Interactive Early Rehab for Patients, Involving Relatives and Health Care Assistants

Jenny Natividad  Diane Richard  Raquel Danae Rodriguez

Staff Nurses
Critical Care Unit
King’s College Hospital, London
WHY?

- Service improvement project undertaken as part of an internal development course for Band 5 and Band 6 nurses.
- 25% of all ICU patients receive early therapy (Zanni et al., 2010)
- Guidelines for the Provision of ICU 2019, Section 3.6 Rehabilitation.
• Rehab should be:
  - Started as early as possible
  - From admission-discharge
  - Provided by trained individuals

• Myopathy: side effect of CCU stay or delayed rehab

• Recovery: 18 months to 2 years
CHALLENGES TO EARLY REHABILITATION

• Barriers linked to: Patient - Provider – Institution. (Parker et al., 2013)
• Reasons for not receiving therapy:
  - Over sedation and/or low level of consciousness
  - Lack of available or trained rehabilitation staff
  - Busy shifts
IN ORDER TO OVERCOME THESE BARRIERS WE NEED:

- To create a culture that prioritises early:
  - Rehabilitation
  - Interdisciplinary coordination
  - Communication and teamwork

(Lee and Fan., 2012)
AIMS

- Prevent myopathy.

- Promote human touch in the ICU by an interdisciplinary approach.

- Combine relatives and health care assistants’ (HCA) input.

- Offer an additional role outside of their usual routine to HCAs.
WHAT?

- Multidisciplinary collaboration
  - PROM or AROM Exercises
    a. Shoulder flexion
    b. Shoulder abduction
    c. Elbow movement
- Training from physiotherapists
- Trained relatives and HCAs
Intervention: UPPER LIMB REHAB

- Individualised Upper Limb Rehab Plan
- Active / Passive Exercises
- Impairment based
CRITERIA
OF INCLUSION

- Patients / relatives willing to undertake rehab
- ICU patients from day 3 initially assessed
- Relatives willing to join in
• We identified a need for alternative resources for early rehabilitation.

• We sought advice from Physiotherapists and Occupational Therapists and received special training about PROM & AROM exercises.

• Presented rehab option to patients and their relatives.
DATA COLLECTION METHOD

• Risk Assessment:
  o Past medical history
  o History of presenting condition
  o Review of current medications
  o Previous level of function

• Questionnaire for patients and their relatives:
  o Open and closed questions
### PATIENTS CHECKLIST

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM</td>
<td>PM</td>
<td>AM</td>
<td>PM</td>
<td>AM</td>
<td>PM</td>
<td>AM</td>
</tr>
<tr>
<td>a.) Shoulder Flexion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.) Shoulder Abduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.) Elbow Movements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Is pt. happy with rehab?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.) Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.) No, why?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Is the performer happy doing it?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.) Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.) No, why?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Performed By:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.) Relatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.) HCA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any comments/suggestions
Shoulder flexion

**Therapist’s aim**
To stretch or maintain range of the shoulder joint.

**Client’s aim**
To stretch or maintain range in your shoulder.

**Therapist’s instructions**
Position the patient in supine with their shoulder extended and elbow flexed a little. Move the shoulder joint to approximately 90 degrees flexion and back.

**Precautions**
1. Impaired or absent sensation of stretch.

Shoulder abduction

**Therapist’s aim**
To stretch or maintain range of the shoulder joint.

**Client’s aim**
To stretch or maintain range in your shoulder.

**Therapist’s instructions**
Position the patient in supine with their shoulder adducted and elbow flexed 90 degrees. Move the shoulder joint to approximately 90 degrees abduction and back.

**Precautions**
1. Impaired or absent sensation of stretch.

Elbow movements

**Therapist’s aim**
To stretch or maintain range of the elbow joint.

**Client’s aim**
To stretch or maintain range in your elbow.

**Therapist’s instructions**
Position the patient in supine with their arm extended. Move the elbow joint through full range of motion.

**Precautions**
1. Impaired or absent sensation of stretch.
<table>
<thead>
<tr>
<th>Teaching Done:</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>Th</th>
<th>F</th>
<th>St</th>
<th>Sn</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Shoulder Flexion</td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Shoulder Abduction</td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Elbow Movements</td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching Done by:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching Done to:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Suitable for Upper Limb Program

Approved by: PHYSIO/OT
### RESULTS

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Patient suitable for ULE</th>
<th>Times performed</th>
<th>Times performed by relatives</th>
<th>Times performed by HCAs</th>
<th>Why ULE not performed</th>
<th>Other Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>15</td>
<td>None</td>
<td>15</td>
<td>None</td>
<td>No relatives</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
<td>20</td>
<td>20</td>
<td>None</td>
<td>None</td>
<td>Relatives preferred to do it</td>
</tr>
<tr>
<td>3</td>
<td>Yes</td>
<td>23</td>
<td>23</td>
<td>None</td>
<td>None</td>
<td>Family said movements are better</td>
</tr>
<tr>
<td>4</td>
<td>Yes</td>
<td>10</td>
<td>10</td>
<td>None</td>
<td>None</td>
<td>Patient passed away</td>
</tr>
<tr>
<td>5</td>
<td>Yes</td>
<td>18</td>
<td>18</td>
<td>None</td>
<td>None</td>
<td>Patient discharged to the ward</td>
</tr>
<tr>
<td>6</td>
<td>Yes</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>None</td>
<td>Patient said movements are better</td>
</tr>
</tbody>
</table>

Six patients were suitable for upper limb exercise this month
It was carried out 99 times
82% of it was carried out by relatives
18% was carried out by HCAs
OUTCOMES OF PROJECT

• Multidisciplinary cooperation

• More patients get to receive rehabilitation

• Increase of patient’s motivation

• Improved sense of “belonging” for relatives and HCAs

• More satisfaction and participation for relatives
OBSTACLES

- Difficulty actualising the aim
- Awaiting and obtaining permission to start project
- Short timeframe
OUR AIMS FOR THE FUTURE

• Family and HCAs involvement in rehabilitation exercises to become a routine aspect of care.
• Promote early reassessment and identify potential patients for early rehab.
• Suitability for rehab exercises to be added to the admission checklist.
• Patients identified for upper limb rehab exercises to be communicated amongst healthcare professionals thereby promoting continuity.
CONCLUSIONS

• Relatives and HCAs can be a resource within Critical Care to assist with rehabilitation.

• Combined approach with the MDT and involvement of relatives helped with the coordination of rehabilitation.
Any Questions?
REFERENCES


• Lee CM & Fan E, (2012), ICU-acquired weakness: what is preventing its rehabilitation in critically ill patients, BMC Medicine 10: 115


• Radomski, M, Anheluk, M, ArulananthamM (2017) Implementing evidence-based practice: A context analysis to examine use of task-based approaches to upper-limb rehabilitation


• Zomorodi, M, Topley, D & McAnaw, M. ‘Developing a mobility protocol for early mobilisation of patients in a Surgical/Trauma ICU’ Critical Care Research, 2012