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### Reducing 30-day Post-Stroke Readmissions with a Discharge Checklist Tool

Monika Robinson  
robinm13@email.franklin.edu

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# **Reducing 30-day Post-Stroke Readmissions with a Discharge Checklist Tool**

DNP Final Report

Monika A. Robinson

Franklin University

Dr. Sandra Cleveland

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## **Reducing 30-day Post-Stroke Readmissions with the Implementation of a Discharge Checklist Tool**

Stroke readmissions pose a significant challenge for healthcare systems nationwide, presenting ongoing patient health risks and contributing to increased healthcare costs and resource demands. Hospital readmissions following acute ischemic strokes had been a challenge for the practice site, an acute care hospital with national stroke certification located in Columbus, Ohio. This facility had a 30-day post-stroke readmission rate of 8.7%. The organizational percentage did not exceed the national average of 12.44%, as reported in a sentinel article by Bambhroliya et al. (2018). To address this practice problem, a post-stroke discharge checklist tool and follow-up phone calls were proposed to standardize discharge procedures, focusing on stroke education, caregiver readiness, and lifestyle adjustments. Targeting an eight-week timeframe, the project aimed to reduce readmission rates to 4.7%, leveraging the facility's track record in achieving lower rates of readmissions and potentially setting a new standard in stroke care. This quality improvement project sought to evaluate the impact of the discharge checklist on 30-day readmission rates.

### **Problem Statement and Gap Analysis**

The project site faced a high rate of readmissions among post-stroke patients, with current practices involving printed discharge instructions and nurse-led education. Despite these efforts, the annual readmission rate remained elevated. The project aimed to lower the readmission rate to 4.7%, reducing the rate by roughly one-half by strengthening adherence to follow-up metrics at discharge. The national benchmark data for post-stroke readmissions was 12.44% (Bambhroliya et al., 2018). Data analysis by leaders of a comprehensive stroke center revealed higher-than-expected post-stroke readmission rates. A gap analysis was conducted to

identify underlying causes contributing to the practice problem. This process aimed to pinpoint specific factors driving the high readmission rates, facilitating targeted interventions to improve patient outcomes.

The gap analysis revealed barriers in the discharge process, such as the lack of a patient-specific checklist, inconsistent communication with primary care providers, and low staff engagement, have serious implications for patient safety and the quality and cost of care in the stroke unit. Without a standardized discharge protocol, patients may leave the hospital without crucial information or follow-up care, which increases their risk of readmission and related complications. This, in turn, not only jeopardizes patient safety but also leads to higher healthcare expenditures due to avoidable readmissions. Implementing structured discharge tools and follow-up phone calls could significantly enhance patient outcomes, reduce the financial burden on healthcare systems, and improve overall care quality.

Unplanned readmissions present significant financial challenges for both patients and hospitals, leading to penalties and increased costs. The average cost of a stroke readmission is approximately \$15,200, and the project facility incurred \$152,000 from ten post-stroke readmissions over eight weeks of pre-implementation (Weiss & Jiang, 2021). Hospitals face penalties, such as reduced Medicare payments, with an average reimbursement loss of 0.64% per Medicare patient for exceeding readmission rates (Fallon, 2023). Penalties reduce bed availability, escalate costs, and strain hospital revenue. Understanding the financial and operational impact of readmissions is critical to implementing strategies that align with the hospital's quality care priorities and reduce future penalties.

## **Background and Significance of the Problem**

Post-stroke readmissions are a result of gaps in transitional care, medication management, and compliance in rehabilitation. This section speaks to the background and significance of these challenges in post-stroke quality of care.

### **Background**

Post-stroke readmissions arise from gaps in transitional care, medication management, and rehabilitation compliance. Stroke affects nearly 800,000 people annually and ranks fifth in United States causes of death (CDC, 2020). Effective discharge planning is essential to prevent hospital readmissions and manage stroke risk factors such as diabetes and hypertension (Powers et al., 2019). Inconsistent discharge processes often fail to educate patients on stroke prevention, increasing the risk of readmissions, healthcare costs, and reimbursement issues (Tay, 2021). Tailored discharge instructions within 14 days have demonstrated a reduction in readmissions (Ifejika et al., 2021). This project aligns with organizational goals to improve post-stroke care, reduce 30-day readmission rates, and enhance service and patient care quality. By addressing these gaps, healthcare organizations can not only improve the quality of life for stroke survivors but also drive meaningful reductions in healthcare costs and enhance overall patient safety and care standards.

