

Implementation of a mandatory internet based learning in a multi professional hospital environment

Basic neonatal resuscitation

Ann Louise Vestergaard, midwife, stud. master ICT and Learning
Jette Led Sørensen, Obstetric consultant, MEEd

Obstetric Department, Juliane Marie Centre for Women Children and
Reproduction, Rigshospitalet University Hospital, Copenhagen, Denmark



Implementation of a mandatory internet based learning in a multi professional hospital environment

- ❖ Need for obstetric emergency training
- ❖ Implementation of multiprofessional skills training
- ❖ Results of multiprofessional skills training at RH

- ❖ E-learning program developed
- ❖ E-learning evaluated



Need for obstetric emergency training

BJOG: an International Journal of Obstetrics and Gynaecology
September 2003, Vol. 110, pp. 837–841

A systematic review of training in acute obstetric emergencies

Rebecca S. Black^a, Peter Brocklehurst^{b,*}

Objective To describe models used for the training of labour ward personnel in acute obstetric emergencies and to describe how these models have been evaluated and compared.

Design A systematic review of the following databases: Medline, the Cumulative Index of Nursing and Allied Health Literature, Embase, PsycLit, Allied and Alternative Medicine, Education Resources Information Center and the Cochrane Library using a structured search strategy.

Conclusions With regard to training in acute obstetric emergencies, few training programmes have been described, and even fewer have been evaluated. Training methods need to be developed, described and evaluated; further well-conducted research for this important intervention is urgently required.

Multiprofessional simulationbased obstetric skills training



Setting: Obstetric Department, Rigshospitalet, Denmark

Period: 2003 – 2006

Material: 220 staff members (midwives, doctors, nurses, auxiliary nurses).

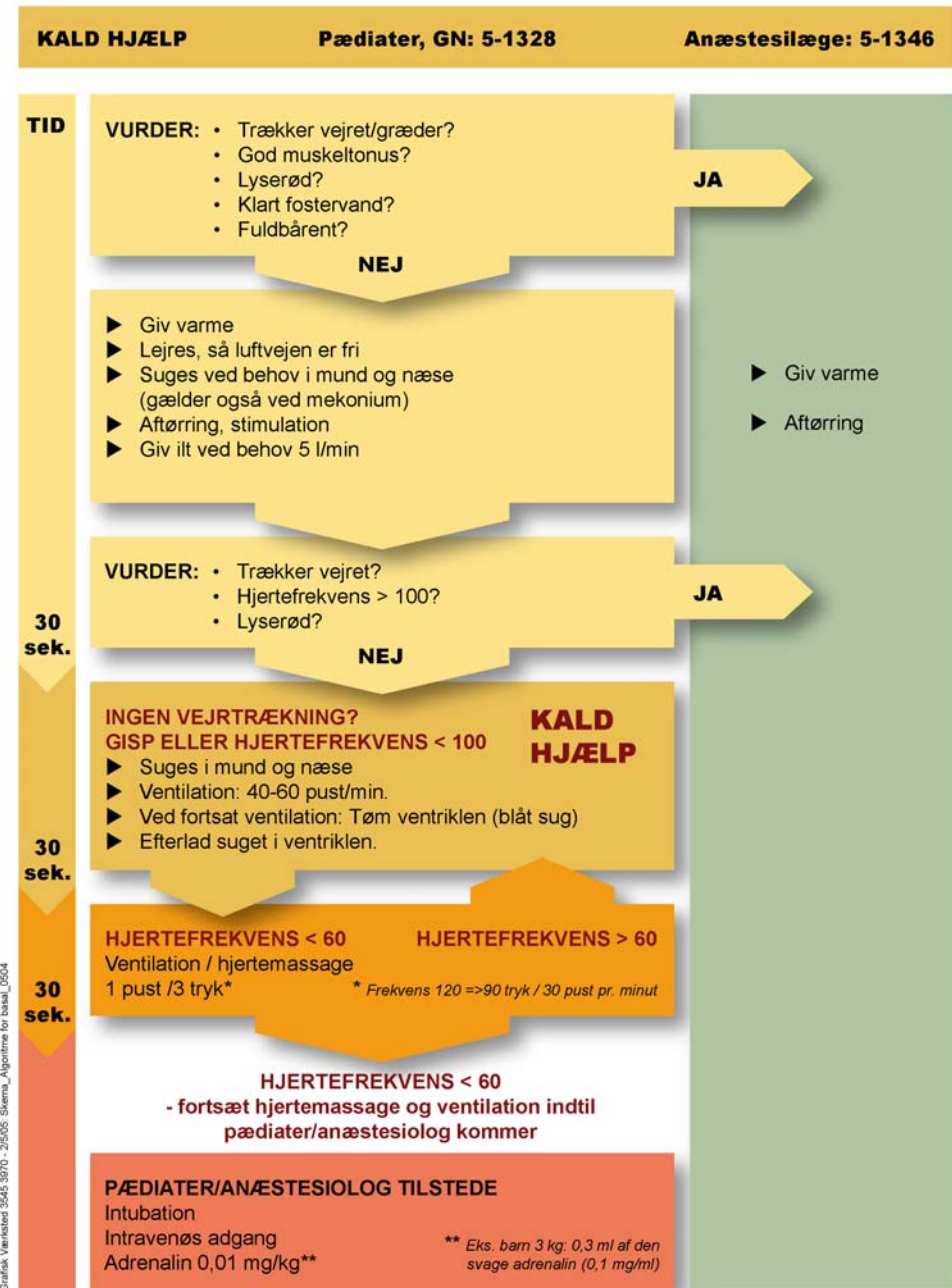
Intervention: Simulationbased training in 4 obstetric emergency situations

