

TCS/17/15 – MIDAS-RTI: Measuring the impact of Improved Diagnostics on Antimicrobial Stewardship in Respiratory Tract Infection

Respiratory tract infection is a very common cause of broad-spectrum antibiotic prescription in hospitals in the UK. Over-use of broad-spectrum antibiotics is a significant problem in healthcare because it drives antibiotic resistance and exposes patients to increased risk of *Clostridium difficile* (“CDiff”) infection and drug toxicity. Therefore, reducing broad-spectrum antibiotic use is a key target of hospital antimicrobial stewardship programmes. Narrower-spectrum antibiotics can be chosen to treat respiratory tract infection if a specific pathogen is identified by laboratory testing. However, current diagnostic methods are insensitive and in practice, changes in antibiotics rarely occur. We believe that using improved diagnostic tools will help doctors to reduce broad-spectrum antibiotic use in respiratory tract infection. This study aims to use more sensitive and faster tests to rule out infection with so-called “atypical respiratory bacteria” and therefore to avoid unnecessary use of antibiotics such as macrolides in these patients.