Rehabilitation Models of Care

Overview of Literature Review

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Overview

- Background to literature review
- Rehabilitation – definitions, the process, standards
- Models of care examples
- Diagnosis specific models of care
- Factors in effective rehabilitation
- Key points
Literature Review

• Dept of Health commissioned NARI to complete a literature review on rehabilitation models of care

• Literature review questions:
  1. What models of care exist for inreach, admitted and ambulatory rehabilitation?
  2. What diagnosis specific models are used in rehabilitation settings?
  3. What are the common elements of these models and how do they relate to the Victorian rehabilitation services?
  4. What principles of a rehabilitation model of care promote best outcome?
Rehabilitation

“A set of measures that assist individuals who experience, or are likely to experience, disability to achieve and maintain optimal functioning in interaction with their environment” (WHO)

“Care in which the clinical purpose or treatment goal is to improve the functional status of a patient with an impairment, activity limitation or participation restriction” (Dept of Health Subacute Planning Framework)

“Prevention & reduction of functional loss, activity limitation, participation restriction arising from impairments, the management of disability physical, psychological and vocational dimensions and improvement of function” (AFRM, 2011)
Rehabilitation

Optimise activity and enable participation in order for the individual to live the life they wish

(Gutenbrunner, 2007)
Rehabilitation

• Problem solving process (WHO, Wade, 2005, Wade 2005)

Assessment

Identify needs/modifiable factors

Goal setting

Measurement, planning & implementation of interventions

Evaluation of change & effectiveness
Model of Care

“Overarching design for the provision of a particular type of health care service that is shaped by theoretical basis, evidence based practice and defined standards”

(Davidson et al, 2006)

Multidimensional, based on evidence and patient and provider needs

(Queensland Health, 2000)
Standards/Guidelines

- Rehabilitation process:
  - Multidisciplinary/interdisciplinary team
  - Frequency and intensity of therapy:
    - 5 days per week (AFRM, 2011, MIRC taskforce)
    - 3 hours minimum (MIRC Taskforce)
    - 3 hours for those with capacity or less as per need/capacity (AFRM, 2011)
Rehabilitation Models of Care

Western Australia
- Amputee Services & Rehab
- Stroke
- Rehab & Restorative Care
- Elective Joint Replacement

South Australia
- Cardiac Rehabilitation

NSW
- Rehabilitation MOC

Victoria
- Victorian Paediatric Rehab Service

Others:
- Transport Accident Commission
- Heads of Workers Compensation Authorities
- Department of Veteran Affairs
MOC – Principles

Common Rehabilitation MOC Principles

Client-centred care
Equity of access
Evidence-based care
Outcome-focused
Interdisciplinary
Early intervention
Service integration
Care co-ordination
Involvement of family/carer
Appropriate setting
Continuity of care
MOC – Enablers

Common Enablers for Rehabilitation Models of Care

- Workforce
- Education & Training
- Information and communication technology
- Infrastructure
- Linkages
- Research & monitoring
- Health facility requirements
- Clinical decision making
- Data & performance improvement
MOC – Pathways

• Included in Dept of Health models of care
• Identify patient journey
• Most preadmission to community
• NSW - ready for rehab to community
Rehabilitation MOC – NSW

Source: Rehabilitation Redesign Project Final Report, NSW Health, 2010
Rehab Models of Care International Literature

- Literature is limited & broad
- Support biopsychosocial approach
- Multidisciplinary or interdisciplinary
- Early rehabilitation
- Equity of access
- Client centred
- Service integration
- Evidence based
COMMUNITY PROVISION

SELF MANAGEMENT POPULATION

- Health promotion, such as prevention of injury at work
- Community leisure, such as swimming groups for older adults and people with long-term conditions
- Counselling/therapy to support people’s mental health
- Increasing health knowledge through technology
- Community-based voluntary agencies, such as drop-in centres
- Community medicine
- Identify vulnerable people in the community (SPARRA*)

*Scottish Patients at Risk of Readmission and Admission

LOCALITY BASED REHABILITATION (+ MAINTENANCE) TEAMS
Includes disease lifestyle management and case management

Potential emergency admission

Successful “treat & leave”

Multi-disciplinary, multi-agency rehabilitation teams

Screening

Single point of direct access

Fast-track back to self management with appropriate rehabilitation support if necessary

ACUTE PROVISION

SPECIALIST REHABILITATION TEAMS
Utilising case management

A & E

Acute wards

Ambulance services: “treat & leave”

Rapid response teams: “treat & leave”

Fast-track discharge teams coordinate further rehabilitation and self management

Fast-track discharge teams focus on and management

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Components of Stroke Models

• Stroke unit
  – greater focus in acute stroke management
  – geographically discrete units
  – comprehensive ax
  – MD team approach
  – clear communication within team/family/patient
  – promote early mobilisation
  – strong engagement with carers/families
  – staffed by professionals with special interest in stroke
Components of Stroke Models

• Selection of patients for rehabilitation
  
  – Variable

  – Bettger et al (2007) found 96.2% of admissions being reported to the stroke registry were assessed for stroke rehab in the acute setting
  — variability in decision process on discharge

  – age, social supports, ambulation/mobility, prognosis common factors influencing decision making
Components of Stroke Models

