Geriatric Emergency Department Intervention (GEDI) Toolkit

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Geriatric Emergency Department Intervention (GEDI) Toolkit

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Executive summary of findings from the research evaluation

Worldwide, ageing populations are placing increasing pressure on health services for the management of acute illness and exacerbation of chronic conditions in older persons. In 2015, over 20% of Sunshine Coast residents were aged 65 years and over compared to 15% in Australia (ABS, 2017). Emergency department (ED) presentations and hospital admissions for older persons is associated with an increased risk of complications compared to younger cohorts (Ackroyd-Stolarz, Read Guernsey, Mackinnon, & Kovacs, 2011; Briggs, Coughlan, Collins, O'Neill, & Kennelly, 2013; Dwyer, Gabbe, Stoelwinder, & Lowthian, 2014; Mudge, Denaro, & O'Rourke, 2012; L. Schnitker, Martin-Khan, Beattie, & Gray, 2011; Schnitker, Beattie, Martin-Khan, Burkett, & Gray, 2016). Appropriate care of this vulnerable cohort is critical to improving care for the older person and managing shrinking health dollars.

The Geriatric Emergency Department Intervention (GEDI), operating in the ED of Nambour General Hospital, Sunshine Coast Hospital and Health Service (SCHHS), is a service providing specialist and targeted care for persons aged 70 years and over who present to the ED. The GEDI team comprises of a Clinical Nurse Consultant, ED physician and Clinical Nurses providing 'front load' assessment within the ED to prioritise assessment and management of frail older persons. GEDI nurses aim to avoid inappropriate hospital admissions of older persons whilst streamlining their care to the right place, right person at the right time. This aligns with the Australian Charter of Healthcare Rights (Australian Commission on Safety and Quality in Healthcare, 2008) and SCHHS (2014) purpose "To deliver the highest standards of safe, accessible, sustainable, evidence based health care with a highly skilled and valued workforce that optimises the wellbeing of our community". The GEDI model builds upon successful interventions, such as comprehensive geriatric assessment (Ellis, Marshall, & Ritchie, 2014), by tailoring interventions to the ED environment.

The GEDI service was evaluated utilising the Donabedian (2003) Structure, Process and Outcome framework. Data on the GEDI model were collected over a 12-month period from September 2015 to August 2016. This data was compared with historical outcome data from the pre-GEDI period January until December 2012 and the interim GEDI period, January 2013 through until August 2015. Outcome measures included disposition, ED length of stay, hospital length of stay and re-presentation to 28 days. Qualitative data to understand structure and processes of the GEDI service were collected from interviews with GEDI patients, families or carers and ED staff.

The older person cohort in this evaluative research study were on average 81 years of age, 50-52% being female across all three data collection periods. The results of the data analysis indicated that older persons who presented to the ED during the full GEDI intervention period benefited with statistically significant reduction in ED length of stay and increased likelihood of discharge compared to pre-GEDI. No significant difference in risk of mortality or risk of same cause representation to 28 days was found. Reductions in length of stay and increased rate of discharge resulted in average cost savings per ED presentation of $35 [95% CI: $21, $49] and savings of $1,469 [95% CI: $1,105, $1,834] per hospital admission. Aggregated data from interviews with seven GEDI patients, families and carers and 23 staff determined that the service has become an integral part of ED patient care, it facilitates efficient time management with better patient and staff satisfaction. The Geriatric Emergency Department Intervention is highly successful in improving the care of older persons in the ED.

Disclaimer

It is important to note that activities being undertaken through this project are not the only factors in influencing and impacting on the delivery of ED care of older persons. The outcomes described will also be influenced to some degree by other initiatives being undertaken at a state wide and local HHS level to improve ED care. The outcomes may also be affected by other operational and policy initiatives being undertaken.

Navigating the toolkit

The Geriatric Emergency Department Intervention (GEDI) toolkit is an integral reference tool for implementing the GEDI model. This toolkit has been designed to provide:

1. An overview of the GEDI model
2. How to GEDI step 1 - Pre-implementation planning
3. How to GEDI step 2 - GEDI ED team assessment and treatment
4. How to GEDI step 3 – Service evaluation for sustainable funding and service delivery
5. How to GEDI step 4 – Resources that may help with local implementation

This toolkit provides a platform supporting the development, implementation and local evaluation of the GEDI service. It should be read and used in conjunction with any applicable standards, service provision documents and local industry requirements.

When undertaking implementation of an intervention into routine practice the Medical Research Council (2006) recommends that the findings of the original research are presented in a detailed but accessible manner, that strategies to encourage implementation are based on the principles of change management and that on-going monitoring is undertaken to detect negative effects that could not be observed in the original evaluative research study.

Key Toolkit Elements
• The advice within this toolkit is **evidence based** underpinned by research evaluation. • It is **applicable** to hospital administrators, management and ED staff. • The toolkit provides **evaluation tools** for implementation

Scope of the toolkit

This toolkit provides information about an evidence-based model of care including pre-implementation planning strategies and evaluation tools. This has been designed to assist ED clinicians, administrators and policy makers in the implementation of the GEDI model. Further information about the research underpinning this model of care may be found in the publications listed on the CEDRiC website: www.cedric.org.au

Key to this toolkit

To augment the information in this toolkit, coloured boxes and boxes with symbols have been used to highlight key information, summaries and work you are required to do; with directions to further information provided. Sample documentation, educational information and evaluation tools have also been provided either within the appendices or through links within the document.

Symbols used within the toolkit

Blue boxes
These blue boxes are designed to provide you with key information or summaries relating to the section you are reading and may direct you to further information.

Symbol boxes

	ATTENTION – This symbol provides information on areas that are important to identify or monitor to facilitate smooth implementation of the GEDI model of care
	DATA/MATERIAL- This symbol requires you to source the recommended material.
	MEETINGS – This symbol highlights recommended meetings.
	READINGS – This symbol refers you to recommended readings.

An overview of the Geriatric Emergency Department Intervention (GEDI)

Background – the clever part

The Geriatric Emergency Department Intervention (GEDI) focuses on the frail older person presenting to an Emergency Department (ED) with an acute illness or complex healthcare requirements. Usually this incorporates people of 70 years of age and over. However, frail older persons who are under this age and Indigenous Australians 50 years of age or older , who may have similar levels of frailty, are also screened by the team and may be included in service delivery. The GEDI model is aimed at improving the quality of care for this cohort, reducing unnecessary hospital admissions and facilitating early safe discharge. The GEDI team consists of an ED physician champion with a special interest in aged care and Clinical Nurses (CNs) led by a Clinical Nurse Consultant (CNC). The CNC implements policy and procedures underpinning the GEDI model, manages the nursing team, provides clinical expertise and leadership, provides education to all ED staff and builds a culture within the ED that values and prioritises person-centred care of frail older persons.

The GEDI service may absorb, replace or collaborate with a range of other services provided for frail older people in the ED. For example, the Community Health Interface Program (CHIP) that operates in many Queensland EDs and supports referral of clients to community-based nursing and allied health resources may be enfolded into the GEDI model. Because GEDI is a service managed within the ED it can be responsive to the needs and timelines of ED and facilitate appropriate referral and discharge planning. However, the GEDI model fundamentally incorporates a 'border spanning' role aimed at improving inter-disciplinary communication, entrenching patient-centred decision making, facilitating safe hospital discharge where possible and improving fast-tracking of referral and admission processes when required.

Underpinning principles of the GEDI model – the boring part

The GEDI model and the nurse-led approach to this model are underpinned by a number of theoretical frameworks. These are: Integration of health service delivery (World Health Organisation (WHO), 2008), Recognition primed decision making theory (Klein, 1998), the Shared decision making framework (Frosch & Kaplan, 1999), Nursing role effectiveness model, the integrated – Promoting Action on Research Implementation in Health Services (i-PARIHS) framework (Harvey & Kitson, 2016), Diffusion of innovations, in particular champions of change (Rogers, 2003) and national and international guidelines. The GEDI model seeks to integrate health service delivery within the hospital and between sectors (WHO, 2008). The GEDI nurses undertake their assessment, clinical decision making and interventions using a recognition primed decision-making approach (Klein, 1998) with a focus on shared decision making (Frosch & Kaplan, 1999). The functioning of the GEDI team incorporates the GEDI physician being a champion of change while the advanced practice nurses incorporate largely interdependent and independent roles (Doran, Sidani, Keatings, & Doidge, 2002). These principles and frameworks will be referred to throughout the document and a short explanation is provided here.

Integration of health service delivery

Improving outcomes for older persons in the ED requires an integrated system of health service delivery. The World Health Organisation (2008) proposes that integrated care provides people with the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money. For frail older persons, presentation to the ED may be as a result of a critical event marking a drop in functional decline or may be due to difficulty accessing primary care.

Types of integration

- *Linkage: links are established between the most appropriate health services to ensure the best possible health outcomes for all clients*
- *Coordination: integrating services to fill gaps in service provision, therefore working across sectors*
- *Full integration: one set of management support systems supporting the whole service*

Levels of integration

- *System integration: the services are provided within one unified system*
- *Organisational integration: services are provided by linking different organisations within a system*
- *Clinical integration: services are provided through the integration of different clinical services within a system or organisation*

Forms of integration

- *Vertical integration: different levels of service under one management system for referring patients up and down appropriate levels. Each service addresses a specific healthcare issue and clear objectives*
- *Horizontal integration: consolidating organisations that provide a similar level of healthcare under one management umbrella, therefore sharing resources to increase efficiency*

The provision of a fully integrated service for older persons moving between two or three sectors (i.e. aged care, primary care and secondary care) when these parts of the system are funded differently and have different performance indicators, is a challenge yet to be successfully addressed in Australia. The GEDI nurses do not provide a fully integrated service but rather ensure linkage between the different sectors and through expert communication provide improved co-ordination of service delivery. They are largely able to facilitate organisational and clinical integration in a horizontal manner increasing the efficiency of care management within the hospital.

Recognition-primed decision making

A key point of difference between the depth of advanced practice of GEDI nurses and the breadth of practice of ED primary nurses is in their use of recognition primed decision making (Klein, 1998). This is an approach to decision making in which the expertise of the GEDI nurses, and their dual preparation in both emergency and gerontological care, provide them with a series of internal working models (based on experience and knowledge) that allow them to streamline and fast-track complex decision making around this vulnerable group.

Shared decision making

Shared decision making in the ED is a method of actively engaging patients, their families or carers to reach mutual agreement with clinicians in decisions that directly affect their health (Charles, Gafni & Whelan, 1997). This differs from informed consent which focuses on one medically superior option (Frosch & Kaplan, 1999). In shared decision making, there are at least two medically reasonable options and the decision relies on patient values and preferences (Probst, Kanzaria, Schoenfeld, Menchine, Breslin, Walsh…Hess, 2017). This is a focus in the GEDI model where the GEDI nurse gathers information from many sources including the patient, family or carer, to influence medical disposition planning.

Nursing role effectiveness

With reference to the Nursing Role Effectiveness Model developed by Doran and colleagues (2002), the GEDI nurses predominantly perform independent and inter-dependent roles. This is important because without the ability to influence key medical decision making and to instigate diagnostic testing, intervention and direct referral to specialist medical and allied health professionals, diagnosis and disposition management can become stalled. Due to their independence and ability to facilitate multidisciplinary discussion and decision-making, the care of vulnerable, frail, older persons in the ED can be streamlined and fast-tracked.

i-PARIHS implementation approach

The i-PARIHS knowledge translation approach aims to facilitate knowledge translation (Harvey & Kitson, 2016). It is suggested that settings wishing to implement the GEDI model of service delivery base their

approach on i-PARIHS and a Cochrane review that provides evidence of the importance of tailoring interventions to the context (Baker, Camosso-Stefinovic, Gillies, Shaw, Cheater, Flottorp, … Jäger, 2015). In this approach, there are two layers of facilitators: external facilitators who will support all participating sites and an internal (hospital-based) facilitator who will be the local champion. The ED physician champion and the ED CNC from a well-established GEDI service centre are the external facilitators and the internal facilitators are the appointed ED physician champion and the GEDI CNC at the implementation site.

According to i-PARIHS, the external facilitator is a knowledge broker, linking the knowledge producers (i.e. clinical and research team) to the recipients or knowledge users (i.e. hospital ED staff). These people have skills in knowledge translation, change management, negotiation and influence, and their activities will include mentoring, coaching and guiding the internal facilitators. They have also developed resources related to facilitation for a web-based toolkit, to train and develop a support network for the other facilitators where 'tricks of the trade' will be shared. Their support includes a face-to-face visit, regular teleconferences and moderating cyber forums, where facilitators will discuss issues.

Figure 1: The facilitator role and process (Harvey & Kitson, 2016)

The internal facilitators (ED physician and GEDI CNC) reflect the role of boundary spanners in i-PARIHS, whereby they interact and connect with local staff and the external facilitator. The internal facilitators bring content expertise related to care of older persons in the ED, contextual knowledge of the hospital system and how to navigate hospital processes. They will receive guidance from the external facilitator to develop and apply skills in knowledge translation and change management. Internal facilitator activities include assisting in ward planning meetings, helping the local staff undertake environmental scans, supporting the development of action plans, and guiding local staff to implement the plans. They will present the toolkit to staff and establish a local support program, enabling local staff to share their knowledge about what works and doesn't work in the local context.

The internal facilitators are the local context experts and understand the recipients (i.e. local ED staff). They will lead ED staff and management team meetings during which first an environmental scan is undertaken and then an action plan targeting strategies to maximise enablers and overcome barriers to implementing the GEDI model is developed, guided by a structured framework (Harvey & Kitson, 2016). These plans will address factors in their immediate and wider contextual environments that act as enablers or barriers to the delivery of the GEDI service. ED staff, the external and internal facilitators will contribute to these plans. Internal facilitators, with support of the external facilitator, will lead the enactment of this plan and monitor its progress.

Champions and change agents

The role of the ED physician in the GEDI team is primarily a champion for organisational change. This enables the innovation to be embedded into the ED and creates the environment for ongoing sustainability of change. The Diffusion of Innovations theory postulates that champions advocate for change and need influence within an organisation to succeed (Rogers, 2003). They require energy, creativity, skills in negotiation with all levels and are key to continuing to overcome barriers, influencing new management and executive staff to understand the innovation and sustainability requirements (O'Loughlin, Renaud, Richard, Gomez & Paradis, 1998). Importantly, champions share the ambitions of the recipients of change, in the case of the GEDI model, the needs of the older person in the ED, they balance the diverse needs of groups and embody strategic leadership (Rogers, 2003; Batras, Duff & Smith, 2016). This role is crucial to the success of the GEDI service.

National and International guidelines

This toolkit references a variety of national and international guidelines that focus on geriatric emergency care. More information about care of older persons in the ED can be found in the following documents:

- ANZ society for geriatric medicine position statement, Australian & New Zealand Society for Geriatric Medicine (2008), Position statement no.14. The management of older patients in the emergency department. Online: http://www.anzsgm.org/managementofolderpatientsintheemergencydepartment.pdf.pdf
- Queensland Government (2016), Clinical Services Capability Framework CSCFV3.2 Geriatric Services – Emergency Geriatric Care. Online: https://www.health.qld.gov.au/__data/assets/pdf_file/0029/444269/cscf-geriatric.pdf
- Australian College for Emergency Medicine (ACEM) (2015), Policy on the care of elderly patients in the emergency department. https://acem.org.au/getattachment/fc1be790-5545-4405-b462-a1f6834f09ab/Policy-on-the-Care-of-Elderly-Patients-in-the-Emer.aspx
- Cook, Oliver & Burns (2012), Quality standards for the care of older people with urgent & emergency care needs: The “silver book”. United Kingdom: British Geriatric Society,NHS www.bgs.org.uk/silverbook/campaigns/silverbook
- American College of Emergency Physicians, American Geriatric Society, Emergency Nurses Association, and The Society for Academic Emergency Medicine (2013). Geriatric Emergency Department Guidelines. https://www.acep.org/geriEDguidelines/
- Care of Older Australians Working Group on behalf of the Australian Minister’s Advisory Council (AHMAC), Age-Friendly principles and practices: managing older people in the health service environment. Endorsed by Australian Health Ministers (July 2004) http://seniorfriendlyhospitals.ca/files/Australian%20Health%20Ministers'%20Age%20Friendly%20Principles%20and%20Practices.pdf

Objectives of the GEDI model – the exciting part

The objectives of the GEDI model are to:

- Maximise patient-centred multidisciplinary decision making for frail older persons in the ED
- Identify the goals of presentation that are important to the patient and/or carers
- Fast track patient assessment and multidisciplinary decision-making
- Identify functional decline
- Reduce morbidity
- Increase appropriately supported safe discharge from the ED
- Reduce avoidable admissions to hospital
- Reduce hospital length of stay
- Reduce avoidable re-presentations to the ED

	ATTENTION The GEDI model is an ***innovation***, provided in a consultant capacity, focussing on early assessment of frail older patients, aimed at clinical and disposition decision making.

The patient journey

Figures 2 and 3 below illustrate the journey of a typical frail older person from a residential aged care facility (RACF) with complex needs through the ED with and without the support of the GEDI service. These figures are provided to emphasise the potential areas of impact that GEDI may have.

Janet, 82 lives in a RACF. AIN reports she is confused. Assessed by RACF RN who finds she is febrile.

RACF RN phones GP. GP advises transfer to hospital. RACF RN calls ambulance and family.

Janet is transferred to the ED by ambulance.

The ED is busy when Janet arrives. Janet must ***wait*** for triage and for a bed to become available.

ED primary RN conducts baseline observations and assessment. Janet must then ***wait*** to be seen by medical officer.

Janet ***waits*** and becomes more confused, she wants to go to the toilet and is hungry.

Janet is seen by the doctor. Further assessment and investigations are performed. Janet ***awaits*** a head CT.

A ***few hours*** go by as the ED staff now ***await*** a urine specimen and CT scan results. Janet becomes increasingly confused and unable to communicate her basic needs.

Janet is sedated due to her escalating behaviour.

