

Frameworks for emergency nursing assessment and management: the Components of Life Model and the Jones Dependency Tool

by Gary Jones (FRCN 2002)



Gary J Jones
CBE, FRCN, FFNF, formerly
company director,
Health Care Training and
Development Services
Ltd; head of emergency
services, Basildon and
Thurrock NHS Trust, Essex,
England

Email
gjjonescbe@gmail.com

During the 1980s, nursing in the UK was moving from the traditional ‘completing tasks in a certain way because Sister says so’ (Laurent 2019) to more evidence-based practice. Part of this move included the need for structure that came with the introduction of the nursing process which, in the UK, including in my own hospital in Orsett in Essex, became prominent in the latter part of the 1970s and early 1980s. From this, further developments included the use of nursing models.

Although the nursing process and nursing models were important tools in structuring nursing care, my concern was that emergency

department (ED) nursing was very different from that on the wards. Any move towards using both the nursing process and a model of nursing had to link to other developments in emergency care, particularly since the introduction of triage as part of the initial patient assessment.

It was also essential that any framework was linked with the anatomical/physiological aspects of the medical model and was simple and quick to use. The development of the Components of Life Model achieved these requirements and gave us an added bonus in that the components were able to be used in the development of a dependency tool.

Care of the emergency patient: frameworks for nursing assessment and management

Abstract

This article provides the reader with an insight into various models and frameworks used in emergency care and focuses specifically on the Components of Life framework. Throughout the article, the use of the Components of Life framework is linked with clinical conditions that commonly present in the emergency care setting, showing how a structured approach to nursing care can be achieved.

Citation

Jones G (2003) Care of the emergency patient: frameworks for nursing assessment and management. In Jones G, Endacott R, Crouch R (Eds) *Emergency Nursing Care: Principles and Practice*. Cambridge University Press, Cambridge, pp9-21.

Introduction and background

The development of the Components of Life Model/framework and the Jones Dependency Tool (JDT) took place during the latter part of the 1980s at Orsett and Basildon Hospitals, Essex in the UK. Earlier in the 1980s, the school of nursing had introduced the nursing process and models of nursing. Although focused primarily on the ward patient, it was clear that

the ED had to become involved. After returning from a Florence Nightingale Travel Scholarship to Canada and the United States in 1980, I had introduced nursing documentation and was keen to take this further. The work being undertaken by the school of nursing and the director of nursing was, with some adaptation, the opportunity to develop a structured approach to nursing care in our EDs.

The model was part of a wider development of nursing models for the whole hospital group and it would eventually link to a computerised nursing care system. The development group for the ED model comprised of the lead nurse for the hospital project and staff from the ED. Although we looked at the traditional theorist models, I found the terminology, fundamental needs or activities of daily living and many other aspects of the models difficult to link to the ED environment. I was also concerned that the documentation in many of these models was lengthy and could become overwhelming.

Because of the nature of ED nursing, the important links between nursing and medical care and the fast turnover of patients (in 1980s we had no 'trolley waits' or four-hour targets), I was keen to develop a model/framework from practice. Practice-based development of nursing models had been given credibility by Wright (1986). The group chose this approach to develop the Components of Life Model.

From the components that make up the model/framework, a dependency tool was designed. The purpose of the tool was to enable each patient to receive a dependency rating that would determine the required level of competency of the nurse allocated to the patient, and an overall dependency rating across the department. Over the years, the model/framework and the dependency tool have been refined.

Influence and impact

The model was constructed by observing nursing practice in the EDs of the two hospitals. Several component headings emerged and an agreed philosophy comprising beliefs, values and goals was established.

The model is based on the belief that all humans are individuals with individual human needs. It is also based on the belief that during their life, the individual is engaged in various self-care activities to retain independence. Seven components of life comprising physical, human behavioural and social aspects were identified and, when in balance, maintain health and quality of life. An event (physical illness, mental illness, or injury) in the course of the individual's life can upset the balance and disrupt the ability to maintain health and quality of life. The individual identifies emergency care staff as the resource to assist them to re-balance the components, re-establish independence and therefore continue physical, emotional and social comfort.

The model includes four universal goals:

1. To establish a partnership with the patient/relatives.
2. To achieve a level of independence in the patient appropriate to the illness or injury.
3. To enable the individual to avoid ill-health or injury through self-care, health education and environmental safety.
4. To ensure optimum effectiveness of nursing and medically prescribed treatment.

