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Photo courtesy of Prof. Henrik Støvring

Tema: NordicEpi 2024

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ORDFÖRANDEN HAR ORDET

Hej!

I handen håller du ett temanummer med bidrag från deltagare som representerade svenska lärosäten på den senaste nordiska konferensen om epidemiologi och registerbaserad hälsoforskning, NordicEpi. Den ägde rum i Köpenhamn i juni.

Stort tack till er alla som har delat med er av det ni bidrog med på konferensen Det visar en stor bredd i olika epidemiologiska inriktningar och också vilken bredd det verkar vara den på internationella rekryteringen till svenska lärosäten.

Det avslutande bidraget är en intressant reflektion från en nybliven doktorand efter att ha lyssnat på Kenneth Rotmans föreläsning kring de fundamentala grunderna i epidemiologin.

NordicEpi arrangeras vartannat år och detta var den 11:e i ordningen. Nästa gång står Norge på tur som önskar välkommen till Tromsö, världens nordligaste universitetsstad.

I denna utgåva av Svepet for vi också lära känna de två nya ledamöterna i SVEP:s styrelse, Lisa Berg och Anders Forss. Vi är mycket glada över att ha er med i styrelsen!

Hälsningar Elisabeth

Elisabeth Strandhagen,
Ordförande i SVEP

TEMANUMMER: NordicEpi 2024

The theme of this issue of Svepet is NordicEpi 2024. In June, the Danish Epidemiological Society and the University of Copenhagen hosted the 11th Nordic Conference of Epidemiology and Register-Based Health Research (NordicEpi). NordicEpi 2024 provided an stimulating combination of pre-conference workshops, keynote seminars, parallel oral presentation sessions and symposia, which covered topics including complexity epidemiology, life course epidemiology, causal inference in social epidemiology, target trials, and measuring the burden of disease. In combination the scientific presentations, there were plenty of social activities and opportunities for networking, meeting collaborators and establishing new academic partnerships. Copenhagen provided an exciting backdrop to one of the highlights of my academic year. The authors of this edition of Svepet share with you a glimpse of the work they presented at NordicEpi. I am sure this will inspire you to mark your diaries for next NordicEpi conference in Tromsø, Norway, in 2026.

/Hannah Brooke

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INNEHÅLL

Environmental exposure assessment: estimating historical PFAS exposures in Ronneby, Sweden using biobanked dried blood spots

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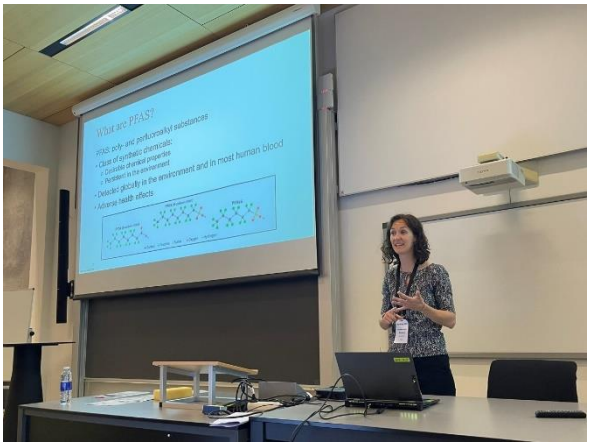
Annelise Blomberg, a Marie Curie Postdoctoral Fellow in the Division of Occupational and Environmental Medicine at Lund University, presented her work on PFAS exposure.

I collaborated with an excellent group of researchers to organize a symposium on Environmental Epidemiology for NordicEpi 2024. The symposium focused on environmental exposure assessment and its implications for epidemiological studies. Dr. Kirstine Wodschow and Dr. Youn-Hee Lim presented their research on the health effects of noise and air pollution using different measurements of exposure (distance to road vs. modeled air pollution and noise exposures). Dr. Amalie Timmerman demonstrated how estimating PFAS exposure using serum and proxy measurements address different sources of bias, and Dr. Esben Budtz-Jørgensen led an engaging discussion on the effects of exposure misclassification on estimated safety limits for PFAS and other chemicals. As part of this symposium, I also presented preliminary results from our ongoing study of historical PFAS exposures in Ronneby, Sweden.



Dr. Blomberg introducing her research at NordicEpi

In 2013, it was discovered that a subset of the population in Ronneby, Sweden was exposed to high levels of perfluorinated compounds (PFAS) from drinking water that had been provided by the local Brantafors waterworks and was contaminated by fire-fighting foam (AFFF) from a nearby military airport. However, the start and time-course of exposure in the population is not known. Accurate historical exposure estimates are necessary for epidemiological studies of PFAS-associated effects in highly-exposed communities, as exposure misclassification can reduce power and potentially bias associations. Therefore, we initiated a study where we measured PFAS in biobanked dried blood spots from 288 infants born between 1985-2013 using liquid chromatography-tandem mass spectrometry. Brantafors subjects (N = 246) were infants whose mothers lived at a Ronneby address that received water from the Brantafors waterworks, while non-Brantafors subjects (N = 42) were infants whose mothers lived in the same county (Blekinge) but never lived in Ronneby. We compared PFAS concentrations between the two exposure groups using Welch's t-tests for unequal variance, and investigated trends in PFAS concentration over time using generalized additive models of PFAS concentrations with a non-linear term for year of birth.