### **Significance of the Problem:**

A comprehensive literature assessment revealed that patient literacy, caregiver support, and socioeconomic factors contribute to post-stroke readmissions (Zhou et al., 2023). Facility factors include limited staffing and post-stroke support services, while financial barriers and access to care affect follow-up. Meeting Center for Medicare & Medicaid Services (CMS) regulations is essential, and proactive reduction of readmissions benefits hospitals financially and

improves patient care (Bambhroliya et al., 2018). Addressing these multifaceted barriers requires an integrated approach that combines patient education, caregiver involvement, and enhanced support services. Such efforts not only help healthcare facilities meet CMS standards but also promote a more equitable and effective post-stroke care environment, ultimately benefiting both patients and providers.

Ineffective discharge planning leads to patient safety and quality concerns, including functional decline and financial burdens on healthcare systems and patients. Lower socioeconomic status groups are particularly vulnerable to increased stroke-related disability and readmission rates (Ahmed, 2023). This project addressed the organizational challenges in discharge planning and reflected a commitment to beneficence, enhancing patient safety and outcomes through collaborative efforts with providers and nursing staff.

### **Overarching Aim of the Project**

The project aimed to reduce 30-day post-stroke readmissions by implementing a post-stroke discharge checklist tool for patients and caregivers introduced at the time of admission. The American Stroke Association Post-Stroke Discharge Tool was employed throughout the patient's stay to ensure comprehensive support of adequate stroke education (refer to Appendix A) (American Heart Association [AHA], 2024). This discharge tool addressed patient and caregiver understanding of post-stroke instructions, including education on follow-up care (appointments, when to contact their provider), living arrangements, activities of daily living (ADLs), and available resources. The project goal was to enhance awareness of stroke risk factors, improve compliance with follow-up care, and decrease avoidable 30-day post-stroke readmissions to 4.7% through standardized education for all post-stroke patients. By reducing

preventable readmissions, patient satisfaction increased, and overall quality of care improved, resulting in cost savings for both the patient and the healthcare facility.

### **Review of the Evidence**

The evidence underscores the importance of standardized discharge processes in preventing 30-day readmissions for post-stroke patients. An initial search yielded 79 articles, which were narrowed to 5 by using terms like "hospital discharge" and "stroke-readmission. Research revealed that effective discharge education and caregiver support can significantly improve patient outcomes during the critical transition from hospital to home (Oyesanya et al., 2021; Saragih et al., 2024). Consistent discharge protocols, particularly those that include standardized education tools, have shown promise in reducing the risk of unplanned readmissions by enhancing patient understanding of their care plan and self-care responsibilities (Swan et al., 2019). These findings support the implementation of structured discharge strategies to bridge identified gaps in patient education, providing clear instructions and reinforcing essential follow-up care.

Implementing a discharge checklist proved beneficial, ensuring that each patient received consistent, comprehensive education on stroke management. This checklist standardized the information provided by nurses, who could emphasize critical care points and ensure that both patients and caregivers were well-prepared for post-hospitalization care (Choudhury et al., 2022). Starting education at admission and continuing through interactive sessions during the hospital stay allowed for continuous reinforcement of essential stroke-related information, equipping patients with knowledge on lifestyle changes, medication adherence, and symptom management to reduce the likelihood of readmissions (Benoit et al., 2020). These strategies underscore the

value of structured, repeat interactions in solidifying patient understanding and compliance with discharge instructions.

Guided by the PICOT framework, this quality improvement project sought to demonstrate that a nurse-driven discharge checklist would decrease 30-day readmissions by providing consistent, comprehensive discharge education. The PICOT question for this project asked: In adult patients discharged from an acute-care inpatient hospital stroke unit (Population), implementing a nurse-driven post-stroke checklist as a discharge component (Intervention) compared to not utilizing a checklist (Comparison) reduce 30-day readmissions for discharged stroke patients (Outcome) over eight weeks? (Timeframe). The project trained nurses to use the checklist as a standardized educational tool, with success evaluated through compliance audits and readmission rate analysis. By embedding these interventions within routine discharge practices, the project aimed to mitigate the risk of preventable readmissions, improve patient satisfaction, and reduce healthcare costs, ultimately contributing to more sustainable, high-quality post-stroke care.

