Introducing the Rehab ABC nursing documentation framework

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Abstract

Background Rehabilitation nursing lacks a documentation framework representative of nursing's contribution to rehabilitation outcomes. The Rehab ABC nursing documentation framework (Rehab ABC) was designed to improve the structure and content of rehabilitation nursing documentation. The framework acts as a mental model and memory aid using a basic mnemonic structure. It contains all the items of the Functional Independence Measure (FIM™) and additional, comprehensive care responsibilities such as nutrition, pressure care, falls management, cognition and continence care.

Aim To evaluate introducing the Rehab ABC with the Normalisation Process Theory (NPT) NoMAD survey using two different implementation processes.

Methods The Rehab ABC was introduced in two independent rehabilitation units using different implementation models of practice development (PD) and quality improvement (QI). The NPT NoMAD survey was used to evaluate four domains of normalisation.

Results The Rehab ABC had become a normalised process in both units, reflecting how well the framework can be embedded using PD or QI. Providing evidence, the Rehab ABC makes sense and is coherent, creating change using local 'buy-in' through reflexive participation. Audit results reinforced individual and focus group feedback that the Rehab ABC provides users with a logical and understandable framework that supports multidisciplinary team (MDT) communication.

Conclusion The Rehab ABC provides nurses with a simple sense-making tool to improve documentation and MDT communication. It reflects how rehabilitation nurses integrate functionally focused, comprehensive and goal-oriented rehabilitation in their care. NPT is an easily administered evaluation process that can help guide implementation and gauge the success of the Rehab ABC framework in different clinical contexts.

Introduction

Nursing documentation is an essential aspect of patient safety, promoting comprehensive care and multidisciplinary team (MDT) communication (Shala et al., 2021; Bjerkan et al., 2021). As a new rehabilitation clinician, it was easy to see that rehabilitation nurses' documentation did not reflect how nurses contribute to rehabilitation outcomes. It is said that necessity is the mother of invention, and the Rehab ABC framework originated from a need to understand the role of rehabilitation nurses, helping to make sense of my new role as a novice rehabilitation nurse educator. The Rehab ABC aims to address deficient documentation of highly skilled rehabilitation nursing care. This paper evaluates two ways the Rehab ABC can be successfully implemented.

The SCQIRE guidelines 2.0 have been used to structure the outline of this paper (Ogrinc et al., 2015). First, there is a brief background of rehabilitation nurse documentation and an introduction to the Rehab ABC framework. Then the two different approaches used to implement the Rehab ABC are explained. As part of this exploration, practice development (PD) (Manley & McCormack, 2003) and quality improvement (QI) (Hilton & Anderson, 2018) change methodologies can be viewed comparatively. Included is an explanation of how and why Normalisation Process Theory (NPT) (May et al., 2016) was used as an evaluation device through its ability to identify levels of cognitive, behavioural and contextual change. Finally, following the methods and results sections, there is a discussion about

the process of nurse documentation and a reflection on the need for action to improve our understanding of rehabilitation nursing care and its documentation.

Background

The WHO recognises that documentation should be clear, concise and comprehensive, reflecting person-centred healthcare (WHO-SEARO, 2007). The nursing literature describes the quality of nurse documentation in general (Johnson et al., 2014; Paans et al., 2011; Tranter, 2009) and particularly in rehabilitation (Cervizzi & Edwards, 1999; Hentschke, 2009) as a long-standing concern. Nursing documentation research demonstrates the frustration at the lack of identity and purpose relevant to specialist nursing care within clinical records (Stewart et al., 2017, Vabo et al., 2017).

The complexity of nurse documentation is underestimated and is unrepresentative of the real impact of quality nursing care on patient outcomes (Cheevakasemsook et al., 2006; Huber et al., 2021). In their meta-study, Jefferies et al. (2010) concluded that the essential components of quality nursing documentation must represent the full extent of nurses' work, including nursing's educational and psychosocial role. Additionally, nurses must contemporaneously record care variances in line with local, legal and policy requirements (Jefferies et al., 2010).

