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The overall theme of LSE GROUPS 2019 was *The Future of Work*. This paper was submitted on the final Thursday afternoon of the project. (Students then presented their work at a conference, on the closing Friday.)

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## **To gig or not to gig?**

**How will online platforms facilitating the gig economy shape the UK healthcare sector in the near future?**

**LSE GROUPS Research 2019  
“The Future of Work”**

### **Group 1**

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## Abstract

Are we getting more accustomed to freelance employment, which is currently facilitated by rapidly emerging digital platforms? E-Health<sup>1</sup> has arguably induced changes into the UK healthcare sector that have already appeared in other sectors such as transportation. However, the relationship between the incorporation of online platforms into the gig economy and the provision of health services is still a relatively understudied topic. This research paper, then, critically analyses results gathered from two surveys designed to test this identified relation. Our findings suggest, firstly, that consumers were relatively unaware of technology facilitating the gig economy, implying that these platforms are still not in the mainstream of the sector unlike other sectors. Secondly, although the results from medical students, and healthcare professionals showed that they are more aware of E-Health opportunities, their role as potential future employees demonstrated that they are reluctant to engage with the gig economy. Nonetheless, our findings indicated that the use of E-Health is feasible in the future. Our proposed model attempts to conceptualise the future market trend. Given the predominance of conservative UK public opinion towards the healthcare system, if E-Health is to be developed further, it must be subject to government regulation and positive incentives.

**Keywords:** E-Health, online platforms, gig economy, healthcare professionals, medical students, consumers, employment, UK healthcare sector

## Introduction

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<sup>1</sup> E-Health-facilitating/providing health services through the use of IT.

This research project is motivated by the exponential increase in the development and the use of online platforms within the gig economy sector in the UK. The title of the paper: *To gig or not to gig? How will online platforms facilitating the gig economy shape the UK healthcare sector in the near future?* is driven by our common desire to navigate current attitudes towards the gig economy within the UK healthcare sector - specifically from current healthcare professionals, medical students as well as existing, and potential, consumers of online platforms. This project seeks to explore how these demographics within UK society react to the unprecedented increase in online platforms and gig economy mechanisms, and how they expect to behave in a potentially 'new' healthcare sector consisting of these 'new' features.

The use of online platforms are part of the current UK social norm, and the growth of the gig economy within these sectors has formed the focus of many academic studies. Comparatively fewer studies, however, have investigated this important dynamic within the field of healthcare. This project, then, seeks to contribute to addressing this limitation in the literature by exploring the willingness of the aforementioned target population to employ online platforms, which facilitate the gig economy within the UK healthcare sector.

The central goal of the project is to determine whether there is a future for online platforms facilitating the gig economy in the healthcare sector in the UK, and if so, what pattern their interaction will take.

## **Literature Review**

The types and number of online platforms facilitating the gig economy has seen rapid growth in service sectors. At present, online platforms facilitate gig work mainly in the transport sector and the food and beverage sector. Commonly known examples include Lyft and Uber in the former, and Deliveroo and UberEats in the latter. Through facilitating gig work, they bring about lower prices and waiting times for customers, while also enabling more flexible working schedules for workers.<sup>2</sup>

Given that the emergence of the gig economy has wholly revolutionised the manner of work, it is unsurprising that there currently exists a large body of academic literature investigating gig work. However, fewer studies have considered the specific intersection of the healthcare sector, online platforms and the gig economy. This is understandable given that this is a recent emergence. Yet, this intersection warrants due scrutiny, for key reasons explained below. This paper thus examines this complex and multifaceted intersection specifically within the United Kingdom.

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<sup>2</sup> James Sherk, *The Rise of the "Gig" Economy: Good for Workers and Consumers*, *The Heritage Foundation*, October 2016

The healthcare sector could potentially benefit from the gig economy staffing solution to help meet its staffing needs at a lower cost. Given the UK's ageing population, healthcare costs have been increasing, with projected annual increases in costs varying between 0.48% to 1.12% in the coming years.<sup>3</sup> This must be considered in conjunction with the fact that NHS funding from the UK government is predicted to decrease, specifically by 1.6% in real terms over the next 3 years.<sup>4</sup> Given that labor costs account for approximately 60% of spending in the healthcare sector<sup>5</sup>, this presents a significant area for cost reduction to tackle issues in funding. The incorporation of the gig economy in healthcare addresses this by enabling hospitals and healthcare providers to negotiate directly with healthcare professionals, thus lowering labor costs.

Temporary staffing is not a novel concept in healthcare. Hospitals have always relied on the services of per diem and travel professionals, such as agency nurses, physical therapists and locum tenens physicians.<sup>6</sup> However, such employment relationships traditionally have been facilitated by specialized job agencies that are slow and expensive. The incorporation of the gig economy into healthcare thus has the potential therefore to significantly reduce the fees charged by such pricey intermediaries. With a gig model, healthcare organizations would be able to hire a professional for certain periods of time based on their staffing needs. This enables providers to hire fewer full-time staff while providing a pool of workers to tap into as needed and at a lower cost.

