Conclusion and relevance The study population had a very advanced age with a high degree of polypharmacy and a high prevalence of PIM. The most frequent drugs involved were nervous system drugs, specially the benzodiazepines. The pharmacist's contribution to review chronic treatment and to detect PIM can improve the safety of patients in the ED.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

5PSQ-092 HOW DOES THE ON-SCREEN DESIGN OF ELECTRONIC PRESCRIBINGSYSTEMS AFFECT SAFE PRESCRIBING? A QUALITATIVE STUDY USING A THINK ALOUD APPROACH

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10.1136/ejhpharm-2020-eahpconf.409

Background and importance User interface design features, such as screen layout, density of information, position of messages and use of colour, may affect the usability of electronic prescribing (EP) systems, with usability problems previously associated with medication errors.
Aim and objectives To explore users' perspectives of the on-screen design features of a commercially available EP system and how these are perceived to affect patient safety.
Material and methods The study was conducted at a large London teaching hospital during 2018–2019. Participants were recruited via adverts on the intranet; all prescribers with experience using the EP system were eligible to participate. We used a mixed qualitative approach. First, prescribers were asked to conduct a prescribing task for a simulated patient using a think aloud approach. Second, we conducted a semi-structured interview with each participant to explore their views in more detail, with a focus on patient safety. Interview questions were developed based on the literature and then piloted. Think aloud and interview transcripts were analysed inductively using a thematic approach. Ethics approval was obtained.
Results Ten participants took part (three registrars, three foundation year 1 doctors, two foundation year 2 doctors and two pharmacist prescribers). Key themes from the think aloud and interview transcripts included: (1) EP design features and process flow; (2) benefits of EP systems; and (3) suggestions for improvement. For instance, design features such as screen features and layout were discussed with regards to impact on workflow, as well as 'information overload'. Suggestions for improvement were made in relation to embedding trust guidelines and making changes to system design (eg, colour, fonts, customisation) to increase information visibility and enhance overall attention. Lastly, a need was expressed for better support for interacting with patients while using the system, as well as making drug–drug interaction alerts more targeted to support medication safety while also avoiding alert fatigue.
Conclusion and relevance We identified specific interface design factors that may improve the usability and/or safety of EP systems, which can be used to inform future experimental research in this area. Limitations include the small sample size; further work should include similar studies on other EP systems.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of interest Corporate sponsored research or other substantive relationships: I supervise a PhD student who is partly funded by a supplier of a commercial electronic prescribing system.

5PSQ-093 EXPLORING EYE TRACKING AS A METHOD TO STUDY USERS' INTERACTIONS WITH A HOSPITAL ELECTRONIC PRESCRIBING SYSTEM: A DESCRIPTIVE STUDY

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10.1136/ejhpharm-2020-eahpconf.410

Background and importance User interface design can have a significant impact on interactions with online systems. Eye tracking is generally accepted as a useful method to study performance in areas such as interpretation of medical imaging. However, there is little evidence of its use to study user interactions with electronic prescribing (EP) systems, an area in which failure to see and act on key information is particularly critical.
Aim and objectives To explore the feasibility of using eye tracking to study EP users' visual attention and behaviour, with a focus on safe prescribing.
Material and methods The study took place at a London teaching hospital from 2018 to 2019. Participants were recruited via the organisation's intranet. Any prescriber with experience of the EP system was eligible to participate. We used Tobii Pro X3-120 integrated screen monitor trackers in a simulation setting. Participants were asked to complete a prescribing task for a test patient, which included prescribing penicillin for a patient with a penicillin allergy. Data collected included videos of the screen showing the participant's scan paths. We segmented the data according to when the user switched screens, and calculated percentage of time spent looking in each of the four quadrants of the screen for each. The study was approved as a service evaluation.
Results Ten prescribers participated. Overall, the highest percentages of fixation points were at the top left and right corners of the screen, where information is provided on allergies and patient information, respectively. However, each prescriber initially prescribed a penicillin and was stopped only by a pop-up alert. The highest number of fixation points was observed during review of the prescription and final signature, followed by review of the allergy alert and the search for drug names and dosages.
Conclusion and relevance Eye tracking is a feasible method for studying EP interactions. The findings will be used to plan a larger evaluation, with the aims of understanding how screen design can help or hinder patient safety, and how type and positioning of decision support information influences the likelihood of it being acted on. Limitations include small sample size; further work should also explore how gaze patterns may differ between novices and experts.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest Corporate sponsored research or other substantive relationships: I supervise a PhD student who is part funded by a supplier of a commercial electronic prescribing system.

