Written evidence submitted by Philips UK (DEL0334)

About Philips UKI:

1. Philips is a leading health technology company employing 1,000 people across the UK and Ireland. We are committed to improving the lives of 3 billion people around the world by 2030 including the 66 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.

2. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions. The company is a leader in diagnosis imaging, image-guided therapy, patient monitoring and health informatics, in addition to consumer health and home care.

3. We are distinctive in our capabilities that span across people's complete health journey from prevention and healthy living to diagnosis and treatment to support people in living longer, healthier lives.

4. Since the COVID-19 crisis begun Philips has:

    - Regularly engaged with government departments, including the Cabinet Office, Department for Health and BEIS.

    - Supplied over 6,000 ventilation devices in support of treating patients in the first wave of the COVID-19 pandemic and to prepare the NHS during future waves.

    - Provided equipment and training for the London, Bristol and Birmingham Nightingales to support in the first wave of the COVID-19 pandemic and to prepare the NHS for future waves, specifically:

        - Equipping 12 London Ambulance Units with break-through technologies to capture patient data and live stream patient vital signs to receiving medical teams at the London Nightingale

        - Supporting Birmingham Nightingale with faster diagnostic equipment that could be read remotely by radiologists at The Queen Elizabeth Hospital

        - Working closely with Bristol Nightingale on implementing training protocols for volunteers in preparation for both facilities being used

    - Run specialised remote simulation-based training videos on transforming a specific model of ventilators configured for non-invasive use into invasive ventilators, which have received more than 300 views, by NHS teams.

    - Managed over 500 field service engineer visits to hospitals across UKI to provide support for and repair of diagnostic equipment used to support affected patients.

5. Philips welcomes this opportunity to respond to the inquiry 'Delivering Core NHS and Care Services during the Pandemic and Beyond'. Philips would be delighted to provide further briefings to the Chair and members or provide oral evidence at an appropriate time.

Evidence: Answers to Relevant Inquiry Terms of Reference

Meeting the wave of pent-up demand for health and care services that have been delayed due to the coronavirus outbreak

6. It is critical that when it is safe for the NHS to do so, treatments for non COVID-19 patients resume to pre-pandemic levels. Partnering with Imperial College Consultants (ICON), in researching healthcare inequalities across the UK (research soon to be released), we have found that we leave the first wave of COVID-19 restrictions with waiting lists for planned surgical and diagnostic activity at unprecedented lengths. In our view, addressing this backlog will require innovative models of care, including greater integration of healthcare data and automation of services that capitalise on digital infrastructure and digital services.

7. In April 2020, Philips commenced a seven-year Cardiology Service Partnership with the Leeds Teaching Hospitals NHS Trust, putting patients at the heart of service design and supporting increased excellence across specialist care, research and local care provision. The partnership will enable a world leading cardiology unit to further enhance its patient care, which is essential considering the backlog of treatments and operations the NHS is now faced with.

8. The partnership will facilitate collaboration focused on improved patient and hospital staff experience, increased efficiency and the maintenance of critical medical equipment. Ultimately this will support the Trust to deliver its vision to set new standards of excellence for cardiac care in the UK and globally.

9. Alongside the Trust, we are committed to fighting cardiovascular disease, and our long-term managed services partnership with Leeds Teaching Hospitals NHS Trust will see Philips:

    a) Deliver cutting edge technology to support the Cardiology team, including state-of-the-art cardiac imaging, surgical and reporting technologies such as the Philips Azurion for image guided therapies

    b) Co-design new patient pathways to create a world class care experience for patients in Leeds and West Yorkshire, as part of a service improvement programme

    c) Ensure staff are fully equipped to deliver exceptional care through an ongoing training programme, enabling staff to maximise the benefits of our innovative technology

    d) Improve efficiencies across the NHS Trust by implementing an equipment replacement programme to minimise down-times

10. As crucial as cardiology, pathology services have also suffered during the COVID-19 crisis, with resources re-allocated to address the pandemic. Given the dramatic fall in the number of urgent cancer checks, digital pathology services have enabled pathologists to continue diagnosing cancer while working remotely and safeguarding their health. It is a profession that can ill afford to lose staff with 35% of pathologists due to retire between 2017-22, according to Cancer Research UK.

