Results: Five consecutive samplings showed a high level of microbial air contamination: the mean (± standard deviation, SD) cfu/m^3 total microbial count was 87.6 (±48.8); the mean IMA value was 4.2 (±4.0). Fungi were isolated in 100% of active samplings and 75% of passive samplings collected from ambient air, and in 77% of air coming from the ventilation diffuser. Since environmental cleaning and disinfection procedures did not bring any improvement in air quality, a further examination of the ventilation system was carried out, revealing that the ventilation ducts had not been properly installed. After correcting the problem, the sampling showed mean values of 6 cfu/m^3 and 0 IMA, with no growth of fungi.
Conclusions: Our experience shows that monitoring air contamination is a useful tool to highlight critical conditions and reveal the necessity for corrective actions.

P11.15
Use of a dusting cloth for mycological surveillance of operating rooms: results of an Italian pilot study

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Background: Surface sampling can detect minor contamination even when air samples test negative for fungi, but the methods in use are able only to capture a small amount (<30%) of real microbial contamination.
Aims: To compare the ability of different sampling methods to detect a mycological contamination of air and surfaces in operating rooms (ORs).
Methods: The study, carried out in ORs of some hospitals from three Italian cities, refers to the results of 95 sampling campaigns. Surface samples were collected from the scialitic lamps: half of upper surface was sampled with two Rodac contact plates. Other half of upper surface is all rubbed with one DC pad (a flat tampon, prepared covering a thick disk of cotton with a dusting cloth selected among those in the market and tested in a previous experimental investigation); the dust captured was seeded on a Petri plate. 560 litres of air were sampled, 1 meter from the surgical table, using biocollector SAS-PBI®. All plates – containing Sabouraud dextrose agar + chloramphenicol + neutral (Beckton Dickinson®) – were incubated five days at 28°C.
Results: Overall, in 81 (82.5%) sampling campaigns a fungal contamination was observed: 13 (16.0%) campaigns were positive for all sampling methods; 20 (24.7%) for Rodac and DC pad; 8 (9.9%) for Air and DC pad; 1 (1.1%) for Rodac contact alone and 39 (48.1%) for DC pad alone.
Conclusion: This study concludes that DC pad, positive in 80/81 samples, is a cheap and effective method for detecting an environmental contamination due to fungi.

P11.16
Evaluation of three air decontamination devices as part of the smart solutions for healthcare associated infections programme

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Background: Smart Solutions for Healthcare Associated Infections (HCAI), a Department of Health funded programme run by TrusTECH, aims to evaluate new technologies with the potential to help reduce HCAI levels within the NHS. At the Royal Free Hospital three air decontamination devices were evaluated; AirManager (Quest International) which is driven by Close Coupled Field Technology; Medixair (GE Healthcare) which is an ultraviolet air sterilisation device; and the AD Air Disinfection Unit (Inov8 Science) which emits hydroxyl radicals.
Objectives: To evaluate the impact of the devices on reducing environmental microbial load and compare the efficacy of the three devices in a general ward environment.
Methods: The devices were evaluated over a 16 week period using an interrupted study design. Each device was placed in a four-bedded bay and a single bed room on a general medicine/elderly care ward. The devices were switched on for two periods of five weeks and off for three periods of two weeks. Environmental microbial load was measured by surface sampling of high and low surfaces five times per week and air sampling three times per day, four times per week. TVC values for on/off periods were compared for each device and each device was compared separately to the other devices.
Results: *Surface sampling*: Medixair reduced TVC in bays and single rooms for high and low surfaces. Air Manager also reduced TVC in rooms, but was only effective for high surfaces in bays. The AD Unit was only found to reduce TVC on high surfaces in rooms. When comparing between devices, Air Manager was most effective at reducing TVC in bays. For rooms there was no clear difference between the devices, but the AD Unit performed best for high surfaces.
Air sampling: None of the devices had a significant effect on TVC.
Conclusions: The air decontamination units were most effective at reducing bacterial load on surfaces but were less effective at reducing levels of airborne bacteria.

P11.17
Improving endoscopy decontamination processes to minimise service disruption due to water test failures

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Background: The Trust has undertaken a replacement programme of endoscope washers with and was seeing an unusual pattern of water test failures with samples >100cfu/100ml in the final rinse water.
Aim: Our aim was to improve endoscopy decontamination processes which minimised service disruption due to water test failures.
Methods: Weekly review of water test failures involving key stakeholders was established. The elements considered as potential influences on the failures of water tests were the cold chain sampling technique single sample water testing Cold chain. Samples were sent for temperature testing the average time from point of sampling to testing was 4 hours.
Sampling technique: The sampling techniques was reviewed and variances between sites were found. One site had proven to be the most stable site in terms of water samples passing the weekly tests the protocol for water sampling at this site has been adopted across all sites.
Single sample testing: Duplicate sample taking ruling out false positive results was introduced failure of water testing was defined as 10 cfu/100ml or more in two bottles. Where a water failure was noted a deep clean was instigated samples resent but the machine remained operational. Two consecutive water test failures meant that the machine was taken out of operation.
Results: Water samples for temp testing before cold chain process was introduced were taken from samples at three sites Specimens. 1 20°C 2 10.5°C and 3 11.5°C. Since the introduction of HPA approved cold boxes with temperature logging all subsequent sample temps were and remain below 5°C By the introduction of the above measures along with duplicate sampling we reduced the number of service disruptions by 28%.
Conclusion: Introducing standardised protocols, using a robust cold chain standardisation of sampling practices duplication of water testing significantly reduces failures and minimises disruption to endoscopy services.