In a Cochrane review of the effects on nursing practice and healthcare outcomes of nursing record systems, Urquhart et al. (2010) concluded that the nursing profession needs to better understand exactly what needs to be recorded, how it will be used, and the importance of involving nursing staff in the development and implementation of new documentation systems (Urquhart, et al., 2010).

Deficiencies in rehabilitation nurse documentation represent a medico-legal risk (Blair & Smith, 2012) that threatens funding (Hentschke, 2009) and, most importantly, undervalues the contribution nurses make to rehabilitation care outcomes (Gutenbrunner et al., 2022). The literature and practice-based experience demonstrate a dangerous deficiency in patient care documentation (Blair & Smith, 2012). These deficits support the development of a specifically designed documentation framework focused on rehabilitation in sub-acute and post-acute care. New documentation frameworks such as the Rehab ABC should reflect the patients' needs and provide sufficient and necessary information to support continuity of care (NSW Health, 2012).

There is a gap in the published literature that supports the development of a specifically designed documentation framework focused on rehab in sub-acute and post-acute care. There is also a lack of evidence that specialist documentation frameworks can be successfully implemented in various settings.

The Rehab ABC framework

Design

Existing documentation systems like SOAP and PIE (Blair & Smith, 2012) and acute care communication frameworks like ISBAR or the A–G assessment mnemonics are not designed for rehabilitation or post-acute phases of care. If not implemented properly, they can neglect critical safety and quality care standards related to falls, pressure care, nutrition, cognition and continence (Chien et al., 2022).

The Rehab ABC was designed to help rehabilitation nurses better represent our contribution to care outcomes within the clinical record. The framework acts as a mental model and memory aid using a basic mnemonic structure – a simple sense-maker. The framework contains all the items of the Functional Independence Measure (FIM™) which is a validated international tool (Dodds et al., 1993) used to measure functional improvement in rehabilitation care that is used for funding and benchmarking rehabilitation outcomes worldwide (Turner-Stokes et al., 2012). The Rehab ABC also includes additional essential comprehensive care responsibilities detailed in the Australian Commission on Safety and Quality in Healthcare Standards (Australian Commission on Safety and Quality in Health Care, 2019). The new Australian Comprehensive Care Standard highlights the need to document issues of impaired cognition, continence care, nutrition and hydration needs, pressure care and fall risk management. The Rehab ABC basic mneumonic can be seen in Figure 1.

Figure 1. The Rehab ABC basic mnemonic

It was intended that if nurses used the Rehab ABC to formulate and document their planned care, this would ensure a more enabling, functionally focussed rehabilitative approach to nursing care. The Rehab ABC framework contains recommendations of what nursing documentation should include in order to ensure the completeness of the MDT clinical record. Entries can then have greater utility in tracking patient improvements or identifying issues hindering progression to independence such as pain, incontinence, mood or motivation. Figure 2 shows an example of how the Rehab ABC can be completed for a particular patient.

Since its inception, the Rehab ABC framework has developed organically, been refined and has improved iteratively through multiple implementations and evaluation cycles. Currently, the Rehab ABC framework is used in several rehabilitation units across Australia. It is available as an accessible reference in a smartphone app supplemented by a limited range of resources developed by local facilitators.

The Rehab ABC framework aims to structure nurse documentation to record and demonstrate the necessary aspects of nursing care that contribute to rehabilitation outcomes. The Rehab ABC improves MDT communication by recording differences

Rehab ABC sub-acute nursing documentation

A – Ability/Assistance with ADLs:
Mr Bloggs needed moderate assistance to shower and dress this morning. He needed help with lower limbs due to R hemiparesis. Can dress upper body with min assist.

B – Behaviour & Communication:
Mr Bloggs has aphasia but can understand basic instructions. He can become frustrated but is easily redirected. Participating well in rehab.

