The A&E Stroke Pathway: From Order To Report

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1. Introduction

There are over 100,000 strokes per year in the UK; equating to a stroke approximately every 5 minutes. Strokes are the 4th biggest cause of death in the UK and cost the economy about £26 billion every year (Stroke Association, 2018). The NICE guidelines state that a non-enhanced CT head should be completed 'immediately,' if a patient's symptoms meet the guidelines (NICE, 2019). 'Immediately' is defined by the NICE guidelines (2019), as 'ideally the next slot and definitely within 1 hour, whichever is sooner.' Imaging must be carried out before a patient can by thrombolised (NHS, 2019). Alteplase used in thrombolysis, is more effective the quicker it is administered, it should be administered within 4.5 hours of symptom onset, however in some cases it can be administered up to 6 hours after symptom onset (Intercollegiate Stroke Working Party, 2016., NHS, 2019).

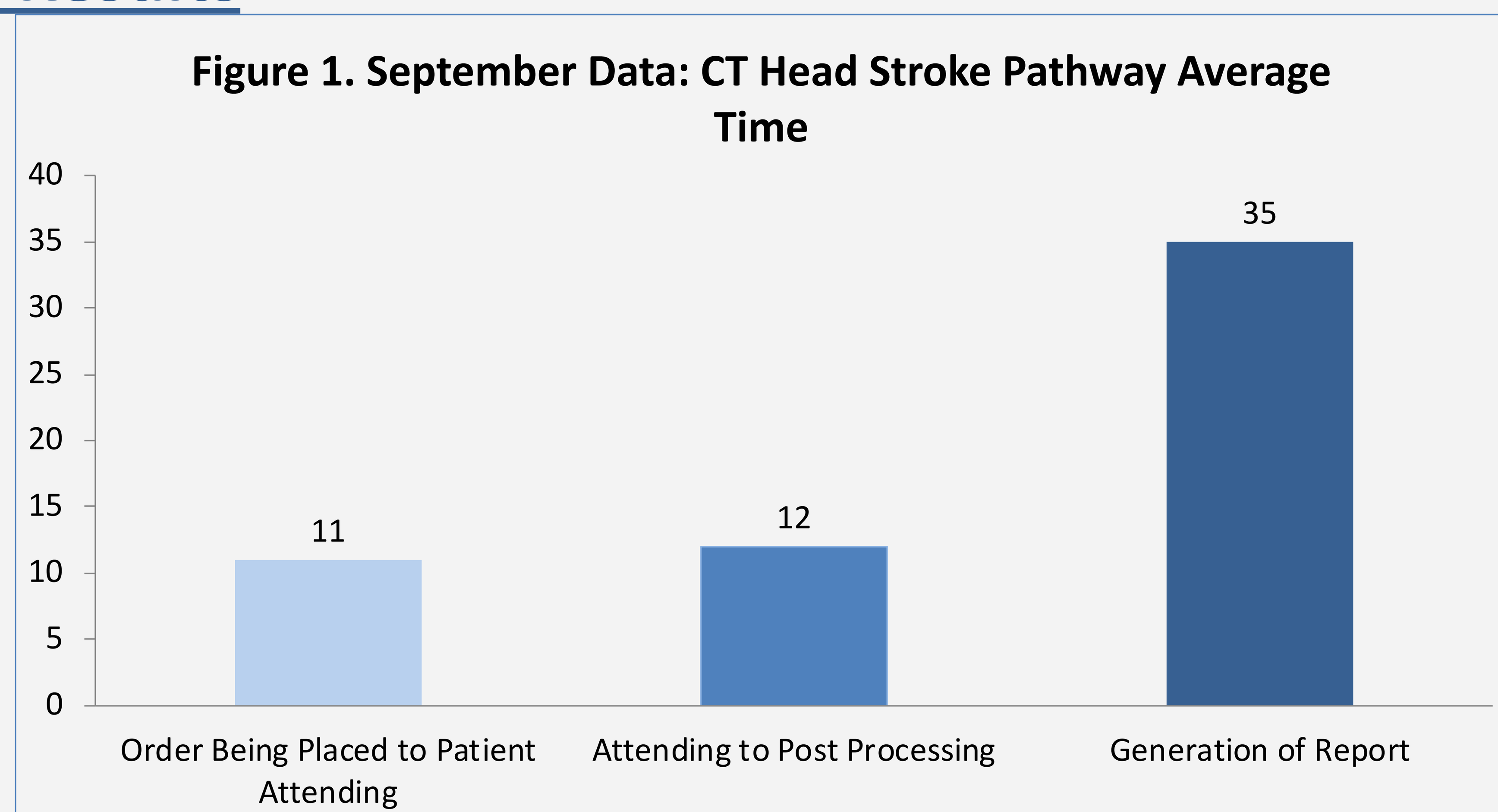
This audit explored if this trust meets the NICE stroke guidelines and highlights areas of service improvement, by examining the effectiveness of the pathway; from when a request was ordered to patient attending, from attendance to post processing and from post processing to generation of a formal report.

