Simulation/skills training in midwifery/obstetric

Trude Thommesen, RN RM MPhil

Product Manager, Lærdal Medical

Brussels, February 21, 2019

Laerdal

helping save lives

Cardiac arrest …

Death

Resus-citation of the baby...

Shoulder dystocia …

Amniotic fluid embolism …

PPH…

Why do we do simulation training in health care?

Simulation is a method of *teaching, learning* and *interaction* that allows the person who is learning, often with other learners, to practice how to treat patients

- without the patient being present

- and exposed to the *risk of mismanagement*

Why do we do simulation training in health care?

- To consolidate *new knowledge* in practical skills competence
- To assess *progress/success*
- In order to inspire *self-training* until you are competent
- To create an understanding that *"we are practicing until we manage"*

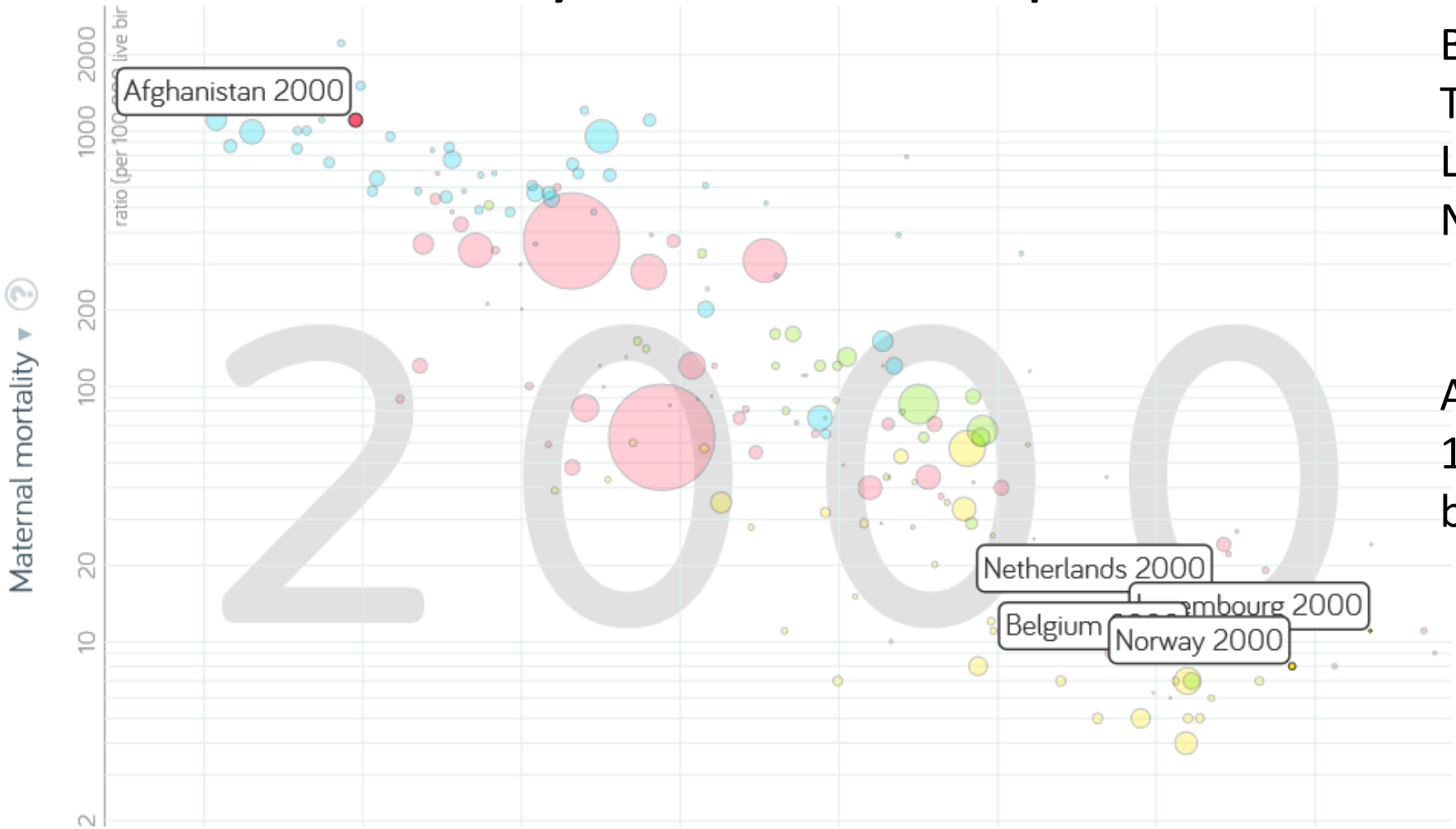
Why do we do simulation training in health care?