Janet is reviewed by ED physician for her escalating behaviour, delirium and need for sedation. This results in hospital admission. Eventually her UTI is diagnosed and treated.

Figure 2: ED patient journey prior to the GEDI service

Betty, 82 lives in a RACF
AIN reports she is confused.
Assessed by RACF RN who finds she is febrile

RACF RN phones GP
GP advises transfer to hospital.
RACF RN calls ambulance and family
RACF RN calls ED GEDI team provides information and goals of transfer.

Betty is transferred to the ED by ambulance

The ED is busy when Betty arrives
GEDI nurses anticipate arrival and liaise with triage
Betty is met by GEDI nurse on arrival and *facilitates* appropriate bed allocation

ED primary RN conducts baseline observations and assessment.
GEDI nurse conducts targeted geriatric assessment and delirium screen.
GEDI nurse liaises with RACF, GP, Betty and family to *determine goals of care* to *determine disposition*.

GEDI nurse *organises/orders* appropriate and *timely* investigations and case management by medical officer
Coordinates acute and chronic disease management including end of life care planning

GEDI nurse and medical team *review* the case and investigations. *Early diagnosis* of delirium secondary to UTI with ED environment contributing.
Early disposition decision making
Betty and her family prefer to return to RACF with support

GEDI nurse phones RACF to ensure ongoing treatment plan can be managed
Organises for follow up by GP at RACF
Provides nursing discharge summary (DS) to accompany medical DS and ensures new medications prescribed and provided.

GEDI informs Betty's family of discharge
Betty goes back home to RACF
Hospital admission is avoided

Figure 3: ED patient journey with the GEDI service

Benefits of the GEDI model

The benefits of the GEDI model include:

	Fast tracking • Early identification through the EDIS system/ phone call from RACF/QAS • Prioritisation of patients referred to and seen by GEDI nurses • Early geriatric screening by GEDI nurses identifies people with complex care needs enabling timely, goal centred care • Rapid assessment and targeted care whilst in ED
	Improved patient care • Rapid and targeted assessment of physical and cognitive functioning (e.g. delirium assessment) • Access to wide range of information from patient, medical records, RACF/GP/family/carers • Formulates patient issues and goals of treatment – discusses with family and carer • Early initiation of independent nursing interventions as required (e.g. insertion of IDC, wound management) • Facilitates and communicates combined progress planning
	Improved care coordination with medical and allied health professionals • Coordination of care within the ED to achieve goals of treatment • Coordinates additional assessment by specialist medical or allied health professionals • Liaises with bed manager, medical team and primary nurse • Direct referral to specialist medical or allied health professionals
	Facilitation of care • Influences range and scope of diagnostic testing • Coordinates chronic disease management and further treatment • Influences disposition course
	Reduce need for patient hospital admission • Liaises with and organises community support to facilitate requirements for discharge • Provides targeted assessment and care for geriatrics in ED – ability for patients to obtain further assessment or care during 24 hour stay in a ward in the ED such as a Short Stay Unit (SSU) can support discharge home without prolonged admission to hospital ward • Organises follow up through required medical/support services • Provides medication script and medications if required to facilitate ongoing care and ensure current planned care may be followed.

How to GEDI: Step 1 - Pre-implementation planning

This step of the journey outlines the work you need to do to get your organisation **ready** for the change required for a GEDI implementation.

Identify an ED physician with a passion and interest in aged care to champion change for GEDI

Central to the success of the GEDI model is identifying an ED physician with a special interest in geriatrics. This enables the model to have senior medical support to facilitate the implementation of a GEDI service and assist in the acceptance of the model. It is this influence within the ED that can facilitate the change and acceptance required to embed the model in the ED.

Both the GEDI ED physician and CNC need to work closely, collaboratively with mutual professional respect being 'like-minded' in their vision for the model and resilient to obstruction and challenges. Departmental support of non-clinical time to establish a GEDI service is paramount.

The ED physician adopts the role of the GEDI Champion and therefore needs to have clinical expertise, the capacity to inspire and empower the specialist GEDI CNC and CNs and drive the change process with ED management (Rogers, 2003; Batras, Duff & Smith, 2016; O'Loughlin et al., 1998). Some of the attributes required of this position include:

- Developing the GEDI team
  - Recognition of skill sets of others
  - Allowing others to grow – build excellence
  - Facilitating the roles of CNs and CNC – performance appraisal
  - Support team in difficult times – counselling

- Facilitating the insertion of the GEDI team into ED management practice
  - Removal of barriers
  - Try something new – if it didn't work, innovate

- Advocate for nurse-led models of care in support of the medical team
- Being open minded and utilising constructive criticism
- Having influence in the organisation
- Rising above negativity and micro politics
- Persistence
- Resilience for championing the GEDI model during fluctuating management and executive engagement
- Making effective short term gains
- A long-term focus on sustainability.

	IDENTIFY THE GEDI ED PHYSICIAN ROLE If the GEDI ED Physician role is not filled, progress with the GEDI model will be at significant risk.

Identify a Clinical Nurse Consultant

Appointment of a GEDI Clinical Nurse Consultant (CNC) with an enthusiastic attitude towards the implementation of a GEDI service is important. A minimum of 5 years aged care clinical experience as well as some experience in acute or critical care settings are important factors in selecting your GEDI CNC. The ability

to work independently and interdependently within this role and act as a facilitator for change within the ED is critical. The appointed CNC must have a high level of clinical skill in geriatrics, while management experience relevant to their new position would be an advantage. Experience within the community in senior aged care nursing roles, is a suggested requirement due to the inherent knowledge that this brings to the position within the ED. The CNC must be willing to work in a collaborative manner with skills in flexibility, ability to influence others and self-reflection. The CNC must have the right attitude towards the role. For example, they should be a team player and an ability to coordinate and work collaboratively with the ED team, GEDI staff, specialists and allied health. This position requires departmental support of non-clinical time to establish and facilitate the GEDI implementation. A suggested job description for the CNC can be seen in Appendix A

EXPRESSIONS OF INTEREST FOR THE GEDI CNC POSITION

An expression of interest for the GEDI CNC position enables the applicant to work in the role in a temporary capacity. This has a dual advantage as:

1. Temporary funding can sometimes be gained more easily than permanent funding while the model is being embedded in the department.
2. The model can be started with the physician champion and CNC working collaboratively utilising the shared experience to build skill in the new roles.

Identify and communicate the need for the GEDI service in your health service

Before implementing the GEDI model, it is important that the need is identified and change management principals considered. Genuine and lasting change is sustainable when the ED staff and management at all levels realise the necessity for change and advocate for it.

Suggested steps to achieve this:

1. Determine the need. Source and analyse data to determine outcomes for the cohort of older people presenting to ED. Such outcomes may include: admission and discharge rates, cost of presentation, NEAT figures. Data may be obtained from the ED information system or the corporate inpatient database. This information is detailed in 'How to GEDI - Step 4', Table 4 p. 39 A list of data items for a minimum data set.
2. Communicate findings from analysis as evidence to support the implementation of the GEDI model. NB: This may be a time-consuming process depending on the skills of staff or resources available to analyse the data.
3. Utilise evidence from research such as, outcomes from the GEDI evaluative research project, to illustrate the benefits to the organisation of implementing the GEDI model.
4. Prepare a business case. For suggestions on how to do this, see Appendix B.

WORK TO DO

Source ED data on presentations ≥ 70, average age and residential status (RACF or community).

Average length of time spent in ED.

Number of admitted and discharged patients from ED.

Re-presentations within 72 hours of ED discharge or 28 days of hospital admission

MEETINGS

GEDI ED Physician champion to organise to meet with ED and hospital administration to present findings confirming the need for GEDI model and a risk/benefit analysis.

GEDI model pre-implementation planning	
Identify an ED physician with a passion and interest in aged care	A physician championing this initiative is crucial to the success of this project
Identify a Clinical Nurse Consultant (CNC) to take on the role managing the GEDI nursing team and implementation of the model	As GEDI is a nurse-led collaboration, ideally the CNC will have extensive experience in gerontology and emergency or aged care nursing and /or experience in community nursing
Identify and communicate the need and consider the current context	Explore the hospital clinical information system data to determine numbers of patients presenting to the ED 70 years of age and over, number of presentations from RACFs, ED length of stay, number of hospital admissions and hospital length of stay. Ensure that this model of care will complement your ED
Identify benefits and risks of implementation	Identify issues and measure the impact of implementing a GEDI service
Engage clinical and executive staff and identify key stakeholders	Clinicians and hospital management engage to discuss the possibility for funding or funding sources and identify who and how interaction will occur
GEDI model parameters	Determine the GEDI scope, staffing, and cost benefit ratios
Establish governance	Consider the work practice changes required

Identify benefits and risks of implementation

You have now identified the need for a GEDI service in your ED by reviewing clinical and client outcome data. Now, it is important that goals of implementation as well as both the barriers and risks are also identified. This needs to be achieved during the engagement phase.

Identify and communicate the benefits

It is important that the future benefits of the GEDI implementation (and the continued identification of emerging benefits once implemented) are identified to move towards set goals. This can also assist in effectively engaging and motivating key clinical stakeholders (for example, ED staff, hospital management, RACF senior nursing staff and local GPs). Communicating the benefits to key stakeholders provides relevance to the need for GEDI and provides reasons to continue to engage with the GEDI team. This can be achieved through meetings, in-service or through broader case examples, e.g. through PHN facilitated meetings with local GPs, educational sessions.

Identify and communicate risks

Implementing a new model of care is challenging. Working with multiple stakeholders from different sectors of community health and the acute sectors brings complexity to the issues that can arise.

Perform and document risk assessment during the pre-implementation phase. Consider: Financial, organisational and clinical risk. Your organisation should have an approach to risk that is organisation wide. Risk needs to be addressed in presenting a business case (Appendix B). A checklist of the key points to address prior to implementation can be found in Appendix C.

	WORK TO DO Queensland Health Related Policies • Work Health and Safety Risk Management Implementation Standard QH-IMP-401-3:2014 • Risk Management QH-POL-070:2015 • Risk Assessment QH-GDL-070-1-1:2015

Engage with ED and hospital executive

The original GEDI service began with an ED physician holding the geriatric portfolio and a CN with clinical background in geriatrics building the intervention. In your organisation, the driver for implementation may be different. Regardless, the clinician interested in establishing this model will need to engage with both the ED and hospital management to effectively communicate the need for a GEDI service. Supporting evidence, such as information from the GEDI evaluative research project (Craswell, Marsden, Taylor, & Wallis, 2016; Marsden, Taylor, Wallis, Craswell, Broadbent, Barnett… Glenwright (2017) and a literature search for similar or alternative models of health service delivery being implemented around Australia and globally may be useful.

	READING Examples of other supporting evidence are: a) supporting the provision of additional clinical resources within RACFs, promotion of Advance Care Directives and End of Life Pathways for palliative care (Arendts & Howard, 2010) b) rapid access to review of older adult patients and comprehensive geriatric assessment, in the ED (Wright, Tan, Iliffe, & Lee, 2014) c) enhanced education in gerontology care (Aldeen, Courtney, Lindquist, Dresden, & Gravenor, 2014; Castilho-Weinert, Sibele Yoko Mattozo, Bittencourt Guimãraes, Gonçalves, Zanini, Cavalcanti, . . . Ximendes 2014; Conroy, Ansari, Williams, Laithwaite, Teasdale, Dawson, . . . Banerjee 2014; Conway, Dilworth, Hullick, Hewitt, Turner & Higgins 2015; Silvester, Mohammed, Harriman, Girolami, & Downes, 2014).

It will also be important at this stage to identify where potential funding might be accessed. See Appendix D for an example calculation to determine your staffing requirements for a GEDI service and Appendix E for a list of suggested equipment for purchasing.

Identify key stakeholders

Stakeholders are important to ensure your implementation of a GEDI service is effective. Stakeholders may include but are not limited to: ED nursing staff, senior ED medical staff, QAS, Geriatricians, ED and hospital executive. Clinicians will be using this model but it is important that they are assisted in understanding the benefits of the system, support the need for this change and they are willing to engage with the model once it is implemented.

This can be a key challenge and requires specific attention. Identifying stakeholders, the key opinion leaders in the ED, is critical to finding support for the intervention to assist in making the implementation successful. Sometimes it will be hard to identify who will be positive (or negative) towards the GEDI model. Inside the ED, everyone will be involved particularly the Nurse Unit Manager (NUM), primary ED nurses, ED physicians and medical teams, administrative officers, triage, and of course the patients.

Think about stakeholders outside the ED such as the business managers, Geriatricians, Allied Health professionals, the Ambulance service, the Director of Nursing and other NUMS i.e. from geriatric wards. Identify how implementation of a GEDI service will affect all stakeholders and communicate this.

Table 1. Example benefits for GEDI for example Health Service stakeholders

Stakeholder	Example benefit
CEO, HHS Executive	• cost savings, improved patient outcomes
NUM of ED	• additional expertise in geriatrics in the ED • improved management of older people in the ED
ED MD	• improved ED flow • lower hospital admission rates • fewer complications of admission • improved patient outcomes
Geriatricians	• direct admissions, avoiding sub-specialist care, improved patient outcomes, improved staff and patient satisfaction
Allied Health	• increased early and appropriate referrals

Methods for engaging stakeholders

- Include opportunistic face to face conversations
- GEDI team representation at other decision making meetings within the HHS
- Determine what each stakeholder can gain from the implementation (See Table 1)
- Develop a specific GEDI forum and invite key stakeholders
- Regular meetings with stakeholders – present goals and small steps to success
- Regular reports delivered in the mode most preferable to each stakeholder
- Provide documentation about the GEDI model and evidence for its efficacy
- GEDI model presentations
- GEDI team education sessions for ED staff
- Engage individual clinicians by allocating specific tasks such as: vertical engagement with senior staff
- Be creative - provide incentives for attendance to key meetings, e.g. cater for events
- Invite stakeholders to join a clinical advisory group.

Communicate the need for GEDI and the potential benefits for older people
• Engage with this toolkit • Access the GEDI website www.cedric.org.au • Read summary of data from The Silver Book (Cook, Oliver, & Burns, 2012) or Geriatric Emergency Department Guidelines (American College of Emergency Physicians, 2013) • Review other websites recommended in Appendix F

	MEETINGS GEDI ED physician and CNC to organise meetings with other key stakeholders, e.g., Community Discharge Liaison Department head, Geriatric Services Medical lead, ED senior management team.

Table 2. Examples of engagement activities for key stakeholders

Example Stakeholders	Example Activities
Director of ED	Advocate for a GEDI service in executive meetings; Engage with nursing management to build joint commitment to the need for GEDI Assist in developing documentation for GEDI protocols; Meetings; Support for project grant applications
Nursing Director for your ED **ED Nursing Unit Manager**	Advocate for a GEDI service in executive meetings; Engage with medical management to build joint commitment to the need for a GEDI service; Recognise the staffing needs for the GEDI model and facilitate recruitment and training; Assist in developing documentation for GEDI protocols; Meetings; Endorse project grant applications
Hospital CEO/COO/ Administrator	Endorse the GEDI team at executive and State level; Access for review of policy and procedure for the GEDI model; Consider ongoing monitoring of consistency of middle management support.
Inpatient geriatricians, general physicians and sub-specialty teams	Attendance at meetings – inform and involve regarding the GEDI model to facilitate acceptance and requirements; Provide GEDI team access to case conferencing; Access for direct GEDI referral
Hospital senior accountant/finance	Developing budget proposals related to GEDI rollout and ongoing service provision; Advocating for GEDI expenditure at executive level; Monitoring budgetary performance;
Hospital quality and safety representative	Assist team in accessing appropriate risk management policy and performing risk management assessment
ED clinical staff	Attendance at education sessions; Engage with the GEDI team in workplace; Provide feedback
Community health services manager	Facilitate communication pathways between hospital and community services

GEDI model parameters

Determine scope for the GEDI team and GEDI service

The scope for the GEDI team needs to be identified early to determine the clinical areas in which the team will be working. Your GEDI service may be implemented across all EDs in the health service or be limited to one.

- Will the CNC be working in one hospital ED or will they be overseeing several EDs?
- Will the GEDI staff be within one health service area or one hospital?
- Will positions be full or part time?
- What number of GEDI CNs will be required?

The GEDI CNC, CN and GEDI physician's scope of practice needs to be determined. See example formula for determining staffing levels Appendix D. Ensure that key stakeholders are involved in these discussions and in establishing key requirements for the roles.

Your team needs to determine the types of patients you wish to focus on. For example, it might be more appropriate to include people over the age of 65 at your facility.

Patients seen by GEDI nurses in original South East Queensland site ED might include:	Patients excluded by GEDI nurses in original South East Queensland site ED
• Patients ≥70 years, Aboriginal and Torres Strait Islander ≥50 years, or 50+ residents living/ residing in an RACF • Functionally active prior to admission • At risk of increasing community care or residential care needs	• Patients on dialysis • Patients awaiting aged care placement • Patients requiring significant rehabilitation e.g. acute stroke

DECIDING ON PARAMETERS

When implementing a GEDI service, you will need to decide on the parameters based on your presentation numbers and clinical indicators.

Establish governance

It is critical that the GEDI team exists within the ED administrative and governance structures. If it sits outside this structure, the risk is that the GEDI service will not be 'owned' by the ED, lines of responsibility and communication will be disrupted, and GEDI may be seen as a visiting service instead of an integral part of the department. GEDI service governance within the ED ensures that the:

- Aims and objectives align with those of the ED
- Intervention is resourced appropriately from within the ED
- Future planning for ED service delivery considers the GEDI role.

Staffing a GEDI service

The numbers of GEDI CN staff required for your health service to operate the GEDI service is determined by a range of factors including numbers of presentations of older patients to the ED, the size of hospital and population demographic of the surrounding community. For example, an ED with overall presentation rates of 150 patients per day, of which 20% are over 70 years will equate to 30 patients over 70 years in a 24-hour period.

