



**HSC** South Eastern Health  
and Social Care Trust

Northern Ireland  
**mdta**  
Medical & Dental Training Agency

**adept**  
Achieve | Develop | Explore  
PROGRAMME FOR TRAINEES  
#ClinicalLeadershipFellow Programme

# Reducing Door to Needle Time through Simulation-Based Education

Dr James Irvine  
ST6 Geriatric Medicine

Turner-Warwick Lecture Presentation



## Special thanks to

Project supervisors: Dr Mark Bowman and Dr Kevin Dynan

Project sponsor: South-Eastern Health and Social Care Trust

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No conflicts of interest to declare.

# Reducing Door to Needle Time through Simulation-Based Education



Trainees reported lack of knowledge and confidence



Increase in serious adverse incidents



Rise in 'Door-To-Needle' time

SSNAP

Deteriorating SSNAP performance



# Reducing Door to Needle Time through Simulation-Based Education



## InterSECT

International Section for Early Career and Training

## Incorporating Simulation-Based Education Into Stroke Training

Nicholas R. Evans, PhD; Jatinder S. Minhas<sup>1</sup>, MD; Zehra Mehdi, MSc; Amit K. Mistri, MD

## Simulation-Based Training of the Rapid Evaluation and Management of Acute Stroke (STREAM)—A Prospective Single-Arm Multicenter Trial

OPEN ACCESS

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### Guideline

## Simulation training programs for acute stroke care: Objectives and standards of methodology

Barbara Casolla<sup>1</sup>, Maria Alonso de Leciñana<sup>2</sup>, Raquel Neves<sup>3</sup>, Waltraud Pfeilschifter<sup>4</sup>, Veronica Svobodova<sup>5</sup>, Simon Jung<sup>6</sup>, André Kemmling<sup>7</sup>, Robert Mikulik<sup>5,8</sup>, Paola Santalucia<sup>9</sup> and  
On behalf of Simulation Committee of European Stroke Organisation

## EUROPEAN STROKE JOURNAL

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### QUALITY IMPROVEMENT REPORT

## Reducing door-to-needle times in stroke thrombolysis to 13 min through protocol revision and simulation training: a quality improvement project in a Norwegian stroke centre

Soffien Chadli Ajmi<sup>1,2</sup>, Rajiv Advani<sup>3</sup>, Lars Fjetland<sup>4</sup>, Kathinka Dehli Kurz<sup>4,5</sup>, Thomas Lindner<sup>6,7</sup>, Sigrunn Anna Qvindesland<sup>8</sup>, Hege Ersdal<sup>2,6</sup>, Mayank Goyal<sup>9</sup>, Jan Terje Kvaløy<sup>5,10</sup>, Martin Kurz<sup>1,11</sup>

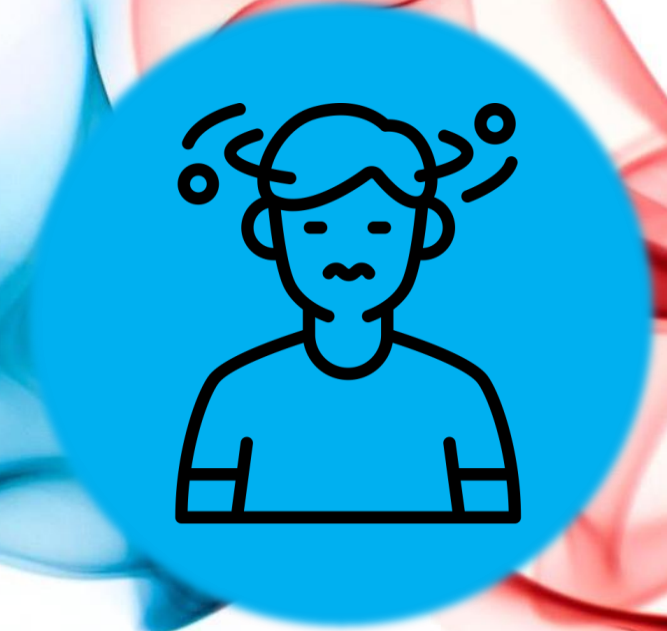
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Ulster Hospital





# Reducing Door to Needle Time through Simulation-Based Education



# Reducing Door to Needle Time through Simulation-Based Education

"Well organised and enjoyable - I feel more confident now!"

"Excellent practical experience dealing with simulated lysis calls."

