No serious adverse effects were reported and no patient discontinued treatment due to adverse effects. One episode of urinary tract infection and one episode of nasopharyngitis were documented.

Conclusion and Relevance Intravenous ustekinumab at 130 mg every 4–6 weeks improves CD inflammatory activity in patients with loss of response or partial response to the standard subcutaneous regimen.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

4CPS-194 EVOLUTION OF HOSPITAL CLINICAL PHARMACY SERVICES IN FINLAND DURING YEARS 2017–2022: A FOLLOW-UP SURVEY

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Background and Importance Pharmacists' involvement in patient care became more common along with system-based medication safety work in Finnish hospitals during 2011–2016. The first national survey was conducted in 2011 and repeated using the same method in 2016. This development is in line with national and international patient safety policy initiatives and European hospital pharmacy statements.

Aim and Objectives The aim of this study was to conduct the third national follow-up survey on hospital clinical pharmacy services in Finland in 2022 and compare the results to the year 2016.

Material and Methods The study was conducted in 2022 as a national online survey targeted to hospital pharmacies (n=22) and medical dispensaries (n=23). The questions were analysed using descriptive statistics and qualitative content analysis.

Results The response rate of the survey was 62% (n=29/45). Clinical pharmacy services were provided in 83% (n=24/29) of the responding units. The number of clinical pharmacy staff increased between 2017 and 2022, and services were provided in more versatile environments. In particular, the services had become more common at admission and in outpatient units, such as first aid, emergency rooms, and outpatient clinics where medication reconciliation is essential. Furthermore, in some units (25%, n=6/24), services were also available in the evenings and during weekends in one responding unit. As in 2016, the system-based medication safety work and the comprehensive development of the medication management system were highlighted also in this survey. The most increased tasks were medication reviews and medication safety audits, whereas in 2016 the most increased task was medication reconciliation. Surprisingly, pharmacists' participation in the patient's discharge had decreased. Despite the increasing prevalence of automation technology and pharmacy assistants, logistic tasks had remained on the same level as in 2016.

Conclusion and Relevance Finnish hospital clinical pharmacy services have expanded in line with national and international guidelines and increasingly concentrate on promoting medication safety. The focus is currently on admission and outpatient units. In the future, more effort should be put into discharge, because it would be particularly cost-effective by decreasing drug-related readmissions.

REFERENCES AND/OR ACKNOWLEDGEMENTS

1. Schepel L, *et al.* Strategies for improving medication safety in hospitals: Evolution of clinical pharmacy services. *Res Social Adm Pharm*. 2019 Jul;**15**(7):873–882.

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4CPS-195 CHARACTERISATION OF INJECTABLE FORMULATIONS AND OPTIMISATION OF THEIR DELIVERY BY ENTERAL TUBE: A PHYSICOCHEMICAL AND PHYSIOLOGICAL APPROACH

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Background and Importance Oral administration of injectables is an alternative for patients with difficulties tolerating solid pharmaceutical forms.

Due to their physicochemical characteristics not adapted to oral administration, gastrointestinal adverse effects can occur, especially in patients with transpyloric feeding tube, especially when they have an osmolarity >500 mOsm/L or pH <3.5.

Aim and Objectives The aim of the present work is to characterise the physicochemical properties of injectable formulations commonly used orally and their gastrointestinal absorption site in order to increase safety in their administration by transpyloric feeding tube.

Material and Methods A literature search was conducted to establish the gastrointestinal absorption site of the active principles (AP) analysed.

For each preparation, pH and osmolality were experimentally determined. The pH was measured with a pH meter (Crison 2006, Hach Lange España, S.L.U., Spain). Osmolarity was determined using the Fiske Model 210 Micro Osmometer (John Morris Scientific Pty Ltd., Australia), considering the density of the active principles studied to be equal to 1 mg/ml. All measurements were performed in triplicate.

Results Of the 24 APs analysed, pH values<3.5 were found in 21% of preparations, which discourages transyejunal administration. In addition, 25% of the formulas administered had osmolarity >500 mOsm/L.

- Of the 13 APs that have bioavailability by transpyloric route, only eight are adequately formulated for this, and another three could be diluted prior to administration to avoid high osmolarities.
- Of the five APs that cannot be administered via the transpyloric route, three of them are also not adequately formulated.
- Of the remaining six APs, whose absorption site cannot be objectified, three have good physicochemical characteristics and with another two this could be achieved by diluting with water.

Conclusion and Relevance Most of APs studied, the gastrointestinal absorption of the drug is not sufficiently characterised,

leading to uncertainty when administered by transpyloric feeding tube.

