HEE FUTURE DOCTOR CALL FOR EVIDENCE

Draft Final Report

14 October 2019

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EXECUTIVE SUMMARY

Executive summary introduction

The Future Doctor Call of Evidence, as a part of the Future Doctor Consultation, has sought expert views from key NHS stakeholders such as arm's length bodies, clinical professionals and professional groups, charities and faculties to provide insight on the vision of the Future Doctor.

The Call for Evidence was open for four weeks and has been distributed across the NHS, made available on Health Education England's website and promoted on social media. A total of 61 responses were received from a range of stakeholders. Of these, 18 respondents were individuals (primarily doctors) and 43 were organisations.

The analysis of responses and additional documentation returned during the Call for Evidence, will be used to develop a consultation document on the Future Doctor. This document will subsequently be used to seek views from a wider range of stakeholders including patients and the public. This interim report details early finding from the analysis, with a final report to follow on the 14th October.

Methodology

To perform the initial analysis, a list of key concepts was created to inform the development of a coding framework, this was based on research into the background to this project, including a review of strategic documents, and cross referenced with themes and subthemes identified by HEE through a stakeholder workshop.

Analysis has identified key findings across the following areas, the concepts across these areas have been reviewed and refined since the interim report to capture an accurate representation of feedback.

- Expectations from patients and the public of doctors in the future
- Expectations of Future Doctors from those within healthcare
- Key drivers for change on the role of the doctor and their future impact
- How the role of the doctor in the future will compare to how it is now
- Key factors impacting the role of the doctor in the future
- The remit of doctor in the future multi-professional team
- Skills, knowledge and behaviours needed by doctors in 30 years' time
- Timescales for change
- Key challenges to be addressed
- Additional comments, feedback and materials provided

Summary of Report Findings

The following is a summary of the findings, and the key themes across all areas captured in the Future Doctor Call of Evidence

1a. Expectations of Future Doctors from patients and the public

The most commonly identified theme was **patient involvement** which as highlighted by just under a third of respondents – most commonly in the sense of patient-doctor partnership for care decisions, but this was more likely to be indicated by an organisational response. **Personalised care** and **compassion** were also key themes - cited by a wide range of respondents.

1.b/c. Expectations of Future Doctors from those within healthcare

Key themes from colleagues within the NHS included **teamwork / MDT working** as an expectation held for the future doctor, including several responses noting that doctors will need to accept the change in their roles. **Leadership** was a strong theme - in a variety of forms and interpretations. The largest expectation identified from doctors was the potential to work flexibly in roles, careers, and work-life balance. **Career development** and **training models** were also key themes.

2. Key drivers for change on the role of the doctor and their future impact

Drivers for change anticipated to have a particularly high level of impact include the **ageing population** and **new technology**.

3. Key factors impacting the role of the doctor in the future

A number of themes covering Society, Healthcare, and at the Individua/Patient level were identified. **Technology/Digital** impact was a cross cutting theme, including developments such as machine learning and AI. **Increase in MDT working** was again seen as a key factor, both as an opportunity and a challenge for doctors. From a patient impact, **complex co-morbidities, an ageing population** and **rising expectations** were the most commonly cited subthemes.

4. The changing role of the doctor in the future

The question suggested relevant factors such as working practices, the patient-doctor relationship or working within evolving multi-professional teams. Of the responses, **Teamwork** was the most commonly cited theme, and also the related theme of **Distributed leadership. Technology** was also seen as an important factor and subtheme relating to an impact on future working practices.

5. The Remit of doctor in the future multi-professional team

The most common role of the future doctors identified by the respondents was that of **Leader**, though there was some divergence as to what this may mean in practice – from training in leadership, leading the team, to a more equal role as team member in the MDT. **Collaboration** was cited in several responses as important to the role. Closely linked to this is the identification that a key part of the future doctor's remit would be **working with new roles** and **coordination** within the multi-disciplinary team.

6. Skills, knowledge and behaviours needed by doctors in 30 years' time

A wide range of skills, knowledge and behaviours were identified as necessary by the respondents.

Again **technology/digital** was a common subtheme, linked to skills and also related advances in technology including **evidence appraisal** and **data interpretation**. Softer skills such as **emotional intelligence**, primarily regarding patients but also colleagues, was also a strong theme. Knowledge areas were less thoroughly discussed in the responses, but **population health** and **prevention** were the most commonly identified. Again, **leadership**, and **teamwork** were identified as essential part of the future doctor's role.

7. Timescales for change

Most participants believed that changes to a doctors' role could happen in 10 to 20 years' time, with **technology**, **culture change**, and the **changing needs of society** commonly cited as reasons.

8. Key challenges to be addressed

Key challenges cited were under the areas of the use of new technology, care delivery and a focus on health prevention. Technology and specifically **Lack of adoption** of technology was a common subtheme. We also identified organisational factors as another theme, with **training** (methods/content/focus) a commonly cited challenge.

9. Additional comments

When given the chance to add additional comments, the majority of respondents elaborated further on previous responses rather than adding further themes, which suggests that the questions framed in the main body of the survey were appropriately framed. The other comments re-iterated the challenges faced by the sector – particularly the need to address **Workforce** and **Supply and Demand / shortages** and primarily focussed on the future changes relating to **New Workforce Roles,** a **Flexible workforce** and **Leadership**, and the need to ensure **Doctors input in policy** to help develop these changes and the required **Skills** and **Standards.** The **Wellbeing of doctors / staff** was a key theme with one respondent summarising this as follows:

"If doctors feel valued, and work in a system that promotes the delivery of safe and high-quality patient care and the wellbeing of its staff, they will be empowered to take on whatever challenges the future may hold."

Summary of Recommendations

The Call for Evidence has collected expert views from a range of stakeholders on the expectations, shape and role of the Future Doctor – this will be used to develop a consultation document on the Future Doctor that will subsequently be used to seek views from a wider range of stakeholders including patients and the public. The call for evidence has shown a number of interesting insights and some that we suggest are investigated further as a priority.

Leadership and teamwork were common themes throughout the Call for Evidence responses but a detailed definition and consensus on the meaning of this was not possible – this should be an area to probe further in consultation and understand further.

Training was also a commonly cited theme with varied views. It was clear from the responses that many believe that training needs to be adjusted/improved but it would useful to understand more about the changes that should be made - engaging with doctors already in or with an ambition to enter education would help to understand this issue further.

Some themes/areas seem underrepresented in responses, and we suggest that any potential rationale for these not presenting as strong themes (in scored and qualitative responses) is explored more in the following consultation – this includes the theme of population health / prevention.

CONTENTS

1. INTRODUCTION AND OVERVIEW

1.1 Future Doctor Consultation

1.1.1 Overview

The Future Doctor Call of Evidence forms part of the wider Future Doctor Consultation. This consultation was committed to in the Interim NHS People Plan, published in June 2019. The plan sets out the vision for the NHS workforce that will allow for delivery of the aims set out in the NHS Long Term Plan. The aim of the consultation is to seek views on "what the NHS patients and public require from 21st century medical graduates"[1], with a further view to supporting the General Medical Council to shape the future direction of medical education. The Call for Evidence sought expert views from a range of stakeholders including clinical professionals, multi-professional regulatory bodies, professional membership bodies and other members of the NHS. The Call for Evidence focussed on the following areas:

- expectations of the Future Doctor;
- what will shape the role of the Future Doctor;
- what the role of the Future Doctor will be;
- skills, knowledge and behaviours needed to fulfil their role; and
- challenges that need to be addressed to facilitate the vision of the Future Doctor.

The analysis of responses and additional documentation returned during the Call for Evidence, will be used to develop a consultation document on the Future Doctor. This document will subsequently be used to seek views from a wider range of stakeholders including patients and the public.

1.1.2 Rationale

Workforce shortages are one of the most significant challenges currently facing the NHS and healthcare systems globally. Such shortages have led to temporary and permanent closures of wards and GP practices and are leading to concerns in patient safety. Steps are already being taken to recruit and retain more staff and new roles are being introduced – and further funding agreed to address the shortages and design new solutions. Although it is clear that a whole workforce solution is needed, the fact that it can take up to 15 years to train a doctor and the increase in medical school places mean that they are the optimal starting point.

The healthcare landscape is currently undergoing significant change as patient expectations and needs change. This, coupled with technological advances and demands for more flexible training and career options, means that the roles and responsibilities of doctors are in flux. As such, some believe traditional medical training is not preparing doctors adequately for the future healthcare landscape[2]. The content and methods of traditional medical training need to be redesigned to prepare the doctors of the future for these changes.

[1] NHS England (2019). *Interim People Plan*.
[2] BMA (2017) *The Changing Face Of Medicine And The Role Of Doctors In The Future*

1.1.3 Structure

The table below shows the timeline of the Future Doctor Consultation.