The mean PFAS concentration was significantly higher in Brantafors subjects born in 1985 (N = 10) compared to non-Brantafors subjects born 1985-1989 (N = 19) for all PFAS. PFAS concentrations in Brantafors subjects increased from 1985, with most PFAS reaching an expected maximum in 2007. These results suggest that population-wide exposure in Ronneby to AFFF-

associated PFAS via the drinking water was already present in 1985 and increased over the subsequent 30 years, and demonstrate how DBS can be used for historical exposure assessment.

My first NordicEpi conference was a great experience, especially as an international researcher who recently moved to Sweden. There was so much to learn from the other participants, both through the formal presentations and through informal conversations. At the conference's welcome reception in beautiful Copenhagen City Hall, we were encouraged to take this opportunity to not just learn about epidemiology, but also invest in our connections and friendships with one another. Almost every time I sat next to a stranger and introduced myself (… so American, I know) I had something interesting to learn or a connection in common. I'm looking forward to seeing everyone again in Tromsø in 2026!

Enjoying Copenhagen City Hall's famous pancakes

In memoriam of HPV18: High risk HPV types approaching extinction in vaccinated birth cohorts

Penelope Gray, Miriam Elfström, Joakim Dillner, Karolinska Institutet, Center for Cervical Cancer Elimination
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Penelope Gray won first prize in the poster presentation competition at NordicEpi for her work showing that human papillomavirus (HPV) 18 is disappearing among the birth cohorts who received school-based HPV vaccination in Sweden

Foreword: I had the privilege to share the findings of our registry-based study (summarized below) which I have conducted with my colleagues at the Karolinska Institutet's Center for Cervical Cancer Elimination this Spring at the NordicEpi 2024 in Copenhagen. I thoroughly enjoyed the conference and the range of studies presented. It was a fantastic chance to meet other researchers working with Nordic registries and to learn the latest in the field of epidemiology coming from the Nordic countries.

Infection with human papillomavirus (HPV) is a necessary cause of cervical cancer and associated with several other anogenital and oropharyngeal cancers. Since 2007 there have been prophylactic HPV vaccines licensed for use with high efficacy in preventing HPV16 and 18 infections (the two HPV types responsible for approximately 70% of all cervical cancers in the pre-vaccine world), thus cervical cancer is now a preventable cancer. As such, in 2018 the Director general of the World Health Organization called for the elimination of cervical cancer as a public health problem, defined as an incidence of under 4 cases per 100,000 women, to be achieved by the year 2030. In Sweden HPV vaccination commenced already in 2007 but was unorganized and had low and inequitable coverage. In 2012, organized school-based HPV vaccination was implemented with a

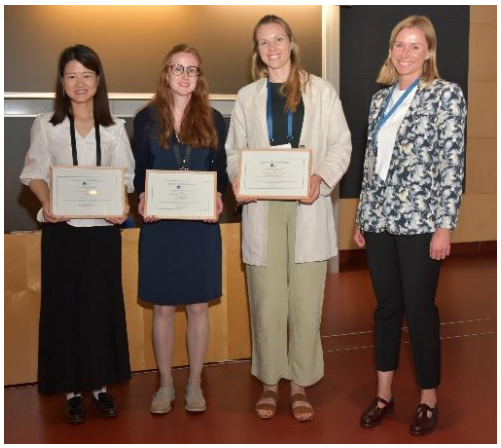
catch-up program for girls aged up to 18 years old, resulting in high and equal coverage. The first birth cohorts who received school-based HPV vaccination have now entered the cervical screening program (which in Sweden is a primary HPV-based program). We have monitored the HPV vaccination coverage and the HPV prevalence over time in the screening program using the Swedish National vaccination register and the Swedish-National Cervical Screening registry (NKCx).

The HPV vaccination coverage (among women having received at least 1 dose of any HPV vaccine) was calculated by birth cohort and calendar year using data from the Swedish vaccination register. The prevalence of HPV16 and 18 was calculated by birth cohort and calendar year from 2014 until the end of 2023 using data from the NKCx and the HPV international reference laboratory. We estimated the odds ratio of HPV positivity by birth cohort relative to the unvaccinated 1984 born using a binomial age period cohort model fitted with natural splines.

The HPV vaccination coverage (Figure) consistently increased with each consecutive birth cohort vaccinated over time, with the vaccination coverage among women eligible for the catch-up vaccination ranging from 55-63%, and the coverage among women eligible for the school-based program from 82-92%. The prevalence of both HPV16 and 18 showed the characteristics age-prevalence trend previously reported in earlier studies from 2014 until 2019, with the prevalence being highest among the youngest birth cohorts (Figure).

However, from 2020 onwards the HPV16 and 18 prevalence began to decline among the youngest birth cohort. Among the 2000-born the HPV16 and 18 prevalence was 0.54% and 0.09% (corresponding to 19 and 3 cases out of 3511 women respectively).

In conclusion, HPV 18 is disappearing among the birth cohorts who received school-based HPV vaccination in Sweden, whilst HPV16 is now rare. These findings are in line with mathematical modelling predictions that high HPV vaccination coverage may result in HPV elimination.



