) was used. A search for "30-day readmission risk factors" and "study" yielded 1,245 results. When narrowing the articles to academic journals written in the last 5 years, 868 articles were left. Articles were chosen if they included larger sample sizes (50 or more subjects) and had a larger scope for types of patients. For example, a study looking at readmission for all surgical clients would be chosen over a study looking at only clients who had a stent placed. From this, 9 articles were chosen to review. To find solutions for readmission, the key words "30-day readmission" and "reduction" produced 525 articles. By narrowing articles to only academic journals written in the last 5 years, 267 articles were left over. Five studies of readmission reduction plans implemented by hospitals were chosen to be reviewed.

Results and Discussion

The results of this literature review reveal that common factors for readmission include being of a minority group, being a fall risk, being of increased age, certain mental health disorders, and socio-economic factors. The methods to reduce 30-day readmissions are diverse, ranging from remote monitoring at home to reducing nursing burn out. These studies show that, when it comes to reducing 30-day readmissions, hospitals have many options depending on their budget, available staff, and clientele.

Factors Affecting Readmission

There are many factors that predispose a patient to be readmitted. It is important as a healthcare worker to recognize these factors so he/she can intervene early, and help the client get the resources he/she needs. Patient's overall physical functioning can be a great predictor of readmission. A study published in 2019 by Min and Hoffman stated that patients admitted for a

fall related injury had a second fall as the highest 30-day readmission cause. This is concerning, as the patient who has been admitted for a fall should be receiving extensive supportive care to prevent future falls at the hospital and his/her home when discharged. Another source found that those with overall functional disabilities or poor health conditions were at high risk for readmission (Pedersen & Meyer, 2017). Healthcare workers should therefore be aware that those admitted due to falls and patients with lower physical mobility are at risk for readmission.

Unsurprisingly, 30-day readmission risk increased based on the patient's age. The risk for readmission increased in individuals 65 or older and had an even more significant risk in individuals older than 75 (Rodriguez-Gutierrez, Herrin, Lipska, 2019). In patients 75 and older, it is important to recognize risk factors of readmission such as pressure sores, inability to feed self, confusion, immobility, and incontinence (Pedersen & Meyer, 2017). While these factors cannot be completely controlled, healthcare workers should be mindful that older patients are at higher risk for readmissions.

Patients' hospital experience and overall mental health seems to play a role in 30-day readmission as well. In patients who received a total knee arthroplasty, lower discharge survey scores were associated with higher rate of readmissions (Sodhi & Mont, 2019). Although the mechanism is unclear, the patient's perception of his/her hospital stay may have an effect on his/her risk of readmission. Another study found that women with psychiatric disorders were more likely to be readmitted after childbirth. Depression and anxiety were not associated with higher readmission rates in this study (Kumar, Rao, O'Rourke, & Hanrahan, 2019). This means that patients who have psychiatric disorders may be at higher risk for readmission in certain settings. The nurse and healthcare team should be aware of readmission risk in patients with psychiatric disorders and work to increase patient satisfaction due to their potential correlation with 30-day readmissions.

Cultural factors seem to play a role in readmission likelihood as well. The literature slightly varies when considering this factor of readmission, but a common theme is present. One literature review notes that black Americans were at higher risk for readmission, but that unmeasured factors, such as less than adequate insurance and decreased access to care, that were not studied may be the underlying cause (Pedersen & Meyer, 2017). Another study reviewed 272,758 patients admitted with diabetes and found that black patients had a significantly higher risk to be readmitted within 30 days when compared to other racial/ethnic groups (Rodriguez-Guiterrez, Herrin, & Lipska, 2019). The study only included individuals with privately funded insurance and found higher readmission rates for black Americans in all hospital types and settings except small hospitals with less than 100 beds. These results were found after adjustment for confounding variables, such as income or comorbidities, leading one to consider that bias and discrimination may be the root for this disparity. Another study found that simply being of a minority group placed the patient at higher risk of readmission (Rayan-Gharra & Shadmi, 2019). These studies emphasize that there is a larger problem in America's healthcare system that may not be fixed by simply creating policy changes. It highlights that cultural factors should be considered when delivering care, and changes should be implemented by healthcare workers when doing patient teaching with patients of different cultures and backgrounds (Rayan-Gharra & Shadmi, 2019).

