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ACUTE PERSPECTIVE

David Oliver: Were Nightingale units and fever hospitals ever workable responses to covid-19?

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Research has found that around one in nine inpatients with covid-19 acquired it while in hospital. Much of the commentary on our national pandemic response included calls for patients with covid-19 to be moved out of hospital wards and away from other patients. Some commentators urged a modern revival of "fever hospitals," solely for isolation and care of people with infectious diseases. Others questioned what they saw as an excessive focus on covid at the expense of other conditions.

But was the idea of setting up fever hospitals ever workable? The covid data are telling. During the first pandemic wave in March to June 2020, the number of people with covid in English hospitals peaked at 21 000. It reached 17 000 again by November, rose to 38 000 in January 2021, and didn't fall back below 20 000 until early March. We have only 102 000 general and acute beds in the NHS, 5 so at times around a third of beds were occupied by patients with covid. Daily covid admissions peaked at 3000 in April 2020 and then 4000 in January 2021.

We don't have lots of mothballed and fully equipped hospital sites ready to use as infectious disease units. Even if we did, the logistics of transporting patients from overcrowded emergency departments to such units would present big problems and risks. Patients would still need access to the full facilities of the acute general hospital, including 24 hour on-call teams, critical care, and imaging.

Furthermore, hospitals need staff, not just beds and equipment. The NHS has one in eight nursing posts and one in 11 other clinical positions unfilled. Where would the staff come from? Which rotas and shifts would be depleted? Would the staff have the right skills? For all of these reasons the idea of fever hospitals at scale, for a disease as overwhelming as covid, was never more than an ear catching soundbite.

However, the Nightingale hospitals—set up at impressive speed with mighty logistical flair and fanfares from press, politicians, and public officials—were concrete entities. Their creation was understandable given the modelling of unchecked pandemic demand and experiences in China, Italy, and New York, weeks before covid hit the UK.

As well as the 4000 beds in the Nightingale hospital at London's ExCeL Centre—for people requiring intensive or high dependency care and equal to the entire pre-pandemic intensive care bed base in England—six further sites were set up around England (in Birmingham, Manchester, Harrogate, Bristol, Sunderland, and Exeter), ^{8 9} and if all of the

beds had been used this would have amounted to around 15 000.

The other units were not set up for intensive care. Some were nominally designated for post-acute patients no longer needing the full facilities of the general hospital. But even if these patients didn't need ventilators or organ support they'd still need nurses and healthcare assistants, medical cover, and allied health professionals for rehabilitation and imaging.

The Health Service Journal estimated the total set-up cost of the Nightingale hospitals at £220m (€259m; \$304m), with a further £200m for running costs. 10 11 Yet between them they admitted fewer than 1000 patients over the whole course of their existence, before they were mothballed and then decommissioned from late 2020. There were simply never enough clinical and support staff to cover anywhere near those bed numbers, and even the established NHS sites struggled with rota and recruitment gaps, sickness, and self-isolation. The Nightingale units were created at such speed that there was no clear vision of precisely which patients they'd be used for, potentially hours away from their homes and support structures.

It's testimony to the NHS that our existing bed base coped and flexed as well as it did—including intensive care beds, which reached double their usual capacity at times. What we need when planning future pandemic responses is more support for those facilities, more capacity on those sites, and an urgent plan to tackle staffing gaps. We must stop putting infrastructure and buildings before the people needed to staff them—or putting headlines and publicity before workable solutions.

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