The dependency tool was based on the seven components and rating scores were identified for each component. A total rating score determined the patient dependency for nursing care. Once the model and dependency tool had been signed off, nursing documentation was designed, and staff training introduced.

When the model and dependency tool were introduced in the two EDs in South Essex, they provided an improved structure to the initial assessment and subsequent nursing management of the patient. The component headings in the nursing documentation provided for much improved nursing records. When I published the model and dependency tool (Jones 1990), I had no idea at the time how the model would influence emergency nursing care throughout the next two decades.

As chair of the Royal College of Nursing (RCN) Accident and Emergency (A&E) Association and, in 1992, taking on consultancy work in the ED, I was able to introduce the model and dependency tool to a number of EDs throughout the UK. I also had the opportunity to publish articles in emergency care journals and chapters in emergency care books. After a number of departments began using the model, and after I began working with a number of EDs developing nursing records and dependency tools, the model was revised from seven to six components:

1. Communication – consciousness/human behaviour/human senses.
2. Airway/breathing/circulation.
3. Mobility.
4. Environmental safety, health and social well-being (previously two components covering environmental health and health promotion).
5. Personal care.
6. Eating/drinking/elimination.

The model was one of several documents that aided the RCN A&E Association working party to establish the mission statement, philosophy, role and scope of practice of the ED nurse. Accident & Emergency –

Open access

This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International (CC BY-NC 4.0) licence (see <https://creativecommons.org/licenses/by-nc/4.0/>), which permits others to copy and redistribute in any medium or format, remix, transform and build on this work non-commercially, provided appropriate credit is given and any changes made indicated

Challenging the Boundaries (RCN 1994) states, probably for the first time, what the service and emergency nurses are all about.

As part of the ongoing development, I was always keen to have the dependency tool validated and this was undertaken by Crouch et al (2001). Through a three-round Delphi study, the six components linked with the model were drawn down to five (personal care was linked with eating/drinking/elimination) so that triage scoring could be linked to the dependency tool thus making six components:

1. Communication.
2. Airway/breathing/circulation.
3. Mobility.
4. Eating/drinking/elimination and personal care.
5. Environmental safety, health and social needs.
6. Triage.

Each component heading has three ratings. On arrival, and subsequently throughout the stay in the ED, this tool provides the overall ratings that determine which of four dependency levels the patient falls into.

Dependency levels are: low, dependency=0, medium, dependency=1, high, dependency=2, total, dependency=3. The main study in six EDs in England provided evidence that the refined tool (now named by Crouch, the Jones Dependency Tool (JDT), is a reliable and valid instrument for measuring adult patient dependency in the ED (Crouch et al 2006).

The main purpose of the JDT is:

1. To ensure that the patient is allocated to a nurse with the relevant competencies to provide the care required.
2. To provide a dependency rating across the department that can be calculated, and actions taken if the threshold level is reached.
3. To determine nursing numbers and, with dependency/competency factors, determine skill mix.

New versions of the refined model/framework and the JDT were published in 2003 (Jones et al 2003) and in 2008 (Accident & Emergency: Theory into Practice (Dolan and Holt 2008)). Since then, many more departments have taken to using the components from the model, mainly as a structure to their nursing documentation, and many individuals have used the model as part of their emergency nursing studies.

The JDT has been widely adopted in departments in the UK and internationally.

Papers have been published in the UK, Australia, Brazil and Portugal. I was interviewed for the January 2002 Emergency Nurse journal that published a news item indicating that government advisers were considering the merits of the JDT to assess patient dependency in emergency settings (Lipley 2002). I said: 'We are still measured on how many patients come through the door. If you can measure dependency and link that with the number of patients in the department and link this with competencies of the nurse, you have got for the first time three parts of being able to say "this is the establishment and skill mix we need".'

Research undertaken in the ED of Bristol Royal Infirmary (O'Brien and Bengier 2007) showed the JDT to be an effective tool that can be used with minimum difficulty and inconvenience. The conclusion to the publication indicated that patient dependency is one of the essential determinants of nursing grade mix and with further work and adaptation, the JDT can be used to predict workload, resource use and the optimal staffing levels that will provide safe and effective patient care. Dependency can be readily and repeatedly assessed, and we recommend this approach to other EDs.