Research also found that socio-economic factors play a role in 30-day readmissions. A study done in Massachusetts found that living in poverty, limited education, poor social supports, substance abuse, and insurance status can increase one's risk for readmission (McCormick, Rao, Kressin, Balaban, & Zallman, 2019). These factors may appear to limit the healthcare worker's ability to prevent readmission, but, with a little extra work, there are many resources available that the healthcare worker may use to help patients reduce these risk factors.

Ethical issues may arise when discussing the causes and risk factors of 30-day readmissions. Many of the groups that are at risk for readmission are minority groups and may be of low socioeconomic status. Therefore, hospitals that work to serve these communities may have a higher financial burden than hospitals that choose to refuse these populations. For example, safety-net hospitals (SNHs) do not refuse any patient, regardless of his/her ability to pay for care. Therefore, these hospitals have a higher proportion of vulnerable patients, leading to higher rates of readmission and increased readmission costs than non-SNHs (McCormick, Rao, Kressin, Balaban,& Zallman, 2019). While some may argue that SNHs receive government funding, the profit margin is negligible in comparison to non-SNHs (Dobson, DaVanzo, & Haught, 2017). In other words, government funding is necessary to stay in business and there is not an ample amount of government cash to pay for readmitted patients. Non-SNHs have the opportunity to reject patients based on their ability to pay, so the individual's risk for readmission may play a role in that decision. When situations such as this arise, hospitals should consult with an ethics board to determine the proper way to proceed.

Reducing Readmissions

While it is key to note the cause of readmission while assessing one's patient, healthcare workers should recognize how variable it can be. Due to this, it is not far-fetched to assume that all patients should receive some variety of readmission prevention interventions. From phone calls to home visits, there is a plethora of ways to help patients manage their care after being discharged. One study found that home care has been found to decrease the risk for an emergency room visits and 30-day readmission in patients after elective vascular surgery (Mestral, Kayssi, Al-Omran, Salata, Hussain, & Roche-Nagle, 2019). The study pointed out that home care is often necessary to prevent readmission and complications, as hospitals attempt to reduce the number of days spent inpatient after procedures. The appropriate efforts toward

reducing re-hospitalization risk for a patient are often not obvious. Patients may need help getting transportation to doctor's appointments and outpatient therapies, assisting family members in applying for family leave, outpatient medication reconciliation, or another less obvious intervention (Min & Hoffman, 2019). In hospitals without protocols to prevent readmission, it is important for healthcare workers to assess for variables that may interfere with a patient taking care of himself/herself at home and to work with the interdisciplinary team to make a solution.

Many hospitals have created plans to combat 30-day readmission. One study done in 2018 focused on using remote monitoring to watch patients from home. This program, which was conducted in Canada, was called "the Smart Program". The program focused on patients with COPD and heart failure who were healthy enough to manage their care from home but were at risk for complications that might send them right back to the hospital. Through remote monitoring, clinicians were able to follow the patient and his/her progress through home treatment. They could make changes in care remotely or suggest an outpatient appointment that could prevent a complication that could result in readmission. The study results show that using remote monitoring could decrease rehospitalization in these clients by up to 35%. While the results of this program may make clinicians ready to implement remote monitoring with all their patients, it does not come without its flaws. First, the patient must be compliant with conducting the different monitoring systems at home. While seemingly simple, patients may decide not to participate in remote monitoring once home. Also, patients must be taught how to use the machinery at home. This process may be very difficult for some patients, especially if they are older or disabled. Security may also be a concern with some patients. The balance between keeping information private while also making it accessible during any adverse event or

emergency must be considered (Hanlon, 2019). Remote monitoring is a great resource that hospitals can utilize to decrease 30-day readmissions.

Another study looked at one teaching hospital in Omaha that is using team work and collaboration to decrease readmission rates. The hospital's system is based off the Triple Aim Model, which includes three factors; the health of populations, having quality patient care, and reducing costs. In order to improve these three factors, the hospital decided to combat health provider burnout. The hospital believed that fixing burnout would give healthcare workers the ability and drive to improve their care and collaboration. Overall, the hospital believes that working with other healthcare workers, including healthcare students, will increase the quality of care the patient receives and reduce the workload on each individual, therefore decreasing readmission rates and cost (AHC Media, 2019).

