



Abstracts

Forskningsseminar 2026

I forbindelse med årets Forskningsseminar har Forskningsavdelingen oppfordret alle stipendiater og forskere til å sende inn et abstrakt for økt synliggjøring av forskningen som foregår ved Sykehuset Østfold. Her får dere presentert alle innkomne bidrag og vi ber om at innholdet ikke deles/publiseres videre.

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Syndesmotic Screw Fixation versus Deltoid Ligament Repair: Multiplanar Stability in a Cadaveric Weber B/SER4b Ankle Fracture Model with Fibular Plate Fixation

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Background

Weber B/ Lauge Hansen Supination-External Rotation 4b (SER4b) ankle fractures are unstable due to syndesmotic and complete deltoid ligament ruptures.

Biomechanical studies suggest that fibular plate fixation (PF) alone is insufficient for SER4b fractures. Concurrent deltoid ligament repair (DLR) seems necessary. This study explores how syndesmotic fixation, which is a simpler surgical approach, restores stability compared to DLR.

Methods

Eight fresh-frozen human cadaveric ankle specimens were tested sequentially by a robot in five states: Native, SER4b injury model with anatomic PF only, or reinforced with a syndesmotic screw (SS) and/or DLR. Stability was measured in lateral translation (talar shift), valgus, internal and external rotation during a constant 45 N axial load. The primary outcome was talar shift on fluoroscopic images. The minimal clinically important difference (MCID) was predefined as 1.0 mm.

Results

As adjuncts to PF, SS restored lateral translation stability as well as DLR. However, talar valgus tilt for PF and increased by 18.1 degrees (95% CI 16.1 to 20.0, $p < 0.001$) and external rotation by 15.9 degrees (95% CI 12.6 to 19.2, $p < 0.001$) compared to native. For combined PF and DLR, external rotation deviated less from native but were still significantly different, respectively 2.7 degrees (95% CI 0.8 to 4.7, $p = 0.006$) and 5.2 degrees (95% CI 1.9 to 8.5, $p = 0.002$).

Conclusion

In this cadaveric SER4b injury model, both SS and DLR restores lateral translational stability when combined with fibular PF. However, only DLR considerably restored rotational and valgus stability.

Grethe Heitmann

The impact of external aortic compression on the severity of postpartum haemorrhage in hospital births: an observational study in Norway

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Background:

The incidence and severity of postpartum haemorrhage (PPH) are increasing. Beside causative treatment and volume resuscitation, temporising measures like external aortic compression (EAC), may be used.

Methods:

The aim of this study was to explore the impact early application of EAC had on the severity of PPH. An observational design was used, comparing retrospective preimplementation data to prospectively collected post-implementation data. Inclusion criteria were use of EAC or blood loss ≥ 1000 mL within two hours after birth.

Results:

During the two study periods, 2,769 and 3,126 women gave birth at the hospital, of whom 221 and 271 were included.

The use of EAC increased from 1.8% to 33.2% ($p < 0.01$). The proportion of the women in the subgroup 1000-1499 mL decreased from 64.4% to 58.7% ($p = 0.04$). The proportion receiving transfusion of red blood cells (RBC) declined from 33.5% to 24.4% ($p = 0.03$) and the total number of transfused RBC units decreased from 204 to 142 ($p < 0.01$). The proportion of women with a nadir haemoglobin level < 7 g/dL was reduced from 14.0% to 6.6% ($p < 0.01$). After adjustment for relevant covariates the likelihood of receiving more than two units of RBCs (aOR 0.23, CI 0.07-0.73), or having a nadir haemoglobin level < 7 g/dL during hospitalisation (aOR 0.24, CI 0.09-0.63) were significantly reduced.

Conclusions:

Implementation of early EAC, was associated with reduced need for blood transfusion and markers of severe PPH.

Clinical implications:

These findings support early application of EAC in the PPH management as a part of a patient blood management strategy.