### **Project Design**

Quality improvement (QI) was the framework for implementing the post-stroke discharge checklist project over eight weeks. Quality improvement is the cornerstone for identifying problems, implementing changes, monitoring outcomes, standardizing processes, and reducing variation (Yacoub et al., 2023). The QI project was held in a Comprehensive Stroke Center's Integrated Stroke Unit (ISU), which has 32 beds with an average daily census of 31. The QI process aided in establishing a systematic process to improve stroke education and follow-up quality to impact readmission rates and patient outcomes positively.



OhioHealth Change Management Resources played a crucial role in helping to understand the importance of a QI project, plan-do-study-act (PDSA) cycles, and the sustainability of a process for positive outcomes. Resources utilized for the project included a case for change, a change plan, and change readiness assessments (OhioHealth, 2021). The initial change readiness survey provided a baseline for staff preparedness and areas to focus on for education before implementation. Additional resources included a checklist of stakeholders to ensure leadership support was attained, key collaborators were included, and participants had ample knowledge of the case for change, communication around the project, and results for sustainability. The resource tools allowed for a systematic action plan to ensure that all developments and measures are feasible for optimal patient outcomes.

During project implementation phases, PDSA cycles were small tests of change that led to redesigns in workflows, troubleshooting, and education. The PDSA cycle is a tool utilized in improvement processes to identify an issue and the need for change (Connelly, 2021). It can also constitute a business framework to implement and encourage change. The four-step model is essential for continuous improvement and was beneficial in identifying, defining, developing, and implementing interventions in the post-stroke discharge checklist project.

During the project's intervention phase, two identifiable PDSA cycles were used. The initial PDSA cycle occurred at the beginning of week two following the go-live. The nurse manager noticed a large stack of discharge checklists and felt we needed to number them to compare them to the post-stroke discharge patients on the unit. Each discharged patient's report was pulled from Epic®, the electronic medical record (EMR), daily and allowed comparison of the number of checklists to the number of discharged patients. The nurses did not provide the post-stroke discharge checklist to all stroke patients on admission, define the concern, develop a

plan to number the checklists, and implement the intervention to ensure the numbers matched daily. This determination was used to ensure all stroke patients received the checklist upon admission.

The second PDSA cycle occurred in week three when the determination was made that only some nurses had access to the Epic EMR smart phrase, also known as a dot phrase, developed as a shortcut to document that the checklist had been provided. The Epic® dot phrase read, “post-stroke discharge checklist provided, ensured checklist was completed, all questions answered, no further questions from patient or caregiver” (Epic, 2021). Only nurses with more than six months of tenure on the unit had access to the dot phrase. Immediately upon being made aware, we met with the information technology (IT) and nurse informaticist to investigate. After pulling a report in Epic®, the team was able to remove the dot phrase and replace it with the upgraded IT dot phrase for all ISU staff. Follow-up occurred with all the staff to ensure they had access, and once this was confirmed, the ticket was closed. The leadership team reviewed a weekly report to monitor dot phrase utilization, which showed an increase of over 70%.

Upon finalizing the project, feedback was received from the ISU staff regarding the checklist. The suggestion was to shorten the checklist from ten pages to two and lower the reading level to a fifth grade for ease of comprehension. Despite not having the time to perform a PDSA cycle on the change requests mentioned, the goal is to provide feedback from the ISU staff to The American Stroke Association for consideration. Once feedback has been provided, the hope is a more condensed version was made available to the public from the American Stroke Association.

## **Project Implementation**

This project was implemented in the ISU of a Comprehensive Stroke Center, utilizing baseline data from Qlik on 30-day post-stroke readmissions collected over the preceding eight weeks. Approval was obtained to use the American Stroke Association's post-stroke discharge checklist. In a stakeholder meeting with the chief nursing officer (CNO), stroke unit leaders, therapy team leaders, and the care management team, project goals, current readmission data, and timelines were discussed. All stakeholders received access to the project charter and materials via Microsoft Teams®. The project's inclusion criteria focused on stroke-related admissions and discharges.

