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Humanising case-based learning

Roaa Al-bedaery[a]*, Shehla Baig[a]*, Yuti Khare[b] and James Sullivan-Mchale[b]

[a]Institute of Medical and Biomedical Education, St George's University of London, UK; [b]Medical school, St George's University of London, UK

ABSTRACT

Purpose of the article: Medical undergraduates at St George's, University of London (SGUL) study a weekly clinical case during their clinical science years. Audit of the human stories demonstrated lack of diversity, mono-professionalism, and objectification of some patients. A collaborative partnership with staff, student and patient representation implemented curriculum change, including an inclusive case-writing initiative. We explored whether the reformed written cases supported the development of positive attitudes by sampling perceptions of the cases amongst students.

Methods: Sixteen semi-structured interviews were conducted (Feb–November 2022) with first year medical students. We applied an interpretative phenomenological analysis approach. Verbatim transcripts were coded and analysed to elucidate themes.

Results: Four themes were identified: (i) effective learning, (ii) clinical authenticity, (iii) authentic human stories, and (iv) opportunity for rehearsing the role of a doctor. Students perceived the cases as an effective, contextual learning method, with a high degree of clinical authenticity, allowing mentalisation of doctor attitudes and behaviours in relation to patient-centredness, multidisciplinary team working and diversity.

Conclusion: The results suggest the reformed cases created positive attitudinal change amongst students and supported transition to clinical roles. Memorable human stories had the greatest impact. Dynamic, inclusive, and collaborative case writing initiatives which integrate realism, diversity and multi-professionalism may help to foster positive experiences in students undertaking CBL sessions.

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Multiprofessional; undergraduate; case-based; instructional design

Introduction

Case-based learning (CBL) and problem-based learning (PBL) are internationally adopted teaching and learning tools utilised in medical education (McLean 2016), encouraging students to prepare for clinical practice through knowledge application to clinical cases in small group settings. This approach is favoured by students and faculty and is purported to enhance learning and clinical problem-solving in a team environment (Thistlethwaite et al. 2012). Though efficacy over traditional methods has been contested (Kassebaum et al. 1991), there is evidence that CBL and PBL enhances the application of theory to practice and supports collaborative learning (Hudson and Buckley 2004; Hansen et al. 2005; Hakkarainen et al. 2007).

Effective case-writing

Effective case writing is a key step in the development clinical cases used in PBL and CBL (Kenny and Beagan 2004; Bruner et al. 2022). Common to the diverse approaches to writing cases for health professional education is the use of true to life clinical cases integrated with basic clinical and social sciences (Kim et al. 2006). Though evidence of efficacy of one case structure over another is lacking (Kim et al. 2006; Kohlert et al. 2018), best practice guidance

Practice points

- A content analysis of the entire CBL and PBL case catalogue revealed a hidden curriculum of mono-professionalism, underrepresentation of certain groups, and many patient characters that were passive and objectified.
- Using a participatory action research framework, curriculum values of inclusivity, diversity, teamworking and patient-centredness were agreed in a staff, student and patient partnership. These values were conceptualised as humanisation.
- Staff-student initiatives took immediate action to redress the human stories in the problem cases, and medium-term action through multi-professional case-writing teams, staff and student case-writing teams, online writing resources, workshops and editorial support.
- Qualitative evaluation demonstrated that the revised human narratives supported positive attitude development and students viewed them as opportunities for role rehearsal in the key areas of working with diversity, patient-centredness and multidisciplinary team working supporting their workplace transition.

CONTACT Roaa Al-bedaery rel-beda@sgul.ac.uk Institute of Medical and Biomedical Education, St George's University of London, UK

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- To achieve satisfactory outcomes, critical reflection on the representation of stakeholders in the case-writing teams and reaudit of cases are essential. Writing interventions need to be dynamic, ongoing, and adequately resourced.

focuses on developing cases which are relevant, realistic, engaging, challenging and instructional (Kim et al. 2006; Azer et al. 2012).