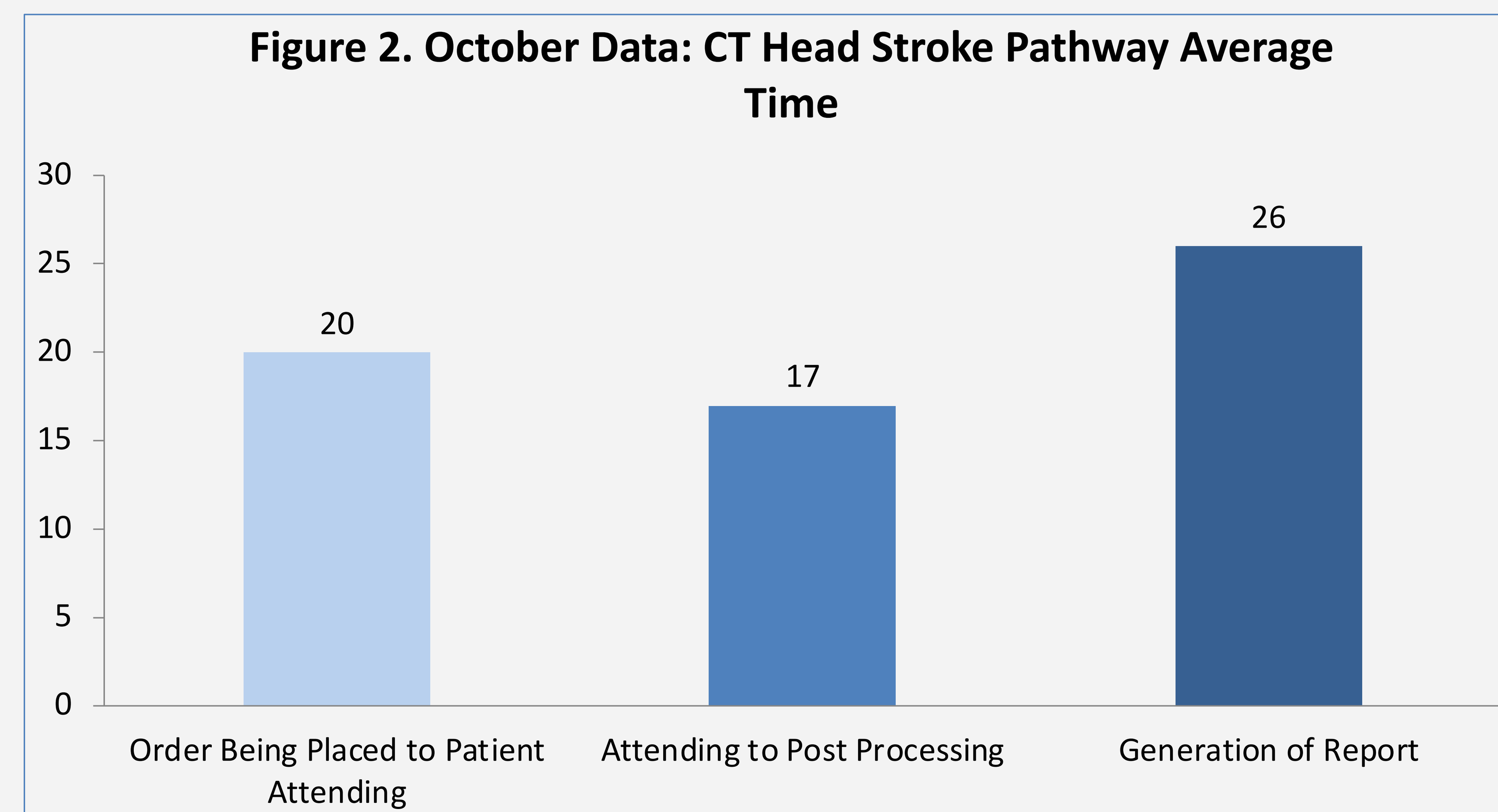
2. Method

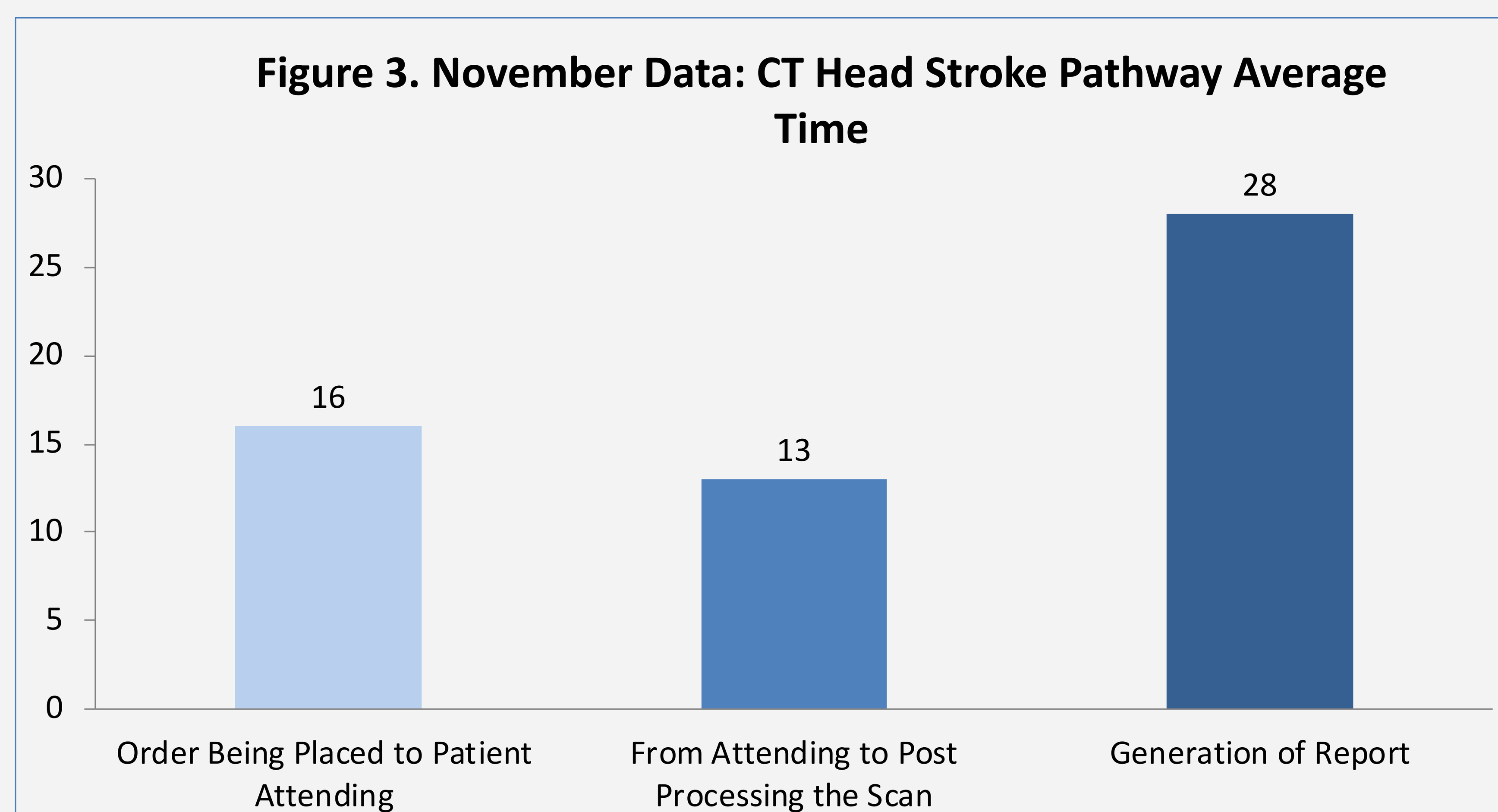
A retrospective audit was completed examining the CT Head Stroke pathway, on patients attending Accident and Emergency (A&E) in September, October and November 2018. This data was collected from a CT scanner that is not based in the A&E department.

