Case Based Presentation and Discussion (CBPD) – A different approach to CBD

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BACKGROUND

Case Based Discussion (CBD) is a structured interview designed to assess professional judgement in clinical cases. It was first introduced as a work-based assessment (WBA) in 2001 by the General Medical Council to assess under-performing doctors against the standards defined in Good Medical Practice. [1] Since then, its usage has expanded beyond the original intentions and is now prevalent in UK curriculums involving junior [2] and middle grade [3] medical trainees. CBD can focus on encounters based on outpatient records, inpatient records or discharge summaries. This assessment is primarily used in a formative way to help develop a trainee's performance but can also contribute in a summative way to judge a trainee's competence at the end of their training.

A study involving 42 trainees and 36 assessors showed that 90% of respondents agreed that CBD enabled trainees to demonstrate clinical reasoning, decision-making, knowledge around case and patient management. [4] Another recent study showed that CBD can give new opportunities for good quality learning and feedback, provided that there was a commitment to the educational aspects of the process by trainer and trainee. [5] Similarly, Bodgener *et al*. [6] opined that CBD encouraged learners to develop and improve but feedback was reliant on the skills and confidence of the assessor. CBD can also contribute to teaching aspects of medicine that was difficult to teach in other contexts. [7]

We utilised a slightly modified version of CBD for our trainees in our Foundation Year programme. [8] Our trainees present their case with a PowerPoint presentation to two specialists and other trainees. The assessee can present any difficult management cases through a wide range of specialties available in their programme. Between the two specialists, one will usually have an expert knowledge in the presented subject and the other with experience in conducting CBD. This encounter lasts between 30 to 45 minutes during which the patient presents a case and a literature review on the subject. Documentations in case notes are also assessed and scrutinised. Assessors and observing trainees will be able to ask the assessee any relevant questions pertaining to the case. The assessees are scored by the two assessors on

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the generic domains used in standard CBD. In addition, assessees are also judged on their presentation skills, interaction with group and quality of literature review. Formative feedbacks are provided by the assessors at the end of the session. Informal peer review feedbacks are also given by observing trainees. To differentiate this WBA from the traditional CBD, we have decided to name this tool Case Based Presentation and Discussion (CBPD).

We have used CBPD to assess competence in Foundation Year trainees since 2010. [9] Table 1 summarises the competencies assessed in CBD and CBPD. This is used in conjunction with other WBA tools like Mini Clinical Examination (Mini-CEX), Direct Observation of procedural skills (DOPS), Multi source Feedback (MSF) and audit assessment. These assessments are scrutinised summatively at six monthly formal interviews by a panel of specialists (Record of In-Training Assessments or RITA).

OBJECTIVES AND METHODS

The main objective of the study is to obtain feedback from assessors and trainees on the use of CBPD as a WBA tool. The feedback is conducted both in a qualitative and qualitative manner. The utility or usefulness of an assessment tool has been defined as a product of its validity, reliability, feasibility (cost-effectiveness), acceptability and educational impact. [10] These principles have been adapted and reported in various publications on WBA. [11-13] Therefore for the basis of this research, judgements on CBDP were made in relation to these five principles. The definitions of these principles are broadly described below:-

- Validity is concerned with the interpretation of assessment results rather than an inherent quality of the tool. It is generally inferred from the evidence presented to assess a particular attribute. [14]
- Reliability refers to the consistency or reproducibility of assessment results over time and instances. Like validity, it is the characteristic of the result or outcome of the assessment and not measuring the tool itself. [15]
- Feasibility (Cost-effectiveness)–The time, effort and expenses involved in its implementation (developing, administering, reporting and interpreting) should justify its use. This must also be weighed against the delivery of clinical services. [16]
- Educational Impact refers to the educational message conveyed to the trainees that can lead to learning and training opportunities. [12]

Table 1: Competencies assessed in the CBD and CBPD.

Competences	**Positive indicators**
Medical Record Keeping	Accurate and legible
Clinical Assessment	Able to perform appropriate history-taking and examination.
Investigation and Referral	Able to justify the rationale for referrals and ordering of tests.
Follow up and Planning	Able to discuss the rationale for the formulation of management plan.
Professionalism	Demonstrate respect, compassion and integrity in the care of patient.
Presentation Skills*	Clear, concise and logical teaching style.
Literature Review *	Understands subject matter and use evidence-based medicine.
Interaction with group *	Able to generate interest and respond appropriately to questions.

