DYSPHAGIA SCREENING AFTER ACUTE STROKE - A QUALITY IMPROVEMENT PROJECT USING CRITERION-BASED CLINICAL AUDIT

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INTRODUCTION

Worldwide

- 15 million suffer from stroke annually
- 1/3 dies
- 1/3 develop a lifelong disability

World Health Organization, 2014
Norway
• 15 000 suffer from stroke annually
• 19 % dies
• 55 000 are living with disability

Norwegian Directorate of Health 2011
Ellekjær & Selmer, 2007
DYSPHAGIA – SWALLOWING DIFFICULTIES

- 37 – 78 % of all stroke-patients have dysphagia
  Martino et al., 2005

- 22 – 52 % of all stroke-patients with dysphagia aspirate
  Katzan et al., 2003
DOES DYSPHAGIA MATTER?

- **Dysphagia**
  - Pneumonia increase with 3-fold
    - Martino et al., 2005

- **Aspiration**
  - Pneumonia increase with 11-fold
    - Martino et al., 2005

- **Pneumonia**
  - Mortality increase with 3-fold
    - Katzan et al., 2003

- **Dysphagia**
  - Malnutrition
    - Foley et al., 2009
STANDARD SWALLOW ASSESSMENT

• Auditing practices and implementing standard methods for swallow assessment
  – Increase the number of stroke patients screened for dysphagia
  – Increase the number of stroke patients identified with dysphagia

STROKE GUIDELINE

Australian guideline
- Patients should be screened for swallowing deficits before being given food, drink or oral medications
- Swallowing should be screened for as soon as possible but at least within 24 hours of admission

National Stroke Foundation, 2010

Norwegian guideline
A standardised screening procedure for swallowing deficits should be done soon after admission and before given oral nutrition

Norwegian Directorate of Health 2011
Setting

• A stroke unit with four beds within a medical ward with 34 beds
• Special trained nurses
• 90 patients submitted annually
• In 2011 a national audit showed a gap between recommendation and practice
METHODS

CRITERION-BASED CLINICAL AUDIT

«Clinical audit is a quality improvement process that seeks to improve patients care and outcomes through systematic review of care against explicit criteria. Where indicated, changes are implemented at an individual, team or service level, and further monitoring is used to confirm improvement in healthcare delivery»

Burgess, 2011

«Clinical audit is all about measuring the quality of care and services against agreed standards and making improvements were necessary»

Burgess, 2011
WHY DID WE USE A CLINICAL AUDIT?

• We needed a method to guide us through our quality improvement project
  • Planning the project
  • Setting criteria and standard
  • Reliable knowledge of practice
  • Implementing change
  • Evaluation and sustaining improvement
AIM

• To determine the level of compliance with an evidence-based recommendation on stroke and swallow assessment
• To take actions to improve practice if a gap was identified
WHAT TO DO, IN A CLINICAL AUDIT?

1. Preparation and planning (including for re-audit)
2. Measuring performance
3. Implementing change
4. Sustaining improvement (including re-audit)

Audit circle rendered with permission from Healthcare Quality Improvement Partnership HQIP, 2012
CRITERION-BASED CLINICAL AUDIT
STAGE 1 - PREPARATION AND PLANNING

• Grounding in the organisation
• Identifying stakeholders
• Making an action plan
• Setting criteria & standard

All patients (100%) with stroke (ICD10 classification – I61, I63, I64, G45,9) are screened for dysphagia with a standardised screening tool

Norwegian Directorate of Health 2011
### CRITERION-BASED CLINICAL AUDIT
### STAGE 2 – MEASURING PERFORMANCE

#### Datainnsamlingsverktøy – Kartlegging av praksis

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Item</th>
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<tbody>
<tr>
<td>1</td>
<td>Er svelgscreening ved hjelp av standardisert screeningverktøy gjennomført?</td>
</tr>
<tr>
<td>2</td>
<td>Om svaret er NEI på spørsmål 1 er det begrunnet og kva er evt grunnlegginga?</td>
</tr>
<tr>
<td>3</td>
<td>Om svaret er DELVIS på spørsmål 1, kva manglar og kva er grunnlegginga</td>
</tr>
<tr>
<td>4</td>
<td>Hadde pasient fått mat, drikke og/ eller medisin prøvet før screening?</td>
</tr>
<tr>
<td>5</td>
<td>Er det dokumentert svelgsvaskar i standardisert screeningverktøy?</td>
</tr>
<tr>
<td>6</td>
<td>Ved JA på spørsmål 5, er tiltak anbefalt?</td>
</tr>
<tr>
<td>7</td>
<td>Ved JA på spørsmål 5, er pasienten henvist til logoped eller anna personale med kompetanse på svelgsvaskar for utgrieng og treining?</td>
</tr>
<tr>
<td>8</td>
<td>Ved JA på spørsmål 5, er rescreening / ny screening utført?</td>
</tr>
<tr>
<td>9</td>
<td>Tidspunkt for rescreening / ny screening?</td>
</tr>
<tr>
<td>10</td>
<td>Andre kommentarer</td>
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</tbody>
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3 I61 - hjerneskadeflatejuryn
2 I63 – hjernemalinfarkt
1 I64 – hjerneslag ikke spesifisert som bløtningsfag eller infarkt
4 G45,9 – Tilf Unspecifisert forbligende cerebralt iskemisk anfall
5 NIHSS - National Institutes of Health Stroke Scale

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6 Anbefalt i norsk nasjonal retningslinje
CRITERION-BASED CLINICAL AUDIT
STAGE 2 – MEASURING PERFORMANCE

Swallow screening
Baseline n=88

- Yes
- No / incomplete

6% Yes
94% No / incomplete
CRITERION-BASED CLINICAL AUDIT
STAGE 3 - IMPLEMENTING CHANGE

Brainstorming

Root cause analysis

Barriers

Tailored interventions targeting barriers
BARRIERS

- Barriers
  - Staff
  - Screening tool
  - Organization
TAILORED INTERVENTIONS

- Interactive didactic workshop
- Local opinion leaders
- Screening tool
- Checklist and reminders
CRITERION-BASED CLINICAL AUDIT
STAGE 4 – RE-AUDIT

- Baseline n=88
- Re-audit n=51

<table>
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<th>Yes</th>
<th>No/ incomplete</th>
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<tbody>
<tr>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>94%</td>
<td>39%</td>
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CONCLUSION

A criterion-based clinical audit involving management and staff and using multiple tailored interventions targeting barriers can lead to greater compliance with the recommendation for screening stroke patients for dysphagia.
REFERENCES


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THANK YOU FOR YOUR ATTENTION