

## HEALTHCARE PATHWAYS AND BURDEN OF DISEASE OF PATIENTS WITH SKIN AND SOFT TISSUE INFECTIONS (SSTIs)

### Background and Aim

The medical history of patients with SSTIs must be reviewed accurately, because of their frequency and their varied etiology. SSTIs also results an emerging cause of outpatient visits and hospitalizations, due to the dramatic rising of the antimicrobial resistance and the infection seriousness. This study aimed to analyze the healthcare profile of patients with SSTIs in the real clinical practice and to determine the total cost of the disease.

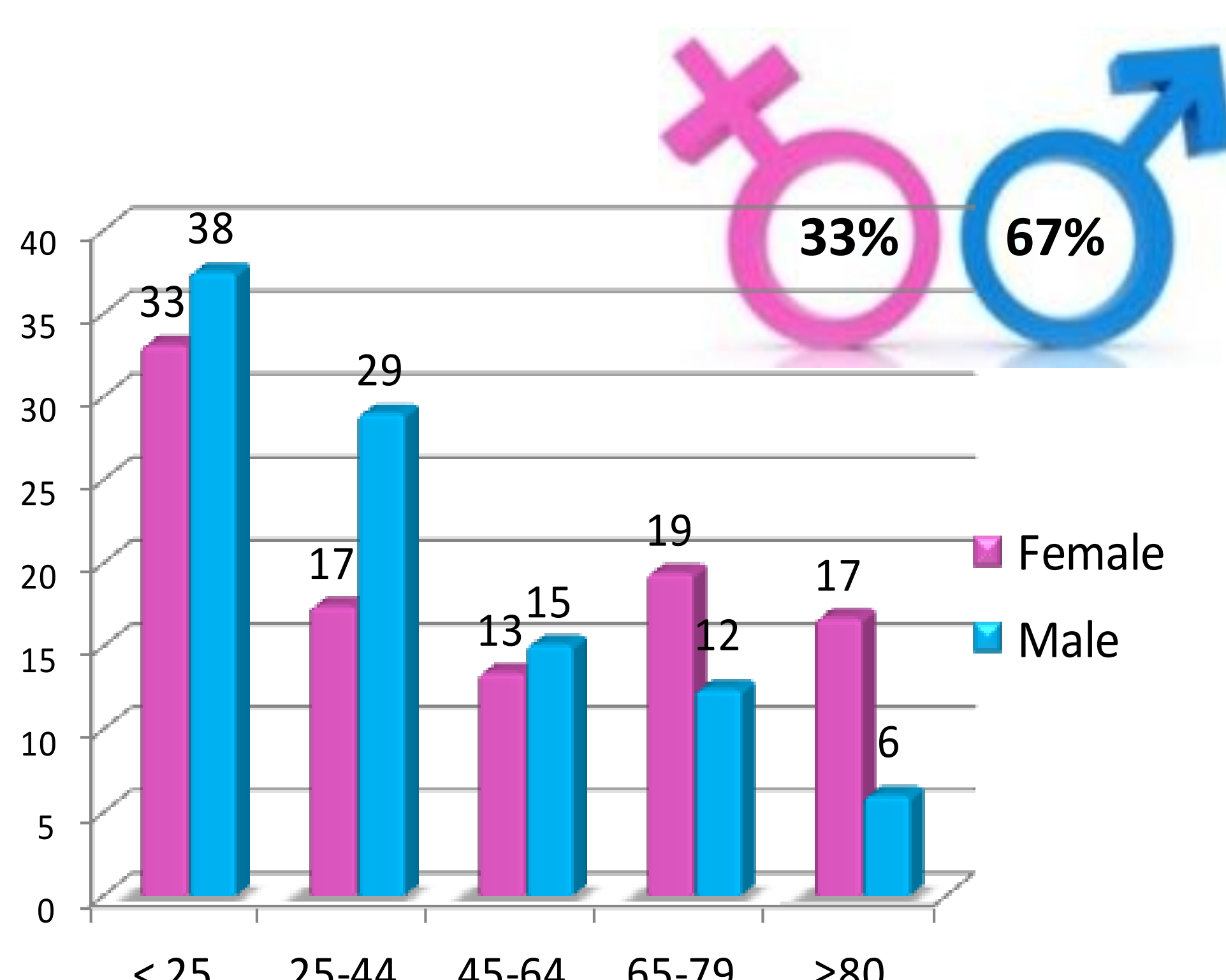
### Methods

Starting from ARNO Observatory database (11 million citizens), we carried out a record linkage analysis of hospital discharge for SSTIs and Linezolid prescription records. We selected a cohort of patients from a subset of Local Health Authorities from Northern to Southern Italy (about 3 million) with available, complete and good quality data on pharmaceutical prescriptions, specialist/diagnostic procedures and hospital discharges. The accrual period lasted from January 1<sup>st</sup> to December 31<sup>st</sup> 2012. Every single patient was followed up to 1 year from the index date (discharge/Linezolid prescription), to identify events, healthcare services associated to SSTIs and their costs (drugs in charge to INHS - estimated on reimbursement prices, diagnostic procedures - estimated using reimbursement tariffs, hospitalizations - estimated using DRG). A focus on Linezolid evaluated the proper length of treatment, both in hospital (assuming hospitalization days equivalent to prescriptions) and in community care (pharmaceutical prescriptions).