* Additional competences that can be measured by CBPD

Table 2: Feedback scores from the assessors (N=23).

	Number of scores (%)						Total
	0 (Don't Know)	1 (Very Poor)	2 (Poor)	3 (Average)	4 (Good)	5 (Excellent)	
Validity	0 (0)	0 (0)	0 (0)	6 (26.1)	11 (47.8)	6 (26.1)	23 (100)
Reliability	0 (0)	0 (0)	0 (0)	6 (26.1)	13 (56.5)	4 (17.4)	23 (100)
Feasibility	0 (0)	0 (0)	0 (0)	4 (17.4)	8 (34.7)	9 (39.1)	23 (100)
Educational Impact	0 (0)	0 (0)	0 (0)	3 (13.0)	7 (30.4)	13 (56.5)	23 (100)
Acceptability	0 (0)	0 (0)	0 (0)	4 (17.4)	11 (47.8)	8 (34.7)	23 (100)

- Acceptability is the belief that the tool is acceptable to practice. If beliefs, attitude and opinions of both assessors and trainees are not taken into account, then sustainability and survival of the tool may be compromised. [10]

Assessors and trainees were asked to score the tool according to the characteristics described above on a 5 point scale (1-poor and 5-excellent) in a purpose made questionnaire. They were also given the opportunity to score '0" if unsure. Additionally, an opportunity to provide an unstructured free text feedback was provided in the questionnaire.

All assessors who were involved in CBD and trainees who have exited the foundation year programme between 2010 and 2013 were invited to participate. The respondents were allowed to provide anonymous feedback to the postgraduate department.

RESULTS

A total of 25 (out of 32) assessors and 15 (out of 27) trainees returned their questionnaires. In addition, trainees would have also attended between 8 and 12 observational CBPD assessments each.

Tables 2 and 3 showed the feedback scores provided by assessors and trainees respectively.

DISCUSSION

The positive response by assessors and trainees indicate that CBPD is a popular form of WBA. Scores for educational impact were consistently higher than those in the other domains. 87% of assessors (n=20) and trainees (n=13) rate CBPD as good or excellent for educational impact. It is perceived that CBPD has high educational impact as it gives opportunities for feedback that can highlight areas of strengths and weaknesses. Furthermore, it provides opportunities for reflection

Table 3: Feedback scores from the trainees (N=15).

	Number of scores (%)						Total
Scores	0 (Don't know)	1 (Very Poor)	2 (Poor)	3 (Average)	4 (Good)	5 (Excellent)	
Validity	0 (0)	0 (0)	0 (0)	2 (13.3)	10 (66.7)	3 (20.0)	15 (100)
Reliability	0 (0)	0 (0)	0 (0)	4 (26.7)	6 (40.0)	5 (33.3)	15 (100)
Feasibility	0 (0)	0 (0)	0 (0)	3 (20.0)	7 (46.7)	5 (33.3)	15 (100)
Educational Impact	0 (0)	0 (0)	0 (0)	2 (13.3)	5 (33.3)	8 (53.3)	15 (100)
Acceptability	0 (0)	0 (0)	0 (0)	2 (13.3)	8 (53.3)	5 (33.3)	15 (100)

Table 4: Themes arising from qualitative analysis.

Themes	Brief descriptions
Good educational impact	CBPD allows assessors and trainees to learn new topics across a range of different specialties
Improve teaching skills	Trainees can obtain feedback on teaching styles. They can experiment with different types of teaching methods.
Improve confidence in public speaking	CBPD enables trainees to practice public speaking in a familiar environment
Vicarious learning	Observing trainees can benefit from real-life clinical management experience presented by the assesse. They can also learn which teaching and presenting styles suit them best.
Evidence-base practice	Trainees can learn to evaluate and appraise literature.
Peer-review learning	Observing trainees have the opportunity to critique teaching style and learn from each other's experience
Reflective practice	CBPD enables all trainees to reflect on their own practice through a wide range of specialties.

and observational learning. Validity and reliability is dependent on the interpretation of results or outcomes, rather than the inherent properties of the tool. [14, 15] With this in mind, we speculate that validity and reliability of CBPD should be superior to that of other WPA tools because the use of two separate assessors can help to reduce bias from inter-case and intra-rater variations. CBPD is usually planned by our postgraduate department to coincide with continuing medical education (CME) programme of the foundation year trainees. Therefore, unlike other opportunistic WBA encounters, it is usually feasible to plan CBPD with assessors and trainees ahead of time.