Table 1: Future Doctor Timeline

Date	Activity
29 August 2019	Call for Evidence opened
26 September 2019	Call for Evidence closes
October 2019	Analysis of evidence Development of consultation document
November 2019	Future Doctor Consultation launch
February 2020	Future Doctor Consultation close
March 2020	Analysis of consultation responses
TBC 2020	Recommendations and next steps

https://www.hee.nhs.uk/our-work/future-doctor

1.2 Medical Education Reform Programme

Health Education England instigated the Medical Education Reform Programme, of which the Future Doctor Consultation forms part, to address the workforce issues in the medical profession. It is the overarching programme which seeks to improve doctors training to ensure they are adequately prepared for the future and increase retention. The Future Doctor Consultation forms one part of this. Other projects involved include:

- Enhancing Junior Doctors Working Lives
- 'Supported from the start, ready for the future': a review of the Foundation Medical Training Programme
- The Supported Return to Training Programme

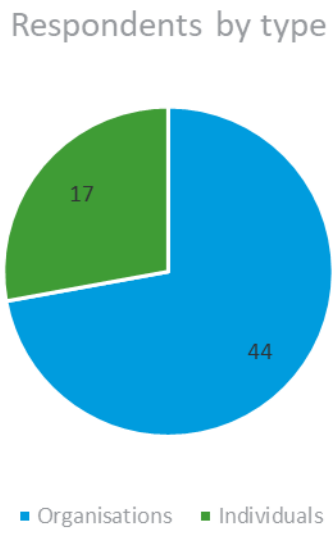
2. OUR APPROACH

2.1 Responses

The Call for Evidence was open for four weeks and was distributed across the NHS and amongst key stakeholders such as arm's length bodies, professional groups, charities and faculties. It was also made available on Health Education England's website and promoted on social media.

The graph below shows a breakdown of the respondents by type – whether these were organisational or from individuals.

Graph 1: Respondents by type

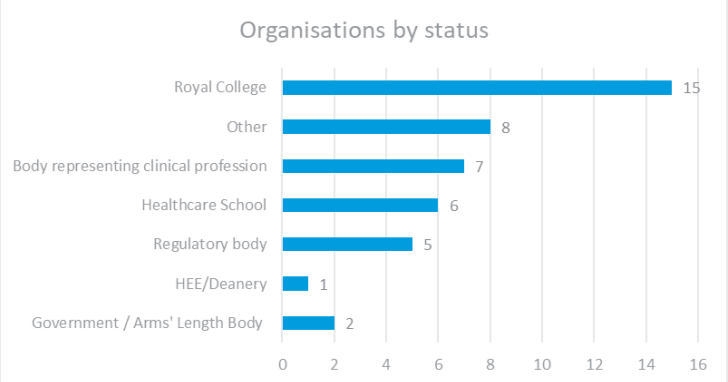


The Call for Evidence received a total of **61 responses** from a range of stakeholders. Of these, 17 respondents were individuals and 44 were organisations.

The individuals who responded were primarily doctors but a pharmacist, patient/member of the public and one "other" responded also. More variety was present in the organisations that responded, including:

- professional representative bodies;
- government/arm's length bodies;
- healthcare schools;
- HEE/Deanery;
- regulatory bodies;
- royal colleges; and
- "others".

Graph 2: Organisations by status



"Other" organisations included universities, faculties, a Council, amongst others.

2.2 Coding framework and analysis

To complete this piece of work, we performed **deductive thematic analysis**[3] **o**n all responses received. This included:

1. Familiarisation with data: reading and re-reading the data, comparing these with initial ideas
2. Generating initial codes: coding features of the data systematically within the data set, collating data relevant to each code.
3. Searching for themes: Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes: Checking if the themes work in relation to the coded extracts and the entire data set, generating a thematic 'map' of the analysis.
5. Defining and naming themes: Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.

In the initial stages of analysis, the themes and subthemes were coded. In the further analysis in the next stages, all responses previously categorised as "other" will be fully coded in order to allow a more granular analysis of this data. All themes and subthemes were then reviewed and refined, and clear definitions will be generated for each theme. A 10% data check was performed to ensure the consistency of theming the data between analysts. The additional documentation has also been reviewed and categorised accordingly.

Where pertinent, we have provided a more detailed analysis that will categorise the responses and themes by individual/organisation status, allowing for a deeper understanding and analysis of any diverging views that have appeared in our initial analysis.

Please see **Appendix 1** for the coding framework.

3. FINDINGS

3.1 Expectations of Future Doctors (q1)

3.1.1 Expectations from patients and the public

Respondents were asked: **What are the expectations from patients and the public of doctors in the future?**

The following themes were identified:

- Quality
- Safety
- Knowledge/skills
- Compassion/caring
- Education & training

[3] Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), pp.77-101.

- Personalised care
- Evidence based/ proven treatments
- New treatment options
- Focus on prevention and wellness
- Patient involvement
- Use of tech

The most commonly identified theme was **patient involvement**, cited by just under a third of respondents. Interestingly, only one of the respondents who identified this theme as a patient expectation was a doctor, with the large majority being organisations. Patient involvement was most commonly referred to in the sense of patient-doctor partnership for care decisions. One respondent stated that "patients and their carers will expect to be even more involved in decisions about their treatment, and be more proactive in their relationship with doctors." Another believes that this expectation comes from "An increasing trend for patients to use available information to enhance their own health management." Several respondents noted that they thought such shared decision-making would lead to other expectations. For example, one respondent believed that patient involvement in care planning would lead to greater advocacy, writing **"**Patients and the public will expect the doctor-patient relationship to be one based on shared decision-making, with the doctor as the patient's advocate in times of patient need." Other respondents linked **patient involvement** with **personalised care,** believing that "with the increased focus on shared decision-making, patients will expect doctors to work in partnership with them to provide treatment options that have their best interests at heart and take into consideration the patient's circumstances." Others anticipate that the expectation of an increased patient-doctor partnership will extend to service planning and design. One respondent believes that patients will expect to be included in decisions about "measures that affect their communities such as the planning of healthcare facilities." Another stated that "The NHS Long Term Plan also announced plans to create apps to support parents, carers and patients in managing their care. Patients and the public should expect to be involved in the creation of these apps"

Personalised care and **compassion** were the second most frequently cited themes. **Personalised care** was cited by a wide range of respondents, with one respondent stating, "the impact of personalisation of care should not be underestimated." As shown above, certain respondents believed that personalised care was linked to deeper patient involvement in care planning. Certain respondents referred to personalised care in a more technical sense. For example, one respondent from a Royal College identified that patients would expect "greater use of personalised medicine and genomics." They warned, however, that we must "ensure genomic tests are only approved for use in healthcare if there is evidence of benefit to the individuals being tested." Other respondents referred to personalised care in a more generalised sense. A pertinent example being a respondent from a reproductive and sexual health background saying, "doctors will be expected to provide holistic, person-centred care that takes into account individual circumstances including sexual orientation, gender and mental health issues and how these inter-relate with wellbeing and ill health."

Compassion/caring was also highlighted by several respondents across a range of backgrounds. Over half of doctor respondents identified this as a patient expectation. The majority of respondents who identified this theme did not elaborate on what compassion and care meant to them. A few expanded, however, linking **compassion/care** to communication skills. One respondent from a Healthcare School wrote that patients expect "to be treated with respect and dignity by a competent, kind clinician who has empathy with their patients and an ability to

communicate that empathy in a way that ensures confidence and trust." Another wrote, "Patients expect doctors who are compassionate and communicate well, which should include the ability to actively listen and explain complicated issues in understandable ways."

Other expectations not in the coding framework included:

- Accessibility
- Holistic care
- LGBTQ+ care
- Honesty/transparency/openness
- Professionalism
- Enough time to listen to all concerns
- Advocacy
- Morals
- Access to and understanding of other professionals
- Understanding of wider healthcare setting
- Continuity of care
- Flexibility
- Increased mental health awareness
- Use of clear language
- Prudent healthcare
- Care close to home
- A diverse workforce
- Leadership/accountability

3.1.2 Expectations from colleagues in the NHS

Respondents were asked: **What are the expectations of doctors in the future from people/colleagues within the NHS, such as employers and wider team members for example nurses, pharmacists, healthcare scientists and advanced clinical practitioners?**

The following themes were identified:

- Teamwork/MDT
- Support
- Leadership model
- Continuous learning/ training and development
- Embracing technology

Over two-thirds of respondents identified **teamwork/ MDT** as an expectation held for the future doctor. One respondent summarised it, saying they expect that "doctors will work in sufficiently staffed teams, in an atmosphere of mutual respect and value for the various members of those multidisciplinary teams, ensuring that the full potential of individuals within those teams can be realised." One respondent explained why they believe teamwork is essential, writing "all members of healthcare delivery need to function effectively together in teams that develop flexibly as advances in healthcare delivery come on stream Respect and understanding of other roles were identified by several respondents as being integral to teamworking. One respondent wrote that "a culture of mutual trust, respect and understanding will be important in underpinning effective joint working", whilst another asserted that "a genuine and respectful appreciation of complementary skills and knowledge." was needed. Several responses noted that doctors will

need to accept the change in their roles and “be able to let go of some duties that are better placed with other colleagues where possible and as appropriate so that they can together with the team optimise healthcare delivery”. As such, it was suggested by one respondent that, 'team work ethic should be embedded at the beginning of undergraduate training and continued throughout postgraduate training'.