In addition, the gig economy staffing solution addresses the existing severe shortage in healthcare professionals within the sector, as well as a greater demand for flexible working patterns by these professionals. NHS hospitals, mental health and community providers currently report a shortage of more than 100,000 staff, representing one vacancy left unfilled in eleven posts.<sup>7</sup> The gig economy solution steps in by encouraging increased flexible participation, where gig healthcare workers can receive the flexibility and control of their schedule that is increasingly desired by healthcare professionals. This is supported by research into the underlying reasons behind the healthcare sector's current inability to encourage healthcare professionals to work. It has been found that healthcare professionals are increasingly finding flexible work options to be more attractive and lucrative. As of 2017, 16% of physicians reported

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<sup>3</sup>Michael Caley, Khesh Sidhu, Estimating the future healthcare costs of an aging population in the UK: expansion of morbidity and the need for preventative care, *Journal of Public Health*, Volume 33, Issue 1, March 2011, Pages 117–122

<sup>4</sup>Ibid, 2011.

<sup>5</sup>George Stoye, UK health spending, IFS Briefing Note BN201, *Institute for Fiscal Studies*, 2017

<sup>6</sup>Richard Lewis, Arturo Alvarez-Rosete, Nicholas Mays, How to Regulate Health Care in England? An International Perspective, *The King's Fund*, 2006

<sup>7</sup>Anon. Closing the gap: Key areas for action on the health and care workforce, *The King's Fund*, March 2019

plans to leave traditional, full-time, clinical employment in the next year. As healthcare consumption continues to grow and the percentage of millennials that make up the workforce rises, this trend is projected to increase 10-15% annually.<sup>8</sup> This therefore forms a compelling and integral argument for the incorporation of the gig economy staffing solution into the healthcare industry.

At present, there are a small but growing number of online platforms facilitating the gig economy in healthcare within America, such as Doctor On Demand, Enzyme Health. Within the UK, however, this number is much smaller. One of the largest platforms at present in the UK is Babylon Health, representing the main form of gig work within the healthcare sector. Babylon Health is a subscription mobile application that allows patients to have remote online consultations with doctors and health care professionals via text and video messaging.

This paper aims to investigate the attitudes of three main groups towards the incorporation of the gig economy into UK's healthcare sector, in an effort to advance academic understanding on this comparatively understudied topic. The attitudes of these 3 groups are necessary to understand if we are to fully comprehend the future of the UK healthcare sector, viability of E-health. These three main groups are current healthcare professionals, current medical students, as well as consumers of healthcare services.

## **Methodology**

Two surveys were used in conducting our research. We chose surveys as our main mode of data collection for its greater time efficiency and greater ease of collecting larger amounts of data. Google surveys were utilised due to its ease of navigation for respondents and extent of customization provided. Both surveys were designed to investigate the attitudes of the respondents towards incorporating the gig economy into the UK's healthcare sector (see *Appendix 1*).

The first survey is targeted at both healthcare professionals and medical students. Given that there currently already exists some online platforms facilitating gig work in the UK's healthcare sector, we aimed to retrieve information about the extent to which both groups are currently aware of these different existing online platforms, and the extent to which they would be willing to utilise them to conduct gig work in the future. In particular, there are 2 main forms of gig work within the healthcare sector that we investigated:

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<sup>8</sup> James Buchan, Anita Charlesworth, Ben Gershlick, Ian Seccombe, Rising pressure: the NHS workforce challenge Workforce profile and trends of the NHS in England, *The Health Foundation*, October 2017

1. Online medical consultations with GPs via text and video messaging. This is a form of gig work for GPs, as GPs are free to dictate their own working hours as desired.
2. Physicians undertaking gig work at understaffed healthcare organisations. This means that these physicians stand in temporarily in the place of the regular physician in the hospital or clinic when he is absent. This is also a form of gig work as such physicians take on gig work as per their availabilities and dictate their own working hours.

The second survey is targeted at consumers of the healthcare sector, in particular, we investigated attitudes towards the utilisation of the first form of gig work in healthcare outlined above- having online medical consultations with GPs via text and video messaging. This entailed retrieving data on whether or not consumers at large were willing to utilise this system, and further examining the extent to which they were willing to pay for this, considering that medical consultations under the NHS are, on the other hand, free of charge. The purpose of this is to further analyse the monetary feasibility of such a form of gig work.

## **Results and Analysis**

*For detailed visualisations, refer to Appendices 3 and 4.*

### **Part 1: The Results**

The two surveys were completed by 40 respondents in total, of which 32 responses are from customers and 8 are from professionals and medical students. Evidently, given the time constraints, a key limitation is the number of respondents obtained. As such, findings based on small sample size cannot be understood as a full indication of the entire UK population.

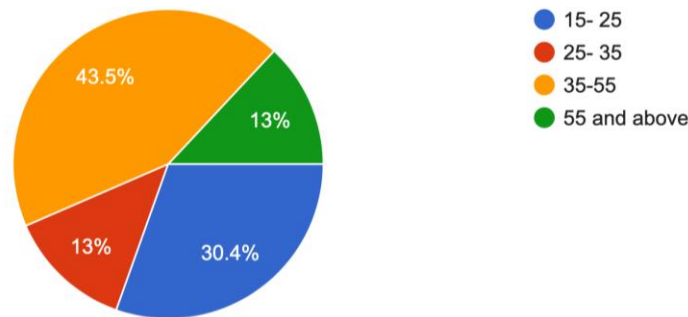
Since consumers of healthcare vary in terms of socio-economic backgrounds as well as age groups, respondents of the surveys are expected to originate from diverse backgrounds in order for the surveys to be representative of the total population. However, given that the bulk of respondents were obtained by personally disseminating our surveys to those within our social network, it is unavoidable that most respondents would be of a certain age group or socio-economic bracket, for instance, undergraduate students. Therefore, it is advisable to treat these surveys as a representative of a restricted demographic - a pool of particular respondents from certain socio-economic background.

