

## News from CMSS

### Ongoing projects – preliminary results

#### **MARTHA – fatigue at sea**

CMSS is now in the last phase of the three-year project on the fatigue issue in international seafaring. The project is sponsored by the TK-Foundation and executed in scientific collaboration with researchers with various backgrounds (navigation, psychology, sociology, medicine) in Britain, China and Sweden.



The collection of data from i.e. interviews, questionnaires, on board diaries and actigraphy measurements is now finished, and most of the huge amount of material has been analyzed. Our Centre and Seafarers' Development International Research Centre at Dalian Maritime University are in charge of the interview and questionnaire part of the study.

Preliminary results have been presented at several scientific conferences and in seminars with seafarers. Two articles have so far been published and three are in print in peer-reviewed journals. In addition, we have contributed a chapter in an upcoming book on maritime psychology.

We have demonstrated that European and Chinese seafarers have higher actual weekly work hours than contract hours, and that the latter suffer from more tiredness and distress at work and have inferior quality of sleep. We also found significant differences in between the ideal and actual sleep as well as between strata of seafarers such as rank, with officers suffering more than ratings.

We are close to submitting a paper analyzing the relative importance of the various risk factors for fatigue as perceived by the European and Chinese seafarers, and three additional manuscripts dealing with various aspects of fatigue as experienced by crews in European vessels.

There is still a lot of material to be studied and made available to the maritime trade and legislative bodies. The project is planned to end this summer, but further work will be undertaken by the research team in order to secure dissemination of all the collected information.

Read more about project MARTHA [here](#).

#### **Optimization of the maritime tele medical health service**

The research project 'Optimization of the maritime tele medical health service' is now a little over halfway through the three-year program for which it is scheduled. The aim of the project is to optimize the quality of the maritime medical services, in particular with regard to evacuations, and to evaluate if the provided services are at an internationally comparable and high level.

The project will be implemented over three stages; the first stage is now completed and included a survey of the services that Radio Medical Denmark (RMD) has delivered in the period 2005-2014. The result of this phase is a database with information on name, age, nationality, character of contact, diagnosis code, ship, rank, etc. of the almost 13,000 contacts received by RMD during this period.



Approximately 5% of the contacts each year result in an evacuation or deviation due to life-threatening or mobility threatening accidents (30 %) or diseases (70%). These contacts have been of special interest and the focal point in the second stage of the project. The aim has been to follow up on the evacuated and deviated seamen from DIS and DAS ships - in order to establish the health, occupational and economic consequences for each of the cases. This is carried out by a search in the databases and archives of the Danish Maritime Authority for information about signing on/off activity, accident – and health insurance reimbursements, health examinations etc.; information which can tell us something about the utmost consequence of the evacuation or deviation, namely whether the seaman is still active in the Blue Denmark or not. This work is to be supplemented by a search in the database at the Joint Rescue Coordination Centre (JRCC) in Aarhus, which coordinates all evacuations from RMD.

Furthermore, the project aims to compare the Danish tele medical efforts with other leading maritime nations to evaluate if the services rendered are at an international comparable and high level. The project is supported by the Danish Maritime Fund and executed in collaboration between RMD and the Centre for Maritime Health Services. It runs until November 2017.

You can find further information about the evacuation project [here](#).

### **Measures for prevention of accidents in fishing in the Nordic countries (ViFaFiN)**



In collaboration with colleagues from Norway, Finland, Iceland and the Faroe Islands, CMSS has launched the project ViFaFiN. The project, which is financially supported by the Labour Market Committee of the Nordic Council of Ministers focuses on the remarkable positive development in the incidence of accidents in the Nordic fishing industry. The aim is, in particular, to gain insight into and knowledge about the specific preventive measures which has been found to work.

The first phase of the project is close to completion. In this phase, we have looked at the trends in reported occupational injuries, and we have also looked at actions taken and instruments used for the reduction and prevention of work-related accidents in fishing. In the next phase, we will interview fishermen to gain insights into what they think has worked and has had a positive effect on the incidence of work-related accidents.

Read more about the ViFaFiN project [here](#).

## Seamen and fishermen profit from good basic research

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### **New study concludes: Not taking preventive medications is linked to fatal strokes**

A recent study, [‘Poor Adherence to Statin and Antihypertensive Therapies as Risk Factors for Fatal Stroke’](#), published in the number-one scientific heart journal, ‘Journal of the American College of Cardiology’, found that patients with elevated cholesterol and high blood pressure who did not take their medication had a substantially increased risk of dying from stroke. Patients who were non-adherent with their antihypertensive and statin therapies had a seven times greater risk of suffering a fatal stroke.

This study, conducted by Kimmo Herttua from CMSS in collaboration with an international research group, used prescription, death and other records from the Finnish national register from 1995-2007. The study population constituted of more than 58,000 patients without pre-existing stroke or cardiovascular disease. Of these patients, 532 died of stroke during the follow-up.

