



From best practice to best education: where are we now and where should we be heading?

Anne Lippert

Associate professor, consultant

Danish Institute for Medical Simulation

annlip01@heh.regionh.dk

From "best practice"

- Before



From "best practice"

- 1960's



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Danish Institute for Medical Simulation

From "best practice"

- Someone always get it wrong.....



From "best practice"

- Demonstration – is that teaching?



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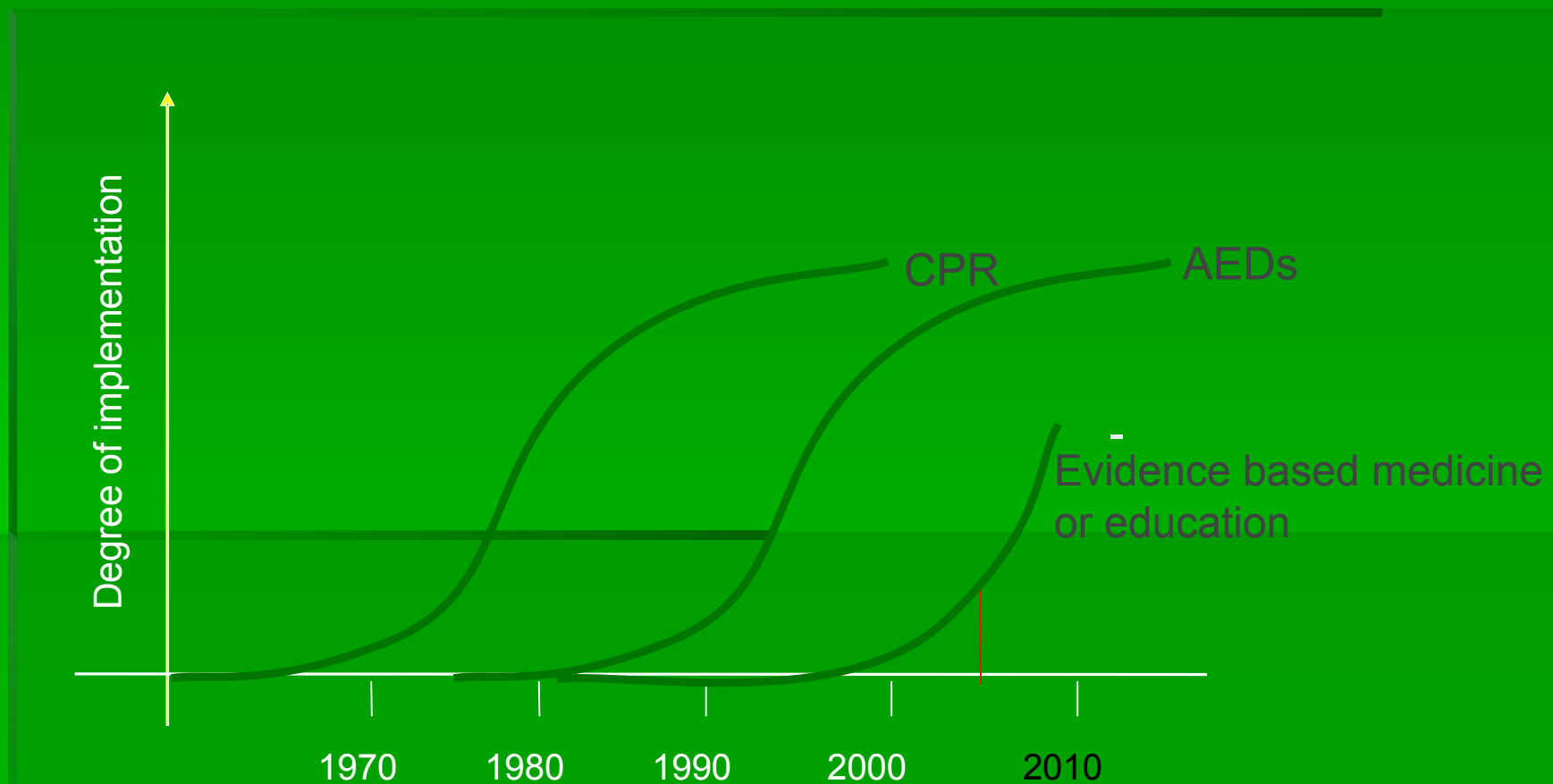
Has teaching resuscitation in your institution changed?

