how to interpret and adjust treatment can be one of the major limitations in adoption of the testing. Education and training of clinicians as well as interprofessional collaboration will help to reduce this gap and help the implementation process. Another important key factor for integration of stable PGx testing is creating an appropriate infrastructure which should include electronic health record system and clinical decision support system (CDS) tool that can save the time and reduce the burden in finding and interpreting PGx information. Cost of PGx testing is another common obstacle in integrating testing into a clinical practice. High quality pharmaco-economic studies which proves cost-effectiveness of PGx guided therapy could help to build a valid argument for implementation of pharmacogenetic testing into a clinical routine.

During this workshop we will discuss the most common hurdles which stop from integrating sustainable PGx testing into clinical practice and approaches how these burdens can be overcome.

SECTION 5: PATIENT SAFETY AND QUALITY ASSURANCE

PSQ1 - Pharmacist-led antimicrobial stewardship: another focus for patient safety?

Antimicrobial resistance (AMR) has been a growing global health problem for several years now. So much so that by 2050 it is predicted to reach the fatal threshold of 10 million deaths per year, a statistic equivalent to the number of cancer deaths in 2020. This has recently been confirmed by the United Nations report 'Bracing for Superbugs - Strengthening environmental action in the One Health response to antimicrobial resistance', published in February 2023 [1].

The document reiterates the need for a 'One Health' approach that addresses the various risk factors associated with the rise of antimicrobial resistance. The inappropriate use of antimicrobial agents is just one of the areas where more resources need to be invested.

Pharmacist-led Antimicrobial Stewardship (AMS) policies, which have been implemented at various levels for years, represent a good approach to promoting the appropriate use of this very important class of drugs.

As our knowledge of antimicrobial resistance evolves and new forms of resistance become more prevalent, it is gaining importance to promote tailored AMS programmes for specific categories of patients. In this sense, promoting even personalized AMS gives us the opportunity to provide the right treatment for the right patient, against the right micro-organism.

Implementing Therapeutic Drug Monitoring (TDM) as well as other tools to assist hospital pharmacists in managing antibiotic therapy becomes essential to ensure not only effective treatment but also, and above all, safe use.

For these reasons, in order to ensure a conscious and safe approach in your AMS programmes, this seminar will be an opportunity to provide you with useful practical and organisational tools that you can implement in your own reality. In addition, we will see how the aspect of safety takes on a primary value in an environment that is characterised by patients at high risk.

[1] United Nations Environment Programme (2023). Bracing for Superbugs: Strengthening environmental action in the One Health response to antimicrobial resistance. Geneva

PSQ2 - Patient safety II – learning from when things go well and not so well

What else can we do to further improve medication safety in hospitals? And how can we do this in a positive, effective, and efficient way? How can we learn from everyday practice?

In the first part of the seminar, we will try to answer these questions. The Safety-II approach, its importance and the need to combine it with Safety-I activities will be explained. Furthermore, several Safety-II initiatives, that can be easily implemented in all hospitals to improve medication safety, will be discussed. As an example, a project about double-checking of parenteral drugs before administration will be presented. While we know that there is a gap between 'work as done' and 'work as imagined' in double-checking, how can we learn from 'work as done' to improve medication safety?

The second part of the seminar will focus on a medication safety initiative which supports safe prescribing and is based on the principles of microlearning. This project involves the compilation of concise knowledge nuggets called 'Medication Safety Minutes' - and their communication to frontline hospital prescribers. The 'Minutes' blend aspects of Safety-I and Safety-II in that they identify learning points from medication safety events but also highlight or launch aspects of best practice or clinical decision supports to reduce future risk in the organisation - all in a message which takes approximately 60 seconds to read and assimilate. Factors central to success of this project are the innovative design of the messages (very brief, question and answer-style format with minimal text and evocative graphics), along with the use of modes of communication not conventionally employed in medical education, i.e., messaging applications on mobile devices and social media. The initiative is highly transferable to other healthcare settings.

SECTION 6: EDUCATION AND RESEARCH

ER1 - Analysing real world data - methods, opportunities and challenges

There is an increasing interest in providing real world evidence for health care decision-making. Real world data may offer unique opportunities to understand the effectiveness, safety, and outcomes of interventions in real-world patient populations. Real world evidence derives from analysing this data, which can be generated in randomised clinical trials, prospective or retrospective observational studies, or routinely collected data from clinical practice, electronic health records, health registries, and other sources. Real world data can be useful to investigate, for example, the size and characteristics of a specific patient group of interest even over longer time periods, to describe the current standard of care in a patient population, or to identify rare adverse events.

