



Antibiotics sensitivity of microorganism causing nosocomial infections

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Tea Koiava

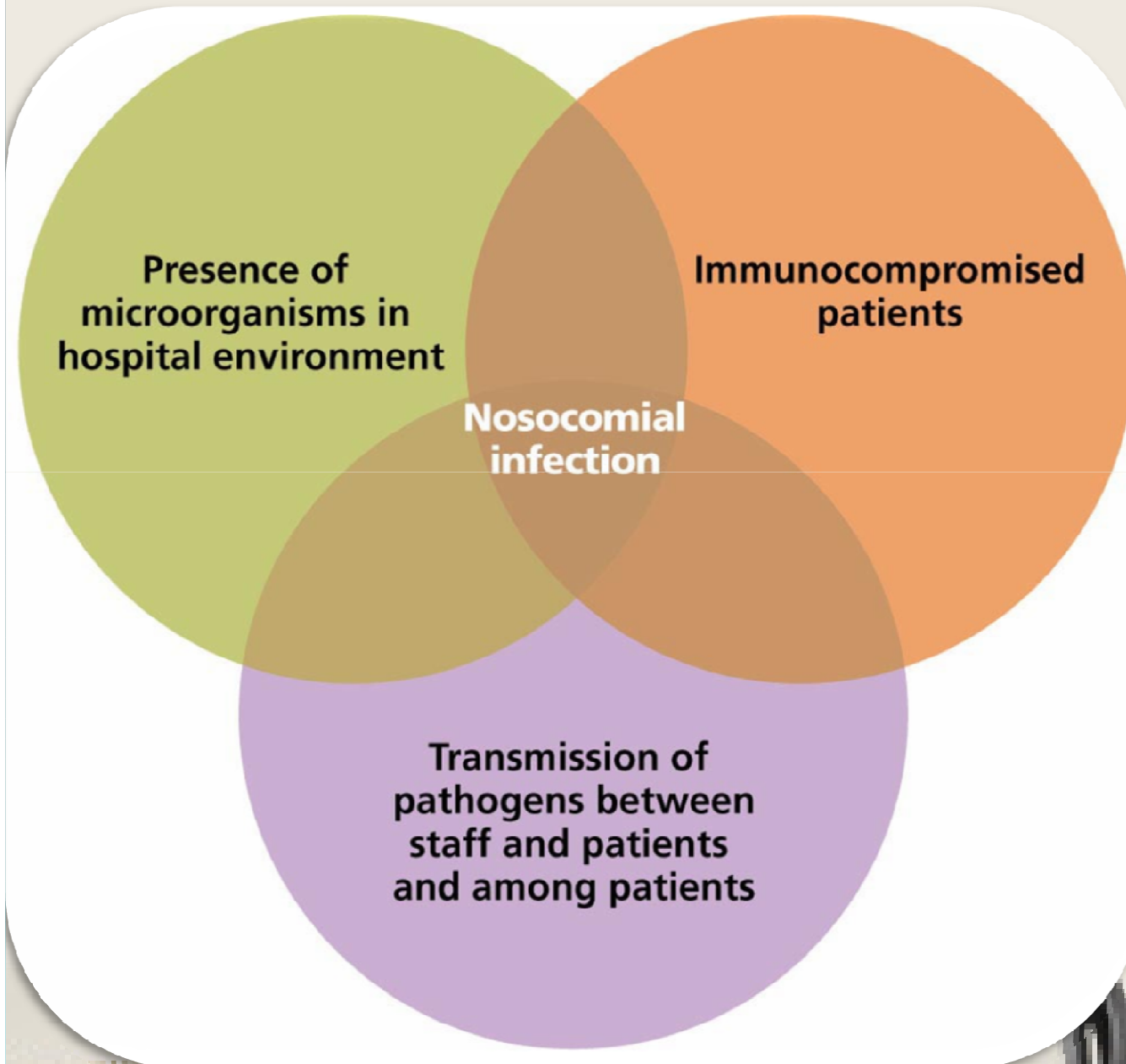
Batumi Shota Rustaveli State University, Georgia



Internal infections

- The most frequent reason for a mortality of hospital patients is internal infections which are associated with general medical manipulations;
- 2 million people become ill from this infection and 5-10 % of them die annually.

