Research strategy of the Research Group on Emergency Medicine, Institute of Clinical Research, University of Southern Denmark (18th of August 2013).

The aim of the research group is:
To initiate, support, and complete studies that improve evidence based management of acute patients in the emergency departments, the pre hospital system, and in other aspects of the health care system.
To perform clinical epidemiological as well as randomized controlled trials and to facilitate translational research in the area.
The research group aim to produce and present results at a high international level in collaboration with local, regional, and international partners.

The Research group is related to the department of Emergency Medicine, Odense University hospital and house:
Annmarie Lassen MD PhD, DMSct, professor of Emergency Medicine, research leader (AL)
Jens Jørgen Frifelt MD, associate professor in clinical medicine
Daniel Pilsgaard Henriksen MD PhD student (DH)
Jon Holler MD, MD PhD student
Camilla Bech MD research assistent
Katrine Lindvig, medical student in a one year undergraduate health science project
Helene Jensen medical student in a one year undergraduate health science project
6 parttime student assistants
Niels Agerbek, Data manager
Berit Pagaard, research secretary

We collaborate with several clinical and theoretical departments.

Research area:
Clinical epidemiological and interventional studies

Examples of data material in the clinical epidemiological studies:
“OUH’s akutkohorte”: Clinical information for all patients admitted to the acute medical department between 1/6 2008 and 31/8 2011 is linked at a personal level to information from Danish population based registers as well as results from laboratory and microbiological tests made at Odense University Hospital. It is also linked to redeemed prescription in Odense Pharmakoepidemiological Database. “OUHs akutkohorte” includes 27,283 admissions for 17,683 patients. The cohort provide possibility to describe and analyze patient status at arrival to the department (before a diagnosis is made) and relate it to later established diagnosis, prognosis, to analyze risk factors etc.
“Syddansk Akutkohorte (SAK)”: This cohort is a collaboration between all 5 Emergency Departments in the Region of Southern Denmark. It is a parallel to “OUH’s akutkohorte” but includes all contacts to the five Emergency Departments in the Region of Southern Denmark. It covers about 300,000 contacts per year, and is started in 2012. A full time data manager work to establish and run this data warehouse in collaboration with Center for National Clinical Databases, South and AL.

Research plan for 2013-2016
SAK is established in a fully functional data warehouse and will be maintained and continue to develop. It can deliver tailored datasets for specific research questions to researchers who typically have clinical, clinical epidemiological, or organizational competences – but who not necessarily have advanced data management competences. Considering all permissions are OK for the specific project - the delivery will take place maximum 7 days after the focused order is made from the researcher. This will allow the researchers to concentrate on the research questions and prevent them from getting stocked in complicated data structures.
SAK will deliver data to PhD studies and other studies for our research group at Emergency Medicine, Odense University Hospital as well as to other research groups at Emergency Medical hospitals and in the pre hospital area in the Region of Southern Denmark.

In the research group of Emergency Medicine, Odense University hospital, we aim to start one new PhD student and one new undergraduate health science project every ½ year. We also plan to occupy two post doc doctors in 60% clinic and 40 % research time 3 years from now. At the moment there are no qualified doctors for post doc, but they will be ready within the next 3 years where the first will start at the first of March 2014.

The research group collaborates with
• The pre hospital system locally at Odense University hospital (associate professor Søren Mikkelsen) and regionally (leader of the pre hospital system in the Region of Southern Denmark Torsten Lang-Jensen).


• Center of Clinical Epidemiology, South: Bente Nørgård, associate professor

Departments of Emergency Medicine in other hospitals: Sydvestjysk Sygehus, Esbjerg, Sygehus Sønderjylland, Åbenrå, Sygehus Lillebælt, Kolding, OUH, Svendborg, Slagelse Sygehus and, Køge Sygehus.

Ongoing studies related to the research group:

- **Jon Gitz Holler MD** (PhD study in collaboration with the pre hospital system, OUH, and Region of Southern Denmark. AL will be main supervisor. Expected to enroll January 2013)
  - Hypotension and shock in the Emergency ward, a population based follow up study at Odense University hospital 1995-2011

- **Daniel Pilsgaard Henriksen MD** (PhD study in collaboration with department of Infectious medicine, Microbiological department and department of Clinical Pharmacology OUH and SDU. AL is main supervisor)
  - SIRS and sepsis among medical Emergency Department patients

- **Thomas Schmidt** (PhD study based at the Maersk Institute, SDU. AL is collaborator and Camilla Bech is the “twin” clinical PhD study)
  - A technical PhD study regarding data capture from patient monitors and data modeling of information to improve clinical decision making at the Emergency Department

- **Athamaica Ruiz Oropeza** (PhD project in collaboration with Dermatological department OUH, AL is co-supervisor)
  - Anaphylaxis in children and adults: Prevalence in the Emergency Room, eliciting factors and treatment paradigm (PhD project Dermatological department OUH)

- **Abdellatif Aharaz MD** (PhD project in collaboration with Endocrinological department and department of Clinical Pharmacology OUH and SDU. AL is co-supervisor)
  - Metformin treatment and risk of lactate acidosis

- **Michala Kehrer MD** (PhD study in collaboration with department of Infectious medicine, Microbiological department and department of Clinical Pharmacology OUH and SDU. AL is main supervisor)
  - Vertebral osteomyelitis. Two population based studies

- **Stig Lønberg Nielsen MD** (PhD study in collaboration with department of Infectious medicine, Microbiological department and department of Clinical Pharmacology OUH and SDU, AL is co-supervisor)
  - Nosocomial bacteraemia – epidemiology and prognosis

- **Thomas Erstad MD** (PhD study in collaboration with professor Kenneth Egstrup, OUH Svendborg. AL is co-supervisor)
Patients with heart insufficiency and inflammation

- **Christian B. Laursen MD** (PhD study from department of Pulmonary diseases OUH. AL and DH are collaborators)
  - Focused Sonographic Examination of the Heart, Lungs and Deep Veins in an Unselected Population of Acute Admitted Patients with Respiratory Symptoms

- **Katrine Prier Lindvig** (A one year undergraduate health science project in collaboration with department of Infectious medicine, Microbiological department and department of Clinical Pharmacology OUH and SDU. AL is main supervisor)
  - Bacteraemia among acute medical patients

- **Helene Jensen** (A one year undergraduate health science project in collaboration with department of Clinical Pharmacology and PhD student Mikkel Brabrand, Sydvestjysk Sygehus, Esbjerg. )
  - Risk factors, incidence, and prognosis of hypocalcaemia among acute medical patients

**Studies that will start within the next 12 month**

- **Camilla Bech MD** (PhD study in collaboration with The Maersk Institute, SDU, AL will be main supervisor. Expected to enroll September 2013)
  - Patient @t risk

- **Anette Tanderup MD** (PhD project in collaboration with Geriatric department OUH. AL will be co-supervisor)
  - Patient@home

- **Nivethitha Ilangkovan Priyanthan** (PhD project in collaboration with Emergency Department, Sygehus Sønderjylland, Åbenrå, and Cardiological department OUH, AL will be co-supervisor)
  - Patients presenting with breast pain in the Emergency Department