### Results

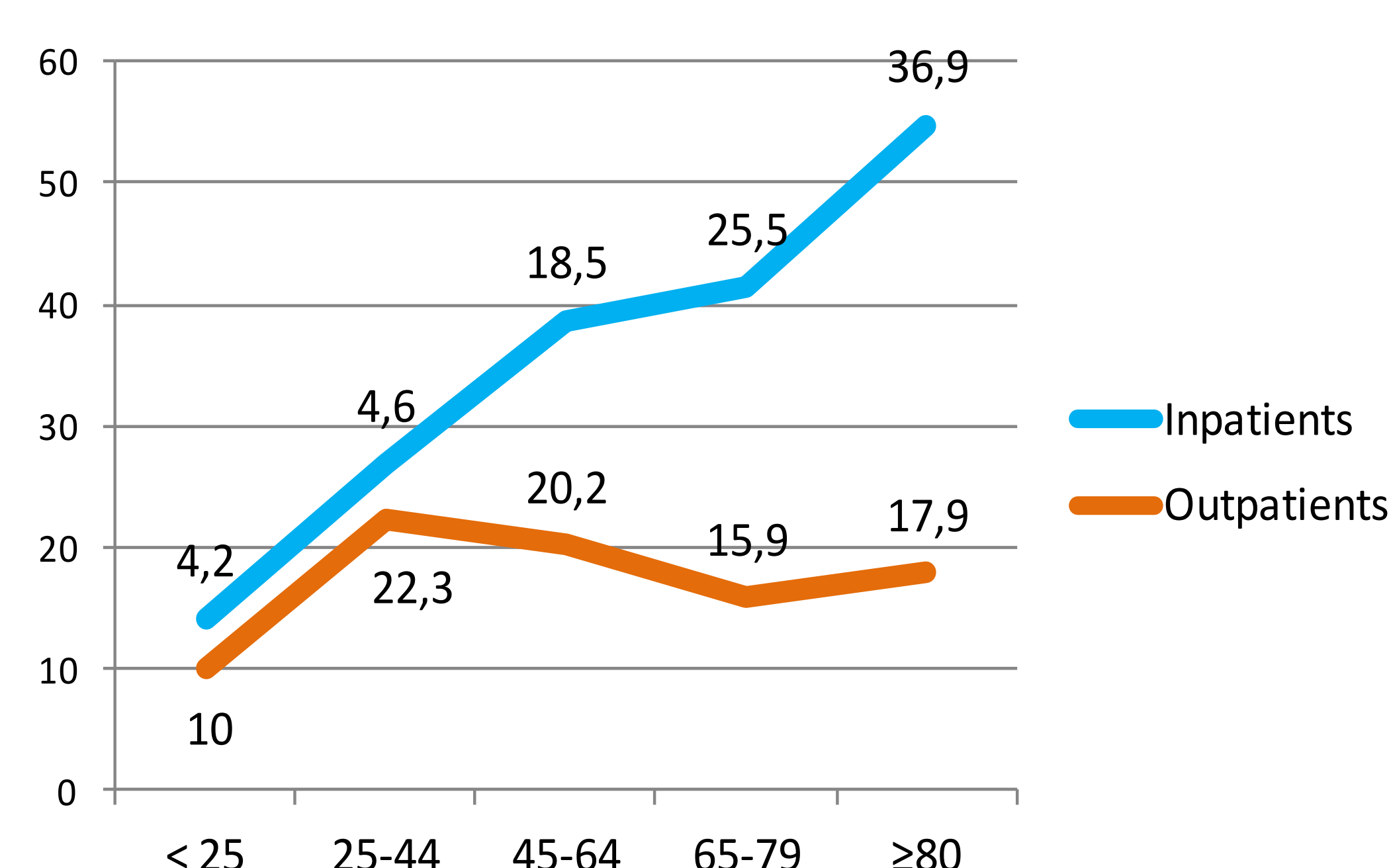
A cohort of 2,216 patients with SSTIs (mostly men and aged  $\leq 25$  – **Figure 1**) was selected.

**Fig. 1** - Prevalence rate (%), by age and gender



Linezolid was prescribed to 106 patients and resulted the most used antibiotic. According to requirements, its therapy length is appropriate if it lasts 10 to 14 days (600mg twice daily), with a maximum of 28 days. The outpatient oral cycle therapy lasted on average for 17,8 days and the IV in hospital therapy for 9,8 days, while hospitalization days were on average 7 – **Figure 3**.