Penelope Gray (second left) won the poster presentation competition at NordicEpi, pictured alongside Danni Chen (left, 3rd Prize), Sofia Hammarstrand (second right, 2nd Prize), and Stine Schramm (Conference Chair). Photo courtesy of Prof. Henrik Støvring.

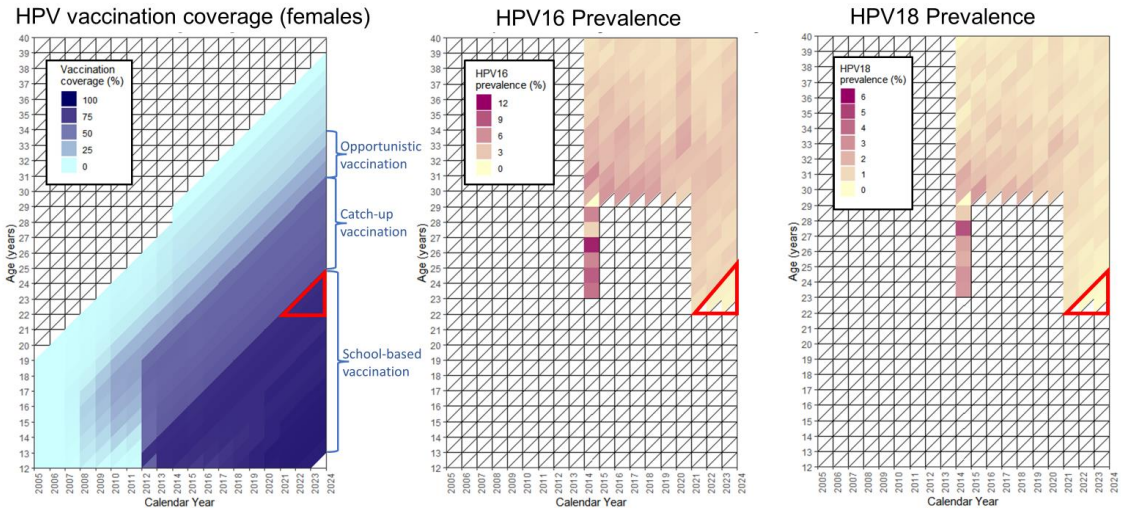


Figure: *Lexis diagrams of i) the HPV vaccination coverage among women residing in Sweden over time by birth cohort and calendar year, ii) the HPV16 and iii) HPV18 prevalence among women attending primary HPV cervical screening in the Stockholm region over time by birth cohort.*

Statistical methods development in population-based survival analysis – a symposium at NordicEpi

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Caroline Dietrich and Therese Andersson from Karolinska Institutet attended NordicEpi and organised a symposium on statistical methods development in population-based survival analysis

NordicEpi is a meeting organised bi-annually within the Nordic countries, aimed at bringing together researchers working with our unique Nordic registers. For me, the NordicEpi is also where I had my first oral presentation back in 2011, in Reykjavik, so lots of fond memories attending this year's meeting in Copenhagen!

Now it was time to do something different than submitting a research study and (hopefully) present. The conference offered the possibility to submit symposium proposals, so I teamed up with Dr Therese Andersson (Karolinska Institutet) to plan a session on Statistical methods development in population-based survival analysis. We aimed for a wide range of sub-specialties within this research field, and balanced country and gender (including ourselves) distributions. The invited speakers and their respective topics where:

- Mark Rutherford (Leicester University, England): Exploring the impact of socioeconomic differences in stage-specific cancer patient survival in England.
- Tor Åge Myklebust (Norwegian Cancer Register, Norway): Reference adjusted survival measures. An alternative to net survival.
- Elisavet Syriopoulou (Karolinska Institutet, Sweden): Disentangling health disparities using an extension of mediation analysis to the relative survival framework.
- Joshua Entrop (Karolinska Institutet, Sweden): Parametric estimation of the mean number of events in the presence of competing risks.
- Rasmus Rask Kragh (Aalborg University, Denmark): Machine learning-based survival prediction models for progression free and overall survival in advanced-stage Hodgkin lymphoma.

All presentations where great and inspiring, and I got lots of new research ideas from the good discussions. For those interested in some more details, I recommend reading about the projects presented by Elisavet and Joshua in this issue of SVEPet.

For the NordicEpi as a whole, I especially enjoyed the plenary session presentation by professor Naja Hulvej Rod (University of Copenhagen) on "Complex Systems Methods in Epidemiology and Public Health". It covered several practical issues that I recognise myself from working in Nordic collaborations, but also gave insights into Naja's research on sleep, health inequalities, and early life adversities. This was also a nice conference from a networking perspective, with several familiar faces and a well organised welcome reception.

Finally, my experience of planning and organising this symposium was overall very positive! We were lucky to have all our speakers accept our invitation to come, which made it an easy task. But mostly, it was exciting to get the opportunity to design the "perfect session" that I myself would attend at a conference.

Caroline Dietrich and Therese Andersson from Karolinska Institutet organised a symposium

Improving Our Understanding of Cancer Disparities in Survival: A Causal Mediation Analysis Approach

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Elisavet Syriopoulou presented her work adapting mediation analysis methods into a relative survival framework

I recently attended the NordicEpi conference in Copenhagen as a first-time participant and I was impressed by the diverse line-up of speakers and the engaging discussions. What excited me the most was the strong interest in statistical methods for epidemiological studies. During the conference, I had the opportunity to present part of my research in the symposium titled "Statistical Methods Development in Population-Based Survival Analysis", which aimed to showcase recent statistical developments within the field of survival analysis, and to illustrate their usefulness in the Nordic settings.

