



*Center for Akutforskning
Årsrapport 2016*



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Center for Akutforskning

Center for Akutforskning (CfA) er en forskningsenhed, der organisatorisk er tilknyttet Fælles Akutafdeling, Aarhus Universitetshospital og Klinisk Institut, Aarhus Universitet og refererer driftsmæssigt til afdelingsledelsen her og den koordinerende lærestolsprofessor i Akutcenteret. CfA arbejder tæt sammen med en række kliniske afdelinger og forskningscentre, både indenfor og udenfor Akutcenteret og ud i Region Midtjylland. Til CfA er der knyttet et sekretariat, der aktuelt bemannes med ½ sekretær. Centeret, der er det første af sin art i Danmark, er stiftet i 2009.

Formålet med CfAs arbejde er at producere og formidle evidensbaseret viden inden for hele det akutmedicinske område.

Akutforskning er et klinisk forskningsfelt, som omfatter alle aspekter af behandlingen af den akutte patient - fra første opringning til vagtlæge/vagtcentral over forløbet under indlæggelse til rehabilitering i primærsektoren efter udskrivelse. Forskningsfeltet går på tværs af eksisterende faglige og organisatoriske skel og har en bred grænseflade til den øvrige kliniske forskning.

Centeret er med til at skabe rammene og den nødvendige infrastruktur for forskning og formidling på tværs af specialer og faggrupper, og bidrager med forskningsinitiativer i alle led af det akutte patientforløb.

Forskningsfilosofien i CfA bygger på etablering af **forskningsnetværk**. Et forskningsnetværk er en gruppe af forskere med sammenfaldende interesser. Forskningslederen i CfA er formand for de respektive netværk, som drives frem af nøglepersoner. Til netværkene er også knyttet forskere fra andre forskningsmiljøer, hvorfor vi repræsenterer en unik tværfaglighed indenfor de enkelte forskningsfelter. Netværksfilosofien indebærer en dynamisk proces, hvor nogle netværk vil vokse, andre vil uddø og nye vil opstå.

Akutmedicin

Akutmedicin har stor betydning for den enkelte borger, der pludselig bliver akut patient, såvel som for sundhedsvæsenet som helhed. Området gennemgår i øjeblikket store organisatoriske forandringer, som ikke er set i årtier, og oplever i kraft heraf stor politisk bevågenhed. Akutmedicin vil de næste mange år indtage en nøgleposition i sundhedsvæsenet både organisatorisk og politisk såvel som økonomisk, hvor området er en sværvægter.

Mission

CfAs mission er at skabe og formidle ny viden indenfor forebyggelse, diagnostik, behandling, og rehabilitering af alle patienter med akut opstået sygdom eller tilskadekomst.

Med fokus på den tidlige indsats i sygdomsforløbet vil vi generere viden, som sikrer en evidensbaseret, hurtig og sikker håndtering af alle patienter i spektret fra den kritisk syge til den raske borger.

For at sikre et optimalt forløb for den enkelte patient, vil centeret til stadighed samarbejde på tværs af fagområder og discipliner for at optimere overgange mellem sektorer indenfor sundhedsvæsenet, herunder skabe viden om både patientforløb, samarbejdsflader og organisationsformer.

Centeret vil spille en aktiv rolle i at udvikle akutmedicinsk forskning som en selvstændig, akademisk disciplin.

Vision

- 1) Forsknings- og/eller udviklingsprojekter er integreret i alle former for akutte patientforløb
- 2) Centeret er førende inden for akutforskning i Danmark og internationalt kendt og anerkendt
- 3) Centeret er en aktiv medspiller i udviklingen af akutområdet både klinisk såvel som organisatorisk og politisk, og kan levere evidens, når der skal træffes beslutninger på akutområdet
- 4) Centeret fastholder og udbygger sit internationale samarbejde
- 5) Undervisning i akutmedicin udvikles til et internationalt niveau inden for såvel det præ-graduate – som det post-graduate område
- 6) Centeret skaber kontinuerligt forskningsprojekter, som udløser donationer fra såvel store som små fonde

Akademisk program

Hans Kirkegaard, professor

Ph.d. studerende, hovedvejleder

Nikolaj Raber: 'Telemedicinske løsninger i det akutte patientforløb; fordele og ulemper for patienter, sundhedspersonale og sundhedsvæsen'.

Louise Møldrup Nielsen: 'The effect of systematic assessment of functional ability, development of rehabilitation plan and follow-up at home for elderly medical patients'.

Anders Møllekær: 'The reorganization of emergency care in Central Denmark Region 2008-2014: Emergency Department performance and quality of care'.

Jesper Weile: 'Initial patient evaluation in the Emergency Department with Point-of-Care ultrasonography'.

Claus Sixtus: 'Opsporing af kritisk forværring og intervention hos hospitalsindlagte børn'.

Anders Grejs: 'Forlænget kølebehandlings påvirkning af hjertet hos hjertestoppatienter'.