Ref. Sorensen JL et al. Acta Obstet Gynecol Scand. 2009; 17:1-11

Algorithm for basic neonatal resuscitation

www.obstetrisktraening.rh.dk

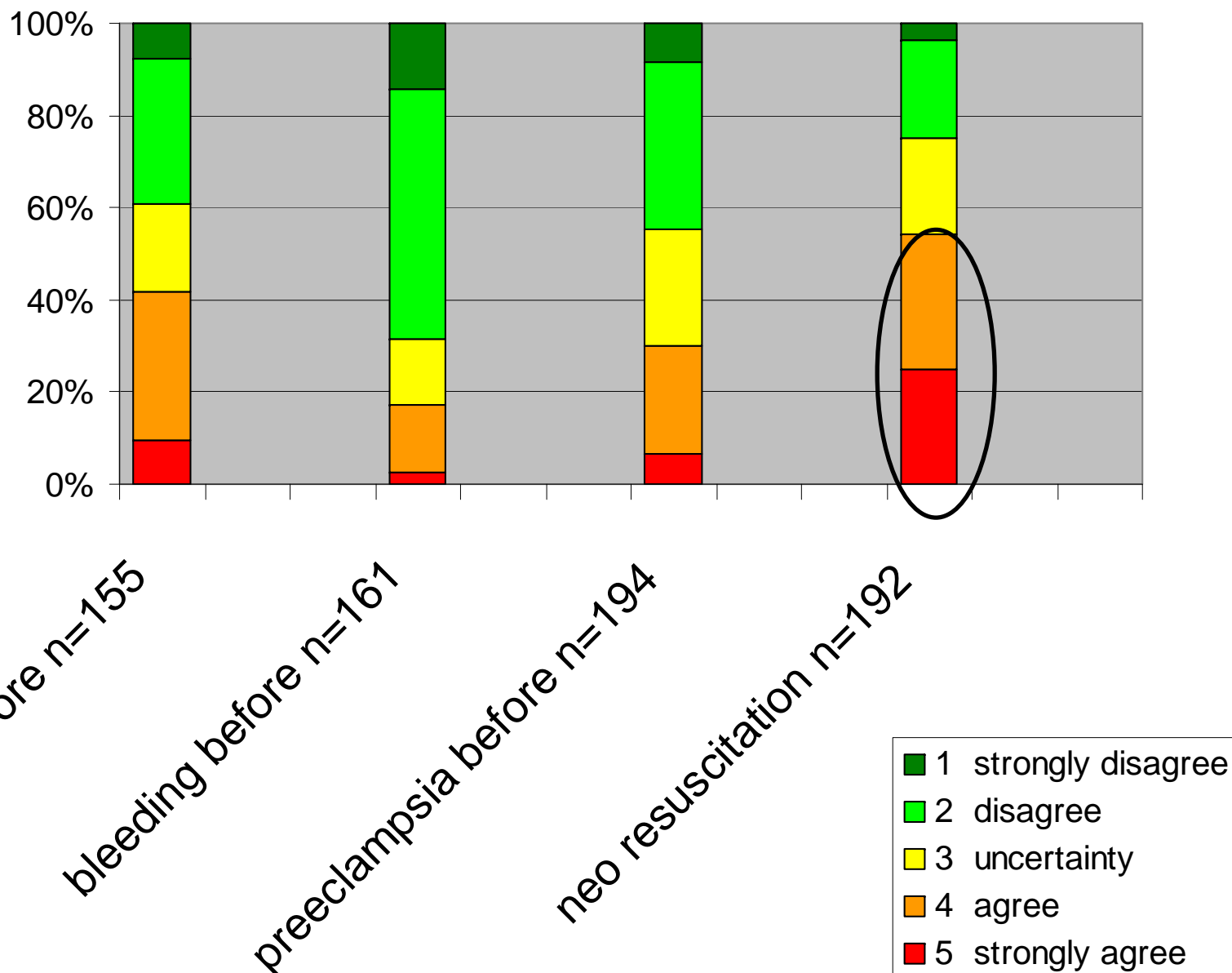
Algorithm for basal genoplivning af nyfødte