Inge Petter Kleggetveit

Utvikling av miniaturisert nervemåling for enklere klinisk bruk

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Background:

Nevrografi er en viktig nervefunksjonstest for diagnostikk av en rekke perifere nervelidelser, men dagens undersøkelser krever store og kostbare apparater og utføres i all hovedsak i høyspesialiserte KNF-laboratorier. Dette gir begrenset kapasitet og forsinket utredning. Det er derfor et økende behov for ny teknologi som kan gjøre nervefunksjonstesting enklere og mer tilgjengelig på flere kliniske arenaer. En miniaturisert løsning kan bidra til raskere og enklere vurderinger og kortere pasientforløp der utstyr og ekspertise i dag er en flaskehals.

Methods:

Prototypen som her ble testet er et tidlig utviklingssteg i arbeidet med å forenkle nevrografimålinger. Den er liten, trådløs og batteridrevet, og utviklet for å kunne registrere motoriske og sensoriske nerveledningsrespons. I denne studien undersøkte vi om prototypen kan levere stabile og klinisk relevante nerveledningsmålinger som grunnlag for videre utvikling.

Results:

Prototypen registrerte sensoriske og motoriske nervepotensialer (CMAP, SNAP, F-responser og H-reflekser) med tilfredsstillende signalstyrke og tidsoppløsning.

Målingene var stabile, og datakvaliteten vurderes som tilstrekkelig for videre teknisk og klinisk utvikling.

Conclusions:

Studien viser at miniaturisert nevrografi med vår prototype er gjennomførbart uten vesentlig tap av målekvalitet. Dette gir grunnlag for videre arbeid med mer tilgjengelige og standardiserbare nervefunksjonstester.

Clinical implications:

Nye innovative løsninger kan gjøre nervefunksjonstesting mulig utenfor spesialiserte laboratorier; i primærhelsetjenesten, på ulike poliklinikker, sengepost og i rehabilitering. På sikt kan teknologien brukes til å utvikle nye medisinske produkter som kan inngå i mer pasientnære og effektive diagnostiske forløp. Dette kan redusere ventetider, avlaste spesialistressurser og bidra til tidligere identifisering av nervefunksjonsendringer.

Abstraktet er dels basert på tidligere publikasjon (DOI: 10.1109/EMBC58623.2025.1125321). Pågående forsknings-/innovasjonsprosjekter basert på denne teknologien vil bli presentert.

Ingrid Autran

Maintenance IV Ketamine in Treatment-Resistant Depression: A Real-World Observational Study

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Background: Intravenous (IV) ketamine produces rapid antidepressant effects in treatment-resistant depression (TRD), but real-world data on maintenance outcomes are limited.

Methods: We performed a retrospective observational cohort study of 127 adults with TRD who completed both induction and maintenance treatment at a Norwegian outpatient unit between November 2020 and December 2025. Response was defined as a $\geq 50\%$ improvement from baseline on the Montgomery-Åsberg Depression Rating Scale, self-report version (MADRS-S), and remission as a score of ≤ 10 .

Results: After induction (mean 6 infusions over 3 weeks), 79 patients (62.2%) met response criteria and 46 (36.2%) achieved remission. After maintenance (mean 6 additional infusions over 7 months), response and remission rates were 51.2% and 37.8%, respectively. Outcomes during maintenance differed across post-induction response groups: patients who had not responded at post-induction showed further improvement during maintenance, whereas initial responders showed a modest increase in symptoms. Of 65 post-maintenance responders, 18 (27.7%) had not been responders at post-induction.

Conclusions: Maintenance IV ketamine was followed by continued benefit at the group level, but individual trajectories varied. Some patients who had not responded after induction improved during maintenance.

Clinical implications: In this cohort, 18 of 65 post-maintenance responders (27.7%) had not met response criteria at post-induction. A $\geq 30\%$ threshold would have captured 60 of 65 eventual responders (92.3%).

Ingvild K. J. Aurebekk

Interrater Reliability of the Adolescent-Adapted SCID-5-AMPD-I Across DSM-5 and ICD-11

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Background:

Reliable clinician-rated interviews are needed to assess personality functioning in adolescents. We developed an adolescent-adapted version of the Structured Clinical Interview for the DSM-5 Alternative Model for Personality Disorders, Module I (SCID5-AMPD-I-A), and examined its interrater reliability across DSM-5 and ICD-11 severity frameworks.

Methods:

Thirty-six adolescents aged 14–18 years from inpatient and outpatient child and adolescent mental health services completed two interviews administered by different clinicians. Raters were blinded to previous assessments. Interrater reliability was estimated using two-way random effects intraclass correlation coefficients with absolute agreement.

