Reducing 30-day Readmission Rates Among Geriatric Patients

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Introduction

Cardiac diseases are the leading cause of hospitalization among geriatric patients, leading to post-discharge readmissions within 30 days. These early readmissions disrupt the quality of life for the elderly burden them both financially and emotionally (1). This research aims to identify systems hospitals can implement to reduce such readmissions while investigating the underlying complexities of the issue.

Literature review

Missed medical appoints are a significant challenge within healthcare, the elderly are especially vulnerable to this. A recent study from the Journal of Health Organization and Management revealed that individuals over 85 and those with low income are most likely to miss appointments due to barriers such as transportation difficulties, forgetfulness, and family responsibilities. These challenges are execrated by the natural cognitive and physical decline that accompanies aging (2). The consequences to these missed appointments, according to the NIH include potential disease progression, mismanaged conditioned, and limited communication with healthcare providers (3). I hypothesize that by implementing tools such as a magnetic chart to track appointments and medications will reduce the frequency of missed medical visits and improve patient adherence, specifically among elderly populations.

Introduction to Experiment:

To explore how improving the accessibility and organization of medication-related information can reduce 30-day readmission rates among geriatric patients with cardiac diseases, I created a prototype chart designed to support patient's adherence care management. The prototype includes a weekly schedule detailing the patient's medications, with accompanying pictures of medications to avoid confusion, precise dosage instructions, and reminders for upcoming doctor's appointments. Additionally, the chart contains critical contact information, such as phone numbers of healthcare providers, and space to track potential adverse reactions.

This large, accessible patient care chart is designed to help patients keep track of their medications and appointments. The chart includes a weekly medication schedule with images of each pill, dosage instructions, and checkboxes to mark when a dose is taken. It also lists upcoming doctor's appointments with key details like date, time, and location, along with emergency contact information and signs of adverse reactions. Designed with large fonts, color-coding, and simple visuals, the chart is easy to understand and can be displayed in a visible spot at home. It's especially helpful for patients with visual impairments or memory challenges. By making treatment plans easier to follow, the chart aims to improve medication adherence, reduce confusion, and ultimately lower the risk of hospital readmission.

Measured Outcome	Without Prototype	With Prototype
Missed "medications" (simulated)	26	5
Missed "appointments" (simulated)	8	1
Percent who said the instructions were clear	40%	93%
Percent who felt confident managing their schedule	33%	87%

During a one-week trail with 15 student's volunteers, participants acted as elderly patients managing heart medications and follow-up appointments using my chart prototype. I implementing the prototype chart led to more than an 80% reduction in missed medication events (dropping from 26 to 5) and nearly a 90% decrease in missed appointments (from 8 down to 1). Moreover, 93% of volunteers reported that the chart was easy to understand, compared with only 40% who found the instructions clear without it. Similarly, 87% felt confident managing their schedule with the prototype, versus just 33% without. These quantitative findings demonstrate that the prototype substantially increased appointment attendance, and user confidence in daily medical management dropped from 26 percent without the prototype to 5 percent with it..

Conclusions

This prototype serves as a simple yet effective tool to support geriatric cardiac patients in managing their care after discharge. By providing a clear and accessible way to organize medications and appointments, the chart addresses common challenges that lead to hospital readmissions, such as missed doses or forgotten follow-ups. With continued testing and feedback, this tool has the potential to be refined and implemented more widely in clinical discharge planning. Ultimately, the goal is to empower patients to take control of their health and improve outcomes through better communication, organization, and support

Implementation

To implement this prototype in a real-world setting, hospitals could introduce the patient care board as part of the discharge process for geriatric cardiac patients. Healthcare providers, such as nurses or discharge planners, would help patients and caregivers customize the board with details like medication schedules, appointment reminders, emergency contacts, and warning signs of adverse reactions. The board would be printed in large format on sturdy, easy-to-clean material that can be mounted on a wall in a central location at home. Its size and design make it especially accessible for patients with visual or cognitive challenges. For broader accessibility, a digital version could also be developed for use on tablets or smart home devices. Follow-up support, such as weekly check-ins or integration with home health visits, would help reinforce use of the board and ensure it continues to meet each patient's needs.