Given that all faculty also have the urgent task of decolonising their curricula and addressing bias, diversity, inclusion, and equity in medical education (Krishnan et al. 2019; Amutah et al. 2021; Bowden et al. 2021; Yang 2021), this also necessitates review to ensure cognitive bias and stereotyping are not inadvertently introduced, and ensuring that that the entire menu of cases respectfully and inclusively reflects the social diversity of the patient community (Bruner et al. 2022). In addition, though interventions that include allied professionals' characters in written cases in the undergraduate medical literature is scarce, we believe that this representation and inclusivity must also extend to the social and professional diversity of the health care professionals in teaching cases. Clinical cases offer an early opportunity to introduce students to the multidisciplinary team both through the cases and/or inclusion of allied professionals in the discussions (Topperzer et al. 2022).

Similarly, while there is a lack of published resources that help guide faculty in developing the human story of the patient, carer, and health professional characters in CBL cases, we suggest that writing portrayals of patients, situated in their unique personal, cultural and social contexts is also vital. While various papers describe interventions such as writing collaboratively with a patient (Hassoulas et al. 2017) and using rich narrative information ('thick narrative'), coupled with rich media resources intending to bring the patient to life (Kenny and Beagan 2004; Bizzocchi and Schell 2009), these tend to be innovations with single cases. More typically, the patient story is written in the passive voice. Through narrative analysis, Kenny and Beagan (2004) found that cases had been written with objective linguistics, using a passive register for the patient, eliminating agency and subjective experience. In essence, the patient characters were not humanised, lacking presence, feelings and were not situated in their social and cultural contexts.

St George's case catalogue: the need for change

In keeping with the St George's ethos of preparedness for practice, both the graduate and five-year streams of the St George's University of London (SGUL) early years medical curriculum have learning weeks which are fully integrated with a clinical case – case-based learning (CBL) in the five-year stream and problem-based learning in the graduate year and common transition year. Related science lectures, clinical skills, patient-centred communication, visits, ethics, diversity, and social sciences ensure a contextualised, practice-orientated slant to the weeks learning, and to the entire curriculum.

Yearly expert review by clinicians and scientists ensures that the cases are clinically up to date. However, despite diversity and patient-centredness being emphasised in learning weeks and the curriculum as a whole as advocated by Mbaki et al. (2021), the human stories in the cases have not been reviewed. These narratives have been written over the years by doctors and scientists unconscious of the attitudes to inclusion, teamwork and patient-partnership they might evoke and had hitherto been part of the hidden curriculum. Beginning with the premise that effective case writing goes beyond clinical currency and includes multiple dimensions of the human story, we audited the human stories in our entire clinical case catalogue (CBL and PBL), in order to take creative, remedial action based on the findings and evaluate the impact of the reformed cases on the student experience.

Two members of the curriculum team (SB) undertook the audit on the cases in the academic year 2018–2019. While the full methodology and results from this audit are beyond the scope of this paper a summary is provided for reference. We used a process similar to Bruner et al. (2022) and Krishnan et al. (2019) to record age, gender, sexuality, ethnicity and related clinical diagnosis of all CBL and PBL cases. Informed by Kenny and Beagan (2004) on the patient as a text, we created a framework for analysing the patient narratives. Narratives using comic, stereotyped, and stigmatising portrayals were noted. Remaining patient narratives were analysed for whether they used the active register, whether patients' interior lives, feelings and concerns were portrayed, and whether patients were situated in their social and cultural context. We described these as 'thick' narratives. For mental health and risky behaviours, we noted if socially determined 'upstream' factors leading to the presentation were identified. We then identified all health professionals in the first term CBL cases, noted whether they were named or not and whether their role and importance in holistic patient care was described ('thick' description) in the text. Despite the limitations of the approach, we noted the origin of the name of the health professionals as a way of imagining how their ethnicity might be perceived by the students.

Using local 2011 Census data as a benchmark for ethnic origin (Census 2011), the audit revealed a lack of representation of African, Afro-Caribbean and Asian patient identities in CBL and a lack of other European identities in both CBL and PBL. There was a lack of LGBTQI + identities throughout the case catalogue. Common patterns of subjectification and objectification of patients featured in the text. Brief social history was often present but evidence of the patient's interior life (speech, thoughts, feelings and concerns) less so. Objectifying narratives tended to cluster stigmatising behaviours with protected characteristics, thus promoting stereotypes. In particular, the ethnic minority identities featuring infectious disease, mental health and obesity, and white/white other narratives in the cases featuring, overdose, drug dependency, intellectual disability and sexual transmitted infection needed immediate remedial attention.

