

What's in a visit? Establishing the content and perceived utility of clinical teaching visits (CTVs) in different settings within Australian GP training (ERG2020-002)

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1.1. Aims/objectives

The objectives of the study are to establish:

- (1) The clinical and educational content of CTVs/assessments in three Australian RTOs.
- (2) Perceived educational utility of CTVs/assessments from the perspective of trainees and of assessors in three RTOs.*
- (3) Trainee, assessor and practice factors associated with CTV/assessment content.
- (4) Trainee, assessor and practice factors associated with perceived CTV/assessment utility ratings.

* 'Trainees' - registrars and Practice Experience Program (PEP) participants; 'Assessors' - clinical teaching visitors and PEP assessors

1.2. Methods

A detailed account of the research methods can be seen in our published protocol paper.¹

Briefly, all registrars / CT visitors from GP Synergy, Northern Territory General Practice Education (NTGPE), and General Practice Training Tasmania (GPTT) who had taken part in a CTV from March 2020–December 2020 were invited to complete an online, quantitative questionnaire following each CTV within the study period. As the COVID-19 pandemic resulted in remote CTV modalities being implemented across all sites for a substantial portion of the study period, questionnaires were adapted to collect data related to all substitute CTV modalities: for registrars and CT visitors - video/telephone CTVs, Clinical Notes Analysis CTVs (CNA-CTV) and Case-Based Discussion CTVs (CBD-CTVs). The study also included GP Synergy's Practice Experience Program (PEP) participants and assessors, who were similarly invited to complete a questionnaire following direct observation assessments (similar to CTVs) undertaken within the study period. These included Direct Observations via Zoom (PEP-DOZ) and Case-Based Discussions (PEP-CBD).

Although it was possible for a trainee or assessor to contribute feedback for more than one CTV/assessment, all data were analysed cross-sectionally. Descriptive statistics were performed for content elements and preliminary univariate analyses were performed to examine associations/differences between utility ratings and variables of interest (chi-square tests for categorical outcomes and t-tests (or non-parametric equivalent, if appropriate) for continuous outcomes). At the time of writing, multivariable analyses (logistic regression) for associations are still in progress, therefore descriptive and univariate results are reported in this summary.

1.3. Results

There were 1985 instances where trainees, and 1972 instances where assessors, were invited to complete questionnaires. 880 and 806 responses for trainees and assessors were received, representing response rates of 44% and 41%, respectively. After exclusions related to time elapsed between the visit and questionnaire response (>10 days), 820 trainee and 760 CT assessor responses were included in analyses. A breakdown of responses from different RTOs and assessment modalities can be seen in Table 1.

Table 1. Responses for each RTO and assessment modality.

Variable	Trainee n (%)	Assessor n (%)	Variable	Trainee n (%)	Assessor n (%)
RTO			Type of assessment		
GP Synergy	683 (83.3)	624 (82.1)	Face-to-face CTV	102 (12.4)	93 (12.2)
GPTT	27 (3.3)	43 (5.7)	Video/phone CTV	523 (63.8)	477 (62.8)
NTGPE	31 (3.8)	29 (3.8)	Clinical Notes Analysis (CNA-CTV)	103 (12.6)	109 (14.3)
GP Synergy (PEP)	79 (9.6)	64 (8.4)	Case-Based Discussion (CBD-CTV)	13 (1.6)	17 (2.2)
Total	820	760	Direct Observation Zoom (PEP-DOZ)	33 (4.0)	24 (3.2)
			PEP Case-Based Discussion (PEP-CBD)	46 (5.6)	40 (5.3)
			Total	820	760

1.3.1 CTV educational utility ratings

Overall, trainees and assessors rated the visits positively, with 92.3% of trainees and 86.3% of assessors rating educational utility as a 4 or 5 (very useful) on a five-point scale. When asked how likely they were to change their practice or approach to learning following the visit, trainees rated a 4 or 5 (very likely) for 87.1% and 81.0% of visits, respectively.



Although educational utility was rated highly positively for the majority of assessments, there were some differences in ratings across different assessment modalities. Proportions of assessments rated as 5 (very useful) by trainees were 82.6% (n=38) for PEP CBD, 76.9% (n=10) for CTV-CBD, 75.7% (n=78) for CNA-CTV, 72.7% (n=24) for PEP-DOZ, 62.9% (n=329) for video/phone CTVs and 56.9% (n=58) for face-to-face CTVs ($p=0.004$). Trainees' perceptions of likelihood to change practice ($p<0.001$) and likelihood to change learning ($p<0.001$) were also associated with assessment modality (outcomes were all dichotomised as 'Rated 1-4' vs 'Rated 5'). For assessors, there was no statistically significant association between utility rating and visit modality ($p=0.30$).

