Royal College of Physicians

RCP regional poster competition digest 2023

Abstracts

Introduction

Since 2021, the RCP regional team have been running virtual poster competitions across all English regions, Wales and Northern Ireland to ensure that trainees and physician associates are able to participate in a competition locally without the need to travel to a conference.

The RCP regional poster competition is just one of a host of RCP membership benefits with the criteria that the lead author for each submitted abstract must be a subscribing member of the Royal College of Physicians. For more information on the membership benefits available, please visit www.rcp.ac.uk/membership.

The 2023 competition was open to trainees at all levels, including medical students, foundation year, IMT, ACCS-AM or ST3-7 (or equivalent) and MTI doctors. Physician associates and physician associate students were also invited to participate.

Posters could be based on the following topics:

- Research and education
- Examples of good practice, service improvement and innovation
- Audit / quality improvement project
- Innovation in medical education/training
- Case study

In total, 194 applications were accepted for shortlisting by our regional panel of judges with a total of 139 trainees being selected to present their poster across the 10 virtual competitions.

'Thank you so much for this award. It really means a lot and has really spurred my enthusiasm for research and continuing to expand medical services.' – Dr Osman Khan – Wessex winner

'Thank you for such a great afternoon with the RCP poster competition South-West. It was great to see and hear all the different things going on in the Deanery – it is a brilliant opportunity for myself and other trainees to practice presenting. Thank you so much for organising this and please pass on my thanks to the judges and your colleagues who also helped with this event'. – Dr Nicola Maddox, Southwest shortlisted trainee

One winning and one highly commended poster were announced in each region and nation, and these are included in this 'RCP regional poster competitions 2023' digest. The lead authors of the winning and highly commended posters also receive a free virtual place at Medicine 2024.

All shortlisted abstracts are also considered by the editorial teams of the RCP journals to see if they offer scope for expanding into full journal articles for potential publication in one of our peer reviewed journals. In 2023, twenty-two lead authors were invited to expand and resubmit their abstract for potential publication.

Congratulations to the winners and the highly commended award winners, but also to those shortlisted within their region/nations. We hope you enjoy this digest of the 2023 competition.

Applications for our 2024 poster competition will open in March 2024. If you would like to receive an alert, please email UKRegions@rcp.ac.uk.

RCP Regional team

Eastern – overall winner

A multi-cycle quality improvement project to improve the quality of discharge summaries: focus on diagnosis at discharge

Lead author: Jigisha Amin – IMT 2, Basildon University Hospital
Co-authors: Sabina Momtaz, Yasser Matter, Chukwunonso Nwatarali

Introduction

Discharge summaries (DS) are a vital form of communication between primary and secondary care. Inaccurate or missing diagnoses can result in a false clinical picture, poor quality of care and higher risk of readmission.[1] The diagnosis at discharge section was not completed for a large number of DS from a renal ward. Dialysis and renal transplant patients are a vulnerable population with complex care needs. Accurate diagnoses are important in ensuring patient safety and high level of ongoing care in the community.

Objective

To evaluate the quality of DS, focusing on the inclusion of diagnosis at discharge. Target: 75% of all DS should have a diagnosis stated which has been approved by a senior doctor and is ICD-10 coded.

Methods

DS from a renal ward were evaluated and multiple plan, do, study, act (PDSA) cycles were conducted with the following interventions:

- Anonymous doctors survey to identify barriers
- Human factors – civility sessions
- Coding for non-coders training
- Board-round checklist
- New doctor's Induction

Results

- Percentage of DS with diagnosis section completed was 17% at baseline, 55% after cycle 1 and 84% after cycle 2.
- Percentage of diagnosis that was approved by a senior doctor was 0% at baseline, 0% after cycle 1 and 90% after cycle 2.
- Percentage of ICD-10 coded diagnosis was 0% at baseline, 0% after cycle 1 and 62% after cycle 2.

Conclusions

Overall, there was improvement in the percentage of discharge summaries with a diagnosis that was approved by a senior doctor. For sustainability of interventions, we need to retain consultant's interest in this project and recruit members of the MDT who do not rotate between wards.

References

1. Tsopra R, Wyatt JC, Beirne P, Rodger K, Callister M, Ghosh D *et al*. Level of accuracy of diagnoses recorded in discharge summaries: A cohort study in three respiratory wards. *J Eval Clin Pract* 2019;25:36–43. https://doi.org/10.1111/jep.13020.

Eastern – highly commended

Accuracy and reliability of non-specialist or patient-led visual acuity tests: a systematic review

Lead author: Arun Thirunavukarasu – medical student, Addenbrooke's Hospital
Co-authors: Aaron Limonard, Shalom Savant, Viral Gudiwala, Refaat Hassan

Introduction

Self-administered visual acuity (VA) tests allow patients and non-specialists to assess vision without eye health professional input. Validation in pragmatic trials, where tests are conducted without specialist assistance, is necessary to justify deployment in general practices, emergency departments, and other non-specialist settings.

Objective

Identify pragmatic validation trials of self-administered VA tests and explore whether any tests exhibit sufficient accuracy and reliability for clinical deployment.

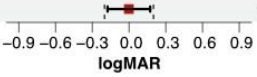
Method

Systematic review undertaken in accordance with a preregistered protocol (CRD42022385045). The Cochrane Library, Embase, MEDLINE, and Scopus were searched. Screening was conducted according to the following criteria: (1) English language; (2) primary research article; (3) visual acuity test conducted out of eye clinic; (4) no clinical administration of remote test; (5) accuracy or reliability of remote test analysed. Quality assessment was conducted with QUADAS-2.

Results

Ten studies were identified.[1-10] One study was at high risk of bias[1] and two studies exhibited concerning features of bias.[2,3] Three trials—of DigiVis, iSight Professional, and Peek Acuity—from two studies exhibited remote test accuracy comparable to clinical assessment (Fig 1).[1,9] All other trials exhibited inferior accuracy, including conflicting results from another study of iSight Professional and Peek Acuity.[6] Two studies evaluated test-retest agreement—one trial showing that DigiVis is as reliable as clinical assessment.[6,9] The three most accurate tests required access to digital devices.[1,9]

Citation	Index test	Reference test	Bias (LLOA, ULOA)
Adyanthaya and B, 2022	iSight Professional	Snellen chart	0.06 (0.04, 0.10)
	Peek Acuity	Snellen chart	0.07 (0.04, 0.10)
Almagati and Kran, 2021	FrACT	Clinic assessment	−0.09
Bellsmith et al, 2022	University of Arizona/Banner Eye Health Chart	Snellen chart	−0.07 (−0.39, 0.25)
	Verana Vision Test	Snellen chart	−0.12 (−0.50, 0.26)
	Farsight.care	Snellen chart	−0.13 (−0.53, 0.27)
Chen et al, 2022	Acustat	Snellen chart	(−0.2278, 0.2235)
Chen et al, 2021	Letter Distance Chart PDF document	Snellen chart	−0.02 (−0.31, 0.26)
	Letter Distance Chart PDF document	Snellen chart	−0.02 (−0.31, 0.27)
Painter et al, 2021	iSight Professional or Peek Acuity	Clinic assessment	−0.14 (−0.88, 0.60)
Pathipati et al, 2016	Paxos Checkup	Rosenbaum near card	−0.06
Siktberg et al, 2021	ETDRS vision chart PDF document	ETDRS chart	0.078
Thirunavukarasu et al, 2022	DigiVis	Clinic assessment	−0.001 (−0.175, 0.173)



Conclusions

DigiVis exhibits suitable accuracy and reliability for vision assessment in non-specialist settings. Other VA tests may have potential, but require further validation in pragmatic trials. Self-administered VA tests can empower non-specialists and patients to assess.

References

1. Adyanthaya AB. Comparison of visual acuity measured by ETDRS based smart phone applications I sight pro and Peek acuity versus traditional Snellen's chart visual acuity in children 6-14 years in a tertiary care institute in India. *Indian Journal of Clinical and Experimental Ophthalmology* 2022;7:634–7. https://doi.org/10.18231/j.ijceo.2021.127.
2. Almagati R, Kran BS. Implications of a remote study of children with cerebral visual impairment for conducting virtual pediatric eye care research: virtual assessment is possible for children with CVI. *Front Human Neurosci* 2021;15:733179. https://doi.org/10.3389/fnhum.2021.733179.
3. Bellsmith KN, Gale MJ, Yang S *et al*. Validation of home visual acuity tests for telehealth in the COVID-19 era. *JAMA Ophthalmology* 2022;140:465–71. https://doi.org/10.1001/jamaophthalmol.2022.0396.
4. Chen E, Mills M, Gallagher T *et al* (The Macustat Study Group). Remote patient monitoring of central retinal function with MACUSTAT R: A multi-modal macular function scan. *Digit Health* 2022;8:20552076221132105. https://doi.org/10.1177/20552076221132105.
5. Chen TA, Li J, Schallhorn JM, Sun CQ, Comparing a home vision self-assessment test to office-based Snellen visual acuity. *Clin Ophthalmol* 2021;15:3205–11. https://doi.org/10.2147/OPTH.S309727.
6. Painter S, Ramm L, Wadlow L, O'Connor M, Sond B. Parental home vision testing of children during Covid-19 pandemic. *British and Irish Orthoptic Journal* 2021;17:13–19. https://doi.org/10.22599/bioj.157.
7. Pathipati AS, Wood EH, Lam CK, Sáles CS, Moshfeghi DM. Visual acuity measured with a smartphone app is more accurate than Snellen testing by emergency department providers. *Graefes Arch Clin Exp Ophthalmol* 2016;254:1175–80. https://doi.org/10.1007/s00417-016-3291-4.
8. Siktberg J, Hamdan S, Liu Y *et al* .Validation of a standardized home visual acuity test for teleophthalmology. *Ophthalmology Science* 2021;1:100007. https://doi.org/10.1016/j.xops.2021.100007.
9. Thirunavukarasu AJ, Mullinger D, Rufus-Toye RM, Farrell S, Allen LE. Clinical validation of a novel web-application for remote assessment of distance visual acuity. *Eye* 2022;36:2057–61. https://doi.org/10.1038/s41433-021-01760-2.
10. Van Der Star L, Mulders-Al-Saady R, Phan A *et al*. First clinical experience with ophthalmic e-device for unaided patient self-examination during COVID-19 lockdown. *Cornea* 2022;41:353–8. https://doi.org/10.1097/ICO.0000000000002945.