#### ***I. Consumers***

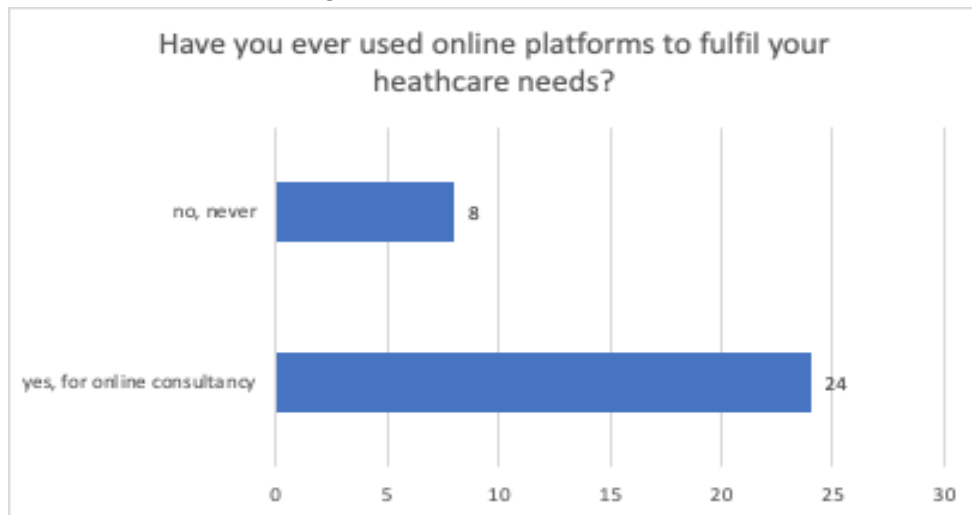
The survey for consumers covered people from 15 to 55+ age groups, and was dominated by 35 to 55, and 15 to 25 age intervals (see *Figure 1*). Deducing from this survey, it is found that approximately 60% of the respondents have not heard about

E-Health online platforms, 75% of respondents have never used them (see *Figure 2*). Hence, the majority have not employed health-related online platforms, this thus reinforces the notion that it is presently not in the mainstream. Among those who used online platforms before, the most popular use was for basic research of illnesses (see *Figure 3*), an activity with which 75% of respondents have engaged.

*Figure 1 Consumers age groups*

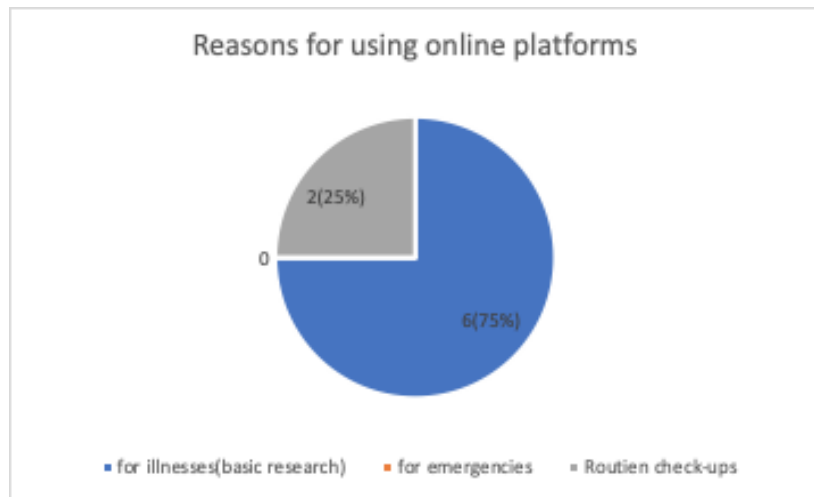


*Figure 2 Consumers' Knowledge of Online Platforms*



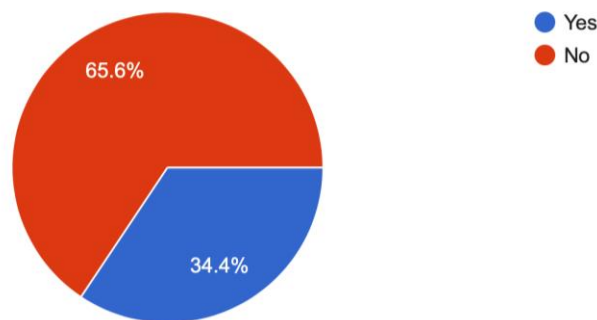
*Figure 3 Consumers' usage of online platforms in the UK healthcare sector*





