

## Written evidence submitted by Philips UKI (HSC0978)

1. This response puts forward Philips UKI's insights and recommendations in relation to the Department of Health and Social Care's White Paper, *Integration and Innovation: Working Together to Improve Health and Social Care*.
2. Philips is a leading health technology company employing 1,000 people across the UK and Ireland. Headquartered in Farnborough, Hampshire, we are committed to improving the lives of 2 billion people around the world by 2025 including the 71 million people living in the UK and Ireland. Philips delivers products and solutions that alleviate some of the biggest health issues faced by the UK today. We are dedicated to supporting the NHS and the health of the nation.
3. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions. We are a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, in addition to consumer health and home care.
4. Philips' response begins by reflecting on how COVID-19 has impacted traditional care models and encouraged innovation and change. Our response is shaped around two of the White Paper's key themes, as set out by the Department for Health and Social Care: 1) the integration of care; and 2) improving access, accountability and oversight in the delivery of services. Philips has provided best-practice examples of innovation and technology adoption in health and care.
5. These examples, alongside insights from Philips UKI and Imperial College London's research paper, *Reducing Healthcare Inequality and Enhancing the NHS*, provide a helpful evidence base in support of the ambitions of the Government's White Paper. In addition to our written evidence we would welcome the opportunity to present oral evidence to the committee.

### COVID-19 has impacted traditional healthcare models

6. It is difficult to scrutinise the proposed direction of travel for the NHS in England without reflecting on the material impact COVID-19 has had upon services, including who is accessing care and how it is delivered.
7. Firstly, the pandemic has exacerbated healthcare inequalities across the UK. Age, gender, deprivation, pre-existing comorbidities, ethnicity, occupation type and geography are some of the key factors associated with an increased risk of being affected by COVID-19 in the UK<sup>1</sup>. Sadly, vulnerable populations are more likely to be affected by COVID-19, and also more likely to suffer the ill-effects of reduced access to their standard treatment.<sup>2</sup> To illustrate this, in March 2020 NHS trusts were asked to postpone non-urgent elective operations to create capacity to care for sick COVID-19 patients, and to ensure that there was a divide between 'hot' and 'cold' diagnostic and treatment settings. From that point, scheduled operations were dramatically cut back but have not recovered since<sup>3</sup>. Further, as the pandemic has continued, an increasing number of patients who can afford to self-fund

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[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/908434/Disparities\\_in\\_the\\_risk\\_and\\_outcomes\\_of\\_COVID\\_August\\_2020\\_update.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908434/Disparities_in_the_risk_and_outcomes_of_COVID_August_2020_update.pdf)

<sup>2</sup> <https://www.nejm.org/doi/full/10.1056/NEJMp2005835>

<sup>3</sup> <https://www.nuffieldtrust.org.uk/resource/cancelled-operations#background>

operations or treatments for debilitating conditions have opted to pay for private care.<sup>4</sup> Unfortunately, those without the means to afford such care fall through the gaps.

8. Secondly, COVID-19 has been a catalyst for reshaping NHS services, particularly in the increased use of remote care and telemedicine in primary care. It has become clear that technology has the potential to further transform not only the delivery of healthcare, but also better enable healthcare prevention too. Enabling technologies must also facilitate a seamless experience for patients and carers. And while there's an element of 'care coordination' required, patients and carers must be given the tools to self-manage as much as possible – through patient engagement technologies, allowing them to engage in their personal care experience.
9. Due to COVID-19, staff and patients have been forced to adapt, and in many cases, this has enabled some services to be more efficient and effective. A good example of this is the Philips Sleep Support Service, a mobile-application based service to support Obstructive Sleep Apnoea patients. UCLH adopted the service in Q3 of 2020 and was able to clear a 200-person backlog which had developed because of the pandemic. Greater digitalization of 'health at home' solutions will be vitally important towards the future of care (see point 20 for further information).
10. It is also crucial to consider human capital and the trends that will impact HM Government's ability to alleviate healthcare inequalities. Pre-existing radiographer and radiologist workforce shortages have been well documented. Combined with extreme pressures that have arisen during the pandemic, we expect this to lead to further stretching of human resources and a rise in attrition. Furthermore, with current levels of staff burnout, Philips does not believe the current pace of work is sustainable in the long term, challenging the NHS's ability to action post-pandemic recovery plans. A combination of adapting working practice, use of technology and focus on education and training will be needed to support the faster deployment and on-boarding of newly trained staff to backfill vacancies.
11. Further considering the human capital element, HM Government must focus on integration of solutions, workflow, and technologies to facilitate staff movement between different manufacturers' solutions. An inspiring example of this is Philips' Remote Operational Command Centre (ROCC), which provides multi-site, multi-vendor, multi-modality virtual imaging operations. Using this technology, different manufacturers' imaging solutions are connected to a command centre, where experienced radiographers connect with radiographers and view scanner consoles real-time during scanning and acquisition. When approved by the radiographer, the expert can take control of the scanner console. This not only facilitates staff movement, but increases productivity, staff experience and population health outcomes.