Reasons!!!



Nosocomial infections

...are a major problem today, not only in developing countries but also in the major developed countries;

- ⊗ Antibiotic use is one of the important factor in the development of nosocomial infections;

microorganisms causing nosocomial infection in most cases belong to the **ESBL** producing bacteria and are resistant to several antibiotics

ESBL bacteria vary
according to regions and countries

Pseudomonas aeruginosa

Klebsiella

E. coli

Acinetobacter

are mostly found among the agents of
the infection.



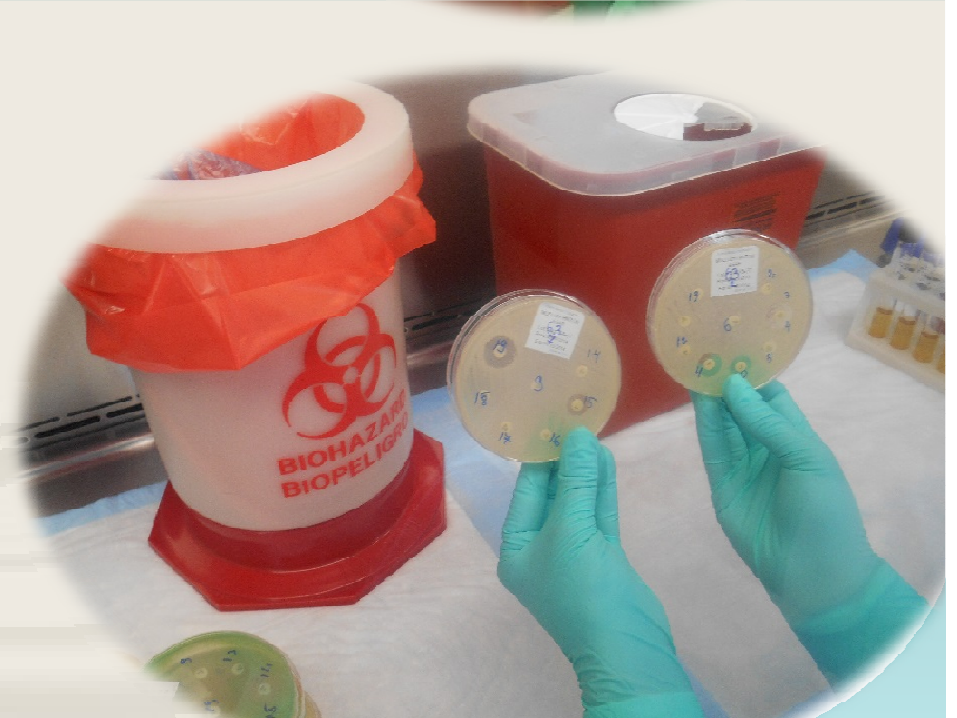
The identification of bacterial spectrum of the etiologic agents of these infections is incompletely carried out and the antibiotic therapy has been determined spontaneously

The goal of our research was

- ❑ identify the causative bacteria of nosocomial infection in several hospitals in Adjara
- ❑ to study the profile of antibiotic-resistance.

