

Optimizing Stroke Program Efficiency: A Guide for Resource Allocation

By Michelle Luffey

Many healthcare facilities are facing the problem of under-allocation of resources for effective stroke program management, particularly in the roles of Stroke Coordinator and Stroke Data Abstractor. This issue often arises when the program's growth outpaces the available resources, necessitating a keen understanding of when additional resources are needed to ensure the program's continued success.

Small programs with less than 300 stroke patients per year may initially operate effectively with a single individual juggling the Stroke Coordinator and Stroke Data Abstractor roles. However, as the program expands, the workload can swiftly surpass one person's capacity. The staffing guidelines in this article were carefully crafted, considering each role's specific responsibilities and the workload associated with tasks within each role.

The Stroke Coordinator is vital to a stroke program's success, serving as the linchpin among multidisciplinary team members to ensure optimal stroke care. They collaborate extensively with pre-hospital, acute care, rehabilitation services, palliative care, outpatient services, and the community, highlighting the importance of teamwork. Typically, this role is filled by a registered nurse passionate about stroke care, directly impacting service-level care quality. The coordinator ensures adherence to the highest care standards through regular rounding and evidence-based guidance. They also play a crucial role in educating staff, physicians, EMS personnel, and the public fostering an informed and responsive care environment. Their effectiveness stems from their ability to interface with various disciplines and their commitment to teamwork, making them an invaluable asset.

A significant part of the Stroke Coordinator's duties is overseeing the quality of the stroke program. They identify performance gaps, collaborate with relevant disciplines to determine appropriate outcome measures, and spearhead performance improvement initiatives to enhance care quality. This includes facilitating feedback to staff, physicians, and EMS and promoting a culture of continuous learning and adaptation.

Often described as a "Jack of All Trades," the Stroke Coordinator's role spans quality oversight, education, public speaking, and patient advocacy. Their multifaceted responsibilities are essential in bridging care gaps, advocating for patients, and driving the stroke program toward excellence. However, this role is complemented by

the crucial work of the Stroke Data Abstractor, who focuses on the meticulous collection, analysis, and reporting of stroke-related data.

The Stroke Data Abstractor is critical to the stroke program's continuous improvement efforts. They go beyond simple data collection by thoroughly gathering, analyzing, and presenting stroke data, providing a data-driven foundation for better patient outcomes. Their role is crucial in identifying data elements that do not meet quality or regulatory standards and assisting the Stroke Coordinator in monitoring the outcomes of evidence-based performance improvements. By tracking program performance over time, the abstractor enables the stroke team to understand the impact of implemented changes, fostering a culture of excellence and accountability. The data collected and analyzed ensures that the program remains compliant and continues to provide high-quality stroke care.

Despite the apparent importance of structured data management in stroke care, the literature is significantly lacking regarding the education and training requirements for Stroke Data Abstractors and the detailed methodologies for data collection, entry, and cleaning to ensure validity and reliability.

Hospitals typically consider two primary candidates for the role of Stroke Data Abstractor: a Registered Nurse (RN) with stroke experience or a Registered Health Information Technician (RHIT). RHITs have formal data collection, entry, and analysis training, providing the fundamental skills required for the role. However, employing an RN with stroke care experience offers a distinct advantage due to their clinical expertise, which is invaluable for interpreting and managing stroke-specific data. When an RHIT is employed, the Stroke Coordinator often fills the vital data interpretation and management role. Regardless of whether an RN or an RHIT fills the position, comprehensive training in national stroke care standards, stroke data definitions, and collection procedures is mandatory to ensure data accuracy and reliability.

In terms of credentialing, while no specific certification is required for Stroke Data Abstractors, credentials in health data management, such as Certified Health Data Analyst (CHDA) or certification from the American Health Information Management Association (AHIMA), support the competency of professionals in this role.

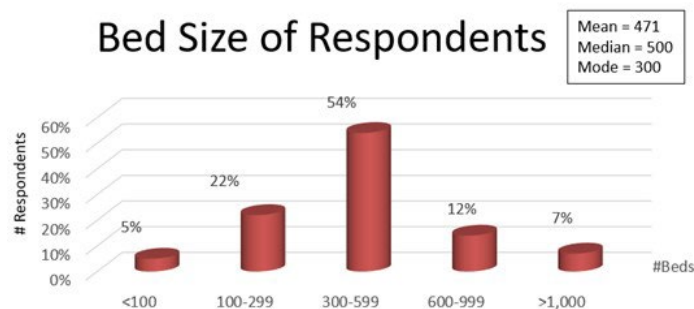
Data collection, entry, and cleaning for stroke care involves several crucial steps to ensure accuracy and reliability.

