

Optimizing Acute Ischemic Stroke Treatment Through Regional Collaboration: Mechanical Thrombectomy Network in the Eastern Region of Thailand

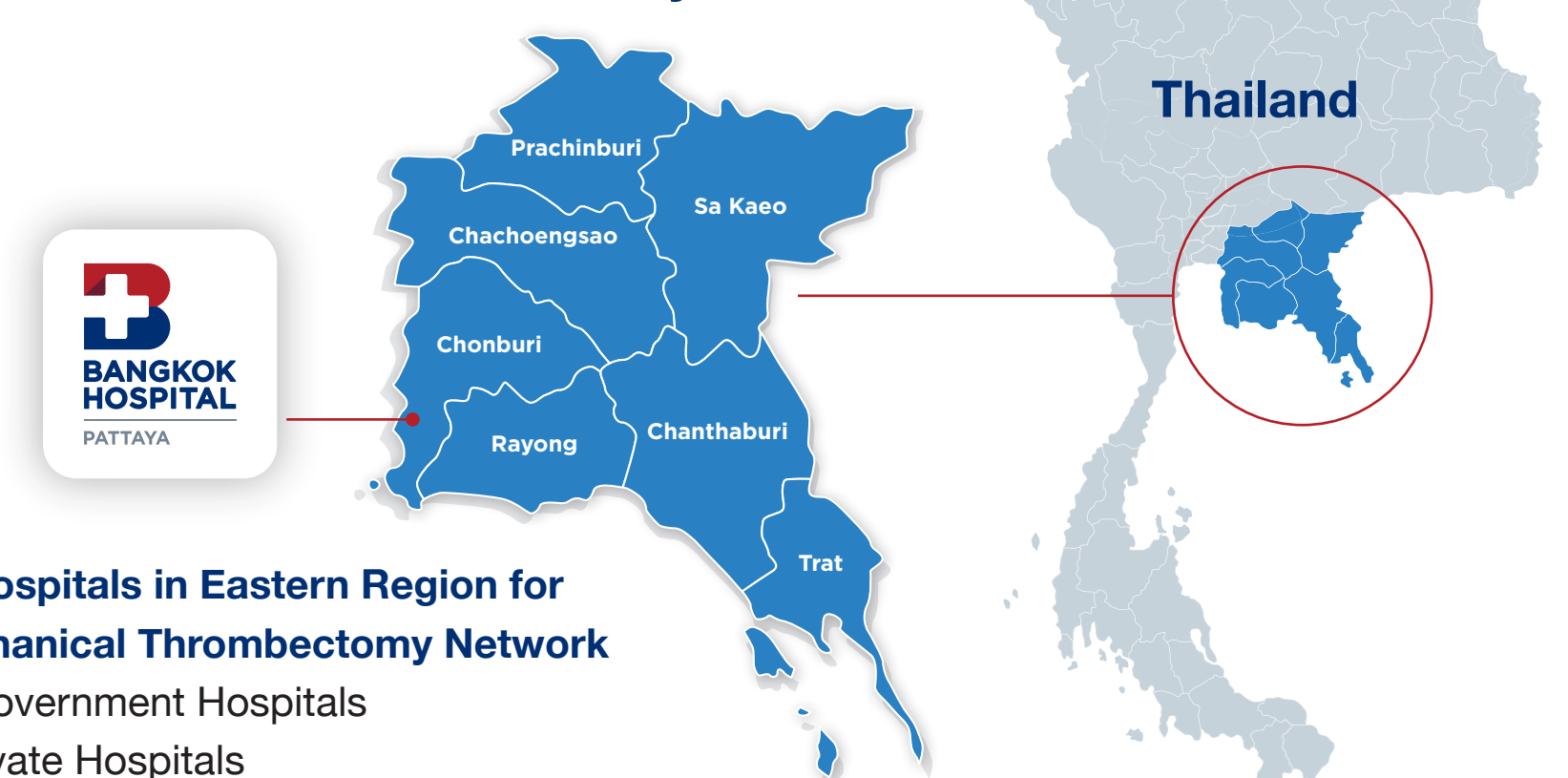
BENJAMAS BOONYAWAN, RN., WITTAWAT TAKONG, M.D., DECHA KINTORN, M.D., YOD PINROJ, M.D., NATTAKARN BURANAKUL, M.D., PIMCHANOK JAMAREE, RN.