A further study in the Prince of Wales Hospital, Sydney, Australia in 2010 (Varndell et al 2013) demonstrated the reliability, validity and sensitivity of the JDT for the first time in an Australian adult ED. It showed patient dependency can be measured in a hectic environment and enabled appropriate patient placement in the department and capacity planning.

Much work has also been undertaken in Portugal and the JDT is used as an integral part of patient assessment in several departments. In 2014, I was invited to meet with senior nurses from emergency care in Portugal and to see their work on the JDT. In 2015, I presented a joint paper with the Portuguese ED nurses at the International Council of Nurses conference in South Korea. The National Institute for Health and Care Excellence (NICE) safe staffing guideline (NICE 2015) recommended that, when determining ED nurse staffing, patient dependency should be considered using for example, the JDT.

Current and future relevance

I am aware from contacts, that the model and JDT continue to be used in departments in the UK and internationally. The JDT is a major

component of the RCN Baseline Emergency Staffing Tool (BEST) (RCN 2015). Using BEST requires every patient attending the ED to be scored using the JDT. The total number of patients are then entered into the RCN BEST website.

The result is the nursing numbers needed per hour to provide for the workload 80% of the time. The whole-time equivalent workforce is then calculated to provide those numbers. The skill mix is then assigned to the whole workforce using the Faculty of Emergency Nursing competency levels. The tool provides a baseline on which to build workforce planning strategies.

The Components of Life Model is recommended for use within the Framework to Support the Delivery and Recording of Nursing Care in Emergency Care Networks in Ireland (Eire) (National Emergency Medicine Programme 2017). The model's philosophy and goals permeate throughout the framework document and the components are used for the recording of nursing care.

Before the Components of Life model and the JDT, little was available to provide a structure to nursing care in the ED. Today, both the model and the JDT enable EDs across the globe to maintain a framework for emergency nursing assessment and management.

References

Crouch R, Williams S, Jones G (2001) Patient Dependency in A&E: Validation of the Jones Dependency Tool (JDT)—Final Report to the Department of Health. University of Southampton, Southampton.

Crouch R, Williams S (2006) Patient dependency in emergency department (ED): reliability and validity of the Jones Dependency Tool (JDT). *Accident and Emergency Nursing*, 14, 4, 219-229. doi: 10.1016/j.aen.2006.06.005

Dolan B, Holt L (2008) *Accident & Emergency: Theory into Practice*. Elsevier, London.

Jones G (1990) *Accident & Emergency Nursing: A Structured Approach*. Faber and Faber, London.

Jones G (2015) Measuring patient dependency in the emergency department. *Nursing Standard*, 30, 2, 38-43. doi: 10.7748/ns.30.2.38.e9249

Jones G, Endacott R, Crouch R (2003) *Emergency Nursing Care: Principles and Practice*. Greenwich Medical Media, London.

Laurent C (2019) *Rituals & Myths in Nursing: A Social History*. Pen and Sword Books, Barnsley.

Lipley N (2002) Dependency tool under scrutiny. *Emergency Nurse*, 9, 8, 2. doi: 10.7748/en.9.8.2.s4

National Emergency Medicine Programme (2017) *A Framework to Support the Delivery and Recording of Nursing Care in Emergency Care Networks in Ireland*. emnow.ie/wordpress/wp-content/uploads/2018/07/Framework-to-support-the-delivery-recording-of-nursing-care-in-ECNs-Nov-2017.pdf (Last accessed: 16 September 2020.)

National Institute for Health and Care Excellence (2015) *Safe Staffing for Nursing in A&E Departments: NICE Safe Staffing Guideline. Draft for Consultation*. NICE, London.

O'Brien A, Bengler J (2007) Patient dependency in emergency care: do we have the nurses we need? *Journal of Clinical Nursing*, 16, 11, 2081-2087. doi: 10.1111/j.1365-2702.2006.01602.x

Royal College of Nursing (1994) *Accident and Emergency: Challenging the Boundaries*. RCN, London.

Royal College of Nursing (2015) *Baseline Emergency Staffing Tool (BEST)*. RCN, London.

Vardell W, MacGregor C, Gallagher R et al (2013) Measuring patient dependency - performance of the Jones Dependency Tool in an Australian Emergency Department. *Australasian Emergency Nursing Journal*, 16, 2, 64-72. doi: 10.1016/j.aenj.2013.04.001

Wright S (1986) *Building and Using a Model of Nursing*. Edward Arnold, London.