## **Supplementary Materials**

Table S1. Predefined inter-regional transmission intensity (TI) matrix.

То	A	В	C	D	E	F
From						
A	_	0.0400	0.0060	0.0320	0.0070	0.0200
В	0.0280	_	0.0080	0.0180	0.0066	0.0080
С	0.0070	0.0070	_	0.0066	0.0180	0.0240
D	0.0200	0.0160	0.0070	_	0.0140	0.0080
E	0.0070	0.0066	0.0220	0.0180	_	0.0120
F	0.0150	0.0090	0.0260	0.0120	0.0140	_
<b>A</b>	50 100	150 200	B 250			
2500 - 2000 - 1500 - 1000 - 500 -			log(probability density)	-4681012 -		— y=-0.971x-2.506

**Figure S1. Power law distribution of out degree of nodes.** A) Out degree distribution histogram for the mutation network constructed based on the Bedford Data. B) Scatter plot for the out degree and its probability density under the logarithmic scale. Fitted linear regression function was also given.

100 150