However, there are as well challenges and limitations of using real world data for generating evidence. These challenges include data quality and completeness, selection bias, or possible confounding. Therefore, before relying on real world data in clinical decision making, the suitability and the validity of the data need to be clarified, as well as the question of whether the used data sources really include the information required (both in quantity and quality).

This seminar will provide the basic knowledge on how to define necessary criteria for the use of real-world data for a specific research question. Besides, it will give insight into the adequate design of a research project with real world data, to finally create valuable real-world evidence.

ER2 - Interprofessional education and research towards better health outcomes

The increased complexity of healthcare systems, the high degree of specialization within the health professions, the burden of non-communicable diseases, scarcity of healthcare providers require effective collaboration among health professionals to optimise patient health outcomes. Collaboration, a term commonly used in health professions education, research and clinical practice, occurs when two or more entities work together to produce a desired and shared outcome. Interprofessional education, the process of preparing people for collaborative practice, is defined as occasions when two or more professions learn with, from and about each other to improve the quality of care. Additional values of interprofessional research are different expertise, ways of thinking and approaches to problems.

To develop and maintain interprofessional clinical practice we need partnerships, shared decision making, mutual respect and trust, responsibility and accountability among healthcare providers. Interprofessional models in education, research and clinical practice need to support students and young professionals to understand their own professional identity while gaining an understanding of other professional's roles on the healthcare team.

Within the seminar, a few successful interprofessional models in education, research and practice from different countries will be presented and discussed.

INT2 - Moving forward with digital clinical education - when ward-based training is not an option

During the recent pandemic, universities across the world have had to change their education methods, from campus based face-to-face teaching to largely digital sessions. Schools of pharmacy providing pre- and post-graduate courses in clinical pharmacy experienced an acute need for improved digital technology to allow for remote experiential education when classroom teaching and ward-based training was not possible. When the situation got back to near pre-Covid-19 conditions, some courses or course-modules remained in a digital form, mainly for practical reasons. It is for example possible to take post-graduate diplomas, in advanced clinical pharmacy practice, completely as distance learning. But how you effectively teach the "soft" skills needed for successful clinical practice – such as communication, teamwork, argumentation, patient interviewing etcetera – remotely?

This session will present a variety of active and engaging teaching methods and examples that can be used remotely and adapted to the teaching needs of different curriculums. The session will help participants build a toolbox for a variety of situations and virtual platforms. The presenters will share ways in which they have been able to make experiences come alive for students across the distance, using technology to allow for remote experiential education and innovative means, and that can be replicated in other settings. The use of simulation tools and rotation design will be discussed.

PHARMACOTHERAPY & YOUNG PROFFESSIONALS

Pharmacotherapy session - Medication management after bariatric surgery

Obesity (defined as a body mass index above 30 kg/m2) is currently a major health issue, with a worldwide prevalence of 13%. It is known that obesity increases the risk of cardiovascular disease, diabetes mellitus, cancer, and many other co-morbidities.

Bariatric surgery is a common applied surgical intervention in patients with obesity to achieve weight-loss. Common techniques for bariatric surgery include the sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB). In SG a smaller stomach is created limiting digestive capacity while with RYGB a small pouch from the stomach is connected directly to the small intestine. Bariatric surgery techniques are associated with physiological changes in the gastrointestinal tract that may therefore lead to changes in oral drug disposition. Depending on the surgical intervention gastric changes can occur such as a decreased transit time and increased pH which can influence the pharmacokinetics and – dynamics of drugs.

For hospital pharmacists it is essential to have general knowledge of the influence of bariatric surgery on the pharmacokinetics of oral drugs.

In this seminar, the consequences of the different surgical interventions are highlighted together with advice on how hospital pharmacists can manage the pharmacotherapy of patients after bariatric surgery.

Pharmacotherapy session - Anticoagulation therapy in the context of women's health

Venous thromboembolism (VTE), which includes deep vein thrombosis and pulmonary embolism, commonly afflicts women of reproductive age. Anticoagulant therapy administered after a VTE diagnosis is frequently associated with excessive menstrual bleeding.