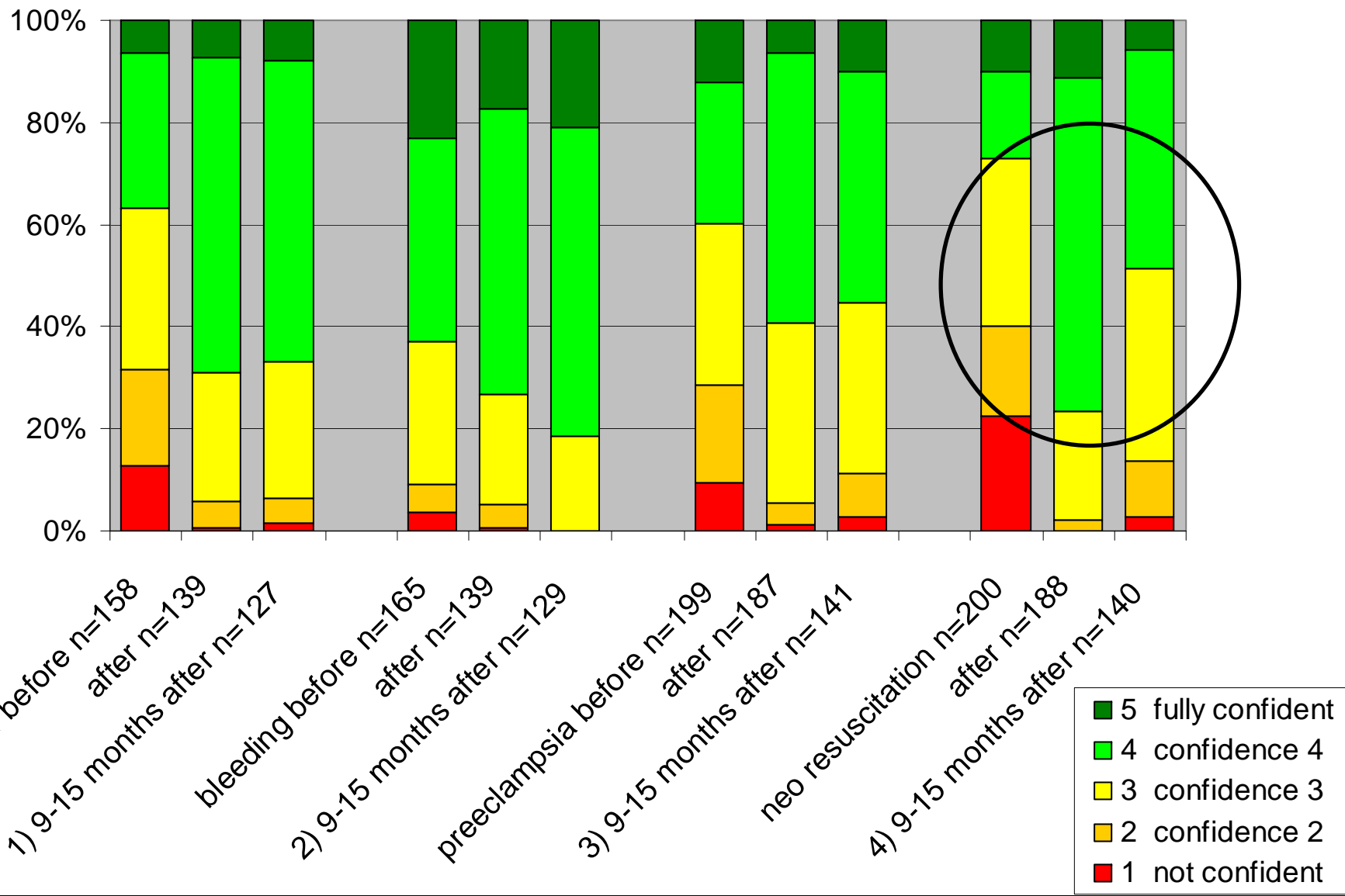
Grafisk Værktøjs 3545 3970 - 29506 Skema, Algoritme for basal_0504



