Introduction of a Novel COVID-19 Biomarker Leading through Education

Centre was converted into a potential 648 bed facility, capable of providing step-down care to patients from the north west.

Junior doctors had the opportunity to witness the creation of a field hospital, shape systems and processes, and work with a diverse team coming together for a common cause. To capture their experiences, interviews were conducted using a semi-structured format and the responses summarised into transcripts. Consensus coding was performed using domains/themes.

When exploring successes, there was consistent mention of a strong team; in particular the feeling of being individually valued within a flattened hierarchy. Staff wellbeing and education were also regularly mentioned and helped contribute to this overall feeling. When asked what they would take forward, doctors focussed on the importance of a strong team that values multi-disciplinary working.

But the hospital was not without challenges, with processes changing from one shift to the next and leading to potential errors. In addition, system issues (such as with medication and documentation) lead to a sometimes-chaotic work environment. Staff identification was a significant challenge, and potentially contributed to communication breakdowns.

To rectify this, doctors undertook QI projects which formed the basis for re-activation plans. Perhaps more important than material improvements were feelings of empowerment they identified to achieve actionable change within the hospital.

Junior doctors were overwhelmingly positive about their NNW experience. Their power to act as agents of change was showcased at NNW, where senior management encouraged them to take ownership of challenges identified and seek ways to improve the system in which they worked.

Leading Innovation and Improvement

COVID-19 is heterogeneous in presentation, with cough, fever, dyspnoea and in some cases, acute respiratory distress syndrome documented. Confidence in the interpretation of clinical symptoms and management of patients can be enhanced with the use of biomarkers and could provide clinicians with a tool to predict prognosis and mortality, allowing for earlier interventions and optimal resource allocation.

In March 2020, clinicians approached CWPS requesting the provision of biomarkers, as highlighted in early publications. The aim of this change was to improve the clinical management of patients, remove the need for referral laboratory testing and ensure swift translation of recent evidence into clinical practice. Cost, method availability, IT requirements, assay verification, sample needs and appropriate testing were all considered when extending the scope of service. Continued dialogue with those leading the local COVID clinical pathway ensured the change was clinically supported and that testing was incorporated into the trust ward management strategies.

Royal College of Pathology guidelines later published in April 2020 supported the service change and literature reviews continue to highlight the role of inflammatory markers for patient stratification; with a recent systematic review finding some of the included biomarkers increased in more severe infections. The Association of Clinical Biochemistry have also made a statement encouraging this type of innovation, utilising both scientific and medical staff in the improvement of patient care.

In collaboration with statisticians from local universities, biomarker data is being interrogated so that any findings may be translated into practice. Currently, multiple regression analysis has allowed the creation of models to explain association of analytes with outcomes and it is hoped continued work will allow the creation of decision trees and clinical reference values.

Leadership, Medical Education

Aims Practical leadership skills have never been more important in healthcare professionals than over the last year, during the global COVID-19 pandemic. In response we transformed a four-day face to face programme – Leading through Education to Excellent Patient Care (LEEP) into a webinar/workshop series. These focus on four perspectives: developing as an individual, developing your team, working in a network to improve change, and developing system literacy. He we share our experience of the first webinar delivery focused on ‘developing self’

Methods We ran the first webinar for foundation year one doctors on three occasions. The webinar was integrated within a flipped classroom approach, with pre-webinar learning, and webinars consisting of small group discussion and mini lectures.

Results Forty-eight participants attended; following the course, participants stated that they had greater understanding in the purpose of leadership in healthcare was and understood more about their own strengths and weaknesses in being a leader. Attendees found that their confidence increased in all 11 topics when compared to pre-course (scale 1-10), covered including (pre to post course): leadership styles (5.5/10 to 8.5/10), compassionate leadership (5.6/10 to 8.8/10) and Johari window (3/10 to 8.5/10). Some comments from the course were ‘I felt encouraged to participate and join in as it was very interactive’ and ‘I came away feeling genuinely inspired’. 97% of participants who attended the webinar said they would recommend this course to others.

Conclusion This novel virtual leadership development course was well received and led to globally improved confidence in understanding through a blending approach of flipped learning, mini-lectures, reflection, and interactive discussion. We aim to continue the course by holding a further virtual workshops/webinar for foundation year 1 doctors, as well as developing them for delivery to other healthcare professionals.