The second most commonly cited theme was **leadership**. Leadership was identified in a variety of forms. Some respondents referred to doctors as leaders of the multi-disciplinary teams. For example, one respondent stated that doctors would be expected “to lead, supervise and develop a team of medical and non-medical practitioners, recognising the skills, and responsibilities of different team members”. Some highlighted doctors’ role in developing and supporting other members of the MDT, for example one respondent form a government/arms’ length body, wrote “Doctors will be required to support development of the skills and capabilities of the multi professional team to enable these changes in practice.” Others focussed on the clinical leadership that doctors would be expected to offer. A respondent, from a body representing a clinical profession, believes that “doctors are expected to take on a true clinical leadership role, receiving technical clinical information from other members of the healthcare professions to inform individual and system-level decision making rather than doctors taking on individual patient management except for complex technical skills, such as surgery. Other respondents identified the future doctor as a leader in certain medical situations. For example, one respondent wrote “the doctor is often seen as a leader in a crisis situation”. Several respondents asserted that although the future doctor would have a leadership role, it was essential that they recognised when it was appropriate to be a leader and when it was more appropriate to follow. A respondent from a Royal College stated that “Doctors will need to have good leadership skills, developed from the beginning of their training, as well as “followership” skills within a team, recognising others’ skills, which may be both complimentary and greater than their own.”

The following themes were identified in the “other” category:

- Responsibility/accountability
- Hard work
- Resilience
- Availability
- Approachability
- Research
- Quality improvement
- Focus on prevention/population health
- Culture change
- Coordination
- Teaching
- Generalism
- Adaptability
- Strategy
- Non-clinical skills
- Technical competence

3.1.3 Expectations from doctors

Respondents were asked **What are the expectations of current doctors and medical students regarding their role in the future?**

The following themes and subthemes were identified:

- Ways of working
  - Flexible working
  - Continuous learning
  - Career development
- Education and training
  - Supportive learning environment
  - Training models
  - Entry/selection
  - Multi-professional training
- Working environment
  - Wider terms and conditions
  - Support
  - Teamwork
- Role
  - Keeping people well/prevention
  - Treating illness

The largest expectation identified was the potential to **work flexibly**. Having a better work-life balance was commonly cited within this theme. One respondent wrote "Increasingly, doctors expect to be able to work flexibly, to allow for a healthy, sustainable work-life balance, providing space for other priorities." However, many extended the idea of flexible working beyond this. For several respondents, more flexible working patterns and the ability to take career breaks were important. One wrote "While a long and fulfilling career in medicine will remain attractive, future doctors will expect an improved work-life balance with increased training opportunities granted and flexibility in training. For example, they will expect to be afforded more opportunity for career breaks, potentially with more frequency, for example for care-giving and training, without detriment to their careers." Another respondent quoted a census taken by the Royal College of Physicians saying "As summarised in RCP's 2017/18 Census, the number of consultants working less than full time (LTFT) has risen to 23% and LTFT training is also increasingly popular… Postgraduate training will need to reflect these changes and make it easier for doctors to step off and back onto a training programme." Flexibility in doctor's roles and career pathways was cited by a number of respondents. One doctor asserted that "I and others want to be able to work flexibly and balance family life with patient facing work, education and training strategy, research etc. Another summarised the point of view by saying "current doctors and medical students are likely to expect flexibility in their roles, giving them the opportunity to create portfolio careers and to determine their work-life balance." Another respondent believes that doctors expect to be able to work flexibly in a number of ways, writing that they "expect to work less than full time. To be at work when at work and not on duty when at home…they are interested in a varied career path, much less linear than now."

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Similarly, opportunities for **career development** were cited by several respondents. Indeed, one doctor wrote that future doctors will expect "that they can pick their own [career] path and be supported in developing it, even if it does not match the needs of the service." This was supported by another respondent who stated that doctors will expect "to have an element of self-determination in what they do, when and where". Another respondent holds a similar view, writing "All future doctors will have to examine their priorities and understand what it is that makes them happy. And they need to be empowered to shape their careers in such a way to meet these needs as it is the only way to counteract the disillusionment that seems so prevalent today." One respondent suggested areas in which future doctors may wish to develop. They wrote "Some current and future doctors wish to pursue additional opportunities in research, education, innovation, industry, management and quality improvement."

Certain respondents believe that **training models** will need to be redesigned to provide for the future doctor. One respondent, from a Healthcare School, identified what they view as issues with the current training model, saying "students continue to be trained to a very traditional model of practice, with little allowance of the need to address working within a rapidly expanding knowledge base with e.g. open book exams, nor the rapidly changing nature of the GP or the secondary care clinician, impacted by technology and the need to manage a large number of patients with limited staff through use of the doctor as a manager / leader of others who see patients." A range of different views on what changes should be implemented were provided by the respondents. One respondent, from a body representing a clinical profession believes that "there needs to be more flexibility built into training, both at medical school and beyond, in order that different doctors can pick up different skills that will be relevant for them." This was supported by a respondent from a Royal College who wrote "Opportunities must include more 'flexible' career pathways, better work/life balance, with a good training experience g. providing preparation that includes these aspects and that is supported by universities and employers will enable them to adapt to the inevitable change in health and care." Another from a different organisation believes that technology will play an important part in shaping future training, writing "students will be more technically literate and will expect their education and training to reflect their own technical lives. This might mean different approaches to traditional models of education and learning. Increased use of virtual and augmented reality in training in a 'blended world'." Furthermore, certain respondents believed that a more comprehensive education was needed and that "we should also focus on training this workforce to deal with complex health care needs". One respondent noted that training needs to reflect the desire to have more flexible pathways and working patterns.

A small number of respondents highlighted the importance of **multi-professional learning**. One respondent believes the increase in multi-professional learning is inevitable, writing "which will result in increased inter-professional learning from undergraduate through to postgraduate, common stem approach to healthcare professional education. Another believes that "inter-professional learning" is necessary "in order to reflect the increasingly clinical nature of the roles."

Other themes mentioned by respondents were:

- Sustainable working
- Certainty (in learning)
- Working with new roles
- Respect/ feeling valued

- Opportunities for research/education
- Access to resources
- More varied training (ie advocacy, adaptability)
- Earlier retirement due to pensions tax
- Managing complex care
- An increased awareness of physician wellness
- Use of technology
- Involvement in strategic decisions
- Safe environment
- Increased patient engagement
- Leadership
- Fewer workforce issues

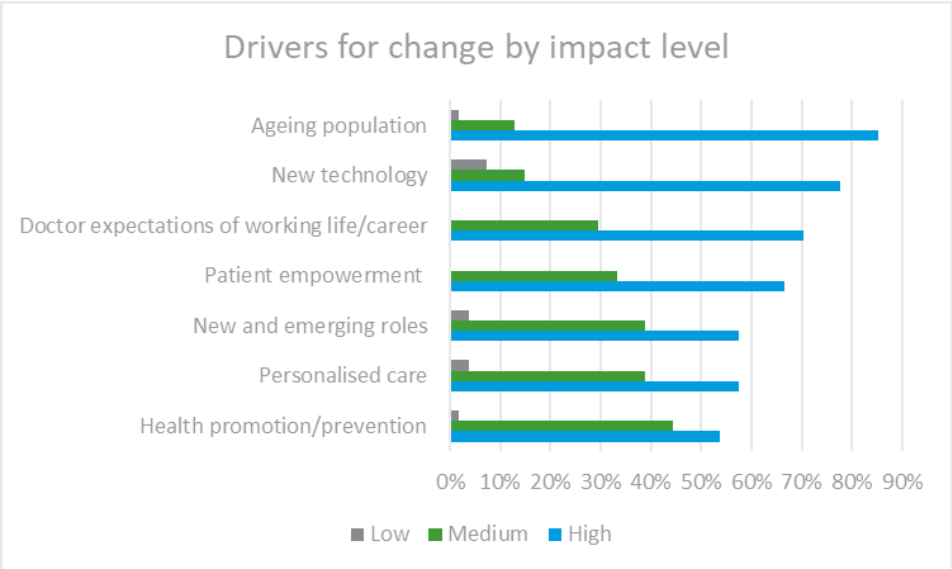
3.2 Key drivers for change on the role of the doctor and their future impact (q2)

Respondents were asked **What level of impact do you think the following drivers for change will have on the role of the doctor in the future?** for each of the following areas.