Anni Jeppesen: 'Koagulation ved terapeutisk mild hypotermi efter hjertestop'.

Christophe Duez: 'Prognostisering af neurologisk udkomme ved kølebehandling af patienter med hjertestop'.

Mathias Holmberg: Coenzyme Q10 in post-cardiac arrest patients: a randomized, double-blind, placebo-controlled phase II trial.

Gitte Boier Tygesen: Development and evaluation of a patient safety model targeting Severe Clinical Deterioration and Safety Awareness in the Emergency Department.

Ph.d. studerende, medvejleder

Morten Bøtker: 'Effekten af præhospital point-of-care diagnostik ved uafklaret dyspnø'. Hovedvejleder Christian Juhl Terkildsen.

Lars Wiuff Andersen: 'Thiamine in Coronary Artery Bypass Graft Surgery'. Hovedvejleder Else Tønnesen.

Kristian Friesgaard. Forekomst og behandling af smerter indenfor akut medicin. Hovedvejleder Lone Nikolajsen.

Kasper Glerup Lauridsen: 'Improving survival following in-hospital cardiac arrest: studies on cardiac arrest teams'. Hovedvejleder Bo Løfgren

Iben Duvald. Weekend effekten. Hovedvejleder Børge Obel

Forskningsårsstuderende, hovedvejleder

Nikola Stankovic: Oxygen Consumption in the Critically Ill

Jacob Dynesen: 'Buzzwords - Identifying sepsis patients through data mining'

Janet Nissen: 'Identification of severe sepsis and septic shock - using hypotension and lactate'

Ine Oppedal. Outcome of sepsis patients with pre-existing chronic heart failure
-A Fluid Therapy Optimization Study

Jos Vesterdal The impact of emergency physicians on LWBS rate compared with physicians of another speciality.

Mathias Karlsson. The energy state in lymphocytes and neutrophils, and its effect on immune function in patients with sepsis and septic shock.

Michael Vogensen. Analysis of premature atrial or ventricular complexes and their post-ectopic beat for fluid responsiveness: a retrospective ICU-study.

Specialeopgave, hovedvejleder

Line Storm. Low socioeconomic status is a risk factor for admission to the intensive care unit with sepsis. Bestået 19. April 2016

Michael Vogensen. Analysis of premature atrial or ventricular complexes and their post-ectopic beat for fluid responsiveness: a retrospective ICU-study. Bestået 28. Juni 2016

Jacob Dynesen: 'Buzzwords - Identifying sepsis patients through data mining'

Janet Nissen: 'Identification of severe sepsis and septic shock - using hypotension and lactate'

Ine Oppedal. Outcome of sepsis patients with pre-existing chronic heart failure
-A Fluid Therapy Optimization Study

Mathias Karlsson. The energy state in lymphocytes and neutrophils, and its effect on immune function in patients with sepsis and septic shock.

Miriam Thygesen. Do board-certified emergency physicians staffing ED make a difference.

Bo Løfgren, lektor

Ph.d. studerende, hovedvejleder

Rasmus Søndergaard Aagaard: 'Cardiac ultrasound: Dead or Alive – does it matter? Experimental and clinical studies'.

Kasper Glerup Lauridsen: 'Improving survival following in-hospital cardiac arrest: studies on cardiac arrest teams'.

Anders Sjørlev Schmidt: 'Improving the efficiency and safety of direct current cardioversion'.

Forskningsårsstuderende, hovedvejleder

Camilla Bang: 'Effect of Point-of-Care Testing on Length of Stay in Emergency Department Chest Pain Patients'

Camilla Hansen: 'Teaching basic life support and automated external defibrillation: A randomized comparative study of instructor-led demonstration versus a formal lecture'

Troels Mygind Klausen: 'In a bed or on the floor? – The effect of realistic hospital resuscitation training: a randomized controlled trial'

Lauge Vammen: 'The impact of type 2 diabetes mellitus on post-cardiac arrest organ dysfunction – an experimental study'

André Jæger: 'Teaching basic life support using a manikin with maximal versus minimal stiffness of the chest: A randomized controlled superiority study'

Søren Rahbek: 'Metformin as a cardioprotective drug - An experimental animal study'

Specialeopgaver, hovedvejleder

Ann Kristine Fleng Sørensen. Cardiac Patients' Perspective on Do-Not-Resuscitate Orders and Conversations about Resuscitation

Troels Mygind-Klausen. 'In a bed or on the floor? – The effect of realistic hospital resuscitation training: a randomized controlled trial'

Søren Rahbek. 'Metformin as a cardioprotective drug - An experimental animal study'. (Karakter: 12)

André Anholm Jæger. 'Teaching basic life support using a manikin with maximal versus minimal stiffness of the chest: A randomized controlled superiority study'

Mathilde Melvej Stærk. 'Training automated external defibrillation on the left or right side of the patient – A randomised simulation study'

Camilla Hansen. 'Termination of Resuscitation: Physicians' And Nurses' Decision-making in Cardiac Arrest'