Results:

Interrater reliability was excellent for total LPFS (ICC = 0.91, 95% CI 0.83–0.95) and good across LPFS domains (ICC = 0.84–0.88). Reliability varied more across subdomains (ICC = 0.59–0.84). ICD-11 overall severity ratings derived from the same interview material also showed good agreement (ICC = 0.85, 95% CI 0.72–0.92). Preliminary global ratings based on the first eight questions corresponded well with final DSM-5 and ICD-11 scores.

Conclusions:

The SCID-5-AMPD-I-A supports reliable clinician assessment of adolescent personality functioning within both DSM-5 and ICD-11 frameworks.

Clinical implications:

A single developmentally adapted interview may support structured severity assessment across diagnostic systems in adolescent mental health services.

Karuna Shrestha

Mental helse det første året etter intensivopphold- tidligere intensivpasienters erfaringer og refleksjoner.

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Bakgrunn: Ca. en av tre pasienter som har vært innlagt på en intensivavdeling har symptomer på angst, depresjon og post traumatisk stress det første året etter intensivopphold. Tross dette finnes det lite forskning som utforsker pasientens erfaringer med mental helse i denne tidsperioden.

Metode: Studien er basert på dybdeintervju med tretten tidligere intensivpasienter. Oppholdet på intensivavdelingen fant sted minst ett år før rekruttering ved ett sykehus i Sør-Øst Norge. Intervjuene ble utført i perioden juni til november 2025, og varte i 44-68 minutter. Det ble gjort lydopptak av intervjuene via en digital diktafonapplikasjon, og lydfilene ble transkribert ordrett. Refleksiv tematisk analyse, slik den er beskrevet av Braun og Clarke, brukes for data analysering.

Resultat: Foreløpige resultater viser at flere husket lite fra intensivoppholdet og hadde variert innsikt i eget sykdomsforløp. Mange hadde sterke minner om hallusinasjoner og delirium. Til tross for dette beskrev de fleste deltagerne sin mentale helse som god ett år etter utskrivelsen. Mange fortalte om en endret hverdag etter intensivoppholdet, men at ulike strategier som sosial støtte og fysisk aktivitet bidro til å styrke mental helse. Deltagerne hadde lite profesjonell oppfølging relatert til sin mentale helse, men mange hadde selv oppsøkt informasjon om tiden etter intensivoppholdet, både via pårørende og via informasjon på nett.

Konklusjon: Til tross for begrenset profesjonell støtte, viste deltagerne en egen drive og utviklet egne strategier for å gjenvinne en normal hverdag. Resultatene indikerer at det er behov for bedre oppfølging i forhold til pasientens mentale helse.

Klara Friberg

Digital interventions with impact on mental health in intensive care unit survivors: a scoping review.

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Background: Intensive care unit (ICU) survivors pose an increased risk of suffering from impaired mental health during their recovery period. While digital interventions have been evaluated to have impact on improving mental health in other patient groups, little is known whether digital interventions have impact on improving mental health in ICU survivors after hospital discharge.

Methods: This scoping review aimed to identify and synthesize relevant research about digital interventions in ICU survivors. Systematic literature searches were made in Medline OVID, Embase OVID, APA PsycInfo OVID, CINAHL Ebsco, and Cochrane Library in June 2024. Studies describing ICU survivors ≥ 18 years and containing digital interventions for mental health after hospital discharge were evaluated for their impact on anxiety, depression and posttraumatic stress symptoms.

Results: Five studies were included, all with quantitative designs. Digital interventions were conducted between four and six weeks after hospital discharge, and delivered via telephone, mobile applications, or internet platforms. These interventions focused on emphasizing coping skills, mindfulness, or cognitive behavioral therapy, including various activities such as physical and relaxation exercises, video and audio files, and interactive activities. Our findings suggest that digital interventions, particularly those emphasizing mindfulness and coping skills, yield promising outcomes especially regarding symptoms on anxiety and depression.

Conclusions: This scoping review suggests that digital interventions can help ICU survivors to improve their mental health and regain independence during recovery. However, larger, well-designed studies to evaluate the impact on digital interventions, using validated instruments for ICU population, are yet needed.

