

# Focus on Stroke: Practical Strategies That Make a Difference

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# Objectives

At the end of this presentation, participants will be able to:

- Describe one practical strategy they can implement at their organization to improve stroke care
- Apply lessons learned from other organizations' successes with improving stroke care and apply to their own organization

# Stroke Care in the Year 2015 & Beyond

- Standardization of stroke care commitment by AHA/ASA
- AHA/ASA published guidelines:
  - 2013 (Ischemic Stroke)
  - 2010 (Intracerebral Hemorrhage)
  - Foundation for stroke care today
  - Clinical practice guidelines – underpinnings for order sets
- Large number of states continue to move forward with stroke legislation

# Pre-Hospital: Practical Strategies

- Establish strong mutual working relationships with EMS with a focus on stroke
- Be knowledgeable of state, city, or regional protocols for EMS guiding stroke care
- Establish early warning system
- Write down all relevant data
- Establish last well known time

# Pre-hospital: Practical Strategies

- Call code stroke from EMS report
- Utilize glucometer reading
- Utilize stroke medical director to do EMS education
- Provide follow up on stroke codes and outcome to EMS
- Utilization of Los Angeles Pre-hospital stroke screen

# Emergency Evaluation & Diagnosis: Practical Strategies

- Goal: Timely evaluation & diagnosis
- Decrease door to CT time
- Call stroke code early
  - EMS
  - Walk-in patient – triage call
- Document times of stroke code in EMR
- NIHSS stroke scale
- Recorder utilization

# Emergency Evaluation & Diagnosis: Practical Strategies (cont'd)

- Accurate weight
- Labs, EKG, Chest x-ray should not slow down CT
- Mark lab as stroke code
- Measuring lab, EKG timeframes
- Primary nurse goes with patient to CT
- Newer strategy:
  - Physician meets EMS at door & immediately goes to CT

# Emergency Evaluation & Diagnosis: Practical Strategies (cont'd)

- CT scan interpretation documentation
- Telestroke present in room prior to arrival of patient
- Document time & who telestroke physician is
- Some EMRs have focused assessment templates
- Communication re CT scan & clearance for IV rtPA
- Documentation exclusion criteria if met timeframe but other issues exclude patient as rtPA candidate
- Consent



# Emergency Evaluation & Diagnosis: Inpatient Code Stroke

- Staff education – FAST
- Stroke code
  - Call same name as ED
  - Staff can call best practice
- Responding team
  - Rapid response
  - Medical emergency team
  - Stroke education
  - Knowledge of stroke protocols

# Ischemic Stroke

# Ischemic Stroke: IV rtPA Administration Practical Strategies

- Consent & policies
- Order with calculations built in
- Best practice pharmacy prepare IV rtPA
  - Stroke code notification
- Nursing prepare put safeguards in place
  - Recalculation of bolus dose
  - Independent double check
  - Order
  - Scanning (if applicable)
  - Consider dose calculator development

# Ischemic Stroke: IV rtPA Administration Practical Strategies (cont'd)

- Draw all bloods, insert foley, etc. prior to administering IV rtPA
- Unused medication
- Vital signs and neuro checks
  - Utilize flowsheet or EMR template to assist with completing as per orders
  - Monitor blood pressure & neurological changes during & after rtPA
  - Maintain blood pressure with medications within established ranges
  - Institute bleeding precautions

# Post rtPA Administration

- Vital signs & neuro checks per protocol/order set
- Transfer & receiving nurse – perform neuro assessment together
- Bedside swallowing assessment
- Speech Language Pathologist (SLP) available for swallowing evaluation
- Typical admit ICU though some stepdown
  - Special patient if stepdown
- NIHSS stroke scale as ordered

# Post rtPA Administration (cont'd)

- Therapies
  - Speech Language Pathologist
  - Physical Therapy
  - Occupational Therapy
- Transitions of Care
  - Care management & social work
  - Based on deficits discharge planning
    - Rehab Hospital
    - Skilled Care
    - Home PT/OT

# Education Practical Strategies

- Ensure covering all elements within STK-8
- Identify individual risk factors & indicate on education booklet
- FAST
- Include family and/or caregiver
- Ensure education is based on clinical practice guidelines
- Assess for understanding – don't just ask

# Spontaneous Intracerebral Hemorrhage



# Emergency Evaluation & Diagnosis

## Practical Strategies

- Follow same processes pre-hospital & during stroke code – CT!!
- Treat or transfer – mobilize rapidly
  - Protocols/Order Sets
- Critical to have labs rapidly, especially INR
- Contact consultants as rapidly as possible
  - Relationships with Comprehensive Stroke Centers
- Transfer – one-stop referral lines
- Frequent blood pressure monitoring with treatment as per protocols

