Fostering clinical research in general practice and family medicine. 
Selected abstracts from the 93rd EGPRN conference Halle, Germany, 14–17 October 2021

All abstracts of the conference can be found at the EGPRN website https://www.egprn.org/page/conference-abstracts

KEYWORDS
COVID-19; patient centred care; mental health; clinical topics

Introduction to the theme of the conference: Fostering clinical research in general practice and family medicine

On behalf of the EGPRN and the local organising committee, we welcome you to the Meeting at Halle. Most of the sessions in the meeting will be physical with hybrid components, some will be online. The topic of the congress 'Fostering clinical research in general practice and family medicine' touches on an area of high relevance for us as researchers and our patients. However, as research in general practice is overall underrepresented compared to other disciplines, this is especially the case for clinical research in the field. The current meeting will provide examples of planned and conducted clinical research projects. Opportunities and obstacles will be mentioned and discussed. We hope to identify approaches that foster clinical research in general practice and family medicine. Together with other activities of EGPRN, e.g. the published research agenda, this hopefully contributes to a strengthening of general practice research in the future years!

KEYNOTE LECTURES

International keynote lecture: How do we integrate clinical research in general practice? It is time to wake the sleeping beauty.

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Medical specialities are characterised by a definable body of knowledge applicable to patient care, a scientific foundation and new knowledge generation. Family medicine has defined an emerging body of knowledge specifically relevant to primary care, and research capacity has grown incrementally since the founding of the specialty.

Not all research conducted on primary care problems constitutes primary care research but all research done in primary care is primary care research. That is, it is not the nature of the studied problem that makes it primary care research but, rather, the context and the way the research is conducted. Since primary care is the point of first contact for all problems, it follows that these problems are potentially and properly the subject of primary care research.

Our EHR systems are becoming more interconnected each year, meaning we can both identify patients for different trials and follow them relatively cheaply. This allows for effective randomisation and easier identification of confounders. With increasing research capacity I see a time when significant national funding will come to primary care to answer the question that faces us every day. This will benefit both the patients and the payer of services. We are uniquely positioned to undertake patient-reported chronic disease outcomes, translational research, and research on drug side effects that have previously been underreported.

Using the electronic health record, the clinical experience of both patient and physician is virtually indistinguishable whether or not the patient is randomised, primarily because the outcome data are obtained from routine clinical data or short web-based questionnaires. Such an approach can be used for head-to-head studies of common drugs, rare diseases and lifestyle interventions.

As opposed to standard clinical research, once the data-base has been set up and the IRB approval given, there is a meager marginal cost for enlarging each trial.

A trial showing no difference in treatment efficacy for two different drugs such as topical antibiotics, steroids or common oral medication, could help reduce the number of medications and save money. The same trial demonstrating a difference will guide us to better medical outcomes.

I will talk about why we need to do primary care clinical research and what we need to study but for most of the talk, I will share my experience of clinical research in primary care in the hope that some of you will join me in a clinical research journey!

Family Medicine research is the essential link in the chain that brings medical science from the bench to the bedside and beyond: into our homes and communities.

To be faithful to our calling, we must integrate clinical research with the tender loving care, we offer our patients. After all, if we offer tender loving care without asking difficult
clinical questions we are only doing half the job. The sleeping beauty is, of course, the Electronic Medical Record.

National keynote lecture: Equipped for the future? Disruptive innovation – data – studies

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The topic of conducting clinical studies in the outpatient setting has been controversial for some time. This from a structural point of view on different levels. First, the question of which studies should be used is whether RCTs are preferred or whether it is better to collect real-world data to derive real-world evidence. Then on the organisational level. How should private practices be enabled to carry out studies of high quality and with the highest possible frequency? Feasibility currently correlates with a comparatively high expenditure of time and personnel, which meets a thin personnel cover with only short treatment times for patients. Similarly, a strongly inhomogeneous IT landscape in practices, inhomogeneous organisational structures within the medical profession and professionally inhomogeneous guidelines, indicators, etc. are identified as obstacles to the implementation of studies. In addition, there is still a high wall between inpatient and outpatient care.

This is an almost fatal situation because relevant and reliable care data are collected daily but are rarely available for valid evaluation. The goal set out in the Geneva Declaration of sharing medical knowledge for patients’ benefit and healthcare promotion will be difficult to achieve in its best form.

However, another aspect is left out of the discussion. This is the increasing integration of innovative, sometimes disruptive changes in the healthcare market as part of the digital revolution, which also has the power to change the physician market permanently; this is entirely independent of the different designs and structures in the various healthcare systems. In Germany, telemedicine, electronic patient files and electronic prescriptions are frequently mentioned, but these are no longer innovations; these tools have already been in use in other healthcare systems for a long time. However, they are indispensable for implementing further innovations, platforms and digital applications (digital printing, use of soft artificial intelligence, etc.). None of these innovations can do without accompanying evaluation and the discussion about reimbursement will always be decided based on data. In Germany, these innovations in healthcare fall on structurally and organisationally inhomogeneous ground, which in some cases is also associated with considerable reservations about the digitalisation that cannot be prevented.