Marianne Lisby, lektor

Ph.d. studerende, medvejleder

Gitte Boier Tygesen: 'Development and evaluation of a patient safety model targeting Severe Clinical Deterioration and Safety Awareness in the Emergency Department'

Hanne Mørkenborg Bové: 'I trygge hænder – sygepleje til socialt udsatte patienter med et skadeligt forbrug af alkohol'

Bettina Wulff Risør: 'Sikker og effektiv medicin håndtering på fremtidens hospitaler'

Ann Lykkegaard Sørensen: Effekt af sygeplejerskers kompetenceudvikling med henblik på medicin-gennemgang hos psykiatriske patienter – en interventionsundersøgelse

Simon Vistisen, lector

Forskningsårsstuderende, hovedvejleder

Jonas Munksgaard Berg: 'Predicting fluid responsiveness in cardiac surgery using extra systoles'

Forskningsårsstuderende, medvejleder

Johannes Enevoldsen: 'Gastrointestinal Transit Time in Patients with Traumatic Brain Injury'

Michael Vogensen: 'Analysis of extra systoles for fluid responsiveness prediction'

Publikationer

Peer review artikler

1. Jessen MK, Mackenhauer J, Hvass AMW, Ellermann-Eriksen S, Skibsted S, Kirkegaard H, Schønheyder HC, Shapiro N. Prediction of bacteremia in the emergency department: an external validation of a clinical decision rule. & CONSIDER Sepsis Network. *European Journal of Emergency Medicine* 2016; 23 (1): 44-9 6
2. Schnegelsberg A, Mackenhauer J, Helle Lykkeskov HL, Dreyer P, Koch K, Kirkegaard H. Impact of socioeconomic status on mortality and unplanned readmission in septic intensive care unit patients. *Acta Anaesthesiol Scand* 2016; 60: 465–75
3. Friesgaard K D, Nikolajsen L, Giebner M, Rasmussen C-H, Riddervold IS, Kirkegaard H, Christensen E F. Efficacy and safety of intravenous fentanyl administered by ambulance personnel. *Acta Anaesthesiologica Scandinavica* 2016; 60: 537-43.
4. M Lind KB, Soerensen CA, Salamon SA, Jensen TM, Kirkegaard H. & Lisby M. Impact of clinical pharmacist intervention on length of stay in an acute admission unit: a cluster randomised study. *European Journal of Hospital Pharmacy* 2016; 23: 171-6.
5. Madsen MM, Eiset AH, Mackenhauer J, Odby A, Christiansen CF, Kurland L, Kirkegaard H. Selection of quality indicators for hospital-based emergency care in Denmark, informed by a modified-Delphi process. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 2016; 24 (1): 11

6. Bøtker MT, Stengaard C, Andersen MS, Søndergaard HM, Dodt KK, Niemann T, Kirkegaard H, Christensen EF, Terkelsen CJ. Dyspnea, a high-risk symptom in patients suspected of myocardial infarction in the ambulance? A population-based follow-up study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 2016; 24 (1): 15
7. Raaber N, MD; Duvald I, Riddervold IS, Christensen EF, Kirkegaard H. Geographic information system data from ambulances applied in the emergency department: Effects on patient reception. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 2016; 24: 39, 9
8. Nielsen, V., Hvass, A. M., Mackenhauer, J., Fuursted, K., Schønheyder, H. C., Kirkegaard, H. & CONSIDER Sepsis Network. Site of infection and mortality in patients with severe sepsis or septic shock. A cohort study of patients admitted to a Danish general intensive care unit. *Infectious Diseases* 2016; 48 (10) 726-31.
9. Kirkegaard H, Rasmussen BS, De-Haas I, Nielsen JF, Ilkjær S, Kaltoft A, Jeppesen AN, Grejs A, Duez CHV, Larsen AI, Pettilä V, Toome V, Arus U, Taccone FS, Storm C, Skrifvars MB, Søreide E. Time-differentiated target temperature management after out-of-hospital cardiac arrest: A multi-centre, randomised, parallel-group, assessor-blinded clinical trial (the TTH48 trial): study protocol for a randomized controlled trial. *Trials*, DOI 10.1186/s13063-016-1338-9.
10. Jeppesen AN, Kirkegaard H, Ilkjær S, Hvas AM. Influence of temperature on thromboelastometry and platelet aggregation in cardiac arrest patients undergoing targeted temperature management *Critical Care* 2016 Apr 30;20(1):118. doi: 10.1186/s13054-016-1302-9.
11. Grejs A, Gjedsted J, Pedersen M, Birke-Sørensen H, Rauff-Mortensen A, Andersen K, Kirkegaard H. Cerebral effects of Targeted Temperature Management Methods Assessed by diffusion-weighted MRI. *Therapeutic Hypothermia and Temperature Management* 2016 Jun 1. [Epub ahead of print]
12. Lassen AM, Jørgensen H, Jørsboe HB, Odby A, Brabrand M, Steinmetz J, Machenhauer J, Kirkegaard H, Christiansen CF. The Danish Database for Acute and Emergency Hospital Contacts. *Clinical Epidemiology*, 2016; 8: 1-6.
13. Eiset AH; Erlandsen M; Møllekær AB; Mackenhauer J; Kirkegaard H. A generic method for evaluating crowding in the emergency department. *BMC Emergency Medicine* 2016, 1:21
14. Grejs AM, Gjedsted J, Thygesen K, Lassen JF, Rasmussen BS, Jeppesen AN, Duez C, Søreide E, Kirkegaard H. The Extent of Myocardial Injury during Prolonged Targeted Temperature Management after Out-of-Hospital Cardiac Arrest. *The American Journal of Medicine* 2016 Jul 29. pii: S0002-9343(16)30735-5. doi: 10.1016/j.amjmed.2016.06.047. [Epub ahead of print].