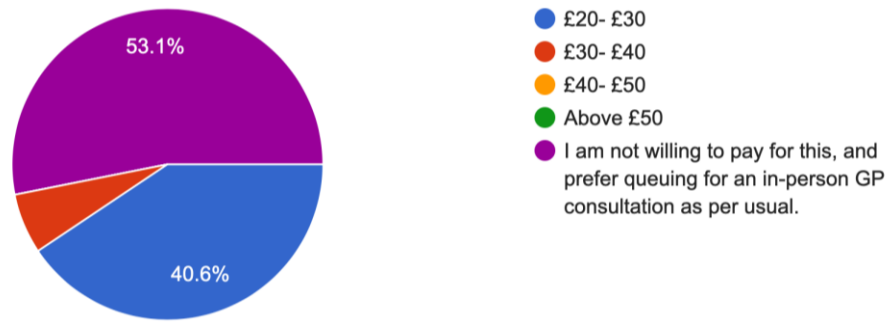
Two-thirds of consumers responded that they have never acknowledged presence of the gig economy within UK healthcare sector (see *Figure 4*). This is somewhat surprising, given the presence of related technology in other non-healthcare sectors, such as the transport industry and leisure industry.

*Figure 4 Consumers' awareness of the gig work in the UK healthcare sector*



It is also important to note that when respondents were asked about their willingness to pay for more efficient healthcare service, more than half of them were unwilling to do so. Furthermore, the significant percentage meant that consumers were only willing to pay the minimum amount. This indicates that 43% of respondents prefer to use the existing NHS system (see *Figure 5*) despite the current problems associated with the state-based healthcare system, which include long waiting times and severe understaffing.

*Figure 5 The willingness to pay for online consultations with reduced waiting time*



Finally, the consumer survey indicated that there is an interest in online platforms, and this strongly suggests that it is in line with the hypothesis of the paper. One of the respondents mentioned that *“it will be feasible because it will reduce the overcrowding in UK healthcare service and reduce the waiting time. This will increase the efficiency of healthcare services”* (see Appendix 3). However, the respondent further notes that the feasibility is subject to increased incentives of the NHS, and it must be *“regulated well.”*

## II. Healthcare professionals and medical students

The second survey revealed that healthcare professionals and medical students, were more aware of gig work in the healthcare sector. Though again, only 25% of our respondents have used online platforms before (see Figure 7), twice as many respondents have heard about the gig economy within the healthcare sector, at a proportion of 62.5%, compared to responses received from customers survey. (see Figure 4 and Figure 8).

Figure 7 Professionals and Medical Students’ usage of online platforms

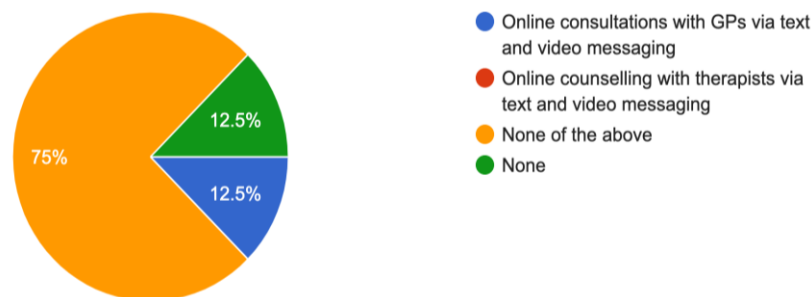
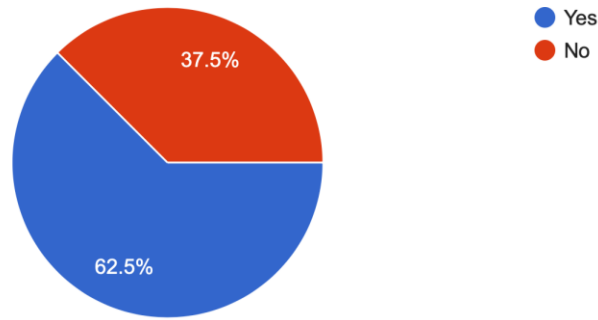
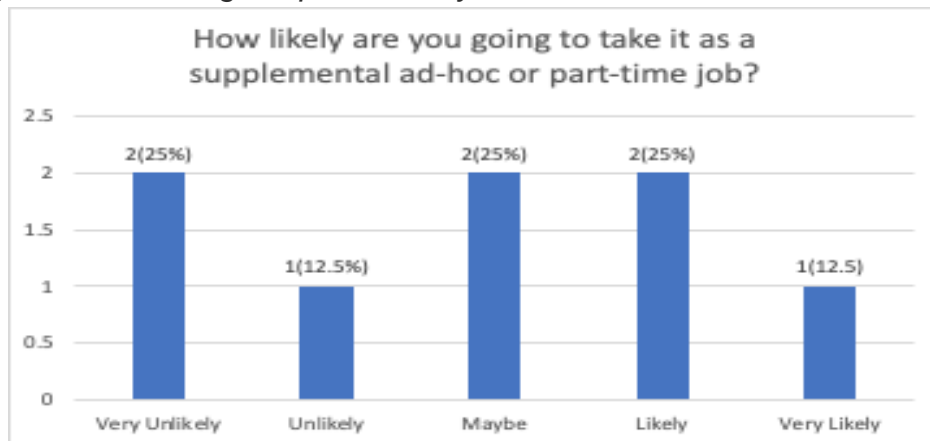