To avoid leaving the organisation of the market entirely to those whose day-to-day business and core competence is dealing with large volumes of data and who can successfully implement this without further external help, the course must be readjusted. This includes the serious and efficient, not over-bureaucratized expansion of the IT infrastructure, the networking of healthcare professionals and patients, the use of existing institutions (e.g. chairs for general medicine) and certainly also the establishment and expansion of homogeneous structures (guidelines, teaching physician practices), as well as an adjustment of the remuneration.

Although a head-to-head comparison of complete health care systems has always failed and will continue to fail, looking at best practice solutions in other physician markets is nevertheless permitted to adapt solutions in Germany. Europe should become an attractive research location again and Germany should not be left behind.

POSTER PRIZE WINNER

Experiences and expectations of medical students and GP teachers regarding long-term mentoring relationships in longitudinal general practice tracks: Preliminary results of an ongoing qualitative study

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Results: Preliminary analysis of 15 student interviews revealed that most students are highly satisfied with their mentoring relationship, although expectations are rarely discussed between mentors and mentees. If so, expectations are pronounced about professional rather than personal issues. Many students value the relationship because they feel more comfortable and encouraged to actively participate in a familiar setting compared to similar short-term experiences. Relationships were positively influenced by additional time spent together in longer clerkships.

Conclusion: Longitudinal GP tracks should encourage and support regular feedback and exchange of expectations between students and preceptors and facilitate joint long-term practice experiences.

KEYWORDS General practice track, medical students, mentoring, expectations, qualitative design

SELECTED ABSTRACTS

BNT162b2 vaccine effectiveness in preventing asymptomatic infection with SARS-CoV-2 virus: A nationwide historical cohort study

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Background: To fight the shortage in general practitioners, longitudinal general practice (GP) tracks have been established in medical faculties in Europe and worldwide. In most programmes, long-term mentoring relationships play an essential role providing students with positive role models, regular practical experiences and acquisition of clinical skills in a community context. In Leipzig, a six-year extracurricular GP track called LeiKA started in 2016, offering 30 slots per year for interested medical students. Individual preceptors are assigned to each student with regular short-term visits in their community practice throughout the study, accompanied by thematic workshops and social events. However, little is known about medical students’ and preceptors’ expectations, experiences, challenges and ideas for improvement within long-term mentoring relationships in general practice.

Research question: What are motivations, expectations and experiences of students and preceptors in long-term mentoring relationships? How can these relationships be adjusted and improved?

Methods: Semi-structured interviews with students and preceptors from the first three cohorts were conducted via video call. Interviews were audio-recorded and transcribed verbatim. We used MaxQDA for data analysis, following a mixed deductive/inductive approach. Two researchers performed coding and the results discussed with the whole research group.

Results: Preliminary analysis of 15 student interviews revealed the following topics: most students are highly satisfied with their mentoring relationship, although expectations are rarely discussed between mentors and mentees. If so, expectations are pronounced about professional rather than personal issues. Many students value the relationship because they feel more comfortable and encouraged to actively participate in a familiar setting compared to similar short-term experiences. Relationships were positively influenced by additional time spent together in longer clerkships.

Conclusion: Longitudinal GP tracks should encourage and support regular feedback and exchange of expectations between students and preceptors and facilitate joint long-term practice experiences.

KEYWORDS Covid-19; SARS-CoV-2; vaccine effectiveness; asymptomatic infection; observational study

The COVID-19 pandemic: Reorganisation of health services and coping of health care workers in primary healthcare

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Background: The COVID-19 pandemic has forced the reorganisation of healthcare services, and the implementation of contingency plans impacted Primary Health Care (PHC) workers’ daily demands. The training and support of health workers staff, its clinical, psychological and social support are additional challenges.

Research question: How have PHC services responded to the pandemic and how has this impacted PHC workers regarding anxiety levels?

Methods: We conducted a cross-sectional survey with a convenience sample of Primary Care Services workers from 7 European countries (Portugal, Spain, Bosnia, Italy, Turkey, Ukraine and France) using an online questionnaire. Ethical aspects were guaranteed. We collected information on gender, age, professional group, perceived support, access to personal protective equipment (PPE), overall pressure felt by
Benefits and challenges of using virtual primary care during the COVID-19 pandemic: From key lessons to a framework for implementation

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Background: With the onset of COVID-19, general practitioners (GPs) and patients worldwide swiftly transitioned from face-to-face to digital remote consultations. There is a need to evaluate how this global shift has impacted patient care, healthcare providers, patient and carer experience, and health systems.

Research question: We explored GPs’ perspectives on digital remote care’s main benefits and challenges.

