

**P0269**

**Poster Session I**

**Antibiotic interactions, formulations and administration**

**RECORDING OF WEIGHT IN PATIENTS BEING ADMINISTERED ANTIBIOTICS WITH A NARROW THERAPEUTIC INDEX – A PROSPECTIVE CROSS-SECTIONAL STUDY FROM ACUTE CARE**

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**Objectives** For patients admitted into acute hospitals body weight is an important measure for the prescription of a large number of drugs. Patient weight needs to be recorded and monitored during hospitalisation for a) accurate drug dosing, especially for medicines with a narrow therapeutic index e.g. gentamicin and vancomycin; b) assessment of response to therapy e.g. diuretics; and c) as an indicator of organ function. Here we report the practice of weighing and recording of patient's body weight on admission in a large multi-site university hospital in West London and the relationship between body weight recorded and the prescription of antibiotic drugs where it is essential to have the body weight of the patient.

**Methods** A prospective cross-sectional study was conducted in three sites of a multisite 1500 bed teaching hospital in West London. Data were collected in two consecutive episodes during March 2011 – September 2011 and July 2012–August 2012, from all adult admissions units and medical and surgical wards. Data from each ward was collected on a single day to provide a point prevalence snapshot of patient episodes. All patients present on the ward at the time of data collection were included in the study. Patient medication charts, nursing and medical notes were reviewed for evidence of weight and height records during current admission to hospital. The recorded height and weight were extracted together with all the medication prescribed for the patients.

**Results** Data was collected on 1045 patients. Analysis was performed on 1012 patients (33 patients excluded due to incomplete data). There were three major sources in which the data on weight could be recorded: nursing notes, medical notes and medication charts. Of the patients included in the analysis, 46% (465) did not have their weight recorded on any hospital documentation. At least one intravenous antibiotic was prescribed for 23% (236/1012) of patients, 38% (89/236) of which were on an agent that required therapeutic monitoring and dosing based on weight. Of the number of courses of narrow therapeutic agents prescribed 39% (35/89) did not have weight recorded for the patient. Intravenous vancomycin was the most commonly occurring antibiotic requiring therapeutic monitoring that was prescribed. In total 61 patients were receiving intravenous vancomycin and of these 44% (27/61) did not have their weight recorded.

**Conclusion** Despite the clinical importance of body weight measurement and the simplicity in its measurement it is poorly recorded in hospitalised patients. In antibiotic dosing the need to keep drugs within the narrow therapeutic index, in addition to ensure efficacy and reduce toxicity is of significant importance for mitigating the emergence of resistance. The risk of development of antibiotic resistance is increased if antibiotic levels fall short of the minimum inhibitory concentrations.