Initially, a Data Collection Plan is developed in alignment with clinical guidelines and research goals, accompanied by training in the use of specific tools such as electronic health records (EHR), stroke registries like Get With the Guidelines, and other data systems. Data entry follows standardized protocols to minimize errors, incorporating automated systems to reduce manual input and enhance accuracy. The process concludes with routine data quality checks to identify and correct discrepancies and established protocols for addressing data fallouts, including verifying and correcting missing or outlier data. This structured approach ensures the integrity and effectiveness of data management in stroke care.

The Stroke Data Abstractor should have a defined reporting relationship with the Stroke Coordinator. This relationship is critical to ensure that data insights are correctly integrated into quality improvement initiatives and that any data-related issues are promptly addressed. Regular meetings should be scheduled to discuss data findings, trends, and potential areas of concern in the stroke program.

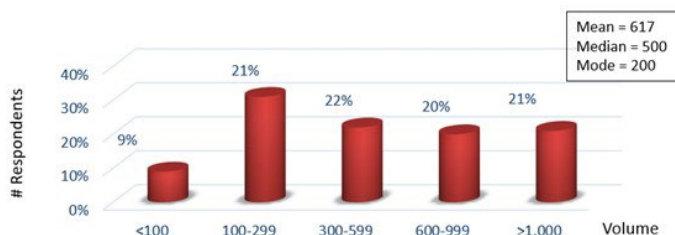
By establishing these structured practices and clear educational pathways, stroke centers can significantly enhance the reliability of their data, which is essential for continuous improvement in patient care and compliance with healthcare standards.

The data collection process is arduous and time-consuming. Several years ago, [Corazon](#) completed a survey and analysis of the time commitment associated with collecting and managing the data within stroke programs to validate the necessary FTE commitment. The 56 study participant hospitals ranged from just under 100 beds to over 1000 beds, with 54% in the 300 to 599 bed range.



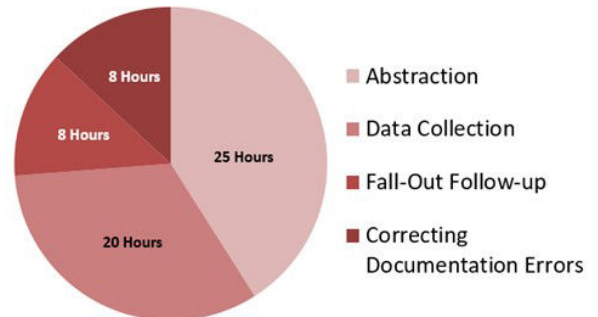
Stroke volumes within the study participants varied, with 63% reporting stroke volumes of greater than 300 patients annually.

Stroke Patients Treated Annually



The analysis identified that data abstraction methods were diverse and often inefficient, with 36% not using a systematic approach and 50% needing to pull data from multiple systems. While the abstraction work is usually done solely by the data abstractor, data collection, fallout follow-up, and management of documentation errors are often shared responsibilities between the data abstractor and the stroke coordinator. Ultimately, the survey analysis identified an average-volume stroke program with 300 to 600 annual patients required over 1.5 FTEs every week for data management alone, resulting in a requirement of 2 FTEs overall to manage the average volume stroke programs.

Weekly Data Management Requirements



Improvements in data abstraction efficiencies over time have been made. However, the sheer volume of data points has significantly increased for most programs to meet their performance improvement requirements. Despite the vast improvements in EMR systems, organizations often still need to perform manual data collection to capture various data points. Programs today are also faced with high staff turnover and the use of temporary contract labor, necessitating a considerable increase in the time the stroke coordinator spends on staff education.

Years of data analysis and program assessments encompassing a wide range of hospital sizes and stroke patient volumes, have informed our nuanced understanding of the FTE commitment necessary for effective management within stroke programs. Our comprehensive analysis of data abstraction and program management complexities strongly recommends allocating one full-time equivalent (FTE) Stroke Coordinator and one FTE Stroke Data Abstractor for programs handling 300 to 600 annual stroke cases. However, as programs expand, it is not uncommon for those now managing 900 to 1,000 or more cases to still be staffed with only one Stroke Coordinator and one Data Abstractor. This staffing shortfall often leads to program inefficiencies. Despite their best efforts, the coordinator and abstractor struggle to manage the overwhelming workload, jeopardizing the smooth operation and effectiveness of the program.

In conclusion, addressing the under-allocation of resources in stroke program management is crucial for maintaining the quality and effectiveness of care. Whether this is a new program starting out or a program that is growing year by year, proper staffing of a sufficient volume of Stroke Coordinators and Stroke Data Abstractors is essential for ensuring that patient care standards are met, and regulatory requirements are upheld, and this requires a recognition

that the program's volume must be taken into consideration. The comprehensive training and credentialing of these roles, along with a structured approach to data collection and management, are fundamental as well to the success of stroke programs. By recognizing the importance of these roles and providing adequate resources, healthcare facilities can foster a culture of excellence and accountability, ultimately leading to improved patient outcomes and the continuous advancement of stroke care.



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