Materials

- Sputum
- Urine
- Blood
- Biological Fluids



Resultes

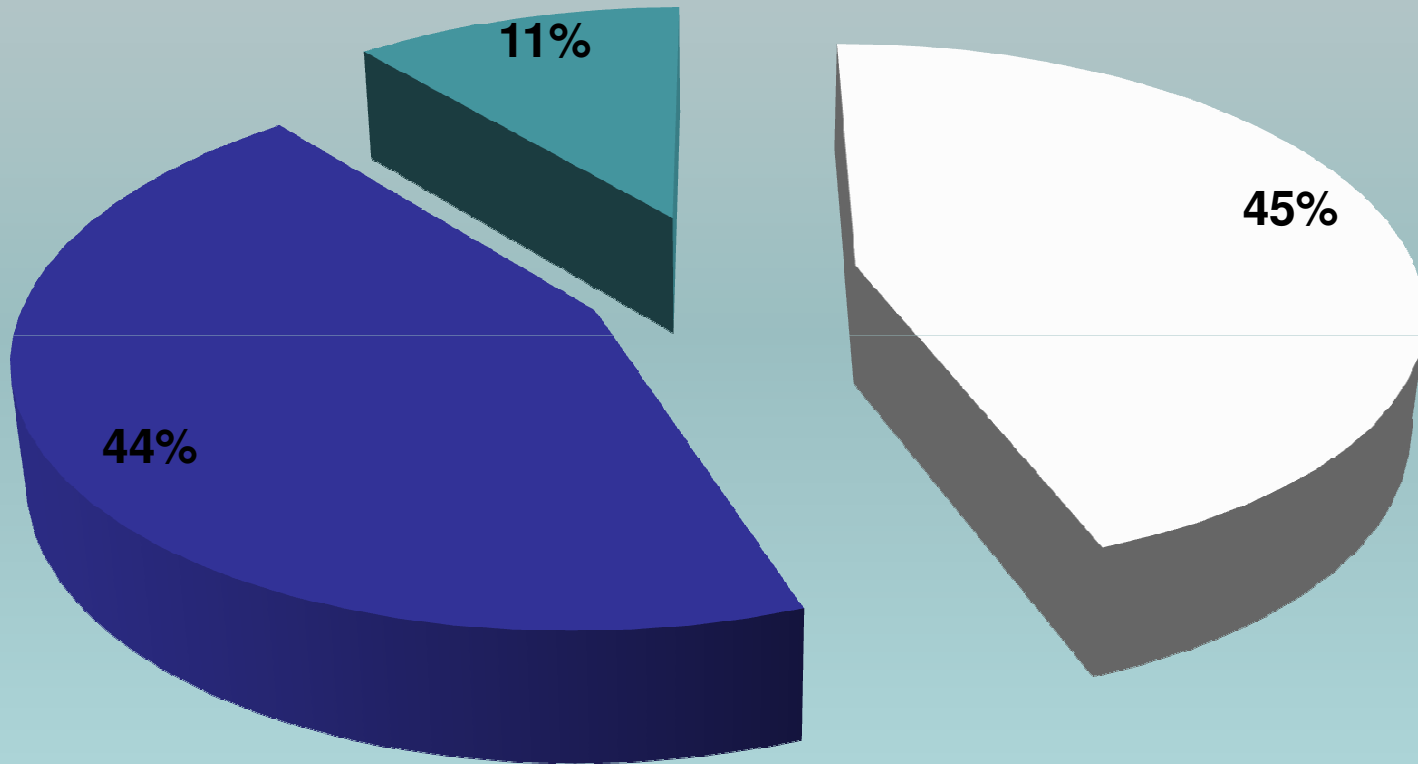
- 100 samples were taken the first 48 hours and totally examined.
- 81 from that were positive for bacteria

Most numerous among the agents of nosocomial infection were

- **Acinetobacter**
- **E. coli**
- **Pseudomonas Aeruginosa**
- **Klebsiella Pneumonia**