Clinical events considered stressful and unpleasant before training



Self-assessed confidence before, after, 9-15 month after training



Sorensen JL et al. Acta Obstet Gynecol Scand. 2009; 17:1-11

1) p= 0.000 2) p= 0.007
3) p= 0.000 4) p= 0.000

“Knowledge of skills test”*

Basic neonatal resuscitation

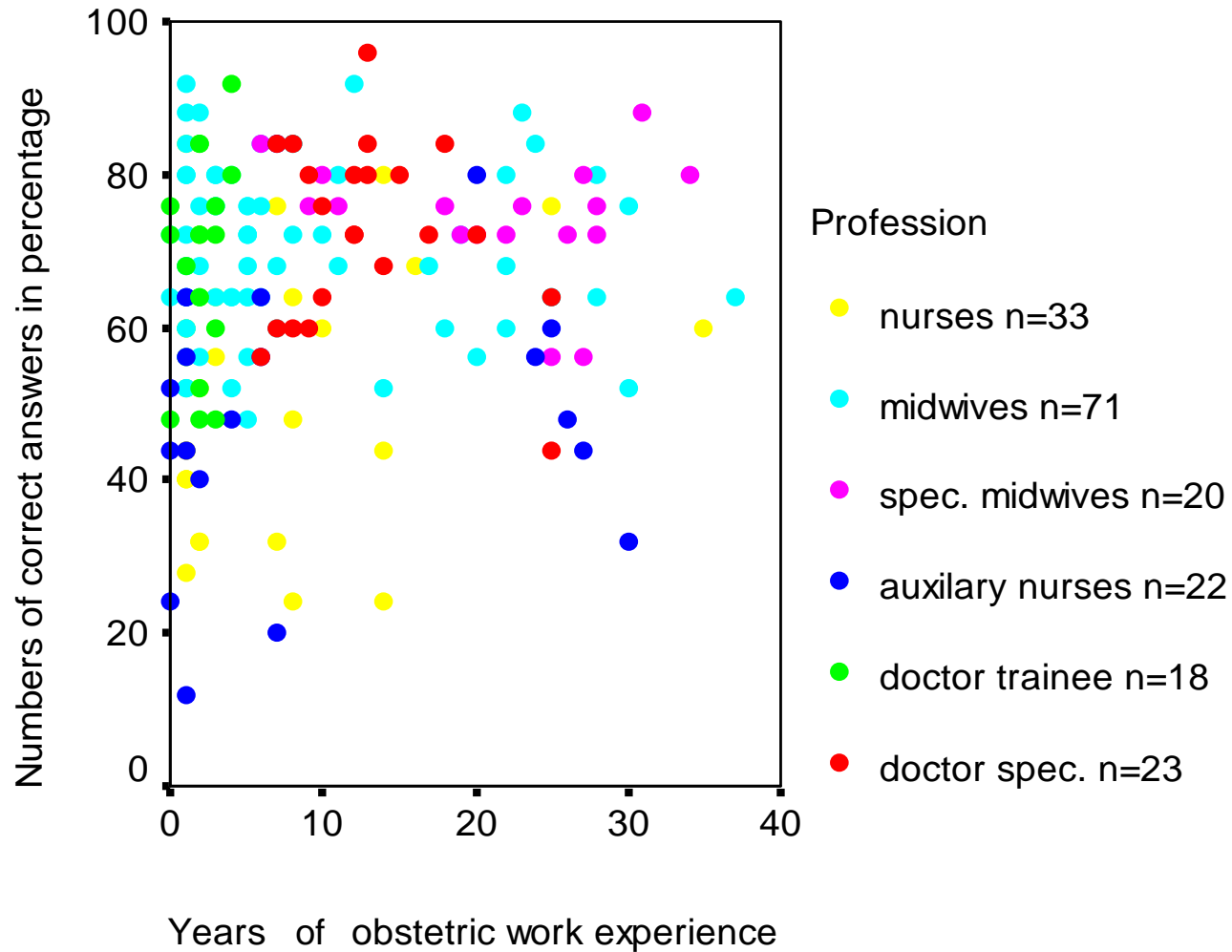
*Definition: Knowledge concerning the technical, procedural and knowledge assessing skills-related aspects.
(Kramer et al 1997. Advances in med edu)

Number of correct answers:

Before training	65 %
Just after training	94 %
9-15 months after training	83%*

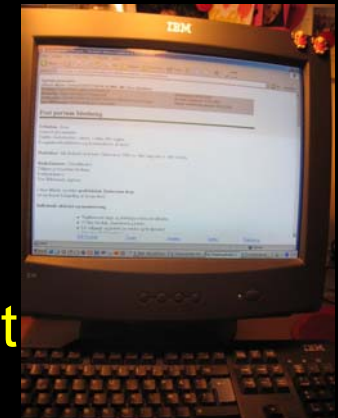