- Simulation- and skills training create *links between theory and practice*, which facilitate the student's learning ability
- The opportunity to work in a *collaborative group* in an *open environment* is important for the learning process
- Simulation- and skills training make the students feel *prepared* and *confident* before clinical practice

What do we want to achieve through simulation training in health care?

- Good planning
- Communication
- Leadership
- Multiprofessional teamwork
- Perceived quality of knowledge/skills
- Improved quality of care/treatment

Why is simulation in midwifery/obstetrics important?



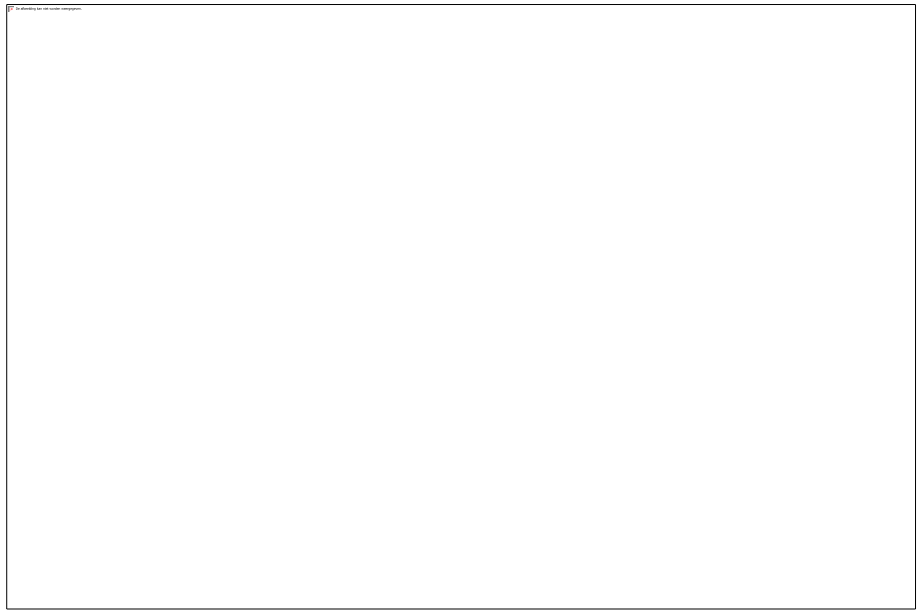
Belgium: 9
The Netherlands: 15
Luxenbourg: 11
Norway: 8

Afghanistan: 1100/100.00 live births

Laerdal
helping save lives

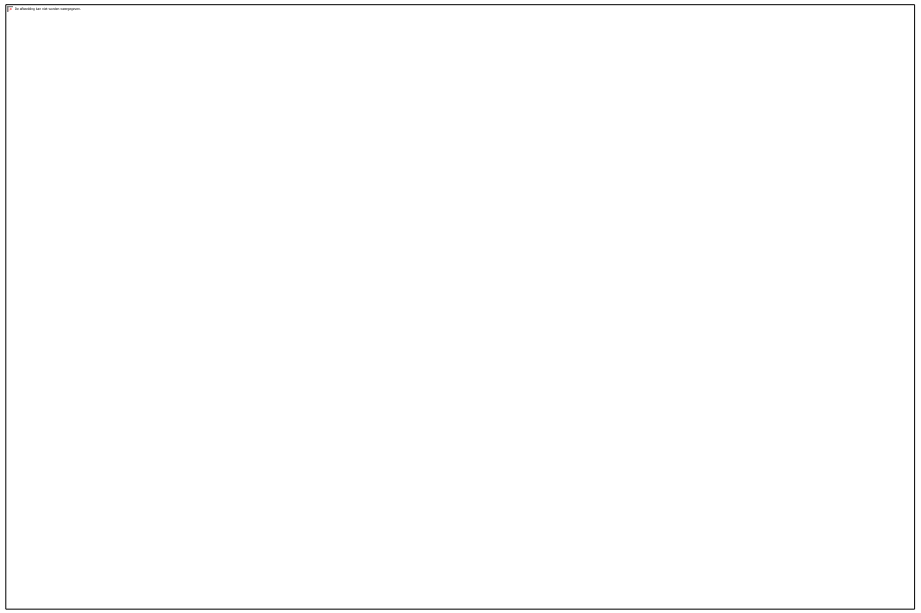
Why is simulation in midwifery/obstetrics important?