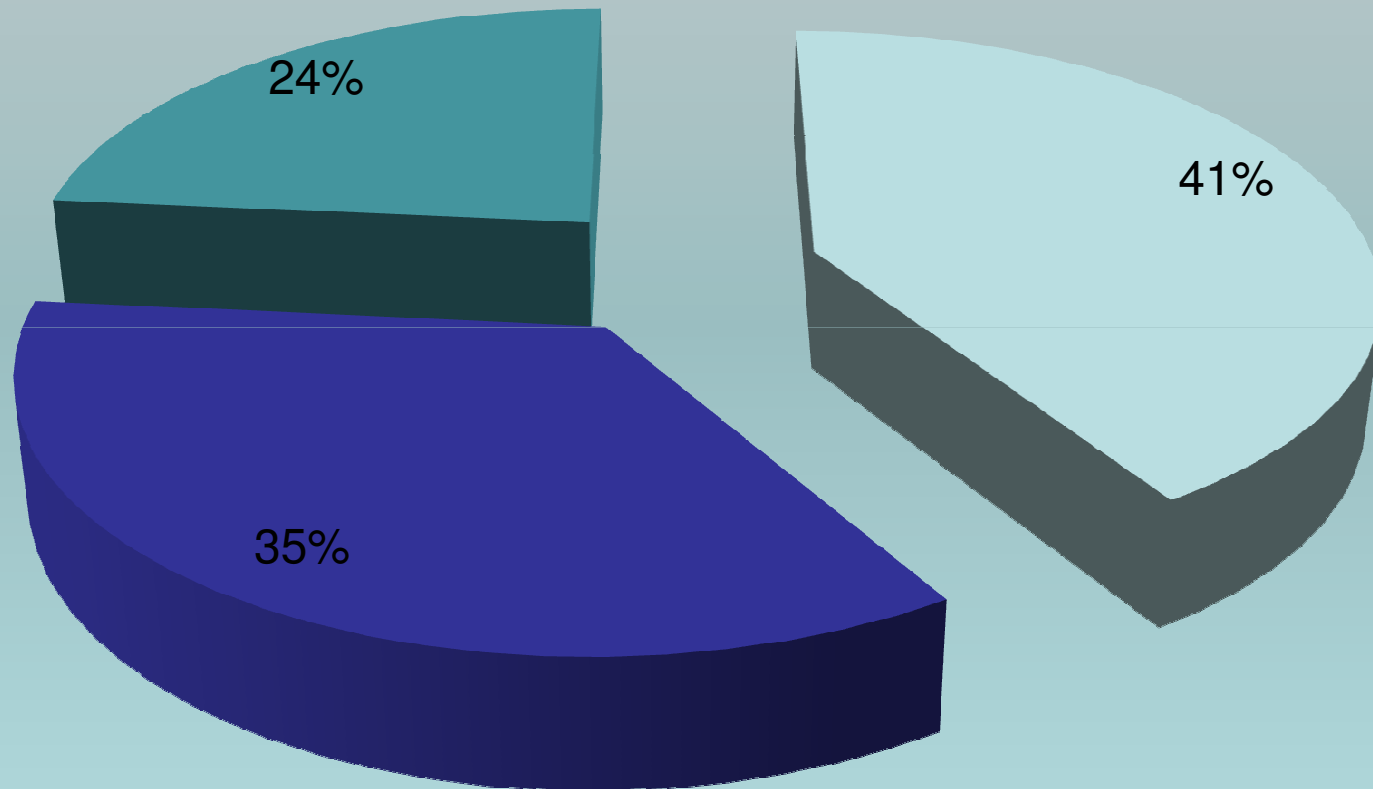
Urine

■ *Sterile* ■ *Kl. Pneumoniae* ■ *Ps. Aeruginosa*