P = 0.000 (Paired sampled T-test)

Association: numbers correct answers in KOS-test in neonatal resuscitation and years of obstetric work experience



Gamma = 0.04

P = 0.286



The simulated obstetric training programme indicated that neonatal resuscitation needed to be trained more often

It was decided to develop an e-learning programme in basic neonatal resuscitation

“When should internet-based learning be used?”

“How can internet-based learning be effectively implemented?”

Cook Da et al. Internet-Based Learning in health professions. A meta-analysis.
JAMA 2008;10:1181-96

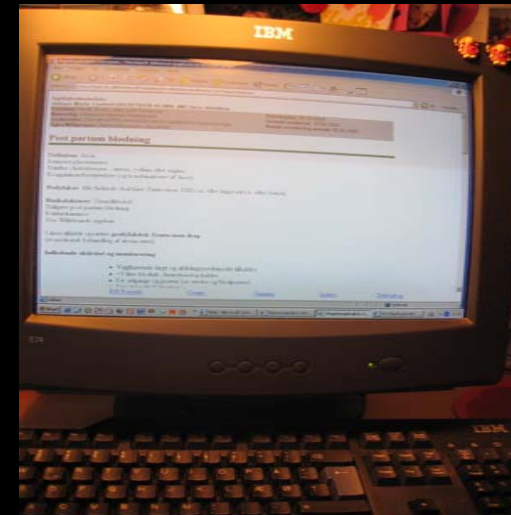
“When should internet-based learning be used?”