15. Lind KB, Soerensen CA, Salamon SA, Jensen TM, Kirkegaard H. & Lisby M. The consequence of delegating medication related tasks from physician to clinical pharmacist in an Acute Admission Unit – an analytic study. *European Journal of Hospital Pharmacy* 2016;0:1–6.
doi:10.1136/ejhpharm-2016-000990
16. Raaber, N., Bøtker, M. T., Riddervold, I. S., Christensen, E. F., Emmertsen, N-C, Grøfte T, Kirkegaard H. Telemedicine-based physician consultation results in more patients treated and released by ambulance personnel. *European Journal of Emergency Medicine*, in press. Telemedicine-based physician consultation results in more patients treated and released by ambulance personnel. *European Journal of Emergency Medicine* 2016 17. oktober.
17. Rasmussen SE, Nebbjerg MA, Krogh LQ, Bjørnshave K, Krogh K, Povlsen JA, Riddervold I, Grøfte T, Kirkegaard H, Løfgren B. A novel protocol for dispatcher assisted CPR improves CPR quality and motivation among rescuers-A randomized controlled simulation study. *Resuscitation* in press.
18. Oedorf K, Day D, Lior Y, Novack V, Sanchez L, Wolfe R, Kirkegaard H, Shapiro N, Henning D. Serum Lactate as a Predictor of Adverse Outcomes in Emergency Department Patients with and without Infection. *WestJEM* in press
19. Nielsen L, Kirkegaard H, Østergaard L; Bovbjerg K, Breinholt K, Maribo T. Comparison of self-reported and performance-based measures of functional ability in elderly patients in an emergency department: implications for selection of clinical outcome measures. *BMC Geriatrics* 2016; 16 (1): 199.
20. Karlsson M, Donnino M, Kirkegaard H, Chase M, Cocchi M, Andersen LW and American Heart Association's Get With the Guidelines-Resuscitation® Investigators. Acute Respiratory Compromise in the Emergency Department: A Description and Analysis of 3571 Events from the Get With the Guidelines-Resuscitation® Registry. *The Journal of Emergency Medicine (Philadelphia)*, in press.
21. Bøtker M T., Vang, M. L., Grøfte, T., Kirkegaard, H., Frederiksen, C. A. & Sloth, E Implementing point-of-care ultrasonography of the heart and lungs in an anesthesia department. *Acta Anaesthesiologica Scandinavica* in press.
22. Kirkegaard, H., Pedersen, A. R., Pettilä, V., Hjort, J., Rasmussen, B. S., de Haas, I., Nielsen, J. F., Ilkjær, S., Kaltoft, A., Jeppesen, A. N., Grejs, A. M., Duez, C. H. V., Larsen, A. I., Toome, V., Arus, U., Taccone, F. S., Storm, C., Laitio, T., Skrifvars, M. B. og Søreide E. A statistical analysis protocol for the time-differentiated target temperature management after out-of-hospital cardiac arrest

(TTH48) clinical trial.: *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* E. 28 nov. 2016; 24, 1: 138

23. Sædder, E. A., Lisby, M., Nielsen, L. P., Rungby, J., Andersen, L. V., Bonnerup, D. K. & Brock, B. Detection of Patients at High Risk of Medication Errors: Development and Validation of an Algorithm. *Basic & Clinical Pharmacology & Toxicology*. 118, 2, s. 143-149. feb. 2016
24. Topaz, M., Lisby, M., Morrison, C. R. C., Levtzion-Korach, O., Hockey, P. M., Salzberg, C. A., Efrati, N., Lipsitz, S., Bates, D. W. & Rozenblum R. Nurses' Perspectives on Patient Satisfaction and Expectations: An International Cross-Sectional Multicenter Study With Implications for Evidence-Based Practice. june 2016. *Worldviews on evidence-based nursing / Sigma Theta Tau International, Honor Society of Nursing*. 13, 3, s. 185-96 12 s.
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31. Andersen LW. Lactate Elevation During and After Major Cardiac Surgery in Adults: a Review of Etiology, Prognostic Value, and Management. *Anesthesia & Analgesia* 2016 (in press)

