Supplementary Tables

Effects of patient-level risk factors, departmental allocation and seasonality on intrahospital patient transfer patterns: Network analysis applied on a Norwegian single-centre dataset

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Table S1 Hospital ward names, types and abbreviations

| Type    | Ward                  | Abbreviations used in Fig. 1 | Department link for “home” wards in current study |
|---------|-----------------------|------------------------------|-----------------------------------------------|
| ED      | Emergency Dept        | ED                           |                                               |
| OR      | Operating Room Suite  | OR                           |                                               |
|         | Day Surgery Unit      | Day S                        |                                               |
| Technical | Postoperative HDU    | PHDU                         |                                               |
|         | General ICU           | ICU                          |                                               |
|         | Medical ICU           | MICU                         |                                               |
|         | Cardiac HDU           | CICU                         |                                               |
|         | ED Observation Unit   | EDOU                         |                                               |
|         | Haemodialysis         | Haemodial                    |                                               |
| Surgical | Orthopaedics A       | OT A                         | Orthopaedics Department                      |
|         | Orthopaedics B        | OT B                         |                                               |
|         | Orthopaedics C        | OT C                         |                                               |
|         | Gastroscopy A         | GIS A                        | Gastroscopy Department                       |
|         | Gastroscopy B         | GIS B                        |                                               |
|         | Mixed Surgery         | Mix S                        |                                               |
|         | Urology               | Uro                          |                                               |
|         | Thoraco-vascular      | TCVS                         |                                               |
| Medical | Neurology A           | NR A                         | Neurology Department                         |
|         | Neurology B           | NR B                         |                                               |
|         | Neuro Rehab           | NR Rehab                     |                                               |
|         | Gastroenterology      | GE                           | Gastroenterology Department                  |
|         | Palliation A          | PC A                         |                                               |
|         | Geriatrics            | Geriatrics                   |                                               |
|         | Palliation B          | PC B                         |                                               |
|         | Infection/Haema       | Inf/Haem                     |                                               |
|         | Infection A           | Inf A                        |                                               |
|         | Cardiac               | Cardiac                      |                                               |
|         | Cardiac/Renal         | Card/Ren                     |                                               |
|         | Pulmonary A           | Pulm A                       |                                               |
|         | Pulmonary B           | Pulm B                       |                                               |
Table S2  Poisson regression analysis on number of intrahospital transfers, with modelled interactions between departments, OR stay, and antibiotics use

| Risk factors       | Model S1 |       |       | Model S2 |       |       |
|--------------------|----------|-------|-------|----------|-------|-------|
|                    | RR       | 95% CI| P value | RR       | 95% CI| P value |
| Age                |          |       |        |          |       |        |
| 18 – 39            | Reference|       |        | Reference|       |        |
| 40 – 64            | 1.016    | 0.980 – 1.055| 0.386 | 1.020    | 0.983 – 1.058| 0.304 |
| 65 – 84            | 0.980    | 0.945 – 1.017| 0.284 | 0.983    | 0.948 – 1.020| 0.361 |
| 85+                | 0.959    | 0.910 – 1.010| 0.115 | 0.961    | 0.911 – 1.012| 0.132 |
| NEWS2 score        |          |       |        |          |       |        |
| 0 – 2              | Reference|       |        | Reference|       |        |
| 3 – 4              | 0.986    | 0.945 – 1.029| 0.523 | 0.989    | 0.948 – 1.032| 0.626 |
| 5 – 6              | 0.963    | 0.889 – 1.042| 0.352 | 0.970    | 0.895 – 1.050| 0.456 |
| 7+                 | 0.821    | 0.716 – 0.937| 0.004 | 0.829    | 0.722 – 0.947| 0.006 |
| Gender             |          |       |        |          |       |        |
| Female             | Reference|       |        | Reference|       |        |
| Male               | 0.998    | 0.974 – 1.023| 0.876 | 0.998    | 0.947 – 1.022| 0.854 |
| Department         |          |       |        |          |       |        |
| Gastroenterology   | Reference|       |        | Reference|       |        |
| Gastrosurgery      | 1.194    | 1.123 – 1.271| <0.001| 1.182    | 1.100 – 1.271| <0.001|
| Neurology          | 1.094    | 1.029 – 1.163| 0.004 | 1.091    | 1.019 – 1.169| 0.013 |
| Orthopaedics       | 1.179    | 1.101 – 1.263| <0.001| 1.163    | 1.076 – 1.257| <0.001|
| Admission          |          |       |        |          |       |        |
| Elective           | Reference|       |        | Reference|       |        |
| Non-elective       | 1.844    | 1.788 – 1.902| <0.001| 1.845    | 1.789 – 1.904| <0.001|
| Antibiotics 2      |          |       |        |          |       |        |
| No                 | Reference|       |        | Reference|       |        |
| Yes                | 1.102    | 1.072 – 1.132| <0.001| 1.073    | 0.947 – 1.213| 0.264 |
| Been to OR 3       |          |       |        |          |       |        |
| No                 | Reference|       |        | Reference|       |        |
| Yes                | 2.307    | 1.953 – 2.707| <0.001| 2.242    | 1.717 – 2.871| <0.001|
| Been to HDU 4      |          |       |        |          |       |        |
| No                 | Reference|       |        | Reference|       |        |
| Yes                | 2.118    | 2.037 – 2.202| <0.001| 2.118    | 2.037 – 2.201| <0.001|
| Interactions       |          |       |        |          |       |        |
| GS * OR            | 1.240    | 1.051 – 1.472| 0.012 | 1.319    | 1.024 – 1.731| 0.039 |
| NR * OR            | 0.925    | 0.713 – 1.195| 0.556 | 0.952    | 0.675 – 1.346| 0.778 |
| OT * OR            | 1.380    | 1.167 – 1.640| <0.001| 1.411    | 1.094 – 1.853| 0.013 |
| GS * Antibiotics   |          |       |        |          |       |        |
| NR * Antibiotics   |          |       |        |          |       |        |
| OT * Antibiotics   |          |       |        |          |       |        |
| Antibiotics * OR   |          |       |        |          |       |        |

RR, patient transfer rate ratio. 1Mean first 48-h NEWS2 score. 2Use of any non-prophylactic antibiotics. 3Indicates a surgical procedure. 4Stayed in an ICU or HDU, indicates a severe patient condition. GS, Gastrosurgery; NR, Neurology; OT, Orthopaedics. Bold font indicates a statistically significant association with transfer number.