Background:

Acute ischemic stroke treatment at Bangkok Hospital Pattaya

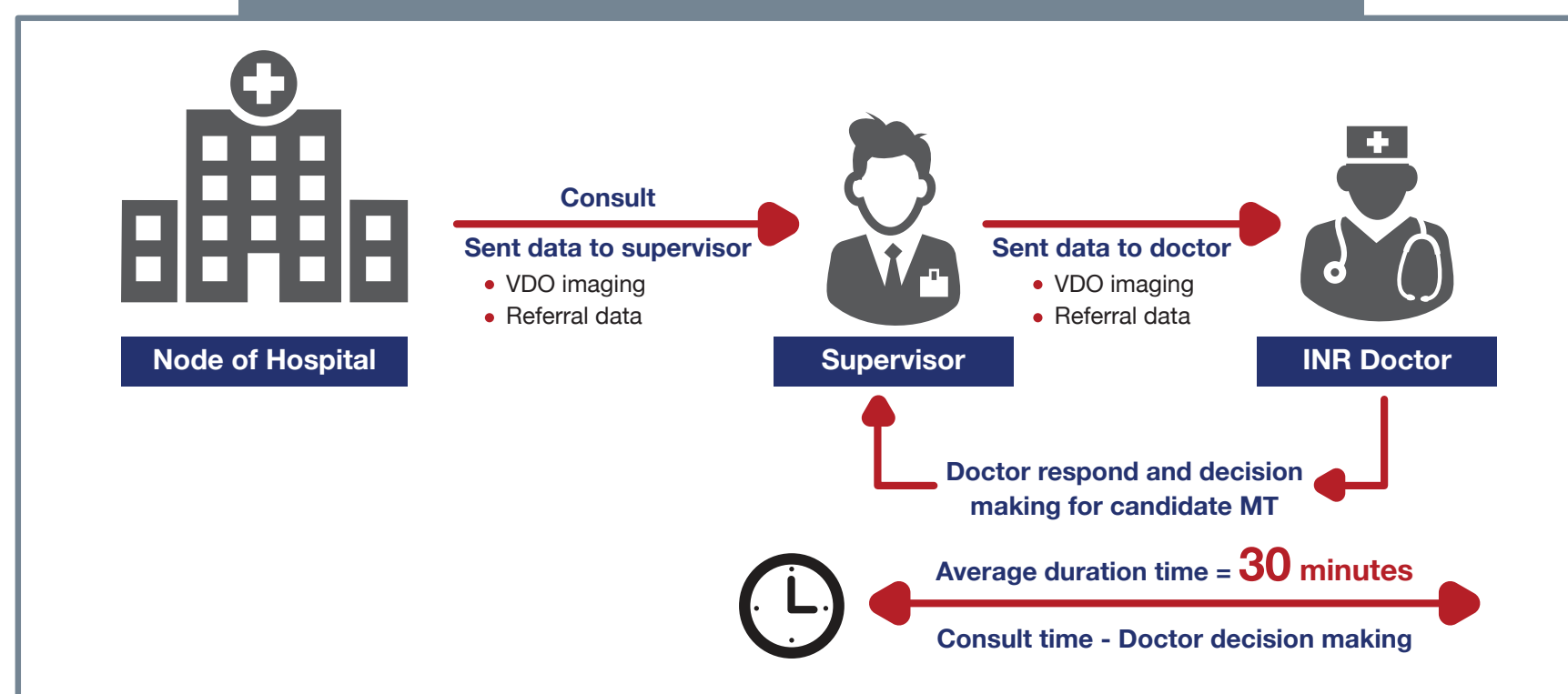
- An average of 200 cases per year, with approximately 20 patients per year receiving intravenous thrombolysis, achieving recanalization of occluded vessels in 19-44% of cases.
- Patients requiring Mechanical Thrombectomy (MT) were referred to the MT Center, with a procedure duration of 3 hours.
- MT was employed starting in 2019, making BPH the first facility in the Eastern Region to offer this treatment.
- In 2021, the hospital expanded its MT referral network to include government hospitals in the Eastern region.

