"Different strokes": a co-relational modelling study of common (community and acute hospital) HCAI reduction targets, variable dynamics and antibiotic prescribing

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Background: Reducing healthcare associated infections (HAI) in hospitals & community has been priority for department of health(DH). Blackpool Teaching Hospitals[BTH] covers Blackpool PCT & North Lancashire PCT. BTH works in partnership with its primary care and operates a highly successful HAI programme, including antibiotic stewardship and infection control across whole health economy. We present here the strategic planning, joint initiatives and results of reductions in MRSA, C. difficile and antibiotic prescribing.

Methods: Retrospective review of database 2007-till date analysing trends in MRSA and CDI across acute trust and primary care; trends in antibiotic prescribing across primary care from primary care pharmacy database; review of joint interventions across primary care and acute trust. Interventions: Acute trust specific: Daily Microbiology ward rounds; rootcause analysis of all MRSA and CDI; antibiotic compliance audits; HAI surveillance incl. SSI surveillance; MRSA PCR screening of all emergency admissions and prompt infection control interventions; antibiotic and infection management committee led initiatives; teaching, training and teamworking with clinical teams. Joint acute trust-primary care initiatives: Monthly consultant microbiologist/general practitioners "bridging the gap" lunch time study sessions involving educational content delivery followed by prescriber led-discussion/questions; microbiologist led rootcause analysis of all CDI across primary care and acute trust; introduction of a revised primary care antimicrobial formulary; engagement with community pharmacy and infection control staff in "Whole Health Economy" meetings; an increasing volume of telephone consultations with primary care clinicians; GP trainees in hospital posts taking on leadership of antimicrobial stewardship audits; and an open invite to relevant primary care staff to the hospital antimicrobial and infection control committee meetings. The proportion of total antibacterial prescriptions of quinolones, cephalosporins or co-amoxiclav was assessed at the start and end of the period. A basic regression analysis was used to look for a significant downward trend. Conclusions: HAI travel freely between community & hospital. There is variation in the dynamics & resources of PCT & hospital ICTs. However, the key to a successful joint HAI programme is team working &complimenting expertise, joint initiatives & real-time monitoring of the HAI to meet new challenges.