PLANNING YOUR STAFFING LEVELS

In the GEDI evaluative research project there were on average 145 presentations to the ED per day. Approximately 19% or 25-30 of these presentations were of people aged 70 years and over. Peak presentations times were between 10am and 4pm. GEDI nurses aimed to screen all presenting patients in this age cohort and provided targeted care for 5-10 patients each shift according to level of complexity.

The average number of patients that GEDI nurses can see per day will vary on patient complexity. Peak presentation times determine when overlap of CN shifts are best utilised. Presentations occurring late in the day who may be eligible for discharge, will often be admitted to a ward within the ED such as a Short Stay Unit (SSU) overnight requiring further assessment and decision making by GEDI early the following morning. Example job description for GEDI CN can be seen in Appendix G

Refer to the Queensland Clinical Service Capability Framework for Geriatric services for differences between facility levels. An algorithm that may assist in determining the staffing you require for a GEDI service in your organisation can be found in Appendix D. A table providing the advantages and disadvantages for staffing GEDI from within the ED is provided in Appendix H.

	PLANNING FOR LEAVE Forward planning for leave (planned and unplanned) of staff in GEDI positions is important. Utilising the ED nursing staff pool provides an opportunity for interested ED nurses to experience the GEDI role. Such acting positions allow geriatric inexperienced nurses to become familiar with GEDI process and decision making pathways and encourages them to develop their geriatric nursing skills. This education and experience supports dissemination of the GEDI ethos amongst the general ED nursing staff and strengthens GEDI service succession planning.

Train the trainer – for GEDI staff

A train the trainer program aimed at GEDI staff education may need to include:

- Awareness of the specific risks associated with ED presentation for older persons;
- Attitudes to older people;
- Ability to assess and recognise geriatric syndromes, especially frailty; and
- Decision-making related to care of older persons in the ED.

Awareness of the specific risks associated with ED presentation for older persons

Nurses knowledge of issues relating to health risks for older persons presenting to the ED has been found to be poor (Deasey, Kable, & Jeong, 2014; Robinson & Mercer, 2007). Recognition of the differences in risk between age groups who present to the ED by GEDI/ED staff will provide evidence to underpin the GEDI model prioritising frail older persons in the ED. The literature reports older persons are at increased risk of adverse events related to presentation to the ED, prolonged length of stay in the ED (Ackroyd-Stolarz et al., 2011) and experience increased incidence of complications such as new pressure areas, delirium, infection and resulting functional decline (Dwyer et al., 2014). Adverse outcomes of ED presentation and hospital admission are found to increase length of stay in hospital, increase rates of representation and likelihood of increasing care requirements including RACF placement (Lafont, Gérard, Voisin, Pahor, & Vellas, 2011). Additional resources are listed in Appendix F.

Attitudes to older people

ED staff work in a fast paced and high pressure environment focused on delivering emergency care to critically ill or injured people. Care of older people presenting in lower triage categories may not be seen as a priority for emergency care. Studies evaluating ED staff attitudes to older people suggest staff see them as dependent, with the ED not set up for the kind of multidisciplinary care they require which impacts negatively on ED workloads (Bulut, Yazici, Demircan, Keles, & Guler Demir, 2015). Skar, Bruce and Sheets (2015) reported staff seeing older people as coming to ED for the “One Stop Shop” of services it provides not available to them in the community. Interestingly, a systematic review of the literature reports that younger people are more likely to present to the ED for non-urgent visits than older people (Uscher-Pines, Pines, Kellermann, Gillen, & Mehrotra, 2013). Such negative attitudes by ED staff can impact of the care provided to this vulnerable cohort.

Validated instruments may be used to measure attitudes of ED nurses to older people such as the Older Person in Acute Care Survey (Deasey, Kable, & Jeong, 2016). A large survey of Australian ED nurses utilising this survey found that staff felt older people were more time consuming, needed family involvement in their

care and found getting comprehensive history information difficult (Deasy et al., 2016). Similar findings were found in a Canadian ethnography highlighting ED staff distress when unable to meet the needs of the older person cohort (Kelley, Parke, Jokinen, Stones, & Renaud, 2011). Consideration of staff attitudes to the care of the older person in the ED need to be addressed for interventions such as GEDI, that are geriatric specific, are to be successfully implemented. Positive ways to do this may include:

- Assisting with improving general knowledge of ED staff to care needs of the older person
- Rotating interested primary nursing staff through the GEDI role when regular staff take leave
- Communicating the GEDI role focusing on how a GEDI model can assist the primary nurse to better care for their older patient to reduce complication and streamline their pathway through the ED.

Ability to assess and recognise geriatric syndromes and frailty

The presence of one or more geriatric syndrome should trigger a more detailed geriatric assessment is required either in the community, person's own home or as an in-patient, according to the person's needs (Cook, Oliver & Burns, 2012). Examples of geriatric syndromes are:

- Falls
- Immobility
- Delirium and dementia
- Polypharmacy
- Incontinence
- End of life care.

To be able to do this effectively, skills are required such as:

- Cognitive assessment and delirium screening;
- Knowledge and understanding of geriatric syndromes and skills in recognition; and
- Pain assessment in the confused patient.

Knowledge of the specific needs of the older person presenting to the ED is critical to ensuring appropriate care is provided and risk of iatrogenic complications is minimised. The literature reports that frailty is distinctly different from ageing and the common age-related changes that develop overtime (Lekan, Wallace, McCoy, Hu, Silva & Whitson 2017). A tool that may be useful to differentiate between a high functioning usually independent older person with functional reserve and one who is at risk of decline is a frailty assessment tool.

Table 3: Tools that may be useful for assessing frailty

Reference	Name of tool	Area of intended use	Aim	Validated?
(Kydd, 2016)	Self-reported Postal Screening Tool for frailty	Primary care	Self-reported screening tool for self-identification of frailty for referral	No
(Lekan et al., 2017)	Frailty Risk Score (FRS)	Admitted patients	Determine association of frailty to inpatient mortality or 30-day representation	No
(Rolfson, Majumdar, Tsuyuki, Tahir, & Rockwood, 2006)	Edmonton Frail Scale	Admitted patients	Brief tool that can be completed by people without special training in geriatric medicine	✓ Yes
(Rockwood & Mitnitski, 2007)	Frailty Index score – (FI-CGA)	Admitted patients	Stratified frailty assessment tool to describe three levels	✓ Yes

Reference	Name of tool	Area of intended use	Aim	Validated?
(Jones, Song, & Rockwood, 2004)			of frailty, mild, moderate and severe.	
Queensland Health 2016, Adapted from (Rolfson et al., 2006) **(Hubbard et al., 2015)**	Frailty Index	Admitted patients	Quantification of frailty as an index of accumulated deficits incorporates multiple health domains to generate a score	✓ Yes
Other tools not assessing frailty directly but may be of use				
Reference	**Name of tool**	**Area of intended use**	**Aim**	**Validated**
(Asomaning & Van den Broek, 2011)	Identification of Seniors at Risk (ISAR) tool	ED	To identify patients at risk of an adverse event post ED presentation	✓ Yes

More detail on these tools can be found in Appendix I.

Decision-making related to care of older persons in the ED

The GEDI nurse focuses on influencing decision making in relation to disposition of the older patient in the ED. This aims to provide information and options for the medical team that advocate for the patient and consider the patient and families wishes.

For the other staff in the ED, education can be provided by the clinical coaches to influence knowledge and skills in the care of the older person. Prompting ED staff can be useful in increasing awareness of the needs of the older person. Some examples are:

1. “This person appears confused. Have you considered a 4AT assessment?”
2. “Have you assessed pain in this patient who appears confused? Try using the PAINAD scale – the Pain Assessment in Advanced Dementia Scale” (Warden, Hurley & Volicer 2003).
3. And in the case of the dying patient - “Have you assessed the patient for a palliative pathway? Have you considered accessing a pump for appropriate pain medication delivery?”.

Simple prompting such as this increases awareness of geriatric syndromes and specific needs in the care of the older person.

How to GEDI: Step 2 – What the GEDI team does and how they do it

In this section, we will outline the functions and activities of the GEDI team, and how they work with, support and enhance the care provided by the different members of the multidisciplinary team.

Multidisciplinary team approach

As discussed in the introduction, the GEDI team is a nurse-led, physician championed team that aims to maximise and fast track multidisciplinary decision making for older persons in the ED. The care of the older person who presents to the ED is managed in the same way as any other patient by the primary care team of emergency physicians and registered nurses with referral to specialist medical and allied health teams as required. The GEDI team provides *additional* specialist consultation, coordination and facilitation of care related to older persons with complex needs.

Figure 3 defines the usual pathway for an older patient presenting to ED. The pink boxes identify ways in which GEDI nurses identify issues and formulate goals of care to streamline the care of the older person already provided by the ED medical and nursing team.

	PLEASE NOTE! It is very important to stress that the GEDI team do not take over the care of all older persons who present to the ED. Rather, the GEDI nurses assess which people, in the older cohort, would benefit from additional care coordination, *fast-tracking* and focusing of clinical decision making and advocacy related to treatment and disposition. They then work with the primary emergency care team of doctors, nurses and allied health professionals to streamline care.

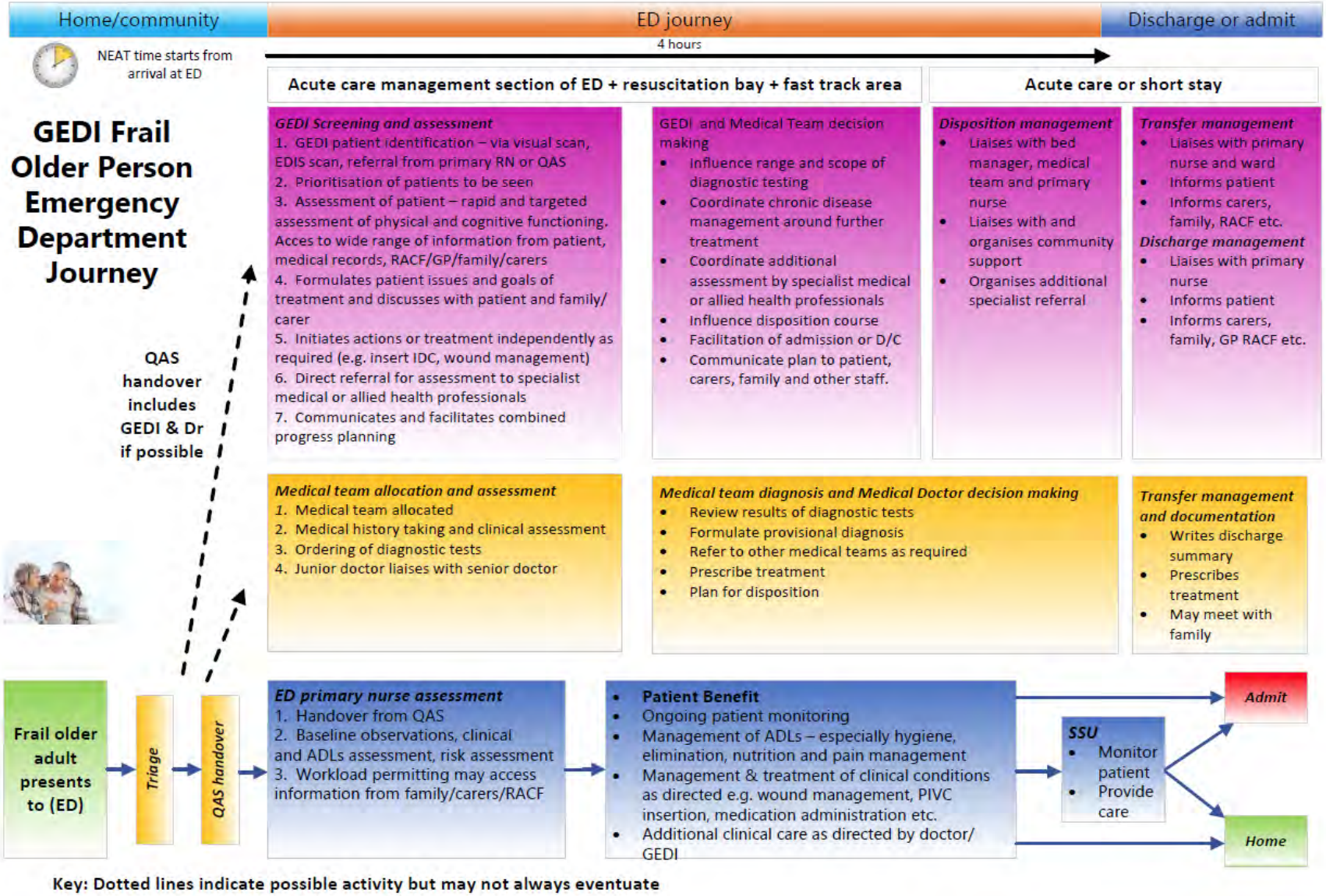


Figure 3: The GEDI patient ED journey

GEDI team clinician roles

ED physician role in the GEDI model

The ED physician's role in a GEDI model is to provide medical leadership for the GEDI service. This role is multifaceted. The incumbent needs the respect of colleagues to influence the hospital and ED executive, to instigate this model of care, and to provide leadership during the initial planning phase. The ED physician must be involved in influencing the ED medical team in accepting and advocating for the GEDI role and in educating the medical team about interdependent decision making. This medical position is also vital to ensuring that the medical team is educated about geriatric syndrome management and key principles related to this cohort, such as, end of life decision making and advanced care planning. The ED physician is also engaged in research activities related to developing the evidence to underpin clinical care of older persons in the ED. Finally, the ED physician needs to work with the GEDI nursing team to implement evidence-based practice for the older ED patient and on-going monitoring of performance.

GEDI Clinical Nurse Consultant role

The GEDI CNC provides leadership of the GEDI nurse team. This role provides support and guidance to the GEDI team, advocates for GEDI model inclusion in medical and disposition decision-making and develops relevant clinical assessment and decision making guidelines and documentation. The CNC works with the GEDI physician to monitor GEDI service processes and patient outcomes and works with the medical and nursing educators to deliver staff development activities designed to improve the care of older persons in the ED. The GEDI CNC is also the nurse lead for research projects related to improving the management of older persons in the ED.

The incumbent works with the Nurse Unit Manager of ED to recruit, manage and develop the GEDI nursing team. As part of this aspect of the role, the CNC is also responsible for supporting and, where required, educating/developing the GEDI nurses to ensure they meet the requirements of the position. Finding the right fit for the GEDI nurse with aged care or geriatric experience in the ED can prove challenging. To ensure GEDI are able to fulfil the role in the busy environment of the ED, the GEDI CNC works with the NUM to manage staff improvement. Appendix H presents the advantages and disadvantages or using existing ED staff in GEDI roles.

GEDI Clinical Nurse role

The GEDI clinical nurse (CN) is a nurse with education and/or experience in both emergency and gerontological nursing. These nurses are part of the ED team and as such are line managed by the NUM with additional professional guidance and day-to-day support in coordinating activity from the GEDI CNC. As with all CN roles in the ED, GEDI CNs have included as part of their role a specific quality improvement portfolio related to one of the national standards.

NB: Refer to Appendix J for more detail on each role description.

The specific functioning of the CN centres around the GEDI model including:

- Screening, assessment
- Contributing to decision making
- Disposition planning
- Advocacy
- Clinical interventions.

These are now described in greater detail.

GEDI patient screening, assessment, decision-making, advocacy and intervention

Screening and prioritisation

GEDI patient identification – this is undertaken via visual scan of arriving patients or patients already in the ED, EDIS scan, referral from primary ED nurse or doctor, consultation with paramedics transporting patient to hospital and phone referral from an RACF or GP.

Prioritisation of patients to be seen: The principles underpinning which patients the GEDI team will see are:

a. The patient has come from a residential aged care facility (RACF) – not all patients will need the GEDI service but a quick assessment will determine whether fast tracking of diagnostics or decision-making or rapid referral to specialist geriatrician or surgeon/physician can be facilitated by the GEDI team.
b. Frailty – while a specific tool to measure frailty is not yet available, tools such as InterRAI or ISAR (found in Appendix K) can assist in identifying older people who can benefit from GEDI nurse input into their care. Experienced GEDI nurses will be able to undertake a rapid assessment of severity of condition, complexity of co-morbidity, issues with cognitive functioning and carer burden and make a quick decision as to whether to intervene/assist.
c. Referral from ED doctor or nurse – if any of the treating team request GEDI nurse involvement screening can be undertaken.

There are two types of patients for whom the GEDI team can extensively affect outcomes:

d. Low acuity patients requiring a specific intervention such as wound care, urinary catheter replacement, or rapid diagnostic testing to confirm treatment plan. These patients may then be either rapidly returned to home/RACF or hospitalisation can be fast-tracked.
e. Complex patients with deteriorating physical and cognitive functioning for whom this presentation may be a sign that additional care or support is going to be required in future. In these cases, more time spent on assessment and planning in the ED may prevent hospitalisation or re-presentation.

	PRIORITISATION FOR GEDI NURSE REVIEW 1. All RACF residents regardless of age or reason for presentation 2. Frail older people over the age of 70 years 3. Older patients who are on palliative care pathways 4. People from Aboriginal or Torres Strait Islander background ≥50 years (Australian Institute of Health and Welfare, 2011) 5. Any other person appearing frail

Focus on RACF patients

The GEDI team place the highest priority on RACF patients with the aim for a return to the RACF where appropriate. This is possible because the RACF has clinical staff that can provide care and monitoring. However, some RACFs may have difficulty in accessing newly prescribed medications out of hours, for example, and so the GEDI nurses will work collaboratively with the RACF to ensure continuity of care and safe transfer. Regardless of triage category, GEDI nurses can quickly identify and initiate interventions to enable faster ED processing. This selective targeting of RACF residents aims to reduce ED wait times for older patients who most often are assigned a lower priority triage category.