## Recommendations

- ***Considering the rapid move to telehealth and digital solutions during COVID-19 pandemic, HM Government should capitalise on the advances made towards a more digital NHS by enabling greater adoption of telemedicine and remote monitoring more widespread, personalised and proactive at community, primary and secondary care levels.***

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<sup>4</sup> <https://www.theguardian.com/money/2020/oct/10/covid-uk-fund-own-operations-private-for-knee-hip-cataract-operations-pay>

- ***HM Government must focus on integration of solutions, workflow, and technologies to facilitate staff movement between different manufacturers' solutions.***
- ***As we look to towards recovery, Philips believes there should be a consideration given to the adoption of more digital healthcare technologies within the NHS from the perspective of all users - not just the most digitally engaged – to help ease the existing burdens on the NHS and move towards a more preventative model of care.***
- ***HM Government should ensure that safety nets are in place to provide safe, effective healthcare for individuals less able to make the transition to a 'digital first' model of care.***

### **Working together to integrate care**

12. Philips supports the Government's ambitions to integrate the delivery of care. Integrating care is a vital component of achieving better health outcomes for the UK's population and creating greater health equity. Today, the lack of effective integration is affecting those worst off. According to Philips' research paper with Imperial College Consultants (ICON), people in the most deprived fifth of the population develop multiple long-term conditions 10 years earlier than those in the least deprived fifth.
13. While there are exemplar areas already delivering better health services and forms of integrated care, there is a clear need to create a legal framework which supports greater integration across the whole of England. Successful integration requires people, systems and technology seamlessly working together. At Philips, we see technology and data playing a huge role in enabling this and have invested in services such as *Philips Interoperability Solutions*<sup>5</sup>, which allows the exchange of clinical information amongst healthcare providers through end-to-end interoperability and connectivity. In short, we are investing in technology and services which enable the exchange of information across different parts of the system in a way that is easy to implement and has minimal impact on the existing infrastructure. This approach helps to turn silos of data in to shareable and useful patient information that can help benefit patients and can help ease the burden on the NHS and hospitals today.
14. Further, using diagnostics as an example, the goal is always to ensure patients receive an early diagnosis. Access to early testing for diseases provides the best opportunity for early detection and secondary disease prevention. There is a potential that poorer health outcomes in deprived areas are exacerbated by increased waiting times for diagnostic tests, delayed referral to treatment and delays accessing surgery or therapies. This highlights the need for government and industry to ensure that diagnostics are more readily available and easy to access – especially for those in more vulnerable communities. Digital technologies have a huge role to play in this rethinking of the way that care is delivered.
15. Embracing new technology, connectivity and investing in the right IT infrastructure would also pave the way for Community Diagnostic Hubs (CDHs) – as previously proposed by the Richards Report<sup>6</sup> - to play a greater role in diagnostic services, allowing for more rapid diagnostics for a larger percentage of the population to happen outside of traditional settings, like hospitals. This will help ensure that existing health conditions within

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<sup>5</sup> <https://www.philips.co.uk/healthcare/resources/landing/interoperability-solutions>

<sup>6</sup> <https://www.england.nhs.uk/publication/diagnostics-recovery-and-renewal-report-of-the-independent-review-of-diagnostic-services-for-nhs-england/>

communities are detected sooner, while also helping to reduce the burden and strain on the NHS that is anticipated post-pandemic.

16. Recent advances in diagnostics and mobile technologies provide future opportunities for early detection and prevention of disease, while reducing demands on healthcare systems. The application of artificial intelligence (AI) to cardiovascular imaging data, for example, when combined with electronic health record data, can better characterise disease and personalise therapy for patients. This combination of technology and hardware does not need to be in an acute setting. By bringing diagnostic testing and monitoring closer to communities, we could see a real uplift in earlier diagnosis and better outcomes for patients with heart and circulatory diseases.
17. We believe productivity will be improved by technologies such as those that improve workflow, for example: technologies that accelerate imaging while retaining image quality, and those which augment the radiologists ability to identify and report on conditions, and facilitate the multi-disciplinary decisions on treatment.

## Recommendations

- ***HM Government should expand Rapid Access Pathways to significantly reducing patient diagnosis time - invest in straight to testing referrals for GPs to significantly reduce the time to reach patient diagnosis.***
- ***Expand diagnostic capacity through Community Diagnostic Hubs - rapidly establish new pathways to diagnosis through a network of elective Community Diagnostic Hubs (CDHs) to provide access to diagnostic and treatment services closer to patient's homes, minimise contact with secondary care facilities focused on the treatment of COVID-19, and accelerate the growth of local diagnostic centres by utilising available space on the High Street.***
- ***HM Government should support further research and development into the use of AI diagnostic and decision-support systems to drive medium and long-term benefits in the quality and cost of care provision in the NHS.***

## Using technology to improve access, accountability and oversight in the delivery of services

18. Improving access, accountability and oversight in the delivery of services is vitally important. The reality is that those living in more deprived areas have less confidence in healthcare practices across the board. At the heart of this is access. At present, access to health and care services varies across the country, and can be particularly poor in deprived rural and coastal communities.<sup>7</sup> Philips are confronting these challenges in a number of ways,