The inclusion criteria for the project were specifically designed to capture patients who would benefit most from targeted post-stroke interventions. Eligible patients included those admitted to the ISU with a primary diagnosis of stroke, whether ischemic or hemorrhagic, and who were subsequently discharged from the unit. The criteria encompassed a range of stroke-related admissions to ensure that patients facing diverse stroke-related complications received standardized follow-up care. Exclusions were made for non-stroke-related admissions or transfers to other departments for non-stroke treatments, thereby focusing resources on patients at higher risk for readmission due to stroke.

The unit included 28 registered nurses (RNs) who received project details and education on the checklist through 30-minute in-person sessions over two weeks during shift briefings. Supplemental materials were made available through recorded PowerPoints and meetings. Pre-shift huddles reinforced key messages. Weekly updates on checklist utilization and readmission rates were posted to Microsoft Teams®, with data sourced from Qlik. The stroke coordinator and project manager ensured weekly reporting and monitored compliance using weekly chart audits.

Registered Nurses provided the post-stroke discharge checklist to patients and caregivers within two hours of unit admission. Patients were educated on their stroke care plan, and follow-up calls were made within three days post-discharge to reinforce the plan. Therapy teams (speech, physical, occupational) provided education to ensure caregiver readiness and improve post-discharge care. Neurologists, stroke nurse practitioners, and stroke physician assistants continued to provide necessary discharge information prior to the patient's disposition. These coordinated efforts aimed to enhance patient and caregiver understanding of post-stroke care, promoting a smoother transition from hospital to home and reducing the likelihood of readmissions.

Chart audits for compliance were conducted, and the stroke coordinator reviewed 30-day readmission rates every month. A formal Teams ® meeting was held to present outcomes, and a strengths, weaknesses, opportunities, and threats (SWOT) analysis was completed to evaluate strengths, weaknesses, opportunities, and threats. Strengths included experienced staff, strong leadership, and dedicated educators. Weaknesses involved potential staff resistance and reliance on temporary staff. Opportunities focused on improved patient outcomes and reduced financial strain, while threats included training costs and potential non-compliance due to workload.

### **Outcomes and Data Analysis**

The QI project aimed to reduce 30-day post-stroke readmissions by enhancing discharge practices with the American Stroke Association post-stroke discharge checklist. Over eight weeks, the checklist was integrated to improve patient education, caregiver involvement, and staff collaboration. Using Epic® and Qlik platforms, the team tracked process, balancing, and outcomes metrics to assess the project's effectiveness in preventing readmissions. The primary

outcome was to reduce readmissions and highlight improvements in patient satisfaction and quality of care.

Data collection tools included the American Stroke Association checklist, daily audits, weekly dot phrase reports from Epic®, and the key performance indicator (KPI) board. These tools ensured compliance with discharge processes and patient education, with daily audits tracking checklist distribution and weekly reports monitoring checklist documentation. Over the eight weeks, 320 discharges occurred, 193 of which were stroke-related. With 139 dot phrase utilization recorded, compliance was 72%, and 93% of patients received the checklist, indicating strong patient engagement.

Weekly outcome reporting enhanced transparency and supported progress tracking for the project. Updates were shared during pre-shift huddles, via email, and on the KPI board, with regular one-on-one follow-ups for real-time coaching and feedback. These mechanisms allowed staff to monitor progress, make necessary adjustments, and maintain a focus on patient safety and care quality, reinforcing the project's objectives. Consistent reporting and feedback supported the goal of reducing readmissions and promoting patient-centered care.

The project aimed to provide patient-centered and collaborative care. The goal was to lower readmission rates from 8.7% to 4.7%, below the national average of 12.44% (Bambhroliya, et al., 2018). Post-intervention data were received, and the post-stroke readmission rates decreased to 3.9%, surpassing the goal of 4.7%. The integration of the patient-involved discharge checklist reduced readmissions by improving education and engagement, with data guiding future improvements.

## Results/Findings

The results section details the evaluation of practice changes aimed at reducing post-stroke readmissions, using a structured approach guided by the Plan-Do-Study-Act (PDSA) framework. Effectiveness was measured through a combination of outcome metrics, such as 30-day readmission rates and patient satisfaction; process metrics, including checklist adherence and follow-up call frequency; balancing metrics to assess staff workload; and financial metrics to monitor cost savings. Reliable tools such as the Qlik reporting system and patient satisfaction surveys provided objective and subjective data, ensuring a comprehensive assessment of the intervention's impact on patient care, financial performance, and staff engagement.

