

WHY consumption should be monitored

- Surveillance of Antimicrobial Consumption (SAC) is the „speedometer“ for antimicrobial use
- SAC is a requirement for **antimicrobial stewardship programs**
- SAC is recommended in **evidence based guidelines** for antimicrobial stewardship (DELLIT, BARLAM, deWITH)
- SAC shows trends in antimicrobial use at the local, national and global level
- SAC may trigger **changes of empiric treatment**
- SAC may demonstrate **trends** over time
- SAC may detect **hot spots of inadequate use** of antimicrobials

HOW data should be COLLECTED

- **Consumption data** is collected **at the product level** from pharmacy computer systems or electronic prescribing systems
- **Bed occupancy data** are provided by the hospital administration
- Data should be collected **at the level of** wards or medical units
- Intensive Care Units should be considered separately
- SAC data should be calculated in Defined Daily Doses (DDD) or **Recommended Daily Doses (RDD)** as the numerator and 1000 patients per day or 100 patients per day as the denominator
- Results are a measure for **density of antimicrobial use**
- There is no well accepted measure for **pediatrics** so far

HOW data should be REPORTED

- Use data should be reported **on a regular basis** (at least once a year, preferably quarterly).
- Use data should be reported and aggregated to the level of the hospital and medical department, but also be available to the level of the ward
- Use data should be reported and aggregated according to ATC codes (or other systems, if established on a national level)
- DIY is an option, **but well established surveillance systems on the national level are strongly recommended**
- **Benchmarking data** may provide additional information, but should be interpreted with caution
- The **cost** of antiinfective therapy should also be reported (local level only)

Pitfalls

- Metrics are not standardized on an international level
- Using DDD is much accepted, but results in an overestimation of consumption for some antiinfectives
- Mixed specialty wards may be responsible for relevant inaccuracy of results
- Base data must be kept up to date
- Dose reduction in renal failure may cause inaccuracy
- Pediatric departments should be excluded
- Local trends are more important than benchmarks
- International benchmarks should be handled with caution for methodological differences
- Data quality is critical, clearing is recommended

6 key steps to SAC in hospitals

- 1 Look at your data
- 2 Standardisation is key
- 3 Join a national, non commercial surveillance system
- 4 Keep your base data up to date
- 5 Look at your local trends first
- 6 Don't overestimate the benchmarks