Cavendish Community: Interview with Professor Charles Hinds

Professor Charles Hinds is Professor (Emeritus) and Consultant in Intensive Care Medicine at St Bartholomew's Hospital and Barts and the London School of Medicine and Dentistry, Queen Mary University of London. He has recently launched a fundraising campaign to finance the appointment of a successor.

Is it unusual to fundraise for your replacement?

I retired from clinical practice last year at the age of 72. I always hoped that I could find a successor to continue my academic work in the department at Barts. However, particularly following COVID, university finances are precarious, so we have put together a package to raise external funding to support the appointment of a Professor of Intensive Care Medicine for a period of 5 years.

When I retired from clinical work, this freed up five clinical sessions, but to appoint a successor we need to fund five academic sessions as well, plus some support costs and capital expenditure. In the current climate, universities are not in a position to directly fund new posts (new because my academic sessions were always reimbursed by the health service, so no costs were met by the university).

For many years, universities have tended to appoint people who either come with funding or have raised specific funding from other sources. The aim is that this initiative will establish a durable legacy and a team of researchers who will continue to deliver world-class intensive care research in one of the largest centres for critical care in the UK.

What is the fundraising goal?

After five years, Queen Mary University of London and Barts Health will take over funding, so we need to raise a total of around £1.2million. We have made a great start but still have just under the £1million mark left to raise, and these things always take time.

Our main sources of support currently are the William Harvey Research Foundation (my academic work has for many years been as a member of the William Harvey Research Institute), and the asset manager BlackRock who have included our project on their employee donation scheme. BlackRock then match whatever the employees donate.

What has been the response so far?

COVID has shone a light on intensive care. Before this, many people didn't understand what intensive care was all about but the pandemic has meant that the public has seen what it really involves – in particular mechanical ventilation. They have seen the large number of staff needed to turn patients onto their fronts and recognised the need for specialist intensive care staff, as well as gaining a greater appreciation of the importance of research.

Can people donate privately?

We would welcome this, and I hope that people who have survived COVID and used the services of intensive care units, or indeed their families, might be willing to support the fundraising drive having seen the importance of the work we do. One of the aspects that the new professor is likely to be investigating is the long-term problems faced by those who have survived but are suffering from long COVID.

What is your current research focus?

I'm still teaching, and my main research interest has been genetic mechanisms in sepsis. We have repurposed our Genomic Advances in Sepsis study for COVID. We've recruited a large number of patients with COVID and are looking at gene expression, protein levels and white blood cells – essentially the immunological response to COVID and why some individuals become seriously ill whereas others don't.

Some of what we do should give clues as to therapeutic targets going forward. If we are successful and can engage a new professor in the next few years, they will be joining at an exciting time. Intensive care research moves at quite a pace, it certainly has in my lifetime and things are advancing all the time. The technological as well as the bioinformatic sides of things have developed dramatically so the next few years will be very exciting.

Why is the role of the professor so important?

The mortality rate for patients who end up on ventilators in intensive care remains unacceptably high. We haven't made a huge impact on outcomes. Interestingly with COVID, it is almost the first

time we have very rapidly discovered, or repurposed drugs which have helped to significantly improve outcomes for patients in intensive care with severe infections causing respiratory and other organ failures. Over my lifetime we really haven't found any specific pharmacological interventions that improve outcomes for these sorts of patients. Usually these interventions have been designed to modify what may go wrong in the body's response to infection, particularly in the immune system.

Survival rates have increased for some patients but mainly due to improvements in general aspects of care. We're better at ventilating and feeding patients and manipulating their blood pressure. These are small incremental improvements but no magic bullets. In my view, that is largely because we really don't understand the underlying pathophysiology, in particular the immune dysfunction that causes many of these problems.

It is also because we have tended to lump patients together – so all patients with sepsis or ARDS are treated the same way – but our work and that of others in recent years has shown that actually these syndromes are very heterogeneous. Patients who may look the same when you stand at the end of the bed, if you look at their underlying pathophysiology or their immune function, they actually fall into quite distinct groupings. Those different groupings probably need to be treated differently. We are only at the beginning of this and it's going to take many more years' work to sort out the precise mechanisms which are causing the immune dysfunction and the heterogeneity and to develop and test new treatments, tailored and targeted to be of most benefit to the individual patient. That's almost a lifetime's work for somebody.

To find out more about the fundraising, please visit
https://www.williamharveyresearch.com/contact-us/campaigns

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