My presentation focused on survival differences between subgroups of cancer patients, e.g., by socioeconomic position, and on how to identify their underlying determinants. Such differences have been reported by several studies, but their drivers are still not well-understood. Mediation analysis can be applied in such settings as it allows exploring, in a systematic way, the role of a third variable (a so-called mediator) that may be on the pathway between an exposure and the outcome. For example, mediation analysis allows exploring if some of the variation between socioeconomic groups can be explained by differences in stage at diagnosis or treatment (see Figure 1, setting A).

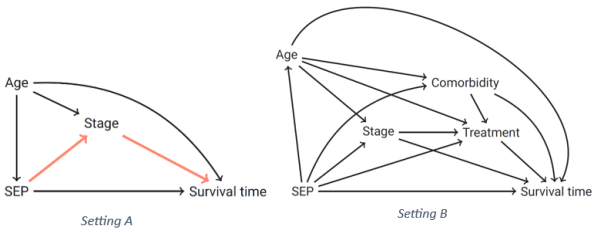

Figure 1. Setting A: Directed acyclic graph (DAG) for the relationship of the exposure socioeconomic position (SEP) and survival at a particular time where stage at diagnosis acts as a mediator. Age is assumed to act as a confounder in this simplified DAG. Setting B: DAG with multiple mediators (stage, treatment, comorbidity) for the relationship between SEP and survival at a particular time. Confounders have been dropped for simplicity.

However, the survival differences among cancer patients are the result of complex mechanisms that involve differences in both cancer-related and other-cause mortality. Identifying their causing factors can, thus, be a challenging task. To address this complexity, we have adapted mediation analysis methods into a relative survival framework. Relative survival is a commonly used measure in cancer epidemiology that estimates cancer-specific survival without requiring information on the cause of death. This is done by comparing individuals with cancer to similar individuals in the general population to quantify the excess mortality due to cancer. Using the relative survival framework, the all-cause survival can be written as the product of relative survival (in the cancer cohort) and expected survival (in the general population). The main idea for incorporating relative survival into mediation analysis methods is that it enables us to consider interventions that only affect the relative survival component of all-cause survival while keeping expected survival constant. This allows to isolate cancer-related factors alone, which may be easier to identify. Under certain assumptions that are described in detail in the published article1 and by using a regression standardisation approach the direct and indirect effects (i.e., through the mediator) can be estimated. In the example that is available in the same article, we looked at survival differences between socioeconomic groups of colon cancer patients diagnosed in England between 2011-2013. By applying mediation analysis using the relative survival framework, we

explored the impact of hypothetical interventions that aim to shift the stage at diagnosis distribution as well as the relative survival of the most deprived group to that of the least deprived group, while keeping their background mortality constant. Three years after diagnosis a total difference of 3.01 (95% CI: [0.77, 5.26]) percentage points was observed in standardised probabilities of death and 1.14 (95% CI: [0.24, 2.04] percentage points of the difference was attributed to differences in stage at diagnosis (Figure 2). As a result, 38% of the survival difference between deprivation groups was mediated through stage.

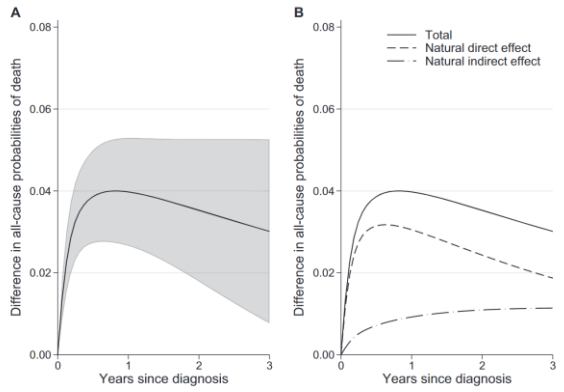

Figure 2. (A) Total causal effect, defined as the difference in standardised all-cause probabilities of death between the least and most deprived patients, with 95% confidence intervals and (B) partitioning of the total causal effect to the natural direct effect of socioeconomic position and indirect effect due to stage at diagnosis.

An example of Stata code for performing the analysis is available on GitHub: https://github.com/syriop-elisa/mediation-example-stpm3. Even though this example focuses on cancer data, the method can in principle be applied to study other diseases as well. As of writing only a single mediator can be studied at a time, but we are working to extend it to more complex settings with multiple mediators (Figure 1, Setting B).

Identifying the factors that are responsible for the survival differences between subgroups is of high importance and can inform health policies. For instance, if stage at diagnosis is partly responsible for the disparities, it is essential to implement awareness campaigns among groups with worse outcomes in order to encourage earlier diagnosis and to increase screening attendance. Similarly, if disparities are driven by differential treatment allocation by SEP, ensuring equal care and treatment for everyone becomes paramount. Mediation analysis using the relative survival framework can be a valuable tool for addressing such questions and has the advantage of allowing us to consider interventions aimed at cancer-related mortality differences.

1. Syriopoulou E, Rutherford MJ, Lambert PC. Understanding disparities in cancer prognosis: An extension of mediation analysis to the relative survival framework. Biometrical Journal. 2021; 63: 341–353.