Methods: GPs across 20 countries completed an online questionnaire between June and September 2020. GPs’ perceptions of main barriers and challenges were explored using free-text questions. Thematic analysis was used to analyse the data.

Results: In our survey 1605 respondents participated. The benefits identified included reducing COVID-19 transmission risks, guaranteeing access and continuity of care, improved efficiency, faster access to care, improved convenience and communication with patients, greater work flexibility for providers, and hastening the digital transformation of primary care and the accompanying legal frameworks. Main challenges included patient’s preference for face-to-face consultations, digital exclusion, lack of physical examinations, clinical uncertainty, delays in diagnosis and treatment, overuse and misuse of digital remote care, and unsuitability for certain types of consultations. Other challenges include the lack of formal guidance, higher workloads, remuneration issues, organisational culture, technical difficulties, implementation and financial issues and regulatory weaknesses.

Conclusion: At the forefront of care delivery, GPs can provide important insights on what worked well, why, and how. Lessons learned during the emergency phase can inform the stable adoption of virtual care solutions and co-design processes and platforms that are technologically robust, secure, and supported by a long-term strategic plan.

KEYWORDS Primary care; telemedicine; digital health

The long-term effect of COVID-19 – Primary care survey

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Background: Long COVID-19 is a multisystem syndrome that may start 12 weeks after the acute illness. About 10% of the recoverees will have at least one symptom during this period. We lack information about the rate of various symptoms and persistence beyond six months, especially after mild disease without hospitalisation.

Research question: Characterisation of the long-term symptoms of COVID-19 patients in Israel.

Methods: A nationwide telephone survey was conducted using a structured questionnaire on 714 post COVID-19 participants aged 18 or over, 12 weeks or more after virological defined recovery. Patients were randomly selected from approximately 80,000 COVID-19-recovered patients at Leumit Health Service in Israel.

Results: About 14% of convalescents had at least one symptom 12 weeks or more from recovery. The most common symptoms were memory or concentration disturbances (10%), muscle aches (8.5%), muscle weakness (7.6%), loss of taste or smell (5.9%) and headaches (3.8%). Six months after recovery, the incidence of most symptoms decreased, but memory or concentration problems (9.2%), muscle pain (7.8%) and muscle weakness (6.6%) remained common. In patients with fever or muscle aches at the time of COVID-19 and in patients with chronic diseases, the rate of prolonged symptoms (>6 months) was higher. Older age and hospitalisation during the course of the disease were not predictive of prolonged symptoms.

Conclusion: In a large sample of recovering patients, most of...
them with mild, community-managed, the most common long-term complaints were disturbances in memory and concentration and muscle pain.

**KEYWORDS** COVID-19; long COVID; primary care

**A study of burnout and associated factors in Irish GPs and GP trainees during the COVID-19 pandemic**

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**Background:** Prior to the COVID-19 pandemic, burnout among Irish GPs was estimated at 6.6% using the Maslach Burnout Inventory. Associated factors were male gender, younger age and early career status. During the COVID-19 pandemic burnout frequency was reported as high as 76% in medical residents in Romania and doctors in Northern Italy. In the US burnout was seen in 46.3% of physician trainees exposed to the virus at work while in China, burnout was noted in 13% of frontline healthcare staff.

**Research question:** This study aims to measure burnout and associated factors in Irish GPs and GP Registrars during the COVID-19 pandemic.

**Methods:** A cross-sectional study using an online questionnaire, comprising of the 16-item Oldenburg Burnout Inventory (OLBI) and a 24-item novel demographic and wellbeing questionnaire that was designed to assess demographic, personal, practice and health system related factors that may be associated with burnout. Data collection was conducted from January to April 2021. Data was analysed using SPSS v27.

**Results:** A total of 153 of the 172 responses received were suitable for calculating burnout inventories. OLBI subtotal scores for disengagement and exhaustion were high in 9.8% and 12.7%, respectively. The total OLBI score was elevated in 12.1% respondents. High OLBI scores were most strongly associated (p < 0.01) with less downtime, less sleep, less family time and a fear of colleagues being off work with COVID-19. Female gender was associated with higher total OLBI scores.

**Conclusion:** High OLBI total scores were associated with several factors. Most notable were the effects of the pandemic on practitioner well-being outside of work. Fear of the effects of colleagues being off work with COVID-19 was also associated with higher burnout scores. Further evaluation is required to investigate the nature of the relationship between these factors and burnout.

**KEYWORDS** Exhaustion; disengagement; burnout; OLBI, Oldenburg burnout inventory; wellbeing; COVID-19; pandemic; Irish; Ireland; Europe; European; general practice; primary care; GP; trainee; training

**PATIENT CENTRED CARE**

**Challenges of research on person-centred care in general practice: A scoping review**

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**Background:** Delivering person-centred care is one of the core values in general practice. Due to the complexity and multifaceted character of person-centred care, the effects of person-centred care cannot be easily underpinned with robust scientific evidence.

