



Stroke Code from EMS to Thrombectomy: An Interdisciplinary in Situ Simulation for Prompt Management of Acute Ischemic Stroke

PUBLISHED ABSTRACT

NICOLA FELDMAN 

LORRAINE BOEHM

MAGDA ZAVALA

BARBARA DILOS

MAMIE MCINDOE

LATCHMI NAGASWAR

KATIE WALKER

DONNIE BELL

DEVORAH NAZARIAN

JOSEPH RABINOVICH

STUART KESSLER

LAURA IAVICOLI

PHILLIP FAIRWEATHER

JOSEPH FARRAYE

HAZEM SHOIRAH

SUZANNE BENTLEY



**Author affiliations can be found in the back matter of this article*

ABSTRACT

Background: The treatment of acute ischemic stroke is challenging because it requires prompt management, interdisciplinary collaboration, and adherence to specific guidelines. We seek to address these challenges using simulation, which has been shown to be an effective educational technique that enhances patient outcomes, including by improving clinical team performance and allowing for systems testing.

Hypothesis/Research Question: Impromptu, in situ simulation can provide an effective teaching strategy for enhancing clinicians' appropriate, prompt, and interdisciplinary management of acute stroke.

Methods: An in situ simulation of a stroke code was designed and conducted at unannounced times. Simulations occurred in the real clinical environment, using real hospital equipment and involving the actual on-shift clinicians who would respond. To begin the simulation, an ED team was presented with a 55-year-old simulated patient with chief complaint of speech difficulty and right-sided weakness. The team needed to assess her appropriately, including activating the Stroke Team via the live hospital paging system. The Stroke Team responded to further coordinate evaluation, obtain appropriate imaging, administer thrombolytic therapy, and recognize the need for thrombectomy. Upon simulation completion, debriefing was utilized to review the case and team performance. Additionally, latent safety threats were recorded, if present. Finally, participants completed an evaluation to gauge the simulation's effectiveness.

Results: Debriefings demonstrated robust discussion and learner reinforcement of the importance of timeliness; critical stroke code actions; and the need for collaboration, teamwork, and communication in the management of acute stroke patients. Evaluations indicated that 100% of learners found the simulation to be an effective

CORRESPONDING AUTHOR:

Nicola Feldman

Icahn School of Medicine at
Mount Sinai, US

nicola.feldman@icahn.mssm.edu

KEYWORDS:

simulation; teamwork; ischemic stroke

TO CITE THIS ARTICLE:

Feldman N, Boehm L, Zavala M, Dilos B, McIndoe M, Nagaswar L, Walker K, Bell D, Nazarian D, Rabinovich J, Kessler S, Iavicoli L, Fairweather P, Farraye J, Shoirah H, Bentley S. Stroke Code from EMS to Thrombectomy: An Interdisciplinary in Situ Simulation for Prompt Management of Acute Ischemic Stroke. *ISMMS Journal of Science and Medicine*. 2021; 1(2): 9, pp. 1–2. DOI: <https://doi.org/10.29024/ijsm.56>

clinical, teamwork, and communication teaching tool, and all believed it would change their future performance on the stroke team.

Conclusions: Impromptu, in situ simulation helps develop interdisciplinary teamwork and clinical knowledge and is useful for reviewing crucial times and processes required for best-practice patient care. This is particularly valuable when timely management is essential, such as in acute ischemic stroke in this case.

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Nicola Feldman  orcid.org/0000-0002-4898-5385

Icahn School of Medicine at Mount Sinai, US

Lorraine Boehm

NYC Health+Hospitals/Elmhurst, US

Magda Zavala

NYC Health+Hospitals/Elmhurst, US

Barbara Dilos

Icahn School of Medicine at Mount Sinai, US

Mamie McIndoe

NYC Health+Hospitals/Elmhurst, US

Latchmi Nagaswar

NYC Health+Hospitals/Elmhurst, US

Katie Walker

NYC Health+Hospitals, US

Donnie Bell

NYC Health+Hospitals, US

Devorah Nazarian

Icahn School of Medicine at Mount Sinai, US

Joseph Rabinovich

Icahn School of Medicine at Mount Sinai, US

Stuart Kessler

Icahn School of Medicine at Mount Sinai, US

Laura Iavicoli

Icahn School of Medicine at Mount Sinai, US

Phillip Fairweather

Icahn School of Medicine at Mount Sinai, US

Joseph Farraye

Icahn School of Medicine at Mount Sinai, US

Hazem Shoirah

Icahn School of Medicine at Mount Sinai, US

Suzanne Bentley

Icahn School of Medicine at Mount Sinai, US

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Submitted: 14 April 2021

Accepted: 14 April 2021

Published: 12 May 2021

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