	WORK TO DO Identification of RACF patients presenting to ED may be difficult. Suggestions: • Identify street address for the RACF • Distinguish between independent living and RACF at the same address • Ask triage administrative officer to include the name of the facility in the address fields • Create alert in EDIS • Suggest RACF staff call the GEDI team when transferring a resident to ED

To facilitate rapid return to the RACF where appropriate, GEDI nurses communicate with the RACF staff to ensure ED staff have all relevant information from the RACF and/or GP. The information can include:

- The sequence of events prior to transfer
- Whether the GP has been involved or been notified of the transfer
- Any therapies, interventions or treatments that have occurred prior to transfer
- Whether contact has been made by RACF with the Next of Kin and/or Enduring Power of Attorney to ensure they are aware of the transfer
- Existence of Advance Health Directive/Statement of Choices on file with the RACF
- Baseline functional status to compare with the person's current status
- Current medical history including medication list.

Example of how the GEDI CN can quickly obtain information on transfer
EVENT: GEDI CN sees ambulance arrive in ambulance bay with frail older person on stretcher being unloaded. OPPORTUNITY: GEDI CN sees golden opportunity to get critical information from ambulance officer i.e. type of home that person came from, stairs, ramps, unit; mobility aids at home, does person live alone or with someone, is someone of family coming behind ambulance? OR if from a RACF, the GEDI CN will notice paperwork in officer's hand that suggests person is arriving from RACF.

GEDI nurses will establish the goals of transfer with RACF staff, their ability to accept the care of the resident for discharge including recommended follow-up GP care or allied health intervention availability. This may include facilitation of medication for palliation or medical treatment e.g. antibiotics.

GEDI nurses must assist in ensuring a medical discharge letter accompanies all returning RACF patients and any newly prescribed medications are dispensed and returned with the resident to the RACF. This is aimed at circumventing problems for RACF staff in obtaining new medications and promotes continuity of care. An example copy of a letter from the GEDI team to the patient's GP can be found in Appendix L. An example of a discharge checklist from a GEDI nurse can be found in Appendix M.

Community patients seen by GEDI

Reasons patients living in the community are seen by GEDI:
1. When there are clear and early identification of need such as predetermined admission pathways (fractured neck of femur, Cognitive Assessment Management Unit) or interventions that may shorten ED LOS (provision of wound care, IDC placement, provision of analgesia, establishing goals of care. 2. When medical decision making may be uncertain and geriatric assessment may help to inform patient disposition. Individuals who do not have a clear, urgent medical indication for admission are the primary targets of the GEDI intervention.

Assessment

- Assessment of patient – functioning both independently and interdependently the GEDI nurse can undertake rapid and targeted assessment of physical and cognitive functioning, as an extension to that undertaken by the primary care medical and nursing teams.
  - The primary nurse will undertake the monitoring of vital signs, levels of consciousness and requirements for assistance with activities of daily living.
  - The medical team will undertake a clinical history and order diagnostic tests.
  - The GEDI nurse will add value to the assessment process by:
    - accessing information from a wide range of sources, such as: the patient, patient's previous medical records, RACF, GP, family members and carers;
    - accessing specific information related to end of life decision making and care planning;
    - undertaking some of the activity required for medical diagnosis and decision making e.g. collecting a blood sample or undertaking an ECG;
    - following up on delayed diagnostic test results;
    - fast tracking access to more complex diagnostic testing e.g. x-ray;
    - undertaking a delirium screen and further cognitive function tests; and
    - identifying carer burden or responsibilities at home such as pets.

Assessment
Older persons identified for the GEDI service receive a modified geriatric assessment utilising, but not limited to, validated risk assessment tools. This assessment *may* include the following domains: • Presenting problem • Patient goal of presentation • Active and non-active medical problems • Current medication • Current activities of daily living i.e. bathing, dressing, eating, toileting, transferring • Instrumental activities of daily living function i.e. cooking, shopping, transport, financial and medication management, telephone use • Continence status • Falls history • Pain status • Psychological function (Appendix N) including cognition and mood • Advance care planning arrangements • Sensory information including vision, hearing, communication barriers • Social/cultural functioning including available supports, current activities/interests, social history, community services, legal and financial issues, issues of domestic violence and suspected abuse. • Carer status and carer stress/support issues, viewpoint. Clinical experience and judgement should also be used on all people who present who appear frail, regardless of being from an RACF, older age, or high complexity of needs resulting from an acute exacerbation of chronic disease (e.g. early onset dementia, heart/vascular disease, respiratory disease associated with immobility). This addresses the Commonwealth *Aged Care Act 1997 (Amended to Act No. 99, 2013)* philosophy which is not age specific but deals with people on a case by case basis. https://www.legislation.gov.au/Details/C2013C00389

Decision making

(i) Shared identification of issues

- The GEDI nurse uses a recognition primed decision-making framework (Klein, 1998) to determine whether the patient has particular geriatric syndromes that may interact with or be an underlying cause for this presentation;
- From the rapid and targeted assessment, the GEDI nurse identifies patient issues and formulates goals of treatment. This will be undertaken, where possible, with the patient, family and/or carers in support of shared or mutual decision making (Charles, Gafni & Whelan, 1997). This is a key function of the GEDI nurse. GEDI will access any available, previously determined advanced care plans of advanced health directives to ensure that they are followed and the patient is not subjected to unwanted treatments or procedures by the multidisciplinary team;
- In some circumstances the GEDI nurse will initiate actions or treatments independently, at this point (e.g. insert IDC, wound management);
- Direct referral for assessment to specialist medical or allied health professionals is also undertaken as appropriate at this point; and
- Throughout this process, the GEDI team communicates with the patient, their family members/carers and all members of the multidisciplinary team to facilitate combined progress planning. Shared decision making is then advocated for with the medical team (Charles, Gafni & Whelan, 1997).

(ii) Influence decision making and disposition planning

- GEDI nurses influence the range and scope of diagnostic testing. Using the primed decision making approach (Klein, 1998) and with reference to the goals of care that have now been established, GEDI nurses will discuss the utility of ordering some diagnostic tests with the treating medical team;
- They coordinate clinical decision making around further treatment and may have to act as the patient or carer advocate encouraging shared and mutual decision making (Frosch & Kaplan, 1999);
- The GEDI team can coordinate additional assessment by specialist medical or allied health professionals – depending on local ED pathways and relationships with other departments this can be undertaken by direct referral by the GEDI nurse. Particularly useful pathways include direct referral to a geriatrician for assessment or direct referral to physiotherapist to assess falls risk and likelihood of safe mobilisation post discharge;
- In collaboration with all the multidisciplinary team, GEDI nurses will influence disposition course. Sometimes junior medical officers will seek to admit an older person if diagnosis is unclear or safe return home cannot be achieved immediately. The GEDI nurse can provide additional information to the junior medical officer of possible solutions that may avoid an admission. For example, if a patient will be able to return home with additional community support, a GEDI nurse may suggest a stay in the SSU within the ED for a few hours while these community resources are put in place;
- GEDI nurses can also support the primary nurse to facilitate the processes involved in admission or discharge;
- Most importantly, having already established relationships with the patient, carers, family and other staff GEDI nurses will communicate and explain clinical and disposition decision-making; and
- Documentation of the GEDI assessment and communication is done in EDIS to enable easy access to the information for all medical staff. This information is then visible in “The Viewer” increasing the access to all hospital based clinicians and community GPs.

Admission to hospital
GEDI nurses also play a major role in coordinating the care of older people between the ED and the admitting teams. When medical admission has been decided, the GEDI nurses can guide, influence or provide inpatient referral pathways. These include: ➢ Orthogeriatric pathway for an older person with a fractured neck of femur ➢ Cognitive Assessment and Management Unit (CAMU – a secure environment) Older patients being admitted under sub-specialities (cardiology, surgical) or general medicine will have available information which may be otherwise overlooked when medical attention is focused on the management of an acute condition such as chest pain in the presence of delirium, a lack of capacity to inform medical decision making, or the absence of community supports.

Disposition coordination

Once a shared decision has been made about what treatment the patient requires and what is the best environment for that treatment (i.e. hospital admission, transfer to another facility or discharge home) the GEDI team can assist the primary nurse in the following ways:

- Liaise with bed manager and medical team
- Liaise with and organises community support
- Organises additional specialist referral.

If the decision is to admit or transfer the patient to another healthcare facility the GEDI nurse can assist by:

- Liaising with primary RN and ward
- Informing patient
- Informing carers, family, RACF etc.
- Refer to inpatient teams using Patient Flow Manager (PFM).

PFM is a dashboard showing bed occupancy in all wards in the hospital and health service. GEDI nurses identify the patient's allied health referral requirements, high scores on risk assessment instruments and presence or absence of Advance Health Directive, before they have left the ED and enter these into PFM. These fields appear in red on the admitted ward's dashboard so staff are alerted to the referral. This is then used by CHIP and Allied Health services to ensure early and proactive implementation of an appropriate plan of care. This inter-dependant function ensures that highlighted needs of the GEDI patient are addressed by the ward staff to ensure early intervention takes place.

If the decision is to discharge the patient home the GEDI nurse can assist by:

- Liaising with primary RN and RACF if appropriate
- Informing patient
- Informing carers, family, RACF etc.

	WORK TO DO: Suggested Documentation by GEDI CN • Seen by GEDI "Name" (i.e. recorded in clinical comments of EDIS) • GEDI entry – assessment and management (i.e. recorded in clinical notes in EDIS) • RACF status – setup field in the EDIS triage section to record if presenting from an RACF

Intervention – specific clinical interventions

As well as assisting the primary ED nurse and coordinating diagnosis and decision-making, GEDI nurses may instigate specific interventions for the older person. These include but are not limited to:

- Wound care
- Insertion or management of various devices e.g. peripheral intravenous catheters, difficult urinary drainage catheters, percutaneous endoscopic gastrostomy tube etc.
- Urinalysis
- Blood collection.

NB: GEDI nurses also assist in activities that will directly assist in streamlining patient flow within the ED for GEDI patients i.e. organising transport home, inter-department movement of patients, ADLs - providing sustenance and assisting to the toilet when able.

Clinical integration with allied health services

Allied Health provide a valuable addition to the GEDI service, providing a vital role in assisting older patients' measurement of current function. Interdisciplinary decision making opportunities arise when information can be drawn from multiple sources to help both patients, their families and clinicians.

The Allied Health team works with GEDI staff to identify patients who will benefit from functional assessment, both within ED prior to discharge, or an inpatient referral once admitted. The Allied Health team can facilitate the older person's return home, with either GEDI or Allied Health staff arranging assessments within the home environment. Allied Health involvement can extend to physiotherapist, occupational therapist, dietician and social worker depending on the local service provision. This is recommended in The Silver Book (Cook et al., 2012) and the Geriatric Emergency Department Guidelines (American College of Emergency Physicians, 2013).

Discharge coordination

The GEDI team coordinate patient discharge by instigating referrals to allied health specialties, wound care specialists and discharge facilitation services to prompt the early actioning of concerns. This aims to intervene early to potentially contribute to a shorter stay and prevent representation. Collaboration between the GEDI team and community health team (including community nursing, non-government organisations and community allied health), is important for patients returning home who require additional and/or increased support, for example; assistance with activities of daily living, transport, wound care, medication supervision, continence aid prescription. These measures may be short term to assist in return to baseline functioning or longer term to address a permanent function decline.

High risk patients may benefit from linkages with Nurse Navigator support with a view to providing ongoing coordinated care to better manage care and prevent representation. Additional linkages with primary health services particularly GPs is recommended to communicate changes and highlight new issues as a result of ED presentation.

DOCUMENTATION SUGGESTED

- Discharge letter to GP summarising ED presentation from a GEDI nurse Appendix L
- Discharge checklist for a GEDI patient Appendix M

How to GEDI: Step 3 – GEDI service management

Having implemented the GEDI service model, the next challenge for the GEDI team is to ensure the sustainability and ongoing management of the service. The principles of continued management are:

- Establishing protocols in the ED that ensure the best care for older people e.g. identify which groups are responsible for which areas, establish palliative care pathways
- GEDI team contributing clinical expertise to the ED
- Ensuring GEDI team professional and clinical development
- Contribution to staff development of nursing and medical teams related to care of older persons
- Embedding GEDI staff and service delivery management within the ED and ensuring the GEDI service evolves in line with the needs of the patient cohort, the ED, the hospital and community it serves
- Monitoring and evaluation of GEDI staff process indicators.

GEDI team involvement in identification of the need for and developing ED specific protocols for the care of older people in the ED

The GEDI CNC, a clinical expert in the care of older persons in the ED, should be recognised as such. Given the current and future demographic profile of Australia and our developing understanding of the specific requirements of acutely ill older persons, their care within health care services is assuming a higher priority. ED clinical service development related to the care of the older person can be championed by the GEDI team. GEDI CNCs should be included in the ED management team to provide expert advice on current deficits in service delivery, gaps in provision of evidence-based practice and opportunities for protocol and practice development focused on person-centred care for the older person in the ED.

GEDI clinical expertise – portfolio management

In Queensland Health, CNs have a responsibility for portfolio development. GEDI CNs, employed as part of the experienced nursing leadership group in the ED, share this responsibility. GEDI CNs may play a valuable role in the ED by having portfolio focused on specific areas that have high impact for the care of older patients. By engaging with ED primary nurses in the fulfilment of these portfolios, an opportunity for broader staff development may be enabled. The GEDI nurse role crosses most aspects of the National Safety and Quality Health Standards so potentially they may take responsibility for a wide range of portfolios in the ED. However, focus on geriatric specific areas may have a greater impact.

	WORK TO DO CN portfolios with high level of impact on the care of older people in the ED relating to the National Standards for Safety and Quality include: • Falls • Patient safety/medication safety • Delirium recognition • Patient engagement • Palliative care • Handover

Portfolio topics are largely determined by mandatory training and expectations, incident reporting or rostering. As well as having portfolios relating to the national standards, EDs may focus CN portfolios on population groups e.g. geriatric, paediatric and mental health patients.

Education and professional development

GEDI team

Professional development for GEDI nurses that is specific for aged care can be difficult to gain in the ED. Therefore, sourcing educational opportunity outside the ED is required. This may mean linking with inpatient teams or accessing education opportunities external to the ED or even the hospital. One opportunity that may exist within the health service is case conferencing. It is suggested GEDI staff attend specialist geriatric inpatient multi-disciplinary team meetings where GEDI patients seen in the ED are often discussed. This assists in GEDI team members learning about the complexities in geriatric patient care. Online resources that may assist in education and professional development of the GEDI team include:

- GERIatric ED and GERI EM websites;
- The Silver Book (Cook et al., 2012) and the Geriatric Emergency Department Guidelines (American College of Emergency Physicians, 2013);
- Geriatric nursing learning modules (See Appendix F to see these and other useful websites).

Queensland Health Nursing Staff are allocated time and remuneration for professional development in the Enterprise Bargaining Agreement that is undertaken as part of establishing the salary of any registered nurse. The GEDI nurses can utilise this for paid education in care of the older person. Conferences may also be a way to increase knowledge in this area.

	PROFESSIONAL DEVELOPMENT GEDI staff should be encouraged to attend courses that extend their knowledge of acute geriatric care. Where relevant, community experience would be a good adjunct to their CN role in a GEDI model. This community exposure provides them with situated learning of their patients care needs and identification of the potential barriers commonly seen in community settings. This also provides familiarity with the referral pathway and service availability in community settings.

ED primary nurses and medical staff

GEDI staff are expected to also have an in-depth knowledge of care of older people and as such will provide education of the ED multidisciplinary team through planned education sessions and opportunistically whilst providing direct care in the department.

The members of the GEDI team may work with the medical and nursing educators to develop a program of education related to the care of the older person in the ED. Topics that may be included in the program include:

- Attitudes to ageing and older persons (see earlier information p 24 Attitudes to older persons)
- Recognition of the physiological changes associated with the ageing process
- Recognition of cognitive impairment and delirium screening
- Trauma/falls assessment and management
- Pain assessment in the confused older person
- Wound care (skin tear management)
- Palliative care in the ED
- Polypharmacy
- Bladder and bowel management.

ED nurse educators and clinical coaches need to consider education regarding the older person as part of the core business for all ED staff. It is suggested that the GEDI ED physician leads the geriatric portfolio for medical training and education. This will ensure that concerns particular to the geriatric patient get equal focus to other age groups based on the specific needs of this vulnerable cohort.

Embedding GEDI staff and service delivery management within the ED

Different models of providing enhanced care of older persons in the ED exist. The GEDI model situates the team within the ED management structure. This is considered important because the focus of the service is not just discharge or admission but rather the enhancement of person-centred care within the ED and streamlining of service delivery.

During the GEDI evaluative research project this emerged as a core issue. Suggestions for addressing this include ensuring that the staffing, financial management etc. of GEDI service remains within the ED organisational structure and that the GEDI team report to ED management rather than any other hospital and health service entity outside of the ED. A similar model exists in general EDs that also accept paediatric presentations. The paediatric ED specialist staff are acknowledged as clinical experts but the responsibility for managing this cohort of patients is shared by all staff and the responsibility for service provision resides with ED management group.

As the local demographic and clinical needs of the community served by the ED change, ED management, working with the GEDI team, need to ensure the appropriate development of the GEDI service. This may mean that staffing levels will change and even the specific expertise within the team may need to be reviewed from time to time. This process is enhanced by having a robust monitoring and evaluation framework in place.

Monitoring and evaluation of the care of the geriatric patient in the ED

In addition to evaluating the effect of the GEDI service on patient outcomes (discussed in detail in part 4) the GEDI team can contribute to the monitoring and evaluation of the quality of care for older persons in the ED. In general, it is suggested that evidence-based practice guidelines are used to direct the care for older persons in the ED (see: The Silver Book (Cook et al., 2012)). However, implementation of evidence-based practice guidelines are less effective than well-targeted indicators for differentiating the quality of care between hospitals (Schnikter, Martin-Khan, Burkett, Brand, Beattie, Jones, …Emergency Care Panel, 2015). Consequently, EDs may choose to audit specific care processes to monitor the quality of care provided to this cohort. GEDI team members may be able to assist in this process. Audits that may be conducted to evaluate care include:

- Review of all level 1 and 2 PRIME reports for all patients over the age of 70 years in the ED
- Review of all PRIME reports for falls in the ED, in patients over the age of 70 years
- Numbers pf patient seen by the GEDI team compared to numbers referred
- Timeliness of regular prescribed medication in the ED
- Provision of appropriate food and fluids during the diagnostic and treatment process
- Pain assessment and management
- Appropriate use of intermittent or in-dwelling urinary catheters
- Delirium screening for older persons presenting with behavioural management issues or developing behavioural management issues during ED stay
- Communication with GP, RACF, family, carers

	FURTHER MONITORING AND EVALUATION Presenting process and outcome measures on a monthly basis using a user-friendly dashboard approach to monitor and celebrate success. Appendix O. Other dashboard development ideas are in Appendicies P&Q. This website shows how to make a dashboard (http://chandoo.org/wp/2011/03/22/healthcare-dashboard/).

