

Table S1. Incidence and distribution of CPE and ESBL-E colonization by ward and period during the R-GNOSIS Project.

| Ward | Period ¹ | Intervention Strategy ² | Patients (No.) | ESBL-E | | | | CPE | | | |
|------------------|---------------------|------------------------------------|----------------|----------------|----------------|---------------|---------|----------------|----------------|---------------|---------|
| | | | | Isolates (No.) | Patients (No.) | Incidence (%) | ±95% CI | Isolates (No.) | Patients (No.) | Incidence (%) | ±95% CI |
| TOTAL | | | 8209 | 730 | 687 | 8.4% | 0.60 | 198 | 162 | 2.0% | 0.30 |
| Medical wards | P1 | SP | 2331 | 222 | 209 | 9.0% | 1.16 | 67 | 52 | 2.2% | 0.60 |
| Surgical wards | P1 | CI | 2006 | 165 | 159 | 7.9% | 1.18 | 31 | 27 | 1.3% | 0.50 |
| TOTAL | P1 | | 4337 | 387 | 368 | 8.5% | 0.83 | 98 | 79 | 1.8% | 0.40 |
| Medical wards | P2 | CI | 2006 | 197 | 184 | 9.2% | 1.26 | 49 | 42 | 2.1% | 0.63 |
| Surgical wards | P2 | SP | 1866 | 146 | 135 | 7.2% | 1.18 | 51 | 41 | 2.2% | 0.67 |
| TOTAL | P2 | | 3872 | 343 | 319 | 8.2% | 0.87 | 100 | 83 | 2.1% | 0.46 |
| Gastroenterology | P1 | SP | 1165 | 125 | 117 | 10.0% | 1.73 | 30 | 26 | 2.2% | 0.85 |
| | P2 | CI | 999 | 111 | 102 | 10.2% | 1.88 | 18 | 15 | 1.5% | 0.75 |
| | Total | | 2164 | 236 | 219 | 10.1% | 1.27 | 48 | 41 | 1.9% | 0.57 |
| Pneumology | P1 | SP | 1166 | 97 | 92 | 7.9% | 1.55 | 37 | 26 | 2.2% | 0.85 |
| | P2 | CI | 1007 | 86 | 82 | 8.1% | 1.69 | 31 | 27 | 2.7% | 1.0 |
| | Total | | 2173 | 183 | 174 | 8.0% | 1.14 | 68 | 53 | 2.4% | 0.65 |
| Medical Wards | TOTAL | | 4337 | 419 | 393 | 9.1% | 0.85 | 116 | 94 | 2.2% | 0.43 |
| Neurosurgery | P1 | CI | 456 | 40 | 39 | 8.6% | 2.57 | 14 | 12 | 2.6% | 1.47 |
| | P2 | SP | 456 | 39 | 37 | 8.1% | 2.51 | 28 | 22 | 4.8% | 1.97 |
| | Total | | 912 | 79 | 76 | 8.3% | 1.79 | 42 | 34 | 3.7% | 1.23 |
| Urology | P1 | CI | 1550 | 125 | 120 | 7.7% | 1.33 | 17 | 15 | 1.0% | 0.49 |
| | P2 | SP | 1410 | 107 | 98 | 7.0% | 1.33 | 23 | 19 | 1.3% | 0.60 |
| | Total | | 2960 | 232 | 218 | 7.4% | 0.94 | 40 | 34 | 1.1% | 0.38 |
| Surgical wards | TOTAL | | 3872 | 311 | 294 | 7.6% | 0.83 | 82 | 68 | 1.8% | 0.41 |

¹Periods= P1 (March 2014-March 2015) and P2 (April 2015-March 2016). ² Intervention strategy for ESBL-E carriers. SP= Standard precautions; CI= Contact Isolation.

Table S2. CPE species distribution and diversity (SDI) by semesters and periods during the R-GNOSIS Project.