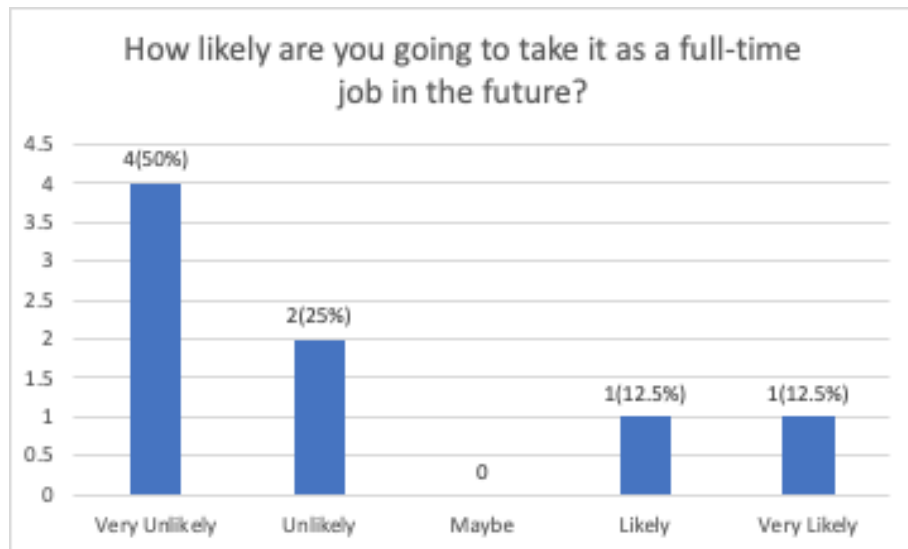
Figure 8 Professionals and Medical Students’ awareness of the gig work in the UK healthcare sector



In terms of employment, 62.5% of the respondents would be willing to use the platforms as part of their part-time work . Whilst 50% of them would never take it as a full-time job, and hence, 25% of them would either refuse, or be unwilling, to use the platforms as part of their full-time job (see *Figure 9 and Figure 10*). Main reasons include the lack of stability within gig economy, for instance one respondent replied, “*I want the additional income but i also want stability and benefits of traditional pay*”. However, one of the respondents stated that it should be subject to further regulation, as it can be viewed as “*an unsafe practise*” with “*fewer benefits*” for employees.

*Figure 9 & 10 Usage of platforms by Professionals and Medical Students*

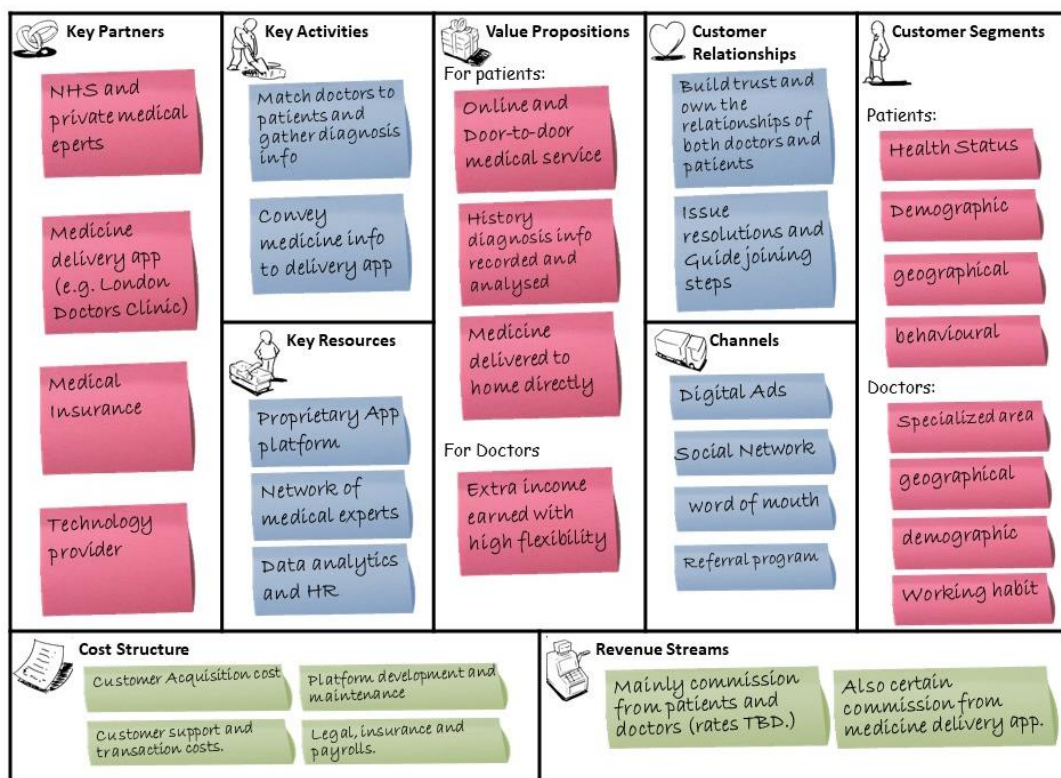




### III. The Proposed Model

There is a positive outlook on the future of E-Health and the associated online platforms. Consumers have shown strong interest in using online platforms, with half of them willing to pay for the services, whilst medical professionals have shown that they are willing to be employed in the gig economy to earn extra income, on a part-time basis. From the findings, an original, proposed business model is extrapolated (see Figure 12).

