

## The Impact of the Implementation of Code Stroke Nurses for Hyperacute Stroke Service

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### Problem Statement

Over the years, the number of stroke activations has increased due to increased public awareness through public campaigns, extended time window for re-perfusion treatment and national diversion of acute strokes to hyperacute stroke centres.

Thus, code stroke nurses play an integral role in leading and facilitating the acute stroke activation service for time sensitive treatment.

### Project Aim

1. To reduce door-to-hyperacute treatment time
2. To reduce the number of stroke activations through triaging by Emergency Department (ED) team and Advanced Practice Nurses (APNs)
3. To improve the support system for Senior Residents (SR) attending to hyperacute stroke

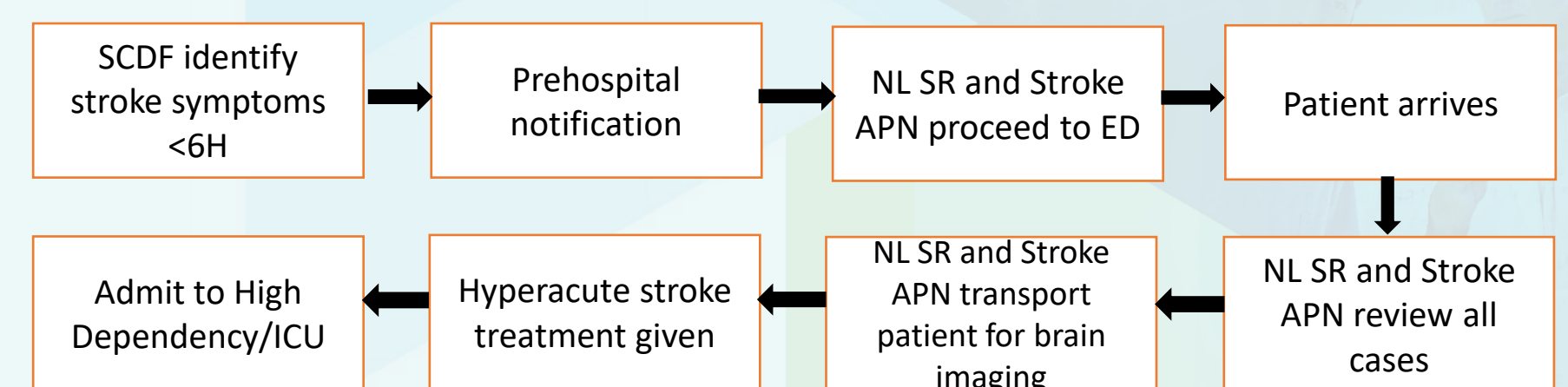
### Lessons Learnt

Inter-department work can be challenging as trust has not been built. There is a need for an ED Clinician Driver as driver for this initiative, conducts regular engagement to address teething issues.

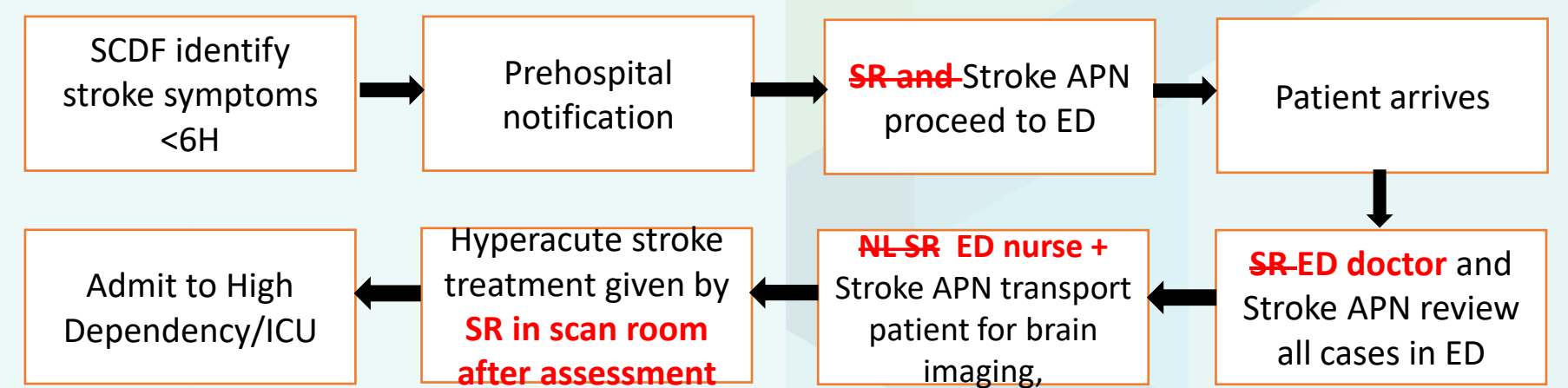
Lack of dedicated staff to run this service and it is not cost effective to have standby staff to perform this service only as stroke activations are unpredictable. Cross training of nurses was essential, and nurses were engaged regularly. Concerns were addressed.