**Research question:** What are the concepts and definitions, interventions and the outcome measures used in research on person-centred care in general practice?

**Methods:** Systematic reviews on person-centred care compared to usual care were included from Pubmed, Embase and PsycINFO. The search was conducted in February 2021. Two reviewers did data selection and charting.

**Results:** Four systematic reviews were included in this review. All reviews used different definitions and models and classified the interventions differently. The explicit distinction between interventions for providers and patients was made in two systematic reviews. The classification of outcomes also showed significant differences, except for patient satisfaction was shared. All reviews described the results narratively. One review also pooled the results on some outcome measures. Most studies included in the reviews showed positive effects, in particular on process outcomes. Mixed results were found on patient satisfaction and clinical or health outcomes. All review authors acknowledged limitations due to lack of uniform definitions, heterogeneity of interventions and outcomes measures.

**Conclusion:** Person-centred care is a concept that seems obvious and understandable in real life but is complex to operationalise in research. This scoping review reinforces the need to use of mixed qualitative and quantitative methods in general practice research. Research could be personalised by defining therapeutic goals, interventions, and outcome variables based on individual preferences, goals, and values and not only on clinical and biological characteristics. Observational data and patient satisfaction surveys could be used to support quality improvement. Integrating research, education, and practice could strengthen the profession, building on the fundament of shared core values.

**KEYWORDS** General practice; family practice, patient-centred care, patient outcome assessment, scoping review
The patient-centred care and its relation to the outcomes of care in family medicine

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Background: Patient-centred care (PCC) contributes to higher patient satisfaction, greater adherence to treatment, health outcomes improvement and more rational use of health services.

Research question: To investigate the PCC level and its relation to the outcomes of care in family medicine (FM)

Methods: Prospective study was carried out on 120 unselected consecutive adult patients (18 years and over) attending routine consultations with six selected Croatian FM practices. The post-consultation questionnaire included items about the sociodemographic details, the 9-item Patient Perception of Patient-Centeredness (The 9-item PPPC) and the Short Form Health Survey. Patients were followed up after two months with the Outcomes in Relation to Impact on Daily Life (the ORIDL measure) and we reviewed notes after two months for reattendance, investigation, and referral. Statistic analysis was done using Statistika, version 7.1 statistic programme and values $p < 0.05$ were considered statistically significant.

Results: Patients mean age was 42.35 ± 14.46 years. Distribution of the 9-item PPPC average scores (on range 1–4) showed high scale range for all items: patient problem discussion (3.26 ± 0.77), patient satisfaction with problem discussion (3.37 ± 0.70), doctor listening (3.7 ± 0.51), doctor problem explanation (3.56 ± 0.59), respective roles discussion (3.28 ± 0.77), doctor treatment explanation (3.54 ± 0.61), doctor manageability of treatment for patient exploration (3.47 ± 0.67), doctor-patient understanding (3.76 ± 0.47) and doctor personal or family issues that might affect patients’ health discussion (3.21 ± 0.87). Patients with greater extent of the discussion of respective roles were significantly less referred to the secondary care specialists ($p < 0.05$). Patients with greater extent of the doctor’s personal or family issues that might affect patients’ health discussion were significantly less referred to the investigation ($p < 0.05$)

Conclusion: Significant relationships between PCC and number of patients’ investigations and referrals observed in this study imply strengthening PCC could be helpful in more rational use of health services.

KEYWORDS Patient-centered care; outcomes of care; family medicine

Shared decision-making enhances vaccination rates in adult patients in outpatient care – A systematic review and meta-analysis

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Background: Insufficient vaccination rates in adults are a major problem in primary health care, leading to a global disease burden. Shared decision-making (SDM) might address major barriers to vaccination.

Research question: The objective of this review was to assess the impact of SDM on adult vaccination rates in outpatient care.

Methods: We conducted a systematic literature search in MEDLINE, EMBASE, CENTRAL, PsycINFO, and ERIC on 2nd February 2020. Only (clustered) RCTs were included. Studies aimed to uptake vaccination rates in adults and comprise a personal interaction between health care provider (HCP) and patient. Three further aspects of the SDM process (patient activation, bi-directional exchange of information and bi-directional deliberation) were assessed. A meta-analysis was conducted for the effects of interventions on vaccination rates. Trial Registration PROSPERO: CRD42020175555.

Results: We included 26 studies in our analysis. The pooled effect size was OR (95% CI): 2.26 (1.60–3.18) for pneumococcal vaccination and OR of 1.96 (95% CI: 1.31–2.95) for influenza vaccination rates. Subgroup analyses among influenza vaccination studies suggested higher effectiveness if all criteria of an SDM process were considered, compared to interventions that focused only on patient activation. Sharing responsibilities among HCP teams also increased influenza vaccination rates. Concerning pneumococcal vaccinations, impersonal patient activation methods, the exchange of information facilitated by a non-physician HCP and deliberation of options enabled by a physician were successful.

