



Sutter Neuroscience Institute Stroke Network

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SHSSR comprehensive stroke strategy 2010-2015

- JC PSC certification for all 6 hospitals
 - Continue and improve interaction with EMS
 - Create/maintain network of services/providers
 - Standardize care and education
 - Develop/improve/maintain services
- Comprehensive neurovascular clinics
- Promote research
- Establish and maintain professional education program

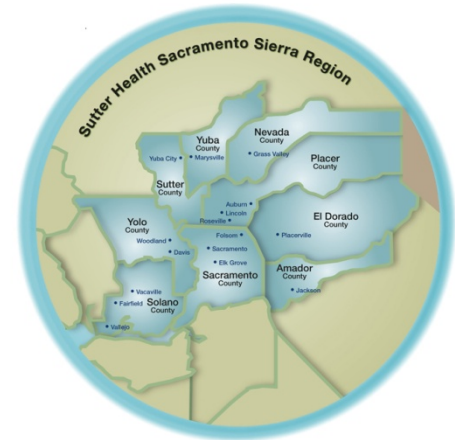
SHSSR acute stroke management strategy

- A simple plan
 - All acute stroke patients treated the same
 - Standardized order sets across 6 hospitals
 - Standardized provider education
 - NIHSS, algorithms, decision tree
 - Nursing education
 - Developing and implementing DI capability
 - Regional radiology service
 - Ability to access images
 - CT/CTA/CTP 24/7 for all acute strokes
 - Developing and implementing standardized metrics
 - JC core measures/dashboards
 - Facility steering committees
 - Regional collaboration/networking

Facts at a Glance

Sacramento Sierra Region

- Six acute-care hospitals (2012 data)
 - 1,416 licensed beds
 - 66,421 discharges
 - 256,720 ED visits
- Six Joint Commission Primary Stroke Centers
 - SMCS Get with the Guidelines Gold Plus



Facts at a Glance*



	2011	2012
Volume	1,500	1,685
ALOS (ischemic)	3.78	4.13
30-day Readmission	7.7%	7.4%
Ischemic mortality	4.5	3.4
Hemorrhagic mortality	21.7	22.7

Source: *ICD-9 codes found in appendix*

Regional Collaboration

- Regional nursing and physician education plan implemented
 - Initial and on-going training
 - All new hire RNs on stroke designated units receive 8 hours of stroke education that includes NIHSS certification, training on order sets, stroke alerts signs and symptoms
 - Established RNs on stroke designated units receive 4 hours of ongoing stroke education
 - Over 80% ED MDs NIHSS certified, 4-8 hours education
 - Core stroke team at each facility with NIHSS certification and 8 hours education
- Stroke coordinators monthly meetings
- Standardized pre-printed regional stroke order sets
- Post discharge phone calls
- Active stroke support groups (Sacramento and Roseville)
 - Stroke Camp
 - Strike out Stroke event
- Regional gap analysis for stroke completed
- Consistent community message
 - Be SAFE to Think FAST
- Research



SHSSR post stroke management strategy

- Challenges
 - Post hospital continuation of appropriate care
 - Education (patient and caregiver)
 - Optimization of medication
 - Risk factor management
 - Disability assessment and support
 - Appropriate/timely feedback to provider
 - Outcomes assessment
 - Quality measurement
 - Inability to reach all patients
 - Scattered providers
 - Multiple/no insurances
 - Lack of coordination between services

SHSSR post stroke management strategy

- Answer
 - Comprehensive neurovascular clinics
 - NP/RN lead weekly clinics at all 6 hospitals
 - Multidisciplinary, especially Therapy/SS
 - Goals: appropriate/timely RX, education, assessment, referral, outcomes, re-admission, care-giver/community support/outreach

SHSSR post stroke management strategy

- How?
 - Take coordinators away from data entry and abstraction and use them for clinical skills
 - Use subject matter experts as supervisors
 - Finance
 - CMI Adjusted Charge Per Case: \$6,992 (2012)
 - Readmission rate: 7.4% = 125 patients
 - Projected readmission rate e.g.: 6.5% = 109 pts
 - Possible saving: \$112,000
 - Nominal facility fee
 - Potential billing

SHSSR post stroke management strategy

- Benefits
 - Appropriate/timely assessment/care
 - Education
 - Outreach
 - Research opportunities
 - Outcomes
 - Registry
 - Community service

SHSSR comprehensive stroke strategy 2010 – 2015 upcoming community collaboration

- Research
 - Sutter inter regional research collaboration
 - Sutter inter/intra regional CME collaboration
- Professional development
 - Semi annual/annual provider retreat
 - Annual stroke symposium
 - Sacramento neurovascular society
 - Neurovascular fellowship

Appendix



- Sutter Medical Center, Sacramento
 - 823 beds
 - 33,256 discharges
 - 84,608 ED visits
- Sutter Roseville Medical Center
 - 313 beds
 - 18,315 discharges
 - 71,249 ED visits
- Sutter Solano Medical Center
 - 102 beds
 - 5,076 discharges
 - 36,767 ED visits
- Sutter Auburn Faith Hospital
 - 78 beds
 - 4,113 discharges
 - 24,356 ED visits
- Sutter Davis Hospital
 - 48 beds
 - 3,437 discharges
 - 21,445 ED visits
- Sutter Amador Hospital
 - 52 beds
 - 2,224 discharges
 - 18,295 ED visits

Appendix

- Stroke Volume ICD-9 codes

Ischemic: 433.01, 433.10, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00, 434.01, 434.11, 434.91, 436

Hemorrhagic: 430.x & 431.x

TIA: 435, 435.8, & 435.9