Outcome measure analysis included increasing discharge checklist tool utilization adherence. An American Stroke Association Post-Stroke Discharge Checklist tool was implemented following education to RNs on utilizing the tool. Data on readmissions were collected pre-and post-intervention. Pre-intervention, the post-stroke readmission rates were 8.7% with a goal to reduce to 4.7% following the conclusion of the project. Compliance was measured at a benchmark rate of 70% of RNs utilizing and documenting the use of the checklist.

Post-discharge audits included data on the number of patients who successfully received the checklist discharge tool/total number of patients discharged times 100. Compliance was measured at a rate of 70% or more from 0 at baseline. This quality improvement project aimed to achieve and maintain 30-day post-stroke readmission rates below the national benchmark of 12.44%. This was achieved by implementing the American Stroke Association Post-Stroke Checklist Tool for patients and caregivers to provide streamlined education, tools, and follow-up instructions for all stroke patients. Success was measured using the checklist tool, and readmission rates over the next eight weeks.

The stroke coordinator pulled the final 30-day readmission rate data; the most recent post-stroke 30-day readmission rate is 3.9%. This is well below the national average of 12.44% and the target of 4.7% for this facility. The goal was to obtain post-implementation data within 60 days though data were lagging, as provided by the IT team following the breach. The aim was to see a decline in the readmission rate from 8.7% to the target of 4.7% after the 8-week period. The data were visualized using the Qlik platform and presented in a graph (refer to Appendix B)

An EPIC® report showing a 72% utilization rate during the project period obtained RN compliance with tool utilization (refer to Appendix C). This was evidenced by the documentation of the American Stroke Association Post-Stroke Discharge Checklist tool being provided to patients and caregivers at admission within the EMR. The goal was for both the patients and caregivers to obtain education from the staff, complete the checklist, and increase the educational acumen to reduce the incidences of patients returning for unnecessary readmissions within 30 days. Results were tracked weekly and posted on the key performance indicator (KPI) board for staff visualization and accountability. The team experienced high utilization rates, with a goal of at least 70% for the post-stroke discharge checklist, and developed a friendly competition between day and night shifts to achieve the highest use percentage.

The final report pulled from EPIC®, provided the percentage of RN documentation for the American Stroke Association Post-Stroke Discharge Checklist tool completion, review, and questions answered at discharge. RNs used a dot phrase within the discharge narrator, allowing a weekly dot phrase utilization report. The dot phrase is also known as a SmartPhrase or a shortcut that inserts a text into a clinical note within the Epic ® electronic medical record (Epic, 2021). In weeks one through three, utilization was 55% due to the inaccessibility of the dot phrase for staff with less than six months of tenure. After identifying this issue, the IT team pushed the dot

phrase to all staff, increasing the utilization rate to 72% for weeks four to seven. The team documented reasons for incomplete checklists or the absence of caregivers during the patient's hospitalization.

Recommendations for reducing post-stroke readmission rates included continued use of the American Stroke Association Post-Stroke Discharge Checklist by staff on ISU beyond the project period. Ongoing documentation of checklist administration, patient and caregiver education for clear retention and understanding, and compliance through effective charting in the EMR were essential to improved patient experience and reduction in unplanned readmissions. The effectiveness was measured by the reduction in post-stroke 30-day readmission rates from 8.7% to 3.9% following the eight-week project. Once data were received, a cost analysis determined decreased costs for patients, the facility, and healthcare in general. The cost savings were \$76,000 with readmissions decreasing from 10 to 5 following the project implementation.

### **Discussion**

The findings for the project were evident when the data were obtained. Due to a national data breach where healthcare organizations were informed of breached information which led to suspending outside platforms, the information was previously unavailable, limiting the organization's implications. The data were received, and the post-stroke readmission rate had decreased to 3.9% from 8.7%, surpassing the goal of 4.7%. Discussions with the ISU team provided valuable feedback on the sustainability of the American Stroke Association Post-Stroke Discharge Checklist tool, including plans to provide feedback to the American Stroke Association for a condensed checklist written on a fifth-grade reading level. The consensus was that the American Stroke Association Post-Stroke Discharge Checklist tool was extremely helpful to patients or caregivers with some understanding of healthcare or education. Much of



the current discharge pamphlets are simple and written at a fifth-grade reading level to ensure adequate comprehension for the patient population. The team determined that the American Stroke Association Post-Stroke Discharge Checklist was at a high school reading level and the length was overwhelming for some patients and caregivers.