Ann-Chatrin Linqvist Leonardsen

Anesthetic Personnel's Experiences and Perspectives With a National Standard for Safeguarding Anesthesia Practice: A Cross-Sectional Study in Norway.

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Background: The Norwegian standard for the safe practice of anaesthesia (NSA) was developed by the Norwegian Association of Anaesthesiologists and the Norwegian Association of Nurse Anaesthetists as a consensus guideline to safeguard satisfactory anaesthetic practice. This study aimed to explore anaesthesiologists' and nurse anaesthetists' experiences with and perspectives on the standard

Methods: The study had a cross-sectional, observational design, using a questionnaire. A purposive sampling strategy was applied, inviting all members of the two associations (N=3300) to participate in a web-based survey. Data were analysed using the Statistical package for the social sciences, version 28. Descriptive statistics and independent samples t-test were used to analyse the data. A two-sided p-value ≤ 0.05 was assumed to be statistically significant

Results: In total, 823 respondents (24.9%) completed the questionnaire in September 2024. The results indicate several areas for improvement to achieve the recommended standards of anaesthetic practice, as outlined by the NSA. We found

several statistically significant differences between responses across anaesthesiologists and nurse anaesthetists. About 2/3 of the respondents had a relation to the standard in their daily work, and from 13 to 30 percent had experienced or heard of situations where the standard had been used in root cause analyses of adverse anaesthetic events

Conclusions: The results indicate that the NSA is used in clinical practice. Provided that the NSA actually safeguards satisfactory anaesthetic practice, there are several areas of improvement. The NSA may be an example to follow in other countries, due to the overlapping jurisdictions and tasks of anaesthesiologists and nurse anaesthetists.

Ann-Chatrin Linqvist Leonardsen

Sustainability in the operating room: a cross-sectional survey of nurse anaesthetists' and operating room nurses' views and practice

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Background: The healthcare sector is responsible for between 4.4% and 5.2% of global greenhouse gas emissions, and the operating room accounts for 20–30% of hospital waste. The study's aim was to (1) explore nurse anaesthetists (NA) and operating room (OR) nurses' views and practice regarding climate change, the healthcare sector's carbon footprint, and sustainable practice in the operating room, (2) assess differences in the way in which the two professions regard these issues, and (3) assess factors which potentially are associated with participants' views and practice.

Methods: A cross-sectional survey was conducted in three hospital trusts in southeastern Norway between October 2023 and January 2024.

Results: A total of 110 NAs and 88 OR nurses participated. There were significant differences ($p < 0.001$) between the two professions' views regarding the individual's responsibility in reducing the healthcare sector's carbon footprint. There was also a significant difference in their views regarding whether the health institution provided training to promote sustainable practice ($p < 0.001$). Both professions recycled waste materials, but there was a significant difference regarding the perceived need for recycling systems ($p = 0.03$). Three themes emerged from the free-text responses: 'a need for education and information', 'increasing awareness' and 'lack of organisational measures' regarding participants' perspectives on climate, health and sustainability in the operating room.

Conclusions: NAs and OR nurses are concerned about reducing the operating room's carbon footprint. However, they have the potential to play a more active role in greening the operating room by participating in grassroot strategies that foster sustainability.

Ann-Chatrin Linqvist Leonardsen

Parent satisfaction with pediatric anesthesia- a cross-sectional, multicenter study in Norway

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Background: Parental satisfaction with anesthetic care is utilized as a proxy for child satisfaction. The evidence base regarding parent satisfaction with pediatric anesthesia care is limited. The aim of the current study was to assess 1) parent satisfaction with pediatric anesthesia in three hospitals, 2) potential differences across hospitals, and 3) potential associations between parent satisfaction and the child's age, surgical specialty, hospital, whether the parent previously had followed a child to surgery and relation to the patient.

Methods: The Norwegian version of the 'Pediatric Anesthesia Parent Satisfaction survey' questionnaire (NPAPS) was used. Descriptive statistics, Kruskal Wallis test and linear regression analysis were used to analyze the data.

