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HOW TO ORGANISE TYPING: LOCAL – NATIONAL – EU – GLOBAL

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Typing of micro-organisms is pivotal to the interpretation of many aspects of Antimicrobial Stewardship strategies. An important common principle is that typing must be fit for purpose. For example it is most commonly used to explore epidemiological hypotheses and should never be an end unto itself ("epidemiological typing") which it can often become judging from the many papers I have refereed for several international journals. We have developed guidelines of investigating complex interventions which include a section on typing and may be of value to readers (see Stone et al and ORION).

Taking hospital and healthcare associated community acquired (e.g. nursing homes) infections (HCAIs) as an example, it is critical that there is an interaction between the laboratory, the infection control team and relevant healthcare workers to ensure that the epidemiology (time, place, person) is explored and that appropriate isolates are submitted for typing. This same principle will extend to other fields e.g. *Legionella* and food poisoning outbreaks. In community related infections then other strategies are appropriate e.g. sentinel based surveillance.

Local typing can be simply based on biochemical and antimicrobial susceptibilities available to the clinical or other front line laboratories. These increasingly are interested in performing additional typing especially as these become more applicable (e.g. sequenced based typing or newer electrophoretic systems) at a local level and as resources increase to so do. However, not everyone has access to such systems or local sequencing services or the resources to send DNA or isolates elsewhere. An important principle is that whatever the typing methods may be there should be central referral of data of organisms to ensure that these data inform the regional/national situation. Systems to do this will vary as appropriate depending on the size and population of the country, its resources and other characteristics e.g. patient movement, extent of food importation, international transfer of patients and healthcare workers, immigration, turmoil and so on.

A major area that needs to be discussed is the organisation of reference services. This is a timely discussion as the EU is currently debating this issue. The EU is of the opinion that reference facilities should exist in Member States (MS). In another project a consensus was explored throughout the EU on standards and performance indicators for hospital acquired infections (HAIs): these included the need for reference and local laboratory support. However, there is currently no definition of a reference laboratory, and the staffing varies throughout the EU. For example there is no job specification or agreed competencies for the head of a reference laboratory, the person in charge currently can be someone with a business, medical or a scientific degree. The facility can be in a university or a public health centre.

An important principle for me is that it is receives adequate government funding. There should be a system to ensure that it is reviewed regularly regarding its public health outputs and whether resourcing is appropriate. In some countries other centres can bid for the funding and in others there is an increasing requirement for interactions between academia and such centres. A lot of the organisational aspects of a reference of a reference laboratory are covered effectively in an accreditation approach. This would ensure that there are systems in place to advise "customers" (there can be many e.g. laboratories, politicians, patients, the general public) on good practice e.g. referring isolates to the laboratories. There should be good internal

and external quality assurance assessments requiring national (e.g. NEQAS) international (e.g. SeqNet, HARMONY, EWGLI, EARSS) systems.Typing underpinning national and international surveillance systems

There are many elements that need to be considered for these. There should be agreed and regular review of protocols for case definitions, surveillance methods, typing referrals, standardised or harmonised laboratory methods (e.g. typing/virulence determinant/identification, antimicrobial susceptibilty), data analysis and dissemination strategies. They include early warning systems (e.g. *Legionella* "EWGLI"), food-poisoning related (Enternet), SARS, Influenza, Glycopeptide resistant *Staphylococcus aureus*), sentinel surveillance systems (e.g. EARSS), holistic systems (e.g. Denmark's staphylococcal bacteraemic referral systems) or systems that are informed by referred isolates (e.g. Nordic countries' MRSA system).

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Panel 3 sunuları

ADÖLESAN AŞILAMASI

Yöneten: **Zafer KURUGÖL**

- Adölesan immünizasyonu
  Ateş KARA

- Human papillomavirus aşıları
  Ayper SOMER