SIMULATION INTRODUCTION

FOR THE STROKE TEAM

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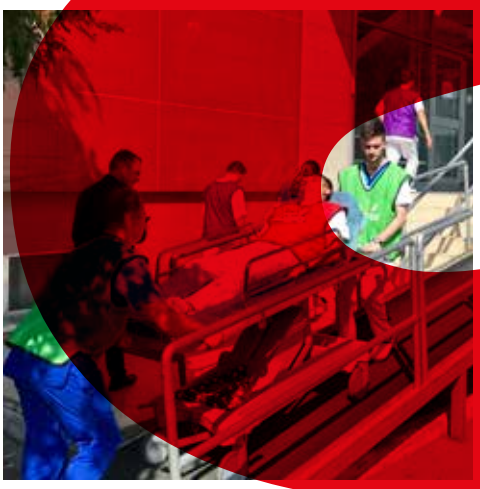
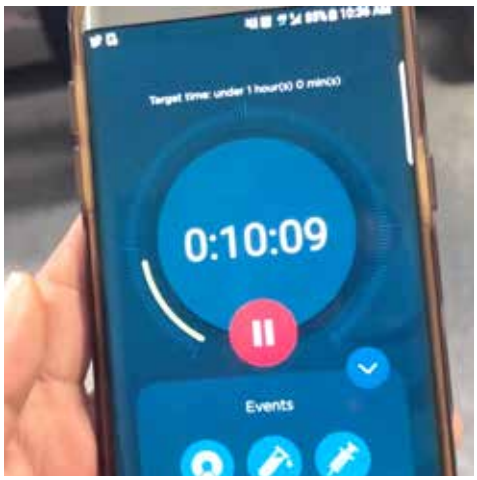
One of the most effective tools we use to identify bottlenecks and optimise stroke care is *'dummy patient simulation training'*. Evidence shows that hospitals using this training on a regular basis managed to significantly improve their performance in the long-term.





Extensive research pointed to the fact that stroke patient outcomes are positively influenced if the patient is treated in a stroke unit and has quick access to therapy.[1]

Focusing on the patient pathway, medical teams will be supported by the Angels consultants to identify bottlenecks in their hospital, and find appropriate solutions to optimize stroke care.

As part of this simulation training the stroke team in your hospital will assign a simulated patient that the stroke team will be asked to treat as they would normally treat any stroke patient. A video recording will be made of the first simulated treatment to be used in a discussion and referred to in order to point out areas of improvement and areas that the team performed well when compared to international best practice. A second run is performed after changes or corrective actions have been agreed on. This is again recorded for reference purposes. Below you can find more details about the process.

PROCESS

1. INTRODUCTIVE MEETING
2. 1ST SIMULATION
3. DEBRIEFING AND DISCUSSION
4. 2ND SIMULATION
5. DEBRIEFING AND DISCUSSION

1. Tahtali, D., Bohmann, F., Rostek, P. et al. Nervenarzt (2016) 87: 1322. doi:10.1007/s00115-016-0162-5

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INTRODUCTIVE MEETING

We will start by a short introductive meeting where we will focus on:

- Explaining the objectives of performing a simulation.
- Assign roles, brief all role-players for the first simulation and distribute simulation vests to identify different role-players.
- Select a case for simulation from the BodyInteract package and brief the “Dummy Patient” on which symptoms he/she should act out.
- Decide if the patient will be a “Walk-in” patient or a patient delivered by the ambulance services. For walk in patients a wheelchair or stretcher needs to be ready.
- Decide on how imaging will be evaluated (e.g. by recalling one of the hospitals’ old scans or using the imaging available on BodyInteract).
- Decide how the management of bloods will be dealt with.
- If necessary provide the “Dummy Patient” with a Dummy Cannula that the nurses can use to pretend to take bloods if this was the agreed process.

The purpose of this team meeting is to make sure everyone fully understands his or her role (from administrative to medical teams) in the selected scenario.

1ST SIMULATION

During the first simulation, the stroke team will organize to manage the simulated patient as they would a real-life patient. The Angels consultants' role will be to observe the process for reference purpose, and to take notes of the highlights and times.