Conclusion: This systematic review and meta-analysis provide evidence that SDM processes can effectively increase adult vaccination rates. With most patients being vaccinated in outpatient care, especially in primary care practices, our findings are of direct relevance for HCP and vaccination service delivery. Further studies with more detailed descriptions of SDM implementation modalities is necessary to understand which components of SDM are most effective.

KEYWORDS Shared decision making; vaccination; influenza; pneumococcal disease; systematic review; adult
Impact of multimorbidity on healthcare professional task-shifting potential in patients with type 2 diabetes in primary care: A French cross-sectional study

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Background: Increasing patient complexity and shortage of doctors lead to consider more interprofessional collaboration.

Research question: To estimate the transferability of care processes from general practitioners (GPs) to allied healthcare professionals and the determinants of such transferability.

Methods: A French national cross-sectional multicentre study in 128 family practices. Participants: All patients consulted with their GP over a total number of 20 days. Secondarily, encounters, where type 2 diabetes was a managed health problem, were selected for analysis. Outcome measures: Care processes associated with specific health problems were collected by 54 residents, who consulted under senior GPs’ supervision. Potential process transferability was the primary outcome assessed; including the professionals involved in the collaboration and the conditions associated with any transfer.

Results: From 8574 processes of care that concerned 1088 encounters of patients with diabetes, 21.9% (95%CI 21.1–22.8) were considered eligible for transfer from GPs to allied healthcare professionals (78.1% to nurses and 36.7% to pharmacists). 70.6% of processes were transferable with condition(s), i.e. a predefined protocol, a shared medical record or supervision. The most transferable processes concerned health maintenance/prevention (32.1%), followed by management of cardiovascular risk factors (hypertension (28.7%), dyslipidaemia (25.3%) and diabetes (24.3%)). Multivariate analysis showed that educational processes or a long-term condition status were associated with an increased transferability (OR =3.26 and 1.47, respectively), whereas patients that held higher intellectual professions or that had two or more associated health problems managed during the encounter were associated with a lower transferability (OR =0.33 and 0.81, respectively).

Conclusion: A significant part of GP activity relating to patients with at least diabetes could be transferred to allied healthcare professionals, mainly on prevention and global education to cardiovascular risk factors. Organisational and finance conditions of teamwork as views of patients and healthcare professionals must be explored before implementation in primary care.

KEYWORDS Interprofessional collaboration; diabetes; multimorbidity; cross-sectional study

MENTAL HEALTH

Experiences of patients with common mental disorders concerning team-based primary care and a person-centered dialogue meeting: An intervention to promote return to work

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Background: Common mental disorders in combination with work-related stress are widespread in the western world, not least in Sweden. Various interactive factors, primarily work-related, impact the return to work process, for example; a supportive communicative function between the person on sick leave and the employer may facilitate this process. The aim was to investigate experiences of being part of a collaborative care model, including a person-centred dialogue meeting with the employer and a rehabilitation coordinator as the moderator.

Research question: This study aimed to explore the experiences of persons with common mental disorders who participated in the Co-Work-Care model with a person-centred dialogue meeting and a rehabilitation coordinator as the moderator.

Methods: A qualitative design based on individual interviews with 13 persons diagnosed with common mental disorders who participated in an extensive collaborative care model called the Co-Work-Care model. Persons were recruited as a heterogeneous sample to age, gender, work background and time since the intervention. All interviews were analysed with Systematic Text Condensation by Malterud.

Results: Five codes synthesised the results: (1) a feeling of being taken care of, (2) collaboration within the group was perceived as supportive, (3) an active and sensitive listener, (4) structure and planning in the dialogue meeting, (5) the person-centred dialogue meeting was supportive and provided increased understanding.

Conclusion: Participants experienced the close collaborative contact with the care manager and the rehabilitation coordinator as highly valuable for their rehabilitation process. Participants valued a well-structured dialogue meeting that included initial planning and thorough communication involving the patient, the employer, and coordinator. Further, participants appreciated having an active role during the meeting, also empowering the return to work process.

KEYWORDS Common mental disorders; rehabilitation; collaboration; qualitative study; person-centred dialogue meeting; return to work
Evaluation of a pragmatic c-RCT to discontinue (z)BZD use for insomnia in general practice

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Background: There is a well-known problem of overuse of sleeping pills, benzodiazepines and z-drugs (zBZD) in the Belgian population. A large proportion of people use this type of medication daily. High consumption of (z)BZD is problematic as they have associated with potentially serious medical complications as well as a high social cost. In Belgium, patients need a prescription from their treating physician, mostly their general practitioner (GP) to obtain (z)BZD. Although GPs are aware of the problem of overconsumption, they often encounter difficulties managing the decrease and stopping of (z)BZD. Considering the success of blended care for the treatment of sleeping disorders and the support of substance use disorders, evidence suggests that a blended care approach, combining face-to-face consultations with the general practitioner with web-based self-learning by the patient, is beneficial for the discontinuation of chronic benzodiazepine use for primary insomnia in general practice.

