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# Exploring the literature on the award gap between international and UK medical graduates in general practice training: A scoping review protocol

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# Exploring the literature on the award gap between international and UK medical graduates in general practice training: A scoping review protocol

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## Abstract

*Background:* International medical graduates (IMGs) currently account for 41% of the UK medical workforce. IMGs in training posts face challenges in progression including a significant 'award gap' (previously differential attainment) in postgraduate training compared to UK medical graduates. General practice (GP) is disproportionately impacted by these issues as over 50% of GP trainees are IMGs. Previous studies focusing on educational interventions to reduce the award gap have failed to improve training outcomes.

*Aim:* To identify literature addressing the factors underlying the award gap.

*Design and setting:* The scoping review will follow the process outlined in the Joanna Briggs Institute (JBI) guidance. Input was sought from a specialist librarian, patient and public contributors, stakeholders with lived experience of working as an IMG and experts in the research field. Studies eligible for inclusion will be those reporting educational outcomes (concept) for IMGs (participants) undertaking UK GP training (context).

*Method:* Searches will be conducted in Medline, EMBASE, SCOPUS and PsycINFO for articles reporting educational outcomes for IMGs in UK GP training. A two-step screening process will be employed to identify eligible articles. Analysis will involve basic descriptive statistics reporting the number and type of evidence sources. Reporting of the data will be in line with the PRISMA-ScR checklist and will include visual representations of findings including graphs and figures developed with stakeholders and PPI group members.

*Conclusion:* By exploring the literature which reports the factors underlying the award gap in GP training we will identify areas for further research.

## How this fits in

- Over 50% of UK GP trainees are international medical graduates (IMGs).
- There is a significant 'award gap' (previously known as differential attainment) between IMGs and UK medical graduates in training outcomes.
- Educational interventions to address this award gap have failed to demonstrate an improvement in training outcomes.
- By considering the factors underlying the award gap, we have a greater chance of improving outcomes, but to do this we need to understand what research has been done so far.

## Introduction

### *International medical graduates in the UK workforce*

International medical graduates (IMGs) are doctors practicing medicine in a country which differs from their country of primary medical qualification(1). In 2023, IMGs accounted for over two thirds of doctors joining the General Medical Council (GMC) register(2). Even though IMGs now make up 41% of the medical workforce, only 16% are in speciality training posts. Speciality training posts offer the opportunity for training and development as well as career progression. IMGs are instead over-represented as locally employed doctors (LEDs) in NHS hospital trusts where the focus is service provision and career progression options are limited. These LED posts exploit doctors 'using insecure contracts that deny them training, progression, and nationally agreed benefits'(3).

The reduction in long term career prospects is no doubt contributing to the rising numbers of IMGs leaving the UK workforce; 24% increase in 2024(4). Charlie Massey, the Chief Executive of the United Kingdom's (UK) regulator for doctors the GMC, has commented 'If we see even a small percentage increase in (IMGs) leaving, our health services will end up with huge holes that they'll struggle to fill'. These issues directly affect an already strained GP workforce; IMGs are largely responsible for the growth in the UK general practice workforce, accounting for over 50% of GP trainees(4).

### *The award gap*

For IMGs who manage to secure postgraduate training posts through the increasingly competitive national application process, progression through training can be problematic. General practice training requires annual reviews of competency and progression (ARCPs) at which time supervisors review the results of formative workplace-based assessments and feedback from colleagues and patients. Trainees must also sit two postgraduate examinations set by the Royal College of General Practitioners (RCGP); the applied knowledge test (AKT) and the simulated consultation assessment (SCA). To obtain the certificate of completion of training (CCT) required to practice as a UK GP, trainees must pass both postgraduate exams and obtain satisfactory outcomes in each of their ARCPs.

IMGs are more likely to receive unfavourable outcomes in annual reviews of competency and progression (ARCPs) than UK medical graduates (UKMGs)(5). Considering postgraduate examinations, Esmail et al reported a significant award gap between IMGs and UKMGs in 2013 (6). These differences in training outcomes were previously referred to as 'differential attainment', a term which this research team are keen to move away from due to the negative connotations for IMGs.

Studies have focused on attempts to close the award gap by development and delivery of educational interventions. Kehoe et al (7) conducted a realist synthesis to identify how and why interventions to support IMG transition to the workplace were effective, suggesting recommendations for future intervention development. So far the interventions developed have been ineffective; more recent statistics show there has been little improvement in training outcomes(8, 9). An understanding of the underlying factors contributing to the award gap would enable changes to national policy and practice to address the root cause. This scoping review will map the literature in this area to allow identification of avenues for further research.

## Methods and analysis

### Research question:

What literature examines the award gap between IMGs and UK medical graduates (UKMGs) in UK general practice training?