This is not only the case with traditional oral anticoagulation treatments such as warfarin, in fact, the introduction of direct oral anticoagulants (DOACs) for the treatment or prevention of VTE has also contributed to the concerns related to heavy menstrual bleeding (HMB) in women on anticoagulants.

Managing anticoagulation therapy is crucial for women with acute conditions like VTE, where maintaining therapeutic anticoagulation levels is vital. However, the onset of HMB can cause disruption to anticoagulation treatment which could lead to patients missing essential anticoagulation therapy for several days and ultimately causing disease recurrence. This seminar will provide valuable insights into the management of anticoagulation in premenopausal women undergoing VTE treatment, with a focus on minimizing the impact of HMB in these patients.

Young Professionals Session - Beyond borders: Exploring European mobility in hospital pharmacy

This session will bring together hospital pharmacists who have embarked on journeys that took them across borders within Europe, enabling them to gain diverse perspectives and invaluable insights into healthcare systems, pharmaceutical practices, and cultural nuances.

Through a series of shared experiences, participants will explore the motivations, challenges, and opportunities associated with international experiences, both before and after graduation.

The European Association of Hospital Pharmacists (EAHP) is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

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REGISTRATION

Registration Fee Student | 150 €
Registration Fee before 1 December 2023 | 520 €
Registration Fee beginning 1 December 2023 | 610 €
Registration Fee beginning 1 February 2024 | 695 €
Registation Fee Young Professional at 50% of the regular rate
Registration Fee Hospital pharmacy specialization resident student | 250 €

Registration fee includes access to all sessions, the opening reception, the exhibition, lunches on Wednesday and Thursday and coffee/tea during official breaks.

The registration fee does not include VAT.
20% French VAT will be added at the end.

PAYMENT TERMS

Cheques will NOT be accepted. Only payments made in Euro will be accepted. As confirmation of registration, an invoice will be issued after receipt of the Registration form.

CANCELLATION POLICY

Cancellation of individual or group registrations received before 31 December 2023 will be refunded, less 100€ + 20% French VAT per registration/participant, in order to cover bank and administration charges.

For groups, a maximum of 15% of the registrations may be cancelled before 31 December 2023, less 100 € + 20% French VAT, per registration/participant, in order to cover bank and administration charges per participant). No refunds can be made after this date but substitution is always accepted.

All cancellations or changes must be sent in writing by the given deadline to registration@eahp.eu.

NOTE: PLEASE DO NOT SEND INDIVIDUAL REGISTRATION FORMS FOR GROUPS OF DELEGATES.

HOTEL ACCOMMODATION

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NOTE THAT ALL HOTEL BOOKINGS WILL BE MADE THROUGH THE EAHP WEBSITE VIA THE LINK TO THE HOUSING BUREAU.

All payments, changes and cancellations for hotel accomodations will be handled directly by the housing bureau.

Audio and Video presentations from the previous Congress are now available via the EAHP website
www.eahp.eu/publications/webcasts

PROGRAMME SCHEDULE

KEYNOTE 1 - Evolving towards sustainable healthcare systems?

"The first wealth is health", a quote from philosopher Ralph Waldo Emmerson, is more actual than ever. Thanks to innovation our healthcare has become very performant and accessible but nearly unsustainable at the same time. Due to high-price innovative therapies, rising costs, aging, continuing drug shortages and environmental impact the time to change course and to reengineer our healthcare systems is now.
Shorter lengths of stay, possible therapies in day clinics, transmural care and home hospitalization initiatives change the need for resources in the different lines of healthcare while the organizational structure and financing model is still often historically pillarized. Market access entry agreements, pay for performance, pathology financing and fair review of reimbursement criteria (with respect for ICER and ethical questions) are tools to facilitate this transition.
But also human aspects as a promotion of prevention, a healthy life style, healthy work environment for care workers, job satisfaction, work-life balance, shortage in the labour market, task purification, lean administrative burden and potential benefits from automation and digitalization are drivers for a sustainable system.
Last but not least there's more focus on the carbon footprint of our healthcare systems. The pandemic and the financial crisis showed us the importance of local production capacity, a short supply chain and circular economy with minimal waste and medicines residues in nature. Smaller and biodegradable packs can also add to a green pharmacy and in the meantime have positive impact on antimicrobial resistance or overconsumption. Responsible procurement answers to this within the legal possibilities.
In this keynote the main hurdles and drivers are touched in order to give a general vision on how to evolve towards sustainable quality healthcare systems.