Research question: How can we improve the implementation of blended care interventions to discontinue of (z)BZD use in general practice? This study aimed to evaluate the effectiveness of a blended care approach for discontinuing (z)BZD use in the long-term (12 months) as assessed by toxicological screening and evaluate the implementation process.

Methods: Evaluation of a multicenter, pragmatic, cluster randomized controlled trial, with a mixed method design, inspired by the framework of Grant et al. (2013). Data was collected through an online survey (n = 76), in-depth interviews with patients (n = 18), focus groups with GPs (n = 19), and a usage logbook of the online intervention. Descriptive analysis was used for quantitative data, and thematic analysis for qualitative data.

Results: Common barriers to participation in the trial were patients’ refusal, and a lack of digital literacy, while facilitators were opening the discussion, and patients’ curiosity. Delivery of the intervention differed strongly from GP to GP, with some never informing the patient about their access to the online intervention, and others regularly reviewing the online intervention to have discussion points for the next consultation. Regarding response, there was also much diversity among both patients and GPs. On the one hand, clinical practice changed because GPs, more often than expected, received positive reactions and were empowered to discuss (z)BZD discontinuation. On the other hand, some GPs reported no differences in practice or among patients. In general, follow-up by an expert was the most crucial element in blended care to patients, whereas GPs reported patients’ motivation to be the key to success. Finally, a lack of time was declared by GPs as an essential barrier to implementation.

Conclusion: Pragmatic implementation of blended care for the discontinuation of long-term (z)BZD use seems to be beneficial for the practice of GPs who are interested in digitalisation. Overall, users of the online intervention were optimistic about its design and content. Nevertheless, a more tailored application with feedback from an expert was expected by many patients.

Trial registration: ClinicalTrials.gov NCT03937180.

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‘Never change a winning team:’ GPs’ perspectives on discontinuation of long-term antidepressants

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Background: Long-term antidepressant use, much longer than recommended by guidelines, can harm patients and generate unnecessary costs. Most antidepressants are prescribed by general practitioners (GPs) but it remains unclear why they do not discontinue long-term use.

Research question: To explore GPs’ views and experiences of discontinuing long-term antidepressants, barriers and facilitators of discontinuation and required support.

Methods: 20 semi-structured face-to-face interviews with GP. Interviews were analysed thematically.

Results: The first theme, ‘Success stories’ describes three strong motivators to discontinue antidepressants: patient health issues, patient request and a new positive life event. Second, not all GPs consider long-term antidepressant use a ‘problem’ as they perceive antidepressants as effective and safe. GPs’ main concern is risk of relapse. Third, GPs foresee that discontinuation of antidepressants is not a straightforward process. GPs weigh whether they have the necessary skills and whether it is worth the effort to start this process.

Conclusion: Discontinuation of long-term antidepressants is a complex and uncertain process for GPs, especially in the absence of a facilitating life event or patient demand. Absence of a compelling need for discontinuation and fear of relapse of symptoms in a stable patient are important barriers for GPs when considering discontinuation. To increase GPs’ motivation to discontinue long-term antidepressants, more emphasis on the futility of the actual effect and potential harms related to long-term use is needed.

KEYWORDS Long-term antidepressants; discontinuation; general practitioner; depressive disorder; anxiety disorder; qualitative review
Clinical outcome data of first cohort of chronic pain patients treated with cannabis-based sublingual oils in the United Kingdom – Analysis from the UK Medical Cannabis Registry

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Background: The estimated global incidence of chronic pain is 20%, with the burden expected to rise further as the global population ages. Whilst pharmaceutical management of chronic pain is increasingly limited in primary care, Cannabis-based medicinal products (CBMPs) represent an emerging therapeutic option in managing chronic pain. Despite promising pre-clinical data, there is a paucity of high-quality evidence to support the routine use of CBMPs for chronic pain.

Research question: This study aimed to investigate the health-related quality of life outcomes of patients with chronic pain who were prescribed CBMP oil preparations.

Methods: A case series comprised of patients from the UK Medical Cannabis Registry, who were treated with CBMP oils (Adven™, Emmac Life Sciences Group) for a primary indication of chronic pain was performed. The primary outcomes were the changes in Brief Pain Inventory short-form (BPI), Short-form McGill Pain Questionnaire-2 (SF-MPQ-2), Visual Analogue Scale (VAS) Pain, General Anxiety Disorder-7 (GAD-7), Sleep Quality Scale (SQS), and EQ-5D-5L PROMs, at 1, 3, and 6 months.

