| Author | Year | Country | Objectives | Contribution | Data | Number of patients | Methodology | Conclusion |
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| *Kumin et al.* | 2019 | United Kingdom | Pilot study investigating forced air vs resistive fabric warming on postoperative infections in hemiarthroplasty patients | Providing direct comparison between FAW and RFW regarding surgical site infection | Collected April 2017 – September 2018. Primary endpoint; deep SSI. Secondary endpoint; superficial SSI, inadvertent perioperative hypothermia, mean duration of surgery, median duration of stay and quality of life measures. | 515 | Randomised multi-centre in 1:1 permuted blocks between FAW and RFW. Deep SSI and superficial SSI determined by independent board of reviewers blinded to allocation/ Analysis via EQ-5D-5L index value using stata command eq5dmap | No significant difference between warming techniques |
| Faizi et al. | 2015 | United Kingdom | Investigating association between lactate levels and admission body temperature | No previous studies at that point had evaluated association between lactate level and body temperature | Collected June 2011 – February 2013. Primary endpoint; lactate levels and tympanic temperature. Also collected | 1,162 | Retrospective multi-centre cohort study from the National Hip Fracture Database. Tukey's post hoc analysis performed. | Significant difference in age between hypothermic and normothermic groups. Significantly higher lactate levels in hypothermic patients |

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| | | | | | demographic data of age and sex | | | |
| Williams et al. | 2018 | United Kingdom | Investigating incidence of inadvertent hypothermia in hip fracture patients and checking associations with readmission and mortality | Little evidence delineates risk factors and outcomes with hip fracture patients and hypothermia | Collected June 2015 – June 2017.<br><br>Primary outcome; hypothermia rate.<br><br>Secondary outcomes; 30-day mortality, 30-day readmission rates.<br><br>Other data included demographic, anaesthetic and surgical variables. | 929 | Retrospective single centre cohort study.<br><br>Chi-squared analysis performed.<br><br>Binary logistical regression formed. | Hypothermia rates increased with age. Patients hypothermic pre-operatively were 1.9x more likely to be hypothermic leaving theatre.<br><br>Statistically significant higher rates of 30-day readmission rates in hypothermia patients.<br><br>There was a trend towards higher 30-day mortality in hypothermic patients although it was not statistically significant. |
| Gurunathan et al. | 2017 | Australia | Investigating patient journey from holding bay to PACU | Agrees with findings in larger trial by *Sun et al.* which | Collected December 2013 – July 2014. | 87 | Prospective observational study. | A significant drop of temperature occurs |

| | | | | investigated hypothermia rates in general surgery | Primary outcome; serial measurements of tympanic temperature.<br><br>Other data such as sex, BMI, ASA grade, anaesthetic category and fracture type were collected. | | SSPS data analysis used to summarise demographic and baseline characteristics.<br><br>ANOVA and T-test used within group differences . | whilst patients are in the holding bay.<br><br>1/3 of patients were hypothermic upon entering recovery. Although active warming is used there are still significant rates of hypothermia. |
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| Frisch et al. | 2016 | United States | Investigating intraoperative hypothermia's impact on hip fracture patients | First and largest study analysing impact of hypothermia on orthopaedic patients with regards to multiple outcomes | Collected January 2005 – October 2013.<br><br>Demographic data, surgery specific data, postoperative complications – surgical site infections, length of stay and 30-day readmission | 1525 | Retrospective chart study.<br><br>Univariate analysis performed via t test and chi-square test.<br><br>Multivariate logistical regression model built using clinically relevant variables. | Hypothermia was associated with increased rates of deep surgical site infection. Lower BMI and increasing ag demonstrated increasing association with hypothermia. |

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| Uzoigwe et al. | 2014 | United Kingdom | Investigating hypothermia and low body temperature and its associations with mortality in hip fracture patients | No previous study had explored prevalence and outcomes of hip fracture patients with hypothermia/low body temperature | Collected June 2011 – May 2012. Tympanic temperature, age, sex, ASA and survivorship. | 781 | Prospective cohort study. Univariate analysis conducted via Chi-square method. Logistic regression performed to adjust for cofounders. Kaplan-meier curves constructed and compared with log rank test | Correcting for cofounding factors, patients who were hypothermic had a 2.8 fold increase in the odds of mortality at 30-days. |
| Faizi et al. | 2014 | United Kingdom | Investigating hypothermia and low body temperature and its associations with mortality in hip fracture patients | Follow up from Uzoigwe et al. including a greater patient number. No previous studies have assessed using hypothermia as an independent predictor of mortality | Collected June 2011 – February 2013. Tympanic temperature, age, sex, AMTS and 30-day survivorship. | 1066 (incl. 781 from prospective cohort). | Retrospective cohort study plus patients from Uzoigwe et al. prospective study. Univariate analysis via ANOVA. Tukey's post hoc test was used to determine significant differences. Proportions compared with using Chi-squared. Multivariate regression performed. | Those with low body temperatures had an adjusted odd ratios of 30-day mortality that was 2.1 times that of euthermic patients. |