KEYNOTE 2 - Impact of climate change on human health: a resilient approach

Climate change is profoundly altering our daily lives. People around the world, in both high- and low-income countries, are increasingly feeling the impact of these changes on their health and well-being, reflecting the effects of continued dependence on fossil fuels. From an epidemiological perspective, climate-related environmental changes are associated with an increase in the incidence of chronic diseases already prevalent in the northern hemisphere, such as cardiovascular disease and mental illness, leading to increased use of related, heavily used western medications. Respirable, waterborne and foodborne toxins and infections, including those transmitted by vectors, may become more prevalent in Western countries, Central and Eastern Asia and North America. As new disease threats arise, there is a growing need for the development of effective medications and treatments. This can drive scientific and pharmaceutical advancements, leading to the discovery of new drugs and therapies that can address not only climate-related diseases but also existing health conditions.
Furthermore, a "horizon scanning" approach can be

a powerful tool for identifying potential future health challenges and preparing appropriate responses. By proactively anticipating these problems, we can allocate resources, enhance preparedness, and invest in research and development to address emerging health threats. This approach should help all of us, including hospital pharmacists, to stay ahead of the curve and mitigate the potential impact of climate change on our health.

KEYNOTE 3 - Reducing problematic polypharmacy - using Action Learning Sets to optimise sustainable medicines use

Each month in England roughly 1 million people receive 10 or more medicines. Almost 400,000 of them are aged 75 or over and over 100,000 of them are aged 85 or over. Risk of errors and risk of hospitalization increase with age, multimorbidity and polypharmacy. Much of the harm from polypharmacy is preventable/ avoidable.

While people can easily understand the problem with the potential overuse of medicines, many clinicians struggle with how to address it with individuals they see within their clinics, wards and pharmacies. Over the past 5 years, we have developed the Polypharmacy Action Learning Sets, aimed at supporting General Practitioners, Pharmacists and other prescribers to improve their skills and confidence to tackle polypharmacy via structured medication reviews with patients. Built on a model funded by the Health Foundation in the Yorkshire and Humber area of England, an independent evaluation by Southampton University of five years of this work led to the commissioning of a national scale-up program across the whole of England.

This keynote will outline how the Action Learning Sets aim to get a better understanding of why medicines that are not clinically appropriate aren't always stopped. They aim to:

1. Understand from delegates the barriers (practical and cognitive) to systematically stopping medicines that are no longer warranted in older patients.

2. Explore with delegates how we can address some of these barriers within General Practice and support better medication reviews.

3. Provide a **deeper understanding** of shared decision making and how to incorporate this into all medication reviews (especially for older people with multimorbidity)

4. Outline some of the many **tools** available to help prescribers to conduct successful medication reviews

5. Replicate the impact already shown in the independent evaluation

This keynote presentation will:

- Tell the journey of the Polypharmacy Action Learning sets over the past 5 years in England
- Share our key learning to date and how you can apply this to your practice
- Outline the impact that these ALS have had on patient care and how they have improved clinicians' confidence in tackling problematic polypharmacy.
- Address where improvements in polypharmacy can support efforts to improve environmental sustainability.

SECTION 1:
INTRODUCTORY STATEMENTS AND GOVERNANCE

IG1 - Sustainable healthcare - opportunities and strategies

Healthcare in Europe is faced with an ageing population, which is likely to challenge our healthcare system as it is today. Hence, we need to rethink our healthcare system to enable us to provide optimal care using the available resources.

According to The World Health Organisation (WHO), a Sustainable Healthcare System may be defined as a system that "improves, maintains or restores health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve it, to the benefit of the health and well-being of current and future generations" (1). In other words, sustainable healthcare is based on the 3 pillars of sustainability (environmental, economic and social dimensions), where healthcare is delivered without damaging the environment, considers the economic dimension and has a positive social impact.

Sustainable healthcare is a broad concept, which provides hospitals and hospital pharmacies with a large array of opportunities and obligations to deliver healthcare in a new way. A core element is to establish or improve existing collaboration with relevant partners in order to think differently and create new solutions.