A. An ageing population with multiple, complex health needs
B. New technology including artificial intelligence, digital health and genomics
C. Patient empowerment and change in the patient-doctor relationship
D. Increasing focus on health promotion and prevention
E. Different expectations from the Future Doctor on working life and career
F. Delivery of personalised care
G. New and emerging roles

Respondents were asked to identify the impact as high, medium or low. The graph below categorises the responses by impact level and driver for change.

Graph 1: Drivers for change by impact level



The two drivers for change most frequently anticipated to have a "high" level of impact are an **ageing population** (85%) and **new technology** (78%). The driver for change selected by the lowest proportion of respondents as having a "high" level of impact on the role of the doctor in the future was the **increasing focus on health promotion and prevention** (54%).

New technology was also identified by the largest proportion of respondents as having a "low" level of impact (7%) indicating some divergence of views on this theme.

93% of respondents indicated that each of the listed drivers for change will have either a "high" or "medium" level of impact on the role of the doctor in the future, indicating that all drivers are important impact factors. The drivers selected by the lowest proportion of respondents as having a low level of impact were **patient empowerment** and **working life/career expectations**, which no respondents believed would have a low impact.

3.3 Key factors impacting the role of the doctor in the future (q3)

Respondents were asked: **Please tell us the factors you think will have the biggest impact on the role of the doctor in the future, and how?**

A significant number of factors that would have "the biggest impact on the role of the doctor in the future" were identified by the respondents, these were grouped into three overarching themes, with sub-themes attributed to each, namely:

- Society
  - Legal/regulatory change
  - Technology/digital
  - Changing patterns of work
- Healthcare
  - Service reconfiguration
  - Changes to training pathways
  - Increase in MDT working
  - Workforce shortages
- Individual/Patient.
  - Care of complex co-morbidities
  - Rising expectations
  - Self-management
  - Increasing choice
  - Ageing population
  - Patient attitudes/ attitudes of the public influenced by eg social media
  - Patients researching their health conditions

3.3.1 Society

The most frequently cited subtheme was **Technology/Digital.** More than half of the respondents to this question indicated that this factor would have a big impact on the role of the doctor in the future. Responses highlighted the significance of the development of robotics and artificial intelligence and also the importance of future doctors contributing to the development process of robotics and artificial intelligence, for example: "Robotics and Artificial Intelligence are evolving at a rapid pace, and these areas will include Medical Profession / Doctors developing appropriate

qualifications to create different specialities that would utilise AI/Robotics in the routine management of patients".

Another respondent highlighted the patient relationship issues that may be raised by the introduction of new technology, writing "technological developments and AI are increasingly likely to challenge the traditional relationship between healthcare professionals and patients. With potentially more automation, remote diagnosis and management of conditions, there could be a reduction in human interaction which could raise issues around, for example, patient trust and consent".

3.3.2 Healthcare

The most frequently cited subtheme within the Healthcare theme was **increase in MDT working.** Almost half of the respondents highlighted that this factor will have a big impact on the role of the doctor in the future. Respondents noted the importance of the need for doctors to have a clear role of MDTs, e.g. "Doctors will need to understand and respect these roles, and show leadership in supporting and enabling the enhancement of roles across the wider system where it benefits patient welfare, outcomes and safety"

That said, other respondents noted that MDTs may create issues for doctors, for example: "the influx of the wider multi-disciplinary team (MDT) is currently the biggest challenge for doctors. On the one hand it provides clinical colleagues with the opportunity to take over some of the doctor's previous tasks, but at the same time there is a risk that this could undermine the professionalism of doctors and public perception of them".

The second most frequently highlighted subtheme within the Healthcare theme that respondents indicated would have a big impact on the role of the doctor in the future was **workforce shortages,** selected by just under a third of respondents. One respondent noted that there will be "excessive workloads arising from difficulties in recruitment".

3.3.3 Individual/Patient

The most frequently mentioned subtheme within the Individual/Patient theme was **complex co-morbidities,** with just under half of the respondents highlighting this as a big factor that would impact on the role of the doctor in the future. This was closely followed by **an ageing population** and **rising expectations**.

Respondents that highlighted care of **complex co-morbidities** were likely to also reference **an ageing population**, and include both of these themes in their response, for example, "the ageing population will continue to have a significant impact, especially if systems are not adapted quickly to deal with this group of patients, who have multiple comorbidities and will be more complex and time-consuming to care for." Changes to the current system and models of care were suggested to be key to overcoming the challenges associated with complex chronic conditions, "the management of patients with multiple co-morbidities, poly-pharmacy, dementia and frailty demands a reassessment of the current model of care with [at present] multiple narrow specialty based silos of care rather than a broad based approach incorporating all aspects of patient care."

Respondents also indicated that there are shifts in the expectations of patients with regards to the care they expect, with some highlighting that softer skills are becoming more important,

"Patients will want greater emotional intelligence and expression from their practitioners, particularly as some practical surgical skills are replaced by new technologies". These expectations are also anticipated to lead to changes in the doctor patient relationship, "Increasingly patients will want to be active partners and decision makers in the care they receive, and no longer view it as something 'done to them'"

Other respondents also highlighted that raising expectations presented challenges to doctors, requiring them to manage expectations, "Society's expectations of ever improving healthcare and having to manage these in the face of multiple co-morbidity." Indeed, some see this as a causal factor for doctors to leave the profession, "Management of patient expectations is the main issue driving people away from medicine".

Other themes highlighted by respondents include:

- Stress/mental health issues
- Travel
- Global warming/climate change
- Migration
- Genomics
- Increased demand
- Funding
- Brexit
- Increased prevalence of disease
- High rate of change in healthcare
- Integration
- Austerity
- Increase in generalism
- Personalised wearable devices
- Antibiotic resistance
- Social behavioural changes eg sedentary lifestyles, e-cigarettes
- Artificial intelligence
- Changing roles

3.4 Role of the future doctor in comparison to now (q4)

Respondents were asked: **How will the role of the doctor in the future compare to how it is now?**

Three themes and ten subthemes were identified in the responses:

- Working practices
    - Longer careers
    - Flexible routes/portfolio careers
    - Reduced working hours/less than full time
    - Technology
    - Taking time out/research
- Multidisciplinary teams
    - Teamwork
    - Distributed leadership
- Patient-doctor relationship

- Partnership
- Prevention focus
- Technology

Teamwork was the most commonly cited theme, identified by half of the respondents, covering a variety of individuals and organisations. Some respondents spoke generally of teamworking and MDT-working, but some were more specific. One respondent wrote: "doctors will need to work in teams and be comfortable with patients being the responsibility of a team of doctors, rather than a named doctor." Another believed that teamwork would be involved in a more general sense, saying that "Doctors will need to work effectively in wider health and social care teams and in community settings, engaging with shared expertise and knowledge." Several respondents believed that such teamworking would be beneficial to the teams and doctors. One respondent wrote that doctors "will work in multi-professional teams with less professional hierarchy and demarcation" Another believes that "multi-professional teams may facilitate collaborative working if given appropriate support and resource. Such working should be patient-centred and allow healthcare professionals to focus on their role, minimising the administrative burden and improving the patient-healthcare professional relationship, outcomes and efficiency."

Not all respondents believed that multidisciplinary teamworking was a universally positive arrangement, with several citing potential drawbacks. One doctor wrote "my concern is that healthcare could become fragmentary with digital access to any healthcare professional and a wide MDT resulting in a lack of continuity between the patient and a healthcare professional". Another respondent believes that "As many roles are handed over to nurses, PAs, pharmacists etc, there is a risk of deskilling amongst doctors". A respondent from a Royal College also warned that multidisciplinary team working could affect doctors feeling of value, saying "there can be blurred lines between professions and roles. What is the difference on the wards between a nurse, therapist or a trainee doctor? For some trainee doctors this impacts on their personal belief systems and feeling of value – we must be clearer about role definitions and how they interact for the profession as well as the public. If we can understand what makes a doctor different then we can start to define the role." Another respondent focussed on the potential effect on patients, saying "there could be a tension between the patients' expectations to be treated by clinicians and new models of delivering care, as new healthcare roles become more common."

Certain respondents linked **teamwork** to **distributed leadership.** One respondent wrote that "Rather than always being in charge, doctors should be prepared to bring their capabilities to each encounter and adapt to those possessed by other members of the team to best serve the patient(s) involved." Another wrote that "our expectation is that doctors will be more likely to operate within multi-disciplinary teams in order to make most efficient use of resources. This will increase the requirements around leadership and communication, and effective judgment to direct work within these environments (including when it is appropriate to follow as well as to lead)."