11. As an example of this much needed digital pathology service, Philips is currently providing the University Hospital Crosshouse (part of NHS Ayrshire & Arran) with the Philips IntelliSite Pathology Solution, comprising of an Ultra Fast Scanner and Image Management System.

12. The remote digital pathology capabilities will support the hospital to best serve residents of Ayrshire & Arran. It may also help set a new standard of diagnostic services and care for communities located outside of main city centres.

13. Further, the partnership will help reduce pressure on the University Hospital Crosshouse's pathology service by streamlining the workflow and extending collaboration, with the objective of increasing diagnostic confidence. Further information on the pathology partnership can be viewed here.

Recommendations

- ***HM Government should conduct an urgent audit of backlogs of critical non COVID-19 treatments and operations and publish guidelines for NHS on how innovative technology can help alleviate pressure (where appropriate).***

- ***Philips also recommends that given the possibility of future waves of COVID-19, early preparations are made to enable remote diagnostics to be utilised across the country in order to safeguard the safety of NHS staff and maintain pathology services.***

Meeting the needs of rapidly discharged hospital patients with a higher level of complexity

14. In a short space of time, the COVID-19 pandemic has accelerated the use of digital technologies such as telemedicine by several years. The assumption that primary care requires most interactions to be conducted in-person has been challenged. In many instances, the pandemic has taught both patients and care providers that telemedicine, email or digital messaging services can be quicker, easier and safer.

15. There will always be a place for face-to-face interactions and examinations, but this pandemic has shown that a large part of care can be provided digitally. Technologies have the potential to further transform healthcare and exist in all areas of diagnosing, treating and preventing illness. Examples of these technologies include electronic health records, web and cloud-based tools, apps, diagnostics, remote monitoring and care devices, telemedicine, artificial intelligence, digital pathology and predictive analytics.

16. Considering the current healthcare technology that can support the NHS, Philips operates the eIAC ambulatory telehealth programme, built upon a population management software platform designed for monitoring and delivering care to the most complex patients at home.

17. Care systems develop the organizational capability to deliver integrated, co-ordinated care across specialties and services at scale. The eIAC programme enables all stakeholders in the clinical and social management of a patient to identify and address the root causes of the patient's frequent admissions. This creates a cohesive system of care that helps reduce hospital admissions while providing the highest level of care to patients with complex, chronic conditions.

18. In a study conducted in the United States, it was recorded that the eIAC programme achieved the following results for supporting discharged patients with high complexity cases:

a. Reduced costs of care by 27 percent, driven primarily by a reduction in hospitalisation rates and days in the hospital
b. Reduced acute and long-term care costs by 32 percent, primarily due to a significant decrease in hospitalisations
c. Acute short-term hospital stays decreased from 7.7 hospitalisations per 100 patients per month to 4.9
d. Long term care, home health or other facility stays decreased from 3.9 hospitalisations per 100 patients per month to 1.4

Recommendations

- ***Considering the rapid move to telehealth and digital solutions during COVID-19 combined with the possible positive outcomes for patient care, HM Government should capitalise on the advances made by making telemedicine and remote monitoring more widespread, personalised and proactive at community, primary and secondary care levels.***

- ***Explore the clinical applications of wearable sensors, remote digital monitoring, and the Internet of Things and how these innovations could improve people's lives and reduce health inequalities.***

- ***Offer patients the opportunity to actively participate in the monitoring, evaluation and personalisation of their care using wearable devices and digital applications.***

Providing healthcare to vulnerable groups who are shielding

19. It has been widely documented that there is an association between ethnicity and COVID-19, with a higher rate of death among Black, Asian and Minority Ethnic (BAME) groups. Further, people working in some occupations such as nursing, midwifery, social care, bus and taxi driving and lower skilled workers in construction and processing plants also had higher rates of death from the virus. Geography also plays a role in rates of death associated with COVID-19, with the highest rates in urban areas and in London, the North West, North East and West Midlands regions of England.