# Emergency Evaluation & Diagnosis

## Practical Strategies (cont'd)

- Transfer – History important:
  - Physician to physician
    - NIHSS
    - CT
    - Last known well
    - Medications
    - Hemostatic abnormalities & treatment
  - Nurse to nurse
    - Neuro assessment details

# Spontaneous Intracerebral Hemorrhage

## Non-transferred Practical Strategies

- Observe for extension of bleed
  - Neuro assessment
  - Vital signs
- Palliative care involvement
- Assessment of blood pressure – be aware of target
- Ensure early implementation of therapies

# Spontaneous Intracerebral Hemorrhage

## Non-transferred Practical Strategies (cont'd)

- Vital signs & neuro checks per protocol/order set
- Transfer & receiving nurse – perform neuro assessment together
- Bedside swallowing assessment
- Speech Language Pathologist (SLP) available for swallowing evaluation
- NIHSS stroke scale as ordered

# Spontaneous Intracerebral Hemorrhage

## Non-transferred Practical Strategies (cont'd)

- Therapies
  - Speech Language Pathologist
  - Physical Therapy
  - Occupational Therapy
- Transitions of Care
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# Stroke (STK) Core Measures

# Stroke National Hospital In-Patient Quality Measures

| <b>Set Measure ID #</b> | <b>Measure Short Name</b>                               |
|-------------------------|---|
| STK-1                   | Venous Thromboembolism (VTE) Prophylaxis                |
| STK-2                   | Discharged on Antithrombotic Therapy                    |
| STK-3                   | Anticoagulation Therapy for Atrial Fibrillation/Flutter |
| STK-4                   | Thrombolytic Therapy                                    |
| STK-5                   | Antithrombotic Therapy by End of Hospital Day 2         |
| STK-6                   | Discharged on Statin Medication                         |
| STK-8                   | Stroke Education  |
| STK-10                  | Assessed for Rehabilitation                             |



# Core Measure Practical Strategies

- Don't wait for the quarterly data
- Review each individual stroke code looking for opportunities
- Education of providers is a key!
- Develop and utilize a checklist to use in assessing for each core element

# Stroke Core Measures

## Practical Strategies to Improve

- STK-1 VTE Prophylaxis
  - Stroke program education to hospitalists, new residents
  - Assessment tool that ties directly to stroke order set
  - How is this picked up for stroke patients in non-stroke units?
  - If not given day of or day after admission document, why?

# Stroke Core Measures

## Practical Strategies to Improve (cont'd)

- STK-2 Antithrombotic on discharge
  - Ischemic strokes
  - Include as part of discharge checklist
  
- STK-3 Anticoagulation for Afib/a-flutter
  - Ischemic strokes with Afib/a-flutter on anti-coagulants at discharge
  - Include as part of discharge checklist

# Stroke Core Measures

## Practical Strategies to Improve (cont'd)

- STK-4 Thrombolytic Therapy
  - Arrive within 2 hrs last known well
  - IV rtPA initiated within 3 hrs last known well
  - Documentation of times – family accuracy
  
- STK-5 Antithrombotic Therapy Hospital Day 2 End
  - Ensure documentation supports why it is not given
  - If you come in 11:59pm that is Day 1 & Day 2 is the next day – education

# Stroke Core Measures

## Practical Strategies to Improve (cont'd)

- STK-6 Discharged on Statin Med
  - LDL  $>$  or  $=$  100mg/dL or LDL not measured or on lipid lowering medication prior to hospital
  - Check for statins on home medication list
  - Consider having LDL automatically ordered
  - Have statins automatically on orders checked
  - Review with residents, hospitalists

# Stroke Core Measures

## Practical Strategies to Improve (cont'd)

- STK-8 Stroke Education
  - Must include:
    - Activation of EMS
    - Need for follow-up post discharge
    - Meds prescribed at discharge
    - Risk factors for stroke
    - Warning signs & symptoms of stroke
  - Ask related questions at discharge phone calls to assess for understanding of teaching

# Stroke Core Measures

## Practical Strategies to Improve (cont'd)

- STK-10 Assessed for Rehabilitation
  - Measure is typically 100%
  - Consider making this mandatory on your order sets
  - Don't leave to order later – may not get done
  - If unable to see due to clinical condition, document

# In Summary

- Many practical suggestions to consider
- Standardize care utilizing clinical practice guidelines (CPGs)
- Help staff to understand role of CPGs
- Think of new ways to look at old processes to improve



Questions? Thank you!