MAC Review of the Shortage Occupation List

Page 2: About you

Q1. What is the name of your organisation?

The Clinical Pharmacology Skills Alliance

Q2. What is your email address?

natalie.harrison@bps.ac.uk

Q3. Please indicate if you would like to be added to our database for future research purposes and updates on MAC work.

Yes

Q4. What is your type of organisation?

Other (please specify):
The Clinical Pharmacology Skills Alliance (CPSA) is a partnership formed by the Association of the British Pharmaceutical Industry (ABPI), the British Pharmacological Society (BPS), the Faculty of Pharmaceutical Medicine (FPM) and Health Education England (HEE). The purpose of the CPSA is to develop and support a long-term, cross-sector action plan for clinical pharmacology. We aim to improve the clinical pharmacology skills pipeline to support both healthcare and life sciences sectors for the benefit of patients and the UK economy alike. The CPSA is led by an Executive Board representing the partner organisations. The Alliance represents over 6000 people, based on individual and organisational membership. Clinical pharmacology is a discipline focussed on the development and use of medicines through education, research, policy and practice. Clinical pharmacologists may be medically qualified and/or scientists. They often have portfolio careers and leadership roles working in the NHS, the life sciences, academia and regulation.

Q5. Please tell us the location of your organisation? (Please select all that apply.)

UK wide

Q6. Please indicate which of the options below best explain your reason for completing this online form.

I would like to provide evidence on sector/wider shortages on behalf of members or as a recruitment business.

Page 7: Your evidence

Q25. Please indicate from which of these industries are you providing evidence?(Please select all that apply).

Professional Services

Health

Other (please specify):
Sector M, Division 72

Q26. If you wish, you can provide details of individual jobs titles you/your members have found hard to fill in the boxes below (maximum of 10). Please help us by matching the job titles you have provided with the closest standardised ONS job title and associated 4-digit occupation (SOC) code using the Office for National Statistics (ONS) Occupation Tool. There is also space to list the sector(s) where shortages of candidates to fill these job titles has been most acute. If providing this information, please refer to the list in question 24.

	Job title	Closest ONS job title	Closest ONS occupation code (4 digit)	Sector(s) most affected
1	Clinical Pharmacology Scientist	-	2112	-
2	Quantitative Clinical Pharmacologist	-	2112	-
3	Clinical Pharmacologist	-	2112	-
4	Clinical Pharmacokineticist	-	2112	-
5	Clinical Pharmacology & Therapeutics trainee	-	2211	-
6	Clinical Pharmacology & Therapeutics consultant	-	2211	-
7	Pharmaceutical Medicine trainee	-	2211	-
8	Pharmaceutical Medicine consultant	-	2211	-
9	-	-	-	-
10	-	-	-	-

Q27. What do you think are the main reasons for job shortages (answered in the question above), and or wider shortages in the sector(s)? (Not to exceed 500 words).

The UK has a shortfall in skilled clinical pharmacologists, with both the public and private sector reporting serious challenges in recruiting into both medical and scientific roles (1–5). This carries a significant threat to the provision of an effective and comprehensive clinical service in the NHS, the attractiveness of the UK as a place to conduct national and international clinical research, and the development of new medicines.

The most recent ABPI skills survey (2018, publication pending [6]) indicates that clinical pharmacology remains a top priority. ‘Clinical pharmacology’ includes the medical specialty of Clinical Pharmacology and Therapeutics and Clinical Pharmacology Scientists who are trained via a scientific pathway. One of the reasons for this challenge is the lack of awareness/visibility of clinical pharmacology as a career option and opportunities to progress within it.

For scientific roles, there is no recognised qualification and there are no openly available routes to train specifically as a Clinical Pharmacology Scientist. Individuals often training in another scientific discipline and finding themselves converting to Clinical Pharmacology later in their careers whilst ‘on the job’.

There is also a shortage of medically qualified clinical pharmacologists who can work in the NHS, academia, industry and regulation. In 2014 there were only 77 Clinical Pharmacology and Therapeutics (CPT) consultants in the UK (7). This compares to a Royal Colleges of Physicians (London) recommendation of a workforce of 440 (8). These individuals are essential for our future healthcare needs given the changing age demographics, the challenges of multimorbidity and polypharmacy, the spiralling drug costs for the NHS, the huge amount of wastage of medicines in the NHS, and the need to develop novel therapeutics taken together with the need to develop our early phase trials capacity.