Results: In total, 234 parents responded. Most respondents agreed that their child had received the highest quality care during the surgical experience (96.4-97.4%). Nearly all respondents agreed that their questions were responded to (94.6-97.6%), information was understandable (96.4-97.4%), the amount of information was appropriate (96.4-97.4%), the child's integrity was respected (94.6-97.4%), the child was treated respectfully and professionally (96.4-97.6%), and that personnel paid attention to the parent's concerns (93.8-94.7%). Respondents disagreed being explained how the child might feel physically and emotionally after anesthesia (9.5-10.5%) and also disagreed being satisfied with the way the child fell asleep and woke up from anesthesia (5.3-7.1%). No factors were associated with the level of parent satisfaction, and there were few differences between hospitals.

Conclusions: Even if parents are overall satisfied with anesthesia care, improvement areas regarding preparation of parents, and control of postoperative symptoms were detected.

Ann-Chatrin Linqvist Leonardsen

Ambulance personnel's perspectives on the use of Artificial Intelligence in prehospital identification of stroke- a qualitative study in Norway and Sweden.

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Background: Stroke is a large and increasing health challenge, leading to physical disability and mortality. A rapid diagnostic assessment in the acute phase of a stroke is central. Studies suggest that artificial intelligence (AI) could contribute for prognostication, prediction and resource optimization in suspected stroke in prehospital emergency care. The objective was to explore Emergency Medical Services (EMS) providers' perspectives on using AI in the prehospital assessment of patients with a suspected stroke diagnosis

Methods: A qualitative study design following stroke case simulation with an AI-based diagnostic tool was used. One focus group and ten dyadic interviews were conducted comprising 24 participants from three ambulance stations in Norway and Sweden respectively. Data were analyzed following Braun and Clarke's steps for thematic analysis.

Results: Three themes were identified, namely 1) Another tool in the toolkit, 2) Trust is essential, and 3) The devil is in the details. The participants underlined that the AI-based tool was just an addition to their usual assessment, including symptoms, anamnesis, and vital parameters. Trust was needed from various stakeholders for the tool to have a function in the patient pathway. Finally, size and weight, and ability to differentiate between hemorrhagic and thrombotic stroke were central aspects for the tool to be feasible.

Conclusions: EMS providers mainly rely on their own clinical eye, combining symptoms, anamnesis and measurement of vital parameters when assessing suspected stroke patients. AI-based tools may be used as support in the decisionmaking process, however this depends on the establishment of trust in the tool.

Ann-Chatrin Linqvist Leonardsen

Upper airway discomfort: a randomized controlled double-blind trial comparing rocuronium and lidocaine spray for intubation

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Background: Endotracheal intubation may be performed using deep anesthesia, neuromuscular blocks, or the topical application of anesthetics on the vocal cords. The null hypothesis was that there is no difference in hoarseness one hour after extubation between patients receiving neuromuscular blocks versus lidocaine sprayed on the glottis for endotracheal intubation.

Methods: A randomized, controlled, double-blinded study was conducted. A total of 114 patients were included. Group I (n = 58) received rocuronium 0.6 mg/kg. Group II (n = 56) received lidocaine spray 4 ml (20 mg/ml) on the vocal cords. The primary outcome measure was hoarseness one hour after extubation. Secondary outcomes were hoarseness at 24 and 48 h after extubation, sore throat at 1, 24, and 48 h after extubation, and intubation and extubation conditions.

Results: There was no statistically significant difference between groups in hoarseness one hour after extubation. At 24 h, Group I had significantly more reported hoarseness (27.6%) and observed hoarseness (1.7%) than Group II (12.5% reported) (p = 0.03). Group II had a significantly sorer throat (21.4%) than Group I (1.7%) (p < 0.001) at one hour. Beyond this, there were no differences between groups.

Conclusions: Even though some differences were observed in hoarseness and sore throat 24 h after extubation, there were few differences between topical lidocaine spray and the use of neuromuscular blocks before intubation for patient-reported and observed outcomes. Consequently, clinicians should choose an approach based on considerations other than those included in this study, such as the need for muscle relaxation or minimizing the number of laryngoscopies.

Ann-Chatrin Linqvist Leonardsen

Digitalization in the operating theatre- an interview study in operating room nurses and nurse anesthetists in Norway.

