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Delivering a Learning Disability OSCE Station – Challenges and Solutions

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Introduction

People with learning disabilities (LD) face extensive health inequalities and premature mortality in comparison to the general population (1). There is evidence to suggest that such inequalities could be preventable and that better training for clinicians has been advocated (2). The GMC's Outcomes for Graduates (2018) stipulates that UK medical graduates should be competent in communicating with and assessing the needs of patients with LD (3).

We already know that medical students' attitudes to patients with LD are responsive to intervention and involving patients with LD in undergraduate training can improve medical students' communication skills (5). Sir John Michael in the Independent Inquiry into Access to Healthcare recommended that LD training should be mandatory in undergraduate and postgraduate clinical training, ideally involving patients with LD and carers in training (this requirement became statutory, through the equality act (2010) (4,6).

Objective Structured Clinical Examinations (OSCEs) are commonly used in medical schools as a way of providing reliable and reproducible clinical assessments. However, it is also important to consider the OSCE as more than just an assessment but also as a learning opportunity and a demonstration to students of which outcomes are important(7).

Here we describe how we used the end of fourth year medical school OSCEs as an opportunity for medical students to interview patients with LD and how we overcame some of the challenges faced.

Challenges and Solutions

Bristol Medical School currently has an average year group size of 250 students. In the fourth year of the undergraduate degree, students sit a summative 16 station OSCE at the end of the academic year. Each station is 9 minutes long and the exam is delivered on two days over four sites. Challenges and solutions regarding the station, patients and examiners are summarised in Table 1.

The Station

In our station the students were asked to explain stage 1 hypertension to the patient and then discuss any lifestyle factors that could be targeted to improve their blood pressure. The focus was on communication and they were not required to examine the patient or initiate any medication.

The Standardised Patients

To make the station authentic we planned to use people with an LD rather than simulated actors. We used a variety of sources to recruit individuals with LD needed to deliver the exam. In Bath and Bristol, we engaged with the *Misfits Theatre Company*, which specialises in creative theatre delivered by people with LD. In Cheltenham and Taunton, we recruited patients with LD known to the local LD psychiatry services.

We conducted group and individual training at all four geographical sites. This included a presentation, group observation of example OSCE stations, familiarisation with the exam day lay out and rehearsal of the role play on a one-to-one basis.

We developed an accessible script for the patients with the help of a specialist LD speech and language therapist. The briefing sheet included shorter sentences and larger font than is usual, with explanatory pictures. We tried to keep the patients' script to a minimum and apart from a few salient points the patients were asked to answer questions honestly as if it were they who were in the scenario. The authors recognise that this reasonable adjustment added to the heterogeneity of the station, however, in the interest of pragmatism it was felt that this made the station easier to deliver.

On the day of the examination, at each site, a substitute patient was available to ensure patients were able to take breaks if required. We also ensured that all patients were welcomed by a member of university staff on arrival who had met them previously and would be a point of contact for the day.

The Examiners

Our examiners for this station were GPs who had previous experience in examining OSCE stations at the university.

We developed a bespoke training video to standardise examiners for this specific OSCE station. This included pre-recorded example videos of borderline and passing students in order to calibrate the examiners. The video also encouraged our examiners to intervene during the station should the discussion branch too far away from the topic area.

The mark scheme for the station was deliberately designed to accommodate the heterogeneity within the station. We avoided a didactic mark scheme and instead allowed the examiners more flexibility by allowing a much larger range of marks for each assessment area. For example, marks were available for addressing lifestyle changes "appropriate for the patient" rather than specifically stating that they should address smoking, alcohol or BMI for example.

Finally, to mitigate against any issues arising on the day of the exam, lead examiners were appointed in advance at each of the four sites to troubleshoot any issues and to act as a point of contact for both patients and examiners throughout the day.

Outcome and feedback

We measured the success of our station using three parameters:

- Did it add to the overall reliability (Cronbach's alpha) of the exam as a whole?
- Did the LD station differ to other station in terms of variability in scores?
- Was the failure rate for this station different to other stations?

Statistical analyses were performed in Stata v.15.1. There was some evidence that the LD station added to the reliability of the overall exam – Cronbach's alpha fell from 0.690 to 0.678 when the LD station was removed from calculations.

Variance ratio tests for the LD station scores against each of the other 15 station scores showed that for 8 of the 15 comparisons, there was no difference ($P=0.16 - 0.97$). For 7 of the comparisons, there were differences ($P<0.001 - 0.05$), but the variability for the LD station scores were always lower than the comparison station scores.

Finally, the failure rate of the station was 5.9%. This was the lowest failure rate of any station in the exam with the range of failure rates for the other 15 stations falling between 6.4%-21.6% with a mean rate of 13.1% (SD: 4.6%).

We also took time to gather informal, anonymous feedback from those involved. We received one complaint from an examiner, who stated:

"It was difficult to mark as the station varied in difficulty depending which of the LD patient you had."

We had two complaints from students who felt that the difficulty of the station varied depending on the severity of the patient's LD. By contrast, the feedback from the standardised patients was universally positive with one commenting:

"The whole thing was amazing. It was good that the student had to understand me"

And another simply wrote that:

"It made me feel important"

Conclusion

We have demonstrated that creating an OSCE station in which students must conduct a focussed consultation with a person who has LD is feasible.

In any exam there is always a trade-off between validity and reliability. We have demonstrated that a station testing students' ability to communicate with someone who has LD can be created without jeopardising reliability.

Notably in this station the failure rate was very low. This may be attributable to examiners knowing that this was a difficult station, or to the success of extensive communication training and interviewing experience offered in our medical school curriculum. In future, it may be worth considering informing the student body of this station in advance and explaining how the variance across sites and between patients will be mitigated against through standard setting and statistical analysis. This may reassure the student body who seemed concerned by the variability of the station across sites.

Supporting medical student exposure to marginalised groups should be the responsibility of all medical educators. There are a variety of ways of doing this and an OSCE is just one example. We feel that the use of a variety of mediums to deliver this exposure is essential if we are to produce doctors who are equipped with the skills needed to deliver high quality care to these underserved patients.

Word count: 1310

Challenges	Solutions
<u>Patient factors</u> Need for real patients as opposed to simulated actors Standardisation of patients Accessible script Potential patient issues on exam day	<ul style="list-style-type: none"> • Local LD theatre group used • Local LD psychiatry consultants contacted for suitable patients • Bespoke training sessions for patients • Speech and language therapist input in script development • Large font and short sentences • Pictures to compliment text • Detailed information kept to minimum • Spare patient available at all sites • Member of staff familiar to patients greeted patients on arrival • Transport arranged for patients • Where required chaperone/carer accommodated
<u>Examiner factors</u>	

Standardisation of examiners	<ul style="list-style-type: none"> • Bespoke training video • Use of experienced OSCE examiners • Examiner briefing on day of exam • Lead examiner appointed at each exam venue to troubleshoot in real time
<u>Station factors</u> Potential for variation Variability in LD severity amongst patients	<ul style="list-style-type: none"> • Examiners instructed to intervene in the station if deviation from the topic • Flexible mark scheme • Standard setting and statistical analysis after exam

Table 1.0 Challenges and solutions of delivering the LD OSCE Station

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