### Objectives:

1. To identify the scope of the literature addressing the award gap between IMGs and UKMGs in UK general practice training
2. To identify areas where data is lacking and make recommendations for future research
3. To develop an initial programme theory which will be the foundation for further realist research

The scoping review will follow the process and steps outlined in the JBI guidance for scoping reviews(10).

### *Inclusion criteria*

Studies eligible for inclusion will report educational outcomes (concept) for IMGs (participants) undertaking UK GP training (context). The inclusion/ exclusion criteria are listed in full in Table 1.

### *Search strategy*

Medline, Embase, SCOPUS and PsychINFO databases will be subjected to systematic searches to identify peer-reviewed articles and gray literature. The British Journal of General Practice (BJGP) and Education for Primary Care will be hand-searched.

A librarian has been consulted in the development of the initial search strategy and will be available for consultation as the review progresses. The term finder, the online thesaurus used to browse for subjects that match topics within a database, will determine a general search term. The 'used for' terms will be explored to ensure that all relevant terms have been captured, and these terms will be incorporated into further expanded searches (see Table 2).

Terms will be combined using the OR function. The process will be repeated for each aspect of the research question; international medical graduates, primary health care and United Kingdom. Results from each of these search terms will be combined using the AND function. This process will be repeated for the Medline, Embase, SCOPUS and PsychINFO databases independently, changing the syntax as appropriate. Reference lists of included studies will also be searched.

### *Evidence screening and selection*

Studies identified from the searches will be transferred to the online software platform Covidence, which will enable effective management of the resources for the scoping review. Duplicates will be identified by Covidence and removed.

Initial screening of titles and abstracts of all sources/articles will be conducted by LE. Any studies which do not meet the inclusion criteria will be excluded from further review. Studies which meet the inclusion criteria from initial title and abstract screening will be subject to a full text review.

At the stage of title and abstract and full text screening, a second reviewer will screen a random sample of 10% of the identified studies to ensure consistency. Any discrepancies will be resolved in discussion with the review team.

The study selection process will be presented in both narrative and flow diagram format for publication.

As the purpose of a scoping review is to map the available evidence, rather than provide a critique on quality, assessments of methodological rigour will not be conducted.

#### *Data extraction*

A data extraction tool will be developed based on the research question and with consideration of the PCC (population, context, concept) framework(11), see example in Supplementary Table 1.

The data extraction tool will be piloted in a small number of studies and changes will be made as needed to improve the functionality of the form. LE will conduct the data extraction, with a second team member independently checking 10% of the articles to reduce the chances of error and bias. A supplementary document giving detailed instructions on data extraction processes will be shared with the other members of the review team to ensure consistency of data extraction. Regular meeting will be held with all team members as the review progresses.

#### *Data analysis*

Quantitative analysis will be limited to basic descriptive analysis describing the number of evidence sources available and the frequency with which research methods were applied.

If appropriate, depending on the number of studies identified, a basic qualitative content analysis will be undertaken to inform a programme theory for further realist research.

#### *Presentation of results*

Reporting of the data will be in line with the PRISMA-ScR checklist(12) and will include visual representations of findings including graph and figures alongside a supporting narrative.

#### *Patient and public involvement (PPI)*

The Yorkshire and Humber Deep End Research Alliance (DERA) patient and public involvement (PPI) group have been involved in the development of this scoping review(13). This group was established in 2016. Members are recruited from GP practices in the most deprived areas of Sheffield in South Yorkshire. There is diversity of age, gender and race within the group.

The DERA PPI group were involved at a very early stage of the research. The problem of the award gap in postgraduate general practice training was explained. Initially, the research team had considered focusing on the impact of culture as a factor in predicting exam success. Discussions with the group highlighted several challenges with this approach, but most importantly that the award gap had not been explained by previous research. The group discussion led directly to the development of the research question for this scoping review. PPI group members will be involved throughout the duration of the project as outlined in Figure 1 below.

The lead investigator for the project does not have lived experience of working as an IMG in the UK. A separate stakeholder group comprising IMGs with experience of training and working in the UK will be established. See Figure 1 for details of proposed stakeholder involvement.

## Discussion

We present a protocol for a scoping review to explore the research addressing the award gap in UK GP training, aiming to identify the literature which addresses the factors underlying the difference in training outcomes.

### *Strengths and limitations*

This review will be conducted systematically in line with the JBI guidance for scoping reviews, as such assessment of methodological rigour will not be conducted. The protocol has been developed with an experienced librarian, PPI group members, stakeholders with lived experience of the topic area and experts in the field. Limiting the scope to UK literature published in English enhances the relevance to UK policy, though may exclude international literature relevant to the broader topic.