The analysis of healthcare professionals in the first twelve CBL cases of the first year of the five-year stream revealed that in total seventeen doctors, nine nurses and two allied health professionals were featured. Named health professionals tended to be male doctors (11/13) with Anglo-Saxon names (10/11). The female doctors, nurses and allied professionals tended to be unnamed or have only a first name (4/6, 6/9 and 2/2 respectively). Roles of allied health professionals were mentioned briefly or not at all. Detailed results of the first year, first term cases are provided in Supplementary Appendix A for further illustration.

Table 1. Recommendations agreed at the CBL/PBL representativeness group.

Recommendations
1. For future adaptations and new cases, authentic, humanising stories that evoke empathy, are parsimonious and respect the educational structure of the case is the aim
2. Epidemiological associations between diseases and certain groups can be retained where unmet health needs are an important concern. However, the protected characteristic should not be portrayed as causal and the association needs to be unpacked to demonstrate the aetiological factor of relevance (e.g. genetics, exposure to pathogen, social deprivation, literacy, behaviour)
3. In addition, where any potential for stigma exists, multiple representations of the same identity must be portrayed throughout the whole menu of cases without any association with the disease in question
4. Where possible, medical and allied health professionals should be named and represent the diversity of our local community of students and health care workers

Case oversight and revision

In keeping with a participatory action research approach (PAR) (Reason and Bradbury 2008), we formed the PBL/CBL representativeness group, a faculty working group with student and patient representation to consider the results and act. PAR is a research-to-action approach for conducting research, centred on the belief that those most impacted by the research should be involved throughout the design and execution of the research. Students from the black students' society, who had independently raised concerns about ethnic minority representation in PBL cases at the time of the audit, and students advocating for better representation for LGBTQI identities in the curriculum came forward to join the group. We also invited a patient representative, who had been contemporaneously evaluating the patient centredness of the curriculum (KS). The audit findings were presented, and a consensus was reached on the recommendations arising (Table 1) Values of inclusivity, representation of diversity, team-working and patient-centredness, were reaffirmed with a commitment to take immediate remedial, medium, and long-term action.

From July 2019 to September 2020, we undertook a series of immediate and medium-term curricular interventions. Rather than use an analytical framework to prescribe case revision for sociodemographic characteristics (Krishnan et al. 2019), we were guided by our recommendations and adopted a participatory approach. Case-writing and teaching development was undertaken by key stakeholders including BAME and LGBTQI students, allied health professionals and faculty staff. We formed staff-student case writing teams, interprofessional case writing teams, staff-student diversity teaching development groups, conducted writing workshops, and provided an online writing resource. Interprofessional case writing teams consisted of professionals, typically participating in healthcare for the diagnosis in question, coming together to co-create scenarios that would facilitate rich descriptions of allied professional roles. To keep our aims in mind, including facilitating the new stories to be written in the active register, situating patients in diverse social and cultural contexts and demonstrating multi-professional working, we provided central oversight, peer review by staff student groups and editorial support. Given that human dimensions of the story such as portrayal of diversity, team-working and patient-centredness puts our relationships with human beings at the centre of our concerns, we conceptualised this as *the humanisation* of our case catalogue. We agreed to evaluate the student experience of the reformed cases after the first semester of year one, to gain insight into the effectiveness of our recommendations. We provide a reaudit of the CBL cases from the first term of the five-year stream for comparison in Supplementary Appendix A. We aimed to explore the students' perceptions of the first term of the reformed cases in the first year of the five-year stream of MBBS in 2021.