| Ward | Semester | Kp | Ec | Ecl | Kaer | Ek | Cf | Ck | Ko | Ka | Ro | Rp | TOTAL | SDI |
|------------------|-----------------|------------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------------|
| | | | | | | | | | | | | | | |
| Gastroenterology | S1 | 4 | 6 | 5 | - | - | - | 1 | - | 1 | - | - | 17 | 0.77 |
| | S2 | 6 | 1 | 3 | 1 | - | - | - | 1 | 1 | - | - | 13 | 0.77 |
| | S3 | 3 | 4 | 1 | - | - | 1 | - | 1 | - | - | - | 10 | 0.8 |
| | S4 | 5 | 3 | - | - | - | - | - | - | - | - | - | 8 | 0.53 |
| | Total | 18 | 14 | 9 | 1 | - | 1 | 1 | 2 | 2 | - | - | 48 | 0.74 |
| Pneumology | S1 | 4 | 2 | 3 | - | - | 2 | - | - | 1 | 1 | - | 13 | 0.86 |
| | S2 | 10 | 5 | 1 | 1 | - | 3 | - | 3 | 1 | - | - | 24 | 0.78 |
| | S3 | 11 | 2 | 2 | - | - | 1 | - | - | - | - | - | 16 | 0.52 |
| | S4 | 9 | 3 | 1 | - | - | 1 | - | - | - | - | 1 | 15 | 0.63 |
| | Total | 34 | 12 | 7 | 1 | - | 7 | - | 3 | 2 | 1 | 1 | 68 | 0.7 |
| Neurosurgery | S1 | 6 | 1 | - | - | - | - | - | - | - | - | - | 7 | 0.29 |
| | S2 | 3 | 2 | 1 | - | - | - | - | 1 | - | - | - | 7 | 0.81 |
| | S3 | 3 | - | 1 | - | - | - | - | - | - | - | - | 4 | 0.5 |
| | S4 | 22 | 2 | - | - | - | - | - | - | - | - | - | 24 | 0.16 |
| | Total | 34 | 5 | 2 | - | - | - | - | 1 | - | - | - | 42 | 0.34 |
| Urology | S1 | 3 | 2 | - | - | - | - | - | - | 1 | - | - | 6 | 0.73 |
| | S2 | 4 | - | 2 | 2 | - | 1 | - | 2 | - | - | - | 11 | 0.84 |
| | S3 | 11 | 3 | 1 | 2 | - | - | - | - | 1 | - | - | 18 | 0.61 |
| | S4 | 2 | 2 | 1 | - | - | - | - | - | - | - | - | 5 | 0.8 |
| | Total | 20 | 7 | 4 | 4 | - | 1 | - | 2 | 2 | - | - | 40 | 0.71 |
| | Total S1 | 17 | 11 | 8 | - | - | 2 | 1 | - | 3 | 1 | - | 43 | 0.73 |
| | Total S2 | 23 | 8 | 7 | 4 | - | 4 | - | 7 | 2 | - | - | 55 | 0.77 |
| | Total S3 | 28 | 9 | 5 | 2 | - | 2 | - | 1 | 1 | - | - | 48 | 0.62 |
| | Total S4 | 38 | 10 | 2 | - | - | 1 | - | - | - | - | 1 | 52 | 0.43 |
| Gastroenterology | P1 | 10 | 7 | 8 | 1 | - | - | 1 | 1 | 2 | - | - | 30 | 0.77 |
| | P2 | 8 | 7 | 1 | - | - | 1 | - | 1 | - | - | - | 18 | 0.68 |
| Pneumology | P1 | 14 | 7 | 4 | 1 | - | 5 | - | 3 | 2 | 1 | - | 37 | 0.77 |
| | P2 | 20 | 5 | 3 | - | - | 2 | - | - | - | - | 1 | 31 | 0.56 |
| Medical wards | P1 | 24 | 14 | 12 | 2 | - | 5 | 1 | 4 | 4 | 1 | - | 67 | 0.79 |
| | P2 | 28 | 12 | 4 | - | - | 3 | - | 1 | - | - | 1 | 49 | 0.61 |
| Neurosurgery | P1 | 9 | 3 | 1 | - | - | - | - | 1 | - | - | - | 14 | 0.57 |
| | P2 | 25 | 2 | 1 | - | - | - | - | - | - | - | - | 28 | 0.2 |
| Urology | P1 | 7 | 2 | 2 | 2 | - | 1 | - | 2 | 1 | - | - | 17 | 0.76 |
| | P2 | 13 | 5 | 2 | 2 | - | - | - | - | 1 | - | - | 23 | 0.64 |
| Surgical wards | P1 | 16 | 5 | 3 | 2 | - | 1 | - | 3 | 1 | - | - | 31 | 0.71 |
| | P2 | 38 | 7 | 3 | 2 | - | - | - | - | 1 | - | - | 51 | 0.43 |
| | Total P1 | 40 | 19 | 15 | 4 | - | 6 | 1 | 7 | 5 | 1 | - | 98 | 0.77 |
| | Total P2 | 66 | 19 | 7 | 2 | - | 3 | - | 1 | 1 | - | 1 | 100 | 0.54 |
| | TOTAL | 106 | 38 | 22 | 6 | - | 9 | 1 | 8 | 6 | 1 | 1 | 198 | 0.66 |

Kp=*K. pneumoniae*, Ec=*E. coli*, Ecl=*E. cloacae* complex, Kaer=*K. aerogenes*, Ek=*E. kobei*; Cf=*C. freundii*, Ck=*C. koseri*, Ko=*K. oxytoca*, Ka=*Kluyvera* spp., Ro=*R. ornithinolytica*, Rp=*R. planticola*.