### *Comparison with the existing literature*

Previous research considering the reasons for the 'award gap', have been studies seeking correlations between exam success and demographic factors such as the language in which primary medical qualification was taught(14). McManus et al found a positive correlation between Professional Linguistics and Assessment Board (PLAB) score and postgraduate exam success; IMGs are required to pass the PLAB exam to gain GMC registration and therefore practice medicine in the UK. However, as the authors themselves remarked, they did not consider 'the demographic factors which would be of sociological interest for understanding and explaining differences'(15). Instead the focus in the literature has been on educational interventions to assist IMGs in adapting to practice in a new country, however a systematic review found that these studies were of poor quality(16). As we have already described, such interventions have thus far failed to improve educational outcomes.

### *Implications for research and practice*

Unfavourable ARCP outcomes and exam failures lead to extended training time which can be costly for both the trainee and the wider NHS. Estimates suggest that the annual cost of training for general practice is approximately £57800 per year(17). Trainees must pay every time they sit a postgraduate exam; AKT £481, SCA £1207(18). Extensions to training also mean a lag in the number of qualified GPs, as well as extra pressure on GP trainers due to the increased number of supervisees(2). Some trainees may leave training if they are unsuccessful in their exams, meaning the time and cost of training is wasted, which has impacts for the trainees and the NHS as a whole.

In summary, the NHS increasingly relies on IMGs, especially in General Practice. However many IMGs who want to specialise as GPs continue to have unsatisfactory ARCP outcomes, and lower pass rates in postgraduate exams compared to UKMGs. Existing research to explain these differences in educational outcomes exists, but more is needed because we still cannot explain the factors underlying this. Advancing our understanding will enable us to tackle the root causes of the issue, rather than continuing to deliver educational interventions based on assumptions.

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Table 1: Inclusion and exclusion criteria

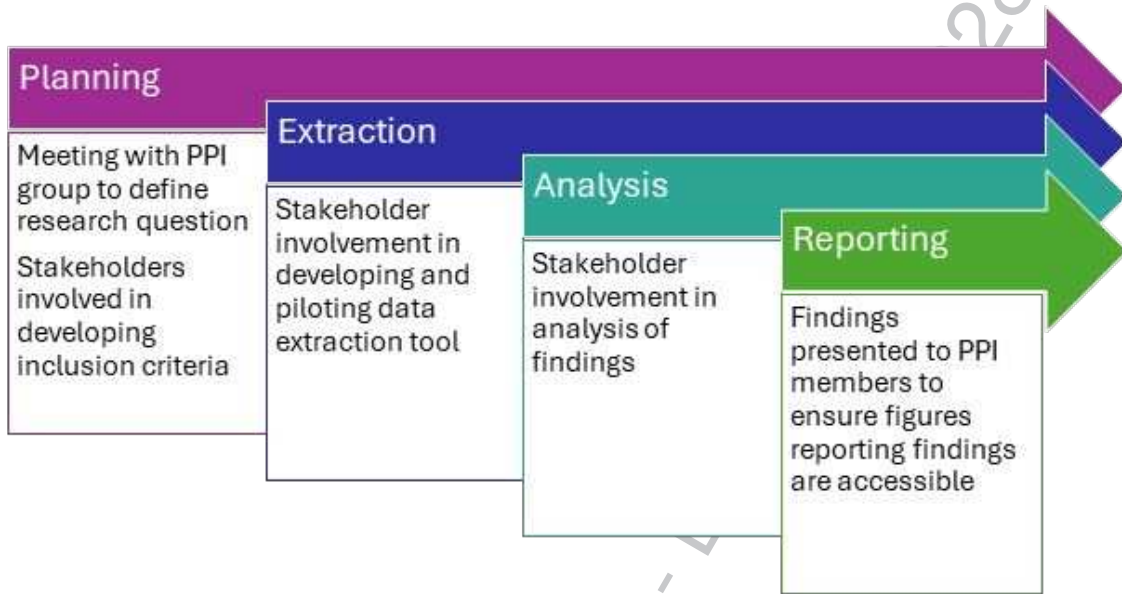
Inclusion criteria	Exclusion criteria
<b>Participants</b>	
International medical graduates (IMGs)	IMGs are not included as participants/ findings not reported separately for IMGs/ UKMGs
Participants are employed by a UK general practice training scheme	Participants in alternative speciality training scheme/ not in training
<b>Concept</b>	
Reporting on educational outcomes	Not reporting educational outcomes
<b>Context</b>	
UK based research	Research based outside of UK
<b>Evidence sources</b>	
Peer reviewed journal articles reporting findings from all research methodologies, reports, policy documents and gray literature	Websites, social media posts, blog posts
Published in English	Not published in English

*Table 2: Example of search terms*

1	Foreign Medical Graduates/
2	((international or foreign or overseas or migrant? or immigrant?) adj2 (medical graduate? or medicine graduate? or clinical graduate?)).ti,ab,kf.
3	((foreign trained or overseas trained or migrant? or immigrant?) adj2 (physician? or doctor? or clinician?)).ti,ab,kf.

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Figure 1: Planned PPI and stakeholder input during the scoping review



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