- No, it is still the same
- Yes, we now use more small group teaching
- Yes, we now use more hands-on training

How long time from guidelines to implementation?

- 1 month
- 6 months
- 1 year
- 5 years
- 10 years

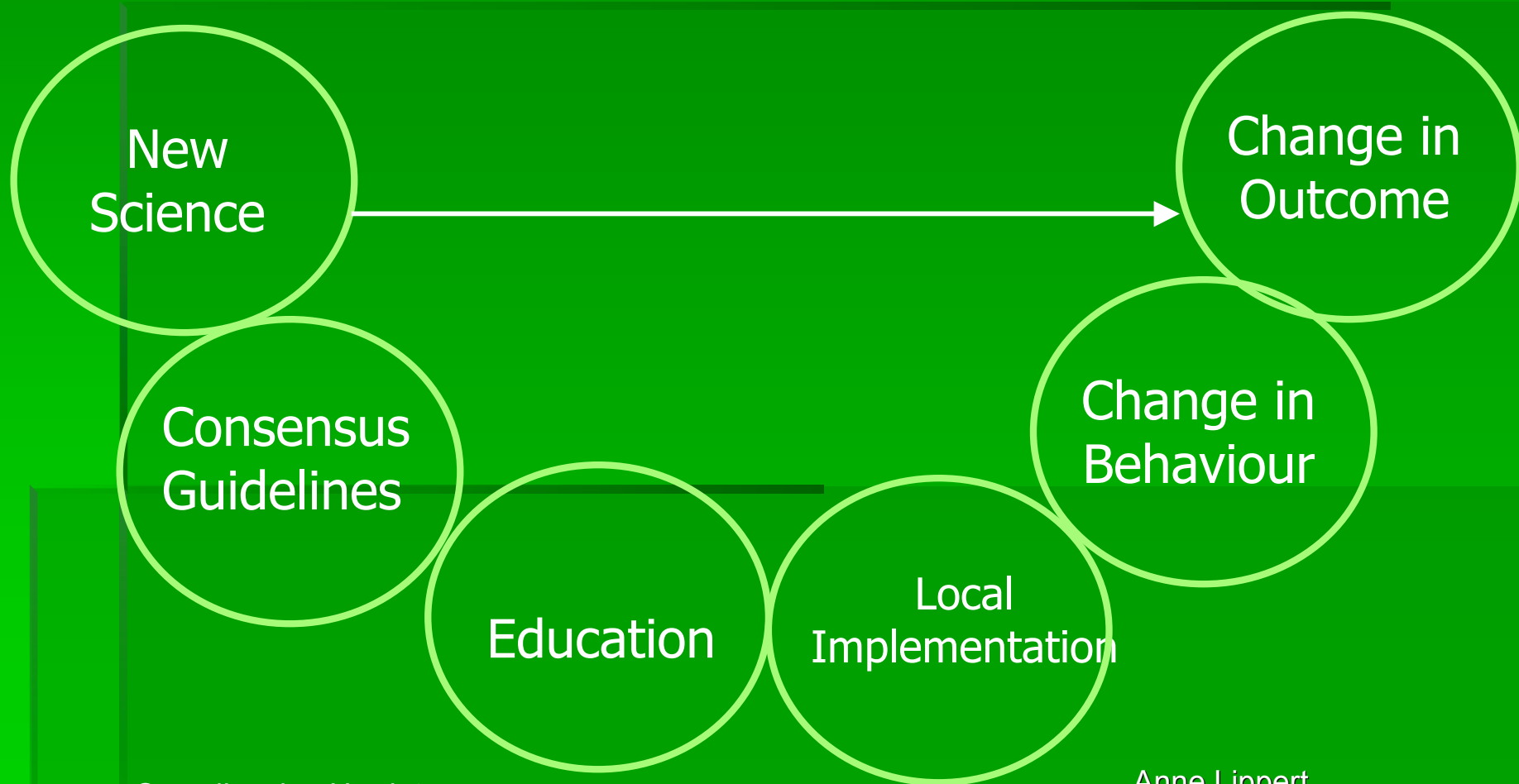
Implementation of medical and educational science



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From Science to outcome



What is most important?