32. Moskowitz A, Omar Y, Chase M, Lokhandwala S, Patel P, Andersen LW, Cocchi M, and Donnino MW. Reasons for Death in Patients with Sepsis and Septic Shock. *Journal of Critical Care* 2016 Dec 2. [Epub ahead of print]
33. Andersen LW, Raymond T, Berg RA, Nadkarni VM, Grossestreuer AV, Kurth T, and Donnino MW. Association between tracheal intubation during pediatric in-Hospital cardiac arrest and survival. *JAMA* 2016 Nov 1;316(17):1786-1797.
34. Andersen LW, Berg KM, Chase M, Cocchi MN, Massaro J, and Donnino MW. Acute Respiratory Compromise on Inpatient Wards in the United States: Incidence, Outcomes, and Factors Associated with In-Hospital Mortality. *Resuscitation* 2016 Aug;105:123-9.
35. Ikeda K, Liu X, Kida K, Marutani E, Hirai S, Sakaguchi M, Andersen LW, Bagchi A, Cocchi M, Berg K, Ichinose F, and Donnino MW. Thiamine as a Neuroprotective Agent after Cardiac Arrest. *Resuscitation* 2016 Aug;105:138-44.
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37. Peberdy MA (co-first author), Andersen LW (co-first author), Abbate A, Thacker LR, Gaiieski D, Abella B, Rittenberger JC, Clore J, Ornato J, Cocchi M, Callaway C, and Donnino MW. Inflammatory Markers Following Resuscitation from Out-of-Hospital Cardiac Arrest - a Prospective Multi-center Observational Study. *Resuscitation* 2016 Jun;103:117-24.
38. Andersen LW, Berg KM, Montissol S, Sulmonte C, Cocchi MN, Wolfe RE, Balasubramanyam A, Liu X, and Donnino MW. Pyruvate Dehydrogenase Activity is Decreased in Emergency Department Patients with Diabetic Ketoacidosis. *Academic Emergency Medicine* 2016 Jun;23(6):685-9.
39. Andersen LW, Liu X, Montissol S, Holmberg MJ, Sulmonte C, Balkema J, Cocchi MN, Gazmuri RJ, Berg M, Chase M, and Donnino MW. Cytochrome c in Patients with Septic Shock. *Shock* 2016 May;45(5):512-517.
40. Andersen LW, Kurth T, Chase M, Berg KM, Cocchi C, Callaway C, and Donnino MW. Early Epinephrine in In-Hospital Cardiac Arrest Patients with an Initial Shockable Rhythm: A Propensity Score Matched Analysis. *BMJ* 2016 Apr 6;353:i1577
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lowing Cardiac Arrest: A Randomized, Double-Blind, Placebo-Controlled, Trial. *Critical Care* 2016 Apr 3;20(1):82.

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43. Donnino M, Andersen LW, Chase M, Berg KM, Tidswell M, Giberson T, Wolfe R, Moskowitz A, Smithline H, Ngo L, and Cocchi MN. Randomized, Double-Blind, Placebo-Controlled Trial of Thiamine as a Metabolic Resuscitator in Septic Shock: A Pilot Study. *Critical Care Medicine* 2016 Feb;44(2):360-367.
44. Andersen LW (co-first author), Kim WY (co-first author), Chase M, Berg KM, Mortensen SJ, Moskowitz A, Novack V, Cocchi MN, and Donnino MW. The Prevalence and Significance of Abnormal Vital Signs Prior to In-Hospital Cardiac Arrest. *Resuscitation* 2016 Jan;98:112-117.
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47. Aagaard R, Grove EL, Mikkelsen R, Wolff A, Iversen KW, Løfgren B. Where is the AED? Limited public ability to recognize and understand the universal ILCOR sign for AEDs. *Heart.* 2016 May 15;102(10):770-4. doi: 10.1136/heartjnl-2015-308700.
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49. Lauridsen KG, Schmidt AS, Caap P, Aagaard R, Løfgren B. Clinical experience and skills of physicians on hospital cardiac arrest teams: A nationwide study. *Open Access Emergency Medicine.* Accepted for publication.

Lærebogskapitler og E-læring

Aagaard R, Løfgren B. Hjerter-lunge-redning. In: Jakobsen A, Skjærbæk C, Villumsen N, editors. Akutbogen. 1 ed. Copenhagen: Munksgaard; 2016.

Jesper Weile J, Aagaard R, Clemmesen L. Ultralydsvejledt vaskulær adgang. E-læring. Gratis tilgængeligt på Region Midtjyllands kursusportal (plan2learn.rm.dk).