How to GEDI: Step 4 – GEDI service evaluation for sustainable funding and service delivery

Health service evaluation

Evaluation of any health service initiative is critical to providing robust evidence for practice in healthcare (Proctor et al., 2011). The aim of a GEDI service evaluation is to compare outcomes from before service commenced to after service is in place. An evaluation may include and is not limited to:

- Quantitative analysis of disposition, length of stay in the ED, length of stay if admitted, representations up to 28 days after discharge and same cause mortality
- Health economic cost-effectiveness analysis
- Qualitative structure and process analysis to determine service users and staff issues with the health service.

Key documentation for evaluating your implementation

Quantitative analysis

Your hospital Emergency Department Information System (EDIS) will collect information on all presentations to the ED. The following is a list of data items for a minimum data set required to perform a baseline analysis of presentations to the ED for persons aged 70 years and over and Aboriginal and Torres Strait Islander peoples aged 55 years and over.

Table 4: A list of data items for a minimum data set

Description	Data item for collection	Evaluation
Time of arrival to the ED/hospital	Arrival Date	Arrival Date minus Departure Actual At = length of stay in the ED
Time of departure from the ED	Departure Actual At	
Length of stay in the ED to ready to leave ED - to account for access block to the hospital	TimeDiff Arrival Depart. Ready	TimeDiff Arrival Depart. Ready minus Departure Actual At = access block
Diagnosis code for presentation to the ED	Diagnosis ICD Code Primary	Provide frequency of type of presentation to the ED NB: ICD 10 code can be converted into 25 systems for easier analysis of conditions (see Appendix Q)
Date of death – this date is usually only present for an in-hospital death	Died At	Can be used to provide mortality data in the ED/inpatient setting
How the person arrived to the ED	Mode of Arrival Code	Provide frequency of method of transport to the ED
Triage number using Australasian Triage Scale (1-5)	Triage Priority	Provide frequency of triage priority in the ED
Assigned hospital Medical Record Number	MRN Medical Record Number	Unique identifier for linking of information with inpatient hospital data
Age at time of presentation	Present age in years	To identify all presentations in the geriatric age group (>=70)

Description	Data item for collection	Evaluation
Gender	Present gender	To determine percentages of Males and Females presenting in this cohort
Person identifies as Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander	Indigenous status	To determine percentage of Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander presenting in this cohort
Postcode	Present postcode	To determine main geographical areas where presentations are from i.e. seasonal flux; high presenting RACF
Optional created fields in EDIS		
GEDI interactions	GEDI fields	GEDI referred – referred to GEDI GEDI attended – seen by GEDI

Data from the hospital admission management database (HBCIS) Hospital Based Corporate Information System should contain the following information for older people admitted to hospital via the ED. Linking of the information via the Unit Record Number or admission episode will provide further information on hospital admissions. Contact your Data manager to determine how this can be achieved.

Table 5: Information that the Hospital Based Corporate Information System should contain

Admission to a ward within the ED		
Time of admission to a ward WITHIN the ED i.e. Short Stay Unit (SSU) (not hospital inpatient)	Admitted at	Date time of admission minus Departure Actual At = length of stay in the ED in addition to initial ED stay
Time discharged from ward within the ED i.e. SSU	Departure actual at	
Discharge home or admission to hospital as inpatient	Departure destination	To determine how many people went home or were admitted
If transferred, name of hospital transferred to	Transfer destination Hospital Code	
In hospital mortality	Died at	Died as inpatient
Admission to hospital as inpatient		
Time of admission to hospital as inpatient	In-patient admit date/ time	
Time of discharge from hospital to place of residence	Inpatient discharge date/ time	
Discharging ward/unit	Discharge ward	
Length of stay as inpatient (separate to stay in the ED)	fractional length of stay	
In hospital mortality	Died at	Died as inpatient

- Numbers of persons >=65 years of age and over presenting to the ED; discharged from the ED, transferred, admitted in hospital, died, departure status
- Average age of people >=65 years of age who present to the ED
- Most common presentation types (ICD-10 code or category)
- Percentages of people presenting in each triage category (1-5)
- Average length of stay in the ED
- Average length of stay if admitted to hospital as inpatient (calculated in bed days)

Representations can be calculated with more advanced statistical methods.

	OBTAIN MONTHLY REPORTS FROM EDIS Liaise and build a good rapport with your EDIS data manager (or similar) to obtain rolling monthly reports on these data items i.e. quality chocolates

Once you have baseline data, you can then track any changes to these data items over identified time periods of implementation of your GEDI service. The GEDI team may also wish to collect other data such as the items listed here. An example GEDI data collection sheet can be seen in Appendix R.

Table 6: Additional data that may be collected

Additional data to be collected / used if available		
Identify if person is from a residential aged care facility	RACF Yes/No	To determine frequency of presentations from RACFs to compare with aged people from community
Name of facility (if available)	RACF NAME	To identify facilities with highest numbers of transfers
Screening tool score collected by GEDI nurse (i.e. InterRAI, TRST, ISAR) Appendix K	InterRAI score	These scores are used to determine if GEDI team involvement is required.

Health Economic cost effectiveness analysis

Information on the cost and cost savings of your GEDI service will be beneficial in asserting the value of the service with hospital administrators. This can then be used to leverage funding for increasing GEDI positions and hours of coverage in the ED.

Your hospital financial databases should contain data on the total cost of the presentation to ED and admission to hospital. Together these costs provide information on the cost of a presentation and subsequent admission which can be used to provide information on any reductions since your GEDI service is in place.

Data to collect	**Data item**
Total cost of ED presentation	Total ED cost
Total cost as inpatient alone	Total inpatient cost

From this data you can calculate the:

- Average cost of presentation to the ED
- Average cost of admission to hospital

Cost saved can be demonstrated by a reduction in hospital admissions in this cohort. For example; these results from the GEDI research evaluation show:

Item	Pre GEDI time period	Post GEDI time period	Savings
Number of admitted bed days	649	480	169 bed days saved
Average Inpatient Cost	$4897.66	$7,320.00	
Inpatient cost TOTAL	$1,430,115,61	$911,340.08	$518,775.53

Additionally, opportunity costs of empty beds that can be utilised for:

- Day surgical patients
- Elective patients

This will potentially have a positive impact on benchmarked targets such as the National Elective Surgical Targets (NEST).

While the presentation of graphs, figures and cost savings can be quickly understood by management, how the service works in practice is of far more concern to the staff who work in the ED and the older people and their families experiencing the GEDI service. For this reason, evaluation of the structures and processes in place to enable the GEDI service to operate is critical in assisting with acceptance and change management.

To do this as a quality improvement activity, interviews with key staff, management and users of the service are recommended. Potential interviewees include:

- GEDI nurses in the ED
- Other nurses working in the ED (both clinical and managerial)
- Medical and Allied Health staff in the ED
- Management who the GEDI team report to
- Patients who have been seen by GEDI nurses and their carers or family members

Suggested areas of inquiry can be seen in figure 4, adapted from Irvine, Sidani & Hall (1998) Nursing Role Effectiveness Model:

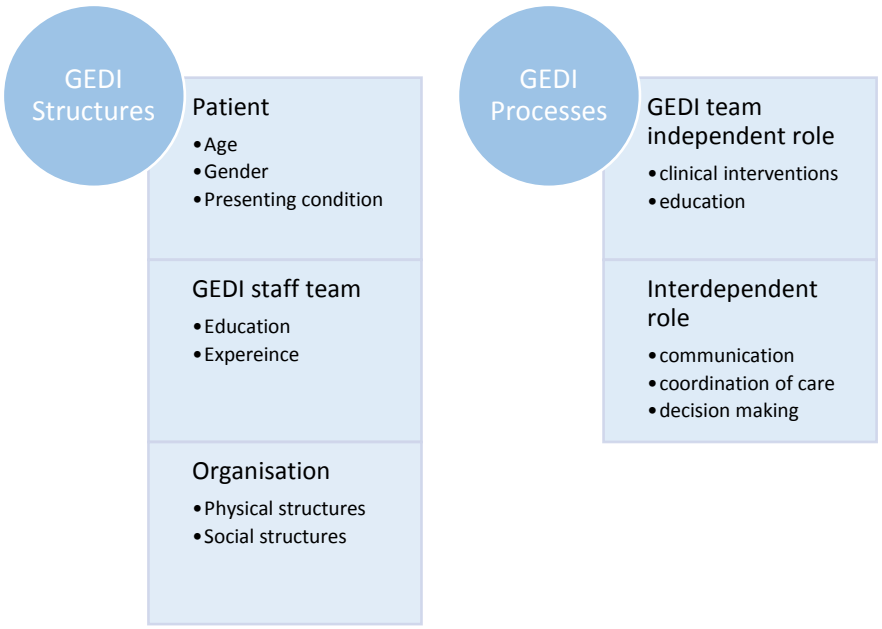


Figure 4: Structure and process elements of the GEDI service.

From these areas of inquiry, interview or survey questions can follow these pathways:

Table 7: Structure pathways

STRUCTURES	
Service (GEDI) structure	
Setting	General information physical area of the services provided, clients seen
Staffing	Staffing requirements needed to operate GEDI
Organisational structure	
Access to resources	What resources are available? Ways of overcoming lack of access to resources – Funding for staffing? Availability of resources so that the service can function i.e. ability to contact GEDI, community services, family
Physical structures	Physical components needed for GEDI to operate – space, tools used
Road map of social structure	Informants' views on key personnel – acceptance, ability
Barriers	Barriers to setting up – continuous funding GEDI, time for service provision, sustainability
Barrier solutions	Solutions to identified barriers

Table 8: Process pathways

PROCESSES	
Interventions	
Regular event chronology	Regular practices; good processes of care
Irregular event chronology	Irregular practices; poor process of care
Referral	
Referral practice before GEDI	Practice before GEDI
Referral practice after GEDI	Practice after GEDI & after hours
Problem-solving	What healthcare providers do when issue arises i.e. what happens after hours; GEDI unavailable
Role	
Key features of GEDI team roles	Activities undertaken by GEDI team
Changes in working practices	Perception of how practice has changed
Communication	
Inter personnel communication	Methods of communication between team and other healthcare professionals
Patient involvement	Methods of communicating to patient
Patient satisfaction: Information	Information: about condition and treatment
Improvement	
Room for improvement – GEDI team roles	Recommendations for improving GEDI team roles
Programme improvement recommendations	Patient's programme improvement recommendations

Complaints and compliments

Set up a complaints and compliments folder for interested parties including patients to improve the service and use positive quotes for service evaluation. In addition, it may be useful to collect data on interesting cases to present at regular GEDI team and hospital meetings as examples of hospital deficiencies and successful GEDI team patient interactions.

Abbreviations

ACAT	Aged Care Assessment Team
AGS	Area Geriatric Service
ACD	Advance Care Directive
ACP	Advance Care Plan
AMU	Acute Medical Unit
CEDRiC	Care coordination through Emergency Department Residential Aged Care and Primary Health Collaboration Project
CGA	Comprehensive Geriatric Assessment
CNC	Clinical Nurse Consultant
ED	Emergency Department
EDIS	Emergency Department Information Service
EDMAR	Emergency Discharge Medication Administration Record
EMR	Electronic Medical Record
EPoA	Enduring Power of Attorney
FACEM	Fellow of the Australian College of Emergency Medicine
FTE	Full Time Equivalent
GEDI	Geriatric Emergency Department Intervention
GP	General Practitioner
HITH	Hospital in the home
IDC	Indwelling catheter
IV	Intravenous
JMO	Junior Medical Officer
LOS	Length of Stay
MHAT	Mental Health Assessment Team
NEAT	National Emergency Access Target
NOK	Next of Kin
NUM	Nurse Unit Manager
OT	Occupational Therapist
PHC	Primary Health Care
PHN	Primary Health Network
RACF	Residential Aged Care Facility
RN	Registered Nurse
SMO	Senior Medical Officer
SSU	Short Stay Unit
UK	United Kingdom
US	United States of America

Key health care professional roles for implementing GEDI

Title and abbreviation	Role
Registered Nurse (RN)	A nurse who has completed and met the Australian Health Professional Regulation Authority (AHPRA) requirements for nursing registration; provides day-to-day nursing care.
Clinical Nurse (CN)	An expert RN clinician and leader with experience in the specialist area, who provides direct patient care; may support the Nurse Unit Manager (NUM). This role is responsible for patients, Enrolled Nurses (ENs), RNs working in their department.
Clinical Nurse Consultant (CNC)	The Clinical Nurse Consultant (CNC) is an Advanced Practice Registered Nurse (APRN). The CNC provides a clinical consultancy to clinical areas in their field of expertise and develops activities to meet the specific clinical needs; may also have management and financial skills. Initiates research and quality improvement activities within their area of expertise.
Community Discharge Liaison Nurse ***In Queensland, this is a Community Health Interface Program (CHIP) nurse. (CDLN)***	This is an RN role with a specialist focus on community health and community service provision. This position is funded by community health. This position is funded externally to the ED. The role focusses on the discharging cohort from the ED.
Emergency Department Physician **(GEDI lead physician)**	This position is the medical clinical lead for the GEDI model. They also support the clinical medical and nursing care delivery.
Nurse Navigator (NN)	This is a clinical nurse consultant role (see description above), focussed on supporting patients with complex health care needs. The role focusses on the delivery of coordinated, patient-centred care, creating partnerships with different health providers and sectors. This role bridges the acute and community sector divide enabling movements across the system.
Geriatrician	Their focus in ED is on the clinical, preventative, remedial and social aspects of illness in older people. Working with the GEDI team and other multidisciplinary services available through ED or in the community to meet patients' additional health or social requirements.
Ortho-geriatrician	Geriatrician who works as part of a collaborative, multidisciplinary team specialising in orthopaedic geriatrics.

Glossary of terms

Name and abbreviation	Explanation
Aged Care Assessment Team (ACAT)	Assesses frail older people over the age of 65 with complex care needs. Assesses eligibility for ongoing care and support.
Cognitive Assessment Management Unit (CAMU)	A secure environment providing a higher ration of nursing staff to patients. Provides allied health services and diversional therapy.
Medical Assessment and Planning Units (MAPU)	Adjacent to the ED. Provides short term stay for patient clinical assessment and decision making. This enables planning and ongoing support be organised. Not in for more than 48 hours.
Frontload assessment	Process of collecting evidence and making decisions early in the patient's ED journey.
Disposition	Determining the patients outlook regarding discharge/admission and the care co-ordination required for this.

Appendix A – GEDI CNC job description

This sample position description is broad enough for use to recruit a GEDI CNC. However, attention to questions during interviews needs to focus on:

- Define boundary spanning and how you use it in the role,
- Provide a clinical scenario. Ask applicant “Should the patient be admitted or discharged?”
- Provide a clinical scenario. Ask applicant “Who would you consult in decision making in this scenario?”

Your role

Assume responsibility and accountability for own actions and the delegation and supervision of nursing care to Registered Midwives (RM), Registered Nurses (RN), Enrolled Nurses (EN) and Assistants in Nursing (AIN).

Lead the achievement of positive patient outcomes by:

- Applying expert clinical nursing knowledge and skills and coordinating clinical practice within a specialty area;
- Taking accountability and responsibility for ensuring practice is evidence-based and continually monitoring and evaluating nursing activity in the specialty area.

Contribute to the effectiveness of the multidisciplinary team through the provision of clinical nursing expertise and leadership.

Facilitate a learning environment by operationalising strategies that support and promote education, learning and workforce development, including leadership in research initiatives.

Provide nursing leadership that drives system and quality improvement initiatives and change management.

Actively participate in clinical networks and work collaboratively with health care teams across the continuum.

Participate in ongoing professional development of self and others and take an active role in performance and development plans.

Actively participate in a working environment supporting quality human resource management practices including employment equity, anti-discrimination, workplace health and safety and ethical behaviour.

Follow defined service quality standards, occupational health and safety policies, procedures and programs and provide clinical governance in the work area.

Fulfil the responsibilities of this role in accordance with the Queensland Public Service values.