It is likely that we should focus on patients requiring highly specialised care in hospitals and attempt to keep patients in their own homes as much as possible. That will require better collaboration with primary care and delivery of hospital services in patients' own homes.

Especially technological inventions may assist in improving healthcare delivery over sectors and within hospitals. Examples include e-health solutions such as using e-consultations, which reduces the need for travel and saves costs due to avoiding hospital admissions.

By reaching out to primary care, hospitals may improve collaboration with other players in the field of healthcare such as general practitioners, private pharmacies, nursing homes, medication manufacturers etc. This may prevent disease development and thereby expensive hospital admissions and concurrently improve the quality of care.

By reaching out, hospitals and hospital pharmacies can take responsibility and become a strong partner in ensuring sustainability in our environment.

IG2 - Redispencing of medicines: pros and cons

Redispensing or redistribution (also reuse) of medicines has become an increasingly popular topic in the realm of healthcare sustainability. With the rising cost of healthcare, medicines shortages and the growing concern for the environment, the idea of redispensing medications is becoming more attractive. Medicines redispensing involves collecting and redistributing unused, unexpired medication by patients at home to other patients both to improve patients' accessibility to medications and improve affordability and sustainability of medication use (sustainability of environment).

The benefits of circularity strategies for medicines are numerous, including reduced medication waste, decreased healthcare costs, and increased access to medication for those in need. Conservatively, there are perceived risks associated with the redispensing of medicines, such as safety concerns and potential legal implications and probably therefore these strategies are not currently implemented in many countries.

Another important aspect, if redistribution of medicines becomes as a standard practice should it be focused only on expensive medications from an economic perspective or also on cheaper medications thus maximizing environmental impact.

Despite these challenges, the redistribution of medicines has the potential to significantly contribute to sustainable healthcare practices. Hospital pharmacists could play an important role into the further investigation of the feasibility and safety of medication redispensing programs, and in developing policies and guidelines that support their implementation.

INT1 - Pharmacists' wellbeing - how to take care of those who take care

As healthcare systems around the world strive to give the best possible care for patients amongst increasing workload, financial restraints, shortages of trained professionals and other necessary resources, and the ongoing consequences of the COVID-19 pandemic, healthcare workers resilience is put to the test. WHO describes burnout as a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. Burnout is a growing concern among healthcare professionals including pharmacists, and can lead to emotional exhaustion, decreased job satisfaction, and decreased quality of patient care. More than half of practising pharmacists report experiencing burnout. Associated risk factors include longer working hours, less professional experience, high patient and prescription volumes, excessive workload and poor work/life balance. Being able to detect and address symptoms and causes of burnout among the pharmacy workforce is paramount to ensure sustainability of the healthcare system, and pharmacy leaders have a relevant role to play. It is paramount that healthcare systems promote initiatives to ensure workers well-being. Some well proven strategies include conducting regular surveys to address professionals' level of burnout, improving work conditions, implementing wellness programs, providing resources for mental health, increasing support and training and fostering a positive work-culture.

This session is designed to provide hospital pharmacists with practical strategies to address burnout, improve their mental health, and enhance their overall well-being. The session will be interactive and participants will have opportunities for discussion and reflection.

SECTION 2:
SELECTION, PROCUREMENT AND DISTRIBUTION

SPD1 - The science behind CFP in hospitals for beginners and advanced / CFP in hospitals - facts and figures

Carbon footprint calculation in hospitals involves measuring the amount of greenhouse gases (GHGs) emitted by the hospital's operations. This includes emissions from electricity use, heating and cooling systems, transportation, and waste disposal. The most common GHGs emitted by hospitals include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These emissions are then converted into carbon dioxide equivalents (CO_2e) using global warming potential (GWP) factors, which are used to compare the relative impact of different GHGs. Once the emissions are quantified, they can be used to identify and prioritize opportunities for reducing the hospital's carbon footprint. This process can help hospitals to reduce their environmental impact and to meet regulatory requirements for reporting GHG emissions.

Also medicines have a carbon footprint. In this field the carbon footprint is calculated in a similar way by assessing the greenhouse gas (GHG) emissions associated with the entire life cycle of the medicine, from the extraction of raw materials to the disposal of the finished product. This includes emissions from the production of raw materials, manufacturing, transportation, packaging, and disposal.