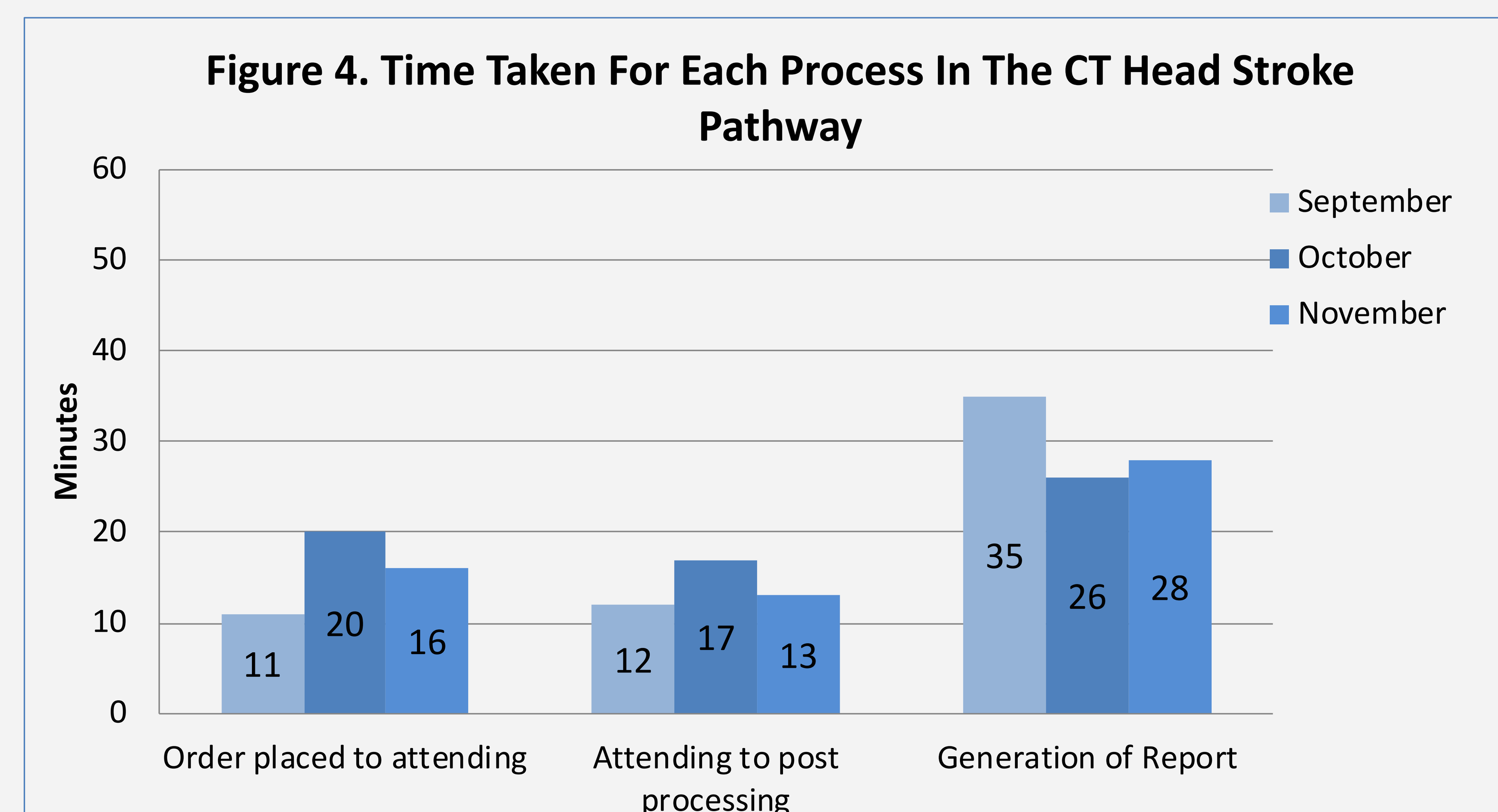
The inclusion criteria was any request using the CRIS 'Urgency 2 Code'. Any requests ordered under other codes were excluded.

