Appendix 2. Algorithm used to assign probability that infection had occurred

\[ p = \exp \left( \alpha + \beta_1 x_1 + \ldots + \beta_n x_n \right) \left( 1 + \exp \left( \alpha + \beta_1 x_1 + \ldots + \beta_n x_n \right) \right), \]

where

\[ \alpha = -5.16 \]
\[ \beta_1 = +3.03 \]
\[ x_1 = \text{dispensing any of five selected antibiotics} \]
\[ \beta_2 = +6.06 \]
\[ x_2 = \text{any selected diagnosis in hospital} \]
\[ \beta_3 = +1.05 \]
\[ x_3 = \text{any selected diagnosis in emergency dept (if } x_2 = 0) \]
\[ \beta_4 = +2.98 \]
\[ x_4 = \text{any selected diagnosis in outpatient setting} \]
\[ \beta_5 = +2.91 \]
\[ x_5 = \text{selected bacterial culture} \]
\[ \beta_6 = +1.91 \]
\[ x_6 = \text{wound care} \]
\[ \beta_7 = -1.79 \]
\[ x_7 = \text{interaction of } x_4 \text{ and } x_6 \]
\[ \beta_8 = -2.70 \]
\[ x_8 = \text{interaction of } x_4 \text{ and } x_2 \]
\[ \beta_9 = -2.21 \]
\[ x_9 = \text{interaction of } x_4 \text{ and } x_5 \]