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E-learning programme: Basic neonatal resuscitation

Period of implementation: Nov. 2008 – April 2009



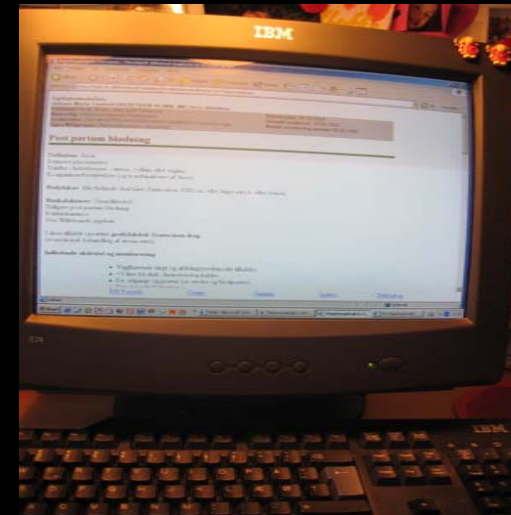
Subjects: 169 staff members
(midwives, doctors, nurses, auxiliary nurses)

Evaluation: Data from questionnaire involved in the e-learning programme

Data from questionnaire in paper also including non-responders

E-learning programme: Basic neonatal resuscitation

Period of implementation: Nov. 2008 – April 2009



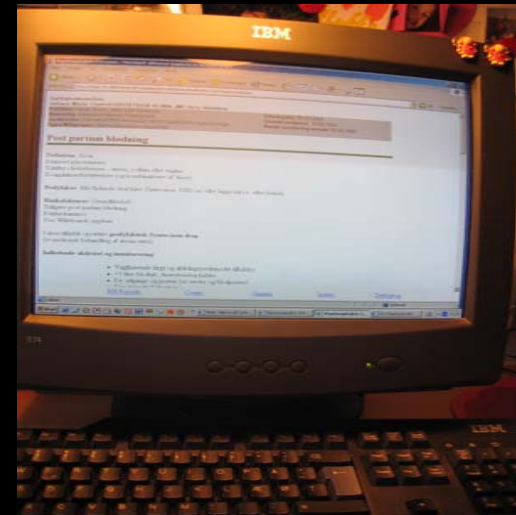
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Programme Structure

- ❖ Self evaluation
- ❖ Pretest
- ❖ Learning-module of basic neonatal resuscitation
- ❖ Posttest
- ❖ Evaluation of the program

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 **Velkommen**



Rigshospitalet

Du er nu klikket ind på **Absalon**, som er et e-læringsværktøj. De data vi indsamler vil kun blive brugt i anonymiseret form.

Det består af fem dele og det er vigtigt at du tager det i kronologisk rækkefølge, men ikke nødvendigvis ud i en køre, dvs. du kan holde pause efter hver del.

1. Selvevaluering. Her skal du angive hvor fortrolig du er med håndtering af basal genoplivning af nyfødte. Du skal regne med at bruge 2-3 minutter på dette. Klik [HER](#) for at komme til direkte selvevaluering. Vær opmærksom på at den åbner i et nyt vindue, som du efter at have afsluttet, skal lukke på krydset i højre hjørne.

2. Test før du starter (prætest). Testen er primært for at kunne producere brugbare forskningsresultater. Der er ingen der forventer, at du kan svare korrekt på alle spørgsmål, idet du jo ikke har gennemgået læringsmodulet endnu. Du skal regne med at bruge ca. 5-10 minutter. Klik [HER](#) for at komme direkte til prætesten. Vær opmærksom på at den åbner i et nyt vindue, som du efter at have afsluttet, skal lukke på krydset i højre hjørne.