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Background: Digitalization in the health sector requires adaptive change in human attitudes and skills. The operating theatres have been introduced to digital innovations through centuries. The aim of this study was to explore operating room (OR) nurses' and Nurse Anesthetists' (NAs) experiences with digitalization in the operating theatre.

Methods: The study had a qualitative design, using individual interviews with OR nurses and NAs at a Norwegian hospital. Data were analyzed using reflexive thematic analysis in-line with recommendations from Braun & Clarke.

Results: Two themes were identified, namely 1) Impacting the work processes, and 2) Implications for patient safety. The OR nurses and NAs experienced that digitalization impacted on their work processes positively through making these smoother, but also negatively making the work processes vulnerable for disruptions, leading to a need for parallel actions. Digitalization was experienced to positively impact patient safety for example through making information more accessible. However, digital tools reduced focus on the patient, and then represented a risk to patient safety.

Conclusions: OR nurses and NAs perceive that digitalization on one side may facilitate work processes and information flow. However, on the other side digitalization may steel focus on the patient. These aspects should be taken into consideration in quality improvement initiatives and when introducing new digital tools.

Ann-Chatrin Linqvist Leonardsen

Utilisation of a GP-staffed emergency response unit: an observational study from Norway

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Background: Emergency department (ED) crowding is a growing challenge, highlighting the need for safe and effective prehospital alternatives to hospital conveyance. The aim was to investigate how a GP-staffed emergency primary care response unit (EPCRU) affects resource allocation and patient pathways.

Methods: A prospective observational study was conducted in two Norwegian municipalities served by a GP-staffed EPCRU. All missions (n = 2950) performed by the EPCRU from April 1, 2023, to March 31, 2024, were included. Data on dispatch origin, triage (telephone and on-site), reason for dispatch, level of care, and participating services were analysed.

Results: Most missions were categorized as Acute (57.6%) by the call centre and comprised a broad spectrum of conditions and severities. The EPCRU was first on scene in 44.1% of cases. In total, 44.1% of patients were treated on-site without hospital conveyance. A mismatch was observed between telephone and on-site triage: 34.2% of Acute cases were triaged as Yellow by RETTS triage on scene. The EPCRU altered expected care trajectories compared to standard ambulance response by enabling both non-conveyance and direct Emergency Department admissions

Conclusions: A GP-staffed response unit may enhance resource efficiency, patient flow, and timely care— offering potential benefits for emergency systems facing growing demand.

Ann-Chatrin Linqvist Leonardsen

Nurse anesthetist-led Piccline insertion- A prospective, longitudinal study in a Norwegian hospital

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Background: Most hospitalized patients require vascular access for intravenous medical treatment. A PICC (Peripherally inserted central catheter) may be indicated in longterm treatment. In many Norwegian hospitals, this is a nurse anesthetist-led initiative. The aim of this study was to examine the use of PICC from insertion to completed treatment, and to assess potential risk factors for the development of catheter-related complications.

Methods: A quantitative prospective, longitudinal design was used. The data was collected via electronic patient records and telephone surveys with patients every fourth week until the catheter was discontinued.

Results: In total, 401 PICCs were included. The primary indications were antibiotic treatment (n=272), nutrition (n=46) or chemotherapy (n=42). A total of 163 PICCs were used for a period of over 30 days. Overall, 41 catheter related complications were identified. Erythema at the insertion site (n=12) was the most common complication, and the most severe were deep venous thrombosis (n=5) and confirmed catheter related infection (n=4). After four weeks, 12 patients reported complications, of which pain/numbness (n=4) was the most frequent. The study demonstrated no statistically significant covariation between the occurrence of complications and age, length of time the catheter was in use, primary indication, venous diameter or the number of insertion attempts.

Conclusions: The study showed a low incidence of severe PICC-related complications. PICCs were inserted and used according to local guidelines. The study indicates that nurse anesthetists can be used in the future selection and insertion of vascular access for patients, as well as in training and education on PICCs.

Ann-Chatrin Linqvist Leonardsen

An educational intervention to bridge the gap between nurses and nurse assistants- a focus group study in Norway

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Background: Mixed staffing model where nurses and nurse assistants work as a team can deliver better care quality than standard nurse staffing models. However, there are issues related to communication gaps, unclear job descriptions, hierarchical barriers, resource limitations, cultural and systemic factors that need to be solved. The aim of the current study was to explore nurses' and nurse assistants' experiences with an educational intervention to bridge the gap between nurses and nurse assistants.