Elisavet Syriopoulou

Kan en mans viktkurva påverka prostatacancerincidens, -aggressivitet eller -mortalitet?

Marisa da Silva, Enheten för registerbaserad epidemiologi, Institutionen för translationell medicin, Lunds universitet
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Efter att ha spenderat lång tid med att harmonisera data från 17 olika nationella forskningskohorter och populationsregister har vi inom forskargruppen Registerbaserad epidemiologi också spenderat lång tid med att utveckla metodologin för att kombinera longitudinella data med överlevnadsanalys. Vi har tidigare presenterat preliminära resultat från studien om viktkurvor och prostatacancer på obesitaskonferenser och har därefter utvecklat metodologin ytterligare tillsammans med Dr. Ahmed Elhakeem och Prof. Kate Tilling från Bristol University för att nu presentera våra resultat med fokus på metodologi på NordicEpi i Köpenhamn.

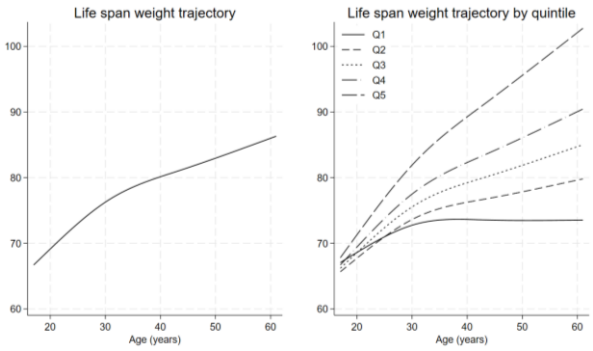
Jag kom till konferensens andra dag för att muntligen presentera studien ”Weight trajectories through adulthood and prostate cancer incidence, aggressiveness, and death in 250 000 men of the Obesity and Disease Development Sweden (ODDS) study” under parallell sessionen “Life course epidemiology”. Det första som slog mig var hur mycket folk som vardera parallell session drog och för första gången i mitt liv behövde jag bära mikrofon för en presentation. Efter en relativt lång resa och väntan fick jag chans att kortfattat presentera studiens resultat och metodologi under 10 minuter och tack vare publikens frågor blev det klart för mig vad som skulle kunna tydliggöras i tolkningen av våra resultat nu när sista detaljerna i skrivandet ska på plats. Förutom att på konferenser lyssna på och prata med eminenta forskare passar jag alltid på att testa lokala ompratade matställen som fotot avslöjar.

Det råder delade meningar i den vetenskapliga litteraturen om obesitas är associerat med prostatacancer. I observationsstudier mäts ofta BMI vid ett tillfälle som estimat för obesitas och utan att urskilja prostatacanceraggressivitet. I vår studie har vi insamlade uppgifter om kroppsvikt från upprepade tillfällen i vuxen ålder för att uppskatta individuella viktkurvor och urskilja olika åldersspann och undersöka deras relation till prostatacancerincidens, -aggressivitet och -mortalitet.

Inom projektet ”the Obesity and Disease Development Sweden (ODDS) study” har vi poolat och harmoniserat data från 17 forskningskohorter och två nationella populationsregister för att forma vår studiepopulation på 4.3 miljoner individer och länkat individdata till ett flertal nationella register, bland annat Cancerregistret och Registret över totalbefolkningen. Mer information går att läsa i vår nyligen publicerade kohortprofil1. Urvalet för denna prostatacancerstudie inkluderade 258 494 män med minst tre viktmätningar mellan 17–60 års ålder med första mättillfället mellan år 1963–2014 och uppföljning till år 2019.

Vi använde linjär flernivåregressionsanalys med naturliga kubiska och linjära splines som fasta effekter och varierande intercept och lutning för att estimera mäns individuella viktkurvor i ett totalt vuxet åldersspann och 15-årsåldersspann2 som vi sedan inkluderade (intercept och lutning) i en multivariabel Cox regression.

Under uppföljningstiden (median 25 år) diagnosticerades 8.5% män med prostatacancer vid i genomsnitt 70 årsålder och 1.8% män dog av prostatacancer. Den uppskattade genomsnittliga viktuppgången mellan 17–60 år var 19.6 kg. I åldersspannet 17–30 var viktuppgången per år 0.73 kg, i åldersspannet 30–45 var viktuppgången 0.34 kg per år och i åldersspannet 45–60 var viktuppgången 0.22 kg per år. Figur 1 presenterar uppskattade viktkurvor i vuxen ålder för



Figur 1. Viktkurvor för populationen totalt och uppdelat i kvintiler. Kurvorna är baserade på uppskattade värden från linjära flernivåregressionsmodeller med naturliga kubiska splines.