In order to reach this goal, the hospital made small, yet effective, changes. First, administrators made sure that students were part of the team. They knew that using students could help reduce costs for procedures and shape young, soon-to-be professionals into the workers their hospital needed. Then, they worked to increase worker's satisfaction through daily huddles, shared values and team efforts. Workers were made to know that no one was alone in treating a patient, and a whole team was always available to assist in care. Workers are always told to assume positive intent in all interactions. This means that staff know that when conflicts occur with patients or staff, he/she should always assume there was no malicious intent. Just by changing the mindset, workers are able to deal with conflict more efficiently and avoid emotional investment, which often leads to burnout. Team members are encouraged to provide "warm handoffs", meaning that if they believe an intervention may help a client, they should tell the team *and* take the effort to make it happen. For example, if a client might benefit from an outpatient dietician, the nurse could suggest it to the team *and* contact an outpatient dietician that

may be able to care for the client once discharged. The changes made at this hospital were not monumental; they were small changes that mostly worked to change the mindset of healthcare workers and the experience of the patient. This Omaha hospital is a great example of how to reduce readmission without having to completely rewrite protocols (AHC Media, 2019).

Another hospital created a program called ComPass, which categorized patients based on their risk for readmission. Each patient was considered a low-risk, moderate-risk, or high-risk subject. Low-risk patients had high amounts of social support and ability to perform ADLs and had little discharge needs. The hospital staff called these patients once after discharge to determine the patient had picked up his/her medications, had successfully managed his/her care from home, and had no concerns. Moderate-risk patients had some gaps in self-care, significant changes in healthcare needs from prior to admission. These patients received one home visit within 48 hours of discharge and two phone calls from medical staff. High-risk patients had history of readmission, high physiological or psychological barriers, low social support, or low self-care ability. These patients had more extensive care with weekly visits from home health/service, an on-call nurse available 7 days a week, and a phone call once a month. Home health/service also helped patients with non-medical needs such as housekeeping, meal preparation, shopping, and transportation to up to two medical appointments. Patients who utilized these resources were assisted in finding facilities that could provide these services after the hospital was out of the picture. Through defining each patient and using different interventions for patients at risk for readmission, the hospital was estimated to have reduced readmission by anywhere from 4.8% to 23% (Wilcox, McCauley, Delaney, & Molony, 2018). Using this method, the hospital was able to provide readmission prevention methods for all patients yet save resources for the patients that needed it most.

Another study looked at the effects of psychoeducation for pulmonary patients that had chronic cognitive impairments that lead to decreased compliance with home therapies. The study noted that clients who have chronic diseases have a higher risk for cognitive impairment, which can often go unnoticed or unreported. If the medical team fails to detect the impairment, the patient will be more likely to be readmitted within 30-days, as he/she is unable to remember to take medications or perform home therapies. The study worked to recognize patients who were cognitively impaired and intervened with these individuals and their families. The medical team discussed the patient's cognitive impairment with the patient and his/her family, including the risk for noncompliance with therapies. The team worked to destigmatize the cognitive impairment with less threatening words such as "forgetfulness" rather than "dementia". The overall goal was to help clients and families recognize these impairments so that measures could be made by the family or client to make sure the client could be compliant with care. Through this simple intervention, readmission rates were reduced from 25.7% to 12.3%. Detecting cognitive impairments and discussing the need for further interventions at home to prevent readmission helped greatly to prevent readmission in clients with cognitive impairments (Ketterer, Ouellette, & Jennings, 2019).

When analyzing different methods to reduce 30-day readmissions in hospitals, it is key to note that each method is quite different. Despite the diverse methods, each one was effective in reducing 30-day readmission. From expensive programs like the ComPass program that required classifying patients and performing home visits to inexpensive programs such as the study that performed psychoeducation for pulmonary patients with cognitive impairments, programs varied in their extensiveness and costs, but not in their ability to reduce 30-day readmissions. Some programs, such as the Omaha hospital's triple aim approach, addressed other aspects of healthcare, such as worker burnout, yet still were able to reduce 30-day readmissions. It is key to

note that hospitals have a plethora of methods, big and small, to reduce readmission. Hospitals need not spend millions of dollars and hundreds of hours to reduce readmission. It is key that hospitals look into creating programs to reduce 30-day readmissions in any way that their resources allow.

Conclusion

When hospitals have high 30-day readmission rates, the patient, the healthcare workers, and the hospital all suffer. The patient has worse health outcomes and spends more time in the hospital when he/she could be contributing to society. The healthcare workers may become burnt out and unhappy in hospitals that ineffective systems. The hospital loses money that could be used towards research, new equipment, or higher salaries for workers. Many hospitals have found systems that truly reduce readmission for patients by using technology, mental reframing, determining readmission acuity, and more. It is important for healthcare workers to recognize when their hospital system is failing and work towards making a change.

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