Building Rapid Interventions to reduce antimicrobial resistance and over-prescribing of antibiotics (BRIT)

Information-led interventions to optimise antibiotic prescribing

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There is major interest across Greater Manchester in reducing the prescribing of antibiotics and antimicrobial resistance. The project BRIT aims to achieve this by improving data analytics and its use by NHS staff, by developing the capabilities to identify interventions and target population with the potentially highest impact and by implementing at least two simple interventions to reduce antibiotic prescribing.

Figure 1 provides an overview of BRIT and the activities in the different phases of implementation (phases 1 and 2 are planned to occur within the next two years). There will be the following work packages in BRIT

1. **Advanced analytics of drivers of antibiotic prescribing**
   To improve understanding of the drivers and variability of antibiotic prescribing (including type and duration) such as clinical and non-clinical factors (such as socioeconomic status), local resistance patterns and the organisation of the healthcare system

2. **Qualitative research of drivers**
   To evaluate qualitative drivers for antibiotic prescribing in general practices (comparing high to low prescribing practices in GM)

3. **Survey of NHS stakeholders of needs**
   To provide understanding of the views of NHS staff/stakeholders on data/information needs and views on possible effective interventions

4. **Survey of perceptions of patients with unexpectedly higher level of antibiotic prescribing**
   To provide understanding of beliefs for antibiotic prescribing and understanding of natural history of disease in patients identified through GP records
5. **Actionable analytics and data presentation**
   To select the data providing direct insight to NHS staff and to visually present these.

6. **E-lab with dashboards and NHS user training**
   To provide a platform for NHS users to access data / results, share / discuss action plans etc, obtain patient communication material and staff training (e.g. STAR training).

7. **Simple interventions in practice**
   To implement simple interventions to reduce antibiotic prescribing.

8. **Stakeholder engagement**
   To identify and engage key stakeholders early in the programme. Key stakeholders will include GP physician leadership, GP commissioning / NHS, patients and Infectious disease consultant, public health community leaders.

9. **Data and IT improvements**
   To develop (and implement where feasible) improvements in data access and IT improvements (such as decision support for antibiotic prescribing).

10. **Patient communication materials**
    To develop / re-use communication material on antibiotics including analytical information where preferred.

11. **Personalised advice for antibiotic use**
    To identify the evidence required for personalised decision-making (such as risks and benefits for particular patient groups, type and duration of antibiotic and local resistance levels.)