The frequency of synchronisation errors mean that it is not feasible to use commercially available WAT for remote monitoring of patients and caution is needed if the results are used to guide clinical intervention, rather than simply offer lifestyle advice.

6 A NATIONAL SURVEY OF THE CURRENT PROVISIONS, PERCEPTIONS AND CHALLENGES REGARDING DIGITAL HEALTH EDUCATION IN THE UK MEDICAL UNDERGRADUATE CURRICULUM

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Objective Digital health (DH) is the integration of technologies to tackle challenges in healthcare. Its applications include mobile health, remote & wireless healthcare, artificial intelligence, and robotics. Digital technologies are increasingly being used to deliver routine care, whilst simultaneously patients are increasing their uptake of DH solutions (e.g. wearables).

With the adoption of DH increasing across the NHS, there is a growing need for a digitally literate workforce. However, there are no national standards on DH education for UK medical students. Consequently, this study sought to assess the current provisions, perceptions and challenges regarding DH education in the undergraduate medical curriculum.

Methods An anonymous cross-sectional online survey was developed following a literature search and by collecting iterative feedback from both researchers and external collaborators. The survey consisted of questions in 6 areas: (a) understanding of DH; (b) existing provision of DH education; (c) interest in DH education; (d) preferred means of delivering and assessing DH education; (e) impact of the COVID-19 pandemic on DH; and (f) demographic information.

The survey was administered via Qualtrics from March to October 2021, and disseminated to UK medical students via university mailing lists, social media and student representatives. Quantitative and qualitative data were collected pertaining to demographics, attitudes, preferences, and current provisions regarding DH education. Qualitative responses underwent thematic analysis. For quantitative analysis, R (version 3.5.0) and R Studio (version 1.1a) were used.

Results 514 complete responses were received from 39 UK medical schools in 2021. 57.2% of respondents were female, with a mean age of 22.9 ± 3.2. 65.8% of students considered DH 'extremely important' to future clinical practice, particularly the domains of electronic patient records, telehealth and smartphone applications. However, only 18.1% felt aware of the DH competencies required in clinical medicine. 70.2% of students reported receiving some DH education, with the highest proportion being in the form of lectures or seminars (30.5%, n=157), e-learning modules (28.6%, n=147) and ad hoc teaching during clinical placements (22.8%, n=117). However, only 25.7% felt satisfied with these provisions. Themes for student satisfaction related to a practical teaching approach, delivery of content appropriate for their training stage and coverage of topics in student interest. Conversely, student dissatisfaction originated from inadequate teaching, and subsequent fears of falling behind. 56.1% preferred DH education to be mandatory rather than elective, ideally through hands-on workshops (75.8%) and lectures and seminars (60.4%). 65.4% thought DH proficiency should be assessed in some capacity, of which 75.6% preferred formative assessment.

Conclusion This study represents the first national survey of UK medical students on DH education. Overwhelmingly, the results indicate that medical students recognise the significance of DH and would appreciate better formal integration into their curriculum; which is supported by previous similar studies in the literature. This study also identified how students would prefer to be taught and assessed on DH, in particular that they would prefer it be mandatory yet remain formative at present. Given the increasing ubiquity of DH in clinical practice, it is therefore crucial that universities and wider medical education organisations work to improve and standardise DH education, to better prepare medical students to adapt to the continuously developing digital landscape. This rings especially true in light of the recent COVID-19 pandemic which has highlighted the quintessential nature of DH to medical practice. Our intended future research from this study includes undergraduate focus groups for greater qualitative depth of information, and Delphi panels from wider medical education stakeholders into what should be included in DH education, with the eventual goal of developing a comprehensive and standardised national DH curriculum.

7 HEALTHCARE STAFF PERCEPTIONS ON USING ARTIFICIAL INTELLIGENCE PREDICTIVE TOOLS: A QUALITATIVE STUDY

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Objective Artificial intelligence (AI) predictive tools can help inform the clinical decision-making process by, for example, detecting early signs of patient deterioration or predicting the likelihood of a patient developing a particular disease or complications postsurgery. However, it is unclear how acceptable or useful clinicians find these tools in practice. This project aims to explore healthcare staff' perceptions on the benefits and challenges of using AI tools to inform clinical decision-making in practice.

Methods Healthcare staff (physicians, pharmacists and nurses) working in different departments at one large teaching hospital in the North East were invited to participate in semi-structured interviews. Interviews were conducted between August and November 2021 by zoom videoconferencing, with questions focused on what AI predictive tools they currently use, how they guide daily tasks around diagnosis, management, prevention, prognosis and screening, and what challenges they face with their use. All transcribed files were checked for accuracy. Thematic saturation guided the volume of qualitative data collection. Qualitative data analysis and development of themes was performed for each interview using Nvivo 12 software. Ethical approval was obtained (20/EM/0183, IRAS 280077).

