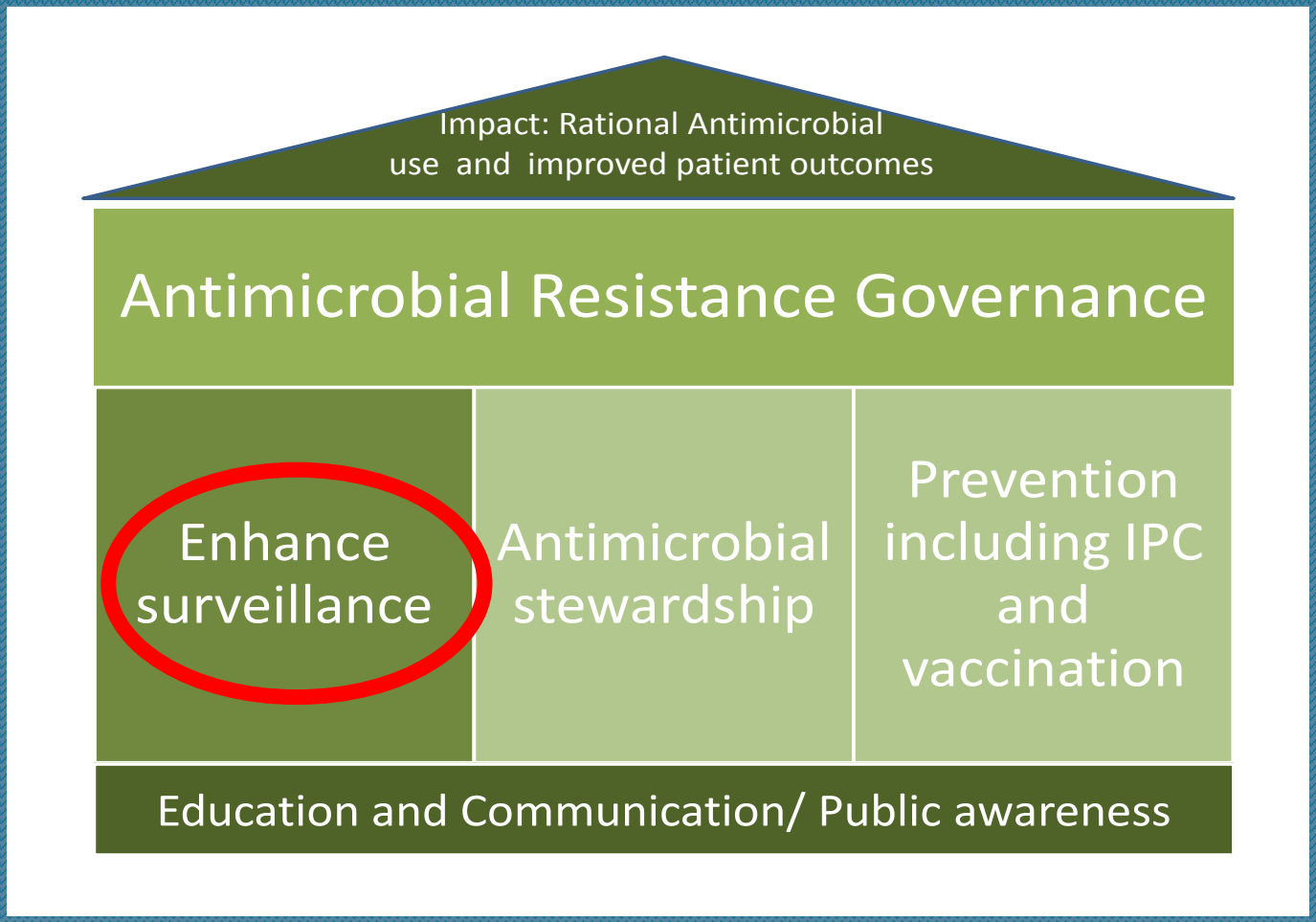
AMR Surveillance Overview

Chetna Govind

Major driver to strengthen SASCM surveillance



Source: Antimicrobial Resistance National Strategy Framework 2014–2024 document

What is currently in place?

A situational analysis of current resistance surveillance and reporting

	Current	Target
Population under surveillance	Sentinel hospitals All hospitals and community doctors	Sentinel & other hospitals, plus community
Surveillance	Passive	Active
Case Detection	Voluntary	Statutory
Data Level	Specimens/isolates	Cases
Data Sources	Stand alone lab data	Linked laboratory, clinical and pharmacy data sets
Minimum Dataset	Basic lab data ESKAPE pathogens and candida UTI isolates	Unique ID, Case Definitions, Diagnoses, Length of stay, community vs hospital acquired
Surveillance reporting data	Aggregate Reporting by sector	Reporting to facility level
Reporting Frequency	Quarterly / annual	Immediate (real time)

Functions of Surveillance

- to collect comparable, representative and accurate AMR data
- monitoring changing patterns of resistance (cornerstone objective) - influence prescribing decisions
- Dissemination of this surveillance data in a timely manner to public health officials, clinicians, and others who may make decisions based on an analysis of the data
- providing early warning of emerging problems
- identify and anticipate gaps in availability of existing drugs
- targeting and evaluating prevention and control measures
- Can provide an indication of the success of an intervention

Goals of Surveillance

- Identify the components of a national AMR surveillance plan and the roles of partners in its design and implementation
- Determine which surveillance activities should be conducted routinely at national, regional, or local levels and which may require specialized projects
- Ensure that the national AMR surveillance plan is consistent with local and national surveillance methodology and infrastructure that currently exist or are being developed
- Develop standards and methodologies
- Develop standards for reporting quantitative resistance data (e.g., minimal inhibitory concentrations or zone diameters) in ways that will detect decreased susceptibility. These standards are necessary because numerical AMR test results reported nonquantitatively (e.g., as susceptible, intermediate, or resistant) as “susceptible” may mask an emerging AMR problem, i.e, microbes with a small decrease in susceptibility may still be classified as susceptible.
- Confidentiality of data

Additional Points("Nice to have")

- Conduct post-marketing surveillance for the development of resistance to critical and newer antimicrobial drugs. Surveillance should be linked to information on drug use, and criteria should be developed to allow a prompt response to a finding of increased resistance associated with a specific pattern of use (restrictions on use depending on the extent of and reasons for emergence of resistance)
- Facilitate the collection of AMR surveillance data on pathogens for which cultures are not routinely obtained, either because the infections are empirically treated without laboratory diagnosis or because they are diagnosed with non-culture tests.
- Enhance availability of isolates of drug-resistant microbes to researchers

Challenges to Meet Future Targets

- **Funding** – for a linked database. And personnel. To overcome this, efforts should start at pilot sites that already have unique identifiers (which is needed for line list data) in use to test out such a system, focusing purely on lab-based surveillance.
- **Information technology** – major barrier for laboratories. Possible IT resources exist within NICD, but need for a data manager is costly. Movements towards the digitalisation of surveillance
- **Ethics and confidentiality** – who owns the data? Ethics clearance required or a clear mandate from NDOH? Reach agreement on how to share their data in the most appropriate way, in order to manage it safely and effectively
- **Quality** – data policy and quality issues; using standardized and reliable laboratory testing methods; inter-laboratory variations in practice in areas such as sampling, isolation, identification, testing and reporting.
- **Technical(??)** - this challenge is in some respects linked to that of diagnostics. The more accurately and widely we are able to collect diagnostic laboratory data, the better our surveillance will be. However, access to the requisite laboratory technology to conduct tests is currently variable.

Questions & Discussion