C – Continence:
With regular toileting, he can be continent but has occasional accidents. He requires full assistance with positioning, don/doff pull-up pad and perineal hygiene. Nil accidents today. BO in pan large BST 3, 2 Assist.

D – Dressings & Pressure Care:
High risk of PI, air mattress in working order, skin inspected head to toe front and back nil PI. Barrier cream applied.

E – Eating & Drinking:
NG feeds as per regime, having oral trials with speech therapy.

F – Falls Risk & Mobility:
High falls risk, alarm device in situ and working. 2 A stand pivot transfer and regular toileting provided to reduce risk of falls.

G – Goals:
Mr Bloggs wants to improve his communication and self-care independence. Family wants Mr Bloggs to return home but will need to be more independent.

H – Home/Holistic Health:
Continues to improve, family want an update from social work regarding home care.

I – Issues & Investigations:
Low graded temp, at risk of aspiration. Reviewed by RMO. CXR ordered.

Figure 2. Example of Rehab ABC documentation

in ward-based levels of assistance and activities of daily living (ADL ability) compared to therapy-based performances. Often the best efforts in the gym are not translated in the ward, where nurses experience greater dependence on their care (Baker et al., 2020).

The mnemonic structure of the Rehab ABC helps organise the complex task of care communication. Mnemonics are an effective technique to help the memory better encode and recall important information (Carney & Levin, 2003; Jurowski et al., 2015). One of the best known medical mnemonics is the Basic Life Support (BLS) ABC. The mnemonic device helps reduce cognitive load and clinical variance during high pressured situations when the stress of the clinical context can override the rational mind. Cognitively complex scenarios make competing demands on the brain's executive functions, negatively affecting performance (Jurowski et al., 2015).

Documentation represents a time consuming and demanding cognitive task (Colligan et al., 2015; Gaudet, 2016). Mnemonics and mental models can also assist to simplify a process, providing structure and sequence, preserving critical cognitive capacities, and ensuring essential principles can be applied more consistently (Johnson-Laird, 2010). A classic example is the London underground map which dramatically improves people's ability to navigate the complex transport system even though it does not accurately represent the existing rail network (Vertesi, 2008). The Rehab ABC is designed to help nurses navigate the real world complexities of documenting the specialty of rehabilitation care.

Implementation

The Rehab ABC was introduced into two different rehabilitation units. The two units are part of the same Local Health District (LHD) in metropolitan Sydney, implementing the framework independently of each other. The first rehabilitation unit (RU1) is a generalist and neurological rehabilitation unit located within a busy teaching hospital. RU1 used PD to guide and evaluate changes that improve person-centred care (Wilson, 2011). The second rehabilitation unit (RU2) is a busy 'off-site' standalone aged care rehabilitation unit. RU2 adopted a formal structured Plan-Do-Study-Act (PDSA) QI (NSW Health, 2002) approach to implementation.

RU1: implementation using a PD framework

RU1 used PD as an improvement methodology. PD is primarily seen in nursing literature (McCormack et al., 2006) focusing on developing people and practices to achieve high quality, person-centred care (Shaw, 2012). It uses collaborative, inclusive and participative approaches, supporting individuals' learning, growth and development, directing collective improvement and enquiry (Akhtar et al., 2016; Wilson & McCormack, 2006). The author led the RU1 implementation using the PRAXIS framework (Hardy et al., 2011) applying emancipatory PD principles of engagement, enablement and empowerment.

RU2: implementation using a clinical PI QI framework

RU2 implemented the Rehab ABC in the context of a desire to standardise clinical documentation and to ensure FIM™ scores could be verified in the clinical records. The implementation of the Rehab ABC in RU2 was managed by a team of senior nurses and overseen by a quality manager using a formal QI methodology mirroring the classical Institute for Health Improvement (IHI) QI methodology (IHI, 2017) using the PDSA framework (IHI, 2017).