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[https://images.philips.com/is/content/PhilipsConsumer/Campaigns/CA20162504\\_Philips\\_Newscenter/CA20162504\\_Philips\\_Newscenter-en\\_GB-AAA-5228\\_uk\\_healthcare\\_inequalities\\_research\\_report.pdf?\\_gl=1\\*kosbo7\\*\\_ga\\*MTMyNTk0ODU3MC4xNjE0NTkyMjEw\\*\\_ga\\_2NMxNNS6LE\\*MTYxNTI5NjI2Ny4xMS4xLjE2MTUyOTY0NDUuNTk.&\\_ga=2.117794816.824115799.1615292306-1325948570.1614592210](https://images.philips.com/is/content/PhilipsConsumer/Campaigns/CA20162504_Philips_Newscenter/CA20162504_Philips_Newscenter-en_GB-AAA-5228_uk_healthcare_inequalities_research_report.pdf?_gl=1*kosbo7*_ga*MTMyNTk0ODU3MC4xNjE0NTkyMjEw*_ga_2NMxNNS6LE*MTYxNTI5NjI2Ny4xMS4xLjE2MTUyOTY0NDUuNTk.&_ga=2.117794816.824115799.1615292306-1325948570.1614592210)

including with NHS Ayrshire & Arran to introduce remote digital pathology capabilities that will help the hospital best serve residents in rural areas<sup>8</sup>.

19. Integrated Care Systems (ICS) will be fundamental in driving system transformation and redressing weaknesses in our health system. Optimising data infrastructure and driving even greater interoperability will profoundly improve and enhance patient care. Philips have started to deliver this transformation for Cheshire and Merseyside by bringing seamless access to patient data via a centralised index and enabling real-time, cross site image retrieval. As a result, clinicians can effectively share patient records between clinical teams across – and even beyond – Cheshire, Merseyside, and the Wirral. This means patients can move between any of the hospitals in the region, knowing that their patient records and previous images can be accessed at any stage of their diagnosis and treatment.
20. Increasing access to care, particularly at a community level, can improve confidence and provide clear benefits for groups of people living in deprived circumstances in the UK. Before the pandemic, video appointments accounted for around 1% of approximately 340 million annual visits to primary care doctors and nurses in the NHS. Since the pandemic began, virtual appointments have enabled massive operational efficiencies, and reduced risk for patients. Equally, Philips have led on the deployment of wearable technologies, including for the monitoring and management of sepsis. Evidence suggests that for every hour delay in the diagnosis of sepsis, the mortality rate goes up by 8%. Early detection of sepsis and other causes of patient deterioration can alert clinicians to start or change treatments earlier and significantly improve outcomes for patients. The better deployment of data, the use of non-invasive wearables and a more responsive dialogue with clinicians can drive up trust between the patient and system.
21. Telehealth, video consultations and other forms of virtual care have transformed healthcare access in terms of patient demand. However, it has also highlighted weaknesses in the current digital infrastructure. To make the system work successfully, wide scale investment in greater data and technology integration is needed to deliver more coordinated patient care, meet patient expectations, and build confidence.
22. Informed by the NHS recent White Paper 'Integration and Innovation', we must also reconsider what enabling technologies are required for joined-up organisational working. This will certainly necessitate the need for technologies to facilitate patient engagement and management; however, ICSs will need to lead in developing solutions such as population health management (including risk stratification and screening), care coordination systems and integrated care records.

## Recommendations

- ***Extend the capacity of radiology and pathology hubs to streamline and bolster patient care. Given the critical situation faced by the NHS, it is essential that regional diagnostics 'hubs' are quickly rolled out, supported by state-of-the-art digital technology to improve the efficiency and safety of care delivered to patients.***
  - ***A key example of this, which has been successfully implemented: by enabling an offsite senior radiologist to sit in remote Radiology Command Centres managing scans as they are conducted across several locations, we can also help mitigate the need for an unmanageable number of resources***

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<sup>8</sup> <https://www.philips.co.uk/a-w/about/news/archive/standard/news/press/2020/nhs-ayrshire-arran-introduces-philips-digital-Pathology.html>

*across the country. This will ensure every patient has access to the latest innovations in healthcare.*

- *It is essential that new healthcare innovations are designed and implemented through the lens of health equity, making sure that pre-existing health inequalities are central to the design and implementation of digital healthcare technologies in the NHS to truly democratise healthcare.*
- *To support the digitisation of the NHS is essential that new methods of partnerships between industry and the NHS are formed, to help improve patient outcomes, productivity and patient and staff experience. HM Government should support working with industry partners to ensure that novel technologies are adopted quickly by clinicians, backed up by a robust training programme that will allow patients to experience their benefits at an earlier stage.*

#### **Additional information**

If committee members would like to read Philips and Imperial College Consultants research paper on healthcare inequalities in the UK, it can be accessed [here](#).

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