Methods: The educational intervention involved nurses and nurse assistants and comprised a lecture of 90 minutes, followed by 60 minutes of simulation in the respective subject 'respiratory issues' and 'sepsis'. A qualitative study design, with six focus group interviews (N=23), was used. Data were analyzed using thematic analysis in-line with recommendations from Braun and Clarke.

Results: Two themes were identified, namely 1) Simulation; a love-hate relationship and 2) Increased insight into each other's competence and understanding of each other's focus. Both nurses and nurse assistants were sceptic to simulation as an educational intervention. However, all appreciated the combination of theory and simulation. The level seemed appropriate for nurse assistants, while nurses perceived the level as mostly repetition. The education day increased insight into each other's competence and understanding of each other's focus across wards and specialties, and across nurses and nurse assistants.

Conclusions: Educational interventions between nurses and nurse assistants may be appropriate to decrease communication and collaboration gaps across occupations. Combining theoretical lectures and simulations also seemed to support this.

Magnus Nossen

uSing arTificial intElligeNce TO tReat myocardial InfArctioN (STENTORIAN)

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Background:

Current ESC guidelines for acute coronary syndromes (ACS) base urgent revascularization decisions on the STEMI/NSTEMI paradigm. However, STEMI criteria were never derived from angiographic data and fail to identify a substantial proportion of acute coronary occlusions. Queen of Hearts is a deep neural network trained to identify occlusion myocardial infarction (OMI) from the ECG.

Methods:

Retrospective observational study of ACS patients admitted to Østfold Hospital Kalnes who underwent invasive coronary angiography. OMI is defined as a culprit lesion with TIMI 0–1 flow, or TIMI 2–3 flow with emergent PCI. Index ECGs will be analysed by the AI mode. Diagnostic performance (sensitivity, specificity, positive and negative predictive values, area under the curve) will be estimated using angiography as reference and compared with STEMI criteria and real-world clinical decisions.

Results:

We plan to include 800 ACS patients to ensure precise estimates of diagnostic performance. Primary and secondary outcome analyses are ongoing and will be presented at a later point in time.

Conclusions:

This study will provide an independent validation of the Queen of Hearts AI model for detection of angiographically confirmed OMI in a Norwegian ACS population.

Clinical implications:

If superior to STEMI criteria and current practice, the AI model could support earlier identification of patients with coronary occlusion expediting coronary catheterization lab activation.

Mikaela Engarås Hamre

Hvem har nytte av hallux valgus-kirurgi? Preoperative MOxFQ-skårer predikerer klinisk relevant bedring etter Chevron osteotomi

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Background:

Hallux valgus (skjev stortå) er en vanlig fotdeformitet hvor kirurgisk behandling ofte gir god symptomlindring. Det er imidlertid betydelig variasjon i pasientrapportert utfall.

Formålet med studien var å undersøke om preoperative symptomer, målt med Manchester-Oxford Foot Questionnaire (MOxFQ; et validert spørreskjema for fotplager), kan predikere klinisk relevant bedring etter Chevron osteotomi (en vanlig korrigerende operasjonsmetode).

Methods:

Prospektiv kohortstudie med 193 pasienter operert ved to sentre. Primært utfall var endring i MOxFQ-indeks (0–100, høyere skår indikerer mer symptomer) fra preoperativt til ett års oppfølging. Klinisk relevant bedring ble definert som ≥ 15 poeng forbedring. Sammenhengen mellom preoperativ skår og behandlingsrespons ble analysert med lineære mixed models, logistisk regresjon og ROC-analyse.

Results:

Totalt 72 % oppnådde klinisk relevant bedring, med en gjennomsnittlig forbedring på 26,5 poeng. Høyere preoperativ MOxFQ-skår var signifikant assosiert med økt sannsynlighet for respons (OR 1,06 per poeng, 95 % KI 1,03–1,09). ROC-analysen viste moderat diskriminering (AUC 0,70), med en identifisert terskelverdi rundt 42 poeng for prediksjon av behandlingsrespons. Pasienter med lav preoperativ symptombyrde hadde begrenset klinisk gevinst av kirurgi.