### Potential Solutions

#### Old Workflow



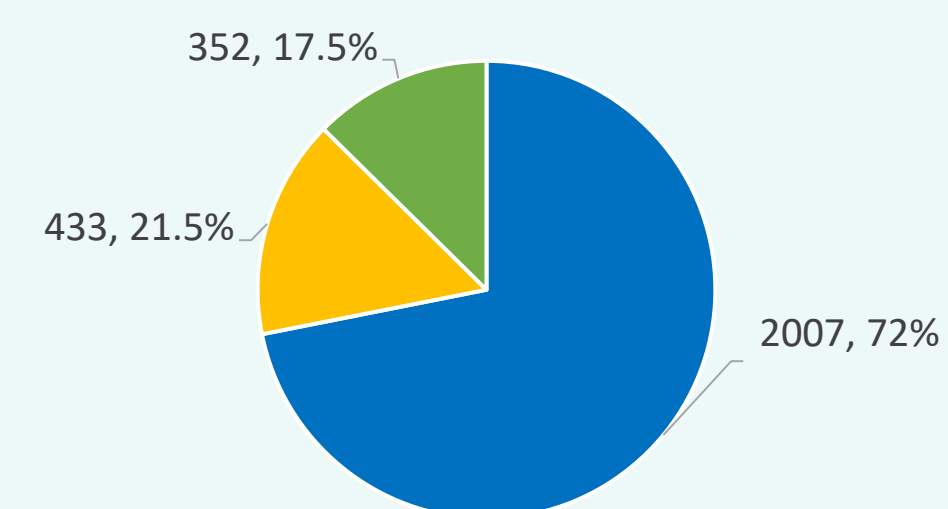
#### New Workflow



APNs were trained to perform the role of a code stroke nurse during weekday 7am to 10pm. The APN works closely with ED and NL team. They lead the stroke activation process from ED to hyperacute stroke treatment. They have replaced neurology SR role in ED so that SR could focus on reviewing medical records of patient while awaiting for patients in the scan room.

### Outcomes & Impacts

Stroke Activation from 1 Feb 2021 to 31 Mar 2022



■ Total Stroke Activations ■ ED Standdown ■ Hyperacute treatment given

	With Nurse	Without Nurse	P Value
TPA, DTN	N= 156 Mean 47mins (SD=33) Median <b>48mins</b> (IQR=30)	N= 135 Mean 56mins (SD=37) Median <b>53 mins</b> (IQR 34)	P = 0.01
EVT, DTG	N=86 Mean 113mins (SD=38) Median <b>113</b> mins (IQR=42)	N=86 Mean 136mins (SD=38) Median <b>134</b> mins (IQR= 39)	P<0.001

SR time saving for each stroke activation is about 20mins as ED and APN plays a bigger role prior to brain imaging. Total time savings : 40,140mins for 2007 cases. A survey was conducted with the SRs and all SRs felt supported and were appreciative of the APNs