Andet

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Bjørnshave K, Rasmussen SE, Nebsbjerg MA, Krogh LQ, Krogh K, Povlsen JA, Løfgren B: “Major Differences In The Use Of Protocols For Dispatcher Assisted Cardiopulmonary Resuscitation – An Observational Study”. Circulation. 2016;134:A15593

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Nissen JY, Dynesen JJØ, Pedersen MKJ, Mackenhauer J, Ebdrup L, CONSIDER Sepsis Network , Kirkegaard H. Detection of organ dysfunction by hypotension and/or hyperlactemia in septic patients. Sepsis 2016 Symposium, Paris, France

Lauridsen KG, Schmidt AS, Caap P, Aagaard R, Løfgren B: Physicians Disagree on Team Leadership and Have Limited Knowledge of Task Allocation on The Cardiac Arrest Team – A Nationwide Study. Præsenteres på American Heart Association Resuscitation Science Symposium 2016, New Orleans, Louisiana. November 2016.

Lauridsen KG, Højbjerg R, Løfgren B: Why Do Physicians Not Attend Hospital Resuscitation Training? A Survey Investigating Barriers for Participation. American Heart Association Resuscitation Science Symposium 2016, New Orleans, Louisiana. November 2016.

Stærk M, Lauridsen KG, Mygind-Klausen T, Løfgren B: Major Differences in Implementation Strategies of the European Resuscitation Council Guidelines 2015 in Danish Hospitals – A nationwide study. American Heart Association Resuscitation Science Symposium 2016, New Orleans, Louisiana. November 2016.

Mygind-Klausen T, Lauridsen KG, Bødtker H, Løfgren B: Emergency Medical Technicians Are Often Consulted on Termination of Resuscitation, and Will Terminate Resuscitation Based on Controversial Single Factors. American Heart Association Resuscitation Science Symposium 2016, New Orleans, Louisiana. November 2016.

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Juhl-Olsen P., Jeppesen A.N., Aagaard R. The use of ultrasound in the pericardiac arrest setting: Lessons learnt. *Critical Care Medicine* 2016 44:12 Supplement 1 (492-)

Remote supervision in point-of-care lung and cardiac ultrasound. A protocol for a prospective blinded feasibility trial. Jensen SH, Weile J, Bolvig L, Primdahl S, Petersen P, Kirkegaard H; Danish Emergency Medicine Conference 7, Copenhagen, Denmark.

Trampoline injuries and safety in children: a retrospective study and follow up phone interview; Huynh ANT, Andersen MM, Petersen P, Kirkegaard H, Hansen TB, Weile J. International Conference on Emergency Medicine (ICEM 2017), Cape Town, South Africa.

Selection bias due to non-responders in a satisfaction survey among patients in an emergency department. Jørgensen A, Primdahl S, Petersen P, Kirkegaard H, Weile J. International Conference on Emergency Medicine (ICEM 2017), Cape Town, South Africa.

Afhandlinger og forskningsårsprojekter

Ph.d. afhandlinger

Anders Grejs: Prolonged Targeted Temperature Management - Methods & Myocardial Injury. Aarhus 15. december 2016. Hovedvejleder Hans Kirkegaard

Morten Bøtker: Dyspnea in the ambulance – mortality, etiology and point-of-care diagnostics. Aarhus, 14. oktober 2016. Hovedvejleder Christian Terkelsen, medvejleder Hans Kirkegaard

Forskningsårsrapporter

Michael Vogensen. Analysis of premature atrial or ventricular complexes and their post-ectopic beat for fluid responsiveness: a retrospective ICU-study. Aarhus, 29. april 2016

Troels Mygind Klausen: ‘In a bed or on the floor? – The effect of realistic hospital resuscitation training: a randomized controlled trial’. Aarhus, 19. December 2016

Lauge Vammen: ‘The impact of type 2 diabetes mellitus on post-cardiac arrest organ dysfunction – an experimental study’. Aarhus, 19. December 2016

André Jæger: ‘Teaching basic life support using a manikin with maximal versus minimal stiffness of the chest: A randomized controlled superiority study’. Aarhus, 19. December 2016

Søren Rahbek: ‘Metformin as a cardioprotective drug - An experimental animal study’. Aarhus, 19. December 2016

Inviterede foredrag

Internationale foredrag

Kirkegaard H: Target temperature management in cardiac arrest: current status. 8th International Baltic Congress of Anaesthesiology and Intensive Care, Tallinn. 1. – 3. december 2016

Kirkegaard H: Targeted temperature management in neurocare: An update. 8th International Baltic Congress of Anaesthesiology and Intensive Care, Tallinn. 1. – 3. december 2016

Weile J: Point-of-Care Cardiac Ultrasound, Update and Current practice in Emergency Medicine. Continuing Medical Education (CME), Ultrasound Division, Massachusetts General Hospital, Harvard Medical School, Boston, USA, April 2016

Weile J: Point-Of-Care Renal Ultrasound, 1st year medical students. Hands on training. Harvard Medical School, Boston, USA, April 2016.

Lisby M: Medication Reviews - Impact on readmissions and QoL. DCHI, Workshop, Medication reviews: Perspectives on economy and patient safety, Feb 2016

Nationale foredrag

Lisby M: Sygeplejersker i Akutmedicinsk forskning. DEMC7: Trends i den akutmedicinske forskning i Danmark, hvor skal vi hen med den akutmedicinske forskning? November 2016

Tygesen GB: Undersøgelse af patientsikkerhedskulturen i akutafdelingerne. Hospitalsenheden Horsens, Hospitalsenhed Midt, Hospitalsenheden Vest og Regionshospitalet Randers, november 2016.