**Fig. 3** – Mean length of Linezolid therapy, as prescribed to outpatients and mean length of hospitalization (inpatients)

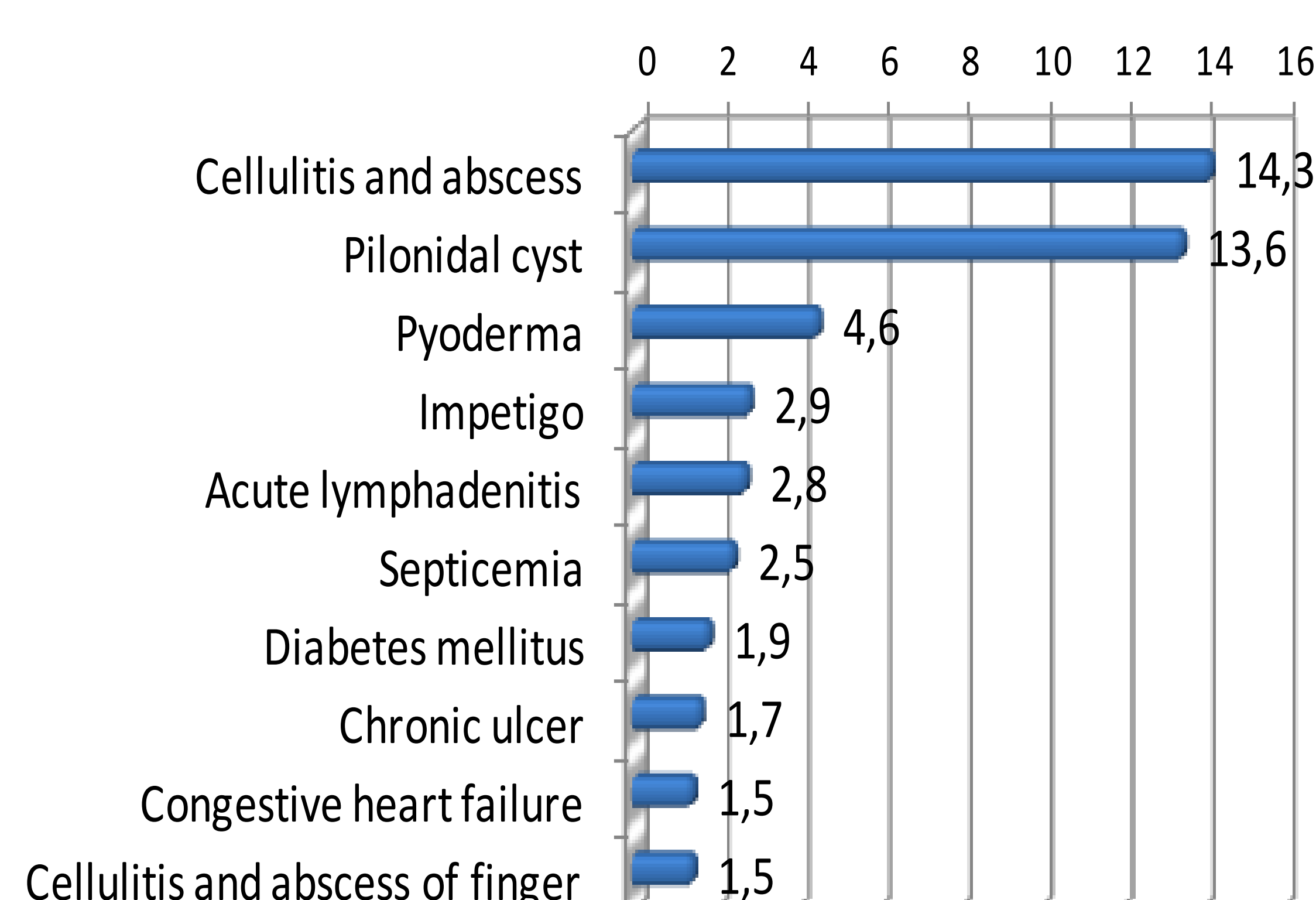


### Conclusions

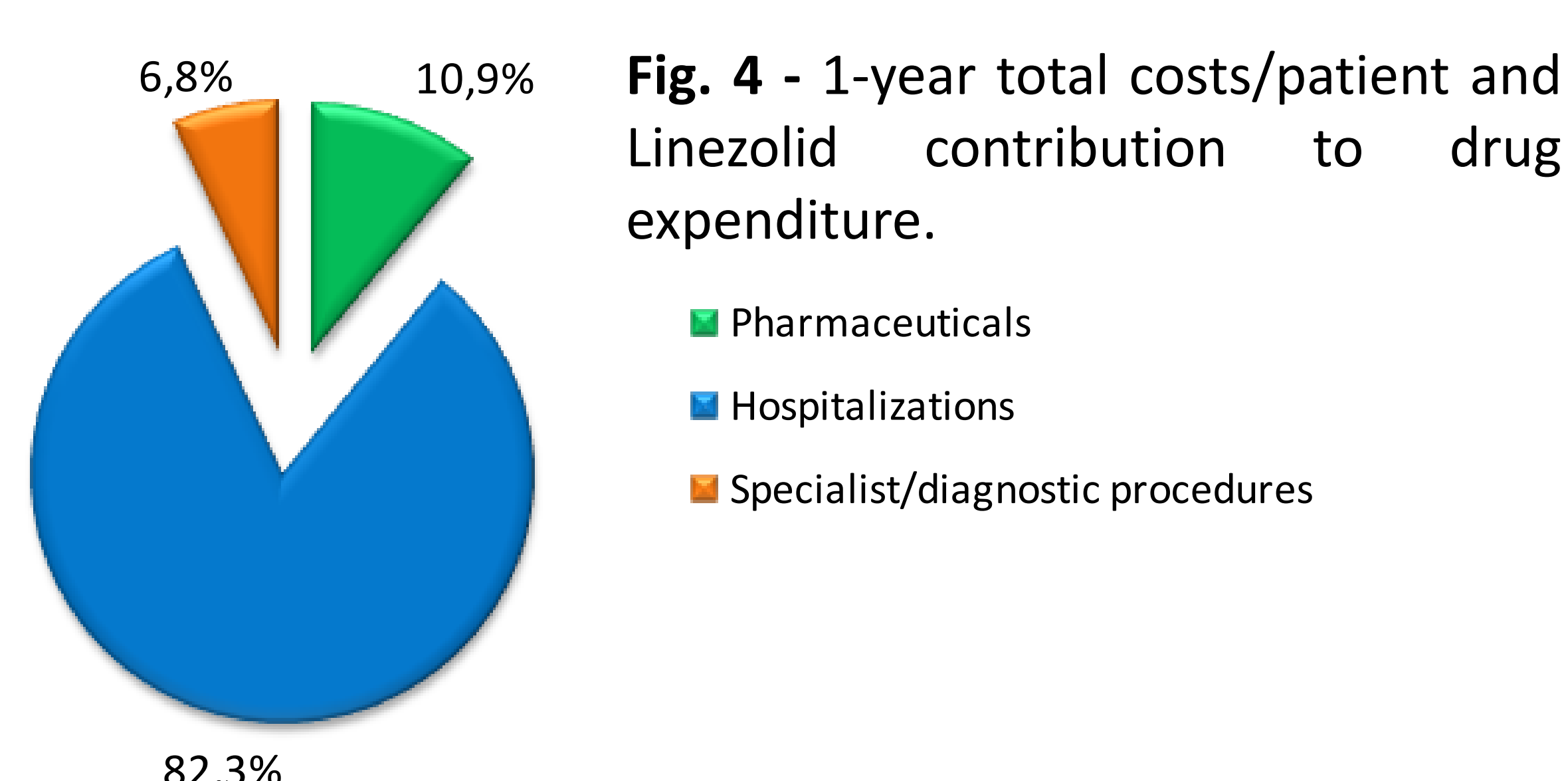
Patients with SSTIs are a healthcare burden, because of the disease seriousness and its constant monitoring (higher frequency of ordinary hospitalizations, than daily ones, and large number of specialist/diagnostic procedures). The community use of Linezolid is borderline and raises outpatient costs, while the in-hospital use is a little less than recommendations. This study shows the still existing gap between evidence based recommendations and what actually happens in the routine clinical practice, possibly determining a high social and economical burden for the INHS.

During the 1-year follow-up, 1,771 (79.9%) patients received at least one drug prescription: “Beta-lactam antibacterials” resulted the most prescribed (40%) and “Other antibiotics” the most expensive (1,340€) pharmacological group. 2.198 (99.2%) patients were discharged for any cause, 95.4% with primary/secondary diagnosis of SSTIs – **Figure 2**. 1,503 (67.8%) received at least one specialist/diagnostic procedure, especially medical examinations/laboratory tests (about 50% of patients).

**Fig. 2** - Rate of ordinary hospitalization for any cause (% on total cohort)



Ordinary and daily hospitalizations were the most expensive healthcare services (on average 4.718€/patient). Linezolid widely contributes to pharmaceutical costs (622€/patient), both for IV and for oral formulation, respectively mean expenditure 914€ and 686€ per pack during the 1-year follow-up – **Figure 4**. INHS average yearly cost/patient with SSTIs is € 5,727.



**Fig. 4** - 1-year total costs/patient and Linezolid contribution to drug expenditure.

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