3. Results









4. Discussion

The invaluable relationship between Stroke Nurse Specialists and Radiographers should not be overlooked in providing an high quality service. Band 6 Radiographers at this trust can accept CT head requests within their scope of practice, contributing to the efficiency the pathway.

The data highlights October had the largest delay in patients attending and post processing, but the quickest average reporting time. Due to this, the pathway in October was marginally longer (63 minutes). In contrast to September's data of quicker attendance times and post processing but the highest average delay for a report. Interestingly, data obtained in November was marginally quicker overall by completion of the pathway in an average of 57 minutes.

Factors affecting the inconsistencies in the different processes for each month was investigated. The impact between in and out of hours reporting was explored; it was found there was a slightly higher delay in reporting out of hours and across handover times. October's higher data for attendance times and post processing was examined, no viable reason was found to affect this, the sample of patients in the audit were similar in all months.

As mentioned previously, a limitation of this audit is that it excluded any stoke patients incorrectly entered under the wrong urgency code on CRIS. This may have limited the sample size and therefore potentially not included all the stroke CT heads completed during the months audited.

5. Service Improvement

Liaison with the Stroke Team

- A stroke bleep would provide members of the stroke team a direct way to contact CT Radiographers if phone lines are busy.
- The attendance of Radiographers at monthly scrutiny meetings with the Stroke Team could highlight areas of improvement.
- Reviewing images while the patient is on the scanner, could highlight if any further scans need to be performed immediately e.g. Angiograms.
- Encourage the administration of thrombolysis while the patient is on the CT scanner.

Education

- Stroke patients should be prioritised by all staff groups, including Porters, A&E staff, Radiographers and Radiologists.
- The data shows there is a large variance in post processing. Radiographers should be reminded about the importance of accurate post processing.
- Educating Radiographers about common appearances of pathologies on CT head scans which may contraindicate thrombolysis.
- Educate referrers about the code system for requests and the importance of using the correct code: urgency 2.

Communication

- Ensure Radiologists are aware when thrombolysis patients are scanned, especially out of hours.
- Documenting any information relevant to the patient's pathway on CRIS for example: if the patient is too unwell to attend for their scan or staffing issues.
- Ensure an efficient and effective hand over at the end of every shift.

6. Conclusion

In hindsight of the aforementioned points, this audit has found that the Trust is meeting the NICE guidelines. The data indicated that the combined total average time from a patient's scan being ordered to reported is 59 minutes.

Analysis of the data has highlighted numerous areas for improvement, education and communication is vital in providing high quality care; reaffirming the importance to Radiographers and Porters of the time sensitive nature of the stroke pathway. In addition, liaising and communicating with Radiologists especially out of hours to ensure a timely report is crucial.

Education into accurate post processing is required and reminding referrers to use the correct urgency code to filter CT head requests.

Once ideas for service improvement has been implemented, further months will be audited to create a more representative sample, in addition this audit will also be able to consider how the service improvement suggested has effected the results.

References:

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