Background
Pyrexia is an evolutionarily conserved physiological response aiding pathogen clearance. It is also a key diagnostic sign with high sensitivity and specificity. Despite high incidence and prevalence in acute medicine, the definition and management of pyrexia are not standardised. Pharmacological pyrexia suppression has become routine practice, despite recent evidence of harm in certain clinical contexts.

Aim
To describe the incidence, prevalence, cause and management of pyrexia in an Acute Admissions Unit (AAU), correlating current practice with clinician’s knowledge and self-reported management.

Method
Service evaluation over 6 weeks (Mar-Apr 2013) in University College London Hospital AAU (56 bed ward admitting >300 patients/week). Bi-weekly data collection employing a piloted, self-designed proforma.

Design and distribution of a self-designed piloted questionnaire to ascertain clinician’s understanding of pyrexia and views regarding it’s management.

Results
28 clinicians and medical students responded to the questionnaire.

Wide variation amongst clinicians about both the temperature that defines pyrexia (mode = 37.5 °C, range = 1.5 °C), and that which requires suppression/treatment (mode = 38 °C, range = 2 °C) was observed.

Knowledge of the differential diagnosis of pyrexia increased with clinical experience. Patient discomfort was the most frequently identified as a trigger for pharmacological pyrexia suppression (82%). The importance of treating pyrexia in patients with neurological or myocardial injury was recognised by only 54% and 39% of respondents.

First treatment chosen for new fever on AAU:
Clinicians’ opinion
- Paracetamol PO
- Paracetamol IV
- Aspirin
- NSAID
- Cold IV fluids
- Surface cooling

Correlation between time working with NHS and knowledge on pyrexia differentials

Discussion
There is little agreement among medical professionals about what temperature constitutes pyrexia. Temperatures triggering anti-pyretic prescription varied widely (>1.8 °C range). Self-stated views do not equate with actual clinical prescribing practice.

Pyrexia was ubiquitously suppressed, always without stated indication. Paracetamol was often administered regularly and for extended periods despite pyrexia cessation risking accumulation with resultant hepatotoxicity. New pyrexia may also be obscured.

There are some instances where treating fever has shown to improve outcomes – in paediatrics, in neurological injury, and in myocardial injury. However, fewer doctors and medical students thought that treating these were important compared to managing perceived patient discomfort, despite lack of evidence for the latter.

Limitations: This project only looks at AMU practice in one hospital over a few months, representing the knowledge of a sample of staff at a snapshot in time. The questionnaire and proforma were in-house designed and have not been validated.

Conclusion
There is currently great variability and inconsistency in clinical knowledge and practice regarding the aetiology, definition and management of pyrexia.

Pharmacological pyrexia-suppression should neither be performed universally, nor regarded as routine practice. Indiscriminate prescription and/or administration without stated indication, trigger temperature and review date may be deleterious in certain clinical contexts, and mask an important diagnostic sign.

Recommendations:
(1) Draw up local and regional guidelines defining pyrexia and describing when and how it should be managed.
(2) Further research is required to quantify the benefits and harms of treating pyrexia in humans.