The carbon footprint of medicines can also be affected by the type of medicine, the manufacturing process, and the transportation and packaging methods used. For example, some medicines may require more energy-intensive manufacturing processes or may need to be transported greater distances, resulting in a higher carbon footprint.

SPD2 - Hospital formularies going green

A hospital formulary is a list of medications that are approved for use within the hospital or healthcare system. Well-established key criteria to consider when medications are included in the formulary include safety, efficacy, cost-effectiveness, and availability. Developing and maintaining a hospital formulary system, taking into account guidelines, treatment pathways and best available evidence has always been a clear responsibility of hospital pharmacists.

More and more, hospital pharmacies are now starting to understand the impact they can make on the environment and are taking measures towards increased sustainability. Aside from the aforementioned criteria, the carbon-footprint of a medicine and other environmental aspects of its use come into focus.

The carbon footprint of available medicines or other hospital pharmacy products is one criterion that could be considered to inform "green" formulary decisions. However, comparative data on greenhouse gas emissions of drugs occurring throughout their life-cycle is often scarce, absent or not publicly available.

Another approach is taking into account environmental criteria when evaluating, selecting or procuring medicines. There is also already first-hand experience with integrating environmental considerations into tender criteria for medicines, and it is vital for hospital pharmacists to understand the possibilities, the challenges and opportunities of such an approach.

SPD3 - Sustainability in medical devices

Sustainability is an increasingly important concern for medical devices as they are a crucial aspect of modern medical practice, yet their environmental impact is often overlooked. Medical devices are made from materials that have a significant impact on the environment, and their use can result in hazardous waste and greenhouse gas emissions. It is therefore important to address the environmental impact of medical devices and develop sustainable solutions to meet current and future medical needs. Such actions not only benefit the environment but also offer potential economic and social advantages. Hospital pharmacists may play a key role in reducing the environmental impact of medical devices and promoting sustainability through three axes of action: better purchasing, better consumption, and better waste management.

This presentation will explore the environmental impact of medical devices, including their use of materials and natural resources, as well as the waste they generate. It will also delve in concrete examples of sustainable practices that hospital pharmacies can adopt. These include selecting medical devices considering sustainable criteria, optimizing consumption practices and implementing effective recycling and disposal practices. Furthermore, this presentation will also discuss the policies and initiatives at the European level aimed at promoting sustainability in medical devices.

W1 - Sustainability in hospital pharmacy: the to-do-list

Hospital pharmacists play a critical role in promoting sustainability and reducing the environmental impact of healthcare. However, integrating sustainable practices into hospital pharmacy operations can be challenging. Where should we begin? What changes can we implement at the pharmacy level to shift sustainability?

This World Café session will provide an interactive forum to share experiences and strategies for promoting sustainability in hospital pharmacy practices. During the session, participants will be gathered in small groups. They will exchange ideas and share experiences on a particular topic related to sustainable healthcare in hospital pharmacy (sustainable medication use, eco-friendly clinical pharmacy services, waste reduction and recycling, sustainable procurement practices, sustainable energy efficiency, stakeholder engagement, sustainable transportation and logistics, sustainable medical devices use…). Participants will rotate through different discussion groups, allowing for a diverse range of perspectives and experiences to be shared. At the end of the session, ideas of each group will be shared to the whole assembly.

By the end of this World Café session, participants will gain a better understanding of the opportunities and challenges of promoting sustainability in hospital pharmacy, as well as practical strategies and tools for implementing sustainable practices in their pharmacy. With this newfound knowledge, participants will be able to make tangible changes and implement sustainable elements in their pharmacy upon returning to their respective countries. The session will also provide an opportunity for participants to build relationships and networks with peers who share a commitment to sustainable healthcare.