Figure 12 Potential Model



The working mechanism of the model can be split into two parts:

1. Online chats between doctors and patients. This method could reduce time costs for patients, as patients could have consultations at home. Since doctors offer services on a part-time basis, extra money needs to be charged to incentivise doctors to provide services, whilst consumers would be willing to pay at least 20 pounds per diagnosis. However, the limitation to this method is that doctors could only make judgements based on the information provided by patients. There could be a large extent of information bias in this case. Thus, feasible applications of these methods are common illnesses such as cough and laryngitis<sup>9</sup>.
2. Door-to-door services could come into play when face-to-face checks are needed. After confirming the basic status of patients, doctors could offer door-to-door services. This not only allows doctors to increase the precision and accuracy for the diagnosis, but it is also more convenient for the patients, as it is now possible to see a General Practitioner at home. The difference between the second approach with the previous one is that it may require a higher price to incentivise doctors. As such services are much more costly due to the travel time costs.

Overall, this proposed business model can potentially segment the market into two groups - based on their different elasticities of demand. The group with more elastic demand corresponds to the first video doctors approach, as it is cheaper and more flexible, but has more limitations on the accuracy of the diagnosis due to limited information. The group with more inelastic demand would be more likely to choose the second door-to-door approach. Though more expensive, the offer from services doctors would have better quality, and higher accuracy towards diagnosis and further treatment. This paper also raises the limitations of the model and their corresponding potential solutions. (see *Appendix 2*)

## **Part 2: Analysis**

### ***(i) Government Regulation and the Gig Economy***

The surveys have indicated that the emergence of gig economy, in the UK Health sector, is feasible from a social perspective. However, as indicated by number of respondents, there are numerous risks that relate to the E-Health practices, such as doctors qualification and job security. Therefore, any further development, within the UK healthcare system, should be accompanied by government regulations. Doctors qualifications must be verified through accredited public institutions such as the GMC. Most importantly, the job security of doctors should be ensured. Even though most respondents see their participation in the gig economy on the part-time basis, should

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<sup>9</sup>Video Doc

they wish to undergo a full-time employment their employee status must be recognised.

The emergence of the gig economy was driven by the development of technologies - mostly through the use of new apps and digital platforms. They provided potential employees with wider choice of employment options; however, working opportunities came at their own expense. New business models for on-demand services has prompted debate of whether new classification of workers should emerge. Originally, workers were classified either as employees, or independent contractors.

However, Marl Warner suggests that there should be a new category “*that allows for both flexibility and worker protections.*”<sup>10</sup> There should be a new, third category that ensures workers receive certain benefits, whilst being independent contractors, for tax purposes.<sup>11</sup> Existing regulations that protects employees, consumers and other demographics have not been adapted to 21st-century businesses. There are increasing regulatory conflicts, for instance, the Uber employment rights dispute<sup>12</sup>. In the recent case of *Uber BV v Aslam*<sup>13</sup> the court upheld that Uber employees have the status of workers, and as such are entitled to minimum wages and holiday pay.

Today’s government regulations vary tremendously across jurisdictions, and are the number one source of the complexity that global businesses face. Hence, the main struggle for gig economy within the UK health sector would be to comply with super-regulation, which is not there yet<sup>14</sup>

## **(ii) Positive Incentives**

Online platforms will have a greater presence in the UK healthcare system, only if they are incentivised. Our results suggest that doctors desire a financial incentive in order to provide their services as part of the gig economy, with 75% stating that they must be paid 110% or greater than their standard pay. Each appointment costs the NHS £30<sup>15</sup> on average, assuming ~60% of this is paid to the GP (£18) then £19.80 (18x1.1) needs to be paid per consultation in order to incentivise GPs to participate in the gig economy according to our results. This may be paid entirely by the consumer as around half were willing to pay £20 or greater for an expedited consultation. However given that gig working in healthcare is likely to be associated with costs over above those associated with traditional work i.e. travel and insurance it is likely that the cost

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<sup>10</sup> p45 Ralph Levy Jr “Impact of the Gig Economy on Legal Classification of Health Care Workers” Journal of Health Care Compliance March-April 2019

<sup>11</sup> Ibid, p.46.

<sup>12</sup> Gillian Kereldena Hadfield, “Rules for a Flat World: Why Humans Invented Law and how to Reinvent it for a Complex Global Economy” Oxford University Press, 2017

<sup>13</sup> Uber BV v Aslam [2018] EWCA Civ 2748

<sup>14</sup> Gillian Kereldena Hadfield, “Rules for a Flat World: Why Humans Invented Law and how to Reinvent it for a Complex Global Economy” Oxford University Press, 2017

<sup>15</sup> Missed GP appointments costing the NHS Millions, NHS, 2019

to the doctor will be greater and therefore an additional commission or subsidy from the NHS may be required to cover this. Our study therefore indicates a gig economy model facilitated by an online platform is feasible from a unit economics perspective.