SCROLL LOCK: OFF

Udgivet af [Brix \(CWBL\)](#), [Berit Cecilie](#) 6. februar 2009

[Tilladelser](#) [Rediær](#) [Slet](#)

- Introduktion
- 2. Algoritme for Basal genoplivning
- 3. Kald hjælp
- 4. Sechers bord
- 5. Lejring
- 6. (Video)
- 7. Selvtest
- 8.
- Hjertefrekvens
- 9. Ventilation
- 10. (video)
- 11. Hjertemassage
- 12. (Video)
- 13. Genoplivning (video)
- 14.

1. Introduktion til e-læringsmodulet

Dette e-læringsmodul skal sikre, at du altid ved hvordan du skal håndtere basal genoplivning af nyfødte. De første fem sider omhandler den indledende førstehjælp, efterfulgt af en selvtest. Derefter bliver basal genoplivning af nyfødte med diverse håndgreb gennemgået. På de sidste sider er der nogle cases du skal svare på.

Selve modulet tager ca. 15 minutter at gennemføre. Det er en god ide at anvende hovedtelefoner for at høre lydsiden. Du kommer videre ved at klikke på pilen eller tallene øverst i højre hjørne af billedet. Du kan taste F11 for at udnytte hele skærmen. Når du taster F11 igen, kommer du tilbage til den forrige skærmvisning.

God fornøjelse.



Udgivet af [Brix \(CWBL\)](#), [Berit Cecilie](#) 6. februar 2009

[Tilladelser](#) [Rediager](#) [Slet](#)

- 3. Kald hjælp
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- 12. (Video)
- 13. Genoplivning (video)
- 14. Opsummering
- 15. Case 1
- 16. Case 2
- 17. Case 3



Følgende videoklip viser hvordan du ventilerer barnet. Klik på den gule pil for at starte.



Programme Structure

- ❖ Self evaluation
- ❖ **Pretest**
- ❖ Learning-module of basic neonatal resuscitation
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Skill Progression



Pretest

123/169

Max 7 point

Mean 5,54 point

Posttest

100/169

Max 7 point

Mean 6,68 point

Programme Structure

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Comments from the evaluation

- *"A really good and effective way to refresh my neonatal resuscitation skills"*
- *"Very educational – should be available in other subjects a.s.a.p."*
- *"Fantastic way to learn. I was happy that it could be done at home, since I have been to busy at work."*
- *"It's great. I really needed to go over this again. Now i feel more comfortable about neonatal resuscitation"*

Structured Questionnaire in paper

Target group

All staff subjects no matter level of accomplishment
(169 prs.)

Staff logged on

Staff Subjects 169 prs.