Your employer – Sunshine Coast Hospital and Health Service

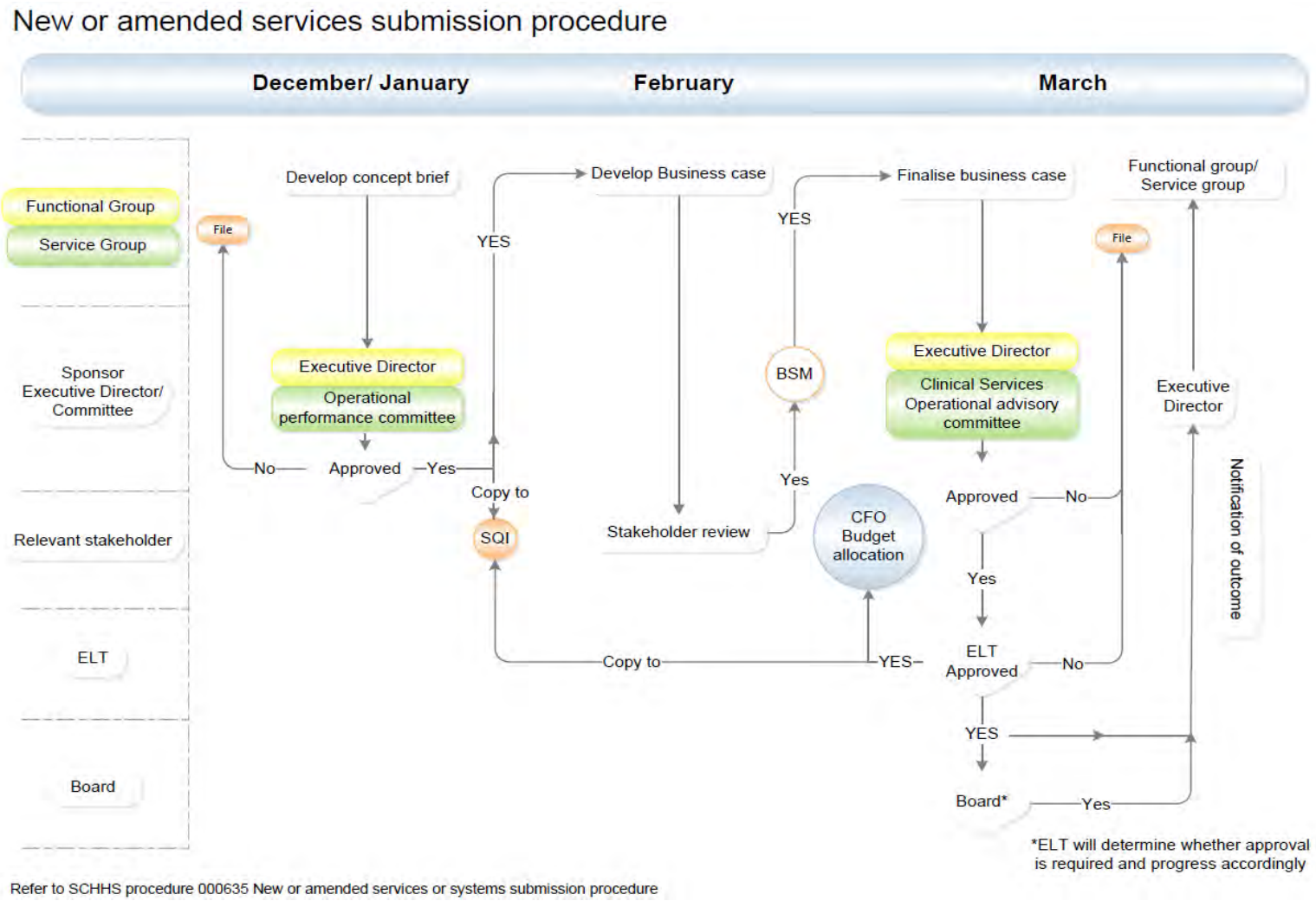
The Sunshine Coast Hospital and Health Service (SCHHS) is a dynamic health service provider that operates in an environment where quality patient care is paramount. Our health service vision is to provide health and wellbeing through exceptional care.

The SCHHS is a high performance organisation that is proud of its reputation within the Queensland public health sector. We actively seek, support and enable better ways of working and reflect our commitment to a culture of learning, with a focus on continuous quality improvement, safety and risk management. Being a person-centred service, we recognise the unique needs and experiences of individuals and actively promote the involvement of consumers and their support people in decisions about the service they receive which results in better outcomes for our community.

Our structure is based on a devolved model that features service groups with responsibility for defined clinical specialty areas. Services are delivered at facilities based at Caloundra, Gympie, Kawana, Maleny, Nambour and community-based locations across the Sunshine Coast.

Appendix B – Example concept brief of business case pathway

Example concept brief or business case templates that may be used to develop arguments to support the implementation of a GEDI service in your organisation.



Example of new or amended services, or systems submission procedure

Documents will be available in your organisation that are designed to ensure that all new or amended services or systems have an approved concept brief prior to progression to a business case, are able to be funded, are aligned with the hospital and health service (HHS) strategic plan, are reviewed by and communicated to all stakeholders and are registered with the Safety, Quality and Innovation Unit and are managed in accordance with the HHS financial management practice.

Examples of documents include:

- Policy
- Procedures
- Concept brief templates
- Business case templates
- Audit compliance strategy

Appendix C – GEDI implementation checklist

This is an example of a checklist for key points to address prior to implementation of GEDI

Checklist - key points to address prior to implementation of GEDI

- ☐ Identify the aim of the GEDI implementation
- ☐ Identify ED physician who is 100% supportive in adopting the GEDI intervention
- ☐ Identify current personnel resources and models within the ED currently
- ☐ Identify what cannot be changed
- ☐ Engage with local PHN prior to implementation to assist with;
  Dissemination of information
  Provision of educational sessions informing key stakeholders in the community
- ☐ Identify how stakeholder expectations will be managed
- ☐ Identify how barriers to change can be minimised both internally and externally
- ☐ Lobby hospital management to adopt GEDI model
- ☐ Gather data (NB: allow time to collect data on aged care presentations to ED, admissions to hospital and length of stay)
- ☐ Identify how clear communication will be ensured within the ED
- ☐ Identify how clear communication will be safeguarded back to the community
- ☐ Identify the cost implications of implementing GEDI

Appendix D – Formula for determining GEDI staffing

Example of formula for determining staff required for GEDI in a level 4 facility

A level 4 facility that is GEDI ready has:

- Access to Geriatrician during business hours
- Specialist trained RNs to perform targeted screening and geriatric assessments
- Access to allied health professionals during business hours, e.g. physiotherapist, occupational therapist, pharmacist and social worker.
- Aboriginal and Torres Strait Islander health workers, as required.

The staffing for the GEDI team during the evaluative research project in a level 4 facility were:

Clinical Nurse Consultant – 0.8 FTE

Clinical Nurses - 2.4 FTE were required to cover 2 overlapping shifts weekdays and 1 staff member on each day of the weekend.

GEDI CN start times during evaluative research project
Monday to Friday: 07:00 – 15:30 and 09:00 – 17:30 overlapping Weekend: GEDI CN from 07:00 – 15:30

Appendix E – Equipment

An example of the “gold standard” resources used by the GEDI team during the evaluative research project:

1. The InterRAI screener app– to assist nurses
2. Pocket talker – to assist communication with the older people presenting to ED
3. Mobility aids – to assist those presenting with mobilisation difficulties ie to help them walk to the toilet or to their car on discharge
4. GEDI office space and desk – managing resources, data, identifying GEDI specific patients.
5. Designated area – for difficult conversations ie speaking on phone to family regarding palliation, ceiling of care discsusions
6. Communication notice board - to provide the ED department with GEDI information at a glance, e.g. may be used to track outcomes.
7. Uniforms – GEDI CNs wore a bright pink shirt as part of their uniform to be easily identified within a busy ED department
8. GEDI communication mechanism for after GEDI hours presentations
9. Fax – to enable information to be sent
10. GEDI flyers to family and carers - important to educate those presenting to ED of the service and will inform them on the GEDI service

GEDI Nursing Team Needs to Stand Out
Choosing a bright/eye catching uniform assists in patients and staff clearly identifying the GEDI nursing team within a busy emergency department.

Appendix F - Useful websites and geriatric nursing learning modules for further information on the healthcare needs of the older person

Advance Care Planning Australia

This website provides information for health and health care workers, individuals, family, friends and carers of palliative patients and provides education and training as well as links to Advance Care Planning and Advance Health Directives for each state and territory in Australia. http://www.advancecareplanning.org.au/resources

Alzheimer's Australia

Alzheimer's Australia, a non-government organisation, provides online information on dementia, support and services, education and consulting, research and publications. There is a link for a help sheet showing what is good care in a residential facility.
https://www.fightdementia.org.au/support-and-services/families-and-friends/residential-care/what-is-good-care

Beyond Blue

Beyond Blue provides information on depression and anxiety in older people through the various programs it runs for this cohort.
https://www.bspg.com.au/dam/bsg/product?client=BEYONDBLUE&prodid=BL/0063&type=file A checklist is also provided by Beyond Blue for anxiety: https://www.beyondblue.org.au/the-facts/anxiety-and-depression-checklist-k10

Decision Assist

Decision Assist provides education, resources and advisory support to support aged care staff and general practitioners in palliative care and advanced care planning. http://www.decisionassist.org.au/

The link to fact sheets for advance care planning and palliative care for aged care is provided here.
http://www.ruralhealth.org.au/13nrhc/images/esatchel/DA%20program%20file_%20National%20rural%20Health.pdf

My Aged Care

This website is a Commonwealth government initiative providing a wide range of information. This includes information on eligibility and assessment, resources for service providers and health professionals and for people wanting to access information for themselves or family members. This includes information on aged care services providing assistance at home, after hospital transition, respite care, RACFs. It also has information on advance care planning. https://www.myagedcare.gov.au/

National Cancer Institute

The National Cancer Institute provides information about planning for advanced cancer, information for caregivers and frequently asked questions about advanced cancer https://www.cancer.gov/about-cancer. It also provides information about palliative care. http://www.cancer.gov/about-cancer/advanced-cancer/care-choices/palliative-care-fact-sheet.

Geriatric ED

The Geriatric ED website provides wide-ranging information for creating a more senior-friendly ED department. Information on policies, procedures and protocols, the interdisciplinary team, accessibility equipment and the environment are provided. There is also information on planning for change, sustaining change and examples of change. The site provides relevant and recent posts from clinicians working in this field. https://geriatric-ed.com/

Geri-EM

Geri-EM is a personalised E-learning website targeted at those working in geriatric emergency medicine. Although this site is designed primarily for physicians working in ED wanting to provide optimal care to older clients, the site will also be of interest to all health-care professionals caring for older patients. The site welcomes members of the public with an interest in geriatric care so may also be of use to carers. The site contains group discussions and interactive content such as; recommended readings and resources for use in the ED, knowledge assessments (pre-tests), knowledge checks (post-tests), teaching material, question and answers with immediate feedback, videos of simulated patient encounters and discussion boards. http://geri-em.com/

The British Geriatrics Society: Silver Book

The British Geriatrics Society (BGS) is a professional body which draws together experts from all the relevant disciplines within the field of geriatrics. Its aim is to inform and influence the development of health care policy in the United Kingdom and ensure design, commissioning and delivery of age appropriate health services. The *Silver Book* was first published in 2012 and provides information addressing how older people are cared for within the first 24 hours of an urgent care episode. The focus of the *Silver Book* is the skills and competencies required by healthcare professionals to better assess and manage frail older people. The link to the *Silver Book* is provided here: http://www.bgs.org.uk/silverbook/campaigns/silverbook

The American College of Emergency Physicians (ACEP) - Geriatric Emergency Department Guidelines

The Geriatric College of Emergency Physicians (ACEP) have developed the Geriatric Emergency Department Guidelines with the aim of standardising a set of guidelines to improve care of older people in the ED. The guidelines provide templates for staffing, equipment, education, policies and procedures, follow-up care and performance improvement measures. https://www.acep.org/geriEDguidelines/

ConsultGeri

ConsultGeri is the clinical website of The Hartford Institute for Geriatric Nursing. This website provides education for any healthcare professionals who, require integration of care of the older client within their practice and educational curriculum. Information is provided for both undergraduate and graduate students. https://consultgeri.org/education-training/e-learning-

UCLA Health System

The UCLA Health System have developed a Geriatric Age Specific Learning Module for Clinical Staff. The aim of this learning module is to enable clinicians to list age-related changes for the normal older person, describe changes in the older person that relate to medication usage and to differentiate between delirium and dementia. https://www.uclahealth.org/hr/workfiles/AgeSpecificSLM-Geriatric.pdf

Appendix G – GEDI CN job description

This position description is broad enough for use to recruit GEDI CN. However, attention to questions during interviews needs to focus on:

- Define boundary spanning and how you use it in your role
- Provide a clinical scenario and ask should patient be admitted or discharged?
- Who would you consult in decision making in this scenario.

client/carer communication and care planning of the elderly admitted to the ED to ensure appropriate and coordinated assessment of this vulnerable cohort of patients.

A key responsibility of this position will be in the identification, timely assessment, intervention and care for persons with dementia and/or delirium. An expectation for this role will include the education of nursing and medical staff regarding evidence based best practice in geriatric emergency medicine. Furthermore, this position will require contribution to data collection.

The GEDI service are seeking enthusiastic, flexible and motivated clinical nurses to work in an evolving model of care with unique challenges as the service develops and adapts to the needs of the regions aging population.

The Clinical Nurse reports directly to the GEDI Clinical Nurse Consultant and ED Nurse Unit Manager.

Your role

- Assume responsibility and accountability for own actions (at an advanced level) and the delegation and supervision of care to Registered Nurses (RNs) Enrolled Nurses (ENs) and Assistants in Nursing (AINs).
- Practice autonomously and provide leadership within the unit which supports the meeting of unit specific and Organisational goals and Key Performance Indicators.
- Identify, select, implement and evaluate nursing interventions for patients with complex care needs.
- Lead the management and coordination of comprehensive care at an advanced level that is additional to the responsibility of a nurse Grade 5.
- Contribute to quality health care and the nursing profession, by participating in research activities; accepting a delegated portfolio and continually developing clinical expertise and practice.
- Facilitate accurate and timely communication to drive effective multi-disciplinary team functioning.
- Facilitate a learning environment by enabling staff to share knowledge and expertise, support the development of other staff and students, and engage actively in Performance and Development Plans (PDP).
- Contribute to work unit/service practice development related to area of expertise by actively participating in clinical education networks and working collaboratively with health care teams across the care continuum.
- Actively participate in a working environment supporting quality human resource management practices including employment equity, anti-discrimination, workplace health and safety and ethical behaviour.
- Follow defined service quality standards, occupational health and safety policies and procedures relating to the work being undertaken in order to ensure high quality, safe services and workplaces.
- Fulfil the responsibilities of this role in accordance with Queensland Public Service Values.

Your employer - Sunshine Coast Hospital and Health Service

The Sunshine Coast Hospital and Health Service (SCHHS) is a dynamic health service provider that operates in an environment where quality patient care is paramount. Our vision, as a health service, is to provide health and wellbeing through exceptional care.

We are a high performing Hospital and Health Service and proud of our reputation within the Queensland public health sector. We actively seek, support and enable better ways of working and reflect our commitment to a culture of learning, with a focus on continuous quality improvement, safety

Appendix H – Advantages and disadvantages of using existing ED staff in GEDI roles

Advantages	Disadvantages
No additional FTE is required if using existing roles.	You will need to source funding for the dedicated roles.
Extension of staff knowledge and skills e.g. CHIP nurses working as GEDI nurses and need to work in acute areas of ED and provide clinical interventions.	ED will not have governance over the GEDI model due to differences in job description and control over the staff employed through another service/department.
Standardising the intervention and role supports therefore individuals willing to adopt and engage with the GEDI model's philosophy would be required to ensure the model's success.	No ability to select the most appropriate candidate for the position.
	ED may not benefit from the investment of a geriatric nursing portfolio.
	Allied Health professionals have a scope of practice which does not include the variety of skills and interventions required for the GEDI role. For example, medication administration, wound management, in-patient referral for admission, AHDs, IDC insertion.
	Nurses working between departments/roles may result in role confusion, for example, the CHIP nurse role is not ED based and is that of a consultant liaison role primarily focussing on discharge planning, therefore, the ability to front load assess may be diminished due to not being a constant presence in ED.

Appendix I – Tools for assessing frailty

This appendix contains examples of frailty assessment tools. For further assessment and screening tools see Appendix K.

Self-reported postal screening tool for assessing frailty in a primary care setting (Kydd, 2016).

Patient address

Practice logo and address

Dear_____,

In order to improve the services that we offer to adults aged over 75 registered with this practice we ask that you take the time to complete this short questionnaire and return it back to [redacted] in the envelope provided by _____

If you have any difficulty in completing the questionnaire please seek assistance from a friend or relative or alternatively contact [redacted] or [redacted] Elderly Care Community Nurses on [redacted] or [redacted] for further assistance Monday - Friday between 09:00 - 16:00.

Please leave a message if there is no-one available to take your call.

The information obtained from this questionnaire will be held in the strictest of confidence.

This questionnaire is also available in other formats and languages, upon request. These can be obtained by contacting [redacted] or [redacted] on the above number.

Thank you for your co-operation.

Yours sincerely,
Name the GP's...

1	Have you had any dizziness in the last 12 months?	YES / NO
2	Have you had any falls in the last 12 months?	YES / NO
3	If yes, how many falls have you had?	
	1 to 2 / 3 to 4 / 5 or more / N/A	
4	Were you able to get up without any help?	YES / NO / N/A
5	Are you worried about falling?	YES / NO
6	Do you have steps to get in to your home?	YES / NO
7	Do you have stairs inside your home?	YES / NO
8	Do you have difficulty getting up or down steps or stairs?	YES / NO / N/A
9	Do you still manage to get outdoors? - on your own? - with help?	YES / NO YES / NO YES / NO
10	Do you use any of the following? - Walking stick(s) - Zimmer frame - 3 wheeler - Trolley - Crutches	 YES / NO YES / NO YES / NO YES / NO YES / NO
11	Do you have difficulty with washing and dressing yourself?	YES / NO
12	Are you able to make hot drinks and meals yourself?	YES / NO
13	Do you have any problems with any of the following? - Getting in or out of bed - Getting in or out of a chair - Getting on or off of the toilet	 YES / NO YES / NO YES / NO
14	Do you ever find yourself wet because you can't get to the toilet in time?	YES / NO
15	Do you have problems with your bowels?	YES / NO
16	Do you think you have a problem with your memory?	YES / NO
17	Has anyone in your family suggested that your memory is less good than it used to be?	YES / NO
18	Do you worried about your mood?	YES / NO
19	How many different types of tablest do you take?	YES / NO
	None / 1 to 4 / 5 to 9 / 10 or more	
20	Do you think your tablets are giving you side effects?	YES / NO / N/A
21	Do you have difficulty remembering to take all of your tablets?	YES / NO / N/A
22	Do you have a blister pack/dosette box?	YES / NO / N/A
23	Do you live alone?	YES / NO
24	Do you have a community alarm?	YES / NO
25	Do you have support from carers? This can be from family, social work, private or others.	YES / NO
26	For how many hours a week do your carers visit?	
	N/A / 1 to 3 / 4 to 6 / 7 or more	

Is there anything that you are worried about? For example finance, health, benefits, housing etc.