Method

Design

We adopted an interpretative phenomenological analysis (IPA) of qualitative interviews for this study (Smith et al. 2009). Rooted in critical realism (Bhaskar 1975), the aim of IPA is to explore an individual's perceptions of their personal and social world. Critical realism offers an ontological and epistemological framework that emphasises the personal and social contexts within which people experience what is 'real,' claiming that to understand and change the social world, we need to understand the underlying structures. Critical realist research methods therefore have a primary focus on understanding, rather than merely describing. IPA adopts an idiographic focus, providing insights into how a given person, in a given context, makes sense of a given phenomenon. In the context of this study, individuals may perceive the case studies differently, and understanding these perspectives is a key tenant to this research, supporting the methodology adopted.

We adopted semi-structured interviews owing to the potentially sensitive themes discussed involving the patient narratives and the feelings these might invoke. To keep the views of the students at the forefront of this evaluation, student leads were trained to conduct the interviews with their peers. We ensured that student leads, who had themselves experienced the CBLs prior to transformation, were actively involved in recruitment, data collection and guiding the iterative process, influencing actionable changes, aligning with the principles of participatory action research (Reason and Bradbury 2008).

Context

While the cases from the entire case catalogue were the focus for the case-writing intervention (CBL and PBL), this research focuses on student experiences of weekly CBL cases at SGUL, United Kingdom in the first semester of year 1 of the five-year programme.

Recruitment

IPA favours small sample sizes from a closely defined group (Smith et al. 2009), sacrificing breadth for depth. Medical students who completed CBL sessions with the reformed cases were targeted for inclusion. Given that most first year

students in the five-year stream were school leavers who were less likely to have established attitudes to health and healthcare than graduate students or students in the later years, we chose this cohort of students for our study.

We adopted a purposive sampling strategy through two student-led recruitment channels. Firstly, through an online forum advertisement accessed by medical students at SGUL, and secondly opportunistically following teaching sessions. Participants were asked to read a study information sheet and complete a consent form prior to scheduling an interview. Participation was voluntary and students could withdraw at any stage.

Researchers

Our research team consisted of an early career researcher with experience in qualitative research (RA), and a reader in medical education and senior member of the education team (SB), both health professionals by background. The establishment of a good level of rapport, trust and empathy was critical to gaining depth of information in this research. For this purpose, the team also included two medical students (YK and JS) who were well positioned to conduct the interviews. The students were trained in qualitative research methodologies and mentored in conducting qualitative interviews prior to commencing the study.

Data collection

IPA supports the use of a flexible data collection instrument allowing participants to detail their perceptions of their personal experiences freely (Smith et al. 2009). Semi-structured interviews were therefore conducted using a topic guide. This guide was developed using Todre's dimensions of humanisation framework (Todres et al. 2009) (Supplementary Appendix B). In keeping with an IPA (Smith et al. 2009), open questions were prioritised e.g. can you talk me through your experiences of case-based learning? Probing questions were included if required. These were amended iteratively during the interview process as new ideas emerged. The guide was reviewed by a qualitative researcher (RA) and piloted on two medical students and amended to improve clarity and reduce question bias. Interviewers were guided by the schedule but prioritised the development of rapport with the respondent, probed interesting areas that arose and followed the respondent's lead to explore their psychological and social world (Smith et al. 2009).

Between February and November 2022, two authors (YK and JS) conducted sixteen interviews. Interviews were audio recorded and transcribed verbatim through a transcription service. Interviews continued until the researchers were satisfied no further themes emerged (Varpio et al. 2017).

Ethics approval was obtained from St George's University Ethics Committee (Approval ID: 2021.0293).

Data analysis

Understanding the content and complexity of the meaning respondents attach to an experience is a central tenant of IPA (Smith et al. 2009). Analysis therefore involved the investigator engaging in an interpretative relationship with the transcripts. A step-by-step approach for analysis in IPA was adopted through an inductive, iterative and collaborative process.

RA and SB independently immersed themselves in the data reading the interview transcripts multiple times to achieve familiarisation with the data. During this process, the data was inductively annotated with comments and codes. These included summaries, notes about the language used, associations and interpretations. Each transcript was analysed fully before moving on to the next, in keeping with the idiographic focus of IPA. As the researchers moved through the transcript's comments on similarities and differences, amplifications and contradictions were included.

