The idea is to look at hospital emergency department visits over time, and see whether modelling the full hierarchy of possible reasons gives better detection of anomalies or forecasting of demand than just modelling one category at a time.

That is, you could have a visit coded as V00.01XS, for "sequelae of Pedestrian on foot injured in collision with roller-skater"​, but you could also consider it as V00 (Pedestrian conveyance accident​) or V0 (Pedestrian injured in transport accident) or V (External causes of morbidity). When you model too broad a category you miss detailed variation; when you model too narrow a category you have too little data; modelling everything together might do better. Part of this would be simulation, but we'd want actual data such as the National Non-admitted Patient Collection from NZ or the National Emergency Department Subsample from the US.