Distributed leadership was mentioned by several respondents. One respondent summarised it, saying "the future doctor will practice collective leadership, sharing leadership with multi-disciplinary team members within their own organisation and across organisational boundaries." Another supported this, identifying areas where the doctor may share their leadership, writing that "Doctors will be required to undertake a more consultative role with less responsibility for the

leadership of certain pathways in primary and secondary care, such as rehabilitation and long term conditions." Certain respondents believed that this sharing of leadership in care delivery would lead to doctors having a role of oversight (Doctors will need to oversee teams of other practitioners who will undertake much of the consultation and treatment currently done by doctors.) and coordination ("the doctor is likely to be seen as coordinator/leader of this multidisciplinary team")

A few respondents, however, believed that instead of sharing leadership, doctors should assume more. One respondent from a Royal College stated "Doctors must assume a greater leadership role, the current erosion of this has had a detrimental impact on patient care. To be leaders they must understand system thinking including complexity, be aware of the needs of both patients and staff, as well as understand effective change management approaches including improvement science."

The second most frequently cited subtheme was **Technology** (within the working practices theme). It was mentioned by just under half of the respondents from a wide range of organisations and five doctors. A variety of technology was mentioned by the respondents such as:

- access to records
- virtual consultations
- diagnostic and treatment algorithms
- electronic referral systems.
- AI

Furthermore, a range of uses of technology were noted including:

- assistance in assimilation of data
- facilitation of communication between team members
- simulation training and 3D planning (for surgery)

Some respondents viewed the adoption of technology as necessary. One respondent wrote "unless basic technology such as simple inter-operable access to patient records is put in place, doctors will not be able to meet rising patient expectation and the need to integrate health and care." Other viewed it slightly less positively. One respondent believes that it "will drive demand rather than reduce it." and another acknowledged that it would increase certainty in some areas (eg individual prognosis) but reduce it in others, claiming that "the sense of overwhelming data may increase the perception of uncertainty and the resultant pressure felt by doctors". Finally, certain respondents were concerned about the impact on regulations and accountability, with one saying that technology "will undoubtedly result in greater complexity and challenges – such as doctors in one country being able to provide services in another – which will need a regulatory response"

Several respondents highlighted that technological advances would have an impact on the patient-doctor relationship as patients became more informed about their conditions, but stressed that "it will be important that this is used to help doctors and patients work together on finding the right care, rather than being exclusively a tool for 'holding to account'."

Other themes identified by respondents were:

- soft skills
- regulatory burden
- increased/reduced patient contact
- higher patient expectations
- home visits/ community working
- holistic care
- ongoing education
- involvement in alternative models of healthcare
- flexibility/accessibility
- better understand of healthcare systems and human factors
- reduction of health inequalities
- more speciality care
- more generalism
- increase support
- opportunities for reflection
- 7 day working
- “do more with less”
- new/changing roles
- continuity of care
- chronicity of care
- political/strategic understanding
- management of patient expectations
- more personalised care

3.5 Remit of doctor in the future multi-professional team (q5)

This section will analyse responses given to the question **What do you think will be the remit of the doctor within the multi-professional team of the future?**

Five themes were identified in the responses:

- Leader/mentor/coach
- Diagnosis/treatment/care planning
- Co-ordination
- Collaboration
- Working with new roles

The most common role of the future doctors identified by the respondents was that of **leader**. Leadership was identified by just under half of the respondents, from a wide variety of organisations and individuals, citing it as a part of the future doctor’s remit. Different respondents gave different interpretations of what being a leader may mean. One respondent, from a Royal College, defined leadership as follows: “doctors will move towards being strategists and leaders who will influence the way in which the team delivers care but may have less of an executive role, while retaining responsibility for the safety of patients” Another (from a body representing a clinical profession) defined it as being “able to safely orchestrate and delegate patient care.” The inclusion of delegation was expanded by another respondent to include training. They wrote that the doctor of the future should “support the training of the team to ensure optimum service delivery, particularly in cases where responsibilities traditionally undertaken by a doctor are delegated to other team members.” Certain respondents believed that the importance of this role meant that “doctors should be trained in leadership”.

Not all respondents believed that the doctor should be the leader of the multi-disciplinary team, with one respondent's view being that "doctors will remain experts and leaders in their field, but will not always lead the team. They will be equals within the team, not first amongst equals." This notion that a doctor should not always be the leader of a multi-disciplinary team was shared by several respondents. One wrote, "hopefully, with the right skills, knowledge, attitudes, values and behaviours doctors will be able to act as effective leader and follower as appropriate." Another believes that although doctors will likely remain the leader of the multidisciplinary team, the style of leadership would need to change, saying "rather than being authoritarian, paternalistic or directive doctors will be expected to partner with other healthcare professionals and defer to their expertise where necessary. Thus flattening the current default hierarchy in the health service."

Collaboration was second most cited role for the doctor of the future - one respondent claimed that a "more collaborative approach to medicine is inevitable in future" and another respondent noted that they believe "the doctor's remit will shift to become team member first and foremost", this was echoed by other responses such as "the multi-professional team ... will move towards a flat hierarchy". Some respondents believed that although collaboration will increase in the remit of the future doctor, they would still ultimately be responsible. One respondent said, "the doctor will be responsible for the stewardship of overall patient care, but there will be greater collaborative working within the multi-disciplinary team."

Emphasis was placed by a number of respondents on doctors understanding and valuing other members of the MDT. One respondent wrote that doctors "will need to learn and work with their teams valuing and respecting differing roles and skill sets" Several respondents identified that a key part of the future doctor's remit would be **working with new roles** within the multi-disciplinary team. Roles noted include Physicians Associates, Nurse Practitioners, "technology experts and scientists". Others anticipate that **co-ordination** will become an important part of the future doctor's remit. Indeed, one respondent stated that the doctor's remit would be: "To lead coordination, oversight and be the advocate for the patient, ensuring care is coordinated and delivered effectively, especially as care may become more fragmented as more organisations and professionals get involved."

Respondents believed that **diagnosis, treatment and care planning** would remain an essential part of the doctor's remit. One respondent summarised it as "they should of course remain skilled diagnosticians and role models for the future medical profession."

Other themes mentioned by the respondents include:

- Development of skills within the MDT
- Advocating for patient wishes
- Management of uncertainty and risk
- Promotion and management of patient work
- Innovation and improvement
- Managing and improving quality of care
- Research
- Improving access

3.6 Skills, knowledge and behaviours needed by doctors in 30 years' time (q6)

In order to be able to fulfil expectations and work successfully within a multi-disciplinary team, the doctors of the future will need to develop certain skills, knowledge and behaviours. As such, respondents were asked the following question: **What different skills, knowledges and behaviours will doctors need to perform their future role, fulfil expectations from patients, and work successfully as part of a multi-disciplinary team in 30years' time?**

3.6.1 Skills

A wide range of skills were identified as necessary by the respondents, ranging from softer skills, such as communication, to more specialised skills, such as the ability to use decision-support algorithms.

Skills were categorised into five subthemes:

- Generalism/specialism
- Technology/digital
- Emotional intelligence
- Communication
- Evidence appraisal
- Data interpretation

The most common subtheme, identified by almost half of the respondents, was **technology/digital**. Some respondents suggested that doctors will need to be "technologically literate" and able to "imbibe and implement technological advances". Others stressed that being able to discuss digital tools was important. A variety of technological advances/solutions was cited by the respondents, including:

- Decision-support algorithms
- Tracking apps
- Artificial intelligence
- Genomics
- Digital consultations

A number of technological skills were also identified as being of likely importance by a number of respondents, namely **evidence appraisal** and **data interpretation**. Evidence appraisal was mentioned by several respondents, with one respondent stating that "the pace of change in medical knowledge, including advances in genomics and robotics, means that no one can be completely up to date, so we needed to teach future doctors how to access and critically appraise evidence." The ability to interpret data was deemed necessary by a number of respondents, with one asserting that "doctors will need to assimilate large quantities of data and communicate risks and options to patients in a new way". Another suggests, however, that "for doctors to focus on tasks such as clinical data interpretation, which they are uniquely qualified to undertake, it is important that staffing levels are maintained, and administrative tasks minimised."

Another key skill category noted by the respondents was **emotional intelligence**. This was identified as necessary primarily in regard to patients, as doctors will need to communicate "empathetically with patients and [discuss] the most challenging topics, including end of life,

stopping treatment and lack of treatment." The need for emotional intelligence was not limited to patients however. One respondent wrote that doctors would need the skill of "interpreting the emotional needs of patients **and colleagues**."

Other skills noted by respondents were:

- the ability to adapt to change;
- quality improvement;
- education;
- research;
- organisation;
- looking after one's own wellbeing; and
- business skills

amongst others.