Tygesen GB: Projekt Sikre Akutte Indlæggelser. Akut og intensivafdelingerne ved Hospitalsenheden Horsens og Hospitalsenhed Midt, august 2016

Tygesen GB: Sikre Akutte Indlæggelser, Fælles Akutafdeling AUH; august 2016.

Tygesen GB: Sikre Akutte Indlæggelser - udvikling og test af en dansk patientsikkerhedsmodel, Temadag i patientsikkerhed AUH, november 2016.

Kirkegaard H: Projekter i DESIGN-EM: Et interdisciplinært forskningsnetværk. DEMC7, København 24. – 25. november 2016

Mikkel Rasmussen og Hans Kirkegaard. Patientkarakteristika og flowmønster for psykiatriske patienter. DEMC7, København 24. – 25. november 2016

Andre foredrag

Hans Kirkegaard: Research center for emergency medicine. Samarbejds-symposium Kings College og CfA. London 16.- 17. august 2016.

Andet

Hans Kirkegaard

Formand for styregruppen for DANARREST, RKKP database for registrering af hjertestop på hospital.

Medlem af styregruppen for Databasen for akutte hospitalskontakter, RKKP database

Medlem af styregruppen for Dansk Traumeregister. RKKP database for akutte traumer.

Bedømmelser

Hans Kirkegaard

Formand for ph.d. bedømmelsesudvalg: Jacob Johnsens ph.d. afhandling, Aarhus Universitet

Medlem af ph.d. bedømmelsesudvalg: Muhammad Abou-Arab. Rapid-sequence induction of anesthesia and tracheal intubation (RSII). Oslo Universitet. Opponent ved forsvar 11. februar 2016

Medlem af ph.d. bedømmelsesudvalg: Catharina Bornha. Early diagnostic evaluation of patients with possible acute coronary syndrome, with special emphasis on troponin T. Lunds universitet. Opponent ved forsvar 7. Oktober 2016.

Chairman, abstract assessment committee. DEMC7, København 24. – 25 november 2016

Editor of abstracts from DEMC7 published in Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine.

Abstract bedømmer: EMS Copenhagen, København 30. maj til 1. juni 2016

Abstract bedømmer: DEMC 7, København 24.-25. november 2016

Abstract bedømmer: DASEM årsmøde, Bregninge 8.-9. april 2016.

Bo Løfgren

Formand for bedømmelsesudvalg: Ansættelse af lektor, Minna Skov

Formand for bedømmelsesudvalg: Ansættelse af lektor Tommy Andersson

Formand for bedømmelsesudvalg: Ansættelse af lektor Katrin Lehman

Formand for bedømmelsesudvalg: Ansættelse af lektor Viborg Flemming Randsbæk

Medlem af bedømmelsesudvalg, doktorafhandling, Wien's Universitet: "Cardiovascular monitoring is detrimental to the initiation of paediatric basic life support" Doctorand: Ms Dr. Elisabeth Hörner.

Medlem af ph.d. bedømmelsesudvalg, Bedømmer: Arzu Bilgin-Freiert, Remote Ischemic Preconditioning for Patients With Subarachnoid Hemorrhage After Aneurism Rupture. Københavns Universitet. Bedømmelse foretaget – forventet forsvar: 2017

Abstract bedømmer for American Heart Association: Resuscitations Science Symposium, Scientific Sessions of The American Heart Association

Marianne Lisby

Abstract bedømmer: DEMC7 Conference, 2016

Abstract bedømmer: Foretagspris ved DEMC7 Conference, 2016

Medlem af MVU-bedømmelsesudvalg, AUH: Bevilling af midler til MVU projekter. Marts & November 2016

Jesper Weile

Weile J: Point-of-Care ultralyd i akutmodtagelsen – hvad er evidensen? Chairman, Danish Emergency Medicine Conference 2017, Copenhagen Nov 2016.

Konferencer og foredrag afholdt i Center for Akutforskning regi

DESIGN-EM: Hvilken betydning har organisering af patient outcome? Danske og internationale resultater og erfaringer. Aarhus Universitetshospital Skejby d. 12. maj 2016.

Internationalt samarbejde

Jesper Weile: International Fellowship, Ultrasound Division, Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, USA.

Marianne Lisby: Professor David W. Bates og Dr. Ronen Rozenblum, Division of General Medicine and Primary Care, Brigham & Womens Hospital, Boston, MA, USA.

Kasper Glerup Lauridsen: Professor Vinay Nadkarni og professor Robert Berg, Department of Anesthesiology and Critical Care Medicine, Children's Hospital of Philadelphia; Center for Resuscitation Science, University of Pennsylvania, USA.

Søren Rahbek: Professor Cameron DeZfulian, Safar Center for Resuscitation Research, University of Pittsburgh School of Medicine.