SECTION 3: PRODUCTION AND COMPOUNDING

PC1 - Drug stability in the clinical environment

Hospital pharmacists regularly prepare medicines to meet patient-specific clinical needs. Today, ready-to-administer (RTA) parenteral products, such as anticancer medication, anti-infectives, parenteral nutrition admixtures, and medication for intensive care patients are prepared in pharmacy-based cytotoxic preparation units and intravenous additive services (CIVAS). Other relevant dosage forms prepared in pharmacies for the special need of patients are eye preparations and oral liquid preparations. For each product the shelf-life or in-use stability is to be assessed and given on the label by the responsible pharmacist. Therefore, knowledge and expertise about stability of different dosage forms, degradation pathways, stability testing, and assessment of physicochemical, microbiological, and pharmacological stability is relevant. Stability assessment depends on the type of preparation, the preparation procedure, storage conditions, and the availability of stability data in the literature. Relevant information can be retrieved from databases, original publications or even stability studies performed by the pharmacy department itself. There are several guidelines published regarding the 'Good Stability Testing' of ready-to-administer parenteral preparations derived from licensed products. In each case, a stability-indicating and validated method must be used. Published physicochemical stability data can be used to assess the in-use stability of an individual preparation the better the more similar the internal and external stability-determining factors are.

When standardized preparations and dose-banded preparations are prepared in series or batches in advance, long-term stability data is needed. However, it will be harder to find literature data as quality controls are mandatory in batch production. Shelf-life of ophthalmic solutions and liquid oral dosage can also be assessed based on literature data. The safest way is do the preparation and labelling according to magistral formularies.

Our utmost goal is to use knowledge on stability and compatibility in conjunction with our expertise in pharmaceutical technology to ensure the safe and efficacious administration of pharmaceutical preparations. In the first part of the seminar, general aspects of stability assessment will be presented. In the second part, good and bad examples of stability studies of pharmaceutical preparations and pitfalls of stability assessment will be discussed.

PC2 - Compounding without frontiers, cooperation over country borders

During times of limited resources, both in terms of personnel and materials, any initiatives that lead to the optimization of available resources are highly advisable.

A clear division has been observed between new "and sometimes" innovative medications, which are readily available, and older, typically cheaper medications that, despite their usefulness, are frequently subject drug shortages. When an essential medication is not available on the market, the hospital pharmacist is the only professional with the necessary drug manufacturing knowledge to prepare it within the hospital. Depending on the degree of complexity in its manipulation, there may be hospital pharmacies without the necessary conditions for manufacturing such medications, specially sterile compounding. In these situations, the possibility of organization between hospitals is already a reality, which varies greatly from country to country.

Cooperation over country borders can help to improve the quality assurance and quality improvement of compounded drugs used in hospitals. When hospitals collaborate with other institutions and organizations across borders, they can benefit from a wider range of expertise and resources. For example, hospitals can share information about the best practices for compounding medications, as well as the latest research and developments in the field, in a interprofessional collaborative practice. They can also share resources, such as specialized equipment and facilities, to ensure that compounded drugs are produced safely and effectively. This might be crucial particularly in the production of drugs that are in short supply, not commercially available, or in cases of allergies to a specific ingredient in a commercial medication.

Besides European Association of Hospital Pharmacists (EAHP), others internationals associations are promoting compounding safety standards and guidelines, as The Alliance for Pharmacy Compounding in U.S. or the Canadian Hospital Pharmacy Compounding Collaborative. The European Commission EU4Health programme 2021-2027 has a financial incentive for cross-border collaboration and partnerships to strengthen European health systems. Council of Europe Resolution states that "Collaboration between national authorities, professional bodies and intergovernmental organisations should therefore be strengthened to continue to develop and share harmonised standards and best practices for the safety and quality of the process of medication use".

W2 - Check of Compounding Appropriateness

In 1999, the Institute of Medicine published their famous report, 'To Err is Human', in which it was shown that medication errors (MEs) contribute to mortality in an important way. It was highlighted that optimization of pharmacotherapy, with an emphasis on avoiding MEs, is the key element to improve patient safety. Serving as a bridge between clinical decision support systems (CDSS) at the moment of prescribing and front office clinical pharmacy services, clinical validation of medical prescriptions has gained importance in many European countries as it offers possibilities to add significantly to patient safety in an efficient and cost-effective manner. Different hospitals therefore implemented the Check of Medication Appropriateness (CMA). Within most clinical validation services electronic patient records are screened (based on clinical rules integrated in the hospital information system (HIS)) for potentially inappropriate prescriptions generating a worklist to be reviewed by a clinically trained hospital pharmacist. The system helps to reduce the number of potentially adverse drug events (ADE's) and stimulate patient safety.