Hospital in Eastern Region for Mechanical Thrombectomy Network



Methods:

Bangkok Hospital Pattaya referral process (Before)



Intervention

Y2022

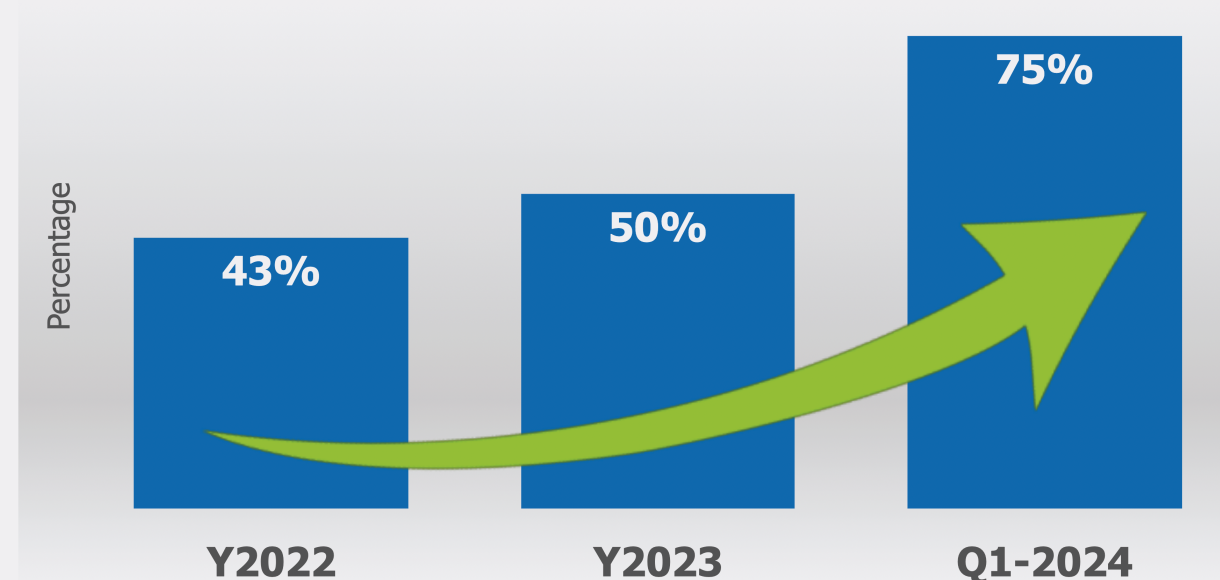
- Adopted the teleconsultation system
- Developed referral guidelines

Y2023

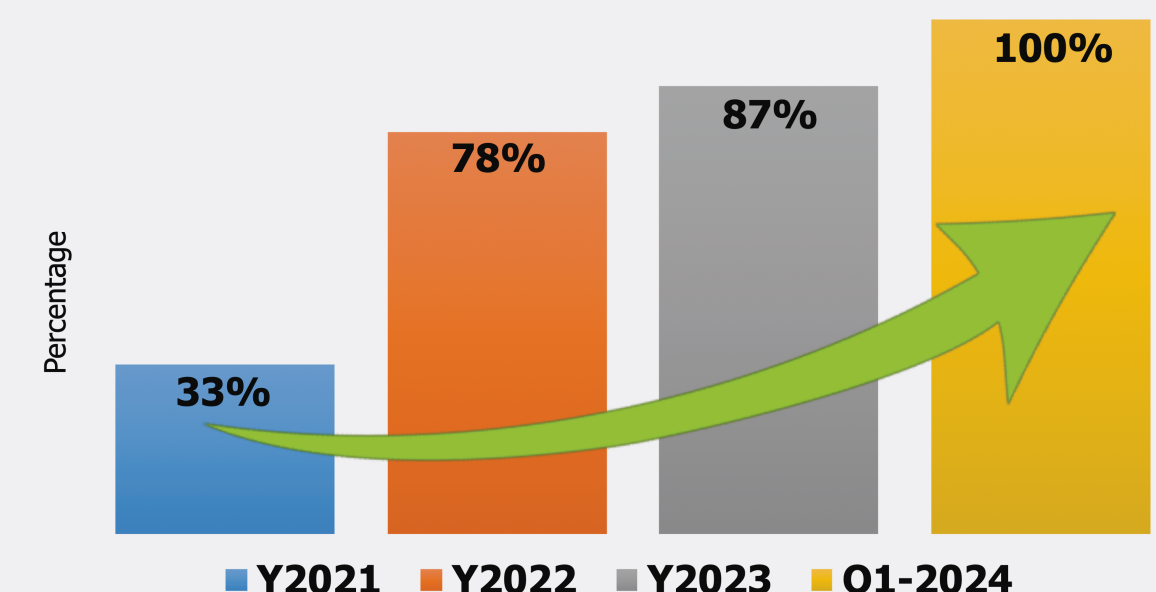
- Create patient transport guidelines
- Held a network Conference