Many of the injectables have a high osmolarity and therefore require prior dilution, while the pH values of some of them can be an added factor for the development of digestive intolerances.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

4CPS-196 ASSESSMENT OF ORAL DRUG THERAPY REGARDING ABSORPTION DISORDERS IN PATIENTS WITH INTESTINAL OSTOMIES – AN OBSERVATIONAL STUDY

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Background and Importance An insufficient absorption of orally administered drugs may threaten therapy goals. Thus, gastrointestinal alterations associated with ostomy formations may pave the way towards absorption disorders. Although there had been reports, this topic remains not sufficiently studied.[1]

Aim and Objectives The main purpose of this study was to assess oral medication in patients who had newly undergone ileostomy or colostomy formation in order to observe whether surgery led to presence of any drug residuals in the pouches, ineffectiveness of therapy or any other indications of absorption disturbances.

Material and Methods An observational study was conducted between March 2022 and September 2023 at the Division of Visceral Surgery at the hospital. Fifty patients aged 18–80 years, were enrolled. Oral drug therapy of every patient was assessed following ostomy surgery. Prior hospital discharge, an interview was led with the patients to collect additional data regarding clinical status. At earliest, 2–8 weeks after discharge, the patients were interviewed a second time at the ostomy outpatient clinic or by telephone call. Both interviews were led by two pharmacists based on standardised questionnaires.

Results

Sixty-three different agents were administered In the following (table 1), findings regarding drug category are shown. Table 2 presents a drug monitoring carried out to proof impaired absorption of bupropion.

Abstract 4CPS-196 Table 1

Findings	tmax[h] (total number of applied drugs)		
	0,5- 3 (36)	3- 5 (16)	>5 (10)
Impaired disintegration/dissolution	Capecitabine Carvedilol Esomeprazole	Acetylsalicylic acid Aprepitant Bupropion	Pramipexole
Ineffectiveness (based on clinical symptoms and/or laboratory parameters)	Trimethoprim Loperamide	Amlodipine Levothyroxine Tamsulosin	

Abstract 4CPS-196 Table 2

	Value [ng/ml]	Therapeutic range of plasma levels [ng/ml]
Bupropion + Hydroxybupropion	353.0	850–1500
Bupropion	16.0	
Hydroxybupropion	337.0	

Conclusion and Relevance The results of this study confirm that, contrary to assumptions, absorption disorders may also occur in drug therapy which seems to be absorbed rapidly. Therefore, no absolute statements regarding intestinal absorptive capacity can be done. Oral drug therapy of every patient has to be assessed individually based on intestinal condition and applied drug properties.

REFERENCES AND/OR ACKNOWLEDGEMENTS

1. DGKP Mario Gradischnig, Dr. Felix Aigner. MBA FEBS FACS
2. Hasait N, *et al*. The ileostomy patient and his drug therapy – Drug absorption problems of patients with an ileostomy. What to do? *Krankenhauspharmazie.* 2015; **36**(5):229–248.

Conflict of Interest No conflict of interest.

4CPS-197 THE KTIA-SCORAC STUDY: SECURING THE MEDICATION MANAGEMENT OF ELDERLY PATIENTS BY THE SYSTEMATIC EVALUATION OF ANTICHOLINERGIC LOAD SCORES VIA A CLINICAL DECISION SUPPORT SYSTEM

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Background and Importance The use of anticholinergic drugs and their cumulative effects are highly prevalent in older people and are associated with adverse effects and outcomes. However, pharmaceutical analysis to assess anticholinergic risk, remains a challenge due to constrained human resources, insufficient functionalities of prescription assistance software, non-interoperability of hospital information systems and the lack of awareness on the anticholinergic burden among elderly patients.

Aim and Objectives This study aimed to 1/evaluate and stratify anticholinergic scores based on patient profile, admission unit, and class of drugs, 2/propose guidelines for medication management and 3/secure drug related management by reducing anticholinergic patient's exposure.

Material and Methods We conducted a retrospective study including all patients > 65 years admitted in our hospital from 1 April 2023 to 31 May 2023 using the CRIDECO Anticholinergic Load Scales (CALS) integrated in the Clinical Decision Support (CDSS) PharmaClass software 3.0 ®.[1]

Results 1186 patients (n=1316 admissions) were enrolled with 130 patients re-hospitalised. Around 32% of patients with CALS $\geq$ 0 were admitted to the surgical department, 13% to a geriatric department and cardiology-pneumology each. In