Next to performing clinical pharmacy services, hospital pharmacists are responsible for compounding of drugs. Although the benefit of clinical validation has been proved in several studies, this service is often only implemented for commercially available drugs and yet missing for prescriptions of compounded drugs. Patient incident reports and implicit checks reveal the potential of inappropriate prescriptions for compounded drugs, most certainly regarding wrong dosing. But also, galenic issues (e.g. solubility, osmolarity, precipitation, physicochemical reactions, …) can impact stability or biological availability and therefore the outcome and patient safety. Therefore, a similar service as CMA is developed, called the Check of Compounding Appropriateness (CCA) to screen for potentially inappropriate prescriptions of compounded drugs.

At the start of this workshop the concept, development and results of CCA is highlighted. Different cases with compounded prescriptions will be presented and participants will be asked to analyse these for appropriateness. Implicit checks suggested by the participants will be discussed. Next, an explicit screening tool checking for clinically relevant medication problems will be applied. Participants will be asked to identify/prioritize relevant aspects for CCA and discuss facilitators and barriers when it comes to implementation in their own hospital based on the hospital needs.

SECTION 4: CLINICAL PHARMACY SERVICES

CPS1 - Engaging patients for efficient clinical pharmacy services

The demand for healthcare is on the rise in Europe, leading to concerns about the strain on the healthcare system posed by the shortage of manpower, an aging population, and greater healthcare costs. Hospital pharmacists face the challenge of delivering high-quality clinical pharmacy services while working efficiently with healthcare teams. However, how are patients engaged in these healthcare teams?

A growing body of evidence suggests that a solution to the current problems of healthcare sustainability is the active involvement of patients in health management through the empowerment of their abilities. Engaging patients' abilities to participate in their own health management can result in better outcomes for clinical pharmacy services, such as medication reconciliation and patient education. Currently, patients tend to be passive members of healthcare teams. However, recent years have seen patients become more proactive in gathering information and managing their own health status, as exemplified by the rising use of online platforms like PatientsLikeMe and MyHealthTeams.

The World Health Organization's (WHO) program "Health 2020" identifies active patient participation as the main goal for achieving better healthcare results. By facilitating patient engagement and collaboration, patients and healthcare providers can identify areas of improvement in sustainable practices and work together to create a more sustainable healthcare system. Hospital pharmacists can play a key role in achieving important goals towards healthcare sustainability, including cost reduction, improved health outcomes, fewer wasted resources, more prevention, improved service quality, and increased patient satisfaction.

This seminar will explore examples of patient engagement in clinical pharmacy services and propose ways to increase patient involvement to enhance efficiency and quality. By involving patients as active participants in healthcare teams, hospital pharmacists can contribute to the creation of sustainable healthcare systems that benefit patients and healthcare providers alike.

W3 - Medicines shortages: an ongoing matter for emergency departments

While medication shortages have occurred in the past, they have become more frequent and severe in the last decade. These shortages have had a significant impact on emergency departments (EDs), as many of the medications used in critical situations have been affected by shortages.

Medication shortages can lead to medication errors when, for example, physicians are forced to prescribe alternative options with which they are unfamiliar. Similarly, nursing staff who are accustomed to administering one product may cause a medication error when administering its substitute to which they are not familiar.

Hospital Pharmacists (HPs) play an active role in developing and implementing mitigation strategies to overcome the negative impact that medication shortages could have on patients outcomes. Such mitigation strategies include i) dissemination of information on medication shortages that could affect ED, ii) collaboration with ED physicians on the selection and use of substitutes for medications in shortage, and iii) provision of education on safe prescribing and administration of substitute medications.

This interactive session will focus on the mitigation strategies that HPs, in collaboration with ED physicians and nursing staff, use to minimize the adverse outcomes that medication shortages could cause to patients admitted to ED.

W4 - Pharmacogenetic testing-how to make it sustainable?

Over the last decade pharmacogenetic (PGx) testing has emerged as a tool for improving patient outcomes through eliminating and reducing avoidable adverse drug events and by increasing clinical efficacy of the drug.

Despite the growing evidence about benefits of pharmacogenetic testing and development of PGx guidelines, many healthcare settings are facing challenges with its successful adoption and sustainability in a routine practice. Barriers to the implementation of PGx testing can be substantial and difficult to overcome. In order to achieve persistence and stability of the testing local adoption process should be well planned from the onset. Lack of trust and understanding of PGx testing results and knowledge of