The goal to sustain the American Stroke Association Post-Stroke Discharge Checklist utilization includes formal adoption by nursing leaders, integration into the ISU admission and discharge policies and procedures, and formal education through the learning management system for new hires. The IT team participated in the dot phrase build and expansion to other units that care for stroke patients. This build included standard documentation templates for admission and discharge narrators to ensure compliance and utilization. Reports would be developed for long-term monitoring of dot phrase use and related metrics.

Key indicators that need ongoing monitoring include readmission rates, RN utilization metrics, and documentation of the discharge RN's completion of the American Stroke Association Post-Stroke Discharge Checklist tool. Indicators identify essential capabilities that lead to specific outcomes (Chism, 2023). These indicators are crucial for a successful project outcome, benefiting patients, caregivers, and healthcare professionals by establishing criteria for quality improvement and feedback. Adequate stroke education during hospitalization can decrease unplanned readmissions, reduce patient stress, financial strain, and hospital-acquired infections, all of which hinder patient healing and increase healthcare costs.

### **Summary**

The American Stroke Association Post-Stroke Discharge Checklist was introduced to reduce post-stroke readmissions through improved discharge education. The checklist was provided to patients and caregivers at admission, encouraging them to ask questions and ensure

understanding before discharge. Physicians, advance practice providers, therapists, RNs, and case managers were involved in providing stroke education. Engaging patients and caregivers early improved education retention, resulting in a smoother discharge process and reducing unplanned 30-day readmissions. The initiative successfully reduced the facility's readmission rate from 8.7% to 4.7% over eight weeks, surpassing the project goal.

Post-implementation readmission rates remarkably declined from 8.7% to 3.9% following the project. Data were distributed to key stakeholders and care site leaders via email, the Microsoft Teams® page, and at a leadership team meeting. Recommendations were provided to continue using the checklist tool for effective stroke patient education and quality care once a condensed version is received from the American Stroke Association, as requested by the ISU staff members. By advancing these critical aspects of post-stroke care, the project not only supports immediate patient needs but also contributes to a sustainable healthcare model focused on long-term health outcomes and resource efficiency

The project aligned with the Triple Aim to improve patient and community health by enhancing patient experience, quality, and reliability (Institute for Healthcare Improvement [IHI], 2022). The checklist provided standardized education for patients and caregivers to ensure all post-stroke questions are answered, understanding of post-stroke care, and preventing unplanned readmissions. This benefits patient satisfaction, quality, and safety and reduces healthcare costs. The project also impacted the per capita cost of care by improving care coordination and medical resource utilization. Ultimately, this project fosters a holistic approach to post-stroke care that enhances patient outcomes, optimizes healthcare resources, and strengthens the foundation for continuous quality improvement.

## References

- Ahmed, A. (2023). Quality metrics in acute stroke: Time to own. *Indian Journal of Critical Care Medicine: Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine*, 27(11), 786–787. <https://doi.org/10.5005/jp-journals-10071-24584>
- American Heart Association [ASA]. (2024). Stroke resources: Stroke discharge list for patients and caregivers. [https://www.stroke.org/stroke-discharge-list-for-patients-and-caregivers-ucm\\_463810.pdf](https://www.stroke.org/stroke-discharge-list-for-patients-and-caregivers-ucm_463810.pdf)
- Bambhroliya, A., Donnelly, J., Thomas, E., Tyson, J., Miller, C., McCullough, L., Savitz, S., & Vahidy, F. (2018). Estimates and temporal trend for US nationwide 30-day hospital readmission among patients with ischemic and hemorrhagic stroke. *JAMA Network Open*, 1(4), e181190. <https://doi.org/10.1001/jamanetworkopen.2018.1190>
- Benoit, C., Lopez, D., Loiseau, M., Labreuche, J., Kyheng, M., Bourdain, F., & Lapergue, B. (2020). Impact of a pre-discharge education session on stroke knowledge: A randomized trial. *Journal of Stroke and Cerebrovascular Diseases*, 29(12), 105272. <https://doi.org/10.1016/j.jstrokecerebrovasdis.2020.105272>
- Centers for Disease Control and Prevention. (2020). *Stroke facts*. <https://www.cdc.gov/stroke/facts.htm>
- Chism, L. (2023). The doctor of nursing practice: A guidebook for role development and professional issues.
- Choudhury, J., Perrio, S., Scobell, M., Bertram, T., & Gray, A. (2022). Proactive care post-discharge to reduce 30-day readmissions to hospital. *The International Journal of Risk & Safety in Medicine*, 33(S1), S41–S45. <https://doi.org/10.3233/JRS-227022>
- Connelly, L. M. (2021). Using the PDSA model correctly. *Medsurg Nursing*, 30(1), 61–64.