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East Midlands – overall winner

Civility in medicine: creating compassionate culture in the workplace

Lead author: Syeda Nafisa – ST7, University Hospital of Derby and Burton
Co-authors: Aklak Choudhury, Sandhya Abraham, James Crampton, Seema Kumari, James Woodard

Background

Workplace incivility has significant consequences for individuals, teams and organisations.[1] In 2018, the estimated cost of bullying and harassment to the NHS was over £2.3 billion.[2] The majority of medical professionals agreed that workplace disruptive behaviours are linked to adverse events with 71% believing that such behaviours escalate the likelihood of medical errors. Furthermore, 27% perceive an elevated risk to mortality.[3] In this project, we reviewed the extent of incivility at Royal Derby Hospital (RDH), its impact on doctors and intervened to improve this.

Method

A questionnaire was sent to all non-consultant grade doctors in RDH via email over a 6-week period. Data for demographics, grade of work, place and nature of incivility from 232 responders were collated and analysed.

Results

Only a fifth of responders reported not experiencing incivility. More than half (56%) faced incivility while referring patients to other specialties and a third faced it during handovers. Over 50% of responders perceived uncivil conduct from consultants and middle grades. Data showed incivility was most prevalent in the emergency department at 18%, with medical wards close behind at 19%. We also found that 60% of the responders were not aware of the trust's published Interprofessional-standards (IPS).

Conclusion

Our results showed that incivility is common among senior doctors, including consultants. Civility appears to be worse in departments with high pressure and workload such as medicine and ED. At RDH, we have initiated various interventions, including development of e-learning, emphasis on IPS during inductions, infographics, and compassionate and inclusive leadership workshops to tackle incivility. Respectful, supportive environments may create healthy workplace cultures, minimising preventable adverse events and improving patient safety.

References

1. Cheetham J and Turner C. Incivility and the clinical learner. *Future Healthcare J* 2020;7:109–11. 10.7861/fhj.2020-0008.
2. Kline R, Lewis D. The price of fear: Estimating the financial cost of bullying and harassment to the NHS in England. *Public Personnel Management* 2018;39:1–10.
3. Rosenstein AH, O'Daniel M. A survey of the impact of disruptive behaviours and communication defects on patient safety. *Jt Comm J Qual Patient Saf* [Internet] 2008;34:464–71. Available from: https://www.ncbi.nlm.nih.gov/pubmed/18714748

East Midlands – highly commended

Inpatient hypoglycaemia in patients with diabetes and moderate/severe frailty is associated with prolonged length of stay

Lead author: Eka Melson – IMT, Leicester Royal Infirmary
Co-authors: Mohamed Fazil, Hnin Lwin, Kevin Thottungal, Anu Thomas, Faseeha Aftab, HayMar Tun

Introduction

People with diabetes and frailty require less intensive HbA1c targets and treatments. Studies have shown a low rate of deintensification in this cohort of patients contributing to hypoglycaemia and hospital admission. The aim of this audit is to assess for the frequency of inpatient hypoglycaemia and factors associated with length of stay in patients with diabetes and moderate/severe frailty.

Methods

We retrospectively collected data on patients with diabetes and clinical frailty score (CFS) of ≥6 who were discharged from the medical unit in 2022. Data, including patients' baseline characteristics, medications, inpatient hypoglycaemia (capillary blood glucose <4mmol/l), and length of stay, were collected. Multivariate regression was conducted using StataSE v1.7 to assess the association between patients' characteristics, medication use, inpatient hypoglycaemia and the length of hospital stay.

Results

Four-hundred and thirty-six patients were included in our analysis [Age: 79.5 years (IQR=71-86). 52.1% (n=227/436) were women and median CFS was 6 (IQR=6-7). 29.4% (n=128/436) of the admissions were due to falls. 17.2% (n=75/436) had hypoglycaemia during admission. Median length of stay was 8 days (IQR=4-16 days). Regardless of age and CFS, multiple regression showed positive association between occurrence of any episode of inpatient hypoglycaemia and the length of stay [β=6.65, $p<0.001$].

Conclusion

This audit shows a high rate of inpatient hypoglycaemia in patients with diabetes and moderate/severe frailty. Inpatient hypoglycaemia is also associated with prolonged length of stay highlighting the importance of deintensification. More studies are needed to identify factors associated with hypoglycaemia in patients with diabetes and moderate/severe frailty during their hospital admission.

East Midlands judges

Dr Aamer Ali – RCP regional adviser, East Midlands North

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Kent, Surrey and Sussex (KSS) – overall winner

Transforming the international medical graduates induction at Maidstone and Tunbridge Wells NHS Trust to create a sustainable and supportive induction programme

Lead author: Ellena Bournat – ST6, Tunbridge Wells NHS Trust
Co-authors: Sam Malomo, Aalia Pagarka, Kubra Shah,

Background

NHS vacancy statistics highlight the need to support the current NHS workforce.[1] International medical graduates (IMGs) working as junior clinical fellows (JCFs) provide an excellent means of providing this clinical support. Literature highlights the challenges faced by IMGs as part of their transition to working within the UK including a lack of understanding of processes within the NHS and lack of focused IMG induction.[2]

Objective

To review the current induction process at Maidstone and Tunbridge Wells NHS Trust (MTW) and create a new IMG specific induction programme. By investing in the medical education of JCFs, we aim to reduce the financial burden of expenditure on agency and bank staff and provide a more sustainable workforce.

Method

We engaged with the IMGs working at MTW to review the limitations of the current process. This formed the basis for creating new induction content. This content included information relating to relocation within the UK. Collaborative working groups were set up with the medical education fellows, simulation lead and a JCF-specific clinical recruitment team was created.

Benefits

The induction process has become more streamlined with a focus on pre-induction information sharing. A more structured 4-week shadowing timetable has been created. A buddy scheme has created mentorships across the trust. IMGs are now being included in the 'Multi-professional simulation' programme and offered the same educational opportunities as medical trainees.

Conclusion

A sustainable and supportive induction programme has been created to assimilate the JCFs into MTW. Post-induction reviews are pending.

References

1. https://digital.nhs.uk/data-and-information/publications/statistical/nhs-vacancies-survey/april-2015---december-2022-experimental-statistics [Accessed 15 April 2023].
2. Melroy R. Difficulties and educational challenges faced by international medical graduates in trust grade roles in the UK. *Br J Hosp Med (London)* 2022;83: 1–7.
3. Kehoe A, Metcalf J, Carter M *et al*. Supporting international graduates to success. *The Clinical Teacher* 2018;15:361–65. https://onlinelibrary.wiley.com/doi/abs/10.1111/tct.12760 [Accessed 12 April 2023].

Kent, Surrey and Sussex (KSS) – highly commended

The clinic project: a wicked problem with a happy ending

Lead author: Rebecca Evans – IMT, Darent Valley Hospital

Background

Internal medicine training (IMT) doctors must attend at least 80 outpatient clinics over 3 years to meet curriculum requirements.[1] The format of outpatient experience varies at individual trusts with varying degrees of success. At Darent Valley Hospital, IMTs traditionally attended outpatients on an ad-hoc basis, but often not without difficulties (Fig 1).

Objective

We proposed providing dedicated ring-fenced weeks per rotation for IMTs to attend outpatients.

Methods

A business proposal to employ a full-time doctor to cover inpatient duties during the outpatient week was accepted and funded by HEE. Each IMT1/2 doctor is allocated clinic weeks each rotation; on-call shifts and trainee preferences are considered. Data of activities undertaken by trainees during each week was collected. Trainees provided feedback about the scheme via online survey in February–March and June 2023.

Results

During the first rotation, seven trainees attended 72 clinics in total, plus seven sessions used for other educational opportunities. Twelve trainees have provided feedback; 100% of respondents reported that the outpatient week was ‘very’ or ‘extremely useful’. Qualitative feedback described the week as ‘the best approach’ and ‘an incredible learning experience’. Respondents highlighted the importance of protected training time, ability to attend morning clinics, and opportunity to gain procedural competencies.

Conclusion

By providing proof of concept to the trust, we have been successful in getting agreement for this scheme to be continued and funded locally. This could be a strategy and approach that could be emulated and implemented at other hospitals.

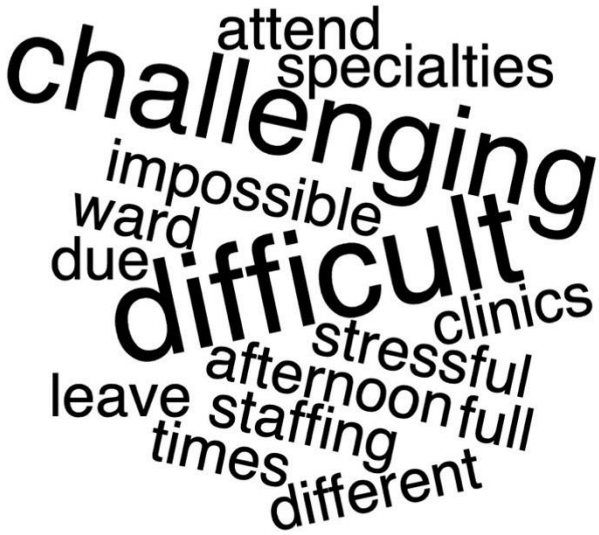

Fig 1: A ‘wordcloud’ capturing trainees’ description of their experience attending clinics prior to the introduction of the clinic week.

References

1. Joint Royal Colleges of Physicians Training Board. *The internal medicine stage 1 curriculum*. www.jrcptb.org.uk/sites/default/files/IMT%20stage%201%20curriculum%20information.pdf [Accessed 28 June 2023].

Kent, Surrey and Sussex (KSS) judges

Dr Deborah Bosman – RCP regional adviser, Kent, Surrey and Sussex

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London – overall winner

‘Don't take blood in vain’: a quality improvement project aimed at reducing blood testing in medical inpatients by focusing on clinical need-directed tests

Lead author: Tabea Haas-Heger – foundation doctor, Kingston Hospital
Co-author: Nidhi Vedd

Introduction

Laboratory pathology investigations pose a £2.5 to £3 billion burden on the NHS.[1] A review of pathology services in England estimated that 25% of pathology tests were unnecessary,[2] resulting in wastage of resources and time. Furthermore, it may lead to patient discomfort and unintended clinical consequences including increased length of stay and transfusion requirements.[3] By aligning our initiative with newly published guidance on blood testing intervals from the Royal College of Pathologists (RCPath),[4] this QIP aimed to reduce the number of unwarranted blood tests requested at Kingston Hospital NHS Foundation Trust (KHFT).