3.6.2 Knowledge

Three subthemes were identified:

- Ageing population
- Population health
- Prevention

Knowledge areas were less thoroughly discussed in the responses than skills or behaviours. **Population health** and **prevention** were the most commonly identified. Several respondents linked the two themes. For example, one stated "Doctors will need skills to prevent ill health and promote good health in their population to the best of their ability, including knowledge and resources. This should link into efforts towards the prevention of ill health in wider society." One respondent summarised the need as a "greater focus on understanding both societal and individual drivers to poor health and how we can tackle them". One respondent identified particular areas of focus, saying that there should be "More focus on the big problems that face our population with greater emphasis early on - ageing, dementia, obesity, substance abuse." Further, more specific areas of knowledge were also identified, such as genomics, robotics and sexual and reproductive health.

No respondents identified the **ageing population** specifically, with only two referencing co-morbidity.

Other areas of knowledge identified by respondents were:

- conscientious objection;
- general practice;
- governance; and
- strategic context.

3.6.3 Behaviours

Three subthemes were identified:

- complex clinical judgment

- leadership
- teamwork

Leadership was the behaviour most commonly identified by the respondents, with several respondents deeming it necessary for the future doctor. One respondent stressed the importance of this behaviour, asserting that "good clinical leadership can transform patient outcomes". Although being mentioned in a over a third of responses, very few identified what they would define as leadership. That said, one respondent believes that "doctors will still need to have the core values of compassion, kindness and respect and inspire these in the teams that they work in and lead." Another stressed that "hero leaders aren't the answer. Rather than emphasising the charisma and control of an individual, new approaches focus on leadership as dispersed throughout the organisation." Several respondents indicated that training in leadership would be needed, with one writing that "doctors need leadership development and team management skills much earlier in their careers to develop behaviours and skills to support and manage large and conflicting agendas."

Despite this, many also note that **teamwork** is an essential part of the future doctor's role and that "we will need to move from a clinician led model of care to a more collaborative one". One respondent believed that teamwork is imperative as "the success of professionals will be defined by their ability to work collaboratively in complex teams. Teamwork is an important component of professional satisfaction and engagement, and effective teamwork improves patient outcomes, as well as organisational performance and productivity."

Other skills behaviours noted were:

- complex clinical judgement;
- advocacy;
- patient empowerment;
- continued learning; and
- innovation.

3.7 Timescales for change (q7)

Respondents were asked the following question: **When do you think changes to doctors' roles could be a reality? Please select one answer below.**

- **10 - 20 years**
- **20 - 30 years**
- **30+ years**

Please provide your reasons below.

The majority (72.1%) of participants believed that changes to a doctors' role could happen in **10 to 20 years' time.** Only 6.5% believed that change would happen in **20 to 30 years' time** and 13.1% declined to answer, either on the basis that change is already happening or that it is currently too uncertain for them to provide a quantified response.

The following six themes were identified in the responses:

- Current commissioning timescales

- Re-design of medical curricula
- Culture change
- Changing societal needs
- Technology
- Challenges

Technology was the most frequently cited theme in the responses, mentioned by over a quarter of the respondents. The fast pace of technological development was cited by several respondents, with one stating that "30 years is too far ahead to either predict or anticipate changes… the fast pace of technological advances will have its impact on our working lives much sooner.". Others emphasised the fact that technology was already contributing to changes in healthcare. One respondent wrote "technology, AI and robotics in healthcare have all contributed significantly".

The second most commonly cited theme was **culture change.** One respondent noted that "as more recently trained professional[s] reach senior positions within the health service it is likely that cultures will start to change". Others believed that the culture change would be less organic and, instead, need to be implemented. One respondent wrote "a culture switch focussing on tailored care for the individual and their own personal perspective on what a good outcome is will need to occur." Another stated "'The system that supports the education and continuing professional development of doctors needs to increase its responsiveness and flexibility so that there is less of a lag between society's needs and what doctors are able to deliver"

The **changing needs of society** were also cited by several respondents. This covered a range of societal changes. One respondent cited the "ageing population with multiple co-morbidities". Others were less certain of the exact changes but instead stated that the "nature of changes to doctors' roles will depend on the political, social and economic context of the country and doctor's localities".

It should also be noted that although many responses were hopeful for change to occur in the earliest time frame possible, some believed that there would be significant **challenges.** For example, one respondent stated that "financial constraints and workforce shortages will dictate the pace." Another summarised it by saying "Investment will be a key driver or obstacle in some developments so much will determined by how the financial context for the NHS is managed."

Those who suggested a timeframe of **20-30 years**, cited a number of reasons. One respondent, from a Healthcare School, believed that a significant event would have to occur, saying "a geopolitical crisis, major global recession or cataclysmic pandemic will be the most likely driver of change. With all the will in the world, without a step-change in the money and power available, current planned changes in how health and social care in the UK will be delivered will be at best partial." Another respondent, from a body representing a clinical profession, disagreed saying that "Changes over the next 10 years will be gradual and incremental. However, in 20-30 years' time the role will be demonstrably different". Another believed that adoption of technology would be the delaying factor. They wrote "Regarding AI, it will no doubt take decades for this technology to be implemented in most hospitals other than large specialist centres: consider the fact that most district general hospitals only recently migrated to Windows 7, which is already defunct."

3.8 Key challenges to be addressed (q8)

The respondents were asked: **What challenges need to be addressed in order for the vision of the future doctor to become a reality, in the timescales you have provided?** The Call for Evidence suggested the following three categories:

- use of new technology;
- care delivery; and
- focus on health prevention

3.8.1 Use of new technology

Five sub-themes were identified within this category, namely:

- establishing what works;
- development of technological solutions;
- establishing effectiveness;
- testing technological solutions; and
- adopting technology.

The majority of those who identified technology as a potential barrier believed that **lack of adoption** was the main issue. Indeed, one respondent states that "technology [is] further 'behind' than ever in a financially frozen, uncertain environment." Referring to new technologies, one respondent asserted that "significant levels of investment and must be accompanied by a culture shift" will be "essential to maximise the chance of their successful and sustainable adoption within the health service. The NHS IT infrastructure was singled out by a number of respondents as being in need of improvement, with one stating that "variation in IT infrastructures across health boards" was a challenge and another stating that "IT systems in the NHS will need to be upgraded to ensure seamless care between systems and care settings." Decision-support algorithms were noted by one respondent as a specific technology to adopt.

With regards to technological developments, two respondents stated the need for improvements in the way patient's records are stored. One respondent believes that "patients should be given control of their notes" to prevent data protection issues. The other believed that it was necessary for staff to be able to have "legitimate access to a patient's healthcare records from anywhere in the NHS".

3.8.2 Care delivery

Within this category, three sub-themes were identified:

- traditional approaches
- buildings; and
- organisational structures.

Fewer respondents identified care delivery as a potential barrier than use of technology. With regards to **traditional approaches**, one respondent wrote that "good people work exceptionally hard in processes that are slow, burdensome and years out of date.", whilst another claims that a challenge would be the "medical profession's resistance to change."

A small number of respondents identified **buildings** as a challenge. One respondent stated that the NHS is in need of "up to date facilities suitable for the delivery of modern healthcare" and another stating that "if not state of the art facilities [they need] clean and working facilities".

A few respondents also cited **organisational structures** as a potential challenge, with one writing that "there also needs to be a redefinition of the relationship between NHS managers and clinicians."

3.8.3 Focus on health prevention

Within this theme, two sub-themes were identified:

- Level of engagement
- Resources available

The focus on health prevention was identified as a key challenge by relatively few respondents. Those who did identify it as an issue believed that **the level of engagement** with and **resources available** to health prevention were the main driving factors. One respondent wrote, "the multi professional team will need to take a significant role in health promotion activities with patients and the public." Another implied that lack of education would be the main barrier to prevention being taken seriously, saying "the public and professionals should be educated on prevention policies." One respondent believes that "the rhetoric on importance of prevention needs to be backed up [by] bolder action from government" and that "social determinants of health need to recognised and addressed by policymakers". Financial restrictions were identified by another as a barrier, writing "budget will prove a major challenge... for doctors to be able to embed a preventative approach to their practice."

3.8.4 Other

We identified organisational factors as another theme. This was split into three subthemes:

- Leadership
- Training
- Regulations

Training was by far the most commonly cited theme. Over a third of respondents believed that current training methods and content need to be addressed to allow for their vision of the future doctor to come to fruition. One asserts that "our current crowded curriculum with teach delivered in a traditional manner means little or no room for innovation skills development." Others highlighted that training needs to move away from purely clinical skills and that a "balance is required between technical skills development and personal and leadership skills development is needed and this tension is not readily addressed." Other non-clinical skills include team management, multidisciplinary working and "academic skills required to access evaluate, assimilate and act on new information from multiple external sources".