populationen totalt och i kvintiler. En brant viktkurva var associerat med prostatacancer-incidens i olika riktningar beroende på aggressivitet - negativt moderat associerat med icke-aggressive prostatacancer och positivt moderat associerat med aggressiv prostatacancer samt starkt associerat med prostatacancer död. Associationen (negativ som positiv) per 1 kg/år och prostatacancer var som starkast i åldersspannet 17–30 år vilket också var perioden som män hade den brantaste viktuppgången. Eftersom det finns en tydlig screening- och detektionsbias i observationsstudier för prostata-cancer gjorde vi post hoc analyser i pre PSA era (före 1997) och PSA era (efter 1997) och uppdelat på typ av detektion (asymtomatisk vs. nedre urinvägssymptom eller andra symptom) i PSA eran (information om detektion är tillgänglig från år 2000). Post hoc analysernas resultat pekade på att associationerna mellan viktkurvor och prostatacancerincidens troligtvis är starkt påverkade av screening- och detektionsbias då estimaten återspeglades i resultaten för asymtomatisk detekterad prostatacancer men med nollassociationer för detektion via LUTS och ingen tydlig trend i pre PSA eran. Vi analyserad även viktuppgång och prostatacancer död hos män som diagnosticerats med prostatacancer med uppföljningstid från diagnos. Resultaten visade att en brant viktuppgång var starkt associerat med prostatacancer död oavsett prostatacanceraggres-sivitet men att association var som starkast för viktuppgång i åldersspannet 45–60.

Våra studieresultat visar att det finns associationer mellan viktuppgång och prostatacancerincidens men att resultaten troligtvis är starkt påverkade av screening- och detektionsbias men att det är svårt att säga till vilken grad, däremot tyder våra resultat på att viktuppgång och prognos för prostatacanceröverlevnad är starkt associerat med viktuppgång i sena medelårsåldern.

1. da Silva M, Fritz J, Mboya IB, et al. Cohort profile: The Obesity and Disease Development Swede n (ODDS) study, a pooled cohort. BMJ Open 2024;14:e084836. https://doi.org/10.1136/bmjopen-2024-084836

2. Elhakeem A, Hughes RA, Tilling K, et al. Using linear and natural cubic splines, SITAR, and latent trajectory models to characterise nonlinear longitudinal growth trajectories in cohort studies. BMC Med Res Methodol 22, 68 (2022). https://doi.org/10.1186/s12874-022-01542-8

Marisa da Silva, lycklig efter att ha köat 45 min för en utsökt skål Ramen i Köpenhamn

Utilization of Healthcare in Children Born to Lymphoma Survivors

Joshua Entrop, Clinical Cancer Epidemiology, Division of Clinical Epidemiology, Department of Medicine, Solna, Karolinska Institutet
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NordicEpi was Joshua Entrop's first epidemiology conference. He presented work showing that children born to lymphoma survivors have an overall increased healthcare utilization up to age five, which was distributed across a broad range of diseases.

This year, Caroline Dietrich and I from the clinical cancer epidemiology group at the division for clinical epidemiology at Karolinska Institutet travelled to the NordiEpi conference in Copenhagen. After being to various clinical conferences and some statistical conferences, this has been my first participation in an epi conference and I really enjoyed it. The conference offered a lot of interesting seminars and symposia focusing on methodological challenges and developments in epidemiological research, which I appreciated.

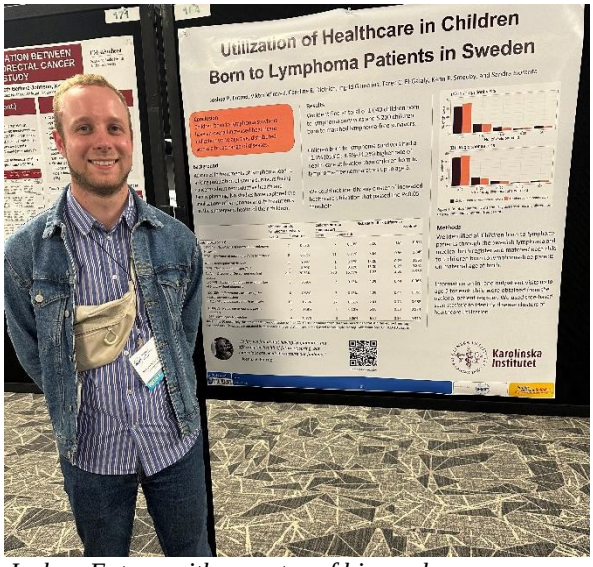
The work, that I presented at this year's NordicEpi conference also had a more methodological tweak to it as we used a method usually used in pharmacovigilance and applied it to analyze healthcare utilization in children born to lymphoma survivors. Recent advances in lymphoma treatment lead to a rising population of young lymphoma survivors in childbearing ages. Young adult cancer survivors are often concerned about the impact of their disease and treatments on their future fertility and the health of their future children. In the study that I presented at the NordicEpi conference, we aimed to investigate the impact of lymphoma and its treatments on birth outcomes and health of children born to lymphoma survivors.

Our analysis was based on data from the LymphomaBaSe linkage. Through the linkage we identified children born to lymphoma survivors, which we subsequently matched on children born to lymphoma-free parents on maternal age. Information on their in- and outpatient visits up to age five was obtained from the Swedish national patient register. We used tree-based scan statistics to identify disease clusters of increased healthcare utilization among children born to lymphoma survivors.

In total, we identified 1 040 children born to lymphoma survivors and 5 200 children born to matched comparators, of whom 792 and 3 834 had at least one in- or outpatient diagnosis before age five, respectively. Children born to lymphoma survivors had a 13% higher rate of healthcare utilization (Rate Ratio: 1.13, 95% CI: 1.05-1.22) than children born to lymphoma-free parents. However, the panorama of diseases requiring healthcare utilization was broad and we could not identify any specific disease cluster with significantly elevated risk ($P<0.05$) using tree-based scan statistics.