_____

_____

Are you happy for a nurse to contact you with any of your concerns?
By telephone? YES / NO Home visit? YES / NO

Please can you supply an up to date telephone number.

_____

Thank you for your time.

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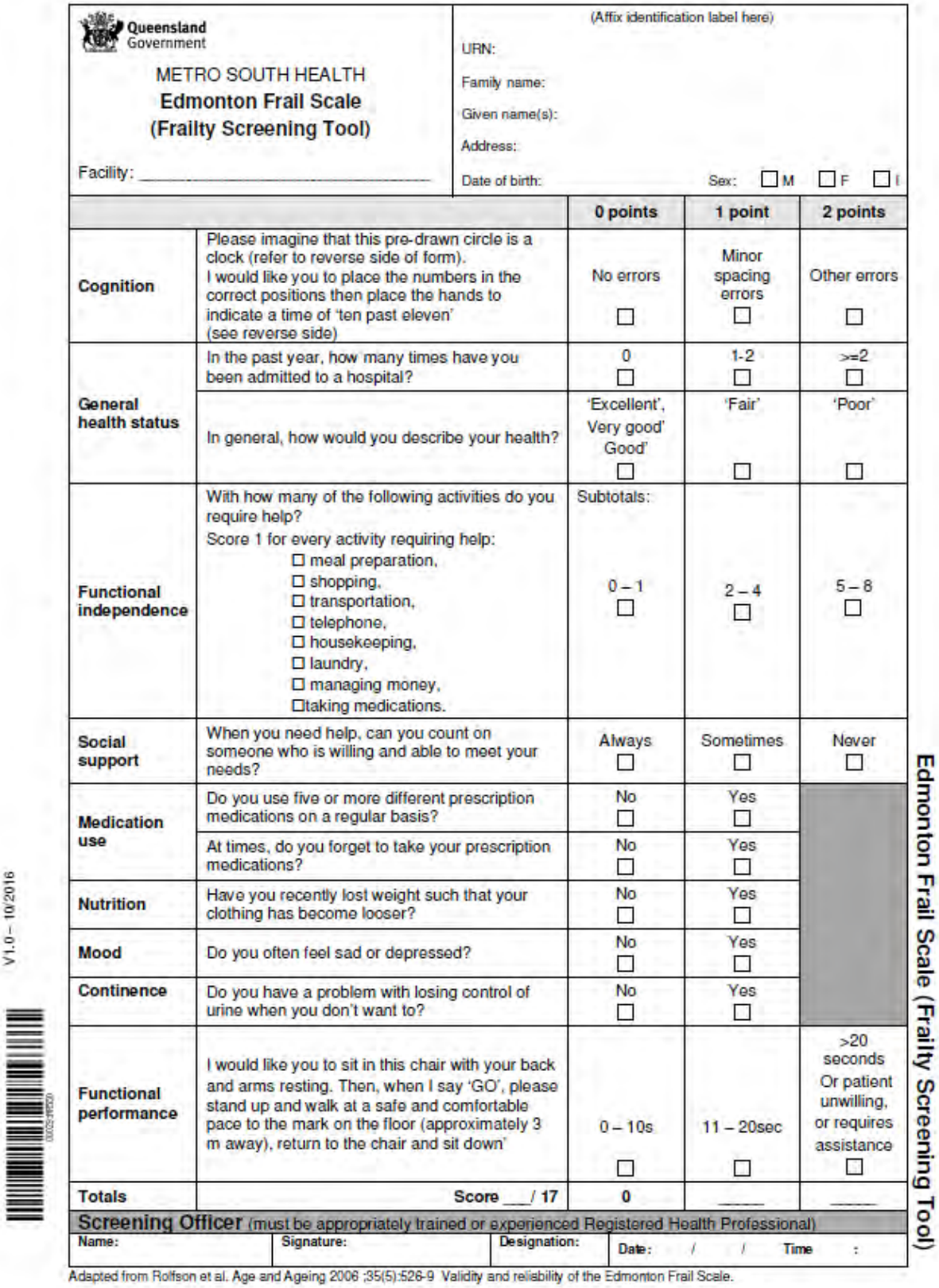
Figure 1. The screening tool consisted of 3 sheets of A4 paper. It was sent to over 75s registered at a local GP surgery with a covering letter and a stamped addressed return envelope.

Edmonton Frail Scale (Rolfson et al., 2006)

This frailty assessment tool is used in some Queensland hospitals.



Queensland Government

METRO SOUTH HEALTH

Edmonton Frail Scale
(Frailty Screening Tool)

Facility: _____

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

		0 points	1 point	2 points
Cognition	Please imagine that this pre-drawn circle is a clock (refer to reverse side of form). I would like you to place the numbers in the correct positions then place the hands to indicate a time of 'ten past eleven' (see reverse side)	No errors ☐	Minor spacing errors ☐	Other errors ☐
General health status	In the past year, how many times have you been admitted to a hospital?	0 ☐	1-2 ☐	>=2 ☐
	In general, how would you describe your health?	'Excellent', Very good' Good' ☐	'Fair' ☐	'Poor' ☐
Functional independence	With how many of the following activities do you require help? Score 1 for every activity requiring help: ☐ meal preparation, ☐ shopping, ☐ transportation, ☐ telephone, ☐ housekeeping, ☐ laundry, ☐ managing money, ☐ taking medications.	Subtotals: 0 – 1 ☐	2 – 4 ☐	5 – 8 ☐
Social support	When you need help, can you count on someone who is willing and able to meet your needs?	Always ☐	Sometimes ☐	Never ☐
Medication use	Do you use five or more different prescription medications on a regular basis?	No ☐	Yes ☐	
	At times, do you forget to take your prescription medications?	No ☐	Yes ☐	
Nutrition	Have you recently lost weight such that your clothing has become looser?	No ☐	Yes ☐	
Mood	Do you often feel sad or depressed?	No ☐	Yes ☐	
Continence	Do you have a problem with losing control of urine when you don't want to?	No ☐	Yes ☐	
Functional performance	I would like you to sit in this chair with your back and arms resting. Then, when I say 'GO', please stand up and walk at a safe and comfortable pace to the mark on the floor (approximately 3 m away), return to the chair and sit down'	0 – 10s ☐	11 – 20sec ☐	>20 seconds Or patient unwilling, or requires assistance ☐
Totals	**Score ___/ 17**	**0**	_____	_____

Screening Officer (must be appropriately trained or experienced Registered Health Professional)

Name:	Signature:	Designation:	Date: / /	Time :

Adapted from Rolfson et al. Age and Ageing 2006 ;35(5):526-9 Validity and reliability of the Edmonton Frail Scale.

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V1.0 – 10/2016

Edmonton Frail Scale (Frailty Screening Tool)

Queensland Government

METRO SOUTH HEALTH

Edmonton Frail Scale
(Frailty Screening Tool)

Facility: _____

(Affix identification label here)

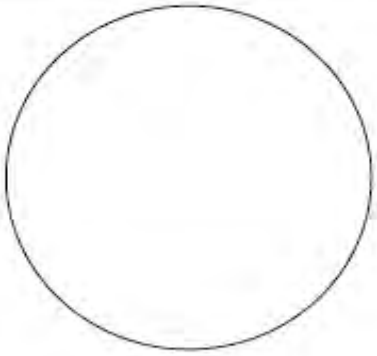
URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I



Please imagine that this pre-drawn circle is a clock.

I would like you to place the numbers in the correct positions then place the hands to indicate a time of 'ten past eleven'

Triage Notes:

Triaging Medical Officer:

Name:	Signature:	Designation:	Date: / / Time :

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Appendix J – Additional information on GEDI role descriptions and responsibilities

GEDI ED Physician role

AS identified above, the GEDI ED physician's role is to provide medical leadership for the GEDI model. This role is multifaceted. The incumbent needs the respect of colleagues that means s/he can influence hospital and ED executive to instigate this model of care and provide medical leadership during the initial planning phase. The ED physician must be involved in influencing the ED medical team as a whole in accepting and advocating for the GEDI role and in educating the medical team about interdependent decision making. This medical position is also vital to ensuring that the medical team is educated about geriatric syndrome management and key principles related to this cohort, such as, end of life decision making and advanced care planning. The ED physician is also engaged in research activities related to developing the evidence to underpin clinical care of older persons in the ED. Finally, the ED GEDI physician needs to work with the GEDI nursing team to develop implementation of evidence-based practice for the older ED patient and on-going monitoring of performance.

GEDI ED Physician responsibilities

Clinical responsibilities

- Enhanced communication and coordinated care for older people through acting as a clinical resource and expert in geriatric emergency medicine
- Oversight of medical staff to promote informed decision making and best practice
- Identify areas GEDI nurses can provide information to enable more informed and rapid assessment of older people in the ED
- Establish clinical networks with hospital inpatient teams.

Administrative responsibilities

- Promote the GEDI model of care in the ED to embed it within the ED culture of care of the older person
- Act as a change agent
- Negotiate resource use in the ED
- Advocate GEDI in strategic planning with senior staff
- Establish and maintain research collaborations
- Administrator of GEDI team, formal documentation and budget.

Joint GEDI team administrative responsibilities

- Providing education for emergency staff in evidence-based care of the frail older person
- Establishment of rapid, direct referral pathways to specialised geriatric and palliative care departments
- Participation in quality improvement projects and research.

	Clear delineation of roles and responsibilities When implementing a new model of care, clear delineation of roles and responsibilities within teams needs to be acknowledged and addressed to reduce issues of change (positions may feel threatened).

GEDI Clinical Nurse Consultant (CNC) role

The GEDI CNC (or senior GEDI at level appropriate to the service) provides leadership of the GEDI nurse team. In this role, the CNC provides support and guidance to the GEDI team, advocates for GEDI inclusion in medical and disposition decision-making and develops relevant clinical assessment and decision making guidelines and documentation. The GEDI CNC works with the GEDI physician to monitor GEDI processes and patient outcomes and works with the medical and nursing educators to deliver staff development activities designed to improve the care of older persons in the ED. The GEDI CNC is also the nurse lead for research projects related to improving the management of older persons in the ED.

The incumbent also works with the Nurse Unit Manager of ED to recruit, manage and develop the GEDI nursing team. Responsibility for supporting and, where required, educating/developing the GEDI nurses to ensure they meet the requirements of the position is an important aspect of this role. If this proves to be problematic the GEDI CNC works with the NUM to manage underperforming staff.

The Nursing Role Effectiveness Model is a useful tool to allow us to examine the role of the CNC in more depth. It was developed to describe nursing functions that could then be used to evaluate nursing practice in relationship to the roles nurses assume in health care (Irvine, 1998). The model links patient and system outcomes to the nurses' role. The key feature of this model is the identification of the independent, dependent and interdependent roles of the nurse. For the role of the GEDI CNC, most functions within the ED are independent and interdependent. Examples of these functions can be seen in Table 1a.

Table 1a. GEDI CNC dependent and interdependent clinical roles

Independent	Interdependent
Clinical expertise and support for GEDI CNs Identification and implementation and evaluation of new treatments, technologies and therapeutic techniques for aged care Provides complex patient-centred consultancy Development and management of the clinical processes, e.g. care maps, clinical pathways	Multidisciplinary patient-centred decision making related to treatment options and hospital admission or discharge Collaboration with all ED staff in the design and conduct of quality improvement initiatives

GEDI is designed with CNC oversight

However, this position may depend on;

- Size of the organisation and aged care presentations to ED
- Number of staff allocated to the GEDI team
- Whether the GEDI CNC will be working across ED departments within a hospital and health service or only within one ED department

GEDI Clinical Nurse Consultant responsibilities

Clinical leadership

- Acts as a role model and expert clinician in the clinical setting
- Contributes to the development and management of clinical processes, e.g. care maps, clinical pathways
- Provides leadership in the ongoing review of clinical practice for a more complex service, i.e. a service provided at multiple sites or by multiple CNCs across an area health service
- Participates on state and on national working parties
- Assumes leadership roles, which promote broader advancement of clinical practice, e.g. membership of editorial boards, leadership of position papers and development of advanced nursing practice standards

Research

- Initiates, conducts and disseminates the findings of locally based research in aged care
- Participates as co-researcher in larger studies
- Manages research projects requiring clinical contribution from others
- Adapts and applies related scientific research to a clinical specialty, i.e. research from other scientific disciplines applied to nursing
- Initiates original research projects
- Disseminates research results through specialist publications and presentation.

Ongoing facilitation of GEDI model implementation

- Identify culture and most effective means of communication with stakeholders
- Liaise with key stakeholders
- Education of new and changing staff on the GEDI model
- Share successes within the department
- Reflection on key activities that are not working to explore how these could be done differently
- Focus on activities designed to keep the GEDI model on track
- Consider external organisational context.

Education

- Participates in formal and informal education programs
- Identifies clinical education needs
- Collaborates with others in the development and delivery of education programs
- Undertakes primary responsibility for the planning and implementation of specialist clinical education for the HHS
- Develops significant education resources for nurses and other health care professionals
- Participates in the development and delivery of postgraduate tertiary programs
- Ongoing personal self-development.

Clinical services planning and management

- Identifies future issues and new directions for the services
- Understand audit process and quality improvement projects
- Contributes to formal service and strategic planning processes within the organisation
- Provides ongoing comprehensive analysis of current practice and the impact of new directions of the clinical specialty service
- Initiates, develops, implements and evaluates strategic change for the clinical specialty/service.

GEDI Clinical Nurse (CN) role

The GEDI clinical nurse is a nurse with education and/or experience in both emergency and gerontological nursing. These nurses are part of the ED team and as such are line managed by the NUM with additional professional guidance and day-to-day support in coordinating activity from the GEDI CNC. As with all CN roles in the ED, GEDI CNs have included as part of their role a specific quality improvement portfolio related to one of the national standards. The specific functioning of the CN centres around the GEDI model including screening, assessment, contributing to decision making, disposition planning, advocacy and clinical interventions.

The GEDI clinical nurse (CN) role has independent and interdependent functions facilitating potential evaluation of practice. Examples of these functions can be seen in Table 2a. The GEDI CN has high level communication skills, ability to multitask, knowledge of clinical pathways and protocols and has confidence in approaching all levels of staff. Key to the GEDI CN role is the geriatric risk screening and rapid assessment of patients of 70 years of age and over who present to the ED. This screening identifies frailty in this cohort, therefore those that require further input from GEDI. A modified targeted geriatric assessment is performed to fast track clinical needs and decision making regarding the appropriate pathway. This action results in earlier consultation liaison and coordination with junior and senior medical officers within the ED and other specialties. The GEDI CN provides ED and RACF staff with a single point of contact when having difficulty managing a frail older person with an acute illness.

Table 2a. GEDI CN independent, dependent and interdependent roles

Dependent	Interdependent	Independent
Provision of non-nursing initiated medications and investigations	Decision making involving patient, carers, multidisciplinary team members including SMOs, nurses and allied health. Patient flow including facilitation of discharge or admission, i.e. appropriate disposition planning Ensure all patients have discharge summaries to provide continuity and informed collaborative care planning involving GP, RACF, families and community services Establish rapid, direct referral pathways to specialised and palliative care departments	Geriatric screening Targeted geriatric assessment Co-ordinated care of older people through enhanced communication and being a dedicated single point of contact within ED for RACF staff, NPs, community services, paramedics and GPs Liaison with older person, enduring power of attorney (when in place) and ED medical team for health-related decision-making and end of life care planning. Nurse initiated interventions such as, nurse initiated medications, wound care, IDC management, education. Wound care assessment, management and advice for older people in ED Evidence-based education for ED staff on care and management of the frail elderly person

GEDI Clinical Nurse responsibilities

Clinical responsibilities

- Works collaboratively with all ED staff
- Enhanced communication by providing a dedicated single point of contact within the ED for RACF staff, NP community services, paramedics and GPs to obtain support and advice regarding optimal care and management of acutely unwell or injured frail older person or RACF resident
- Rapid assessment and management of frail older persons in the ED in collaboration with the primary nurse
- Provides evidence based clinical care for older persons in the ED in collaboration with the primary nurse
- Provision of a consultative service for patient centred care of the frail older person or RACF resident within the ED
- Direct referral to Geriatricians and rapid consultation pathways with other medical service streams
- Pre-hospital communication with the RACF, GP, NP and Ambulance service, facilitating appropriate transfer decision making and early arrival triage
- Liaison with hospital acute-care substitution services such as the Hospital in The Home and palliative care services.

Administrative responsibilities

- Facilitation of both discharge back to place of residence or admission – i.e. appropriate disposition planning
- Ensuring discharge summaries are provided to all care providers e.g. GPs, RACF, primary carers, community services following acute ED care to allow seamless transition of care
- Provide education for ED staff in evidence based care of the frail older person or RACF resident
- Facilitate education/clinical exposure in the ED for NP candidates specialising in care of the frail older person or RACF resident to enhance skill base and knowledge of the ED setting
- Establishment of rapid, direct referral pathways to specialised geriatric and palliative care departments.

	Clear role delineation is required It is important during this pre-implementation phase that role delineation is made clear to all ED staff. The role of the CN in ED is not a primary care role; it is a specialist adjunct role in ED.