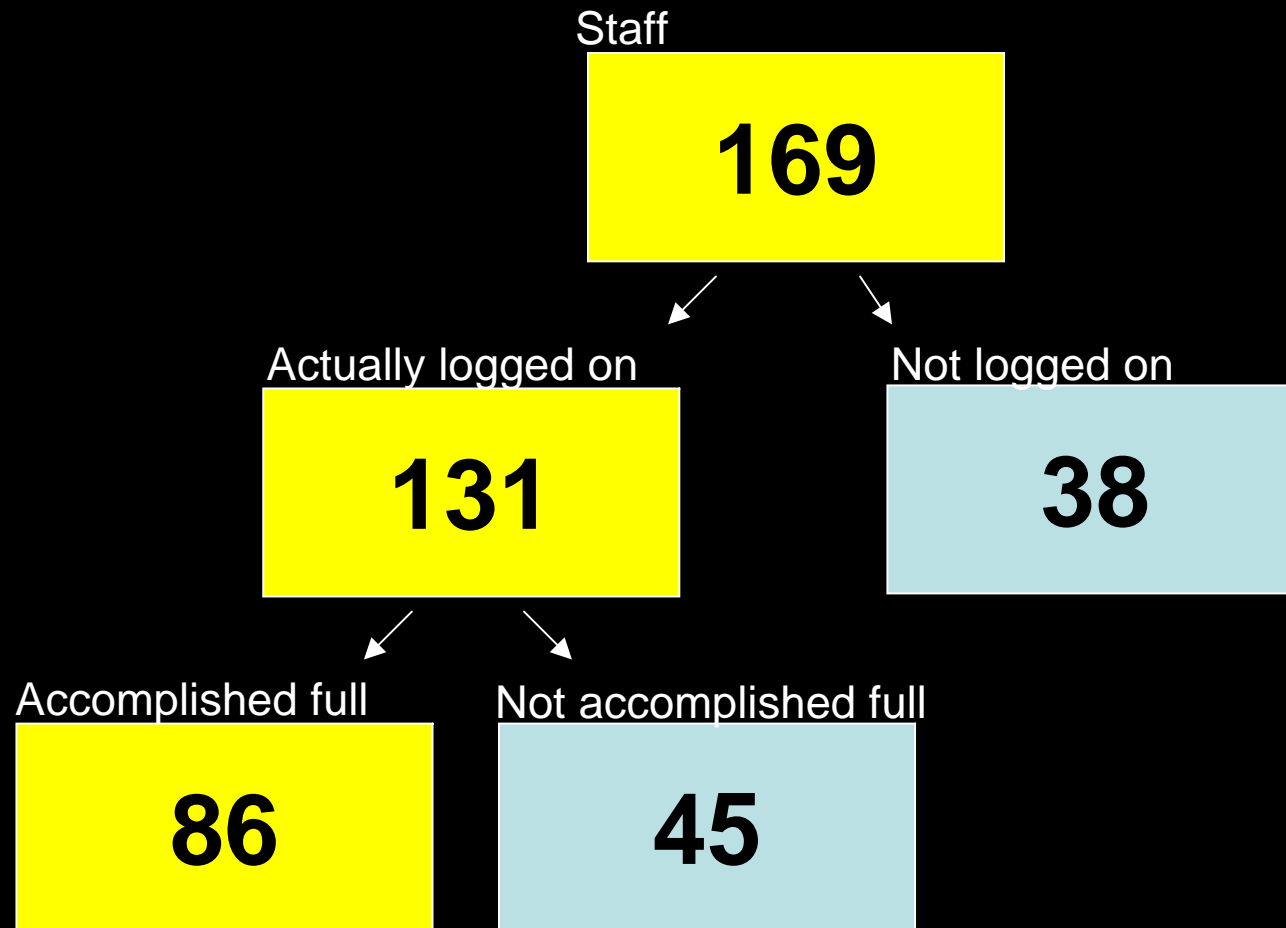
Actually logged on: 131 prs. = 78%



Accompliced full: = 66% (86 prs.)

Not Accompliced full: = 34% (45 prs.)

User Evaluation



IT habits 116/169=69% (preliminary data)

22/38 prs (58%):

No difference due to IT habits or confidence using the internet, no difference if we compare the different staffgroups

25/45 prs (56%) not accompliced full, but believed they did

Summing up

- Positive attitude towards e-learning and open minded to be involved in further programs
- The program should not be taken out of context and it need to be recognizable
- Pilottest – use the evaluations to further development

Project group:

Ann Louise Vestergaard¹

Anne Cathrine Christensen¹

Pernille Lottrup¹

Berit Cecilie Brix²

Lars Kayser³

Bent Ottesen¹

Jette Led Sørensen¹

¹ Department of Obstetrics, The Juliane Marie Centre for Children, Women and Reproduction, Rigshospitalet University Hospital, Copenhagen, Denmark

² Centre for Web Based Learning (CWBL), Copenhagen University, Denmark

³ Faculty of Health, Copenhagen University Hospital , Denmark

www.obstetrisktraening.rh.dk
ann.louise.vestergaard@rh.regionh.dk