In summary, we found children born to lymphoma survivors have an overall increased healthcare utilization up to age five, which was distributed across a broad range of diseases.

If you want to learn more about our project, you can find my presentation from the NordicEpi meeting on the following website: https://www.joshua-entrop.com/talks.html.



Joshua Entrop with a poster of his work

Reflections from a PhD student at NordicEpi 2024

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Genevieve Allen, a first year PhD student at Uppsala University, reflects on the final plenary session of NordicEpi 2024

The final session at NordicEpi, featuring the highly anticipated talk by the esteemed Dr. Kenneth Rothman, diverged from the prior plenary themes that highlighted methodological developments in epidemiology such as target trials, complex systems, and machine learning. Instead, Rothman focused on a fundamental that was less technical than the other themes but is more ubiquitous – the mistakes we make in study design and statistical analysis that can impact our research and conclusions. This topic resonated with me in particular because, as a practicing physician and, now, as an early PhD student, mistakes I made or narrowly missed making as well as mistakes yet to be made have given me innumerable sleepless nights.

Rothman presented numerous examples of published epidemiologic studies that were later found to have serious methodological flaws. These flaws escaped notice during personal, peer, and editorial reviews. Rothman's examples served as a reminder of how solid data can, nonetheless, result in mistaken results when coupled with improper study design or analysis. In particular, Rothman's discussion noted that counterintuitive results merit close review for possible errors.

Another fundamental concept explored by Rothman in his talk was the value of constructive criticism. Dr. Rothman noted that instead of avoiding criticism, he actively sought critical reviews by sending papers to his critics. Dr Rothman explained that rather than trying to cover-up potential weaknesses, his willingness to seek critical comments brought those weaknesses to light and helped him strengthen the science. This was an insightful reminder that while it is sometimes easier and less stressful to surround oneself with supporters, it is constructive criticism that often provides the most valuable learning opportunities and strengthens research quality.

It seemed particularly fitting that a conference filled with innovation and inspiring ideas, ended with a talk on core fundamentals. As an early PhD student in epidemiology, Dr. Rothman's talk was a timely reminder of these fundamentals. It helped reinforce that if a result seems suspicious or counterintuitive, then it is necessary to check and double check those results. In addition, Dr. Rothman helped reframe my mindset from fearing the difficult questions during an oral presentation to welcoming them as a way to strengthen the science and to learn. While I am excited to incorporate new epidemiologic methods discussed at the conference, such as causal discovery via a new R package into my next directed acyclic graph and identify potential opportunities to integrate complex system ideas into my PhD project, I am more acutely aware of vigilantly checking for the possibility of human error and logical fallacies.

Genevieve Allen (left) and her colleagues, Elena Extrand, Olga Titova and Emerald Heiland, at the NordicEpi Welcome Reception at Copenhagen City Hall

Lisa Berg är ny i SVEP:s styrelse

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Lisa Berg är ny ledamot i SVEP:s styrelse. Hon är docent i folkhälsovetenskap. Här presenterar Lisa sig själv:

Jag heter Lisa Berg och är ny i SVEP:s styrelse. Jag arbetar vid Stockholms universitet sedan drygt 10 år tillbaka och är numera docent i folkhälsovetenskap. Men för att backa bandet lite – innan jag flyttade till Stockholm bodde jag under flera år i Göteborg där jag studerade sociologi vid Göteborgs universitet. Jag har alltid haft ett starkt intresse för frågor som rör ojämlikhet och hur hälsan påverkas av människors olika förutsättningar, livsvillkor och levnadsvanor. Efter min mastersexamen i sociologi gick flyttlasset upp till Stockholm och jag började arbeta som forskningsassistent på Institutet för Miljömedicin vid Karolinska institutet. Det var under den tiden som jag introducerades för epidemiologi och jag insåg hur roligt det är att arbeta med stora datamaterial och epidemiologisk metod! Efter ett år som forskningsassistent började jag sedan som doktorand i ett diabetesprojekt och Anders Ahlbom, som var med och startade Svensk epidemiologisk förening, var en av mina handledare.

Jag disputerade vid KI 2012 och året därefter började jag arbeta vid Stockholms universitet. Först arbetade jag som forskare vid CHESS, ett tvärvetenskapligt forskningscentrum för forskning om ojämlikhet i hälsa. Detta passade min bakgrund som hand i handske och jag kunde kombinera min utbildning i medicinsk vetenskap och epidemiologi från KI med min bakgrund inom sociologi och fokusera på mitt grundintresse för frågor om ojämlikhet i hälsa. Jag har sedan dess arbetat med ett flertal spännande projekt, bland annat med fokus på barn och ungas livsvillkor och hälsa över livsloppet samt migration och hälsa. Min forskning utgår framför allt från register- och enkätdata, ofta utifrån ett livsloppsperspektiv kombinerat med ett särskilt intresse för inter- och multigenerationella effekter.

