**Appendix A – Results**



**Figure S1** – District of provenience of the specimens of MAC sent to DST between February 2003 and February 2016.



**Figure S2** – District of provenience of the specimens of RGM sent to DST during February 2003 to February 2016.

|  |  |  |
| --- | --- | --- |
|  |  | ***M. ABSCESSUS*** |
|  | **AMI** | **CIP** | **SMX** | **LNZ** | **CEF** | **DOX** | **TOB** |
|  |  | **S** | **I** | **R** | **S** | **I** | **R** | **S** | **I** | **R** | **S** | **I** | **R** | **S** | **I** | **R** | **S** | **I** | **R** | **S** | **I** | **R** |
| **CLA** | **S** | 17 | 3 | 0 | 2 | 5 | 13 | 2 | 0 | 15 | 5 | 0 | 5 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| **I** | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** | 3 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **AMI** | **S** |  |  |  | 1 | 5 | 20 | 1 | 0 | 24 | 11 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **I** |  |  |  | 1 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| **R** |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **CIP** | **S** |  |  |  |  |  |  | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| **I** |  |  |  |  |  |  | 1 | 0 | 4 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **R** |  |  |  |  |  |  | 0 | 0 | 19 | 9 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SMX** | **S** |  |  |  |  |  |  |  |  |  | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| **I** |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** |  |  |  |  |  |  |  |  |  | 11 | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
|  | ***M. CHELONAE*** |
| **CLA** | **S** | 12 | 0 | 0 | 3 | 3 | 6 | 1 | 0 | 11 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **I** | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **R** | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **AMI** | **S** |  |  |  | 5 | 5 | 8 | 2 | 0 | 16 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **I** |  |  |  | 0 | 2 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| **R** |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **CIP** | **S** |  |  |  |  |  |  | 1 | 0 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **I** |  |  |  |  |  |  | 1 | 0 | 6 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **R** |  |  |  |  |  |  | 0 | 0 | 9 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 |
| **SMX** | **S** |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **I** |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** |  |  |  |  |  |  |  |  |  | 5 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 2 |
|  | ***M. FORTUITUM*** |
| **CLA** | **S** | 5 | 1 | 0 | 6 | 0 | 0 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **I** | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **AMI** | **S** |  |  |  | 10 | 0 | 0 | 9 | 0 | 1 | 5 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **I** |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **CIP** | **S** |  |  |  |  |  |  | 9 | 0 | 1 | 5 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **I** |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SMX** | **S** |  |  |  |  |  |  |  |  |  | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **I** |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **R** |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

**Table S1** – Cross-susceptibility and/or cross-resistance of the most frequently tested antibiotics in RGM. **S,** Susceptibility; **R**, Resistance; **I**, Intermediate Resistance; **CLA**, Clarithromycin; **AMI**, Amikacin; **CIP**, Ciprofloxacin; **SMX**, Sulfamethoxazole; **LNZ**, Linezolid; **CEF**, Cefoxitin; **DOX**, Doxycycline; **TOB**, Tobramycin.

|  |  |  |
| --- | --- | --- |
|  | **SXT** | **Total** |
| **S** | **R** |
| **CIP** | **S** | 12 | 7 | 19 |
| **R** | 0 | 28 | 28 |
| **I** | 2 | 10 | 12 |
| **Total** | 14 | 45 | 59 |
|  | **SXT** |  |
| **S** | **R** | **Total** |
| **CIP** | **S** | 12 | 7 | 19 |
| **R+I** | 2 | 38 | 40 |
| **Total** | 14 | 45 | 59 |

**Table S2** – Cross-tabulation of the susceptibility profiles to ciprofloxacin and sulfamethoxazole in RGM. **SXT**, sulfamethoxazole; **CIP**, ciprofloxacin; **S**, susceptible; **R**, resistant; **I**, intermediate resistant.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Districts** |  |  |
| **RGM species** | **Lisboa** | **Porto** | **Total** | **Proportions** |
| *M. abscessus* | 11 | 3 | 14 | 0.500 |
| *M. chelonae* | 5 | 7 | 12 | 0.429 |
| *M. fortuitum +* *M. mucogenicum +**M. peregrinum* | 1 | 1 | 2 | 0.071 |
| **Total** | 17 | 11 | 28 |  |

**Table S3** – Contingency table 3x2 for chi-square test of homogeneity of **Resistance Response to Sulfamethoxazole** in RGM from Porto and Lisbon’s districts.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Districts** |  |  |
| **RGM species** | **Lisbon** | **Oporto** | **Total** | **Proportions** |
| *M. abscessus* | 7 | 4 | 11 | 0.647 |
| *M. chelonae* | 4 | 2 | 6 | 0.353 |
| **Total** | 11 | 6 | 17 |  |

**Table S4** – Contingency table 2x2 for chi-square test of homogeneity of **Resistance Response to Ciprofloxacin** in RGM from Porto and Lisbon’s districts.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **CLA** |  |  |
|  |  | **S** | **R** | **Total** | **Proportions** |
| **Pre ISO** | **N** | 95 | 2 | 97 | 0.021 |
| **Y** | 49 | 7 | 56 | 0.125 |
| **Total** | 144 | 9 | 153 |  |

**Table S5**- Crosstabulation of the susceptibility profile to clarithromycin in MAC isolates and the presence/absence of previous MAC isolates sent to DST in the past. **CLA**, clarithromycin; **S**, susceptible; **R**, resistance; **PreISO**, presence/absence of MAC isolates previously sent to DST; **N**, no; **Y**, yes. p1=0.021 (2.1%), p2= 0.125 (12.5%); Relative Risk (RR)= p2/p1= 5.95