Results: In total, 110 patients were included, with most having a diagnosis of chronic non-cancer pain (n = 53, 48.2%). Significant improvements in SQS, EQ-5D-5L pain and discomfort subscale, and Brief Pain Inventory Interference Subscale (p < 0.050) at 1, 3, and 6 months were demonstrated. There were no notable differences between cannabis naïve and previous cannabis users in terms of quality-of-life outcomes. The adverse event incidence was 30.0%, with most (n = 58, 92.1%) adverse events being either mild or moderate in intensity.

Conclusion: Treatment of chronic pain with CBMP oils was associated with improving pain-specific outcomes in addition to HRQoL and self-reported sleep quality. Similarly, relative safety was demonstrated over medium-term prescribed use. Whilst these findings must be treated with caution considering the limitations of study design, this provides a platform to inform future clinical trials.

KEYWORDS Cannabinoids; medical cannabis; health-related quality-of-life; chronic pain

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Heartwatch: A chronic disease management programme for heart disease in Ireland

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Background: In Ireland, the standardised death rate from ischaemic heart disease in Ireland was 133 per 100,000 inhabitants, which was slightly more than the EU rate of 119.4 per 100,000 inhabitants. In 2003, Ireland started Heartwatch, a secondary prevention programme for patients with a history of coronary heart disease, during which patients have up to 4 specialised visits per year across 20% of Irish GP practices.

Research question: Do patient health outcomes improve throughout the programme?

Methods: Data is collected in general practice during structured visits and is held in a central database. Variables collected include blood pressure (systolic and diastolic), cholesterol (total and LDL), waist circumference, as well as HbA1C and fasting glucose for diabetic patients. Data were extracted and analysed using R (4.1.0).

Results: Between signup began in 2003 and May 2021, 21,000 patients participated. Over 17,000 have 1-year follow-up, while more than 7000 patients have participated for at least 8 years. Based on patients with at least 1 year of participation; 73% are male; they sort equally into 0–74, 75–84, and 85+ age bands; and most were retired (56%). Mean systolic BP among patients with 4 yrs. Follow-up was 132.7mmHg down 1.4 from their average baseline. The target systolic BP within the programme is <140mmHg, and divergent results are seen based on wether patients begin the programme above or below this target. For the same cohort, patients starting with a systolic BP >140mmHg see an average decrease of 13.2 (mean 138.8), while patients who enter the programme with BP <140 see a moderate increase of 6.18 (mean 128.7). Other metrics show a similar pattern of divergence.

Conclusion: Patients do see an overall improvement in some targeted health metrics, however, there is a divergence in the direction of metric change based on baseline readings.

KEYWORDS Chronic disease management; cardiovascular; heart disease

Factors that influence the mortality rate among individuals who are over 65 years old and utilise home health care services

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Background: Mortality and morbidity of elderly people have become more critical due to the increasing elderly population. Investigating the conditions that affect the mortality of the elderly and determining the factors affecting survival is therefore an important aspect.

Research question: To determine the conditions affecting mortality in patients utilising home health care, aged 65 years and over.

Methods: In this retrospective cohort study, the following variables were collected: sociodemographic characteristics of patients 65 years and older who were first registered to Marmara University Home Care Services between January and December 2018, the time interval they stayed in-home care, chronic diseases, drug numbers, fall risks, cognitive situations, daily life activity scores, presence of pressure sores, incontinence, sociodemographic characteristics of the caregiver, and the date of death. Descriptive and comparative analyses were performed and p < 0.05 was considered statistically significant.

Results: 67.7% were female. The median age was 81 years. 159 patients died while utilising home care. The average number of days in-home care services was 313.49 (min: 0; max: 572) days. Mortality was found to be related to male sex, malignancy, stool incontinence, daily living activity score, and fall risk score. In survival analysis, men have a 1.407-fold higher risk of mortality than women (95% G.A: 1.008–1.963). Those with a diagnosis of malignancy had 3.489 times higher mortality than those without (95% G.A: 2.341–5.200). The mortality risk is 2.093 times higher in patients with stool incontinence (95% G.A: 1.332–3.290). A one-unit increase in the total score of daily living activity reduces the risk of mortality by 0.735 times (95% G.A: 0.603–0.895). The patients with a high fall risk have a 2.869 times higher mortality than those with low risk (95% G.A:1.795–4.588).

Conclusion: Geriatric syndromes and malignancies are associated with old age and build a significant portion of the causes of mortality and morbidity. Improving the quality of contacts between elderly persons and primary care may help this group of patients.

KEYWORDS Elderly; mortality; home health care services

Men’s knowledge about erectile dysfunction and its management options: Results from primary care study in Latvia

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Background: Different levels of erectile dysfunction (ED) problems affects nearly 17% of men in Latvia (Lietuvietis, 2016). The urgency of the problem grows with age. To objectify data, we used The International Index of Erectile Function (IIEF-5). The study aimed to figure out awareness of erectile dysfunction symptoms, treatment opportunities and the relevance of this topic among men in Latvia.

