To consider

Understanding differential attainment in postgraduate medical education and training

Issue

1 To provide an update on the work programme investigating differential attainment in postgraduate training and assessment.

Recommendations

2 The Strategy and Policy Board is asked to:

   a Endorse the publication in March 2015 of reports on exam and recruitment training outcomes.

   b Note the timeline for the work programme, at Annex A.

   c Note the longer term work programme will need to be iterative in nature.

   d Note that while there are clear expectations on the GMC, we cannot deliver the work alone.
Understanding differential attainment in postgraduate medical education and training

Issue

3 Since 2010 the GMC has been working with key interests on a number of projects to enhance our understanding of the factors associated with doctors’ progression through the training programmes we approve.

4 We reported to the Board at its meeting on 22 July 2014 on the actions we were taking to explore differential attainment, which were material to the Judicial Review decision to dismiss the claim against the GMC. This paper provides a further update, following the collection of new exam and recruitment data sets.

College exam data and recruitment data reporting projects

5 During the autumn of 2014, we received exam data from all medical royal colleges for one academic year. We have combined the exam pass mark data with data on doctors’ characteristics collected in the National Training Survey (NTS) to develop reports on the pass rates by different groups: deanery/local education and training board (LETB), gender, ethnicity, overseas or UK qualified and, where UK qualified by graduating university.

6 The draft exam data reports have been shared with colleges and will be shared with deanery/LETBs and medical schools. Publication on our website is scheduled to coincide with the GMC Conference in March 2015.

7 With a few exceptions, the reports broadly show that the findings in relation to the GP assessments are relevant across other specialties, i.e. doctors who gained their primary medical degree overseas are less likely to pass, as are black and minority ethnic (BME) doctors, regardless of where they qualified. In some specialties women outperform men.

8 There are however limitations: this is only one year’s worth of data, so some exams have been sat by small numbers of candidates and trend analysis is not possible, the work on differential attainment will be iterative, developing as we obtain data over more years. Nevertheless, this is ground-breaking data: nothing of this scale or breadth has been published before in the UK.

Differential attainment work programme

9 Due to the limitations of our data at this early stage (having only one year’s worth of exam data), the programme of work takes a phased and stepwise approach; aiming to balance practical action with systematic investigation over a longer period so that
we can be sure that we are making the right decisions by increasing our evidence base over time.

10  The aims for the work programme are:

a  To gain a systematic, evidence-based understanding of differential attainment across characteristics, specialties and training providers.

b  To act on this understanding proportionately, with and through others.

c  To ensure that our commitment to increasing fairness is understood and to lead by example.

11  Detail of the work packages are at pages A9-A12 of Annex A.

Key milestones

12  Page A13 of Annex A provides an overview of the key milestones for phase 1 and what insight we will gain at each milestone. Of note:

d  Completion of initial data analysis and initial findings from both the Literature Review and the GP Selection Research in February 2015.

e  Publication of exam and recruitment outcome reports on our website in March 2015.

f  GMC conference. Where we will be able to share our emerging findings about the extent and patterning of differential attainment, share ideas for how to develop further research and facilitate discussion amongst key interests about what is working now and what success might look like.

g  Key decision point in May 2015 on how to proceed in prioritizing further research and next steps.

Communications

13  We are developing plans to support the effective communication of the research programme, and meaningful engagement with our key stakeholders. Highlighting our values of fairness and transparency, along with our strategic aim to raise standards in medical education and practice will be key elements of our approach.

Resources 2015

14  The research budget total is £80,000. A breakdown of anticipated costs is included at page A15 of Annex A.
Supporting information

How this issue relates to the corporate strategy and business plan

1. Strategic aim 1: to make the best use of intelligence about doctors and the healthcare environment to ensure good standards and identify risks; and strategic aim 2: to help raise standards in medical education and practice.

2. The research we are undertaking uses a proactive, evidence-based approach in order to understand more about the risks that doctors in training face as they progress through the training programme. An intended outcome of this research is that we will be able to harness this knowledge in the future and take action to mitigate where appropriate. In so doing, we will be working to ensure that the very best doctors are able to qualify to practise medicine, regardless of their personal characteristics or background. This will ultimately help to raise standards within the profession.

How the issues support the principles of better regulation

15. The work programme includes data analysis, research and work with key interests which will support an evidence-based approach to regulation. Work on College exam data will provide more consistent and transparent information on the outcomes of exams across medical specialty, including GP training. The resulting research programme will aim to identify underlying factors affecting progression and mechanisms that can target support doctors for doctors at greater risk of not progressing. The development of a database that can support medical education research will improve the accessibility of training data and increase the transparency of training pathways.