Methods

A fishbone analysis confirmed the reasons for excessive blood testing are multifactorial,[5] but a locally distributed survey identified lack of clear guidance on testing intervals as a significant driving factor. We subsequently designed and distributed posters based on the RCPath’s minimum re-testing intervals.[4] Regular trust-wide communications and intranet reminders were generated to spread awareness. Additionally, we recruited junior doctor ‘champions’ and designed distinctive lanyards to attract attention the project’s objectives and followed several plan-do-study-act (PDSA) cycles to test the impact of our interventions.

Results

In the first year we have seen a decrease of 11.5% in both haematology ($p<0.05$) and biochemical ($p<0.05$) tests, which translates to an estimated £17,000 saving. Awareness of guidelines regarding minimum testing intervals increased from 22% to 41%, with awareness of the cost of tests rising from 9% to 34%.

Conclusion

Inspiring sustainable changes in test ordering practices is feasible by employing a bottom-up multi-pronged education strategy targeting junior doctors.

References

1. Lord Carter of Coles. *Operational productivity and performance in English NHS acute hospitals: unwarranted variations. an independent report for the Department of Health by Lord Carter of Coles*. 2016. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499229/Operational_productivity_A.pdf
2. Lord Carter of Coles. *Report of the second phase of the review of NHS pathology services in England 2010*. London, 2010. http://webarchive.nationalarchives.gov.uk/20130107105354/http:/www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_091984.pdf.
3. Silverstein WK, Weinerman AS, Born K, Dumba C, Moriates CP. Reducing routine inpatient blood testing. *BMJ* 2022:e070698. doi:10.1136/bmj-2022-070698

4. Lang T and Croal B. *National minimum retesting intervals in pathology*. RCPath, 2021. https://www.rcpath.org/static/253e8950-3721-4aa2-8ddd4bd94f73040e/g147_national-minimum_retesting_intervals_in_pathology.pdf.
5. Fryer AA and Hanna FW. Managing demand for pathology tests: financial imperative or duty of care? *Ann Clin Biochem Int J Lab Med* 2009;46:435–37. doi:10.1258/acb.2009.009186

London – highly commended

Reducing urine dipstick usage in adults aged over 65 and older

Lead author: Doyinsola Kuku – foundation doctor, Chelsea and Westminster Hospital
Co-authors: Alexandria Graham, Syeda Hridi, Lily Pollock

Background

Urinary tract infections (UTIs) are a common reason for empirical antibiotic prescriptions in primary and secondary care. However, urine dipsticks are unreliable in patients over 65 years due to a high prevalence of asymptomatic bacteriuria. Current guidelines from the National Institute for Health and Care Excellence (NICE) discourage the use of dipsticks for UTIs in patients aged 65 and above to prevent inappropriate antibiotic prescribing and antibiotic resistance.

Objective

To raise awareness about the guidelines for UTI diagnosis in patients aged 65 or over, aiming to reduce misdiagnosis and overuse of antibiotics.

Methods

Data were collected from 184 eligible patients (aged 65 or over) admitted to the acute admissions unit at Chelsea and Westminster Hospital between 1 January and 14 January 2023. This included urine dipstick tests results, indications, antibiotics, and urine culture outcomes.

Results

Among the patients, 37.5% of patients underwent urine dipstick tests. Of those, 65.2% were to rule out infection, with 88.9% testing positive for UTI. Of the dipstick-positive samples sent for culture, 67.5% showed no significant growth. Antibiotics were prescribed to all patients who had positive dipstick results regardless of the culture results. Interestingly, 20% of dipstick-negative samples had significant growth on culture.

Conclusion

This audit highlights a significant proportion (62.5%) of urine dipsticks are still used for UTI diagnosis in patients aged 65 and above. Re-education of healthcare professionals is necessary to ensure greater compliance with NICE guidelines, improving accuracy of assessments of patients in this age group amid increasing antibiotic resistance and healthcare budget constraints.

References

1. Joseph A. The diagnosis and management of UTI in >65s: to dipstick or not? the argument against dipsticks. *Infect Prev Pract* 2020;2:100063.
2. Mambatta AK, Jayarajan J, Rashme VL *et al*. Reliability of dipstick assay in predicting urinary tract infection. *J Family Med Prim Care* 2015;4:265–8.
3. Clinical Knowledge Summaries. (n.d.). *Urinary tract infection (lower).* Retrieved from https://cks.nice.org.uk/topics/urinary-tract-infection-lower-women/diagnosis/assessment/
4. Diagnosis of urinary tract infections - quick reference tool for primary care. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/927195/UTI_diagnostic_flowchart_NICE-October_2020-FINAL.pdf
5. Givler DN, Givler A. Asymptomatic Bacteriuria. [Updated 2023 Feb 19]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing, 2023. Available from: www.ncbi.nlm.nih.gov/books/NBK441848/.

London judges

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Mersey and Northwestern – overall winner

Nitrous oxide-induced myeloneuropathy: a case series across Greater Manchester

Lead author: Laura White – IMT 2, Salford Royal Hospital
Co-author: Katherine Dodd

Background

Nitrous oxide (N_2O) is the second most common recreational drug used by 16 to 24-year-olds in the UK and is an increasingly common cause of myeloneuropathy. The current evidence base for N_2O-myeloneuropathy, however, comes from small case series only.

Objective

To describe the clinical presentation, examination and investigative findings in patients with N_2O-myeloneuropathy.

Methods

We describe 28 patients with N_2O-myeloneuropathy seen at NHS trusts across Greater Manchester. Data on demographics, N_2O usage patterns, clinical presentation, examination findings, investigations (including magnetic resonance imaging [MRI] and nerve conduction studies [NCS]), B_{12} treatment regimen and follow-up were collated. Data were analysed using descriptive statistics.

Results

Mean age was 22.5 years and 82.1% were men. Almost half (46.1%) of patients used N_2O at least weekly. The commonest presenting symptom was paraesthesia (89.3%). Loss of sensation and/or power was more frequently seen in the lower versus upper limbs, and sensory ataxia was common (69.6%). MRI findings were abnormal for 55.6%, showing posterior cord hyperintensity. NCS findings were abnormal for 84.6%, showing predominantly motor or sensorimotor axonal neuropathy. A variety of initial B_{12} regimens were prescribed, reflecting a lack of current consensus guidelines. Attendance to follow-up clinic was poor (45.8%), with most patients having ongoing signs.

Conclusions

Preventable neurological harm from N_2O abuse is becoming more common across the UK. Our data demonstrate the range of neurological presentations and the importance of initiating rapid treatment. This work combined with data from Birmingham and London forms the largest case series to date on N_2O-myeloneuropathy.

Mersey and Northwestern – highly commended

Improving investigation and diagnosis of meningitis: an audit and development of a new hospital pathway

Lead author: Hermaleigh Townsley – IMT 1, Warrington Hospital

Introduction

Meningitis is a serious infection with significant mortality without prompt treatment. A recent UK study[1] reported low adherence to the UK Joint Specialist Societies guidelines[2] regarding timing of lumbar puncture (LP), CT imaging and steroid use.

Objective

To determine how investigation and management of suspected meningitis in adults at Warrington Hospital aligns with national guidelines.

Methods

Records of cerebrospinal fluid (CSF) samples received by the Warrington Hospital Microbiology Department from February 2022 to July 2022 were used to identify cases of suspected meningitis. Adult patients with an initial documented differential diagnosis including suspected meningitis were included. Electronic records were used to collect data on diagnosis, timing of LP, imaging and medication prescription.

Results

19 cases of suspected meningitis cases were identified. In 17/19 cases (89%), antibiotics were prescribed according to guidelines. Dexamethasone was prescribed in 16% of cases. Aciclovir was prescribed in 12/19 cases (63%), but only 25% had a documented concern for encephalitis.

Median timing of LP was 19 hours after first antibiotic administration (range 1–52.5 hours).

18/19 (95%) underwent a CT head before LP. In 22% of these patients, a CT head was indicated per guideline criteria. In 39%, the documented indication was possible subarachnoid haemorrhage; the remainder had no documented indication.

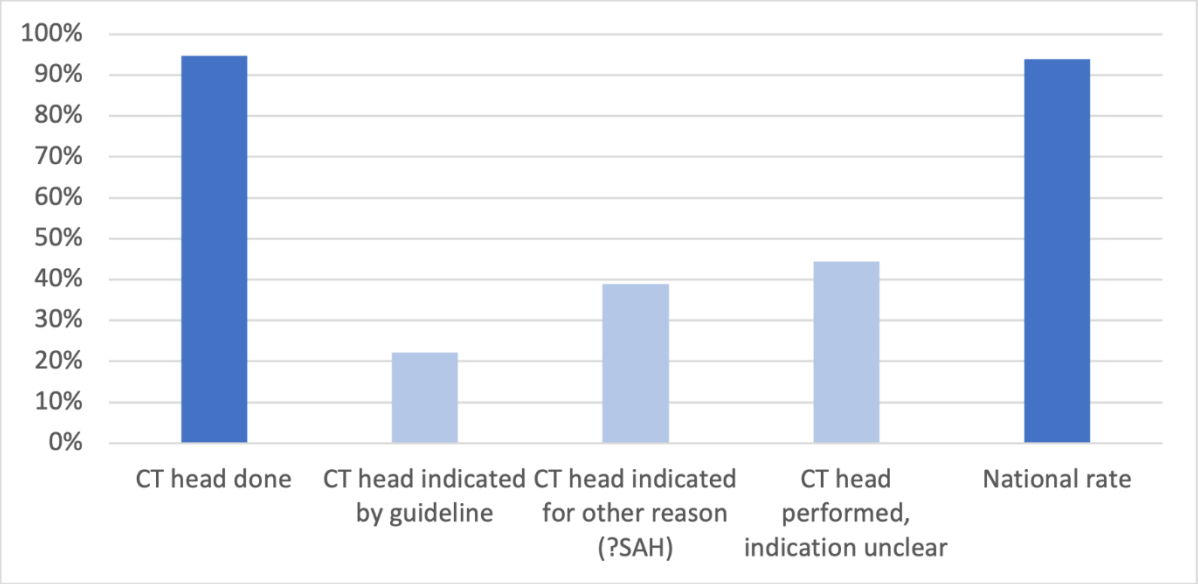

Fig 1. Rate of CT head imaging prior to LP.

Conclusion

Current practice does not align with recommendations for investigation and treatment of meningitis – and this is a national issue. Following this audit, we developed a new trust pathway for investigation and diagnosis of CNS infections to support care, to be evaluated following implementation.