## Conclusion

So, to gig or not to gig? From our analysis primarily conducted through surveys, this research paper has found that there is a potential for the development of the gig economy within the UK healthcare sector in the near future. Following the investigation, there are positive attitudes towards E-Health from healthcare professionals, medical students and consumers currently residing in the UK. However, the extent of integration of the gig economy into the healthcare sector is almost certainly subject to government regulation and positive incentives. The proposed model reflects how the gap between NHS and private online platforms can be narrowed through the demand side and supply side mentioned in this paper.

It is recognised that this research lacks detailed information due to limited representative sample and time constraints. Given more time, and greater access to the medical professional network, more comprehensive results could be achieved.

On a final note, given the rapid technological advancements and the widespread expansion of the gig economy, it is very likely that gig work will be introduced into the UK healthcare sector. Hence, we believe that the answer is *'to gig'*, and we are optimistic that this will happen in the near future.

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## Appendix 1

In total, 3 main groups were surveyed: Current healthcare professionals, current medical students, and consumers of healthcare services. The aims of surveying each group are:

1. To find out the attitudes of healthcare professionals already in the industry towards undertaking gig work themselves in the near future. This provides an understanding of the readiness of the current healthcare sector towards incorporating the gig economy's working style.
2. To find out the attitudes of current medical students towards undertaking gig work when they enter the healthcare sector in the near future. This provides an understanding of possible future perceptions by would-be healthcare professionals and sheds light on the readiness of the future healthcare sector towards incorporating the gig economy's working style.
3. To find out attitudes of consumers of the healthcare service towards utilising gig services in healthcare. This enables us to project possible demand for such gig services, and further reconcile this demand with the supply of such services using points 1 and 2 above in order to examine the feasibility of incorporating gig services into healthcare.

## Appendix 2

### Limitations of the proposed model and potential corresponding solutions.

However, limitations still exist. Several main issues raised by respondents in the surveys need to be taken into account when implementing this proposed business model. Potential solutions are as follows:

1. Doctors' qualification verification: Since it is an online platform, patients feel less certain of the qualification of doctors, compared to doctors present in hospitals. For example, one respondent said "*adequate checks need to be in place to ensure security and safety of advice given*". In this case, the solution is split into 3 parts. (i) Firstly, each individual doctor needs to complete a list of basic information to establish their profile and facilitate the building of trust (ii) Secondly, the rating system would enable the market mechanism to function, allowing the doctors with better service quality to be selected by the patients. (iii) Thirdly, providing an approach that allows the patients to directly verify the doctors' identity. GMC<sup>16</sup> offers a search engine for the full list of registered medical practitioners in uk. Hence, patients could be able to verify the doctors' identity directly.
2. Safety issues: when the doctors go to patients' home, a security risk to both doctors and patients is imposed. Regarding this issue, doctors need to be well-

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<sup>16</sup> General Medical Council

trained before they offer door-to-door services. Furthermore, a full record of service including patients' address, time of diagnosis, results and prescriptions need to be updated, and uploaded, in order to be tracked if something has gone wrong. This data also needs to be stored securely in accordance with regulation and protected against cyber threats.

This model is a contribution to the existing literature, and it can allude to the notion that healthcare professionals, medical students and consumers would be able to use online platforms synchronously, to deliver healthcare services as well as to receive services in the future.

## **Appendix 3**

### Survey for Consumers

#### *Incorporating the Gig Economy into Healthcare - Consumers*

*Q1: Have you heard of the following types of online platforms used in the UK healthcare sector? Please select as many as applicable. \**

- *Matching of patients and GPs for online medical consultations via text and video messaging (Examples: Babylon GP, VideoDoc)*
- *Matching of patients and therapists for online counselling via text and video messaging (Example: Talkspace)*
- *Matching of understaffed NHS healthcare organisations and physicians undertaking gig work. This means that these physicians stand in temporarily in the place of the regular physician in the hospital or clinic when he is absent. (Examples: SwiftLocum, AppLocum, Lantum, BookAMed)*
- *None of the above*

*Q2: Have you personally used any of the following types of online platforms to fulfil your healthcare needs? Please select as many as applicable. \*For "Others", please state clearly the type of platform used.*

- *Online consultations with GPs and/or qualified doctors via text and video messaging*
- *Online counselling with therapists via text and video messaging*
- *I have not used any health- related online platforms*
- *Other:*

Q3: *If you have answered yes to the above, what were your reasons for using the online platform? Please select as many as applicable. \*For "Others", please clearly state the reasons involved.*

- *For medical emergencies or accidents*
- *For illnesses*
- *For routine medical check-ups*
- *Not applicable- I answered "No" to Q2*
- *Other:*

Q4: *How often do you use health-related online platforms or mobile applications to fulfil your healthcare needs? \**

- *Always*
- *Often*
- *Sometimes*
- *Never*
- *Not sure*

Q5: *Have you heard of gig work within the UK healthcare sector? \**

*Gig work within the healthcare sector is defined as independent "freelance" physicians taking on temporary jobs or short-term jobs. Unlike traditional full-time employment, gig physicians take on and leave temporary positions in clinics or hospitals based on their own availabilities and thus enjoy greater flexibility in their schedules. Analogous gig work in other sectors include Uber drivers or Deliveroo riders.*