Other challenges identified by respondents include:

- lack of funding/government support;
- professional resistance to change;
- integrated services;
- opportunity for research;

- respect from patients;
- recruitment;
- Realistic Medicine;
- decline in doctors working as clinical academics
- supply/demand;
- open access in scholarship;
- social media;
- demographic changes;
- overreliance on new technology;
- changing junior doctor contracts;
- self-care;
- safety culture;
- clarity over what skills are needed for the future doctor;
- evidence base for services
- public expectations and
- culture.

amongst others.

3.9 Other comments (q9)

The respondents were asked: **Do you have any additional comments or feedback that you would like to provide?**

This was an open-ended question, which allowed respondents to identify additional areas of interest or elaborate on themes identified earlier. We have grouped the responses in to the following themes:

- Roles and ways of working
  - New roles/ flexible working
  - Leadership
  - MDT working
  - New models of care/ways of working
- Supply and demand
  - Workforce supply and demand/shortages
  - Accessibility and availability of GP appointments
- Organisational
  - Doctors input in policy
  - Wellbeing of doctors/staff
  - Complexity of environment
  - Diversity
- Training
  - Skills and training
  - Standards
- Other
  - New technology
  - Prevention/early detection
  - Pace of change and implementation timelines
  - Global climate change/sustainable healthcare

3.9.1 Roles and ways of working

New roles/flexible workforce and **leadership** were common subthemes. One respondent believes that looking to other healthcare systems will assist in shaping the future workforce. They wrote "it would be useful to learn from other countries how they have approached shaping their own future medical workforce - for example through the creation of new roles." Technology was cited as being a driver for change, with one respondent writing that the NHS will need to "deliver a flexible workforce capable of retraining as new technology is implemented." One respondent believes that change in leadership is needed to suit the current and future workforce, saying "Current models remain hierarchical and may not be suitable for a diverse workforce". This was supported by another respondent who asserts that "The hierarchical trainee: consultant model will need to change." Another suggests the importance of leadership, writing "Leadership, leadership development and the professional standards to which clinical leaders should aspire and then be assessed, need to be at the top of the future doctor's agenda"

3.9.2 Supply and Demand

Several respondents discussed w**orkforce supply and demand/shortages** in their answers, although the focus was no purely on increasing workforce numbers. Indeed, one respondent wrote that "Simply expanding the clinical workforce to meet population demands will not on its own deliver the high-quality outcomes needed to assure standards in healthcare provision for the long term." Another made a suggestion to help ease the current strain on the Primary Care workforce. They wrote "the reintroduction of Well-Women/Men clinics would alleviate the strain on GPs as through these clinics the patients could be offered the time to be seen and listened to which sometimes is all the patient requires, instead of ailments going undetected and eventually leading onto more serious ailments."

3.9.3 Organisational

Wellbeing of doctors/staff was the most commonly cited subtheme. One of the respondents wrote "currently there are a lot of doctors working in the NHS who are suffering from mental illness and are too afraid to disclose in case this affects their career." The need for this to be addressed was highlighted by another respondent, who wrote, "if doctors feel valued, and work in a system that promotes the delivery of safe and high-quality patient care and the wellbeing of its staff, they will be empowered to take on whatever challenges the future may hold." Another highlighted that one way to ensure staff wellbeing was to address it in training. They wrote "enabling the development of mental resilience is as essential in training as teaching basic medical knowledge and practical skills."

Doctors input in policy was also cited by a couple of respondents. They both agreed that "doctors must be central to the formulation and implementation of policy"

3.9.4 Training

Developing the **skills** of the future workforce was mentioned by a several respondents, particularly the need to develop new and varied skills. One wrote, "we need to shift the expectations of trainees, students and their clinical teachers so that they focus their learning on wider skills, particularly skills in medical education." The need for students to be trained in medical education was echoed by another respondent who wrote that "It will be imperative to

maintain a critical mass of consultants as educators required to train expanding workforce. Standards in Educational (as well as Clinical) Governance are required." **Standards** were also mentioned by another respondent who wrote that "in the event that the EU directive of 5 years and 5500 hours of training no longer apply, this opens up the potential of accelerated entry routes into medicine which would require careful consideration and discussion to ensure continued high standards of medical education."

3.9.5 Other

Pace of change/implementation timelines was the subtheme discussed in the most depth. Respondents believed that current implementation timeframes and the impact of any change can be lengthy due to a number of factors. One believes that changes need to take account of this. They wrote "change to what we expect new doctors to know, do and be able to deliver has a time lag and there is a need to build in further agility and flexibility to support the adjustments and transformation for the future." Another criticised the current pace of change, writing "The pace for substantive change has been and is still too slow (for example, work on credentialing has been in train for over 15 years)."

3.10 Additional insights

3.10.1 Research and Innovation

Research and innovation were cited by several respondents throughout the Call for Evidence questions, although the focus varied. References to research and innovation can be separated in to three categories: leadership in healthcare research, expectation of opportunities for research/innovation and the need for research skills.

Leadership in healthcare was cited by a number of respondents throughout the Call for Evidence . One respondent believes that doctors "will continue to lead on innovation and progress in healthcare, including research". This is supported by another respondent who notes that doctors will need to be "leaders of research, quality improvement, innovation and change" within the multi-disciplinary team. Another notes that doctors will not only lead research and innovation, but "support and foster innovation" within the team.

Expectation of opportunities for research and innovation was most frequently cited with regards to doctors' expectations of their future role. One respondent from a Royal College believes that "opportunities for research and self-progression must be available for those who choose to follow these avenues." Another agrees, whilst stressing the importance of recognising the time needed to allow for this. They wrote "Opportunities for research, education and self-progression must be available, particularly by recognising that this requires time." Another respondent believes that time for doctors to research is expected by their NHS colleagues. They wrote that there must be time allowed "for leadership, research, teaching and other aspects development throughout working lives to support innovation and adoption." Interestingly, one respondent identified lack of research/innovation as a challenge that would need to be overcome in their response to question eight. They wrote "opportunities for NHS teams to experiment, research and implement ideas - with time to do this properly and to evaluate."

The need for doctors to have **research/innovation skills** was highlighted by two respondents. A respondent from a Royal College believes that "innovator" is one of the "key characteristics

crucial that are crucial to the development of the modern professional doctor". They wrote "AI, machine learning and digital technologies have huge potential to affect how doctors work. To be effective, innovation must build on the skills and attributes the doctors develops as healer, patient partner, team worker, leader and manager, advocate, learner and teacher – with a continued commitment to enquiry, reflection and learning. Research will be a fundamental part of this process and doctors should have a positive attitude to all aspects of research."

3.10.2 Comprehensive knowledge or ability to assimilate information?

Knowledge and **assimilation of information** have been highlighted in a number of responses. The majority of responses refer to one or the other, but a few explore the relationship between the two. **Knowledge** was highlighted as a subtheme within Section 3.1.1 relating to patient expectations and **assimilation of information** was discussed in section 3.6.1 with relation to evidence appraisal and data interpretation. Examples of viewpoints from across the sections relating to knowledge and assimilation of information are highlighted below.

It was noted in several responses that patient have a "general expectation of high levels of knowledge and expertise" from their doctors. It was acknowledged by some that this should not be limited to knowledge gained in their formal education, but that doctors should "have access to up to date knowledge." This viewpoint was shared by several respondents. One wrote that patients expect "comprehensive up to date knowledge about all aspects of illness and treatment (although recognition that in future some of this won't necessarily be in the doctor's head but at their fingertips)". Another respondent expanded this point of view further, writing that "as technology and knowledge develop, patients will expect doctors to be able to interpret complexity and uncertainty to help with personalised decision making. This will entail a clear understanding of new knowledge, e.g. prevention strategies and genomics, and the related ethical challenges, to be able to provide clear explanations." Another respondent agrees but warns that keeping up with advances should not be achieved to the detriment of their existing clinical knowledge. They wrote "Doctors will need to remain up to date with advances in their field, but also ensure they are not deskilling from existing clinical knowledge."

Other respondents however focussed on the ability of doctors to assimilate and interpret data. One believes "that the shift from knowledge to interpretation and human factors will change the role of the doctor. Advances in the availability of data, for example, genomics, must be matched by the ability of doctors to assess the quality, benefits, cost-effectiveness and risks of tests to enable appropriate use and communication in an understandable way to patients to aid empowerment." The ability to not only assimilate information but communicate what they have understood to patients was highlighted by another respondent. They wrote "doctors will need to assimilate large quantities of data and communicate risks and options to patients in a new way. Another believes that the skills necessary to achieve this need to be taught during medical training, writing "medical schools will need to ensure that their curricula include teaching in the requisite … academic skills required to access, evaluate, assimilate and act on new information from multiple external sources (medical, technical, data, biological sciences).