The transcripts were re-read following this process to transform initial notes and codes to emerging theme titles. Connections were sough between themes, some clustered together, others emerged as superordinate themes. As some themes clustered, transcripts were rechecked to ensure the connections worked for the primary source material. As emergent superordinate themes emerged, earlier transcripts were reviewed in an iterative analysis process. A directory was created tabulating emerging themes and their corresponding quotes as evidence, ensuring our recognition of themes could be traced from the participants' original accounts. RA and SB met to discuss their independently generated codes and themes, reaching a final consensus. The medical students who conducted the interviews engaged in data analysis discussions alongside RA and SB throughout the study, facilitating the triangulation of the data.

Reflexivity

The researchers collaboratively acknowledged how their position and roles could impact the handling of the data. The medical students reflected on the prejudices they may bring whilst they interview their peers and as previous CBL/PBL tutorial participants. RA and SB reflected on their positions as medical educators and the impact this could have on the subjectivity on data analysis. We discussed our motivation to conduct this research whilst also reflecting on other personal motivators including our backgrounds, ethnicities and personal experiences of privilege/marginalisation. Our intention was to gain further access to the meaning of the interviews, reflecting the interpretative focus of IPA.

Results

Participant demographics

Sixteen participants were interviewed aged between 20 and26 years, from Asian/Asian British (10), White/White British (5) and Black/Black British (1) backgrounds.

We identified four themes which encompassed the interview data: effective learning, clinical authenticity, authentic human stories, and cases as opportunities for rehearsing approaches to clinical practice, diversity, relationships with patients, and allied health professionals. We described this last theme as role rehearsal (diversity,

Table 2. Themes with exemplar verbatim quotes.

Theme	Quote
Effective learning	*'So CBL I'm sure that a lot of people would agree that CBL is a very good way of putting together what you've learnt in the week to make connections. And develop the skills that you're going to need as a future healthcare practitioner at an earlier stage in your life as a first-year medical student and then you carry on doing that … a really good way of really cementing the information, making those essential synoptic sorts of links between the different areas that you cover.' Participant 2*
Clinical authenticity	*'I didn't realise the amount of things or aspects you have to consider as a doctor, because CBL is essentially putting you in the shoes of a doctor and you have to make all this.' Participant 1*
Authentic human stories	*' … so, I've done PBL before, and then it wasn't similar. I think I much preferred, I like having a story for the person. I think it makes it way more interesting. It's way more engaging … , even though it's not a real person, but I feel like you care about the person more.' Participant 7*
Role rehearsal: patient centredness	*'I always found in CBL that it makes it more human and then you're kind of more empathetic and that that resonates with you because you're really, like, thinking about the character being a true patient and potentially someone you could see later down the line.' Participant 6*
Role rehearsal: multi-disciplinary team	*'There were definitely lots and lots of professionals that I didn't previously know about, such as PTs and OTs and haematologists. So, I felt that CBL, it forced us to go through each of these professionals. And that just increased my respect for just everyone that was in the multidisciplinary team and how they work together. … that set off a good start to our placement as well … ' Participant 5*
Role rehearsal: diversity	*'I thought that including some of those characters that are more diverse definitely helps you think about that. It is so much more realistic. London is just so multicultural. I think what will be quite interesting to have potentially as a CBL case is that, I know that certain religions, for example, or ethnic sects, they prevent you from having access to certain treatments.' Participant 3*

patient-centredness, and the multidisciplinary team). The themes are described below. A small number of outlier perspectives were also identified. We considered these important to both illuminate the limits of the intervention and to provide future direction. Quotes directly referenced in the text can be found in Table 2 and illustrative quotes for all points in the text can be found in Supplementary Appendix C.

Themes

Theme 1: Effective learning

Participants regarded CBL as an effective teaching and learning tool. They found the sessions particularly useful in their ability to integrate the lectures and skills of the learning week and recognised that these synoptic skills were important to their future roles (e.g. participant 2) and acknowledged the active nature of the learning. The small group setting was identified as collaborative in all but one student, with many students reporting CBL as the best part of the learning week, even when the pandemic forced CBL online. We saw evidence of students learning how to collaborate with only one student identifying group dynamics as problematic.