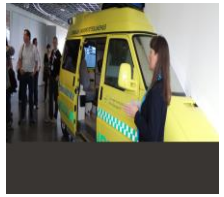
- Midwifery/obstetrics has become more challenging with *more complex/complicated cases*
- Increased risk of *legal claims* and *litigations*
- "Delicate subjects"; many women do not want to/reject to be *exposed to students*



Why is simulation in midwifery/obstetrics important?

- Skills can be practiced *repeatedly under supervision*
- Possible to *make errors* without doing harm
- Many skills and procedures require swift, *accurate* and *correct* handling





Rare, undramatic situations and cases

Normal childbirth

Just-in-case (in case it happens)

Just-in-time (when it happens)

Rare, acute situations and cases

Relatively frequently occurring acute situations and cases

Just-in-case

vs.

Just-in-time

What can be simulated?

Skills:

- Normal childbirth
- Practical skills and procedures;
  e.g. support of the perineum, suturing
- Shoulder dystocia
- Breech delivery

Scenarios:

- Postpartum haemorrhage
- Eclampsia
- Prolonged labour

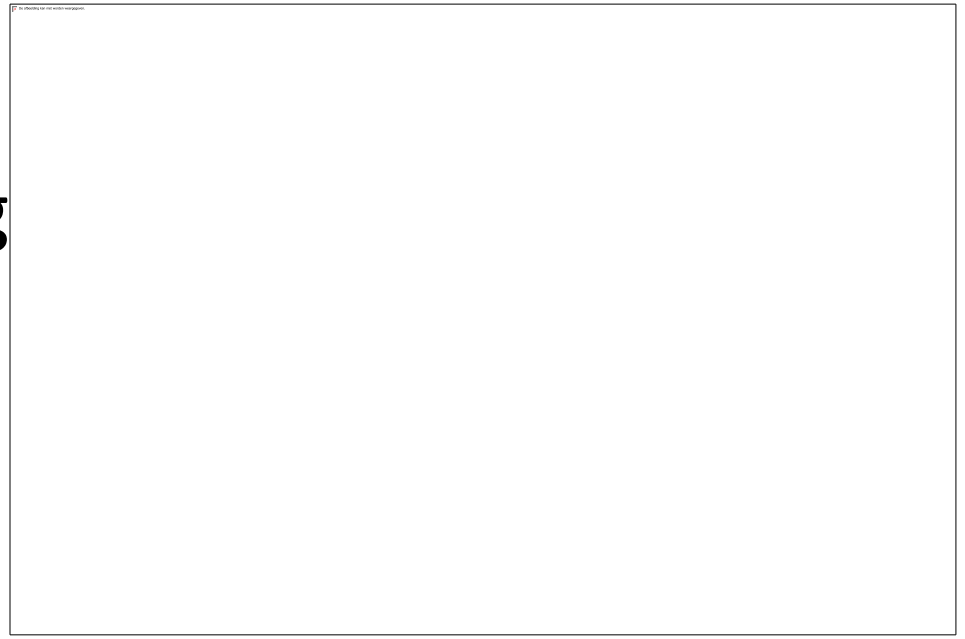


Photo: Bernt- Erik Rossavik

What are the learning objectives in simulation training?