Reassuringly, the vast majority of our respondents accept the value of CBDP as an assessment tool. This 'buy in' commitment is especially important to us because it implies that we have the support needed to champion and proliferate the usage of this tool. We believed that acceptability of the tool is vital in ensuring sustainability and applicability of its usage. Perhaps more importantly, our respondents rated this tool higher than the other assessment tools (Mini-CEX, DOPS, MSF and audits) used in Foundation Year doctors in a separate study (unpublished data).

The important themes (Table 4) that arise from the questionnaires are described in sections below.

1-Educational Impact: Trainees are allowed to present any difficult cases from a wide range of clinical specialties. These case presentations are used to occupy CME slots in the curriculum. CBPD allows a supervised interaction between assessors, assesse and trainees on clinical management of an interesting case in a non-threatening and familiar environment. This process is regulated by assessors who may take opportunities to conduct impromptu teachings on areas that are deemed deficient during the course of the discussion. Role-playing to mimic a real-life patient encounter is a popular feature which can help in the assessment of counselling or consenting skills.

2-Vicarious learning: A common theme from the analysis of feedback was the value of vicarious or observational learning by observing trainees. Vicarious learning through simulation exercises like role-playing can arguably be more effective than hands-on training. [17] Our trainees feel that they can learn equally as much by watching their peers interact with assessors and role-playing train-

ees, especially when it concerns day-to-day clinical management and communication skills.

3-Peer review learning: Peer review of lecturing can enhance confidence and lecturing skills. This is also perceived as less threatening as peers are usually more helpful and less judgemental. McLeod *et al.* [18] endorsed the benefits of peer assessment in cultivating lecturing virtuosity among university faculty members. Peer review of teaching is also widely accepted in nursing schools and pharmacy colleges. [19] Regrettably, in medicine "there is currently no global level of professional peer-review of excellence in teaching". [20]

4-Evidence-based practice: CBPD enables trainees to evaluate and appraise evidence-based literature. This skill is traditionally not well taught and assessed in the curriculum. [21] Similar novel tools used for the assessment of evidence-based practice has been reported and described in the literature. [21, 22] Many of our trainees have never done extensive literature research prior to CBPD and find this an extremely educational experience.

5-Teaching skills: Most doctors are expected to have teaching skills regardless of whether they received formalised training. The UK foundation year program has introduced a similar 'developing the clinical teacher' assessment tool in 2010 although it has not been formally reported in the literature. [23] Formalised assessments made by our trained assessors have improved delivery of teaching sessions especially when emphasis is made on planning, interaction and delivery.

6-Public speaking: Many doctors do not enjoy public speaking, mainly because of the lack of training in their formative years. [24] This is especially true for junior doctors or internists who have limited opportunities to do public speaking. [25] This is compounded by cultural and language limitations in our society. CBPD allows early exposure to public speaking and trainees can become more equipped to after their foundation year program, especially with practice, repetition and planning.

7-Reflective practice: Formative feedback after each CBPD has enabled reflection on clinical management, teaching skills and presentation content. Trainees were usually given specific action plans to aid their development in areas that are perceived to be lacking. Self-reflection, which can be and are often unrelated to action plans, [26] should be discussed with their allocated mentors or supervisors at another time.

CONCLUSION

We believe that CBPD is a valuable tool that can be adapted by most medical curriculum. Its usefulness and value extend beyond the benefits of most WBA tools in that it can serve as both an assessment tool and a teaching aid. CBPD can assess a wide range of competences that has not been explored sufficiently. This may help to reduce the need for the introduction of separate assessment tools to an already saturated assessment portfolio. In addition to the advantages conferred by traditional CBD, assessees can hone their presentation skills and evaluate evidence-based medicine. Other trainees can benefit through the process of vicarious learning and formative peer-reviewing.

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