

Case Study

DeltaSafe - Isolation room pressure control



apolloconnect
M2M web based monitoring & control

The Hospital

Royal Surrey County Hospital at Guildford - one of the first NHS Trusts - treats over 260,000 patients a year - 56,000 accident and emergency, 39,000 in-patients and day-patients and 167,000 outpatients. It has 20 wards comprising general and specialist surgery, obstetrics, paediatrics, oncology, orthopaedics, general and specialist medicine, intensive care and coronary care, with 570 beds in total.



Hascombe Ward

Apollo Connect was asked to provide isolation facilities to four rooms within this new paediatric ward. Two to be positive and two negative pressure.

Working to specifications as defined by the resident consultant microbiologist, the **positive pressure** rooms are suitable for protection of **neutropenic** patients from fungal spores in order to prevent invasive aspergillosis and mucormycosis. These rooms are fitted with a **HEPA filtered** air supply.

The **negative pressure** rooms are suitable for isolation of patients with infections and include a dedicated air extract system ducted outside to a high level.



Apollo Connect installed their **Deltasafe** system in the four isolation rooms in Hascombe ward providing control of room to corridor air pressures. Additionally, in order to maximise patient comfort, room climate control was installed to maintain specified conditions of 21° C

The Deltasafe provides a programmable control panel located at the nurses station complete with a visual "GO / NO GO" light box installed above each room door as well as an audible alarm. One of the key elements of the **Deltasafe** is that it maintains a secure data log of all alarm events for future reference.

Medical Assessment Unit

The hospital also required a room within its accident and emergency department as a medical assessment unit (MAU). Incoming patients can be assessed for infections while being kept isolated from other A&E patients.

Working closely with the hospital's main building contractors, Apollo Connect converted an existing suite into a negative pressure isolation room. The suite, consisting of the room, an ante room and a toilet, is kept at a lower air pressure to that outside with the result that air is continually drawn into the room and is then safely ducted outside.

A dedicated key switchable air handling unit, pressure controller and room status monitor were also provided, again with data logging facilities



Conclusion

The Royal Surrey County Hospital are keen to continue promoting excellence and quality throughout the Trust and are undergoing a schedule of improvements to wards. Within this they see the provision of further single bed negative and positive pressure isolation rooms as an integral part of this process.