What equality and diversity considerations relate to this issue

16. The work programme on progression is designed to explore concerns over a number of equality and diversity issues. Research undertaken by Medical Royal Colleges has identified differential performance in exam is not limited to the specialty of General Practice or to ethnicity, e.g. the results of the 2013 GP Exam Research also indicated that women outperformed men.

Impact on other areas of GMC work

17. The research is being jointly developed with the Research team in the Intelligence Unit. We will use the policy engagement and consultations planned for Quarters 3 and 4 of 2015 to raise awareness of the research findings and help identify next steps. There may learning we can share to support candidates who take the assessments that we deliver.
The data analysis and research programme is being developed in collaboration with the Professional and Linguistic Assessments Board (PLAB) test review implementation project and will respond to the recommendation that the GMC investigate the reasons for differential attainment in its own exam.

We are working closely with the Equality and Diversity team.

If you have any questions about this paper please contact: Emily Phillips, Survey Reporting Officer, ephillips@gmc-uk.org, 0161 250 6975; or Kirsty White, Head of Planning Research and Data Development, kwhite@gmc-uk.org, 020 7189 5308.
Understanding differential attainment in postgraduate medical education and training

Project overview
Background

- Public sector duty of equality
  - This applies to us
  - It applies in our dealings with others
  - It applies to others we work with e.g. colleges and deans
  - It requires us to monitor and to understand our impact
  - It applies to all protected characteristics

- Concern about fairness in training i.e. Judicial Review - the different levels of exam attainment associated with characteristics such as gender and ethnicity
- Differential attainment not exclusively in medicine, recognised throughout higher education and in other professions

At present, we know that certain cohorts of doctors are at greater risk of not progressing through their training programme, but we don't yet know enough about the extent why this happens or if/how we might intervene to support these doctors better.
GMC’s Corporate commitment

A key part of our Corporate Strategy . . .

**Strategic aim 1:** Make the best use of intelligence about doctors and the healthcare environment to ensure good standards and identify risks

**Strategic aim 2:** help raise standards in medical education and practise

We have committed to ‘develop our standards, our guidance and the way we support particular groups of doctors to help them deal with professional challenges.’
What would good look like?

- A proactive and evidence-based approach
  - Gathering of appropriate data
  - Effective research into the data
  - Understand differences and reasons for them
  - Develop and implement effective interventions

- Equality of opportunity not necessarily equality of attainment
This work in context: our commitment to fairness in assessment, education & training

We are doing a lot already...

- **Ensuring our systems are fair:**
  - FtP research
  - PLAB research
  - Changes to our Postgraduate Curricula and Assessment Approval systems

- **Supporting others to ensure the systems we regulate are fair:**
  - Guidance and training for royal college examiners
  - Further on the equality duty and curricula & assessment development (Q1-2 2015)
  - Publication of benchmarked reports on the outcomes of exams (March 2015)

The DA work programme will contribute . . . a systematic view of differential attainment (across: characteristics, specialties and training providers) and an overview of what is currently known about mechanisms that can support doctors.

This will enable us to make evidenced-based decisions about prioritising in-depth research and interventions to support doctors.
Differential Attainment Work Programme - Aims

1. To gain a **systematic, evidence based** understanding of differential attainment – across characteristics, specialties and training providers.

2. To **act** on this understanding proportionately, **with and through others**.

3. To ensure that **our commitment to increasing fairness is understood** & to **lead by example**.

... tested in November 2014 with BAPLO at the BMA’s symposium: Ensuring fairness in clinical training and assessment.
Differential Attainment Work Programme - Approach

- A long term programme of work that will be iterative
- We will need to prioritise and target research & intervention
- These priorities will need to be reviewed and adjusted as we learn more with each step
- We will need to work collaboratively with others to prioritise, to co-ordinate and share responsibility for work
- Two phases in 2015:

<table>
<thead>
<tr>
<th>Phase 1: Building an evidence base</th>
<th>Initial Data Analysis</th>
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<tbody>
<tr>
<td></td>
<td>Literature review</td>
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<td></td>
<td>Inventory of deanery/LETB and college initiatives</td>
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| Decision point 1 Prioritise research and support for sharing practice |