Consistent with this, the House of Commons’ Business, Energy and Industrial Strategy Committee highlighted that “EEA employees (and employees from the rest of the world)…provide skills that are not currently readily available from UK recruits, including shortages in translational medicine, clinical pharmacology and novel therapies.”

Q28. Please explain what measures have been taken to reduce shortages in the sector as informed by your members and or research. (Not to exceed 500 words).

Scientific skills: The Alliance worked with representatives from pharmaceutical and biotechnology industries, academia and the NHS to explore potential solutions to scientific skills shortages. This resulted in formation of a Trailblazer Group, which is now working to develop a new Level 7 Clinical Pharmacology Scientist apprenticeship standard: https://www.instituteforapprenticeships.org/apprenticeship-standards/clinical-pharmacology-scientist/

The apprenticeship aims to provide a flow of workplace-ready candidates to ease the current skills shortage. The cost of training apprentices will be drawn down from the Apprenticeship Levy, and this route will provide part-time training and a recognised qualification for graduate entry, and for established life-scientists to convert to clinical pharmacology. We hope the apprenticeship will be successful as it is developed and becomes embedded over the coming years. However, flexibility in how the UK sources these skills is needed so we can respond to the critical skills gaps now. With this in mind, appointments of overseas candidates will continue to be an important part of staffing these important roles now and in the near future.

Medical skills: Overseas appointments are also needed to fill critical shortages in medical clinical pharmacology skills and the removal of the tier 2 visa cap for doctors has been helpful (see case study in response to Q7). The Alliance is also working to improve the domestic pipeline through improving visibility of the specialty, modernising education and training to meet the needs of the NHS and life sciences, and by developing new ways of working in partnership with pharmacy in the NHS.

One of our priorities is to help the NHS address the challenge of increasing numbers of older people with multiple long-term conditions, requiring prescription of multiple medicines. The complexity of the clinical conditions of these patients, combined with overstretched, fragmented primary care increases the risks of medicines-related harm including adverse drug reactions, drug-drug and drug-disease interactions, medication errors and lack of adherence. Medicines related harms are responsible for 6-7% of hospital admissions (10,11), with sufficient patients admitted due to adverse drug reactions at any one time to fill 10 800-bed NHS hospitals (12). Together with NHS England, we are exploring a model whereby “medicines specialists” (i.e., experienced pharmacists and clinical pharmacologists) work in partnership as at the primary-secondary care interface to support complex polypharmacy, as part of the NHS prevention approach.

Medicines specialists would review patients with the most complex polypharmacy at the request of GP/GP pharmacist teams, conduct multidisciplinary reviews with GPs/GP pharmacists of patients identified with polypharmacy using the ePACT2 polypharmacy indicators, and provide advice, training, and networking to help reduce and avoid issues with polypharmacy. This idea is currently being piloted in South West London.

Q29. Have these measures worked, if not why? (Not to exceed 500 words).

The impact has yet to be measured. The Clinical Pharmacology Skills Alliance was established in December 2017. This skills gap has been formally reported since at least 2005, indicating that significant measures need to be put in place to resolve it. We envisage that a cross-sector Alliance working to raise awareness of (a) the Clinical Pharmacology Scientist role and development of clear training pathways through the new apprenticeship standard will help; and (b) medically qualified clinical pharmacologists. Investing in the domestic pipeline will be a long-term solution for all clinical pharmacologists. We also envisage that the new apprenticeship will provide a conversion route into these roles for other professionals and, therefore, would like to maximise flexibility in overseas recruitment. Conversion and overseas hiring are needed to address these critical gaps in the immediate term.

The CPSA supports the ABPI recommendation (13) that the Shortage Occupation list be reviewed more regularly and that as much flexibility as possible should exist in the immigration system outside of the occupational list to adapt to the dynamic needs of the economy, particularly as the UK leave the EU and seeks to build a strong industrial strategy in areas such as life sciences.

Q30. Are the jobs that you have said are in shortage, open to eligible workers from the Tier 2 points-based visa system?

