



Medical and Health Professional Education
Best Evidence Medical Education

BEME Spotlight 55

A systematic review of the approaches to multi-level learning in the general practice context, using a realist synthesis approach: BEME Guide No. 55

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Review citation

Marie-Louise Dick, Margaret Henderson, Yi Wei, David King, Katrina Anderson & Jill Thistlethwaite (2019) A systematic review of the approaches to multi-level learning in the general practice context, using a realist synthesis approach: BEME Guide No. 55, Medical Teacher, DOI: [10.1080/0142159X.2019.1595554](https://doi.org/10.1080/0142159X.2019.1595554)

Review website

<https://bemecollaboration.org/Published+Reviews/BEME+Guide+No+55/>

Keywords

Primary care, medicine, teaching and learning, work-based, clinical, methods, multi-level learning, realist synthesis, general practice.

Headline conclusions

General practices are using a range of multi-level learning (MLL) approaches including clinical supervision and parallel consulting, shared tutorials, informal discussions, and interdisciplinary teaching.

Self-reported benefits for learners, learner-teachers, general practitioner supervisors and practices include:

- a broad range of teaching and learning experiences, the development of collegial relationships, and learning from learner-teachers in adjacent / nearby levels of learning (learners);
- personal and clinical benefits (learner-teachers);
- knowledge exchange and a sense of engagement (general practitioners); and
- time and cost efficiencies (for some practices).

Our realist synthesis identified eight key mechanisms (and their associated contexts) that support five of our hypotheses regarding successful outcomes from MLL approaches:

- 'A strong teaching and learning culture' in the practice was widely represented throughout the papers, and is considered a context for most of other mechanisms.

Other key mechanisms were

- 'a learning community',
- 'flexible learner-centred teaching',
- 'exposure to a range of teachers and learners using diverse teaching and learning methods',
- 'practice self-determination of appropriate teaching methods and approaches',
- 'the social and cognitive congruence of learners and learner-teachers',
- 'learner-teacher training and support', and
- 'sharing the teaching and clinical loads with learners'.

Background and context

Increasing numbers of medical students, and a growing shift in the location of medical education training from teaching hospitals to community-based settings, necessitates effective strategies to address the demand of medical teaching in the community-based general practice setting. 'Multi-level learning (MLL)', in which learning and teaching are shared across different levels of learners (Morrison et al. 2014), is an approach that has been adopted commonly in the hospital setting for many years, but only more recently reported in use in the general practice setting. It is one strategy proposed to assist with providing efficiencies in teaching in the general practice setting, whilst also providing positive teaching and learning experiences for participants.

Review objectives

This review aimed to identify, evaluate and synthesize the evidence related to the types, benefits, challenges and facilitators of MLL in community-based general practice, and to explore the underlying mechanisms and associated contexts to explain the reported outcomes of MLL.

Review methodology

Search Strategy: Following scoping searches, six electronic databases were initially searched in their entirety from their earliest records until November 2015, using search syntaxes developed in collaboration with a university librarian. Search terms related to general/family practice and MLL or teaching. These searches were updated in July 2017. Additional potentially relevant articles/reports were sought from article titles in three journals, the grey literature, reference lists of key articles, and articles citing our included articles.

Inclusion and Exclusion Criteria: Studies were included if: they reported approaches to MLL principally implemented in the general practice setting; their participants included GP supervisors and at least two other learner levels (e.g. GP registrars and medical students) or at least two learner levels (not including GP supervisors); and they had evaluation data relating to the process/outcomes/benefits of the multi-level learning initiative. Studies were excluded if they: only focussed on the traditional "GP supervisor as a teacher" model of teaching; had no evaluation data; were not published in English; or were presented as abstracts or conference PowerPoint presentations without associated full paper publications.

Data Extraction: Fifteen papers from 10 different research studies were identified, reporting primary evaluation data predominantly from interviews with or surveys of key stakeholders. The papers, which all came from Australia or the United Kingdom, were critically appraised using the Critical Appraisal Skills Programme (CASP 2018) qualitative research checklist and / or a cross-sectional/survey/ prevalence/observational study appraisal tool. Data extraction for each paper was undertaken using fields appropriate for the relevant study type and the review questions.

Data Synthesis: Two review team members independently assessed each of the 15 included articles and summarized the data that addressed the types, benefits, challenges, and facilitators of MLL in community-based general practice. Two review members then adopted a realist synthesis approach (based on that proposed by Wong et al. (2013)) to independently assess each article for data that generated explanations for causation, i.e. an outcome (O) of interest was generated by relevant mechanisms (M) being triggered by one or more contexts (C).

Implications for practice

Based on the identified published evaluation data, the following implications for practice are noted.

- Given the appropriate contexts, MLL initiatives in general practice work for most practices and individuals participating in the process, and have many benefits.
- Benefits of MLL over traditional non-MLL teaching approaches may include the broader range of teaching and learning opportunities offered to learners and the potential for time and cost efficiencies for some practices.
- The findings can help to inform educators and practices considering the implementation or enhancement of MLL initiatives in general practice, and potentially in other community-based settings.

References

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