Epic. (2021). Things you can do on your own -

*Epic*. <https://www.acep.org/administration/quality/health-information-technology/epic-articles/things-you-can-do-on-your-own-epic>

Fallon, C. (2023). Readmissions: What the statistics tell us. The National Committee for Quality Assurance. <https://blog.cureatr.com/cost-of-hospital-readmissions-what-the-statistics-tell-us>

Ifejika, N., Bhadane, M., Cai, C., Watkins, J., & Grotta, J. (2021). Characteristics of acute stroke patients admitted to inpatient rehabilitation facilities: A cohort study. *PM & R: Journal of Injury, Function & Rehabilitation*, 13(5), 479-487. <https://doi.org/10.1002/pmrj.12462>

Institute for Healthcare Improvement. (2022). The quintuple aim for health care improvement: A new imperative to advance health equity. <https://www.ihl.org/resources/publications/quintuple-aim-health-care-improvement-new-imperative-advance-health-equity>

OhioHealth. (2021). OhioHealth change model.

[franklin.instructure.com/courses/16042/pages/ohiohealth-resources?module\\_item\\_id=860757](https://franklin.instructure.com/courses/16042/pages/ohiohealth-resources?module_item_id=860757)

OpenAI. (2023). *ChatGPT - AI language model*. <https://openai.com/>

Oyesanya, T. O., Loflin, C., Byom, L., Harris, G., Daly, K., Rink, L., & Bettger, J. (2021). Transitions of care interventions to improve quality of life among patients hospitalized with acute conditions: A systematic literature review. *Health Quality of Life Outcomes*, 19, 36. <https://doi.org/10.1186/s12955-021-01672-5>

Powers, W. J., Rabinstein, A. A., Ackerson, T., Adeoye, O. M., Bambakidis, N. C., Becker, K., Biller, J., Brown, M., Demaerschalk, B. M., Hoh, B., Jauch, E. C., Kidwell, C. S., Leslie-

- Mazwi, T. M., Ovbiagele, B., Scott, P. A., Sheth, K. N., Southerland, A. M., Summers, D. V., & Tirschwell, D. L. (2019). Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines for the early management of acute ischemic stroke. *Stroke*, *50*(12). <https://doi.org/10.1161/str.0000000000000211>
- Saragih, I. D., Everard, G., Saragih, I. S., & Lee, B. (2024). The beneficial effects of transitional care for patients with stroke: A meta-analysis. *Journal of Advanced Nursing*, *80*(2), 789–806. <https://doi.org/10.1111/jan.15850>
- Swan, B., Haas, S., & Jessie, A. (2019). Care coordination: Roles of registered nurses across the care continuum. *Nursing Economic\$,* *37*(6), 317-323. <https://jdc.jefferson.edu/nursfp/101>
- Tay, M. (2021). Hospital readmission in stroke survivors one year versus three years after discharge from inpatient rehabilitation: Prevalence and associations in an Asian cohort. *Journal of Rehabilitation Medicine*, *53*(6), jrm00208. <https://doi.org/10.2340/16501977-2849>
- Weiss, A., & Jiang, J. (2021). Healthcare cost and utilization project (HCUP). Agency for Healthcare Research and Quality. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb278-Conditions-Frequent-Readmissions-By-Payer-2018.jsp>
- Yacoub, A., Alshammary, S. A., Alhalahlah, T., & Somduth, S. (2023). Using FOCUS-PDSA quality improvement methodology model in healthcare: Process and outcomes. *Global Journal on Quality and Safety in Healthcare*, *6*(2), 102–110. <https://doi.org/10.36401/JQSH-22-19>
- Zhou, L., Lansberg, M., & de Havenon, A. (2023). Rates and reasons for hospital readmission after acute ischemic stroke in a US population-based cohort. *PLoS One*, *18*(8), 1-14. <https://doi.org/10.1371/journal.pone.0289640>

