

Strategies for Incremental Implementation of Stroke Systems of Care

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None

Potential Obstacles to the Establishment of Stroke Systems

- Costs of developing and maintaining a stroke system
- Geopolitical lines of service by EMS
- Adequate legal and political recognition of the system
- Competition for patients and market share among providers
- Tensions that may exist among academic and community-based institutions
- Variable commitment to acute stroke therapy
- Differences in corporate culture among different facilities and provider groups
- Concerns about the adequacy of reimbursement

Financial Obstacles to the Establishment of Stroke Systems

- Costs of developing and maintaining a stroke system
- Competition for patients and market share among providers
- Concerns about the adequacy of reimbursement

Implications of the high cost of developing and maintaining a stroke system

- Stroke systems will develop incrementally
- Their development will be impeded by
 - Unequal distribution of resources, costs, and revenues
 - Inadequate reimbursement
- Their development will be facilitated by
 - A market with incentives aligned so that costs and revenues are balanced
 - Adequate reimbursement for hospitals and individual providers

Incremental Implementation of Stroke Systems of Care

How do we incrementally implement a system
in which costs and benefits are unevenly
distributed?

One strategy is to balance the differential
between system components that have
unequal costs and benefits

Adequacy of Hospital Reimbursement for Thrombolysis

- Prior to DRG 559, thrombolysis was associated with greater acute care costs, but later savings related to a reduced need for rehab and extended care
- As of 10-1-05, CMS increased *hospital* reimbursement by about \$6000 more per patient treated with tPA
- At one center, the cost-reimbursement ratio was 1.41 before DRG 559 and was estimated to be 0.82 after DRG 559

Adequacy of Physician Reimbursement for Thrombolysis

- Relatively low compared to that for other diagnoses commonly treated by Neurologists
- Possible solutions
 - Bill critical care CPT codes
 - Stroke on-call stipends
 - Change in health policy to better reimburse physicians



“You say it’s a win-win, but what if you’re wrong-wrong and it all goes bad-bad?”

Political Obstacles to the Establishment of Stroke Systems

- Geopolitical lines of service by EMS
- Adequate legal and political recognition of the system

Roles of the Government in Improving the Health Care Market

- Supplement the market where there are gaps (provide safety net)
- Regulate the market where there is inefficiency or unfairness
- Help realign incentives so that the market works well
- A partnership between the public and private sectors

What drives policy decision making

- *Does a particular problem deserve my attention?*
 - In the US, the number of deaths from stroke will double by the year 2032
 - Across the developed world, stroke is associated with high cost—typically 3% of national health care costs and 0.25% of the gross domestic product (or \$100 per capita)
 - Over the next 45 years total stroke costs will be over \$2.2 trillion, with the highest per capita contributors being those most afflicted by stroke: African Americans and Hispanics

Three Brazilian Soldiers

Donald Rumsfeld is giving the president his daily briefing. He concludes by saying:

"Yesterday, 3 Brazilian soldiers were killed."

"OH NO!" the President exclaims. "That's terrible!"

His staff sits stunned at this display of emotion, nervously watching as the President sits, head in hands.

Finally, the President looks up and asks, "How many is a brazillion?"

What drives policy decision making

Is there any solution to the problem that is credible, practical, and otherwise politically attractive?

NYSDOH Stroke Center Designation Project

- An Example of the Government's Role in Improving the Stroke System of Care
- Altered EMS lines of service
- Required NYSDOH designation of Stroke Centers
- Linked early recognition and transport of acute stroke patients to designated stroke centers

Main Results

- After stroke center designation, in Brooklyn and Queens:
 - More than three times as many potential t-PA candidates were evaluated in stroke centers compared with nondesignated hospitals
 - Stroke patients received MD evaluation twice as rapidly once they reached a hospital
 - Potential tPA candidates had brain CT performed twice as rapidly
 - Appropriate use of tPA was more than doubled
 - Stroke patients were more than twice as likely to receive stroke unit care

“Social” Obstacles to the Establishment of Stroke Systems

- Tensions that may exist among academic and community-based institutions
- Variable commitment to acute stroke therapy
- Differences in corporate culture among different facilities and provider groups

Overcoming Social Obstacles

- Academic and community-based institutions
 - Houston
 - Cleveland
 - Brooklyn and Queens
- Rural neurologically under-served regions
 - Florida (helicopter)
 - Georgia (telestroke)
- Emergency Medicine and Neurology
 - Martha's Vineyard (telestroke)

Summary of Strategies

- The approach must be multi-faceted and inclusive
- Financial and other incentives must be properly aligned
- Collaboration and Education are critical

Key Writing Group Recommendations



The writers group met every Tuesday for support and fellowship.

Key Writing Group Recommendations

- Primordial & Primary Prevention
 - Develop and promote a Patient Report Card
- Community Education
 - Build upon evidence-base surrounding effective community/public education initiatives
 - Make recommendations to add definition to community education criteria for primary and comprehensive stroke certification
- EMS
 - Reach consensus on selected important aspects of pre-hospital care of the stroke patient and distribute them for feedback
 - Consider the development of standardized modules for teaching or performance improvement

Key Writing Group Recommendations (cont.)

- Acute Stroke Treatment
 - Identify each state's system of stroke care for the NECC region
 - Establish a web-based central repository of acute stroke protocols and order sets to be shared with developing centers
- Sub-Acute Stroke Treatment
 - Tools, processes and collaboratives that allow us to more systematically assess and improve the care we provide THROUGHOUT the region are becoming available
- Rehabilitation
 - Incorporate into all NECC state stroke center designation programs explicit requirements for providing rehabilitation in acute and post-acute care
 - Develop guidelines based on quality evidence