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<tr>
<th>Phase 2: Targeting research &amp; sharing practice</th>
<th>Commissioning qualitative research</th>
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<td></td>
<td>Work with deans and colleges to transfer learning from local initiatives</td>
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<td>Begin trend analysis</td>
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</table>

| Decision point 2 Review research findings, progress on local initiatives and trend data, decide new priorities & next steps |
Phase 1 work packages

1. Data analysis

- **Aim**: To identify patterns of attainment to be triangulated with other evidence and investigated further
- **How**: two-stage analysis (univariate followed by multivariate analysis) to be peer reviewed both internally and externally
- **Outputs**
  - **Stage 1**: a matrix of risk that will show how age/gender/PMQ/route to registration (PLAB or not)/ethnicity relate to progress in training
  - **Stage 2**: analysis that will help us understand:
    - For UK graduates, whether there is a relationship between their medical school and their attainment
    - For all, whether there is a relationship between the deanery/LETB and attainment of doctors with these characteristics and, how this varies by specialty
Phase 1 work packages

2. A literature review

- **Aim**- to gather together the most up to date theoretical knowledge on the key issues around DA. Specifically: causes, methods of study and possible interventions.
- **How**- externally commissioned
- **Output**- interim and final reports. The findings will give context to the project as it progresses and guide the approach to understanding data and commissioning further research.

Literature review questions:

1. *What is currently known about the underlying causes of differential attainment in postgraduate medical education in the UK and other specified countries?*
2. *What can the literature tell us about research methods that could help us understand the causes of differential attainment in UK postgraduate medical education?*
3. *What can the literature tell us about interventions that have been effective in reducing differential attainment that may be applicable to UK postgraduate medical education?*
Phase 1 work packages

3. Sharing practise

Aims-
- raise the profile of the work being undertaken by those we regulate (colleges deaneries/LETBs, providers) to investigate DA and support doctors in these groups.
- work with deans and colleges to encourage evaluation of these.
- Create a network of local experts to support our longer-term work programme

How- a shared database of research and evaluation initiatives related to differential attainment and local contacts.

Outputs-
- A database of knowledge around projects and practises that may be mapped against the data analysis for the purposes of further investigation (i.e. we could potentially tell which initiatives are having an impact by examining patterns in the data.)
- A contact list key stakeholders across colleges, deanery/LETBs and providers.
Phase 1 work packages

4. GMC Conference Workshop

Aims-
- Present an **emerging picture** from the data analysis
- **Raise the profile** of GMC and local initiatives
- Facilitate **discussion** about interventions and support strategies that are currently happening, **experiences of what works**, what **barriers** exist, what are the **possibilities**, **what would success look like**?
- **Discuss priorities** and options for next steps - research, sharing practice (We’ll have a lots of data describing the problem and possible responses - but it won’t ‘solve the problem’)

How- a workshop during the GMC conference.

Outputs-
- Conference materials to support workshop – summary of findings, interactive session
- Summary of feedback from conference workshop
# Phase 1: Key Dates

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<tr>
<th>Date</th>
<th>Output/Event</th>
<th>Insight</th>
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<tbody>
<tr>
<td><strong>Jan</strong></td>
<td>Risk matrix</td>
<td>- what combination of characteristics are associated with progression in each speciality</td>
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<tr>
<td>Feb</td>
<td>Initial Multivariate analysis</td>
<td>- what effect does qualifying at particular medical school and training in a particular deanery/LETB have on the likelihood of progress</td>
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</table>
| | Initial Report on GP selection and exams | - whether those who fail exams started from a lower base at entry to the training programme  
- whether exam failures are associated with particular areas of competence at entry |
| | Interim literature review report | - What range of literature has been identified, in what countries and related to what characteristics |
| | Data base of shared practices & local network focus group | - what research colleges have commissioned and the timeframes for delivery  
- how deanery/LETBs are supporting doctors at risk of not progressing and what evaluation, if any has been done  
- contacts details for local experts/leaders |
| **March** | Publication of college exam reports, including gender, ethnicity, PMQ | - First time, systematic publication of pass rates by protected characteristics and PMQ (and pass rates by deanery and UK medical school) |
| | GMC Conference session | - What stakeholders think we should prioritise |
| **April** | Final Report on GP selection and exams | - as above |
| | Final Literature Review Report | - options for developing in-depth research to explore differential attainment in medical education |
| | Multivariate analysis complete (publication later, to coincide with SOMEP?) | - an indication of where there might be good practice (e.g. deanery/LETBs with higher than expected attainment for BME groups) |
| **May** | Strategy & Policy Board | Decision on research spending and next steps |
# Overview