20. The impact of COVID-19 on populations in the UK is, clearly, intertwined with multiple health, social and environmental disparities. Overall, these contribute to inequality in the impact of COVID-19 that disproportionately affects some of the most vulnerable groups of people in the UK.

21. Considering these factors, with many communities still shielding and the potential of another outbreak in the UK, healthcare technology can be leveraged to empower vulnerable communities to be in control of their wellbeing when face-to-face hospital or GP appointments might be not possible or appropriate.

22. For example, Philips operates the Engage programme – a digital dashboard that can be used on smart phones that enables proactive and patient centred care. Engage allows healthcare professionals to connect with patients at home and support them in better managing their chronic and complex conditions.

23. Engage is focused on putting people in control of their own health and wellbeing. The application is designed to enable patients to receive reminders, engage with health

coaching, respond to surveys and questionnaires and message or video call their health professional – in a single digital portal. Where appropriate patients can invite their family members to view their results, enabling them to better care for their loved ones.

24. This nature of empowering patients to connect with healthcare professionals will be crucial for vulnerable communities who are currently or may soon need to shield from the virus. The capabilities it provides can also be used across a wide range of health challenges.

Recommendations

- ***Investigate and tackle the underlying factors that have led to worse outcomes from COVID-19 in people living in deprivation, from BAME groups and in people with existing medical conditions.***

- ***Formulate contingency plans for a second spike in COVID-19, urging GP practices and NHS Trusts to recommend digital healthcare applications to vulnerable patients.***

<u>How to ensure that positive changes that have taken place in health and social care as a result of the pandemic are not lost as services normalise</u>

25. In the space of a few weeks, Philips transformed its whole UK operation to support the NHS through the pandemic. There have been numerous examples of rapid operational and health changes that we believe organisations should continue in order to overcome COVID-19, but crucially support the NHS to tackle long standing health challenges, including:

    a. The digitisation of training programmes enabled improved learning to take place throughout the crisis, even if medical equipment trainers were not available. For example, Philips enabled NHS staff working at the sharpest end of care to transform a specific model of Philips' non-invasive ventilators into invasive ventilators with the ability to effectively treat patients in COVID-19 ICUs.

    b. Philips rapidly filmed specialised training videos which were made freely available to NHS staff. This innovative approach ensured the NHS could make use of the 1,800 ventilators with this capability that were already in hospitals, to expand treatment on COVID-19 ICUs. To date, 25 training sessions for NHS teams has been held and the online video has received 300 views by NHS audiences. The transformation of training videos is an action that Philips will ultimately implement with additional critical medical equipment.

    c. Further, the pandemic demonstrated that healthcare technology can be utilised rapidly to drive faster treatment. An example is demonstrated through Philips' support of the Birmingham Nightingale. The Philips Vue PACS solution supports physicians and radiologists in reporting and distributing chest X-rays, ultrasound images and CT scans, resulting in faster diagnosis and treatment.

    d. Deploying this solution enabled images acquired at the Birmingham Nightingale to be sent via the network to The Queen Elizabeth Hospital – part of University Hospitals Birmingham NHS Foundation Trust – where the images were reported on by the radiology team.

e. This technology remains in place should it one day become necessary to open this Nightingale facility and to support medical professionals in the rapid diagnosis and treatment of future COVID-19 patients. This rapid technology model could be implemented across multiple areas such as ultrasound and CT-scans to improve patient outcomes and treatment times.

Recommendations

- ***HM Government should encourage the NHS and its partners to review technology used to tackle the COVID-19 crisis and present plans for how equipment can be transformed to support other areas of patient care where appropriate.***

- ***HM Government should also encourage medical technology companies to digitalise their training programmes to ensure learning can take place quickly, without a reliance on trainers being present – to avoid bottlenecks.***

August 2020