

## Key Messages

### *The Challenge*

Antibiotic consumption is a major modifiable driver of antibiotic resistance (ABR), a serious threat to public health globally. Primary care accounts for most antibiotic prescriptions, and 30-50% of these prescriptions are considered unnecessary. Acute respiratory tract infections (RTIs) are the most common reasons for patient encounters and inappropriate antibiotic prescribing in primary care, linked to the development of drug-resistant bacteria at the individual, community, and national levels. The unnecessary and inappropriate antibiotic use increases the incidence of adverse events, re-consultations, and complications and consequently increases healthcare costs. It has been estimated that if no effective actions are taken, by 2050 ABR could become the leading cause of death, surpassing cancer. C-reactive protein (CRP) point-of-care test(-ing) (POCT) is increasingly being promoted to reduce diagnostic uncertainty and enhance antibiotic stewardship. CRP-POCT's use in limiting ABR could be better established through best-practice guidelines. CRP-POCT can enable clinicians to discern inflammation due to bacterial from non-bacterial infections and identify the patients who can benefit the most from antibiotics. This, however, can be a challenge due to the following:

- data on antibiotic consumption (for RTIs) from Swiss primary care are limited, which makes it challenging to identify the strategies that are best to reduce prescribing;
- documentation of the use of CRP-POCT to reduce unnecessary antibiotic prescribing for RTIs in Swiss primary care is limited;
- clinical guidance on the use of CRP-POCT to reduce unnecessary antibiotic prescribing for RTIs in primary care is lacking;
- advice for physicians on how to deal with patients' pressure and the decision of not prescribing antibiotics, in the current clinical guidelines, is lacking.

### *Options to address the challenge*

1. Strengthening clinical guidelines by integrating CRP-POCT into the clinical pathway to support diagnostic decisions and guide antibiotic prescribing for RTIs.
2. Strengthening the integration of CRP-POCT by incorporating guidance on interpreting CRP concentration levels to support diagnostic decisions and guide antibiotic prescribing for RTIs.
3. Strengthening physicians prescribing decisions by incorporating advice on how to deal with patients' pressure and the decision of not prescribing antibiotics to reinforce physicians' confidence and enhance the reduction in antibiotic prescribing.

### *Implementation Considerations*

Potential windows of opportunity to consider include:

- integrating CRP-POCT as a target topic in local and national strategies already in place to enhance antibiotic stewardship;
- integrating the use of CRP-POCT and CRP cut-off guidance as part of the clinical examination in the clinical pathway of relevant local and national guidelines, e.g., StAR (Strategy on Antibiotic Resistance)-SSI (Society of Infectious diseases) guidelines, EMR, INFECT by ANRESIS;

- involving both GPs and specialists in the development and update of prescribing guidance with the target topic, e.g., a collaboration between the Swiss Society of General Internal Medicine (SGAIM) and the SSI;
- developing prescribing guidelines for GPs by GPs, which integrate the target topic, e.g., through SGAIM;
- adding the topic of patient-physician communication and shared-decision making as part of the national public information campaigns and in flyers for patients;
- adding the topic of how to deal with decisions of non-prescribing and patients' pressure or expectation to receive antibiotics in the clinical pathway, e.g., decision aids of rapid access;
- distinction between outpatient data on national surveillance, especially for primary care, to enable feedback for physicians and on the performance of strategies.

Potential barriers to implementation that should be considered include:

- high practice volume features such as time pressure and time constraints, increased workload and increased working time;
- a lack of involvement of general practitioners (GPs) in the development of prescribing clinical guidelines;
- a lack of a system that allows rapid access to information and guidance, and a lack of a back-up support system for doctors;
- a lack of a systematic approach supporting the development of clearer guidelines that regularly and timely integrate the up-to-date body of evidence;
- the limited evidence on intermediate CRP values to differentiate all types of RTIs, especially a lack of a strategy to deal with results from intermediate CRP values;
- a lack of data on antibiotic consumption exclusive to primary care could interfere with the proper quantification of antibiotic use and, thus, with the monitoring and achievement of implemented strategies.