Factors univariately associated with educational utility (as perceived by trainees) included: the overall quality of feedback received, having received specific and meaningful feedback, and assessor feedback being consistent with that of their supervisor (all $p<0.001$). Feedback quality and the assessor/supervisor feedback consistency were both also significantly associated with likelihood to change practice and likelihood to change learning (both $p<0.001$).

1.3.2 CTV content

Trainees reported seeing/reviewing 1-11 patients/cases ($M=4.6$ $SD=1.7$) and assessors reported the trainee had seen/reviewed 1-9 patients/cases ($M=4.5$, $SD=1.4$). Within face-to-face and remote CTVs (i.e., CTVs involving observation of consultations in real-time via video/phone), registrars and CT visitors reported undertaking Random Case Analysis (RCA) in 23.0% [CI:19.9-26.5] and 18.8% [CI:15.8-22.2] of CTVs respectively. For CTVs where an RCA was conducted, there was a reported range of 1-6 RCAs undertaken per session. Within face-to-face and remote CTVs, the proportion of visits where the CT visitor observed the registrar performing a physical examination was reported to be 84.6% [CI:81.6-87.3] (registrars) and 74.9% [CI:71.2-78.3] (CT visitors).

Topics discussed during the visit were reported at similar proportions between trainees and assessors. However, the topics of discussion varied by the specific type of assessment modality. For example (within the trainee dataset), physical examination technique was reported to be discussed at higher proportions within face-to-face CTVs (37.3% [CI:25.1-51.3]) compared to CNA-CTV (15.5% [CI:9.7%-23.9%]) or CBD-CTV (7.7% [CI:1.0-41.1]). Alternatively, medication prescribing processes were reported to be discussed in 16.7% [CI:10.6-25.3] of face-to-face visits, compared to CNA-CTVs (33.0% [CI:24.6-42.7]) and CBD-CTVs (30.8% [CI:11.5-60.3]). Preliminary univariate analysis of factors associated with CTV content suggest that 'specific and/or location contextual factors relevant to the consultation(s)' was significantly associated with trainee rurality (within the trainee dataset) ($p=0.001$). Within the assessor dataset, 'contextual factors' was significantly associated with assessor rurality ($p<0.001$) and trainee rurality ($p=0.002$).

1.4. Discussion

Our most striking finding was that most trainees and assessors provided particularly high utility ratings for CTVs and remote assessment alternatives. Similarly, trainees reported that feedback they received was likely to change their approach to practice and/or learning. This provides empirical evidence supporting the anecdotal view that CTVs are a highly valuable formative assessment item within Australian vocational general practice training. Various content elements of CTVs and remote assessments have been highlighted. For example, the frequency of RCAs being conducted during a CTV was previously unknown, as were the frequencies of specific topics that are discussed during a visit.

However, the findings relating to the traditional format of CTVs (face-to-face) from this study are limited by the small number of responses we were able to collect for this modality, due to the pandemic and resulting shift in CTV delivery. Furthermore, given the broad scope of this study, the contents of this report provide only a snapshot of our findings. Full multivariable analyses will provide a more detailed and robust assessment of the content, utility, and associations of CTV/PEP observation assessments across varying settings.

1.5. Implications

Previously, there was an evidence gap regarding the content and educational utility of CTVs. This study is the first to address that gap. As a consequence of the pandemic and resulting changes in CTV delivery, this study was also able to collect data on remote forms CTVs and CTV-like assessments, providing initial evidence for the use of remote assessments. This is valuable information for RTOs as it may help guide the delivery of CTVs in the future. Remote CTVs, or a hybrid model of face-to-face and remote assessments, may be a potential solution to the high resource investment associated with CTVs, particularly in rural areas.

1.6. Future research

More research is required on face-to-face CTVs to ensure our findings are generalisable to a non-pandemic training and practice context. GP Synergy will continue data collection internally throughout 2021, to achieve adequate power for thorough multivariable analysis on face-to-face CTVs and help ensure generalisability of findings beyond the pandemic period.

References

Fielding A, Mundy BE, Tapley A, et al. Study protocol: content and perceived educational utility of different modalities of clinical teaching visit (CTV) workplace-based assessments within Australian general practice vocational training: a cross-sectional study. *BMJ open* 2021;11(4):e045643.