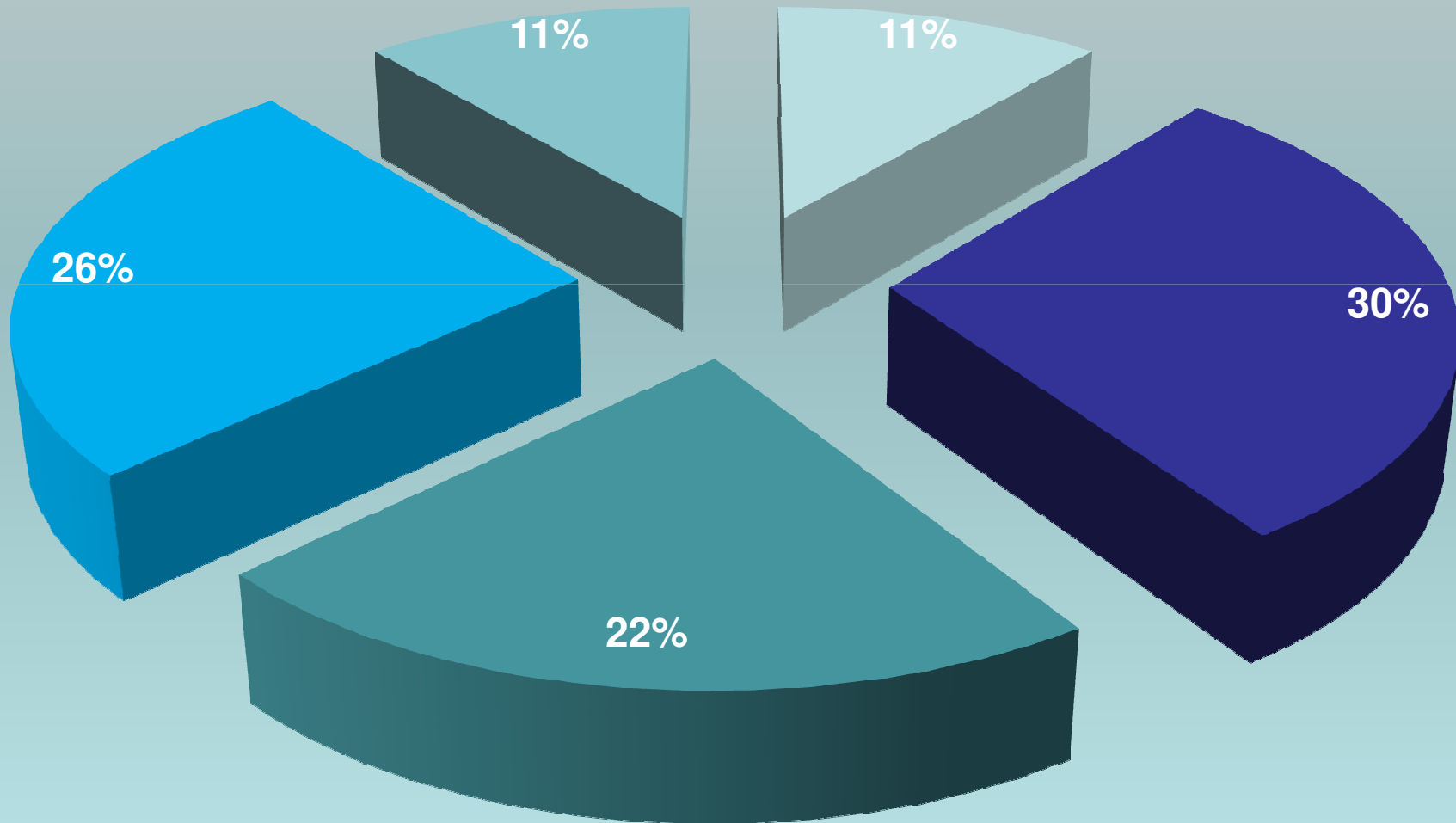
Biological fluids

■ *E.coli* ■ *Acinetobacter* ■ *Ps. Aeruginosa*



Suptum