Table S3. ESBL-E species distribution and diversity (SDI) by semesters and periods during the R-GNOSIS Project.

| Ward | Semester | Kp | Ec | Ecl | Kaer | Ek | Cf | Ck | Kox | Ka | Ro | Rp | TOTAL | SDI | |
|------------------|--------------|----|------------|------------|-----------|----------|----------|-----------|----------|----------|----|----|-------|------------|-------------|
| | | | | | | | | | | | | | | | |
| Gastroenterology | S1 | 8 | 44 | - | - | - | 1 | - | 1 | - | - | - | 54 | 0.32 | |
| | S2 | 17 | 54 | - | - | - | - | - | - | - | - | - | 71 | 0.37 | |
| | S3 | 18 | 37 | 2 | - | 1 | - | - | - | - | - | - | 58 | 0.46 | |
| | S4 | 12 | 41 | - | - | - | - | - | - | - | - | - | 53 | 0.36 | |
| | Total | | | 176 | 2 | - | 1 | 1 | - | 1 | - | - | - | 236 | 0.39 |
| Pneumology | S1 | 3 | 43 | 4 | - | - | 1 | - | - | - | - | - | 51 | 0.28 | |
| | S2 | 9 | 35 | - | - | - | 1 | - | 1 | - | - | - | 46 | 0.39 | |
| | S3 | 6 | 49 | - | - | 1 | 2 | - | - | - | - | - | 58 | 0.28 | |
| | S4 | 5 | 21 | 1 | - | - | - | - | 1 | - | - | - | 28 | 0.42 | |
| | Total | | | 148 | 5 | - | 1 | 4 | - | 2 | - | - | - | 183 | 0.33 |
| Neurosurgery | S1 | 4 | 13 | - | - | - | 1 | 1 | - | - | - | - | 19 | 0.51 | |
| | S2 | 6 | 14 | - | - | - | 1 | - | - | - | - | - | 21 | 0.49 | |
| | S3 | 4 | 15 | - | - | - | 2 | - | - | - | - | - | 21 | 0.47 | |
| | S4 | 4 | 12 | 1 | - | - | - | - | 1 | - | - | - | 18 | 0.53 | |
| | Total | | | 54 | 1 | - | - | 4 | 1 | 1 | - | - | - | 79 | 0.44 |
| Urology | S1 | 6 | 59 | - | - | - | 1 | - | - | - | - | - | 66 | 0.19 | |
| | S2 | 9 | 49 | - | 1 | - | - | - | - | - | - | - | 59 | 0.29 | |
| | S3 | 10 | 51 | 3 | - | 1 | 1 | 1 | - | - | - | - | 67 | 0.4 | |
| | S4 | 3 | 36 | 1 | - | - | - | - | - | - | - | - | 40 | 0.19 | |
| | Total | | | 195 | 4 | 1 | 1 | 2 | 1 | - | - | - | - | 232 | 0.28 |
| Total S1 | | 21 | 159 | 4 | - | - | 4 | 1 | 1 | - | - | - | 190 | 0.29 | |
| Total S2 | | 41 | 152 | - | 1 | - | 2 | - | 1 | - | - | - | 197 | 0.36 | |
| Total S3 | | 38 | 152 | 5 | - | 3 | 5 | 1 | - | - | - | - | 204 | 0.41 | |
| Total S4 | | 24 | 110 | 3 | - | - | - | - | 2 | - | - | - | 139 | 0.34 | |
| Gastroenterology | P1 | 25 | 98 | - | - | - | 1 | - | 1 | - | - | - | 125 | 0.35 | |
| | P2 | 30 | 78 | 2 | - | 1 | - | - | - | - | - | - | 111 | 0.44 | |
| Pneumology | P1 | 12 | 78 | 4 | - | - | 2 | - | 1 | - | - | - | 97 | 0.34 | |
| | P2 | 11 | 70 | 1 | - | 1 | 2 | - | 1 | - | - | - | 86 | 0.33 | |
| Medical wards | P1 | 37 | 176 | 4 | - | - | 3 | - | 2 | - | - | - | 222 | 0.35 | |
| | P2 | 41 | 148 | 3 | - | 2 | 2 | - | 1 | - | - | - | 197 | 0.4 | |
| Neurosurgery | P1 | 10 | 27 | - | - | - | 2 | 1 | - | - | - | - | 40 | 0.47 | |
| | P2 | 8 | 27 | 1 | - | - | 2 | - | 1 | - | - | - | 39 | 0.49 | |
| Urology | P1 | 15 | 108 | - | 1 | - | 1 | - | - | - | - | - | 125 | 0.24 | |
| | P2 | 13 | 87 | 4 | - | 1 | 1 | 1 | - | - | - | - | 107 | 0.32 | |
| Surgical wards | P1 | 25 | 135 | - | 1 | - | 3 | 1 | - | - | - | - | 165 | 0.31 | |
| | P2 | 21 | 114 | 5 | - | 1 | 3 | 1 | 1 | - | - | - | 146 | 0.37 | |
| Total P1 | | 62 | 311 | 4 | 1 | - | 6 | 1 | 2 | - | - | - | 387 | 0.33 | |
| Total P2 | | 62 | 262 | 8 | - | 3 | 5 | 1 | 2 | - | - | - | 343 | 0.38 | |
| TOTAL | | | 124 | 573 | 12 | 1 | 3 | 11 | 2 | 4 | - | - | - | 730 | 0.35 |

Kp=*K. pneumoniae*, Ec=*E. coli*, Ecl=*E. cloacae* complex, Kaer=*K. aerogenes*, Ek=*E. kobei*; Cf=*C. freundii*, Ck=*C. koseri*, Kox=*K. oxytoca*, Ka=*Kluyvera* spp., Ro=*R. ornithinolytica*, Rp=*R. planticola*.