This observational study appears to be the first to provide information on the association between nonadherence to statin and antihypertensive therapies and fatal stroke. These results thus emphasize the benefits of taking statins and antihypertensive medication.

These findings are of high relevance for seafarers and fishermen, regardless of being based on the whole population, because of the high prevalence of elevated cholesterol and high blood pressure among them.

Read more about the study findings in this [press coverage](#) from HealthDay.

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## A selection of other CMSS activities

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### **CMSS – a research partner in Blue SDU**



Blue SDU is an interdisciplinary research network unifying more than 30 maritime and marine researchers from across all five faculties of SDU. The goal is to provide 1) a one-stop-shop connecting people and organizations outside of SDU with our Blue research environment (homepage fully operational ultimo August 2016) and 2) to carry out research of high international standard with great relevance for society.

CMSS has been an active partner in Blue SDU from the very beginning - in organizing and participating in Blue SDU events, e.g. joint seminars. Quite a few initiatives have come out of these events - e.g. CMSS is currently involved in developing ideas for a project on improving the performance, working environment and safety of small working vessels, and a training program including teaching and training in occupational health and safety in the maritime field.

And at the time of writing, we have just received the happy news that we have received funding from the

Danish Maritime Fund for another Blue SDU initiative that CMSS is involved in; a pilot run for a Students' Think Tank. The main task of the Think Tank is to host an annual one week challenge for students. The challenge will be put forward in cooperation with an organization or firm, which presents students with a problem facing one or more maritime stakeholders, and the results will be presented during the Danish Maritime Days. This year Maritime Cluster Funen has agreed to help find the provocateur. We are looking forward to this cooperation and to welcome our first students into the Think Tank in October this year, and we are grateful to The Danish Maritime Fund to make this possible.

**Positive feedback on a well-organized course**



On 11-13 April, on Campus Esbjerg, CMSS hosted and co-organized a training course on 'International Health Regulations-Ship Sanitation Certificates' in cooperation with WHO/EURO the EU SHIPSAN ACT consortium. It was targeted to public health officers, public health inspectors and professional seafarers who want to apply the standards of WHO/IHR (International Health Regulations) and the SHIPSAN manual.

The participants were welcomed by the Head of CMSS, the Danish Patient Safety Authority, WHO/EURO, EU SHIPSAN ACT Joint Action, the Head of Maritime Department, Esbjerg port, the Deputy Mayor of Esbjerg Municipality and the Director of SEAHEALTH.



The course combined theoretical and practical training. During the "hands on" exercise the trainees had the opportunity to visit all areas of a ship including the galley, the hospital, the laundry/housekeeping room, and the garbage room, conducting a simulated hygiene inspection.

A total of 33 trainees - mainly from the Nordic and Baltic countries, but also from Belgium, Brazil, Germany, the Netherlands, and UK – participated in the training course. The evaluation showed that trainees were fully satisfied with the theoretical and practical activities of the course.

This course provided an excellent opportunity for CMSS to strengthen its international cooperation.

**The fishermen who disappeared**



The fishing industry has undergone major changes and is still facing major challenges. This is described in the report 'Omvæltninger og det psykiske arbejdsmiljø i fiskeriet – i ord og tal' from January 2015 by Jørgen Møller Christiansen and Anders Berthelsen Carlsbæk .

In a follow-up article entitled 'Fiskerne der forsvandt', Jørgen Møller Christiansen highlights the historical and factual basis for the current situation of the fisheries. In particular, the article focusses on reasons behind the fact that many fishermen have left the profession. The article is published in Danish in 'Sjæk'len 2015' which is a yearbook



## Centre of Maritime Health and Society

for the Fisheries and Maritime Museum in Esbjerg. You can read the full article here:

<http://pub.fimus.dk/Sjaeklen2015/>. The follow-up article also includes the second report of Jørgen Møller Christiansen and Anders Berthelsen Carlsbæk 'Fiskerne der forsvandt – hvorfor ophører fiskerne i fiskerierhvervet, og hvor går de hen?'

In 2016, TV2 Fyn made a documentary about the fishermen who disappeared, and Jørgen Møller Christiansen was interviewed and commented on the development. You can watch the broadcast on: <http://www.tv2fyn.dk/artikel/tv-2/fyn-dokumentar-fiskerne-der-forsvandt>.

You can find the two fishery reports (only in Danish) [here](#).