- *Yes*
- *No*

*There currently are online platforms matching patients and GPs for online medical consultations via text and video messaging. This is a form of gig work for GPs, as GPs are free to dictate their own working hours as desired.*

Q6: *GP consultations on the NHS in the UK are free. However, a certain waiting time is involved. Imagine you are down with a serious cough. How much would you be willing to pay for the same medical consultation with an equally qualified GP, with the only difference being that this consultation is online and thus significantly reduces your waiting time? \**

- *£40- £50*

- *I am not willing to pay for this, and prefer queuing for an in-person GP consultation as per usual*
- *Above £50*
- *£20- £30*
- *£30- £40*

*Q7: If you have answered above that you are not willing to pay for and use this system to fulfil your healthcare needs, what are the reasons why? Please select as many as applicable. For “Others”, please state your reasons clearly.*

- *I prefer using the free NHS system rather than paying for a GP consultation*
- *I am unsure if this system provides reliable and qualified GPs*
- *I believe it may be difficult to navigate and use this online system*
- *Not applicable- I answered above that I am willing to pay*
- *Other:*

*Q8: What is your opinion on incorporating gig work into healthcare? Do you believe doing so is feasible in the future? Please explain briefly. \**

## **Appendix 4**

### Survey for Healthcare Professionals and Medical Students

#### *Incorporating the Gig Economy into Healthcare - Healthcare Professionals and Medical Students*

*Q1. Have you heard of the following types of online platforms used in the UK healthcare sector? Please select as many as applicable. \**

- *Matching of patients and GPs for online medical consultations via text and video messaging (Examples: Babylon GP, VideoDoc)*
- *Matching of patients and therapists for online counselling via text and video messaging (Example: Talkspace)*
- *Matching of understaffed NHS healthcare organisations and physicians undertaking gig work. This means that these physicians stand in temporarily in the place of the regular physician in the hospital or clinic when he is absent. (Examples: SwiftLocum, AppLocum, Lantum, BookAMed)*
- *None of the above*

Q2. Have you personally used any types of online platforms to fulfil your healthcare needs? Please select as many as applicable. \*For "Others", please state clearly the type of platform used.

- Online consultations with GPs via text and video messaging
- Online counselling with therapists via text and video messaging
- None of the above
- Other:

Q3. Have you heard of gig work within the UK healthcare sector? \*

Gig work within the healthcare sector is defined as independent “freelance” physicians taking on temporary jobs or short-term jobs. Unlike traditional full-time employment, gig physicians take on and leave temporary positions in clinics or hospitals based on their own availabilities and thus enjoy greater flexibility in their schedules. Analogous gig work in other sectors include Uber drivers or Deliveroo riders.

- Yes
- No

There currently are online platforms matching patients and GPs for online medical consultations via text and video messaging. This is a form of gig work for GPs, as GPs are free to dictate their own working hours as desired.

Q4. How likely are you to take on this form of gig work in the future, as a supplemental ad-hoc or part-time job, apart from having traditional full-time clinical employment? \*

Least likely

1

2

3

4

5

Most likely

Q5: How likely are you to take on this form of gig work full- time in the future, in place of having traditional full-time clinical employment? \*

*Taking on gig work full-time entails that gig work is your only means of working, without any other types of traditional employment.*

*Least likely*

1

2

3

4

5

*Most likely*

*For the above 2 questions, what are the reasons for your choice? \**

*Q6. In your own opinion, in order to motivate healthcare professionals to take on this form of gig work, how much higher pay must be drawn? \* For "Others", please state a percentage clearly.*

- *10% higher*
- *30% higher*
- *50% higher*
- *Other:*

*There currently are online platforms matching understaffed NHS healthcare organisations and physicians undertaking gig work. This means that these physicians stand in temporarily in the place of the regular physician in the hospital or clinic when he is absent. This is a form of gig work as such physicians take on gig work as per their availabilities and dictate their own working hours. However, such physicians are considered "freelance" and do not enjoy the same benefits that a traditional employment contract provides, such as health insurance.*

*Q7. How likely are you to take on this form of gig work in the future, as a supplemental ad-hoc or part-time job, apart from having traditional full-time clinical employment? \**

*(Scale of 1 to 5, 1 for being least likely and 5 being most likely)*

*Least likely*

1

2

3

4  
5  
Most likely

Q8. How likely are you to take on this form of gig work full-time in the future, in place of having traditional full-time clinical employment? Taking on gig work full-time entails that gig work is your only means of working, without any other types of traditional employment. \*

Least likely  
1  
2  
3  
4  
5  
Most likely

For the above 2 questions, what are the reasons for your choice? \*

Q9. Such gig positions currently pay higher as compared to traditional full-time employment for the same job. This is because these gig positions fill in for shortages in clinics or hospitals. In your own opinion, in order to motivate healthcare professionals to take on gig work, how much higher pay must be given to gig positions for the same job? \* For "Others", please state a percentage clearly.

- 10% higher
- 30% higher
- 50% higher
- Other:

Q10. What is your opinion on incorporating gig work into healthcare? Do you believe doing so is feasible in the future? Please explain briefly. \*