Normalisation Process Theory (NPT)

The evaluation methods used in QI and PD are often considered relatively soft and empirically loose (Fairbrother et al., 2015). It was therefore considered essential to evaluate the Rehab ABC more empirically. NPT was chosen as an evaluation device because it provides an empirically validated, context-based appraisal of the extent to which a process has become embedded into routine practice (Finch et al., 2016; Murray et al., 2010). NPT provides a way of exploring the necessary conditions for successfully integrating interventions such as the Rehab ABC within dynamic social contexts such as rehabilitation care (May et al., 2018). The four components of NPT relate to:

- Sense-making processes or creating a sense of *coherence.*
- Engagement or *cognitive participation* in change.
- *Collective action* in work done to enable the intervention to happen.
- Ongoing *reflexive monitoring* of the costs and benefits of the intervention.

These components are dynamic and interdependent; they interact within the broader context of the intervention (Murray et al., 2010).

The NPT NoMAD survey

NPT helps evaluate the extent to which a program has become part of normal practice. The NoMAD survey is the outcome of the **No**rmalization **M**e**A**sure **D**evelopment process that was conducted by testing the utility, validity and reliability of measures that assessed NPT's four core constructs – coherence, cognitive participation, collective action and reflexive monitoring (Finch et al., 2013). This process resulted in the 23-item open-access NoMAD survey instrument (http://www.normalizationprocess.org/) used for assessing the real world dynamics of implementation from the perspectives of the people it intends to affect.

Tested in six healthcare settings, the NoMAD survey demonstrated high face validity, high construct validity, and reasonable internal consistency, with Chronbach's alpha ranges from 0.65–0.81 across the four NPT constructs. All four scales have strong internal consistency (Hazell et al., 2017). Carl May is the original architect of NPT; for an in-depth theoretical description, see May et al., (2016). Subsequently, NPT has been used in over 108 published empirical studies that have been the subject of a systematic review demonstrating the applicability of the four constructs of NPT to implementation science and evaluation in health (May et al., 2018).

Component sample questions

Coherence (sense-making)

Four questions relating to how the Rehab ABC differs from usual documentation and the value of the framework to improve documentation, the existence of a shared understanding of its purpose, and effect on practice.

Example question: Staff in this rehabilitation unit have a shared understanding of how the Rehab ABC works.

Cognitive participation (Buy-in)

Four questions relating to how the framework is driven by key people in the team, its legitimacy related to nurses' role and their work with colleagues, and the anticipated level of continued support for the framework.

Example question: I believe using the Rehab ABC is a legitimate part of my role.

Collective action (team integration)

Seven questions on how easily integrated or disruptive the Rehab ABC has been to daily practice, nurses' confidence in other people's skill in its use, the allocation of sufficient resources, training and managerial support to the project.

Example questions: I can easily integrate the Rehab ABC into my existing work. I have confidence in other people's ability to use the Rehab ABC.

Reflexive monitoring (adaptability)

Five questions about flexibility, feedback and local adaptation, effectiveness and use in planning future improvements of the framework. Questions also relating to whether nurses jointly agreed that using the framework is worthwhile, if they valued its effects on practice, and the extent to which the user can adapt the way they work with the Rehab ABC.

Example questions: Feedback about the Rehab ABC can be used to improve it in the future. I can modify how I work with the Rehab ABC.

NPT NoMAD survey results

There are 20 questions in the NoMAD survey on a Likert scale scored from 0–5 where zero is strongly agree, and five strongly disagree. RU1 and RU2 returned 18 and 20 surveys, respectively, with 82% and 50% response rates.

The NoMAD survey was adapted to reflect the Rehab ABC and distributed to nurses working on both rehabilitation units during the same 2-month period. In RU1, 18 of 22 permanent RU1 nurses completed the survey, representing 82% of full-time nurses. In RU2, 20 of 40 distributed surveys were completed, representing over 50% of RU2 nursing staff. Response rates

reflected local contextual conditions, specifically the size and accessibility of staff to surveyors. Completion of the survey was anonymous and voluntary.