5PSQ-094 HOW CAN PATIENT HELD INFORMATION ABOUT MEDICATION IMPROVE PATIENT SAFETY?

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10.1136/ejhpharm-2020-eahpconf.411

Background and importance Studies suggest that in the hospital setting, prescribing errors are most common at admission, largely due to challenges of medication reconciliation. Problems are also common following transfer from hospital into the community and when attending outpatient appointments. Many patients who take medications use patient held information about medication (PHIMed) to improve transfer of medication related information across care settings. However, it is not known how PHIMed is used in practice and the extent to which PHIMed tools available meet the needs of patients and healthcare professionals. Discussion with patients and carers highlighted this as a priority for research.

Aim and objectives To identify how PHIMed is used in practice, barriers and facilitators to its use, and its role in supporting medication safety.

Material and methods We used a mixed methods design comprising two focus groups with patients and carers, 16 semi-structured interviews with healthcare professionals, 60 semi-structured interviews with PHIMed users, a quantitative features analysis of PHIMed solutions available in the UK and usability testing of four PHIMed tools. Participants were identified and recruited in Greater London in 2018, using advertisements on social media, our professional networks and face to face recruitment in outpatient clinics. Findings were triangulated using thematic analysis using distributed cognition for teamwork (DiCoT) models as sensitising concepts. NHS ethics approval was obtained.

Results We found that PHIMed was viewed positively by patients and carers using it and healthcare professionals. We identified a wide range of mechanisms through PHIMed improved medication safety, such as identification of potential drug interactions. However, a key barrier to use was lack of awareness by patients and carers that healthcare information systems are often fragmented, which meant that they had not identified a need for PHIMed. Different PHIMed tools met different needs, with no 'one size fits all' solution. No tools currently meet the core needs of all users.

Conclusion and relevance Healthcare professionals should raise awareness among patients and carers of the potential safety benefits of carrying and using PHIMed, encourage its use during consultations and be able to signpost to some of the tools and features available. PHIMed tool developers should modify their tools in order to meet all core user requirements.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

5PSQ-095 ANALYSIS OF THE TOXICITIES ASSOCIATED WITH TYROSINE KINASE INHIBITORS IN PATIENTS WITH CHRONIC MYELOID LEUKAEMIA

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10.1136/ejhpharm-2020-eahpconf.412

Background and importance Pharmacological toxicity management of tyrosine kinase inhibitor (TKI) use is important in the setting of chronic use in chronic myeloid leukaemia (CML) patients.

Aim and objectives The aim of this study was to describe TKI toxicity in patients diagnosed with CML.

Material and methods This was a retrospective study of patients with CML treated in our hospital with TKIs from June 2010 to July 2019. We collected data on TKIs prescribed, treatment line, toxicities (haematological (TH)/non-haematological (NHT)) according to CTCAE V.5 and time of occurrence, demographic data, Charlson index, Sokal index, concomitant medication, molecular response and dose modifications/discontinuations.

Results A total of 37 patients (19/37 women, median age 59 years (33–89)) were included. The median Charlson index was 2 (0–8). The Sokal index at diagnosis (23/37) was: low (14), medium (6) and high (3). Patients had a median of 4 (0–12) drug prescriptions.

At the time of data analysis, the pattern of TKI prescriptions was: imatinib (23/37), dasatinib (4/37) and nilotinib (3/37) as firstline treatment; and imatinib (4/37), dasatinib (12/37), nilotinib (4/37), bosutinib (2/37) and ponatinib (1/37) as second or subsequent lines of treatment. When the data were collected, 18 patients achieved a deep molecular response (12/37 imatinib and 3/37 nilotinib).

Abstract 5PSQ-095 Table 1

		Imatinib	Dasatinib	Nilotinib
Anaemia	G1/G2	6	4	0
	G3	2	1	0
Thrombocytopenia	G1/G2	4	1	1
	G3	0	1	0
Neutropenia	G1/G2	0	2	0
	G3	0	1	0

Abstract 5PSQ-095 Table 2

		Imatinib	Dasatinib	Nilotinib	Bosutinib	Ponatinib
Diarrhoea	G1/G2	10	3	1	1	1
	G3	1	1	0	0	0
Oedema		9	5	0	0	0
Pleural effusion		0	4	0	0	0
Fatigue		10	6	0	2	1
Musculoskeletal pain		6	0	2	0	0
Fever		12	5	2	1	0
Hypertension		1	0	0	0	0
Cephalea		4	0	0	0	0
Nausea/vomiting		13	2	0	2	0