Bo Løfgren: Professor Vinay Nadkarni og professor Robert Berg, Department of Anesthesiology and Critical Care Medicine, Children's Hospital of Philadelphia; Center for Resuscitation Science, University of Pennsylvania, USA.

Bo Løfgren: Visiting professor, Perelman School of Medicine, Children's Hospital of Philadelphia, USA og Johns Hopkins School of Medicine, Baltimore, USA

Gitte Boier Tygesen: Cincinnati Children's Hospital, Ohio, USA, forskningsophold juni 2016.

Jacob Dynesen: Dr. Jeff Keep, Research lead in Emergency Medicine, King's Trauma Centre, King's College Hospital

Jonas Munksgaard Berg: University Medical center Groningen (UMCG), Holland

Simon Vistisen: Prof. Thomas Scheeeren, University Medical Center Groningen, UMCG, Groningen, Holland. Clinical director of the MIMIC database, Leo Celi, Massachusetts Institute of Technology (MIT), Boston, USA.

Hans Kirkegaard: Eldar Søreide, Professor, MD, PhD, FERC, Department of Anaesthesiology and Intensive Care og Alf Inge Larsen, Professor, MD, PhD, FESC; Department of Cardiology, Stavanger University Hospital, Stavanger, Norway and Department of Clinical Medicine, University of Bergen, Bergen, Norway.

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Hans Kirkegaard: Fabio Silvio Taccone, Professor, MD, PhD; Department of Intensive Care, Erasme Hospital, Université Libre de Bruxelles (ULB), Brussels, Belgium.

Hans Kirkegaard: Urmet Arus, MD og Valdo Toome, MD; Department of Intensive Cardiac Care, North Estonia Medical Centre, Tallinn, Estonia.

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Hans Kirkegaard: Timo Laitio, MD, PhD; Department of Anesthesiology and Intensive Care, Turku University Hospital and University of Turku, Finland, email: timo.laitio@elisinet.fi

Hans Kirkegaard: Markus B Skrifvars, Associated professor, MD, PhD, EDIC, FCICM; Division of Intensive Care, Department of Anesthesiology and Intensive Care Medicine, Helsinki University Hospital and University of Helsinki, Finland, and Australian and New Zealand Intensive Care Research Centre, School of Public Health and Preventive Medicine, Monash University Melbourne, Australia.

Hans Kirkegaard: Nathan Shapiro Ass. Professor , MD Emergency Department, Beth Israel Deaconess Medical Center, Longwood, Boston.

Michael Donnino, Ass. Professor MD, Emergency Department, Beth Israel Deaconess Medical Center, Longwood, Boston

Hans Kirkegaard: Bo Madsen, Associated professor, MD, Emergency Department, Mayo Clinic, Rochester, Minnesota

Hans Kirkegaard: Jeff Keep, MD, FRCER Consultant & Honorary Senior Lecturer in Emergency Medicine & Major Trauma Lead for Research & Clinical Governance King's College Hospital, London

Hans Kirkegaard: Philip Andersson, Adjunct professor, MD, Emergency Department, Brigham & Womens Hospital, Boston, MA, USA.

Bevillinger, priser og anerkendelser

Marianne Lisby: Lektorat ved Center for Akutforskning og Institut for Klinisk Medicin i perioden 15. juni 2016-14. juni 2021

Bo Løfgren, Riisfort fonden: 329.920 kr.

Hans Kirkegaard, Trygfonden: 1.647.397 kr.

Hans Kirkegaard, Hjerteforeningen: 198.000 kr.

Hans Kirkegaard, The Laerdal Foundation: 120.000 kr.

Simon Vistisen, Det Frie Forskningsråd, Sapere Aude Forskertalent: 496.659 kr.

Kasper Glerup Lauridsen, Aarhus Universitet: 366.667 kr.

Kasper Glerup Lauridsen, Regionshospitalet Randers: 900.000 kr.

Camilla Hansen, Grosserer L.F. Foghts fond: 80.000 kr.

Gitte Boier Tygesen, Familien hede Nielsens Fond: 25.000 kr.

Gitte Boier Tygesen, Hospitalsenhed Midt, pris for bedste poster: 5000 kr.

Gitte Boier Tygesen, Aarhus Universitet: 144.333 kr.

Stig Holm Jensen, Holger og Ruth Hesses Mindefond: 20.000 kr.

Jesper Weile, Lippmann Fonden: 15.000 kr.

Jesper Weile, Lundbeck Fonden: 10.000 kr.

Jesper Weile, Familien Hede Nielsens Fond : 7.000 kr.

Jesper Weile, Helga og Peter Kornings Fond: 20.000 kr.

Jonas Munksgaard Berg, Lippmann Fondens legat uddelt af DASAIM: 25.000kr.

Jonas Munksgaard Berg, Etatsraad C.G. Filtenborg og Hustru Marie Filtenborg's studielegat: 5.000 kr.

Lauge Vammen, Eva og Hans Carl Adolf Holms Minde Legat: 20.000 kr.