DEBRIEFING AND DISCUSSION

The Angels consultant and the stroke team will debrief using the recorded video and the timeline.

Using an action item list to organise potential interventions, the team will decide upon which actions should take priority in order to improve the performance.

For these discussions, it is recommended that the whole stroke team attend so that each participant may give their input in building an action plan.
If possible, hospital managers and administrative staff might find interest in this meeting.

After selection of the actions to be implemented, it is crucial to perform a 2nd simulation to measure the impact of these actions.

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2ND SIMULATION

This 2nd simulation is crucial as it gives the opportunity to implement right away changes in the process and see how these behavioural changes impact the whole performance.

Again, before starting the simulation, the whole team needs to be briefed in, in particular the members who will directly implement changes.

The Angels consultants' role will again be to observe the process to serve as a support, and take notes of key moments and time so they can be compared with the first simulation.

1ST SIMULATION

2ND SIMULATION

DEBRIEFING AND DISCUSSION

After the second simulation the team will first evaluate and celebrate the improved pathway

The viability of implementing the priority actions are discussed and specific tasks and deadlines assigned to specific people who will be responsible for driving the changes with the help of the Angels consultant.

A method of evaluating the impact of the changes are agreed on and put in place.

The team agrees on the most appropriate follow up and communication channels that will be used during the change process.

Finally, a photo of the Simulation team is taken to share the experience with the rest of the Angels Community.

LEARNINGS FROM **PREVIOUS SIMULATIONS**

In preparation for the simulation training all that has to be done is for the stroke team to be notified that a stroke simulation training will take place, it does not have to be a very complicated procedure. Your Angels Consultant performs these simulation trainings on a regular basis so they will assist you during the process.

To get the most value out of the simulation, it would be useful to involve as many people as possible that are normally involved in acute stroke care. The idea is to simulate as closely as possible the real life treatment of stroke patients.

If possible involving someone from the ambulance services adds a lot of value to the experience as they can play a critical role in optimising the pathway.

Also consider involving the admin staff that influence the patient pathway. Admitting a patient to the hospital system could be a significant time waster that is often overlooked.

If the hospital wants to test the effect of the clinical lab in terms of processing bloods, they can involve them as well. If the time it takes to process bloods is a known issue, the simulation can also be run without informing them that it's a simulation to see the real time it takes to process bloods. This evidence is often very useful in getting better cooperation in the future. In this case the dummy patient would have to consent to having his/her blood draw for analysis.

LEARNINGS FROM **PREVIOUS SIMULATIONS**

The radiology protocol is also a key aspect to simulate. Normally we ask the radiology department to allow us to put the simulated patient in the scanner and move them in and out of the scanner without really scanning them. The best way to evaluate the stroke imaging protocol would be for the Radiologist to prepare a previous stroke scan from their system for the simulation interpretation. This should include the full set of imaging studies that are typically performed for real patients that are treated in the hospital. For example if on non-contrast CT is all that is routinely done then this should be used for the simulation as well. If CT Angio or Perfusion scans are also done routinely then examples of these should also be prepared for the simulation. For the first simulation the image should be evaluated exactly like in real life. For example if a radiologist typically is sent the image to his/her workstation and has to write a written report before treatment can be initiated then this process should also be followed in the simulation.

If the hospital makes use of Telemedicine or other forms of communication to refer patients for further treatment this should also be simulated to evaluate the need for improvement.

3h The total time it takes to perform the first simulation, the discussion and the second simulation is around three hours in total.

IF A REAL STROKE CODE ARRIVES DURING THE SIMULATION THE SIMULATION IS OBVIOUSLY ABANDONED AND THE REAL PATIENT TREATED.

Simulation training is a very *immersive*, often *challenging*, but very *rewarding* way of improving stroke treatment pathways and we guarantee that the team will benefit from the experience.

Kind regards,

YOUR ANGELS CONSULTANT

Angels Initiative is a non-promotional, health care project of Boehringer Ingelheim International GmbH to support the ESO and WSO in implementing their main goal, to improve stroke care around the world.
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