Methods: This cross-sectional study was conducted in 6 family practices in Latvia, in both urban and rural settings. We invited 300 (50 per practice) randomly selected 40–65 older men to fill in an anonymous online questionnaire using an online randomiser (random.org). To quantitively report ED the IIEF-5. Score below 22 was considered ED. Patients with Diabetes mellitus type 2 were excluded.

Results: Out of 300 men, 246 completed the questionnaire (response rate 82%). According to the collected data 13% (n = 31) men think they have problems with erection and 18% (n = 44) found it difficult to answer this question. According to IIEF-5 index, 29% (n = 78) of respondents scored < 22 points, which corresponds to ED. However, only 23 out of 78 respondents from this group acknowledge that they have erection problems. Our data shows that most respondents (n = 231) have never consulted a family doctor about ED. According to the multiple choice question reasons were different: in 152 cases respondents thought that they do not have ED; 20 admitted being too shy; 27 replied that they can solve the problem without family doctor and other causes.

Conclusion: Despite accessible medicine only nearly a 3rd of the respondents with decreased IIEF considered having erection function problems. Our study implies that men in Latvia rarely talk to a family doctor about ED and that awareness about symptoms and treatment options is still insufficient.

KEYWORDS Latvia; men; erectile dysfunction; family doctor

Rapid detection of NAFLD and its evolutionary stages toward cirrhosis at a targeted population: Multiparametric Liver Ultrasonographic Screening (MLUS) and artificial intelligence with fibrosis risk stratification by family physicians

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Background: NAFLD is a global public health issue, which progressively covers a spectrum of liver pathology, including steatosis, steatohepatitis, fibrosis, and cirrhosis, and their incidence increases exponentially. This study aimed to evaluate the diagnostic accuracy of the multiparametric liver ultrasonographic screening which uses of artificial intelligence and performed by family doctors, compared to the evaluation performed by a specialist, in targeted patients with a high risk of NAFLD/NASH.

Research question: How can we improve the early diagnosis of NAFLD progression to NASH/fibrosis and cirrhosis in high risk-patients in primary healthcare?

Methods: We conducted a multiparametric liver ultrasound screening (MLUS) on 4751 patients, with a high risk of NAFLD/NASH, which presented as inclusion criteria: mixed dyslipidemia, obesity (BMI >30), type 2 diabetes, metabolic syndrome (NCEP criteria), chronic lithiasis cholecystitis, liver cirrhosis, chronic hepatitis B/hepatitis C. APRI-score was
initially calculated to stratify the fibrosis risk. We used a 'standard-protocol', which could improve reproducibility and facilitate dynamic comparison, in grayscale, colour/power-Doppler-US, and Strain-Elastography in standard-liver-scans as: transverse, oblique and longitudinal views. We established the cut off/median values (morphometric ultrasound) of normal ratios, between the anterior/posterior diameters of the normal liver segments (Couinaud)/lobes, with the kidney/spleen long axis ratio (not influenced by fatty tissue loading). The high-risk patients identified with NAFLD were first examined by an experienced family doctor subsequently compared with ultrasound review by the specialist. We have developed a Smart Computerized Diagnostic Algorithm of NAFLD/NASH pathology for US diagnosis by family physicians. The agreement between family physicians and specialists on each finding was evaluated using Cohen's-kappa-coefficient.

**Results:** We identified 4751 patients with NAFLD/NASH, or cirrhosis and subsequently confirmed by the specialist. The positive results of this screening were: 2592 steatosis, NASH/steatofibrosis 971 persons, and 22 cases with cirrhosis. The accuracy of liver US screening by family physicians was: 95.87% with 95%CI = 95.27% to 96.42%, Sensitivity: 97.12%, Specificity: 91.59%, which the specialist subsequently confirmed as the 'Gold Standard' method through fibroscan. The prevalence of liver pathology was: 77.48% with 95%CI: 76.26% at 78.66%. Reports of the two groups of specialists for identifying NAFLD/NASH showed a very-good strength of agreement k = 0.875; 95%CI = 0.864–0.887, standard error: 0.005.

**Conclusion:** The uses of Multiparametric Liver Ultrasound Screening (MLUS), morphometric US (MUS), and artificial intelligence (AI), performed by trained family physicians are comparable to diagnostics performed by the gastroenterologist. The use of a diagnostic algorithm based on ratios between the axes of organs, using artificial intelligence can identify early fatty liver.

**KEYWORDS** Multiparametric liver ultrasound (MLUS); NAFLD screening in primary healthcare; morphometric-ultrasound; APRI Score; artificial intelligence; point of care ultrasonography (POCUS)