### Study trip to the Port of Hamburg

At the end of May, CMSS was invited on a study trip to the Port of Hamburg organized by the Danish Society of Maritime Medicine. First stop was at the old maritime hospital 'Hafenkrankenhaus', which is situated only a few minutes' walk from one of the city's major sights 'Landungsbrücken' in St. Pauli. Today, the Maritime Hospital houses 'Zentralinstitut für Arbeitsmedizin und Maritime Medizin' (ZfAM). On ZfAM, Dr Martin Dirksen Fischer, leader of 'Institut für Hygiene und Umwelt' informed us about accident prevention and response in the port of Hamburg. This presentation was followed by Professor Dr Marcus Oldenburg, who heads the 'Schiffahrtsmedizin'. He talked about their ongoing research on working environment and health and about their courses for persons in charge of medical care onboard. Later, we received a guided tour of the house.



The program also included a visit to 'Die Nautische Zentrale als Verkehrsleitzentrale für den Hamburger Hafen', the experience of witnessing the Cunard cruise ship "Queen Mary 2" being berthed, and a canal tour where we passed another of the world's largest cruise ships 'Aida'.



The trip ended at the 'Duckdalben International Seamen's Club' located in the industrial port, which provides a host of services to seafarers: free and fast internet, computers, prayer room, activity room, canteen, grocery store, bar and much more. The club hummed with activity, and, in particular, foreign seamen were strongly represented there.

All in all, it was an exciting and inspiring study trip, which opened up possibilities for new projects and new collaboration within the field of maritime medicine.

### Recently published scientific articles from CMSS (names of CMSS employees marked in bold)

- **Jepsen JR**, Røder O. Bilateralt hypotenarhammersyndrom. *Ugeskrift for læger* 2015;177(2A V02130122): 58-59
- **Herttua K**, Mäkelä P, Martikainen P. Educational inequalities in hospitalization attributable to alcohol: a population-based longitudinal study of changes during the period 2000-07. *Addiction* 2015;110(7): 1092-1100.
- **Andrioti D**, Kyprianou K, Charalambous G. How much do rheumatologists and orthopaedists doctor's

modalities impact the cost of arthritis in Cyprus? *B M C Musculoskeletal Disorders* 2015;16(1): 193

- Skitsou A, Anastasiou M, Charalambous G, **Andrioti D**. Job Satisfaction of Nurses in a Psychiatric Hospital, in Cyprus. *International Journal of Caring Sciences* 2015; 8(3): 683-697.
- Pischke CR, Helmer SM, McAlaney J, Bewick BM, Vriesacker B, Van Hal G, Mikolajczyk RT, Akvardar Y, Guillén-Grima F, Salonna F, Orosova O, **Dohrmann SB**, Dempsey RC, Zeeb H. Normative misperception of tobacco use among university students in seven European countries: Baseline findings of the 'Social Norms Intervention for the prevention of Polydrug useE' study. *Addictive Behaviors* 2015;51: 158-164
- **Zhao Z, Jepsen JR**, Chen Z, Wang H. Experiences of Fatigue at Sea—A Comparative Study in European and Chinese Shipping Industry. *Journal of Biosciences and Medicines* 2016,4: 65-68.
- **Jepsen JR**, Canals L, Ulven A, Lucas D. International Maritime Health Association (IMHA) - expanding participation, coverage, and service. *International Maritime Health*, 2016; 67(1): 51-53.
- **Herttua K**, Martikainen P, Batty GD, Kivimäki M. Poor Adherence to Statin and Antihypertensive Therapies as Risk Factors for Fatal Stroke. *Journal of the American College of Cardiology* 2016;67(13): 1507-15.
- Larsen Ingemann, A, Schmidt J, **Jepsen JR**. Practical occupational medicine in "practice". *International Journal of Community and Family Medicine* 2016;1(106): 1-5.
- **Jepsen JR**, Simonsen JA. Raynaud's phenomenon in a slap bass player : a case report. *Medical Problems of Performing Artists* 2016;31(1): 51-53.
- Westlund K, Attvall S, Nilsson R, **Jensen, OC**. Telemedical Maritime Assistance Service (TMAS) to Swedish merchant and passengers ships 1997-2012. *International Maritime Health* 2016;67(1): 24-30.
- **Zhao Z., Jepsen JR**, Tang, L. The reform of Chinese state-owned ship crewing agencies and implications for China's seafaring labour export. *Maritime Policy and Management* 2016: 1-11.  
Doi: <http://www.tandfonline.com/action/showCitFormats?doi=10.1080/03088839.2016.1169450>
- **Jepsen JR**. Work-related upper limb "overuse" syndromes: A review of historical descriptions and interpretations suggesting a psychogenic origin. *Edorium Journal of Occupational and Environmental Medicine* 2016;2: 19-25.
- **Jepsen, JR**. Work-related upper limb "overuse" syndromes: A review of historical descriptions and interpretations suggesting a somatic origin. *Edorium Journal of Occupational and Environmental Medicine* 2016;2: 8-18.

You can find more CMSS publications and bibliographic details by clicking [here](#).

CMSS wishes you all a nice summer