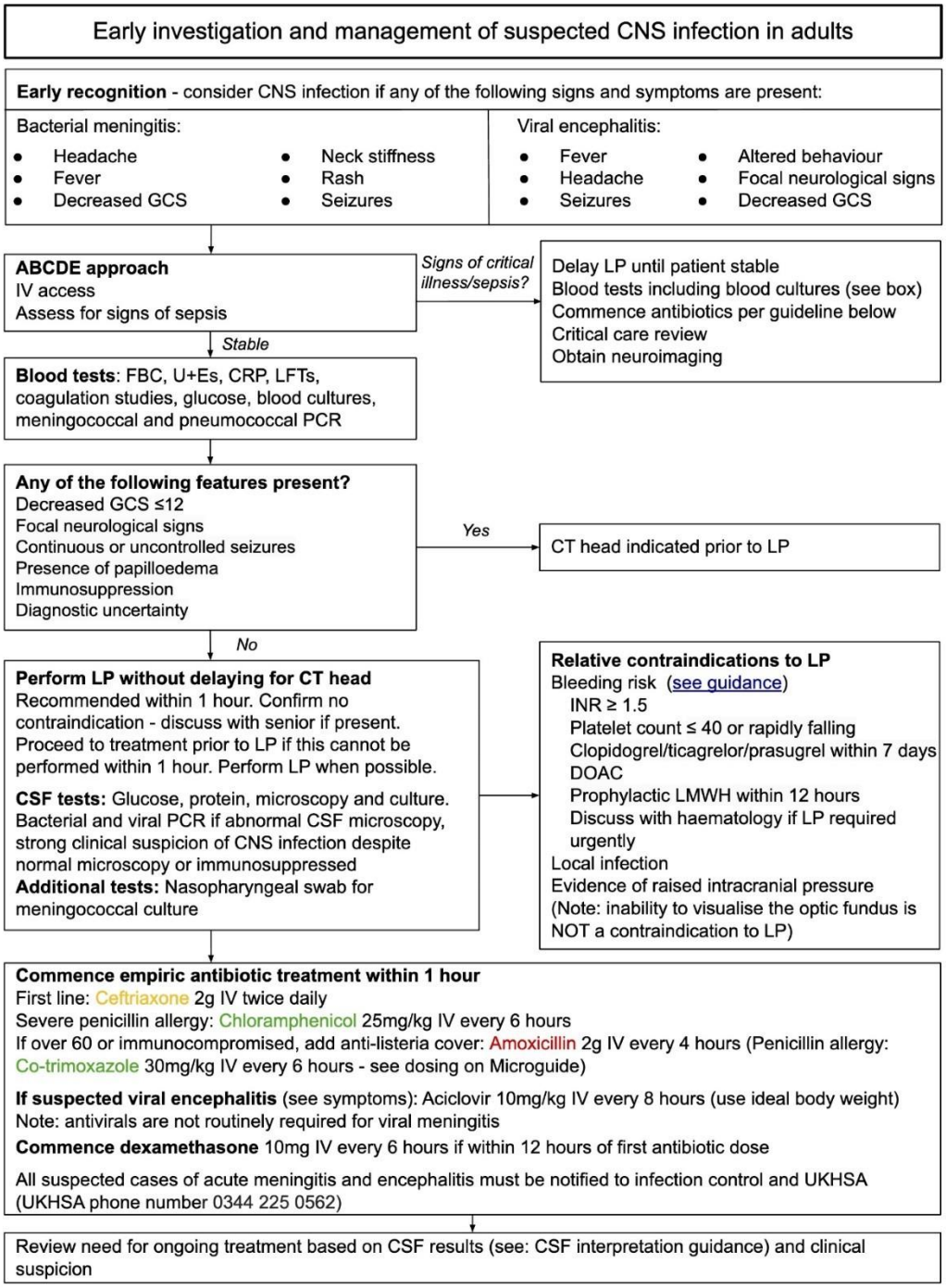

Fig 2. Pathway developed based on national guidelines.

References

1. Carter E, McGill F. The management of acute meningitis: an update. *Clin Med* 2022;22:396–400.
2. McGill F, Heyderman RS, Michael *BD et al*. The UK joint specialist societies guideline on the diagnosis and management of acute meningitis and meningococcal sepsis in immunocompetent adults. *J Infect* 2016;72:405–38.

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Northern and Yorkshire – overall winner

Matters after death: The development of a new undergraduate teaching module to address a key educational need

Lead author: Rebekah Grassby – IMT, St Luke's Hospice

Background

The professional and legal responsibilities following the death of a patient are essential duties of a doctor.[1] However, little formal teaching is provided to undergraduates,[2–4] leading to our hypothesis that prospective doctors are underprepared for these scenarios.

Objective

To implement a new undergraduate teaching module into the Sheffield Medical School palliative care curriculum, addressing this key educational need.

Method

Quantitative evaluation of the target cohort (fourth year medical students) was performed to establish the learning need. eLearning sessions were designed based on national guidelines and experience in practice. These were delivered via an online platform (Fig 1) to a cohort of 128 during subsequent palliative care rotations. Quantitative and qualitative feedback was gathered as evaluation of the teaching.

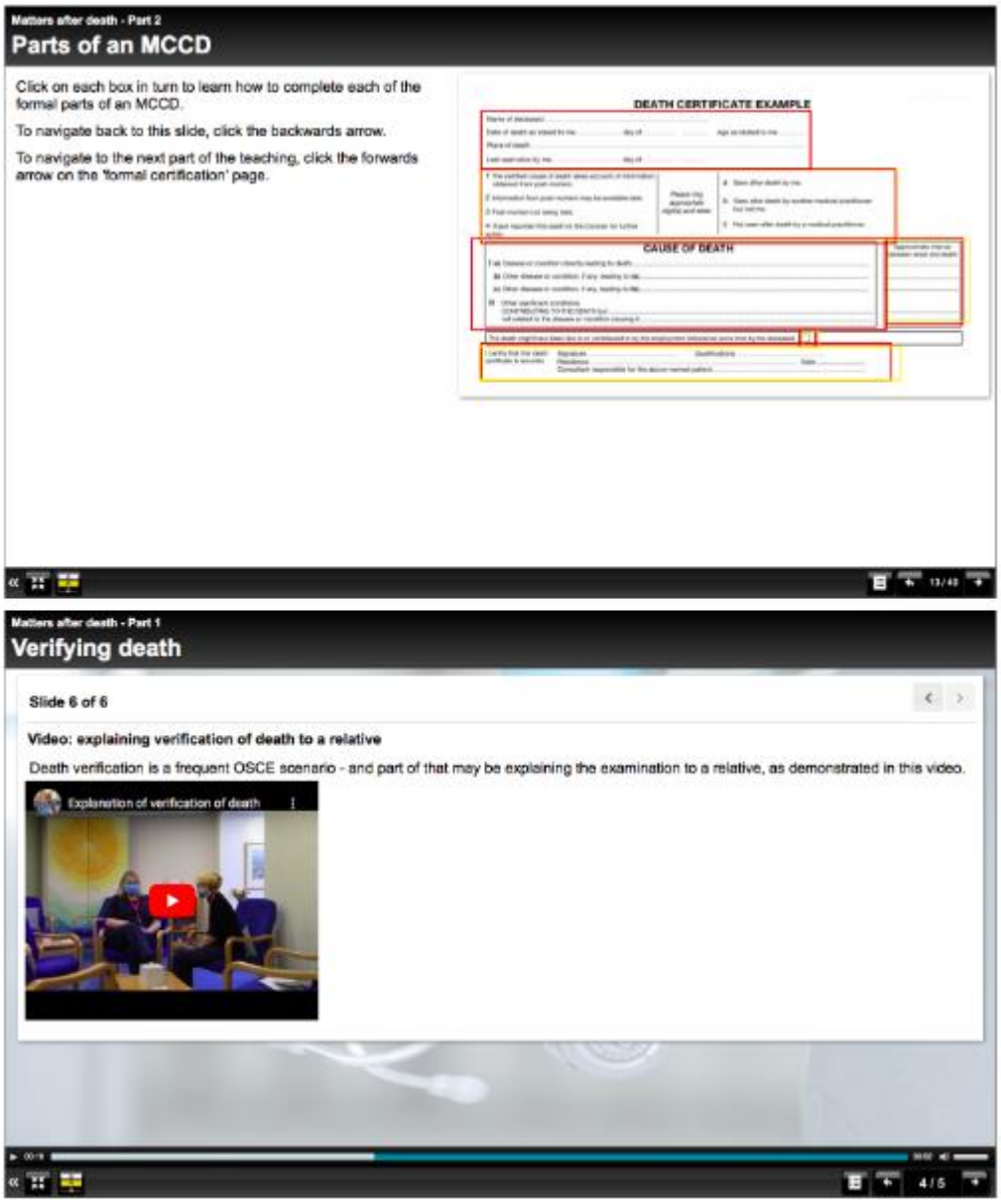

Figure 1. Representative slides from eLearning.

Results

The initial survey demonstrated a clear unmet need: 100% of students had not received formal teaching, and nearly 80% had received no teaching of any kind. Following module completion, there was a consistently marked improvement in students' self-assessed confidence levels across all topics evaluated (Fig 2). Qualitative feedback was concordant, with a consistently positive response testifying the teaching was 'useful' and 'good'.

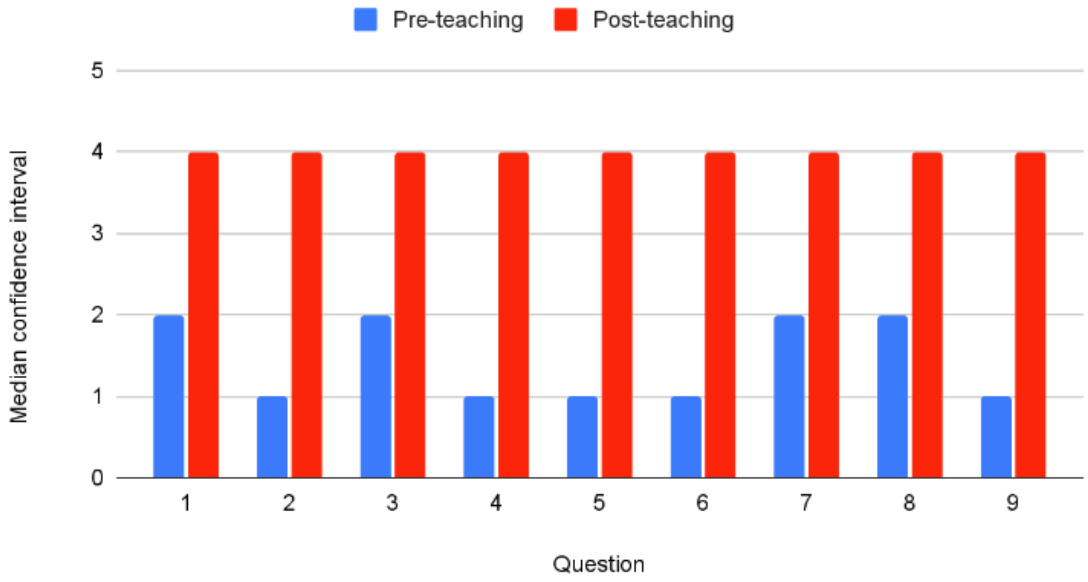

Figure 2. Comparison of median confidence levels pre- and post-teaching.