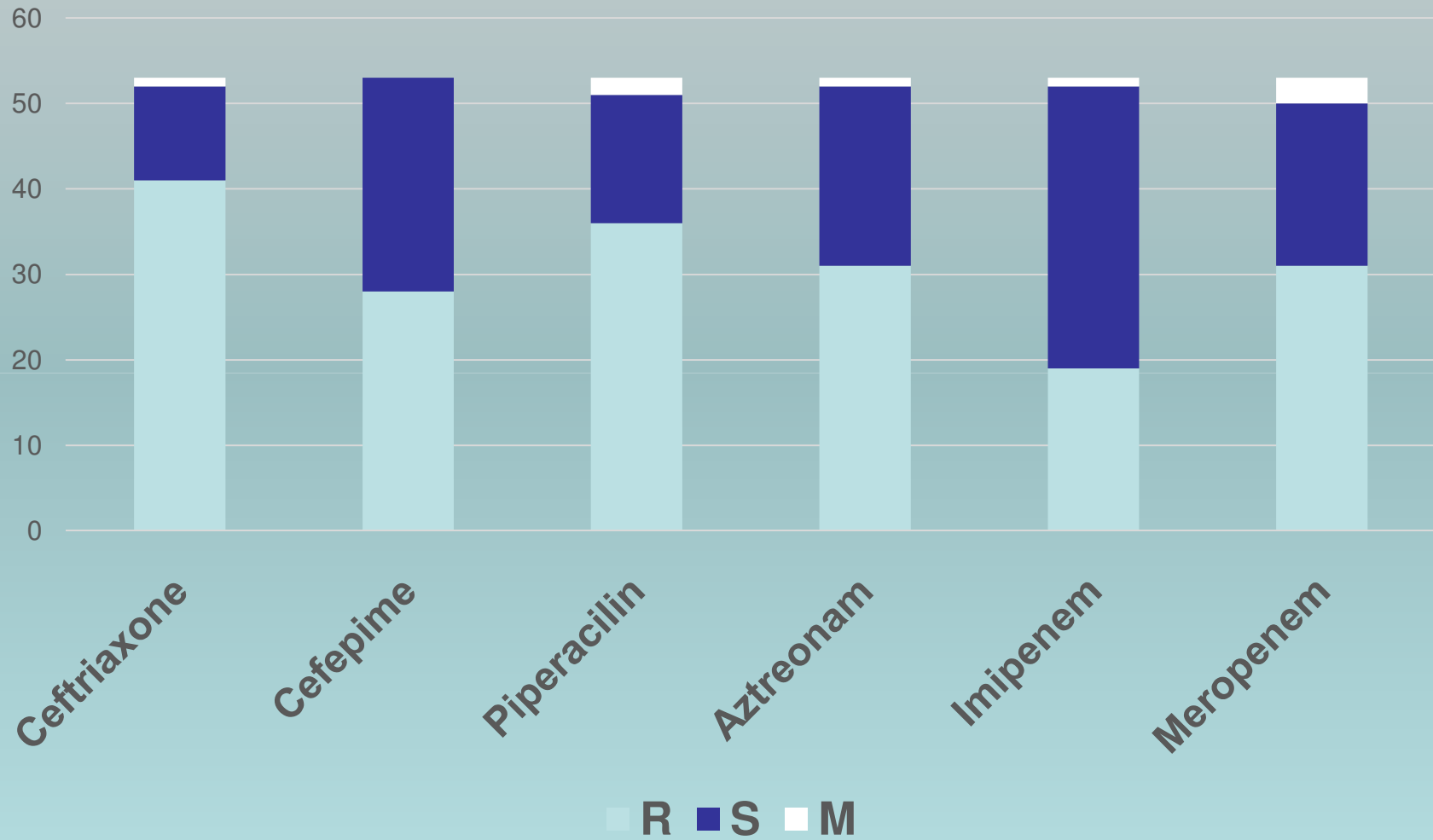
■ *E.coli* ■ *Acinetobacter* ■ *Ps. Aeruginosa* ■ *Kl. Pneumoniae* ■ *Kl. Oxytoca*



