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Medical iSight supports Microsoft and Imperial College Healthcare NHS Trust initiative to help protect doctors while providing patient care amidst coronavirus pandemic

Microsoft HoloLens reduces the number of healthcare workers required to enter high risk areas*

- Early estimates by Imperial College Healthcare NHS Trust indicate a reduction in time spent in high risk areas of up to **83%**
- Initial analysis shows a saving of up to **700** PPE items per ward per week
- Preliminary data shows efficiency of ward rounds increased by **30-40%**

Medical iSight, leaders in the development of specialist real-time 3D imaging software for complex surgical procedures, is proud to have provided key technical assistance in a team effort with Microsoft and Imperial College Healthcare NHS Trust to deploy Microsoft HoloLens with Remote Assist technology in the fight against COVID-19.

Using Remote Assist, doctors wearing a HoloLens headset can hold hands-free video calls with colleagues and experts anywhere in the world and simultaneously view medical records and patient information. This delivers clear benefits to healthcare workers in critical situations. Without HoloLens, typically 4-7 NHS staff walk from bed to bed caring for COVID-19 patients on ward rounds. With HoloLens, only one doctor wearing the headset and full PPE needs to enter high-risk areas of the hospital, including COVID-19 wards, CPAP respiratory wards and trauma wards. Colleagues can see and hear the interaction with patients from a nearby room situated in a lower risk area of the hospital and communicate directly with the doctor on the ward. In addition, the doctor on the ward can view important information on the HoloLens headset, such as the patient's X-ray imaging and blood test results, which are digitally displayed in front of them.

Imperial College Healthcare NHS Trust, which includes Charing Cross Hospital, Hammersmith Hospital and St Mary's Hospital, reports that using HoloLens has led to a fall in the amount of time staff are spending in high-risk areas of up to 83%. It is also significantly reducing the amount of personal protective equipment being used - early estimates indicate that up to 700 items of PPE per ward per week, are saved.

James Kinross, a Consultant Surgeon at Imperial College Healthcare NHS Trust, Senior Lecturer at Imperial College London, and Clinical Advisor at Medical iSight, led the deployment of this innovative solution on the front line at St Mary's Hospital, London, and said:

"In one week our hospital trust switched from being a place that delivered acute, elective care and planned treatment into a giant intensive care unit. We weren't just trying to restructure an entire building, we were trying to redeploy and retrain our staff, while at the same time we had to cope with an ever-growing number of very sick people."

"We needed an innovative solution. I've used HoloLens before in surgery and we quickly realised it had a unique role to play because we could take advantage of its hands-free telemedicine capabilities. Most importantly, it could be used while wearing PPE. It solved a major problem for us during a crisis, by allowing us to keep treating very ill patients while limiting our exposure to a deadly virus. Not only that, it reduced our PPE consumption and significantly improved the efficiency of our ward rounds."

Medical iSight's Chief Scientific Officer, Philip Pratt, noted that:

“Deploying new technologies like HoloLens in the middle of a crisis is only possible if a healthcare worker can immediately pick up the device, instinctively know how to use it, and immediately start getting benefit from it. In close collaboration with Microsoft, and in a completely remote fashion, we were able to configure multiple devices and put them to work in the wards within a very short period of time.”

This work would not have been possible were it not for the equipment and expertise provided by Microsoft. Their ability to move at pace and to forge significant momentum more widely across other NHS Trusts has been invaluable.

Leila Martine, Product Marketing Director for Mixed Reality at Microsoft UK, said:

“It is inspiring to see how HoloLens is being used by Imperial College Healthcare NHS Trust during the COVID-10 pandemic. HoloLens is keeping essential healthcare workers safe, while significantly improving communications to help patients.”

Regarding Medical iSight's role in the project, Leila said:

“To support this rapid deployment, Medical iSight played a pivotal role by ensuring that the HoloLens and Remote Assist was configured with the right management, security and network capabilities required by the NHS trust, while also ensuring that it was customised for the easiest clinical adoption.”

Many NHS Trusts across the UK are now looking to advance the use of HoloLens to protect medical professionals against COVID-19, including: the University Hospitals of Morecambe Bay, University College London Hospital, the Leeds Teaching Hospital and Alder Hey Children's NHS Trust.

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Notes

***HoloLens**

In contrast to virtual reality, where a fully immersive computer-generated world is experienced, the HoloLens allows users to place 3D digital models in their real world environment, and interact with them using eye movement, hand gestures and voice. This is often described as being an Extended Reality, Mixed Reality or Augmented Reality.

Medical iSight

Medical iSight enables real-time 3D surgical navigation by providing critical information at the point of care to help surgeons make better decisions faster.

As the surgeon is operating, our software accurately merges live 2D imaging data with 3D patient anatomy, and automatically evaluates instrument navigation options. The intuitive user interface seamlessly delivers this capability through our hardware platform of choice, the Microsoft HoloLens.

Greater accuracy. Faster procedures. Better results.

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