Conclusions

The new module effectively addressed a previously unmet educational need in the palliative care curriculum at Sheffield Medical School. These results suggest these topics should become a greater priority in undergraduate medical education in order to prepare graduates for an essential professional responsibilities. Reproducibility at other institutions would provide further evidence.

References

1. UK Government. *Guidance for doctors completing Medical Certificates of Cause of Death in England and Wales.* HM Passport Office, 2022.
2. Heath L, Egan R, Iosua E *et al*. *Palliative and end of life care in undergraduate medical education: a survey of New Zealand medical schools*. *BMC Med Educ* 2022;22:530.
3. Gibbins J, McCoubrie R, Maher J, Forbes K. *Incorporating palliative care into undergraduate curricula: lessons for curriculum development. Med Educ* 2009;43:776–83.
4. Smith-Han, K, Martyn, H, Barrett, A *et al*. *"That's not what you expect to do as a doctor, you know, you don't expect your patients to die." Death as a learning experience for undergraduate medical students. BMC Med Educ* 2016;16:108.

Northern and Yorkshire – highly commended

Correlation between cardiac autonomic neuropathy and progressive decline in renal function in patients with type 1 diabetes: a 15-year follow up study

Lead author: Kywe Kywe Soe – ST6, Northern General Hospital

Introduction

Diabetic kidney disease (DKD) is the leading cause of chronic kidney disease (CKD) and end-stage renal failure (ESRF) worldwide with a third of patients with diabetes developing kidney disease over the course of their lifetime.[1] Impairment of autonomic function is widespread among the diabetic population, especially among those suffering from diabetes-associated complications.[2,3] Cardiac autonomic dysfunction may play a role in the pathogenesis of diabetic nephropathy through a relative increase in sympathetic tone, leading to proteinuria, nocturnal hypertension and declining renal function.

Aims

To examine the relationship between cardiac autonomic neuropathy (CAN) and progressive renal decline in patients with type 1 diabetes.

Methods

36 subjects with type 1 diabetes mellitus underwent assessment for CAN using cardiovascular reflex testing as per the O'Brien's criteria[4] during baseline visits performed from 2007 to 2010. Cardiac autonomic neuropathy was defined as > 3/5 abnormal reflex tests. Progressive renal decline was defined as decline in eGFR of more than 2 ml/min/1.73 m^2 per year and/or incident advancement in the stage of CKD from baseline stage.

Results

Among the 36 subjects, renal decline occurred in 7 (58.3%) of the 12 patients with CAN and 6 (25.0%) in the those without. Baseline CAN was strongly associated with odd of renal decline (adjusted odds ratio 31.6 [95%CI 1.3:796.0]; p=0.01). Results did not substantially change after additionally adjusting for retinopathy.

Discussion

In this relatively small but carefully phenotyped study, cardiac autonomic neuropathy was a strong independent predictor of the long-term risk of renal function decline in type 1 diabetes.

References

1. Hole B, Gilg J, Casula A, Methven S, Castledine C. UK renal registry 20th annual report: Chapter 1 UK renal replacement therapy adult incidence in 2016: National and centre-specific analyses. *Nephron* 2018;139.
2. Vinik AI, Erbas T, Casellini CM. Diabetic cardiac autonomic neuropathy, inflammation and cardiovascular disease. *J Diabetes Investig* 2013;4:4–18.
3. Sudo SZ, Montagnoli TL, Rocha BdS, Santos AD, de Sá MPL, Zapata-Sudo G. Diabetes-induced cardiac autonomic neuropathy: impact on heart function and prognosis. *Biomedicines* 2022;10:3258.
4. Ewing DJ, Martyn CN, Young RJ, Clarke BF. The value of cardiovascular autonomic function tests: 10 years experience in diabetes. *Diabetes Care* 1985;8:491–8.

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Northern Ireland – overall winner

The integration of artificial intelligence-based tools in medical education: a thematic content analysis

Lead author: Ashna Arif – medical student, Royal Victoria Hospital
Co-author: Anoshah Arif

Background

Artificial intelligence (AI) in undergraduate medical education holds significant potential for transforming students' learning experiences and for the future of clinical medicine. However, there is no clear integration of AI into the current medical curriculum. Therefore, recent literature was reviewed of medical students' perceptions of AI and the importance of its formal application in medical education, and a framework is provided on how to incorporate it into the curriculum.

Aims/objectives

A thematic content analysis of recent studies was conducted on how AI-based education is perceived by students and how it will aid physicians in their future practice. Next, interventions are proposed on how to evolve the medical curriculum to become more AI-inclusive.

Methodology

Relevant literature published in the last 5 years was obtained via PubMed searches using keywords and phrases linked to the topic.

10 articles were analysed,[1–10] and no exclusion criteria were applied.

Results

Analyses of the understanding of AI in medicine across several articles demonstrated an average of 20% students per school. Around 86.2% of students had a positive outlook on AI and were keen to learn more about its clinical application.

The American Medical Association (AMA) suggested initiatives for AI in medical education (Table 1).

A novel idea could be the integration of a short module on where students can utilise AI-based tools in virtual case-based patient simulations.

Conclusion

There is a gap in the area of AI education in medicine and it is imperative that we find ways to fill that gap in curricula worldwide.

Institution	Project
Duke Institute for Health Innovation	Medical student work together with data experts to develop care-enhanced technologies made for physicians
Carle Illinois College of Medicine	Offers a course by a scientist, clinical scientist, and engineer to learn about new technologies
Sharon Lund Medical Intelligence and Innovation Institute	Organizes a summer course on all new technologies in health care, open to medical students
University of Virginia Centre for Engineering in Medicine	Involves medical students in the engineering labs to create innovative ideas in health care

Table 1. AMA initiatives for AI incorporation into medical education.

References

1. Paranjape K, Schinkel M, Nannan Panday R, Car J, Nanayakkara P. Introducing artificial intelligence training in medical education. *JMIR Med Educ* 2019;5:e31043.
2. Charow R, Jeyakumar T, Younus S *et al*. Artificial intelligence education programs for health care professionals: scoping review. *JMIR Med Educ* 2021;7:e16048.
3. Han ER, Yeo S, Kim MJ, Lee YH, Park KH, Roh H. Medical education trends for future physicians in the era of advanced technology and artificial intelligence: an integrative review. *BMC Med Educ* 2019;19:460.
4. Krive J, Isola M, Chang L *et al*. Grounded in reality: artificial intelligence in medical education. *JAMIA Open* 2023;6:ooad037.
5. Grunhut J, Wyatt AT, Marques O. Educating future physicians in artificial intelligence (AI): an integrative review and proposed changes. *J Med Educ Curric Dev* 2021;8:23821205211036836.
6. Ejaz H, McGrath H, Wong BL *et al*. Artificial intelligence and medical education: A global mixed-methods study of medical students' perspectives. *Digit Health* 2022;8:20552076221089099.
7. Buabbas AJ, Miskin B, Alnaqi AA *et al*. Investigating students' perceptions towards artificial intelligence in medical education. *Healthcare (Basel)* 2023;11:1298.
8. Liu DS, Sawyer J, Luna A *et al*. Perceptions of US medical students on artificial intelligence in medicine: mixed methods survey study. *JMIR Med Educ* 202;8:e38325.
9. Chen M, Zhang B, Cai Z *et al.* Acceptance of clinical artificial intelligence among physicians and medical students: A systematic review with cross-sectional survey. *Front Med (Lausanne)* 2022;9:990604.
10. Ngo B, Nguyen D, vanSonnenberg E. The cases for and against artificial intelligence in the medical school curriculum. *Radiol Artif Intell* 2022;4:e220074.

Northern Ireland – highly commended

Junior Doctors - Spot the difference!

Lead author: Aoife Brown – IMT, Royal Victoria Hospital
Co-author: Suzanne James

Introduction

The term 'SHO' is still widely employed throughout our hospitals, despite no 'SHOs' having been appointed since 2007. This term refers to trainees who have a variable range of medical knowledge and clinical skills. In addition, in some placements in our trust, IMT3s work as medical registrars out-of-hours, but not in-hours. Throughout Northern Ireland each medical training grade wears a corresponding coloured lanyard. All of these factors cause confusion for our nursing colleagues, with a potential risk to patient safety.

Method

Baseline knowledge of 200 nurses' understanding of the medical training grades was assessed by an online survey. We then introduced a poster demonstrating the appropriate lanyard colours along with a one-page 'Rough guide to the medical training grades' to help improve nurses' knowledge.

Following this, our second intervention was the introduction of purple IMT3 lanyards (similar to the purple ST lanyard) and a short video of different trainees (wearing their lanyards) explaining their various roles. A re-survey is planned to ascertain if there has been further improvement in nurses' knowledge of the trainee grades.

Results

The second survey demonstrated an increase in correct responses to the various questions with regards to the role of Foundation doctors, IMTs and GP trainees. This survey also demonstrated a significant increase in the percentage of nurses who were 'somewhat confident' or 'extremely confident' in their knowledge of trainee grades, compared to the baseline survey, increasing from 16% to 61%.

Conclusion

We have shown that educational initiatives can significantly improve nurses' knowledge of the medical training grades leading to more appropriate identification of the trainee grades and their experience, thus improving patient safety.

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Oxford and Thames Valley – overall winner

Virtual alcohol detox pathway: enabling home-based detoxification with chlordiazepoxide

Lead author: Daniel Jin Sun – clinical fellow, Royal Berkshire Hospital
Co-author: Hodan Jama

Introduction

Traditional inpatient alcohol detoxification programs often require extended hospital stays, limiting bed availability and increasing risk of hospital-related complications.[1] This abstract presents a novel approach, the virtual alcohol detox pathway (VADP), enabling patients to undergo alcohol detoxification in their own homes, utilising daily telemedicine consultations with breathalyser and clinical measurements to guide chlordiazepoxide titration. The primary goal of VADP is to save hospital bed days while ensuring the safety and successful detoxification of patients.

