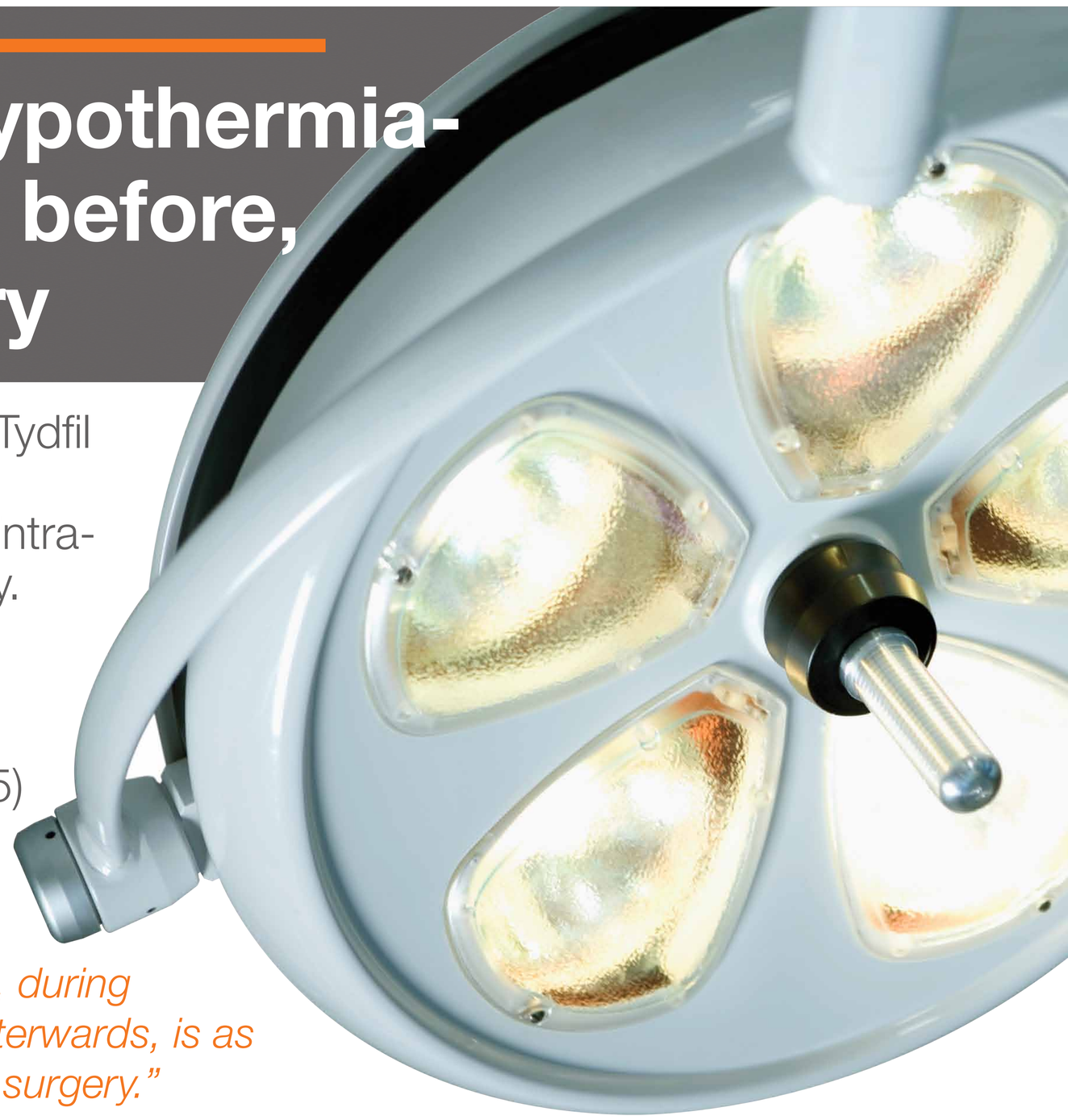
GIG CYMRU NHS WALES | Bwrdd Iechyd Cwm Taf Health Board

Avoiding inadvertent hypothermia- keeping patients warm before, during and after surgery



The Prince Charles Hospital (PCH) in Merthyr Tydfil audited how they kept patients warm to avoid inadvertent hypothermia in the pre-operative, intra-operative and post operative stages of surgery.

From the results they were able to see how effectively they were implementing the NICE guideline on perioperative hypothermia (CG 65) and identify ways of changing their processes to improve patient outcomes.

"Ensuring patients are warm before their operation, during transfer to the operating theatre and in recovery afterwards, is as important as maintaining body temperature during surgery."

Dr Jonathan Sunkersing, Junior Doctor, Prince Charles Hospital

Reducing unnecessary hypothermia

Hypothermia is defined as a having a core body temperature of less than 36°C. Inadvertent hypothermia is not uncommon after operations and can cause serious cardiovascular, circulation and coagulation complications. It can also effect post-operative recovery and wound-healing, especially in vulnerable older and paediatric patients.

For several years PCH had been auditing how effective its measures were to control the perioperative temperature of patients. The NICE guideline provided good justification for expanding the remit of the audit and extending the audit cycle.

By expanding the audit to include baseline assessments against data from previous audit cycles and comparing it with the data from another nearby hospital, PCH were able to evaluate what the barriers were to effective implementation and prioritise areas for improvement.

Measuring the hospital's performance

Patients can develop perioperative hypothermia in the pre and post operative environment or during a procedure when the body reacts to anaesthetic treatments. To begin with, implementing the NICE guideline was mainly the responsibility of anaesthetists but the PCH team found that some factors controlling body temperatures were outside their operating theatres.

Staff on wards, theatre nursing staff, clinical staff in theatre reception and staff working in post-operative recovery all had an important role to play in helping to keep patients warm and implementing the NICE guideline.

To carry out the audit, the team designed a survey questionnaire, based on the online NICE audit tool, to evaluate the pre-operative, intra-operative and post-operative stages. The project lead worked with operating department practitioners and the recovery team to collect completed surveys and record the audit data.

The audit data was then collated on a spreadsheet and analysed to identify the key stages in the pathway when patients needed to be kept warm, to prevent the onset of inadvertent hypothermia.

The challenges of keeping patients warm

The results of the audit showed that most of the changes in body temperature occurred during the transfer of patients from the wards, to the theatres, on to recovery and then back to the wards.

This posed a challenge because not all staff had access to the same warming equipment that anaesthetists had in theatre. It was also unclear who should have overall responsibility for keeping patients warm before, during and after surgery.

To implement the NICE guideline the PCH team is developing a policy, which ensures relevant teams are working together to keep patients warm. The hospital has identified the need to invest in more warming equipment and blankets to manage body temperatures and has met with the Local Health Board to see how they take this forward.

In future the PCH team will focus their efforts on tackling the environmental factors in the pre and post operative stages that can cause inadvertent hypothermia.

Contact: Dr Jonathan Sunkersing
Prince Charles Hospital
Junior Doctor
Email: sunkersingj@gmail.com
Telephone: 01685 721721