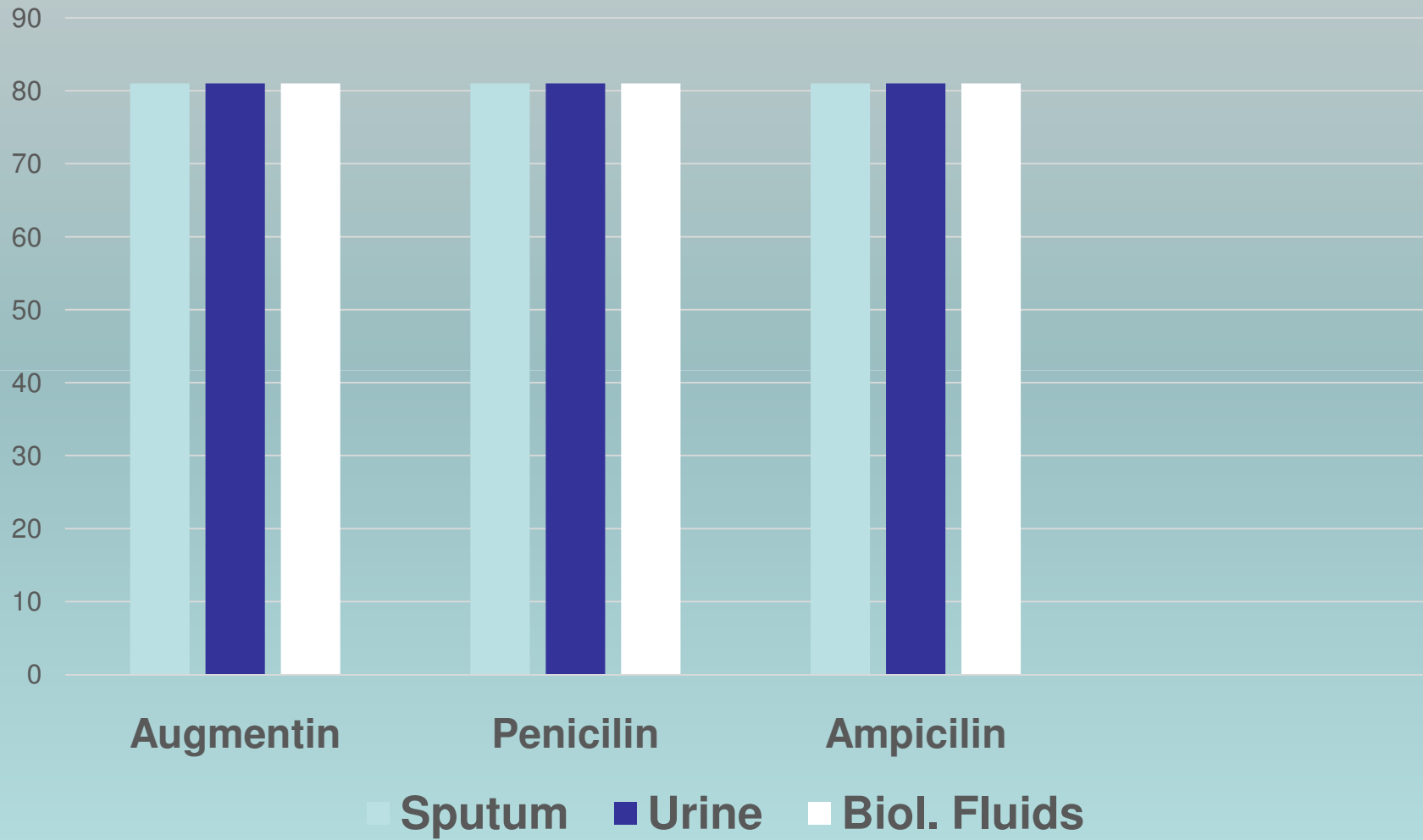
Antibiotic Resistance Profile

- Cefalosporine Ceftriaxone,
- Cefepime,
- Piperacillin,
- Aztreonam,
- Augmentin,
- Penicillin,
- Oxacillin Ciprofloxacin,
- Colistin,
- Imipenem,
- Meropenem,
- Gentamicin,
- Amikacin,
- Ampicillin / sulbactam,
- Co-trimoxazole, Kloramfenikol,

Antibiotic Resistance Profile



Antibiotic Resistance Profile



All isolantes of the gram-negative bacteria were resistant to

✓ Augmentin

✓ Ampicilin

✓ Penicilin

Conclusions

- ✓ Augmentin, Ampicilin, Penicilin are antibiotics using massively in Georgia;
- ✓ Supposedly use of these drug as, illegal in most cases without a prescription (these drugs are freely sold in pharmacies) contributes to the formation of antibiotic resistance.

In the future...

We are playing detail genetic screening for:

❖ **bla SHV**

❖ **bla CTX-M**

❖ **bla TEM**



Thank You for
Your
attention!