Theme 2: Clinical authenticity

Participants identified the clinical narrative of CBL as alerting them to the reality of being a doctor in an engaging way (e.g. participant 1). There was recognition that the cases were true to life clinically, and excitement when fiction became reality and health care learning experiences mapped onto CBL cases. Recognition of the reality of death and adjusting to the limits of medicine was observed in several students. Several participants wanted more challenging scenarios portrayed including unsatisfactory health outcomes, disputes with patients, clinical futility and difficulties with clinical communication. The absence of community health services (other than general practice) was noted by one participant with a suggestion of future inclusion.

Theme 3: Authentic human stories

The human stories integrated into the cases made the cases engaging (e.g. participant 7) memorable and relatable. Participants showed awareness of the interior life of patients, and this led to empathic responses in many students and awareness patients may not divulge this interior life to doctors without rapport and trust. Even participants that favoured the technical narrative over the human story nevertheless showed a nuanced understanding of a patient's interior life which demonstrated relating to patients.

Theme 4: Role rehearsal

An overarching theme which resonated amongst participants was the opportunity the cases gave them to rehearse their future roles as doctors, including thought processes and reactions. The CBL cases sometimes featured role-play with speech, which they appreciated, but in all cases the stories themselves led students to identify with the doctor and then mentalise the experiences of healthcare the doctor was involved in. Specifically, students identified the importance of patient-centred attitudes, the multidisciplinary team and appreciation of diversity in the way they worked. Many participants mentioned CBL narratives as being useful preparation for clinical attachments later in the year.

Patient-centredness. The cases allowed students to rehearse providing care to patients that took account of the whole person, raising their awareness of patient-centred care. Several participants found the human stories evoked deep empathy for the patient characters and one participant insightfully recognised the doctor as being part of the patient's story. There was evidence of mentalising approaches to patients for future health care encounters (e.g. participants 6). The need to individualise care was noted, both in terms of interpersonal skills (see participant 1) and from a medical point of view (e.g. participant 5).

Multidisciplinary team. Students acknowledged the importance of the multidisciplinary team and the outdatedness

doctor-centric attitudes. The cases allowed students to increase their understanding and respect for other members of the multi-disciplinary team including paramedics, physiotherapists, occupational therapists, physician associates, radiographers and laboratory scientists (e.g. participants 5). Students described the cases as supporting their transition to clinical placements (e.g. participants (5).

However, several students noted the absence of thick descriptions of the nurse's role as a limitation of the case narratives.

Diversity. Participants valued exposure through CBL cases to diverse groups of people prior to clinical experience. This included different age groups, ethnicities, and sexualities (e.g. participant 3). Several students appreciated being able to rehearse the pronunciation of unfamiliar names, identifying this as a basic skill in demonstrating respect. Some participants identified children and intellectual disability as needing more representation. While more participants used the term ethnicity, several participants used the notion of race and some commented on the relationship between health needs and skin colour or the relationship between religion and health needs (e.g. participant 3) While we saw most participants discussing specific examples and not generalising from them, some responses implied the belief that there were direct and simple relationships between the notion of race and health or showed evidence of starting to grapple with the complexity of the field.

Discussion and conclusion

This paper describes the qualitative evaluation of an intervention to humanise case narratives used for CBL and PBL at St. George's University, London. Similar to other studies (McLean 2016), the results demonstrate CBL to be an effective, contextualised learning method with potential for a high degree of clinical authenticity. In addition, emergent themes demonstrated the positive attitudinal change in participants of including human stories that feature patient-centredness, diversity and multi-professionalism in the narrative. This extends the work of Bruner et al. who described inclusivity and diversity and patient-centredness in their seven core attributes of case revision, but not explicitly multi-professionalism. Students felt the cases represented their real clinical experiences, the health professional characters supported their transition to clinical placements later in the year, and the human stories supported relatability, emotional engagement and made the cases memorable. While we do agree with Bruner that stepwise cognitive challenge in the sequence of cases is important, we found our students had nuanced and sophisticated responses to social complexity and were keen for more social realism and social challenge as a means to rehearse and mentalise responses in a safe setting before real clinical experience. We feel there is more work to do on the cases regarding the portrayal of patient ethnicity. While most students did not generalise from case examples to a simple relationship between disease and ethnicity, we are keen to avoid essentialism with its resultant risk of diagnostic overshadowing. We did note the use of the notion of race by a few students despite associated curricular sessions on race as social rather than a biological construct and it is likely that further curricular teaching on this area is indicated.