Yes

Q31. If known, how many workers from outside of the UK have been recruited using the Tier 2 points-based visa system in the past 12 months, stating the job titles.(Not to exceed 500 words).

Unknown.

Q32. If you have supporting evidence such as survey results from members please attach here. Please remember to omit sensitive details before attaching.

- File: MAC consultation Question 14 Case study.docx

32. If you have any other information that might be useful for our call for evidence please use the space below to explain (Not to exceed 500 words).
References from questions 9–11

1 Association of the British Pharmaceutical Industry. (2005) Sustaining the skills pipeline in the pharmaceutical and biopharmaceutical industries. Available from: http://careers.abpi.org.uk/your-career/undergraduates/Documents/_publications_pdfs_2005-STEM-Ed-Skills-TF-Report.pdf
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12 Davies, EC. et al. (2009) Adverse Drug Reactions in Hospital In-Patients: A Prospective Analysis of 3695 Patient-Episodes. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2635959/
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The Association of the British Pharmaceutical Industry. (2008) Skills needs for biomedical research. Creating the pools of talent to win the Innovation Race. Available from: http://www.abpi.org.uk/media/1366/skills-biomedical-research.pdf

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BBSRC and MRC. (2014) Review of Vulnerable Skills and Capabilities. Available from: http://www.mrc.ac.uk/documents/pdf/review-of-vulnerable-skills-and-capabilities/

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Page 8: Feedback

Q33. Please use this space to let us know if you experienced any difficulties in using this online form. (Not to exceed 500 words).

9. If you have any other information that might be useful for our call for evidence please use the space below to explain (Not to exceed 500 words).

As discussed in our responses, addressing clinical pharmacology skills shortages would help the UK to realise the ambitions set out in the new Life Sciences Industrial Strategy: to facilitate innovative research across the health and life sciences sector, and provide better care for patients through better adoption of innovative treatments and technologies. The second sector deal reinforces the need for “an effective regulatory environment that works for innovative, emerging new technologies”. Clinical pharmacologists contribute significantly to the regulation of medicines and devices by holding key roles in regulatory agencies including the Medicines and Healthcare Products Regulatory Agency (MHRA), the European Medicines Agency and national Yellow Card Centres. They hold leadership roles in organisations responsible for providing national guidance, advice, quality standards and information around the use of medicines.

Investing in clinical pharmacology will also support the NHS by improving efficiency and supporting patient care. For example, cost-modelling demonstrates that every £1 invested in clinical pharmacologists could save nearly £6 through more efficient use of medicines, and fewer adverse drug reactions (16). Further, the NHS proposes to implement pharmacogenomics in the next few years, to personalise the use of medicines. Clinical pharmacologists will be needed to support this process, train other healthcare professionals and manage complex problems that emerge in clinical practice.

Clinical pharmacologists can help the NHS and the Life Sciences sector deliver their strategic objectives, both through their own work and by leading, educating and developing the practice of the wider workforce. Building expertise in the use of medicines across the NHS should be done in collaboration with pharmacists, who already provide leadership in medicines optimisation (17).

Clinical pharmacologists make a unique contribution to the NHS and to UK clinical research and development, but critical skills shortages have been persistent. The Alliance has explored the reasons for this and concluded that it is a complex problem: it affects the whole sector; it affects both medical and scientific training pathways; problems are found at each level of career progression, as well as in workforce planning; and many different partners need to act in concert to make a difference. The Alliance is working across the pipeline to enthuse potential clinical pharmacologists, to create and promote career pathways and is developing new ways of working to help realise the value of clinical pharmacology across the NHS and the life sciences. Whilst not a ‘silver bullet’, including medical and scientific clinical pharmacology skills to the Shortage Occupation List (SOL) would greatly facilitate the sector’s ability to fill critical gaps now.

References

16 British Pharmacological Society. (2016) Clinical Pharmacology and Therapeutics: the case for savings in the NHS. Available from: https://www.bps.ac.uk/BPSMemberPortal/media/BPSWebsite/Assets/CPT-case-for-savings-in-the-NHS.pdf

17 Health Education England. The school of medicines optimisation. Available at: https://hee.nhs.uk/our-work/medicines-optimisation