4. SUPPORTING DOCUMENTATION

In addition to survey responses, some respondents also provided supporting documentation to provide context to the comments they provided. The documentation provided was in the form of academic journals, reports and letters. These have been analysed and categorised based on the potential impacts for future doctors. Many of the same themes observed in the survey responses were present in these documents.

Name of document	Type	Key themes for Future Doctors
The changing face of medicine and the role of the doctor in the future	Report	The patient-doctor relationships • Increased patient knowledge • Self-care • Self- management Technology • Balance of human elements of medicine with the scope of assisted decision making. • Appropriate use in the right context Physician wellbeing • The emotional burden of medicine • Maintaining Autonomy • The use of resilience as a catch all, the need for culture change • Safe spaces to discuss issues Medical education and training • Incorporation of societal and technological changes into undergraduate education. • Shift in educational emphasis, human aspects of care Leadership • A new model for leadership which is more collaborative and distributive. • Introduce leadership into the undergraduate curriculum

		• Potential to have a management fast track scheme.

The WPA-*Lancet Psychiatry* Commission on the Future of Psychiatry	Journal article	Changing population demographics • Growth of elderly population • Increase in age related diseases • Migrant populations and cultural factors • Chronic conditions rather than acute episodes Diagnostics • Biomarkers are still illusive • Standardised toolkit of psychiatric measures Doctor- patient relationships • The therapeutic alliance Training • Comorbidities common, need for Psychiatrists to been trained to diagnose and manage communicable and non-communicable diseases. • Subspecialists and generalists. • GP psychiatric training The future role • Role in improving the conditions essential for mental wellbeing • Expertise in social problems and oversight of social change Digital • Telepsychiatry • Using a variety of sources to build a picture of physiological, molecular, genetic and behavioural dimensions of mental illness
Fulfilling a new obligation: Teaching and learning of sustainable healthcare in the	Journal article	Sustainable healthcare • Understanding of lifestyle and environmental factors

medical education curriculum		• Health promotion and prevention • Embedding this in the medical education. • Reciprocal learning for educators
Educators of Healthcare Professionals: Shared Values and Activities Study (HEVAS)	Executive Summary	Preparation for teaching • Understands student learning needs • Awareness of a range of learning and teaching Teaching and supported learning • Establishes safe and effective learning environment • Collaborates with others to support learning and teaching Learning progression • Selects appropriate methods to assess learners' progress • Understands a range of methods to assess learner progress • Evaluates and improves assessments Quality • Reflects and acts on feedback • Evaluates and improved educational activity • Applies research evidence to educational practice
Disciplinary boundaries and integrating care: using Q-methodology to understand trainee views on being a good doctor	Journal article	Current challenges • Shift in demand on health services • Aging population Broad Based Training • Integrated care and enhanced medical generalism as possible solution • Similar priorities exist regarding views on being a good doctor between generalist and specialist trainees

'Black sheep in the herd'? The role, status and identity of generalist doctors in secondary care	Journal article	Current challenge • Long term conditions and multi-morbidities take up a large proportion of outpatient's appointments and bed-days. • Separation of specialties Broad- based training • piloted to increase generalist training • unrecognised role • Isolation and lack of understanding • Challenges for professional identity
Enhancing the quality and safety of care through training generalist doctors: a longitudinal, mixed-methods study of a UK broad-based training programme	Journal article	Trainee gains from BBT • Understanding of the interplay of specialities • Application of learning across specialities • Confidence in managing complex patients Patient care • Bringing additional skills to teams • Improved patient safety • Improved communication across specialities Receiving different treatment • Overlooked as not committed to the specialism • Viewed as potential converts, given opportunities

'It's surprising how differently they treat you': a qualitative analysis of trainee reflections on new programme of generalist doctors	Journal article	Trainees gain a wider perspective • Understanding of the interplay of specialities Transferable skills • Application of learning across specialities Professional identity • Isolation and lack of understanding • unrecognised role • positive perceptions
Ignoring the alarms: How NHS eating disorder services are failing patients	Parliamentary and Health Service Ombudsman report	Communication • Improving communication in MDT's • Across localities and trusts Training • GP training and level of understanding • Undergraduate training Transitions • Movement from child and adolescent services to adult, continuity of care.

5. RECOMMENDATIONS

The Call for Evidence has collected expert views from a range of stakeholders on the expectations, shape and role of the Future Doctor – this will be used to develop a consultation document on the Future Doctor that will subsequently be used to seek views from a wider range of stakeholders including patients and the public. The call for evidence has shown several interesting insights and some that we suggest are investigated further as a priority.

As a general point, the responses have illustrated that respondents have understood the survey questions and were able to give detailed and informative responses, which should give some comfort in the suitability of using these in wider public consultation. There were however some differences in interpretation that may be worth considering further - particularly to questions such

as “What challenges need to be addressed in order for the vision of the future doctor to become a reality” (question 8) – a number of responses have tended to focus on solutions to challenges rather than the challenges themselves.

Leadership and teamwork were common themes throughout the Call for Evidence responses, but relatively few respondents identified what they meant by these terms, and those who did presented divergent views about the definition. It should be possible to gain more insight on this subject via a wider cohort of respondents – and of particular interest will be to understand whether one of the views is more highly represented. This is something that should be explored further in the consultation.

Training was also a commonly cited theme with varied views. It was clear from the responses that many believe that training needs to be adjusted/improved but it would useful to understand more about the changes that should be made. It was also emphasised in certain responses that more doctor-educators would be needed. In order to discover more about both areas, engaging with doctors already in or with an ambition to enter education would help to understand this issue further.

We also identified some themes/areas which are clearly of importance to the Future Doctor but may have been underrepresented in the Call for Evidence itself and suggest that potential rationale for these not coming through as strong themes is explored more in the consultation.

- Wellbeing of doctors
- Workforce supply issues
- Population health/prevention
- Ageing population

It would also be useful to further explore the impact for drivers of change (as per question 2), particularly with regards to patient empowerment and the doctor expectations of working life/career for which no respondent believed would have a low impact. It would also be beneficial to understand the relatively low scoring that was seen regarding the impact of health promotion/prevention on the role of the doctor in the future.

APPENDIX 1: Coding Framework Summary

Q1a	Quality	Safety	Knowledge/ skills	Care/ caring/ compassion	Education & training	Personalised care	Evidence based / proven treatments	New treatment options	Focus on prevention and wellness	Patient involvement	Use of tech				
Q1b	Teamwork / Multi disciplinary team	Support	Leadership model – e.g. collective leadership	Continuous learning/ training & development	Embrace technology										
Q1c	Ways of working			Education and training				Working environment			Role				
	Flexible working	Continuous learning	Career Developmement	Supportive learning environment	Training models	Entry / selection	Multi-professional training	Wider terms and conditions	Support	Teamwork	Keeping people well/ preventing illness	Treating illness			
Q3	Society			Healthcare				Individual/ patient							
	legal/ regulatory change	technology/ digital;	changing patterns of work	service reconfiguration	changes to training pathways	increase in MDT working	Workforce Shortages	care of complex co-morbidities	rising expectations	Self-management	Increasing choice	Ageing Population	Patient attitude / social media / Public perception	Patients researching their health conditions	
Q4	Working Practices					MDTs			Patient-doctor relationship						
	Years of work/ Retire later/ Career framework	Flexible routes/ Portfolio Careers	Reduced hours / Work-life-balance	Technology	Taking time out/Research	Teamwork	Culture Changes	Distributed leadership	Partnership;	prevention focus;	technology				
Q5	Leader/ mentor/ coach	Diagnosis/ treatment/ care planning	Prescribing/ order tests	Co-ordination	Collaboration	Working with new roles									
Q6	Skills						Knowledge			Behaviours					
	Generalism vs. specialism	Tech/ digital	Human intuition / touch / relationships	Communication	Evidence appraisal	Data interpretation	Ageing population	Population health	Prevention	Complex clinical judgement	Leadership / accountability / decision maker	Teamwork			
Q7b	Current commissioning timescales	Re-design undergrad / postgradmedical curricula	Culture change	Changing needs of society	Technology	Challenges									
Q8	Technology					Care delivery			Focus on health prevention		Organisational factors				
	establishing what works	development of tech solutions	establishing effectiveness	testing tech solutions	Adoption of technology	traditional approaches	buildings	organisational structures	level of engagement (patient and public)	Resources for prevention (vs treating ill health)	Leadership	Training	Regulations		
Q9	Roles and ways of working				Supply and Demand		Organisational				Training		Other			
	New Workforce Roles / flexible workforce	Leadership	MDT Working	New models of care / ways of working	Workforce Supply and Demand / shortages	Accessability and Avaliability of GP Appointments	Doctors input in policy	Wellbeing of doctors / staff	Complexity of environment	Diversity	Skills and training	Standards	New Technology	Prevention / early detection	Pace of change nd implementation timelines	Global Climate Change / Sustainable healthcare

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