There were low levels of disagreement, 0–7%, and high agreement rates, 69–84% on average, across the four constructs (Table 1; Figure 3). The most significant level of disagreement, at 7%, related to collective action in RU2. The greatest ambivalence in the form of neutral response was in collective action and reflexive monitoring – rated between 13–25%. The highest rating was of sense-making or coherence; it had an 84% average, representing the highest agree/strongly agree result.

NoMAD also surveys how familiar people felt the Rehab ABC had become and the extent to which it is a current part of everyday practice. On average, staff rated between 7.5–8.8/10, with ten feeling completely familiar or becoming a current part of practice. RU1 showed slightly greater familiarity than RU2, but this may be because the Rehab ABC originates in RU1 and RU2 had more junior staff. This was reflected in RU2 which showed greater scores for Q3; whether they feel the ABC tool *will become* a normal part of their work was 8.5/10.

Contextual elements that interacted with the intervention

The timing of the NPT-based empirical evaluation using NoMAD was prompted by a perceived threat to the Rehab ABC from introducing a new electronic medical record system (eMR). It was also important to see if the Rehab ABC was robust enough to survive the disruptive effects of eMR implementation.

The principle differences between RU1 and RU2, being PD vs QI, relate to the underlying intent of improvement:

- QI focuses on the individual issue, whereas PD focuses on the potential the person has as an individual to learn and grow.
- QI uses PDSA cycles, and the RU1 version of PD uses the emancipatory principles that engage, enable and empower people.
- Emancipatory PD (ePD) is about people; QI is about the process.

Table 1. Results

Component	RU1	RU2
Coherence		
Agree/strongly agree	87%	81%
Neutral	13%	18%
Disagree/strongly disagree	0%	1%
Cognitive participation		
Agree/strongly agree	86%	80%
Neutral	14%	20%
Disagree/strongly disagree	0%	0%
Collective action		
Agree/strongly agree	73%	66%
Neutral	25%	24%
Disagree/strongly disagree	2%	7%
Reflexive monitoring		
Agree/strongly agree	76%	76%
Neutral	22%	19%
Disagree/strongly disagree	2%	5%

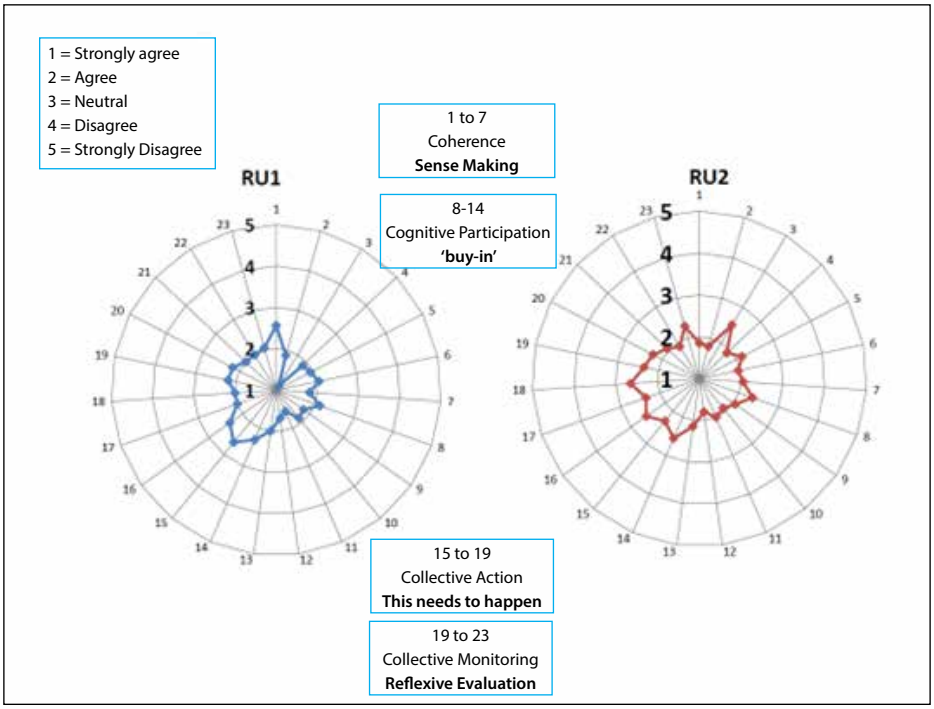

Figure 3. Spider diagram comparing NoMAD survey results

- QI's intent is transactional, whereas ePD's intent is transformational.