Results Ten healthcare staff were interviewed (physicians (n=7), pharmacists (n=1), surgeons (n=2)) from different medical specialities (e.g., Oncology, Endocrinology, Cardiology, Head and Neck, and transplant surgery). Five themes emerged, including the meaning of the term AI, the usefulness of AI predictive tools in informing clinical decision-making, features that healthcare staff found helpful, and challenges

around their use. Healthcare staff recognised the benefits of AI predictive tools in being able to 'detect deterioration quicker than you would currently do'(05-ID), which informed decisions around patient discharge: 'can you safely send them home (...) or do you want to keep them, in case they do deteriorate' (05-ID). They found AI predictive tools useful when explaining the potential risk of cardiovascular events to patients and encouraging medication adherence 'it does help so much convincing the patient to actually adhere to the medication' (07-Endo).

During COVID-19, AI prediction tools helped identify patients that might potentially need mechanical ventilation and ICU admission. Healthcare staff also felt it was important that AI predictive tools provided reliable information, that was easy to understand, and integrated with the current systems. A concern raised around the use of AI predictive tools was whether they might 'mislead junior doctors or doctors who would not have that much of a clinical sense and would totally depend on it' (07-Endo).

Conclusion This study demonstrated opportunities for the application of AI predictive tools in clinical practice. Concerns raised around the use of these tools should be considered by developers. We recognise that the perceptions of only a small number of clinicians were included mainly due to the increased time pressures on staff during the COVID-19 pandemic. Healthcare staff described essential features that will guide the future development of AI predictive tools with higher potential for application in real practice.

8 EVALUATION OF A TELEMEDICINE MODEL TO DELIVER CATARACT CARE USING IMAGING TECHNOLOGY INSTEAD OF TRADITIONAL F2F PATHWAYS

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Objective To set up and establish a sustainable telemedicine model to deliver cataract care pathway, where the traditional face-to-face cataract assessment clinic is replaced with a telemedicine consult with imaging technology to develop a safe, efficient telemedicine care delivery model in contrast to the current established traditional face-to-face pathways. To study the efficacy, efficiency, safety, patient experience of the new service. To assess usability and review risk of digital exclusion with patients and staff.

Methods Patients referred for cataract surgery from the community are booked into a video clinic (AttendAnywhere) as per date of referral. Patients were not pre-called or pre-selected for the digital pathway. After video consultation and pt confirmed to have symptomatic cataract affecting quality of life, the patient is preliminary listed for cataract surgery and verbally consented. The patient then attends a cataract imaging hub where anterior segment and fundus high resolution photography and optical coherence scans were performed. In addition, patient blood pressure and blood sugar are obtained. The results of the assessments are reviewed by the surgeon remotely to confirm the stratification of the cataract and plan for surgery. Any patient with unexpected findings or abnormal vitals were brought back for face to face review. Post-op patients are follow-up in the community. All patient consultation and imaging were recorded in an electronic patient records (Medisfot) Prospective data collected on patient demographics, access to video consult, referral date, review date, stratification, and outcome of surgery. Patient experience assessed via a post video clinic survey.

Results 403 patients were assessed, 42 excluded from the final data analysis due to erroneous bookings into the clinic. Total 361 patients correctly booked for new cataract assessment were included. 9 patients were brought back for further assessment in a face-to-face clinic as additional abnormalities were found on imaging. 299 listed for surgery (conversion to surgery rate of 82%). Average age of the patient is 74 yrs old. 31% >75 and

17% > 80 years old. 24% patients were the presumed digitally excluded group e.g. elderly, language barrier, care home resident, patient with partial or lack capacity, and lack of technology. To date, 166 patients have completed their surgery and 6 week post-op follow up. 96% reported improvement of vision post surgery. 7% had post-op complications and 3 patients had intraoperative complications. Cases were stratified and operated appropriately by all levels of surgeons, 52% by trainees and 48% by consultants or consultant grade surgeons.

No attendance to the emergency eye care service within 1 month post-operation. Patient survey showed 95% satisfied with care, 57% preferred the video clinic method. 82% would have come to a face to face clinic via a carbon emitting mode of transport, 60% by car.

Conclusion Digital cataract service (DCS) has demonstrated it is safe; patients with abnormal findings on imaging clinics were correctly stopped from proceeding with surgery. 96% of patients reported improvement of vision post surgery, this is better than the national audit standard of 95%. 4% patients had post-op complications which is lower than the 14% audit standard.

DCS is effective as it has a high conversion to surgery rate at 82% compared to the national average of 74%. The stratification of patients and their cataracts enabled surgery to be carried out safely by all levels of surgeons.

For patient experience it shortened the overall assessment time to 1.5 hours compared to a 3–4 hour wait in a face-to-face clinic. It also maximises the efficient use of staff, equipment and space; patients are consulted/assessed at time of arrival with no idle staff in the process. 24% patients with demographics traditionally included in the digitally excluded group were able to access the service by proxy, it also enabled clinicians to bring care to patients' home environment.

Overall DCS provides a safe, effective, efficient way of delivering cataract care with reduced carbon footprint by minimising patient and staff travelling.

9 FREE TEXT NOTES ADDED TO A PATIENT'S ALLERGY STATUS IN ELECTRONIC PRESCRIBING SYSTEMS DIGITALLY ANALYSED FOR BETTER USABILITY

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Objective Electronic prescribing systems often provide a drop-down list of medications and pre-specified reactions to record a patient's allergy status. This list is non-exhaustive; less common reaction types require the user to add a free text note.

The Careflow Medicines Management EPMA system provides decision support preventing a prescriber initiating a drug a patient has a recorded reaction to. Where a free text