• Timing of intervention
  – Mobilisation as early as possible (Wright et al, 2012)
  – Geographic location and collocation with acute impact early mobilisation
  – Optimal timing is not definitive
  – Cost effectiveness with early rehabilitation & reduced costs at 3 & 12 mths post (Tay-Teo et al, 2008)
  – Dutch study of physios adherence to early mobilisation – 71% claim adherence, patients received 50% of guidelines
Components of Stroke Models

• Frequency & intensity of intervention
  – Intensity of therapy as much as possible within 6 months post stroke (Otterman et al, 2012)
  – Clinical expertise & resource capacity determines timing and intensity (Otterman et al, 2012)
  – Dutch study on feasibility of multiple physical therapy sessions weekdays and weekend therapy found low feasibility. Barriers were patient health status, policy and funding
  – Literature lacks definition of intensity & exact content of therapy, therefore maximal intensity for change is not documented (Quinn et al, 2009, Karges, 2009, Kelly, 2009)
Components of Stroke Models

• Early supported discharge
  – Including follow up with mobile stroke specific team – reduced LOS, no change in readmission or home based/community service costs (Fjaertoft et al, 2005, Anderson et al, 2000, Bryer et al, 2011)
  – NICE guidelines recommend ESD offered to all who can indep transfer & same intensity skill mix as in hospital (NSF, 2010, NICE, 2011)
  – Implementation across England reinforced the need for appropriate processes and systems to ensure safety and communication prior to discharge

• Interdisciplinary or multidisciplinary approach
  – Mapped stroke continuum with case manager to navigate the system
Components of Stroke Models

• Telemedicine
  – Aid ESD in rural areas
  – American Stroke Association – must be a substitute for specialised face to face care
  – Can provide specific stroke rehabilitation
  – Further development required
Components of ABI Models

- Reaccess in all settings
- Access to community or outpatient rehabilitation
- Systematic review on efficacy of community rehab found ID team, support grps & telephone counselling to have strongest evidence
Components of ABI Models

- Early rehabilitation post ABI associated with better outcomes
- Greater gains shown in patients admitted within 6 months
- Reduced LOS with early rehabilitation (within 1-2 months of injury)
- No specific guidelines of intensity – as much as patient is capable of (BSRM, 2003)
- Gains still made 12 months post, therefore opportunity to reengage important (High et al 2006)
- Neurotrauma clinics can provide avenue for co-ordination & continuity of care
Components of SCI Models


• Common services are fragmented with gaps between settings or services across the continuum (Riis, 2007, Kendall, 2003, Scivoletto et al, 2006)

• Reduced inpatient LOS with transitional model combining inpatient and outpatient rehabilitation as a continuum of recovery (Riis, 2007, Kendall, 2003, Vivo, 2007, Suddick, 2009)

• Interdisciplinary team

• Care co-ordination across settings

• Varied evidence to support early intervention, not defined
Components of Ortho/Musc Models

• Home based rehabilitation (Mahommed et al, 2008)
• Timing of rehabilitation rather than setting was predictive of efficient rehabilitation (Tian et al, 2012)
• Therapy intensity is referred to in terms of inpatient rehabilitation, this and 7 day frequency is associated with reduced LOS, improved FIM and short term recovery (Kirk-Sanchez, 2001, Pua et al, 2011)
• Interdisciplinary team and pain management
Components of Cardiopulmonary Models

- Alternative models to address low uptake of cardiac rehab
- Referral pathways and access
- Communication impacts referral and success of cardiac rehab
- Cardiac rehab occurrence rather than timing
- Multidisciplinary approach
- Comparison of hybrid model (outpatient, home based, telemonitored) and standard outpatient rehabilitation found comparable results in physical capacity (Korzeniowska-Kubacka et al, 2011)
Factors in Effective Rehabilitation

• Acute or early rehabilitation – ideal timing unclear from literature
  – Stucki (2005)
  – Poulos (2011)

• Early supported discharge – cost effective without reduction in outcome
  (Miller, 2005)

• Setting – home based and interface between settings

• Therapy intensity associated with better outcomes however maximal amount and content are not detailed
  – Poulos (2010)
  – Cifu (2003)
Factors in Effective Rehabilitation

• Interdisciplinary care
  – Multi and inter often used interchangeably in the literature
  – Integrated and co-ordinated care essential in providing interventions in complex biopsychosocial model
  – Effectiveness of teams research still uses high level measures such as LOS and mortality
  – Strasser (2005)

• Goal setting
  – Holliday (2005) found goals were set in individual disciplines & shared at team mtgs
  – 60% of patients didn’t receive any record of their goals
  – Greater patient involvement
  – Levack et al (2006) found inconsistent evidence that goal planning influenced patient adherence to therapy
  – Strong evidence that prescribed, specific, challenging goals can improve immediate patient performance
  – Liu (2005) found client centred approach of discussing goals achieved greater agreement
  – Understanding of rehabilitation process
Key points

• Principles common in rehabilitation MOC:
  » Client centred care
  » Interdisciplinary approach
  » Evidence based care
  » Goal directed intervention
  » Equitable access

• Other elements important in rehab MOC:
  » Care co-ordination
  » Service integration & continuity of care
  » Early intervention
  » Setting
Key points

• What primarily enables MOC principles?
  » Workforce
  » Education & training
  » Information & communication technology
  » Infrastructure
  » Relationships

• Emerging themes in the research
  » What therapy intensity and frequency is optimal for best outcome?
  » What is the optimal timing for commencing a rehabilitation model of care
  » What setting is rehabilitation best provided and for who, including telemedicine
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