- Education / training guidelines
- Training practical skills
- Education / training team skills
- All

Practical skills



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nulation

Training algorithms and decision making

MicroSim Inhospital
File Simulation Help

MicroSim Inhospital

Time: 1:29

Flushing

Cold saline

Drip set
IV hand left

Pressure pump

Fast
Slow
Off

0 mL/hr
154 mmol/L
Total infused: 0.000

NIBP
119/66
Measure now
Interval: 2 min.

Epinephrine
IV bolus
IV left hand
1.0 mg
Slow injection
Administer

HF 96
NIBP 129/77
SpO2 98%
PR 96
ETCO2 5.1%

Medical record

RESPONSE	AIRWAY	BREATHING	CIRCULATION	EXAMINE	EXPOSURE
Check consciousness >>	Check airway patency	Check breathing	Check pulse	Check skin	Temperature >>
Ask questions		Stop ventilation	Blood pressure >>	Examine eyes	
DRUGS	Head-tilt/chin-lift	Oxygen >>	Stop CPR	Head-to-toe examination	MISCELLANEOUS
IV lines	Jaw thrust	Monitoring devices >>	ECG & Defibrillator >>	Auscultation & percussion	Medical record >>
Drugs and fluids	Procedures >>	Procedures >>	Procedures >>	Lab & diagnostics >>	Procedures >>

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Best education:

- Christenson J et al: A comparison of multimedia and standard advanced cardiac life support learning. Acad Emerg Med 1998; 5:702-8
- Schwid HA, et al: Use of a computerized advanced cardiac life support simulator improves retention of advanced cardiac life support guidelines better than a textbook. Crit Care Med 1999; 27:821-4.
- Schwartz LR et al: A randomized comparison trial of case-based learning versus human patient simulation in medical student education. Acad Emerg Med 2007; 14:130-137

Why is team training also important?

- Resuscitation is a team task
- Team skills:
 - Communication
 - Leadership
 - Followership
 - Use of resources
 - Constructive intervention



Ilcor Advisory Statement

- Education in resuscitation:
 - Train the teams that are working together
 - Use simulators
- Ref:
 - Chamberlain, Hazinski et al in
 - Resuscitation 59 (2003) 11- 43

Best Evidence Medical Education (BEME) collaboration on high fidelity simulators:

- Provides feedback
- Repetitive practice
- Curriculum integration
- Range of difficulty level
- Multiple learning strategies

Issenberg B, et al: Features and uses of high-fidelity medical simulation that lead to effective learning: A BEME systematic review. Med Teach 2005; 27:10-28

Best Evidence Medical Education (BEME) collaboration on high fidelity simulators:

- Capture clinical variation
- Controlled environment
- Individualised learning
- Defined outcomes
- Simulator validity

Issenberg B, et al: Features and uses of high-fidelity medical simulation that lead to effective learning: A BEME systematic review. Med Teach 2005; 27:10-28

Evaluation – “effect” of the course / education

- Do they like it?
- Do they learn?
 - theoretical knowledge
 - practical skills
 - team behaviours
- Does it affect the organisation?
- Is patient outcome improved?

(Kirkpatrick)

We want to train it all how to get resources?

- Sim centres in every hospital?
- Funding
- "If you can't measure it, you can't change it"
- Data convinces
 - We need research – in education!

When did you last read a paper on education ?

- This week
- Last month
- A year ago
- Never

Why?

- We all want the best treatment for our patients
- Then we all want the best education for our colleagues

Conclusion

- Best education is a variety of methods
- Team training is essential
- We need to measure the effect of education
- We need more research in education
- We must use the research