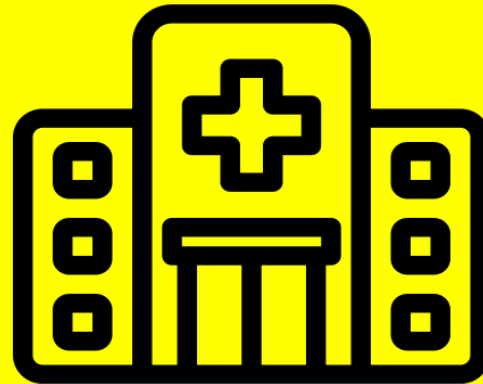
"Good to get feedback on stroke assessment"

"Useful to experience situations I haven't been in before"

"Excellent session - I would like this at every induction."

**"Great shortbread!"**

## Ulster Hospital



"I think the learners felt safe and they all seemed happy to ask questions. I'm confident that they will all be more confident with lysis calls going forward."

"Debriefs were excellent - really good, shared learning!"

"Excellent session. I think a lot of teams could benefit from this."

"It should be mandatory regionally for all trainees."

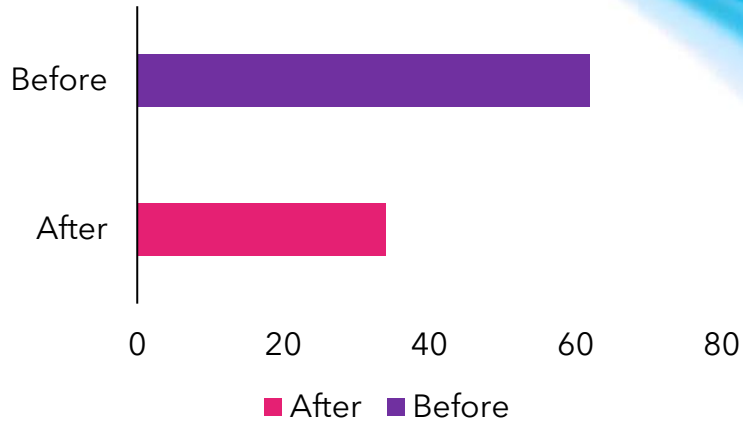
**"Excellent sandwiches!"**

# Reducing Door to Needle Time through Simulation-Based Education

Improvements to Stroke lysis pathway

- Use of Vocera devices
- Development of lanyard cards

Mean OOH DNT - Pre and Post SIM



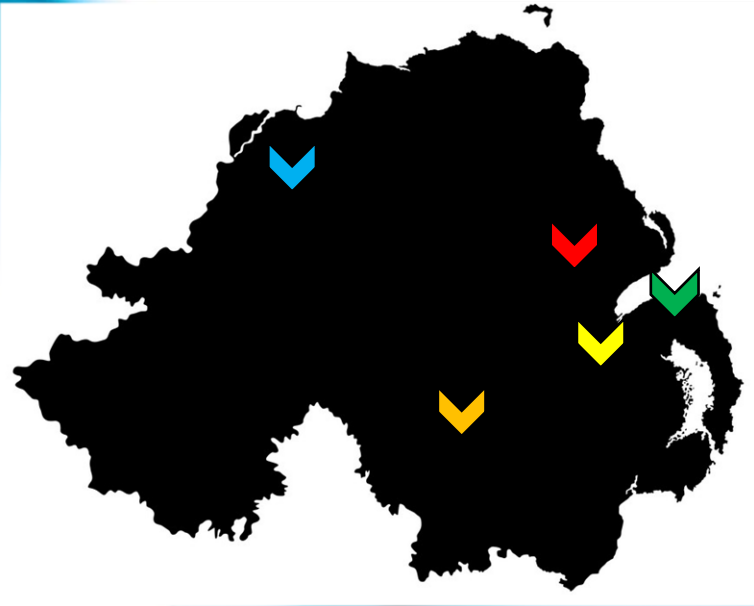
Reduction in mean out-of-hours DNT amongst involved trainees

- Pre SIM - **62 minutes**
- Post SIM - **34 minutes**





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# Reducing Door to Needle Time through Simulation-Based Education



Course available to all IMT3s from August 2023

Expansion of SIM for greater inter-professional involvement

SIM education now used for nurse training in thrombolysis competencies

Sharing of resources across UK and Ireland to encourage wider rollout of Stroke SIM education





@Jlrv29

# Reducing Door to Needle Time through Simulation-Based Education

Thanks for listening!



South Eastern Health  
and Social Care Trust

