Benefits dependency network for stroke service improvement* - some enablers and anticipated results

*Built on outputs of table discussions session of the WMC launch on the 16th November 2016. Delegates were asked to discuss and debate stroke-related data, modelling projects and future work.

Enablers	Enabling changes	Business changes	Outcomes	Benefits

Enablers

Promote preventive activity

Early intervention (Pre-event)

Early intervention (Event)

Undertake whole system/ intelligent modelling

...What if..?

Enabling changes

Review evidence base Develop a framework for health promotion.

Work with primary care re: tackling risk factors and secondary prevention.

Amendment to resources, service model/ infrastructure where required e.g. management of Atrial Fibrillation (AF)

Review current system capabilities/ capacity/ efficiency - (feed into modelling)

Involve clinicians, planners, and managers with modellers.

- Identify key pathway elements.
- Incorporate work already done/ evidence base. (e.g. PenCHORD)
- Model effect of placing a senior decision maker at front door.
- Bed modelling - acute
- Bed modelling - community (model demand to be moved to community under various LoS assumptions).
- Model clinically appropriate bed ring fencing.
- Predictive modelling for outcomes following rehab.
- Factor in seasonality, geography, predicted demand changes and service impacts (including wider system, WAST etc.).

Business changes

Implement health promotion activity. (Patients & public). Early education: smoking, obesity, etc..

Targeted intervention for those with stroke risk factors (e.g. high BP & previous TIA). Preventive meds. Health promotion advice.

Align resources/ system elements to quickly convey the patient to hospital and deliver swift diagnostics/ treatment/ care. (Thrombolysis, ASU...)

Improve identification/ recording of mimics to improve modelling.

Adopt mathematical model to assess impact of changes at different points in the pathway & implement optimal options for stroke service redesign.

Develop and implement (revised) model for early intervention.

Develop and implement acute & community bed plan.

Implement changes to rehab model.

Implement a capacity model which accounts for annual leave/ sickness, etc.

Outcomes

Avoidance - fewer stroke presentations

Reduced demand for acute services.

Better outcomes for patients/ public

Evidence for change - support for mobilising...

Stakeholder engagement

Ability to develop a performance framework - baseline & (expected) measures

Services provided across a continuum of need.

Better understanding of stroke pathway

Ability to repatriate patients with effective handover of care.

Delivery of safe/effective care.

Efficient services.

Benefits

Improved health

Value for money

Reduced reliance on acute services - reduce demand

Improved stakeholder

Ability to deliver more care closer to patient networks (excluding hyper

Key

Factors to consider when modelling.

Potential impacts of whole system modelling for service redesign.

Anticipated benefits

General challenges include:
-Health promotion - needs widespread suppot
-Evidencing cost avoidance of preventative measures
-Long term population assessment - modelling impact
-Potential cost of optimal model esp. initial cost

Data specific challenges include:
-What data?
-What tools?
-What analytical capability/time?
*Need standardised data