Additional file 2**: Formulae used for measures of complexity of sequence.**

For a sequence of consultations including N different categories; and where P*i* represents the proportion of consultations belonging to the *i*th category

$$Herfindahl index=\sum\_{i=1}^{N}P\_{i}^{2}$$

$$State Entropy=-\sum\_{i=1}^{N}P\_{i}\*log\_{2}\left(P\_{i}\right)$$

If the same sequence is then converted to K different category transitions (so sequence ABBC becomes AB, BB, BC); and where P*j* represents the proportion of consultations belonging to the *j*th transition category

$$Transition Entropy=-\sum\_{j=1}^{K}P\_{j}\*log\_{2}\left(P\_{j}\right)$$