Institutionen för folkhälsovetenskap vid Stockholms universitet, där jag numera arbetar, bildades 2018 genom en sammanslagning mellan CHESS och ett annat forskningscentrum (Sorad - Centrum för socialvetenskaplig alkohol- och drogforskning). Sedan bildandet av den nya institutionen har vi arbetat med att expanderade vår utbildningsverksamhet och jag har vid sidan av forskningen under flera år arbetat med kursutveckling, undervisning och handledning. Jag är numera anställd som universitetslektor och i flera av mina kurser är epidemiologisk metod och analys högst relevant!

Det var verkligen roligt att få den här förfrågan om att vara styrelseledamot i SVEP och jag ser fram emot att genom det här uppdraget delta i intressanta diskussioner och bidra till SVEP:s fortsatta arbete!

Lisa Berg är ny ledamot i SVEP:s styrelse (foto Axel Berg)

SVEP:

Anders Forss är ny i SVEP:s styrelse

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Anders Forss är ny ledamot i SVEP:s styrelse. Han är ST-läkare i medicinsk gastroenterologi och hepatologi vid Karolinska universitetssjukhuset. Här presenterar Anders sig själv:

Till att börja med vill jag tacka för möjligheten att få vara med och bidra till SVEP:s verksamhet. Forskning i allmänhet, och epidemiologi i synnerhet, är ju så spännande! Jag heter Anders Forss och är ST-läkare i medicinsk gastroenterologi och hepatologi vid Karolinska universitetssjukhuset. Jag bestämde mig tidigt för att forska och började doktorera samtidigt med läkarstudierna. Jag disputerade med en avhandling om medicinsk och kirurgisk behandling av inflammatorisk tarmsjukdom under handledning av professor Jonas Ludvigsson. Jag har fortsatt att forska parallellt med det kliniska arbetet och även varit studierektor för Karolinska institutets/Region Stockholms tvååriga forskarskola i epidemiologi för kliniskt verksamma doktorander. Det var en givande tid där mina epidemiologiska kunskaper sattes på prov. Att undervisa är ett fantastiskt sätt att fördjupa och befästa sin egen kunskap!

Min forskning omfattar både kliniska och epidemiologiska studier. Jag har bl.a. studerat risken för kardiovaskulär sjukdom i olika gastrointestinala sjukdomar. I min epidemiologiska forskning vill jag att patientnyttan är vägledande så långt det går. I skrivande stund ägnas forskningstiden åt projekt om risken för infektioner hos patienter med inflammatorisk tarmsjukdom tillsammans med docent Ola Oléns forskargrupp på avdelningen för klinisk epidemiologi vid Karolinska institutet.

Jag tror att många av oss som ägnar oss åt epidemiologi har något speciellt område eller metod inom epidemiologin som vi brinner extra för. I mitt fall är det incidens-, prevalens- och valideringsstudier. ”Vi borde validera mera!”, som jag brukar säga. Ibland undrar jag vad all den tid jag lägger på epidemiologisk forskning verkligen leder till? Det blir sällan stora genombrott eller kioskvältar-resultat, men genererar däremot ofta mindre pusselbitar att lägga till en större helhet. Epidemiologisk medicinsk forskning är litet av grundforskning, fast från andra hållet brukar jag tänka. I laboratoriet kan man finna ut saker som löser olika sjukdomars mysterier, men i epidemiologiska studier – med hjälp av våra underbara svenska register och den kunskap om epidemiologiska metoder som finns samlad i Sverige (och såklart också i världen i övrigt) – kan hitta pusselbitar som kanske är litet skrovliga i kanterna, men som får finslipas i andra studier eller kanske till och med i laboratoriet. Det blev många ord om forskning, vilket såklart är viktigt, men livet består även av andra viktiga saker! För mig inkluderar dessa att snickra på sommarstugan, ta löpturer i skog och mark, titta på konst och upptäcka nya platser i världen.

Jag ser fram emot att få ta del av SVEP:s samlade kompetens och bidra själv på ett hörn till verksamheten!

Anders Forss är ny ledamot i SVEP:s styrelse

SVEPET-redaktionen

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B | Porto betalt Sverige

Kurser och konferenser

Namn	**Datum**	**Plats**	**Hemsida**
EUPHA public health conference	12-15 november	Lissabon, Portugal	https://ephconference.eu/
Svenska mötet för kohortstudier	14 november	Lund	https://www.epihealth.lu.se/en/calendar/7th-swedish-meeting-cohort-studies-lund-2024
NorPEN årligt möte	18-20 november	Köpenhamn, Danmark	http://www.norpen.org/
Swedish Register-Based Research Summit	2 december	Stockholm	Save the date! Swedish Register-Based Research Summit 2 Dec 2024 – Registerforskning.se
2025			
Vinterskola i epidemiologi	20-25 januari	Wengen, Schweiz	www.epi-winterschool.org
Vinterskola i epidemiologi (UMC & EpidM)	Jan - april 2024	Amsterdam, Nederländerna	https://www.epidm.nl/en
Kvalitetsregister för forskning	25 april	Stockholm	https://www.registerforskning.se/sv/save-the-date-kvalitetsregister-for-forskning-2024/
Summer courses in epidemiology	16 juni - 4 juli	Florence, Italien	https://www.eepe.org/
ISPE annual meeting	22-26 augusti	Washington DC, USA	https://www.pharmacoepi.org/meetings/annual-conference/
Nordic public health conference	11-14 november	Helsinki, Finland	https://ephconference.eu/helsinki-2024-493