Methods

A retrospective audit of patients referred to the VADP (as of April 2023) was carried out. The data were collected from hospital EPR system and analysed using Microsoft Excel for demographics, source of referral, number of bed days, alcohol consumption, chlordiazepoxide dosage, and if patient has represented to hospital for alcohol related reasons.

Results

59 patients have been referred to the VADP: one self-discharged prior to initial suitability assessment, 10 were deemed unsuitable for VADP and 47 were enrolled onto the pathway.

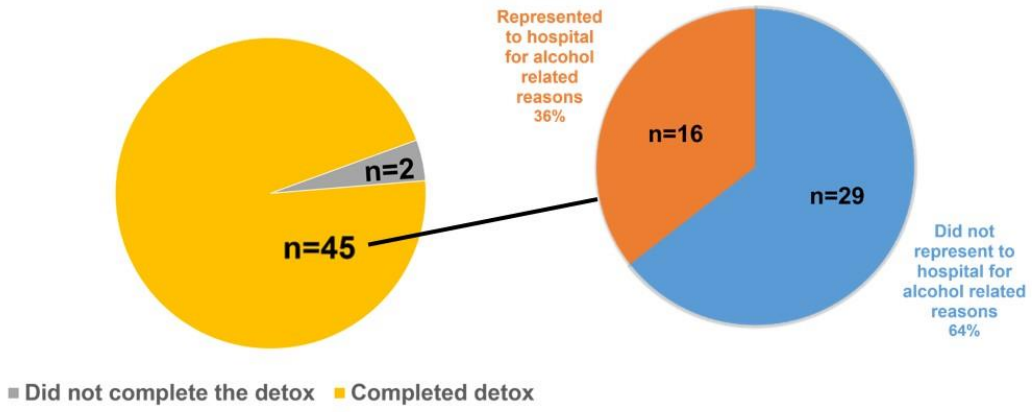

Fig 1. Outcome of 47 patients who underwent VADP

Total duration of VADP outpatient care for all 47 patients combined was 212 days, averaging 4.51 days per patient.

The sources of referrals came from the following departments:

Acute medical unit (AMU)	21

Short stay unit (SSU)	6
Gastroenterology ward	4
Surgical ward	4
Emergency department (ED)	4
Respiratory ward	4
Trauma and orthopaedics ward	2
Community	1
Cardiology ward	1

Conclusions

The VADP represents a promising patient-centred approach to alcohol detoxification, which optimises healthcare resources by freeing up hospital bed days through an outpatient detoxification course with a high completion rate. Further research and continued improvement of the pathway are warranted to validate its long-term outcomes and integrate it into standard clinical practice.

References

1. Manoukian S, Stewart S, Graves N *et al.* Bed-days and costs associated with the inpatient burden of healthcare associated infection in the UK. *J Hosp Infect* 2021;114:43–50.

Oxford and Thames Valley – highly commended

Improving the quality of patient information in same day emergency care using a novel digital solution: standardised, condition-specific autotext

Lead author: Robin Kearney ST6, Milton Keynes Hospital
Co-authors: Hasaan Khan, Nicola Jones

Introduction

High quality patient information supports patients' understanding of their health. Verbal information given during consultations is poorly remembered and providing patients clear, written information is a standard of care in ambulatory emergency care.[1,2] Autotext is a digital process which inserts standardised text from a shortcut.

Objective

To improve patient information within our same day emergency care (SDEC) service by implementing customisable, standardised, condition-specific autotexts so that 80% of letters contain written patient information.

Methods

Autotexts for patient advice for 19 common conditions were created using local and national guidance, integrated into the electronic health record and publicised. Records of 10 patients attending SDEC were randomly selected weekly over a 23-week period and letters were assessed for patient information provided on diagnosis, treatment, and safety netting. Those admitted or for planned review were excluded. The chi-squared test was used for analysis.

Results

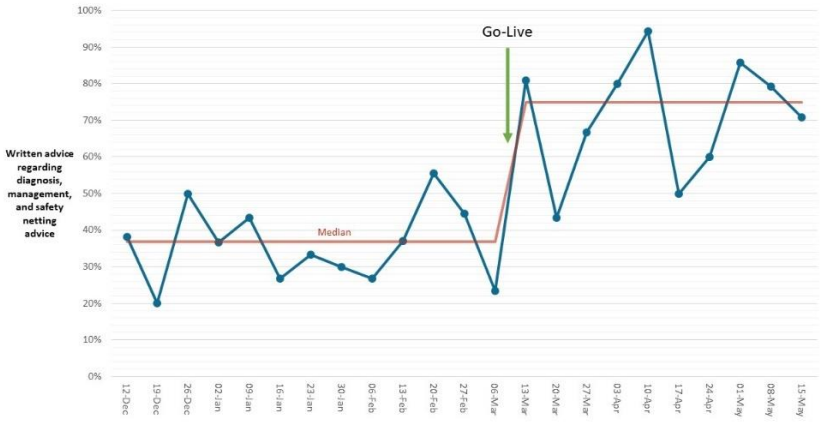

Fig 1. Run chart showing percentage of information included.

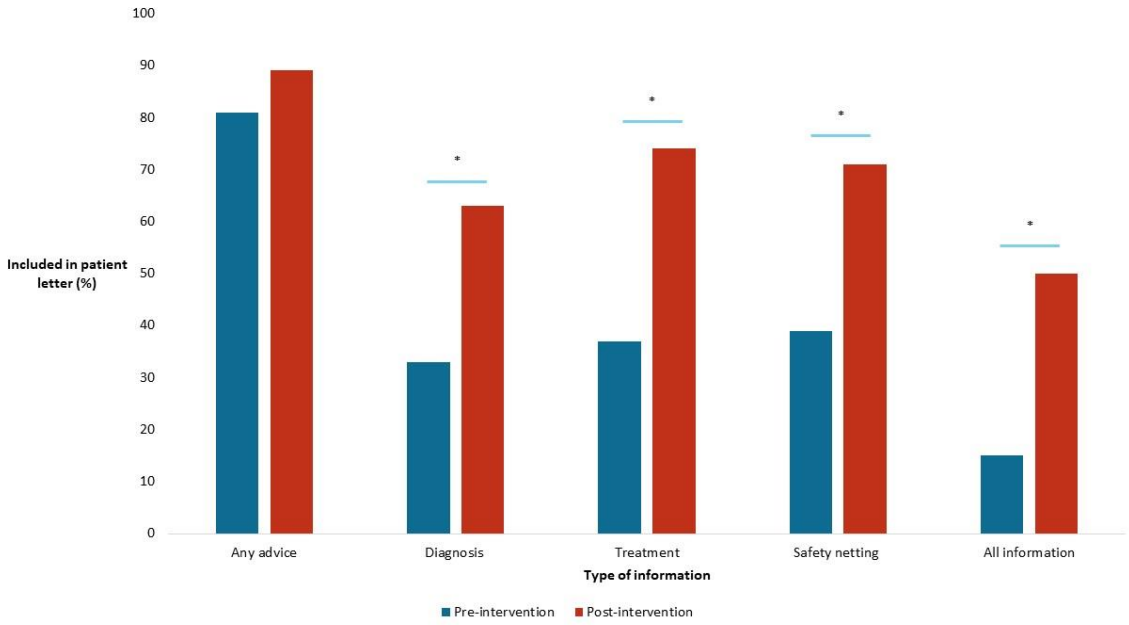

Fig 2. Comparison of information included before and after intervention.

After implementation, there was an increase in letters containing patient information on diagnosis (33% vs 63%), treatment (37% vs 74%), safety netting advice (39% vs 71%) and all of these (15% vs 50%, all $p<0.001$). Autotexts were found in 49% of letters post-intervention.

Conclusions

This project substantially improved written information provided by SDEC, ensuring clear and consistent communication. User-friendly autotext has vast potential to improve other communication such as discharge summaries and clinic letters. This project underscores the benefits of adopting innovative digital solutions to improve patient care.

References

1. Kessels R. Patients' memory for medical information. *J R Soc Med* 2003;96:219–22.
2. Royal College of Physicians of Edinburgh. *Standards for Ambulatory Emergency Care: Report of a working group for Royal College of Physicians of Edinburgh and Society for Acute Medicine.* RCPE, 2019. www.rcpe.ac.uk/sites/default/files/ambulatory_care_report.pdf [Accessed 23 June 2023]

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Southwest – overall winner

COVID-19 vaccination responses in renal transplant recipients: a single centre experience

Lead author: Fatima Abbas – ST4, Royal Devon and Exeter Hospital

Introduction/background

Renal transplant recipients are at risk of adverse outcomes with higher mortality rates with COVI19 infection.[1,2] Although vaccination may have provided some protection, immunologic responses and clinical effectiveness remains less than that for the general population given immunosuppressed status.[3,4]

Objective

To study the immunologic response of transplant recipients to COVID-19 vaccination and potential factors that may have resulted in absence of immunologic protection with emphasis on immunosuppression regimen.

Methods

This was a retrospective cohort study of kidney transplant recipients in a single tertiary renal centre in UK. Data were collected from renal electronic database from December 2020 to June 2023 to include current transplant patients. Analysis of the data concentrated on patients with no immunologic protection against COVID19 infection and it was completed using Microsoft Excel 2010.

Results

From 536 kidney transplant recipients in the centre, 25 (4.7%) tested negative for SARS-CoV-2 spike antibody while 58 (10.8%) did not have tests done. In those 25, mean age was 54, 16 (64%) were male and only 9 (36%) were female. Two (8%) had positive SARS CoV-2 nucleocapsid antibodies simultaneously. 16 (64%) were on triple maintenance immunosuppression regimen, five (20%) on double while four (16%) were on monotherapy. The most common immunosuppressant used in most regimens was tacrolimus in 22 (88%) of the recipients. Similarly, prednisolone was used in 22 (88%), 19 (76%) utilised mycophenolate mofetil. A total of two (8%) recipients used alternatives such as sirolimus or azathioprine (used by only one recipient each). 8% had pancreatic transplants as well. 28% have declined COVID19 vaccination altogether. Mean COVID-19 vaccinations received was four.

Conclusion

Some did not amount an immunologic response despite multiple vaccination against COVID-19 and most are on triple immunosuppression. There is some evidence that modification of immunosuppression regimens, especially MMF (mycophenolate mofetil), could be beneficial.[5] Consideration needs to be given to that and there should be ongoing study of factors that may contribute to poor responses.

