

Press release

Please fill in this form and return it to graduateschoolhealth@au.dk in Word format no later than three weeks prior to your defence.

Basic information

Name: Jakob Schöllhammer Knudsen

Email: jks@clin.au.dk Phone: 87167212

Department of: Clinical Medicine

Main supervisor: Reimar W. Thomsen, Consultant, Assoc. prof, MD, PhD

Title of dissertation: Type 2 diabetes in real-life: Population-based Danish studies of incidence, prognosis, and treatment effectiveness

Date for defence: may 27th at (time of day): 13.00 Place: Virtual Zoom meeting. Please email jks@clin.au.dk to receive an invitation with a Zoom link.

Press release (Danish)

Virkelighedens type 2 diabetes patienter: ændringer i forekomst, prognose og behandlingseffekt.

Type 2 diabetes (T2D) har i de seneste årtier set væsentlige ændringer i sygdommens klassifikation, diagnostiske kriterier og tærsklen for iværksættelse af anti-diabetisk behandling. Disse ændringer kan potentielt have påvirket både forekomst af diabetes, prognosen samt profilen på / karakteristika af den "typiske" diabetes patient som opstarter anti-diabetisk behandling. De overordnede formål med denne afhandling var: 1) undersøge udviklingen over tid i behandlingen af blodsukker og kolesterol i blodet hos patienter med T2D, samt at undersøge udviklingen i forekomst og prognose af T2D. 2) at undersøge forskellen mellem patienter i den kliniske hverdag og de patienter som deltog i de store lodtrækningsforsøg der dannede grundlag for godkendelse af nyere anti-diabetisk behandling. 3) at demonstrere og anvende en ny metode til at undersøge om denne forskel påvirker de konklusioner der kan overføres fra lodtrækningsforsøgenes patienter til patienter i den kliniske hverdag.

Ph.d.-afhandlingens fire studier er baseret på nationale befolkningsdækkende registre (1995-2018) med data over hospitalskontakter, indløste recepter, dødelighed og laboratorie-prøver. Forekomsten af diabetes har været stigende og dødeligheden faldende indtil 2011, hvorefter man indførte HbA1c som diagnostisk kriterium, og trends for forekomst og dødelighed vendte retning. Patienter fra den kliniske hverdag som kunne have deltaget i de kliniske lodtrækningsforsøg for liraglutid havde reduktioner af HbA1c i samme størrelsesorden som både de patienter som ikke kunne have deltaget, og som de patienter som deltog i lodtrækningsforsøgene.

Nyt ph.d.-projekt fra Aarhus Universitet, Health. Resultater præsenteres med baggrund i et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Jakob Schöllhammer Knudsen, der forsvare det d. 27/05-2020 kl. 13.00.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 27/05-2020 kl. 13.00. Grundet COVID-19 vil forsvaret blive gennemført som et web forsvar via Zoom. For at deltage i forsvaret skal du sende en mail til jks@clin.au.dk for at modtage en invitation med et link til Zoom. Titlen på projektet er "Type 2 diabetes in real-life: Population-based Danish studies of incidence, prognosis, and treatment effectiveness". Yderligere oplysninger: Ph.d.-studerende Jakob Schöllhammer Knudsen, e-mail: jks@clin.au.dk, tlf. +45 40 54 02 20.

Bedømmelsesudvalg:

Christina Catherine Dahm, MSc, Ph.d., lektor
Institut for folkesundhed,
Aarhus Universitet, Aarhus Danmark

Bjørn Olav Åsvold, MD, Ph.d., Professor
HUNT Research Center and the K.G. Jebsen Center for Genetic Epidemiology Department of Public Health and Nursing
Norwegian University of Science and Technology, Trondheim, Norge

Daniel Pilsgaard Henriksen, MD, Ph.d., lektor,
Afd. for Klinisk Biokemi og Farmakologi,
Syddansk Universitet, Odense, Danmark

Press release (English)

Type 2 diabetes in real-life: Population-based Danish studies of incidence, prognosis, and treatment effectiveness

Recent decades have seen significant changes in type 2 diabetes disease classification, diagnostic criteria, and the threshold for treatment initiation. These changes could potentially affect both basic diabetes epidemiology trends and the prognosis and profile of the typical type 2 diabetes patient initiating treatment. Furthermore, changes in profiles of the typical patients diagnosed with type 2 diabetes may affect the generalizability of key trials with regard to contemporary diabetes populations.

The overall aims of this dissertation were to 1) examine time trends in HbA1c and lipid management, incidence and prognosis in early T2D in Denmark and 2) examine how differences in patient characteristics between participants in key randomized controlled trials influence the generalizability of trial efficacy into treatment effectiveness among real-world users of newer glucose-lowering drugs. The project was carried out by Jakob Schöllhammer Knudsen, who is defending his dissertation on 27/05-2020. Type 2 diabetes incidence changed from increasing to declining, a change temporally coinciding with the 2012 introduction of HbA1c measurement as a diagnostic option. Trends for mortality following diagnosis were opposite: a decrease until 2011, followed by increasing mortality. Overall, trial in-eligible real-world patients initiating treatment with liraglutide experienced similar reductions in HbA1c compared to both real-world patients eligible for the trials and patients originally participating in the trials.

The defence is public and takes place on 27/05 at 13.00. Due to COVID-19, the defence will be held as a web defence via Zoom. Please e-mail jsk@clin.au.dk to receive an invitation with a Zoom link.

The title of the project is Type 2 diabetes in real-life: Population-based Danish studies of incidence, prognosis, and treatment effectiveness. For more information, please contact PhD student Jakob Schöllhammer Knudsen, email: jsk@clin.au.dk , Phone +45 40 54 02 20.

Assessment committee:

Christina Catherine Dahm, MSc, PhD, Associate Professor
Department of Public Health
Aarhus University, Aarhus Denmark

Bjørn Olav Åsvold, MD, PhD, Professor
HUNT Research Center and the K.G. Jebsen Center for Genetic Epidemiology
Department of Public Health and Nursing
Norwegian University of Science and Technology, Trondheim, Norway

Daniel Pilsgaard Henriksen, MD, PhD, Associate Professor,
Department of Public Health, Clinical Pharmacology and Pharmacy
The University of Southern Denmark, Odense, Denmark

Permission

By sending in this form:

- I hereby grant permission to publish the above Danish and English press releases.
- I confirm that I have been informed that any applicable inventions shall be treated confidentially and shall under no circumstances whatsoever be published, presented or mentioned prior to submission of a patent application, and that I have an obligation to inform my head of department and the university's Patents Committee if I believe I have made an invention in connection with my work. I also confirm that I am not aware that publication violates any other possible holders of a copyright.