Results:

Rate of time from consultation – Dispatching within 60 minutes



Reperfusion rate (TICI 2b/3)



Rate of mRS 0-2 at 90 days

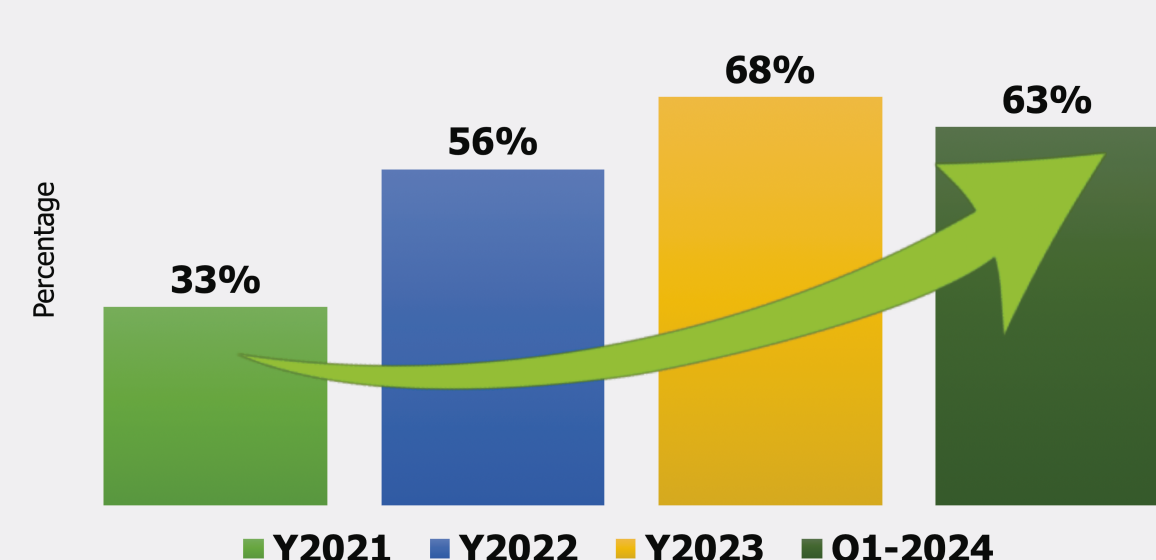


Table 1. Mean score time from consult to doctor's decision making in 2021-Q1 2024
Mean score time from consultation to Dispatching in 2022-Q1 2024.

Variable	Year	n	SD	Min-Max
Time from consultation to doctor decision-making	2021	18	30.3	6.1 (29-52)
	2022	138	7.2	5.8 (1-29)
	2023	219	8.7	6.8 (1-39)
	Q1-2024	50	7	6.7 (1-23)
Time from consultation to Dispatching	2022	86	74.6	36.4 (21-234)
	2023	140	61.8	25.9 (24-166)
	Q1-2024	24	54.8	28.8 (21-116)

Conclusions:

- The goal of establishing a Mechanical Thrombectomy (MT) network for ischemic stroke patients in the Eastern region is to improve treatment accessibility and reduce referral times.
- Improving the teleconsultation system and referral processes is crucial for streamlining patient transfers.
- However, there is no significant correlation between referral time and clinical outcomes, as other factors, such as disease severity and brain collateral circulation, play a role.

Limitation: One key limitation of this study is the need for enhanced safety measures in the teleconsultation system to ensure reliable and secure handling of patient data.



Benjamas Boonyawan, RN., M.S.
Nurse Coordinator of
Center of Excellence Neurology
Bangkok Hospital Pattaya