Yet most ORs are not in use for 40% of the time

There is scope for significant energy and cost saving with more efficient HVAC use

Heating, ventilation, and air conditioning (HVAC) systems are responsible for*

- 99% of OR energy use
- 80% of OR carbon emissions
- 40% of hospital carbon emissions

OR space utilization = 60%

Solutions to widening remit

Employ multi-disciplinary approach
Including involvement of management and engineering department (biomedical engineers / health systems engineers)

Identify a champion
Ideally a senior member of the team who can act as contact point for other members of the multidisciplinary team

BARRIERS TO IMPLEMENTATION

Two main barriers
- Seen as outwith remit of clinical staff
- Concerns around clinical safety

Solutions to safety concerns

- Increase awareness

- Surgical site infection
  There is no significant difference in bacterial contamination with 6 ACH vs 30 ACH ¶

- OR utilisation
  It takes just 30mins from HVAC start up, to achieve acceptable levels of bacteria & airborne particles for operating

Solutions to safety concerns

- Increase awareness

BENEFITS

MacNeill et al. achieved a 50% reduction in HVAC energy use with weekend and night time setback in 19 of 22 ORs *

COST SAVINGS

Reducing OR ventilation from 6 ACH to 30 ACH can reduce energy costs by 70% ¥

Combined with other energy saving strategies, hospitals can save on average $125k per year #