## Appendix A



# YOUR STROKE DISCHARGE CHECKLIST



**Together  
to End Stroke™**

Leaving the hospital after your stroke can be scary and overwhelming. To help you prepare for what's next in your recovery, hospital staff will speak with you and the person helping to care for you about what you can expect. Use the checklist below to help guide your conversations and to make sure your questions are answered.

### **INSTRUCTIONS:**

1. You and the loved ones helping you should talk with your medical staff throughout your stay about the questions below.
2. Check the questions that you have asked and have gotten answers for, skip any that aren't applicable. Make sure you fully understand the answer before checking the box.
3. Write down the answers to your questions and any important information (e.g., names, phone numbers, etc.) in the spaces that follow.
4. Bring the checklist home and make copies for friends and family who may help you with your post-stroke care.

### **UNDERSTAND WHAT HAPPENED**

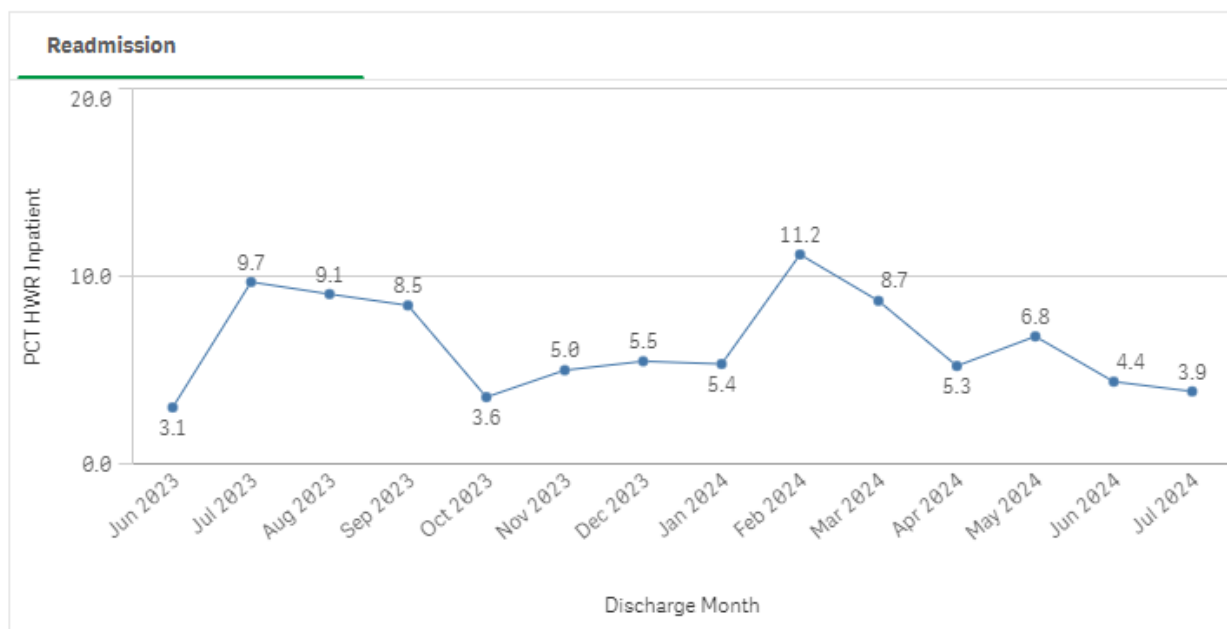
What was the diagnosis?

What caused the stroke?

Patient's Name: \_\_\_\_\_

## Appendix B

### Post-stroke readmission rates



## Appendix C

## OhioHealth Neurology

## RMH ISU Dot Phrase Utilization

Time Period: June 17, 2024 - August 9, 2024



Dot Phrase Utilization			
	Number of RMH ISU Patients with .strokedc	Total Patients Discharged from RMH ISU	% Utilization
ISU	213	320	66.6%
ISU STROKE DX	139	193	72.0%