- Improve knowledge
- Improve skills/confidence
- Reduce errors
- Avoid morbidity/mortality

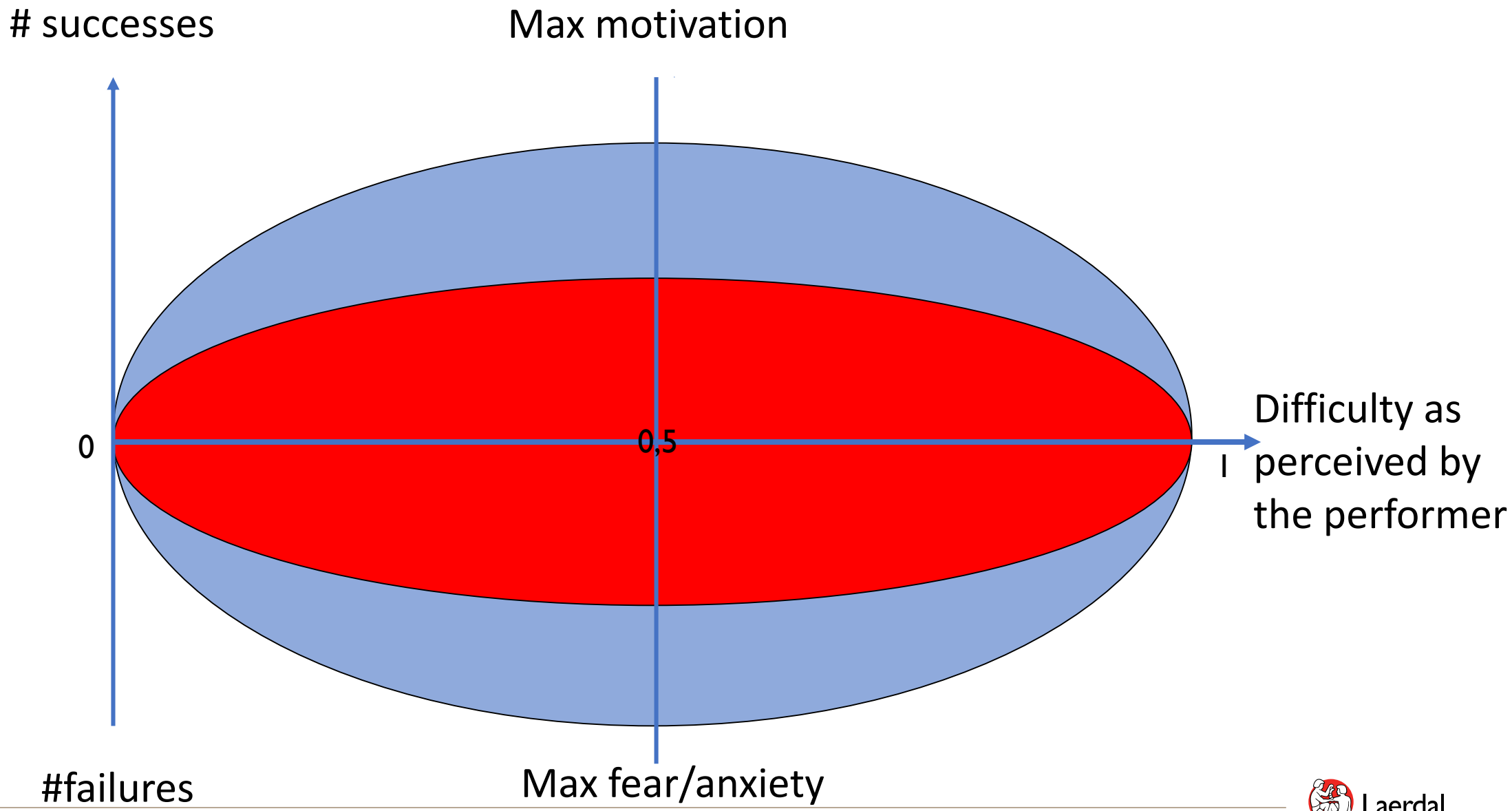
Who needs to simulate?

- Students
- *All* who are working in clinical maternal health care- the *un-skilled* and *the skilled*
- Educators

How do we conduct a simulation training?