## Understanding differential attainment across training pathways

### Project overview

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<th>Phase 1 Q1 2014</th>
<th>Phase 1 Q1 2015</th>
<th>Phase 2 Q2 2015</th>
<th>Phase 2 Q3 2015</th>
<th>Phase 2 Q4 2015</th>
<th>2016</th>
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<td><strong>Research and investigation</strong></td>
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<tr>
<td>Feb 2015</td>
<td>Initial Report</td>
<td>March 2015</td>
<td>Multi-level modelling</td>
<td>Initial findings</td>
<td>April 2013</td>
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<td>Feb 2015</td>
<td>Literature review</td>
<td>April 2013</td>
<td>LR final review</td>
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<td>Jan 2015</td>
<td>GP selection and exams research</td>
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<td>LR interim report</td>
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<td>Literature review</td>
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<td>Data analysis</td>
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<td>Gathering information on Deanery/LETB support strategies</td>
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<td>Qualitative research</td>
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<td><strong>Engagement &amp; collaboration</strong></td>
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<td>Feb: supporting trainees workshop</td>
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<td>May: BME forum</td>
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<td>October</td>
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<td>(precursor to conference workshop)</td>
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<td>Stakeholder forum the</td>
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<td>GMC</td>
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<td>-discuss progress</td>
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<td>BMA symposium</td>
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<td>-build consensus on approach</td>
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<td>March conference</td>
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<td>-discuss prioritisation &amp; next steps</td>
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<td>-Share initial findings</td>
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<td><strong>Governance &amp; key decision points</strong></td>
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<td>3/2/15</td>
<td>S&amp;P board</td>
<td>21/05/2015</td>
<td>S&amp;P board: Review evidence, stakeholder feedback</td>
<td>6/10/15</td>
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<td>Progress report</td>
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<td>Decision point: research priorities</td>
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<td>Review progress and priorities, decide on next steps</td>
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<tr>
<td>23/03/2015</td>
<td>Research policy forum</td>
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Project Governance Approach

Project Reporting Line – fortnightly to E&S senior team

Monthly Project Board (from January)
- Co-ordinate progress on E&D related projects across the GMC
- Lead from each directorate

Weekly working group meetings (commenced)
- Project and work package leads across the GMC
- Data & Insight Team, Comms Team, E&D Team, PLAB lead, Education so far – FtP too?

Engage and update:
- Data Strategy Working Group
- Research Forum
- SOMEP project team
Resources 2015

Research budget total: £80k (proposed in S&C work programme)

- In-depth research analysis - £62.5k from June 2015
- Literature review – £17.5k (£17.5k committed from E&S 2014 budget)

Consultancy costs: data analysis expert review £5-10k

Engagement costs: £4-7k (included within the 2015 E&S and E&D budgets)

- Preconference focus-group with local professional support leads in local deaneries/LETBs and colleges/faculties (circa £1.5K)
- Stakeholder event in autumn to review progress and help set priorities for 2016- £3-6k (based on externally hosted, circa 30-60 people)
- Conference workshop (embedded in conference budget)
# DA 2015 Roadmap

<table>
<thead>
<tr>
<th>DA key dates</th>
<th>Related projects &amp; milestones</th>
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<tr>
<td><strong>Jan</strong></td>
<td>Initial contact with PSUs-info gathering</td>
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<tr>
<td><strong>Feb</strong></td>
<td>Academic review of approach to data analysis</td>
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<tr>
<td><strong>March</strong></td>
<td>GMC conference workshop</td>
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<tr>
<td><strong>April</strong></td>
<td>Lit review &amp; phase 2 GP research complete</td>
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<tr>
<td><strong>May</strong></td>
<td>Qual research commissioned (LR/GP data published?)</td>
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<td><strong>June</strong></td>
<td>S&amp;P board</td>
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<td><strong>July</strong></td>
<td>October stakeholder forum tbc</td>
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<tr>
<td><strong>Aug/ Sep</strong></td>
<td>Qual research commissioned</td>
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<tr>
<td><strong>Q4</strong></td>
<td>Academic review of approach to data analysis</td>
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</table>

- **Phase 1: Building an evidence base and engaging key interests**
  - Consultation on standards for education and training begins
  - Exam data published
  - Draft guidance to colleges on Equality duty
  - BME forum
  - Consultation on generic professional competencies begins
  - Reveals patterns of attainment across specialties.

- **Phase 2: Prioritising and developing research**
  - PLAB review implementation begins
  - BMA follow up event on fairness
  - NTS KFR
  - SOMEPEP 2015