Conclusions:

Preoperativ symptombyrde, målt med MOxFQ, er en viktig prediktor for behandlingsutfall etter Chevron osteotomi. Pasienter med lav preoperativ skår har begrenset sannsynlighet for klinisk relevant forbedring.

Clinical implications:

MOxFQ kan bidra til bedre pasientsелеksjon og mer presis preoperativ rådgivning ved hallux valgus-kirurgi.

Silje K. Karlsen

Non-operative versus operative treatment of weightbearing stable suprasyndesmotic ankle fractures: a prospective, multicentre, randomised controlled trial.

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Background:

Suprasyndesmotic ankle fractures (Weber C) are traditionally considered unstable and treated operatively due to presumed ligamentous disruption and the risk of post-traumatic arthritis. Emerging evidence suggests that ankle stability depends on combined syndesmotic and deltoid ligament integrity and may be preserved in fractures with a congruent ankle mortise on weightbearing radiographs. This trial compared functional outcomes following non-operative versus operative treatment of weightbearing-stable suprasyndesmotic ankle fractures. We hypothesised that non-operative treatment would be non-inferior at two years.

Methods:

We conducted a prospective, multicentre, randomised, parallel-group non-inferiority trial at four hospitals in south-east Norway. Adults aged 18–70 years with isolated suprasyndesmotic fibular fractures were randomised to operative or non-operative treatment. Operative treatment involved syndesmotic fixation, while non-operative treatment consisted of functional bracing. Both groups were allowed weightbearing as tolerated for six weeks. The primary outcome was the Olerud–Molander Ankle Score (OMAS) at two years. Secondary outcomes included patient-reported outcomes, pain, health-related quality of life, range of motion, radiographic outcomes, post-traumatic osteoarthritis, and complications. Intention-to-treat and per-protocol analyses were performed using a predefined non-inferiority margin of 10 OMAS points.

Results:

A total of 120 patients were randomised. At 24 months, OMAS was 3.6 points higher in the non-operative group (95% CI –2.1 to 9.4), confirming non-inferiority. Secondary outcomes were comparable. Progression of ankle arthritis and treatment-related complications were more frequent after operative treatment.

Conclusion:

Non-operative treatment of weightbearing-stable suprasyndesmotic ankle fractures provides non-inferior functional outcomes with fewer complications, supporting a selective non-operative approach.

Tor-Morten Kvam

Public perceptions of psychedelics: Results from a survey in the general Norwegian population

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Background:

Recent developments in Norway indicate growing institutional acceptance of psychedelic treatments. In 2025, Norway became the first country to reimburse ketamine for treatment-resistant depression in public healthcare, alongside increased funding for related trials. Emerging research on MDMA-assisted therapy and rising media attention may further shape public perceptions. However, stigma and limited acceptance may hinder implementation, and population-level knowledge remains limited.

Methods:

A cross-sectional online survey was conducted by Ipsos with a representative sample of 1,240 Norwegian adults. The survey assessed experiences, attitudes, and knowledge regarding psychedelics using the Attitudes on Psychedelics Questionnaire and additional items. Psychiatric and substance use disorders were self-reported. Descriptive statistics, Mann–Whitney U tests, and Spearman’s correlations were used.

Results:

Most participants reported no mental disorder (79.8%); depression (8.3%) and generalized anxiety disorder (3.8%) were most common. Lifetime psychedelic use was reported by 14.2%, mainly recreationally; 0.8% reported therapeutic use. Prior use was associated with more positive attitudes ($p < .001$, $|r| = .38$). Positive attitudes were linked to all psychiatric conditions ($p < .05$) except obsessive–compulsive disorder. A majority supported regulated medical use (51.3%), though safety concerns were common. Nearly half believed controlled use could be safe (45.3%), while 47.4% opposed broader legalization. Knowledge was low (64.9%) but positively associated with attitudes ($\rho = .24$, $p < .001$).

Conclusions:

Public attitudes are cautiously supportive but marked by limited knowledge and safety concerns. Individuals with mental health conditions may be particularly receptive, offering insights relevant to future clinical implementation.