- It is necessary to build *trust, confidence* and have a *common goal* for improvement
- *Everyone/all* professionals need to be involved/participate

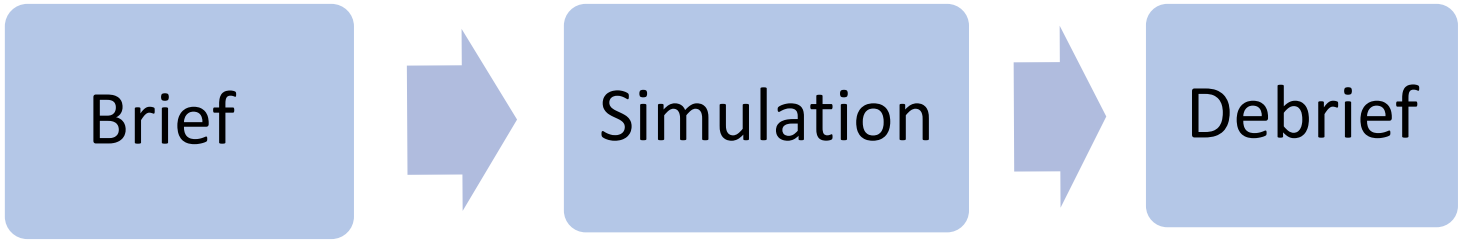
  (Be aware of confidence, re-traumatizing, personal experiences)
- It must be *realistic*
- It must be *relevant*
- Self assessment
- Expect/accept *errors* to occur

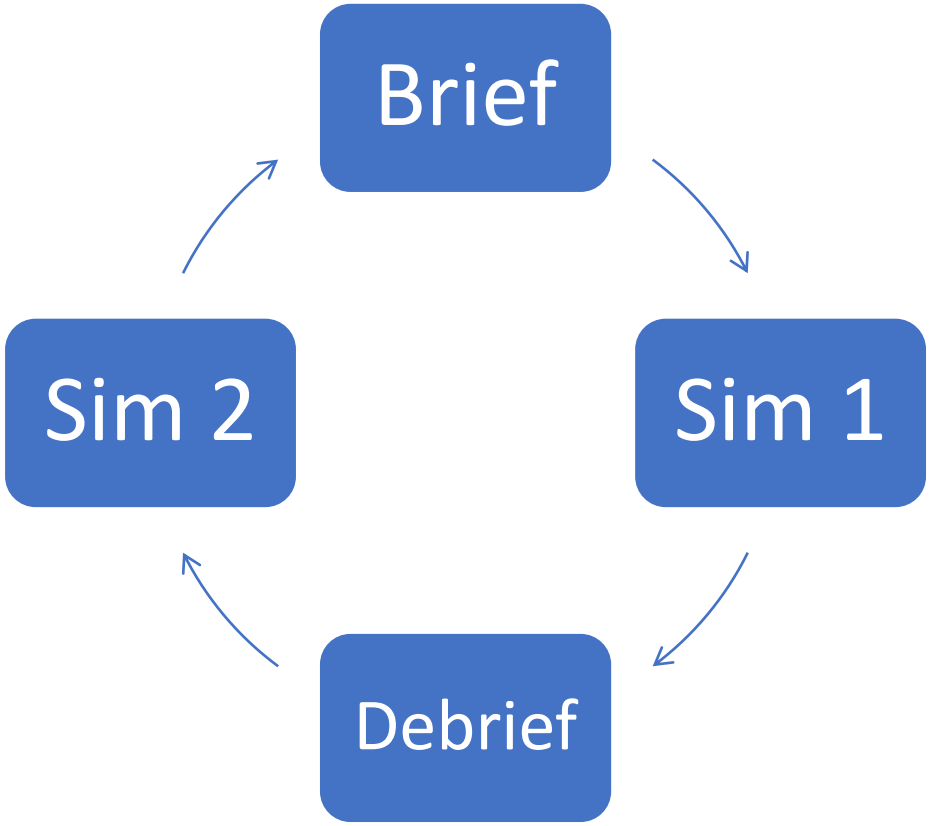


McClelland 1985

What is a scenario?