References

1. Overvad M, Koch A, Jespersen B *et al*. Outcomes following SARS-CoV-2 infection in individuals with and without solid organ transplantation-A Danish nationwide cohort study. *Am J Transplant* 2022;22:2627–36.

2. Jager KJ, Kramer A and Chesnaye NC *et al.* Results from the ERA-EDTA Registry indicate a high mortality due to COVID-19 in dialysis patients and kidney transplant recipients across Europe. *Kidney Int* 2020;98:1540–8.
3. Kamar N, Abravanel F and Marion O *et al*. Three doses of an mRNA Covid-19 vaccine in solid-organ transplant recipients. *N Engl J Med*. 2021;12;385:661–2.
4. Callaghan CJ, Mumford L, Curtis RMK *et al*. Real-world effectiveness of the Pfizer-BioNTech BNT162b2 and Oxford-AstraZeneca ChAdOx1-S vaccines against SARS-CoV-2 in solid organ and islet transplant recipients. *Transplantation* 2022; 106:436–46.
5. Kantauskaite M, Müller L, Kolb T *et al*. Intensity of mycophenolate mofetil treatment is associated with an impaired immune response to SARS-CoV-2 vaccination in kidney transplant recipients. *Am J Transplant* 2022;22:634–9.

Southwest – highly commended

Improving national online learning resources to guide internal medical trainees (IMTs) through the curriculum and e-portfolio requirements

Lead author: Jessica Michael – IMT, Royal United Hospital

Introduction

When postgraduate doctors in training embark on a new training programme such as IMT, there is a large amount of information to take on with regards to navigating a new training portfolio and curriculum requirements. This transition can be even more challenging for those who have not come through the traditional UK Foundation Programme route.

Guidance available can be limited and local IMT induction processes variable. It was felt that a national online learning resource that IMTs could watch at the start of the programme and refer back to over the course of the year would be a valuable resource.

Objectives

The aim was to improve the overall training experience for IMTs by providing 'video podcast' educational online resources that improve IMTs' familiarity with the portfolio/curriculum requirements and confidence to achieve these.

Methods

I worked alongside the Severn deanery IMT TPD to create five video podcasts. As we had Health Education England funding approved for this project, the videos were professionally edited by the company Sightline.

Each video was 3–6 minutes long and in the form of an interview with a senior clinician, focusing on different topics, such as 'Acute take training', 'Outpatient training' and 'Preparing for your ARCP'.

Results and conclusion

This national learning resource is now available at www.e-lfh.org.uk/.

The project is ongoing; prior to the publication of the videos, a survey was conducted of current IMT's to establish consensus on quality of current learning resources surrounding this topic, and quality of current IMT inductions.

Following the advertisement of this resource to current and& incoming IMTs, survey feedback will be collected.

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Wales – overall winner

Closing the gap in dermatology training. introducing the Skin of Colour Training Day UK

Lead author: Dominique Dao – IMT, Princess of Wales Hospital
Co-authors: Shahd El Amin, Oluwadami Jagun

Introduction

Common skin conditions in patients with skin of colour (SOC) are underrepresented in medical education. Research shows that 54% of dermatology trainees in the UK often lack confidence in managing these conditions.[1] Additionally, 86% of dermatologists felt inadequately trained in managing hyperpigmentation, a prevalent concern in SOC.[2] Addressing the growing diversity of the UK is essential for improved recognition and treatment of common skin conditions in SOC individuals.

Aim

The SOCTDUK educates trainees to diagnose and manage skin conditions in SOC, aiming to enhance confidence and improve patient outcomes.

Methods

- Annual virtual meetings supported by the British Association of Dermatologists
- 2021 – Common SOC presentations chosen based on previous publications
- 2022 – 2-day meeting and access to post-conference recordings in response to feedback
- 2023 – virtual poster walk, workshops and oral presentations introduced

Results

Post-conference surveys showed high satisfaction rates:

- Programme (98.58% in 2021, 98.27% in 2022, 97.72% in 2023),
- Range of topics (96.39% in 2021, 95.79% in 2022, 95.21% in 2023)
- Clinical relevance (93.33% in 2021, 95.32% in 2022, 96.88% in 2023)

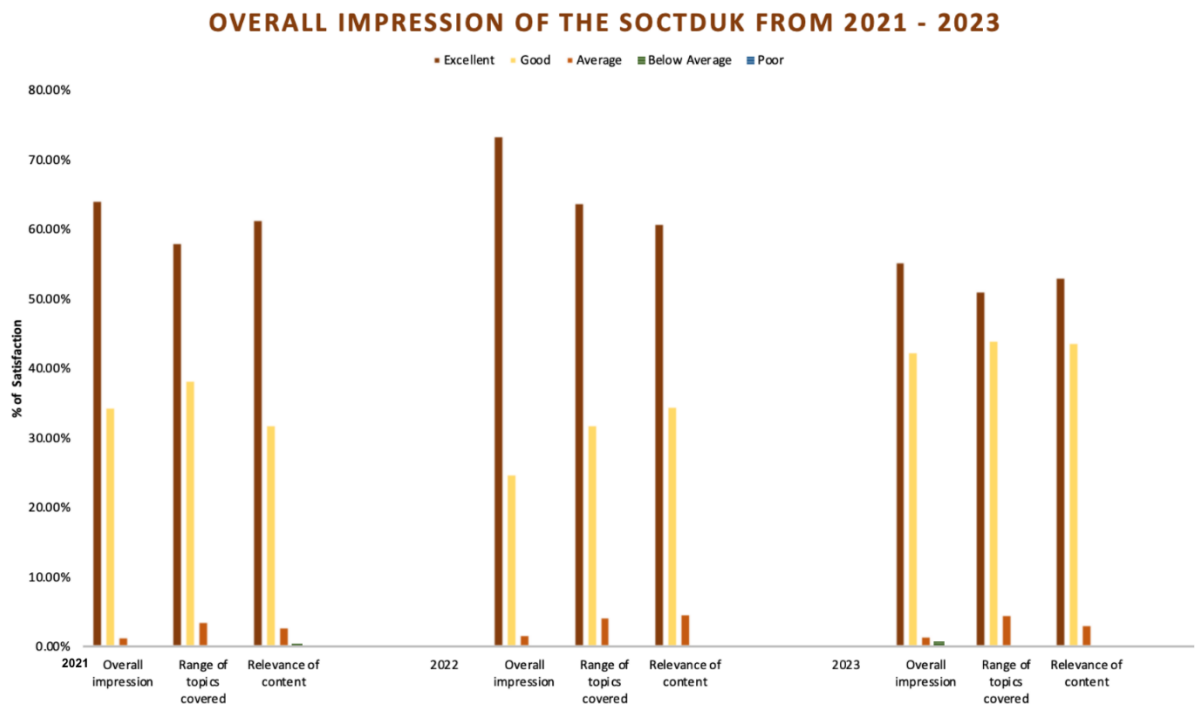

Fig 1. Overall impression of SOCTDUK. 2021, 280 responses from 394 delegates; 2022, 173 responses from 250 delegates; 2023, 132 responses from 249 delegates.

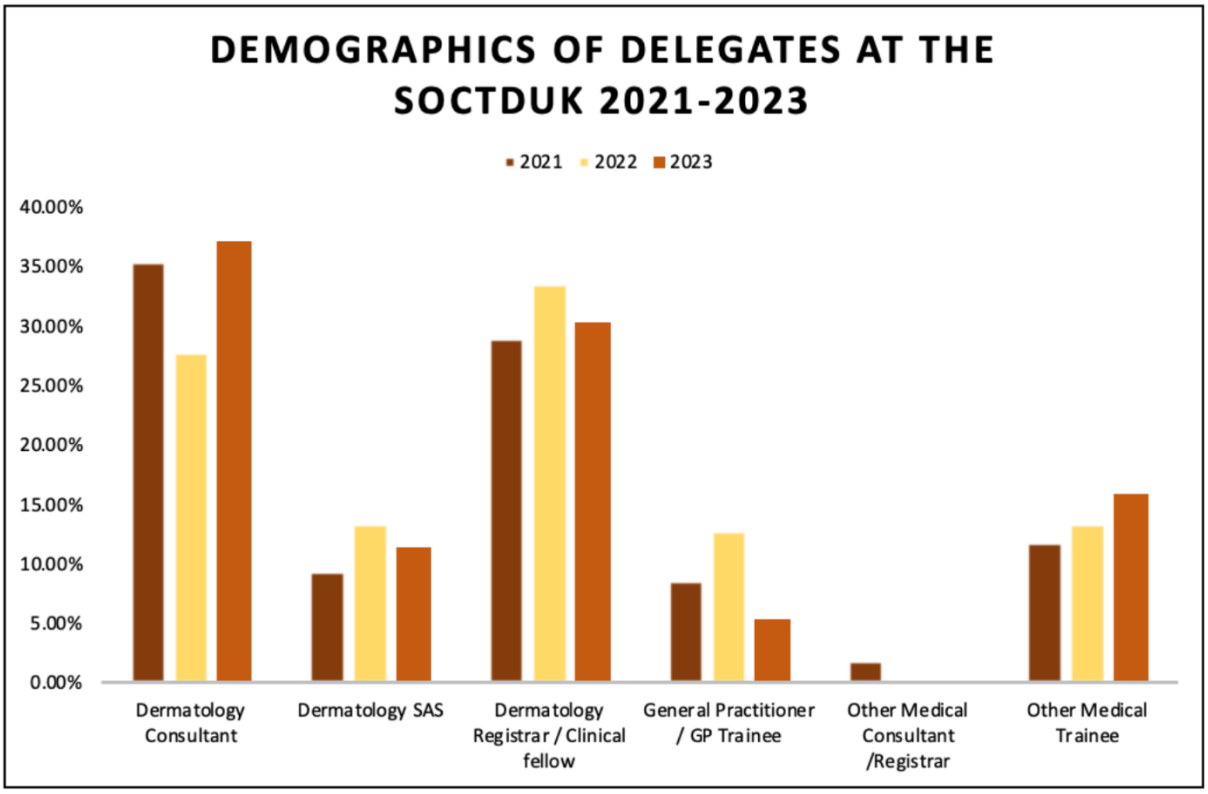

Fig 2. Demographics of delegates at SOCTDUK. 2021, 280 responses from 394 delegates; 2022, 173 responses from 250 delegates; 2023, 132 responses from 249 delegates.