RU2 achieved more consistent compliance within a shorter timeframe than RU1 achieved with PD. Before eMR, RU1 had not consistently used the Rehab ABC, with under 70% of written entries using it. The most significant difference between the two contexts is that RU2 is a standalone rehabilitation unit that only admits rehabilitation patients. RU1 is located within a teaching hospital and has a much greater acute care case mix. RU1 has a greater ratio of registered nurses (RN) to enrolled or assistant nurse positions and a consistently higher RN-to-patient ratio. RU2 is a mixed government and privately funded, non-government run 'third schedule' facility, a smaller organisation with a flatter hierarchy than RU1. There may be a greater local sense of rehabilitation nursing specialty at RU2 as a rehabilitation hospital than at RU1, being a rehabilitation unit within an acute hospital.

Discussion

This paper set out to introduce the Rehab ABC through the lens of contrasting implementation approaches and the use of a new theory representing the process of normalisation. Most published attempts to improve nursing documentation are based on the IHI QI framework built on audit and PDSA processes (Saranto & Kinnunen, 2009).

Critically reflective, action-oriented approaches like ePD that improve nursing documentation are less common in the published literature than traditional QI initiatives. Where such approaches have been undertaken, they often uncover a broader agenda related to the local context and the development of nurses' reflective critical thinking (Jefferies et al., 2012), thus the need for organisational support for more profound changes to develop specialist nursing knowledge and skills (Vabo et al., 2017; Okaisu et al., 2014).

QI usually focuses on a specified problem and pre-set outcomes, limiting the impact of change on the target outcome rather than care culture. Rapid PDSA cycles can often be temporary, with initial improvements decaying once efforts turn to the next problem. NPT postulates that in addition to being considered necessary, change needs to make sense and be a good fit for the context. New interventions, and their facilitators, need to foster the type of groupthink and flexibility shown in this study to normalise change.

In addition to being key to patient safety, improvement in nursing documentation needs to be representative of progressive person-centred care cultures. The NoMAD instrument extrapolates the NPT constructs relating to the individual's cognitive and behavioural change and the groupthink needed to implement an identifiable change program successfully. The results of this survey were surprising since the two contrasting units' results were remarkably similar despite differing implementation methods and contexts.

Electronic documentation systems are introduced to improve systems and outcomes of care. However, the international literature and local experience of the technology have seen that implementation has had little regard for nurses' workflows and specialty roles (Chao, 2016). In particular, rehabilitation and the many multidisciplinary sub-acute/post-acute forms of hospital care find the eMR systems represent a missed opportunity for technological innovation in integrated care. Within electronic recording, there is a risk of completely automating, oversimplifying or deconstructing the complexity of rehabilitation. Nursing tasks can become a mindless list or "tick box process", minimising nursing contribution to healthcare outcomes (Chao, 2016).

Most popular documentation mnemonics are problem-focused, shifting the attention from the patient to the disease, thereby perpetuating a dominant biomedical model of practice (Blair & Smith, 2012). The potential benefits of technology rely on the inputs from users containing relevant information and capacity of technology to convey critical thinking. The Rehab ABC provides the users with a framework that ensures that sufficient and necessary information is being recorded and conveyed in a format that maintains the integrity of authorship and assists the reader.