- Medical case
- Normally carried out by *two or more participants*
- Clear *patient description*
- Pre-defined *learning objectives*
- Fixed starting point but «floating» along the way
- Assessment criteria normally involve *both medical and (inter-) human factors*
- Time-limited and with a clear *set time for de-briefing*
- Both en-route and final *evaluation*


Brief
Simulation
Debrief


Brief
Sim 1
Debrief
Sim 2

Typical explanations…

…Don't have *time* to let everyone run the same scenario 2x

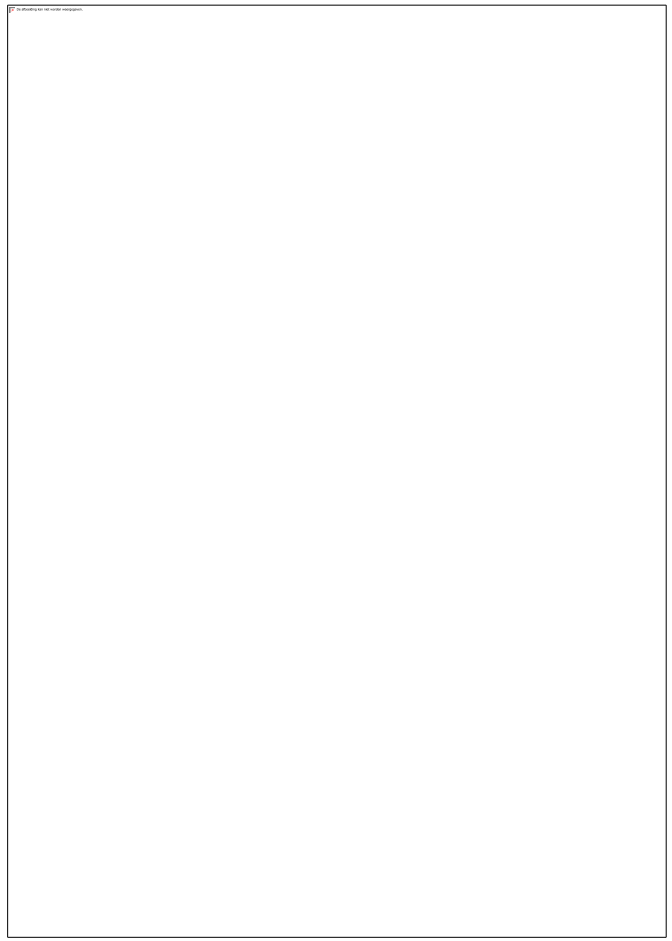
…There are *too many participants* to let everyone drive 2x

…Don't have enough *facilitators* to let everyone drive 2x

…Don't have enough *simulators* to let everyone run 2x

…Don't *see the point* of driving 2x

What does the evidence say about simulation training?



- John Hattie (2008) «Visible Learning»
  - Focus: Effect-size of parameters influencing learning outcomes
  - 800 meta-studies
  - 15 years of research
  - 80 million students
  - 50 000 smaller studies

- What has the highest effect on learning and acheivement is **self-evaluation**

- The urge to repeat is natural with most of us, even when we do something well. We use repetition to «over-learn» and to build confidence

Laerdal
helping save lives

My experience

- Some students were appointed “super-users”; they`re responsible for the simulation equipment as well as the simulation room
- The students were eager to get this role
- This responsibility was also credited them when they graduated

My experience

Normal labour and childbirth

- A class with 40 students- divide them into small groups of 5 *(20 before lunch, 20 after lunch)*
- Either use SimMom or MamaBirthe with a standardized patient
- Create scenarios of different situations in labour and childbirth *(E.g. young primigravida, grand multipara, anxious woman, talkative woman, etc)*
- Different positions of the woman in first and second stage of labour

My experience

Normal labour and childbirth

- *One student* was attending the delivery, the others were observing
- We were *filming the situation* and looked at the film afterwards
- The students was focused on their *practical skills* as well as the *communication* with the delivering woman

My experience

PPH

- Demonstrated a scenario of PPH using MamaNatalie where *nothing* was correct
- Then we did the same again- where everything were correct
- Discuss and debrief

