Clinical quality

PROCESS MAPPING IN DIAGNOSING DELAYS: ACUTE STROKE IMAGING

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Introduction: Patients with suspected acute stroke need urgent brain imaging to guide decisions. We systematically looked into imaging as part of work to improve our performance.

Method: We conducted a Process Mapping exercise as well as retrospective review of timings and quality of image requests. Data was extracted from electronic hospital systems covering consecutive acute stroke admissions over a period of one month. A re-audit was conducted six months later.

Results: We identified three main steps for imaging: requesting, performing and reporting. Of 52 confirmed acute strokes, 50% had imaging within 60 minutes and 100% within 24 hours, meeting national and local targets. Yet, we identified significant delays in different steps of the pathway. For example, only 53% had a CT scan within 30 minutes from request and in only 34% was the scan reported within 30 minutes of completion. A significant proportion of patients (48.3%) presenting within the “lysis window”, were not scanned within 60 minutes.

Following this audit, we suggested new roles for team members, which were accommodated in the new stroke pathway. For example, the radiographer alerts the radiologist upon completion of scan.

Our recommendations led to dramatic improvements with 82% of patients having a scan within 30 minutes from request. In addition, 75% of scans were reported within 30 minutes. Finally 66% of patients presenting within the “lysis window” were scanned within an hour.

Conclusion: Process mapping gave us meaningful insight into the quality of our data. It identified delays and clarified the steps needing improvement that conventional audit methods could not pick up. Individual roles and responsibilities became clear. Not every model works for every service - there are no golden rules.

We strongly encourage clinicians to engage in mapping exercises of their clinical pathways, instead of adopting “successful” models that may be susceptible to local factors.