R–002 The impact of antibiotic prescription in surrounding community on the incidence rates of nosocomial extended-spectrum β-lactamase (ESBL)-producing strains in hospitalised patients – QUB

The aim of the present investigation is to assess the impact of outpatient antibiotic prescription on ESBL incidence rates in hospitalised patients at the individual patient level. This study will be carried out in two phases. During the first phase, matched controls will be used. The main objective of this phase is to examine if any particular antibiotic prescribed in primary care lead to an increased hospital detected ESBLs. During the second Phase, controls will be selected randomly. The focus of this phase will be to determine other risk factors (in particular those used as matching criteria in phase 1) that may be associated with hospital detected ESBLs. In both phases, paediatric patients (i.e. patients under the age of 16 years) and patients with scheduled admissions will be excluded.

Following this, the case and the two sets of control patients will be linked to the Health and Social Care Business Services Organisation (BSO; Northern Ireland) records, to determine antibiotic use over the previous 12 months. To identify any association between previous antibiotic exposure and hospital detected ESBLs incidence rates in the hospitalised patients, a univariate analyses will be conducted. Following this, a backward multivariable logistic regression will be used to identify significant risk factors.