www.laerdal.com

Laerdal
helping save lives

My experience

Breech delivery

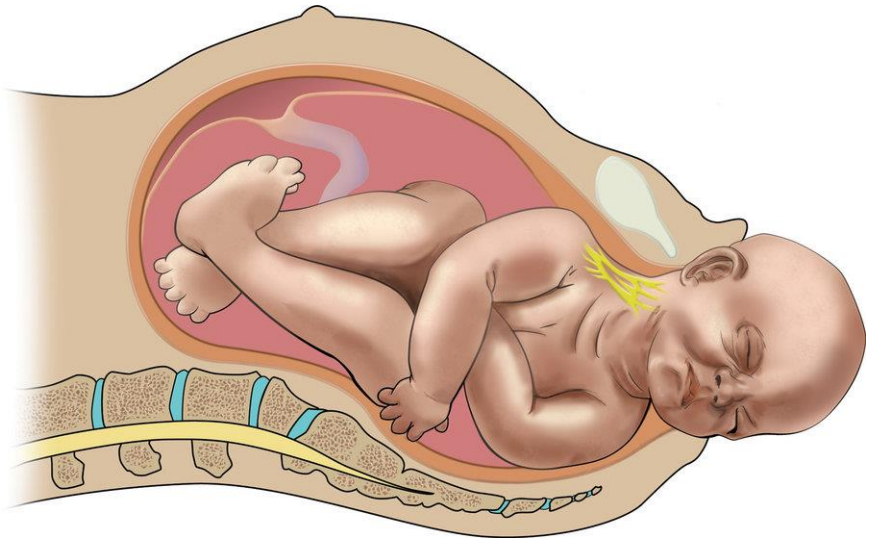
- Demonstrated a scenario with an *unexpected* breech presentation
- Use SimMom or Sophie and her Mum with a standardized patient
- Debrief and discuss

https://sykepleien.no/mediegalleri/jordmorstudent-over-pa-setefodsel

My experience

Shoulder dystocia

- Demonstrated a scenario with *shoulder dystocia*
- Used SimMom or Sophie and her Mum with a standardized patient
- Discuss and debrief



De afbeelding kan niet worden weergegeven.

Nu afbeelding kan niet worden weergegeven.

Nu afbeelding kan niet worden weergegeven.

When do we simulate?

- In *pre-service education* (before graduation)
- *In-service education* (after graduation)
- *Everyday life* in clinical work

www.laerdal.com

How?

Pre-service education:

- All the different (emergency) *topics in obstetrics* (e.g. PPH, shoulder dystocia, breech)

In-service education:

- Choose different *focused* and *actual topics*

Can be done in *a simple environment* or in a *sophisticated simulation/skill-lab*

The impact of maternal mortality…

https://www.bing.com/videos/search?q=maternal+death+&&view=detail&mid=845675F1E331EB868DD3845675F1E331EB868DD3&&FORM=VRDGAR

Laerdal

helping save lives

Thanks for listening

References

1. Egenberg S, Øian P, Bru LE, Sautter M, Kristoffersen G, Eggebø, TM *Can inter-professional simulation training influence the frequency of blood transfusions after birth?* ACTA Scandinavia 2014; 94:3 https://doi.org/10.1111/aogs.12569
2. Kordi M, Erfanian F, Fakari FR, Dastfan F, Nejad KS *The comparison the effect of training by means of simulation and oral method on midwives`skills in management of shoulder dystocia* J Educ Health Promot 2017; 6:50 doi: 10.4103/jehp.jehp_115_15
3. Truijens S, Banga FR, Fransen AF, Pop VJM, van Runnard Heimel PJ, Oei SG. *The Effect of Multiprofessional Simulation-Based Obstetric Team Training on Patient-Reported Quality of Care: A Pilot Study* Simulation in Healthcare 2015; 10:4 doi: 10.1097/SIH.0000000000000099
4. Hattie J. *Visible Learning. A Synthesis of Over 800 Meta-Analyses Relating to Achievement* Routledge London 2008 DOI: https://doi.org/10.4324/9780203887332
5. The World Bank Data/ Health Indicators https://data.worldbank.org/indicator
6. Gapminder. https://www.gapminder.org/tools/#$state$time$value=2000;&marker$select@$country=afg&trailStartTime=2000;&$country=bel&trailStartTime=2000;&$country=lux&trailStartTime=2000;&$country=nld&trailStartTime=2000;&$country=nor&trailStartTime=2000;;&axis_y$which=maternal_mortality_ratio_per_100000_live_births&domainMin:null&domainMax:null&zoomedMin:null&zoomedMax:null&scaleType=genericLog&spaceRef:null;;;&chart-type=bubbles