Conclusions

Over 50% provided feedback, with over 90% rating the programme highly for quality, relevance, and breadth of topics. This response highlights the need for such educational initiatives, given the growing prevalence of SOC. Addressing trainees' needs in managing skin conditions in SOC, the event

enhances confidence and competence. Workshops and trainee-led presentations provide diverse perspectives. The SOCTDUK emphasises ongoing research, aiming to deepen understanding of SOC-related conditions and improve educational resources. This commitment reflects our dedication to continuous improvement in SOC education.

References

1. Salam A, Dadzie OE. Dermatology training in the UK: does it reflect the changing demographics of our population. *Br J Dermatol* 2013;169:1360–2.
2. Ma Y, Millette D, Nalluri R, Yoo J. *UK-based dermatologist online survey on the current practice and training in the management of melasma and postinflammatory hyperpigmentation. Clin Exp Dermatol* 2020;45:483–4.

Wales – highly commended

Exploring the experiences of widening participation (WP) and non-WP students in medical school

Lead author: Christy Varghese – IMT, Grange University Hospital

Introduction

Widening participation is the active process of ensuring that the higher education cohort within the UK is representative of the general population.[1] There is limited research looking at the experiences and motivations of students from widening participation backgrounds (WP). It is unclear if they experience medical school differently to their colleagues from non-WP backgrounds.

Objective

The aim of this research was to explore the overall experience of WP students in comparison with non-WP students.

Method

This was a qualitative study conducted using online qualitative surveys as a research tool. There were a total of 34 participants; 20 WP students and 14 non-WP students from seven different medical schools across the UK.

Results/benefits

A total of 11 themes were evident from the data and the comparisons. Some of the most significant results shows WP students have significant feelings of not fitting in within medical school. WP students are disadvantaged in terms of resources and extracurricular activities because of cost. From the non-WP data, significant number of students reported they were not aware of their privilege before medical school. Both WP and non-WP students reported discrimination in terms of race.

Conclusions

WP students have disadvantages even before medical school and some of these disadvantages continue in medical school. Both WP and non-WP students agree diversity is necessary in medicine to ensure doctors are representative. Exploration of WP experience is new and under researched. A safe environment should be available for WP students to voice their concerns without judgement.

References

1. Connell-Smith A, Hubble S. *Widening participation strategy in higher education in England.* UK Parliament, 2018.

Wales judges

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Wessex – overall winner

Enhanced spinal trauma rehabilitation (ESTRE): A pilot project's impact on spinal cord injuries inpatient pathways and cost benefit

Lead author: Osman Khan – ST5, University Hospitals Southampton
Co-authors: Emily Mason, Chetan Sudarshan

Introduction

Our major trauma centre (MTC) admits patients for management of acute spinal cord injuries. These patients require specialist inpatient neurorehabilitation to maximize their functional outcomes. This level of rehabilitation is not provided by the MTC and the average wait for a specialist rehabilitation bed at the regional spinal cord injury (SCI) rehabilitation centre is around 16 weeks. Evidence indicates that early access to specialist rehabilitation following SCI improves patient outcomes and is cost effective.

Objectives

The ESTRE Project provides early rehabilitation within the MTC prior to transferring to the spinal injury centre. The aim is to improve efficiency and reduce costs at point of care.

Method

Project funding was acquired through NHS England Transformation Programme to provide enhanced rehabilitation within the MTC for six spinal cord injury rehabilitation beds. The project includes additional physiotherapy, occupational therapy, rehabilitation assistant input, nursing assistant input and additional clinical input from a consultant in rehabilitation medicine.

Results

Within the initial 4 months, 27 patients accessed the project. Average length of stay was reduced by 64 days (105 days down to 41 days) when compared to data for previous 12 months. This indicated a cost saving of over £2m per annum (excluding medical staffing costs). There was also a 9% increase in the number of patients able to return directly home.

Conclusion

Early rehabilitation input in spinal cord injury care can have positive impacts on inpatient length of stay and has a direct impact on cost efficiency as a result of a more efficient service.

Wessex – highly commended

Exploring the learning ecology of flexible bronchoscopy training: a scoping review

Lead author: Ellie Cox – ST6, Queen Alexandra Hospital

Introduction

Learning flexible bronchoscopy requires a combination of both complex psychomotor and cognitive skill sets, while also factoring in numerous intertwined factors that together constitute an elaborate ecology of education.[1] Within the existing body of evidence are various pockets of areas of investigation, some more in-depth than others. There is now a need for some form of evidence synthesis for the benefit of medical education.

Objective

To complete an extensive search of the existing literature around teaching the skill of flexible bronchoscopy, by applying an iterative approach to selecting studies and extracting data. The outcomes of the literature review will be analysed by incorporating a numerical summary, and the relevant studies evaluated and synthesised using thematic analysis.

Method

Primary databases searched were ERIC and MEDLINE via Ovid. The scope of the search was limited to those written in the English language and published within the last ten years. The recommended Joanna Briggs Institute approach was used for source selection, data extraction and the presentation of data.

Results

Seven studies were included, predominantly from the USA and published within the last 2 years. Four key themes were identified: learning away from clinical practice, providing a positive learning environment, balancing autonomy and patient safety, and traits of the teacher including supervisory behaviours.

Conclusions

The traditional ‘see one, do one, teach one’ approach is overly simplistic and outdated, and there is a contemporary and evidence-based methodology available that needs to be expanded upon to provide the best learning opportunities for trainees.

References

1. Ringsted C, Hodges B, Scherpbier A. 'The research compass': An introduction to research in medical education: AMEE Guide No. 56. *Med Teach* 2011;33:695–709.

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West Midlands – overall winner

Improving patient flow from the emergency department to the same day emergency care – a quality improvement project

Lead author: Kiran Kumar Jimmy Issuree – ST6, Queen Elizabeth Hospital, Birmingham
Co-author: Nishchay Kakkar

Our aim was to improve the waiting time for patients in the emergency department (ED), who were identified for a sam- day emergency care (SDEC) bed, by improving communication between the acute medical unit (AMU) and ED teams.

Measurements

Time between ready to depart from ED and recorded departure, time between ready to depart ED and SDEC bed allocation, time between recorded ED departure and SDEC bed allocation.

PDSA Cycle 1: From 28 July to 18 August 2022. 499 patients included.

PDSA Cycle 2: From 19 November to 20 December 2022. 770 patients included.

Interventions

1. Timely updates of patients identified for SDEC by ED nurses on the whiteboards in the ED ambulatory areas.

2. AMU coordinator visiting the ED ambulatory areas every 1–2 hours to discuss the listed patients for SDEC with ED nurse-in-charge.

These interventions led to an improvement in patients taking more than 1 hour to leave ED after being identified as appropriate to move to SDEC (47% in cycle 1 versus 38% in cycle 2) and in patients taking more than 1 hour to be allocated an SDEC bed after being ready to depart ED (60% in cycle 1 versus 53% in cycle 2).

In cycle 2, there was a more than 50% increase in patient volume from ED to SDEC, as the SDEC capacity was increased due to winter pressures. Despite this, our quality improvement project led to a 9% improvement in identification and departure of SDEC patients from ED and a 7% improvement in the time between departing from ED and allocation of an SDEC bed.

West Midlands – highly commended

The artificial pancreas: a retrospective hospital-based study on the effect of hybrid closed loop recorders on micro-vascular complications in diabetes mellitus

Lead author: Awab Ismail – IMT, Queen Elizabeth Hospital, Birmingham
Co-author: Raheel Ahmad

Introduction

Most patients commenced on hybrid closed loop (HCL) recorders are those with objective evidence of poorly controlled diabetes. Previous studies have shown that rapid correction of blood glucose levels in those with poor glucose control results in transient worsening of microvascular complications.[1-4]

Aim

This study aims to outline the incidence of worsening microvascular complications in all patients commenced on HCL in the last 2 years at Queen Elizabeth Hospital, Birmingham (QEHB) Diabetes Centre and Heartlands, Good Hope and Solihull Hospitals (HGS) sites.

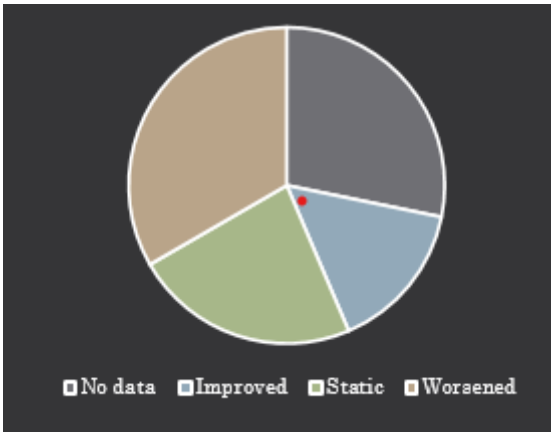
Method

Data were obtained from electronic patient records using PICS and Spectra software. All patients commenced on HCL at QEHB and HGS sites were included.

HbA1C, eGFR, ACR, retinal screening and neuropathy were all compared pre- and post-HCL.

Results

- 96.42% improved HbA1c following 6 months of HCL recorder use.
- 50% of patients with data present had increase in ACR post-HCL.
- A mean increase in eGFR of 3.8 mL/min/1.73m^2 +/- 2.94 mL/min/1.73m^2 after commencing HCL.
- 71.42% had retinopathy prior to HCL (53.65% R1, 17.07% R3a).
- No patients developed new retinopathy.
- 33.33% of patients with retinopathy had worsening within 9 months of HCL.
- 25.93% of patients with retinopathy had R3a after HCL (8.76% higher than pre-HCL)
- 46.67% of patients whose retinopathy worsened had R1 pre-HCL, 13.33% had R3s.



Conclusions

HCL improves HbA1c within 9 months of initiation and is unlikely to cause new retinopathy.

Patients with retinopathy are more likely to worsen after commencing HCL.

Almost half of those whose retinopathy worsened had R1.

References

1. Owen K, Turner H, Wass J (eds). Oxford Handbook of Endocrinology and Diabetes, 4th Edition. Oxford University Press, 2022.
2. Ian B Wilkinson, Rayne T, Wiles K *et al.* Oxford Handbook of Clinical Medicine, 10th Edition. Oxford University Press, 2019.
3. McAuley SA, de Bock MI, Sundararajan V *et al*. Effect of 6 months of hybrid closed-loop insulin delivery in adults with type 1 diabetes: A randomised controlled trial protocol. *BMJ Open* 2018; 8:e020274.
4. Vithian K, Hurel S,. Microvascular complications: pathphysiology and management. *Clin Med* 2010;10:505–9.

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If you would like to receive an alert when applications open for the RCP regional poster competitions in April 2024, please email UKregions@rcp.ac.uk

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