Mnemonic frameworks such as the Rehab ABC attempt to influence users' mental models, helping them reduce the cognitive load of recording important information while still reflecting the complexity of clinical care (Colligan et al., 2015). In time-constrained, complex and technical working environments, heuristics and mental models should provide users with relatively safe short-cut ways of working. Notably, users need to keep the critical thinking capacity to remain open to cues that put the theory into question and recognise circumstances that are outside of its remit, for example, recognising an escalating acute condition where an alternative mental model is required (McAllister, 2003).

This ability to reflexively work, being 'in the moment' and switch thinking depending on incoming information is the dynamic art of nursing at the heart of rehabilitation care. In RU1 introducing the Rehab ABC was a platform for transformational change. Based on the feedback of facilitated action learning sets, nurses could better see how their care directly influences rehabilitation outcomes and the necessity for documentation that reflects their contribution to the patients' rehab and recovery. PDSA provides a pragmatic process but lacks the deeper cognitive challenges of collective change if used in isolation.

PD provides a practice environment for nursing leaders to promote nurse development beyond the narrow confines of a predetermined set of outcomes. Manley et al. (2017) has recently provided evidence that PD can be synonymous with continuous improvement and safety culture. She found that the enablers of safe person-centred care are transformational leadership and enabling facilitation that focuses on holistic safety and ways

of working that embrace learning, improvement and innovation (Manley et al., 2017).

Recommendations

NPT provides a cue to incorporate reflexivity into the planning, implementing and evaluating programs such as the Rehab ABC. PD promotes reflection and critical thinking about delivering individualised person-centred care, representing an antidote to routinised process-based so called 'task-oriented' care. Revisiting the primary purpose of the proposed change is vital to reflexivity, being open to providing flexible and adaptable adjustments that match the prevailing needs of the context. Be flexible during implementation, but take care not to lose sight of the fundamental meaning and purpose of the Rehab ABC in demonstrating the instrumental contribution nurses make to rehabilitation care outcomes.

Further research is needed to investigate whether the Rehab ABC directly influences rehabilitation nurses' practice, linking observation of nursing care to rehabilitation outcomes while investigating its documentation.

Limitations

The comparative results of the NoMAD survey did not provide much feedback on the differences between the implementation strategies or the specific ways they could have been improved. It may be that at the timing of the NPT review, the Rehab ABC was already in a steady state of normalisation. Units adopting the framework may find more use in undertaking the NoMAD survey or using the NPT four constructs during the planning of implementation and or formative staged evaluations to provide evidence for feedback and to revise plans earlier in the process.

Conclusion

It is reasonable to conclude that the Rehab ABC is a sense-making framework that can become a normal part of everyday practice when formally implemented using PD or QI. PD may be more person-centred but may not achieve as quick or as consistent a change. QI is process driven to achieve more linear change; as such, it is considered more transactional than transformational. QI represents a pragmatic, effective change process, while PD promotes the growth of person-centred cultures.

This evaluation has shown that improvement programs must avoid forging a set-and-forget mindset. Established change may not be sustained without reflexive monitoring and collective action – the NPT reminds change agents that this is necessary for normalisation. NPT can be used to effectively counter claims that PD lacks structured evaluation processes, demonstrating that PD can enhance people's potential to learn and develop collectively within person-centred cultures.

Ethical consideration

The Local Health District Health Research Ethics Committee (HREC) executive officer deemed the project a QI program not requiring formal ethical clearance.

Conflict(s) of interest

As the designer of the Rehab ABC and senior nurse within RU1, a potential conflict of interest relates to the desire for successful implementation. The Rehab ABC framework has not been used commercially and is currently free to download as an app with no commercial links. As this paper has been written from a PD perspective, the reported effect may have been weighted towards reporting on PD as this is part of the NSW Health nursing workforce strategy. The author designed and updated the Rehab ABC resources at his own expense. The intent has been to explain the utility to prospective users and provide guidance on implementation.

Further collaboration

The author would like to collaborate with current or prospective users of the Rehab ABC to improve its utility and explore its validity through further research activity such as Delphi survey. If you would like more information on implementing or contributing to evaluating the Rehab ABC contact the author by email.

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