The participant demographic, reaudit of the first term cases and participant responses provide a useful critique on the limitations of our intervention and our study design. Firstly, we are aware that participants that enjoyed CBL may have self-selected, and the qualitative design may not adequately reflect the impact on the whole cohort. However, the participant that described the difficult group dynamic still demonstrated attitudinal change in their responses. We did not purposively sample participants for ethnicity, gender, or sexuality but the participant demographic in conjunction with the student groups participating in the case-writing initiative did lead to inclusion of all the intended student stakeholders in the project as a whole. We worked with our Joint Faculty and Physican Associate programme to create interprofessional case-writing teams. However, this does not include the School of Nursing and we overlooked the inclusion of nurse colleagues in our intervention. This was quickly identified by students in their responses and in the case reaudit as all the remaining thin descriptions of health professionals in Supplementary Appendix A are nurses. Thus, using a participatory action research framework is limited to the adequacy of stakeholder representation in the framework and we advocate critical review and constant re-iteration in this regard. In addition, all the work of this short- and medium-term intervention was undertaken by staff in addition to their usual workload and with the use of time-limited grants for students. Without adequate resourcing, the long-term future of such initiatives is under threat.

Patient ethnicity was portrayed in the cases using thick descriptions. However, health professional ethnicity used name as a proxy, as visual and other non-verbal cues that would convey ethnicity are not part of our text-based case delivery system. We realise that there are limitations with this approach. Using multimedia case delivery or complimentary professionalism resources such as online vignettes of health professionals might improve this in the future. Similarly, while the targets for the ethnic mix of patients and healthcare professionals met census criteria (Census 2011) and NHS workforce figures in this instance (NHS Digital 2022), Krishnan et al.'s (2019) more analytical approach to representation does provide a more reliable framework for future case reaudit.

Conclusion

These findings support the philosophy which underlies CBL as a transformational learning tool (Williams et al. 2012), promoting preparedness for practice (Williams 2005; Williams et al. 2015), and a tool that is positively received by students (Kassebaum et al. 1991; Garvey et al. 2000; Williams 2005; Thistlethwaite et al. 2012) but enjoin us to extend our conception of authenticity to include the human dimensions of health and healthcare. Given that CBL and PBL are common teaching tools in undergraduate medicine and their impact on student attitude formation, attention must be given to the hidden curriculum that is conveyed by the human stories or the absence of the human stories. We recommend programmes audit their

case catalogue. A participatory action research framework can be effective to create change, but adequate representation within stakeholder groups and critical reflection on the process and outcomes through student feedback and reaudit of cases is essential. Case evaluation, revision and reaudit requires specific skills and time and we argue for recognition of this through adequate resourcing to secure long-term impact.

In summary, CBL is an effective faculty intervention to humanise the curriculum, support positive student attitudes and facilitate transition to clinical roles and environments. To maximise its value, it must respond to the changing social milieu and be kept clinically up to date. Case-writing initiatives should be dynamic, inclusive, and collaborative and include authentic, humanised stories from a diverse range of healthcare and patient characters.

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Notes on contributors

Dr. Roaa Al-bedaery MSc is a Clinical Teaching Fellow, General Practioner, and lecturer at St. George's University London with an academic interest in qualitative research, teaching evaluation and curriculum development.

Dr. Shehla Baig is a Reader in Medical Education and an Education Associate for the General Medical Council. She is currently Director of MBBS Development, a member of the Senior Education team for MBBS at St George's, University of London and a General Practitioner at Balham Park Surgery.

Dr. Yuti Khare is an Academic Foundation Doctor specialising in Medical Education and Leadership at Maidstone and Tunbridge Wells. She recently graduated with a merit in MBBS from St George's University of London and worked on this research as a Student Curriculum Advisor.

James Sullivan-McHale is a fourth-year medical student at St George's University of London. He has a strong track record of staff-student collaboration for improving medical education interventions and worked on this research as a Student Curriculum Advisor.

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