Appendix K - Examples of potential screening tools

InterRAI – ED screener

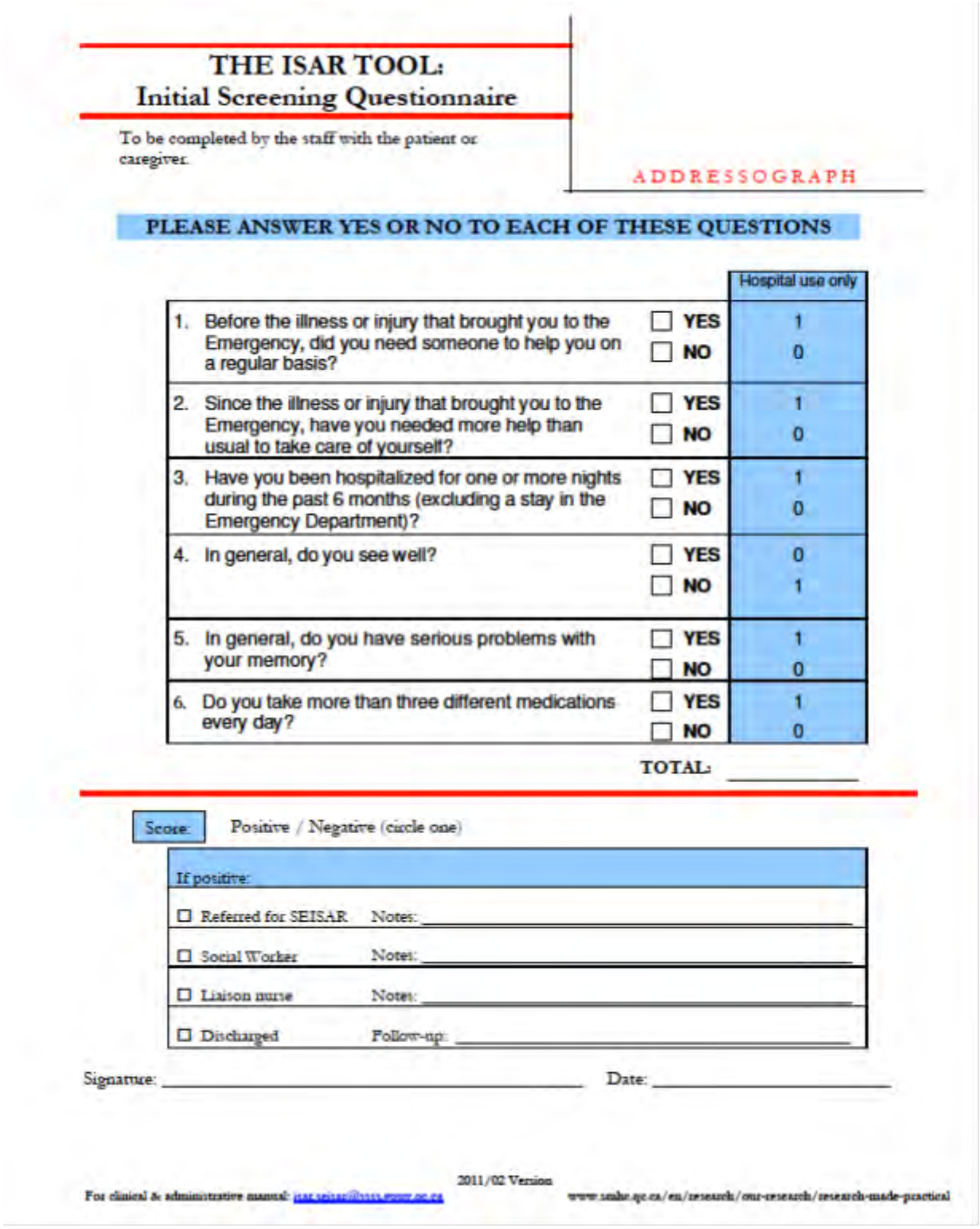
The GEDI nurses in ED use the interRAI ED screener. This is a tool to screen older people who present to ED resulting in a score from 0-6 of risk. InterRAI risk is defined, as those older persons most at risk of an increased length of stay (LOS) or representation to ED i.e. frail older persons. High risk scoring individuals can also be determined at the ED clinician's discretion. Geriatric risk screening minimizes time spent with older persons likely to least benefit from a geriatric assessment i.e. not frail older persons. The older person is classified into six levels of need with higher scores indicating greater need for geriatric intervention and case management. The algorithm is based on 4 activities of daily living (ADLs). This provides a score between 1 and 6, 1-2 being low risk, 3-4 medium risk and 5-6 high risk. The link to the app online is provided here; https://itunes.apple.com/us/app/interrai-ed-screener/id871248119?mt=8 The app looks like this:

The Triage Risk Screening Tool (TRST)

The TRST screening tool is designed for health professionals who have received training in its administration. This tool predicts repeat emergency department visits and hospitalisations in older patients discharged from the ED. A link to the screening tool is provided here http://tools.farmacologiaclinica.info/index.php?sid=10048

ISAR screening tool

The ISAR screening tool is an initial screening questionnaire to be completed with the patient and or their caregiver. The link is provided here. http://www.smhc.ca/ignitionweb/data/media_centre_files/240/ISAR%20tool%20v2011_02%20_e_%20_%20February%202011.pdf The Screening tool looks like this:



THE ISAR TOOL:
Initial Screening Questionnaire

To be completed by the staff with the patient or caregiver.

ADDRESSOGRAPH

PLEASE ANSWER YES OR NO TO EACH OF THESE QUESTIONS

		Hospital use only
1. Before the illness or injury that brought you to the Emergency, did you need someone to help you on a regular basis?	☐ YES ☐ NO	1 0
2. Since the illness or injury that brought you to the Emergency, have you needed more help than usual to take care of yourself?	☐ YES ☐ NO	1 0
3. Have you been hospitalized for one or more nights during the past 6 months (excluding a stay in the Emergency Department)?	☐ YES ☐ NO	1 0
4. In general, do you see well?	☐ YES ☐ NO	0 1
5. In general, do you have serious problems with your memory?	☐ YES ☐ NO	1 0
6. Do you take more than three different medications every day?	☐ YES ☐ NO	1 0

TOTAL: _____

Score: Positive / Negative (circle one)

If positive:	
☐ Referred for SEISAR	Notes: _____
☐ Social Worker	Notes: _____
☐ Liaison nurse	Notes: _____
☐ Discharged	Follow-up: _____

Signature: _____ Date: _____

2011/02 Version

For clinical & administrative manual: [illegible] www.smhc.qc.ca/en/research/our-research/research-made-practical

Appendix L – Sample GEDI nurse discharge letter for the GP

This example of a discharge letter from GEDI to the patient's GP identifies requirements for inclusion.

Emergency Department
Nambour General Hospital
Hospital Road
Nambour

Date:

Patient ID label to be inserted here

Patient Allergies

☐ Yes	Details:	☐ No

Dear Doctor,
The above-mentioned patient presented to the Emergency Department, Nambour General Hospital today following:

_____

During this visit the Geriatric Emergency Department Initiative (GEDI) Clinical Nurse completed a Geriatric Assessment resulting in the following actions:

☐ A referral to My Aged Care has been sent. Specifically: _____

☐ Wound care was completed. Specifically: _____

☐ Treatment provided. Specifically: _____

Care requirements on discharge:

☐ Aftercare recommendations. Specifically: _____

☐ Wound care plan suggested: _____

Services contacted by GEDI:		Appointment date

The following are recommended for further action by the primary healthcare team:

☐ Medication Review
☐ Bowel Management Plan/ Pain Management Plan
☐ Wound Care required – for chronic wounds consider referral to USC/ Blue Care Wound Solutions Clinic – call Blue Care on 1800 030 289
☐ Discussion and completion of an Advance Health Directive
☐ Formal Cognitive Assessment/Geriatrician Review
☐ Older Persons Mental Health Team Referral
☐ Review of Drivers Licence
☐ Webster Pack for medication management
☐ Other:

Additional communication provided by the ED team:

☐ A copy of this discharge summary has been given to the patient/carer/RACF
☐ Discharge summary uploaded to MyHealthRecord
☐ Other:

Thank you for the ongoing care of this patient.
Please do not hesitate to contact us for further information.
Kind regards

The GEDI Team
Emergency Department,
Nambour General Hospital

Telephone: 5470 6235
Monday – Friday 7:00am – 5:30pm; weekends and public holidays 7:00am – 3:30pm

Appendix M - GEDI emergency department discharge checklist

This is an example of a discharge checklist that ED staff can use when discharging older patients.

Item	Yes	No	Not required
Patient aware of provisional diagnosis?	☐	☐	
Patient aware of follow-up arrangements?	☐	☐	
Patient aware of red flags and when to return if concerned?	☐	☐	
Does the patient live alone?	☐	☐	
Time of discharge appropriate?	☐	☐	
NOK/ carer/person responsible aware?	☐	☐	☐
RACF aware?	☐	☐	☐
Cannula/ ID band removed?	☐	☐	
Discharge referral letter?	☐	☐	
Medications – return of patient's own	☐	☐	☐
Medications provided if new - Scripts provide or filled?	☐	☐	☐
Results/ x-rays provided?	☐	☐	
Relevant discharge factsheet?	☐	☐	
Medical/ worker's compensation certificate?	☐	☐	☐
Treating ED doctor has deemed the patient clinically and functionally safe for discharge?	☐	☐	
Identified risks have been mitigated where possible: Risks may include supervision for discharge and ongoing care, unsafe home circumstances or environment such as the departure of elderly patients home at night, known domestic violence situations. Arrange interventions and resources to avoid ED representation such as equipment, additional supports such as nursing support, allied health follow-up.	☐	☐	
Transfer to another facility (RACF) = clinical handover to facility at point of departure.	☐	☐	☐
Completion of Emergency Department Medication Administration Record (EDMAR) for nursing home residents if a new medication has been prescribed in the ED	☐	☐	☐

Appendix N - 4AT cognitive assessment

The 4AT is a screening instrument (copied below) is designed for rapid initial assessment of delirium and cognitive impairment. Link to this screening assessment tool is https://static1.squarespace.com/static/543cac47e4b0388ca43554df/t/57ebb74ad482e9f4d47b414d/1475065676038/4AT_1.2_English.pdf.

4AT

Assessment test for delirium & cognitive impairment

(label)

Patient name:

Date of birth:

Patient number:

Date: **Time:**

Tester:

CIRCLE

[1] ALERTNESS

This includes patients who may be markedly drowsy (eg. difficult to rouse and/or obviously sleepy during assessment) or agitated/hyperactive. Observe the patient. If asleep, attempt to wake with speech or gentle touch on shoulder. Ask the patient to state their name and address to assist rating.

Normal (fully alert, but not agitated, throughout assessment)	0
Mild sleepiness for <10 seconds after waking, then normal	0
Clearly abnormal	4

[2] AMT4

Age, date of birth, place (name of the hospital or building), current year.

No mistakes	0
1 mistake	1
2 or more mistakes/untestable	2

[3] ATTENTION

Ask the patient: "Please tell me the months of the year in backwards order, starting at December." To assist initial understanding one prompt of "what is the month before December?" is permitted.

Months of the year backwards	Achieves 7 months or more correctly	0
	Starts but scores <7 months / refuses to start	1
	Untestable (cannot start because unwell, drowsy, inattentive)	2

[4] ACUTE CHANGE OR FLUCTUATING COURSE

Evidence of significant change or fluctuation in: alertness, cognition, other mental function (eg. paranoia, hallucinations) arising over the last 2 weeks and still evident in last 24hrs

No	0
Yes	4

4 or above: possible delirium +/- cognitive impairment
1-3: possible cognitive impairment
0: delirium or severe cognitive impairment unlikely (but delirium still possible if [4] information incomplete)

4AT SCORE ☐

GUIDANCE NOTES Version 1.2. Information and download: **www.the4AT.com**

The 4AT is a screening instrument designed for rapid initial assessment of delirium and cognitive impairment. A score of 4 or more *suggests* delirium but is not diagnostic: more detailed assessment of mental status may be required to reach a diagnosis. A score of 1-3 suggests cognitive impairment and more detailed cognitive testing and informant history-taking are required. A score of 0 does not definitively exclude delirium or cognitive impairment: more detailed testing may be required depending on the clinical context. Items 1-3 are rated *solely on observation of the patient at the time of assessment*. Item 4 requires information from one or more source(s), eg. your own knowledge of the patient, other staff who know the patient (eg. ward nurses), GP letter, case notes, carers. The tester should take account of communication difficulties (hearing impairment, dysphasia, lack of common language) when carrying out the test and interpreting the score.

Alertness: Altered level of alertness is very likely to be delirium in general hospital settings. If the patient shows significant altered alertness during the bedside assessment, score 4 for this item. **AMT4 (Abbreviated Mental Test - 4)**: This score can be extracted from items in the AMT10 if the latter is done immediately before. **Acute Change or Fluctuating Course**: Fluctuation can occur without delirium in some cases of dementia, but marked fluctuation usually indicates delirium. To help elicit any hallucinations and/or paranoid thoughts ask the patient questions such as, "Are you concerned about anything going on here?"; "Do you feel frightened by anything or anyone?"; "Have you been seeing or hearing anything unusual?"

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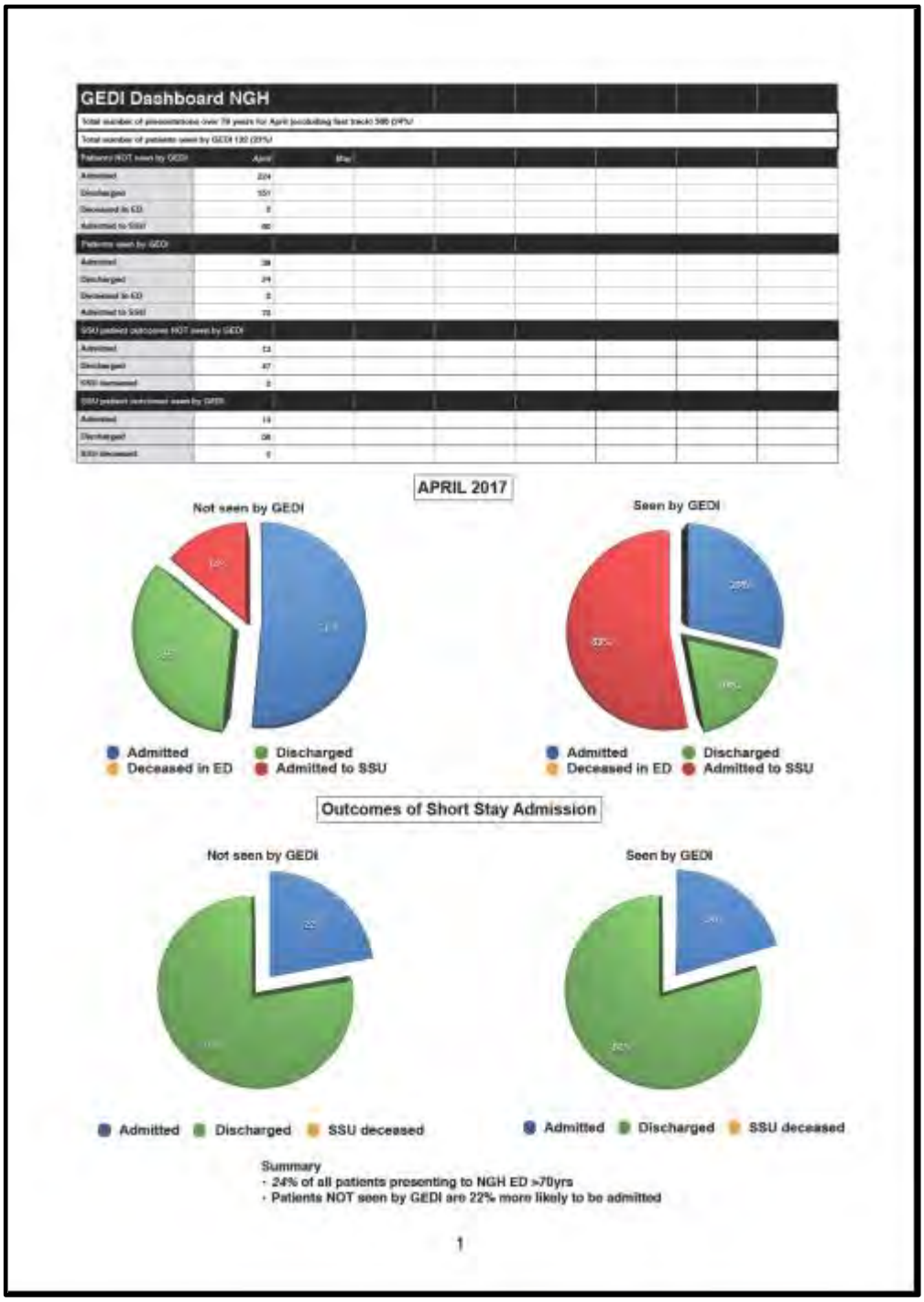
Appendix O – Example of dashboard

Information can be obtained from an ED information system (EDIS) extract the data manager for ED may be able to do this for you). For a month at each ED site data to be retrieved could include:

Overall >70 year old's presenting to the ED

Overall numbers seen by GEDI		For SSU outcomes as a subset	
If NOT seen by GEDI % admitted % discharged % SSU admitted % deceased	If seen by GEDI % admitted % discharged % SSU admitted % deceased	If NOT seen by GEDI % admitted % discharged % deceased	If seen by GEDI % admitted % discharged % deceased



Appendix P – Sample geriatric assessment instrument Dashboard

Sample Geriatric Assessment Instrument (Dashboard) (Cook, Oliver & Burns, 2012). This provides some examples of content that may be useful in developing your dashboard.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
GLOBAL MEASURES												
Patient volume >65												
% of total admissions												
Readmissions												
72 hour ED revisits												
24 hour admission upgrades												
Geriatric abuse												
Deaths												
DISEASE SPECIFIC												
FALLS												
Hip Fractures												
Traumatic ICH												
Blunt Abdominal Injury												
Death												
Fall-Risk Assessment												
Physical Therapy Eval												
URINARY CATHETERS												
Check List Used												
Catheter Days												
Automatic Discontinue												
CAUTI Stay Length												
MEDICINE MANAGEMENT												
High Risk Meds Noted												
ED High Risk Meds												
Adverse Reaction Revisit												
Non-compliance Revisit												
DELIRIUM												
Screen Documented												
Restraint Indications												
Chemical Restraint Attempt												
Behavior Physical Restraint Used												

Appendix Q - ED patient flow analysis example

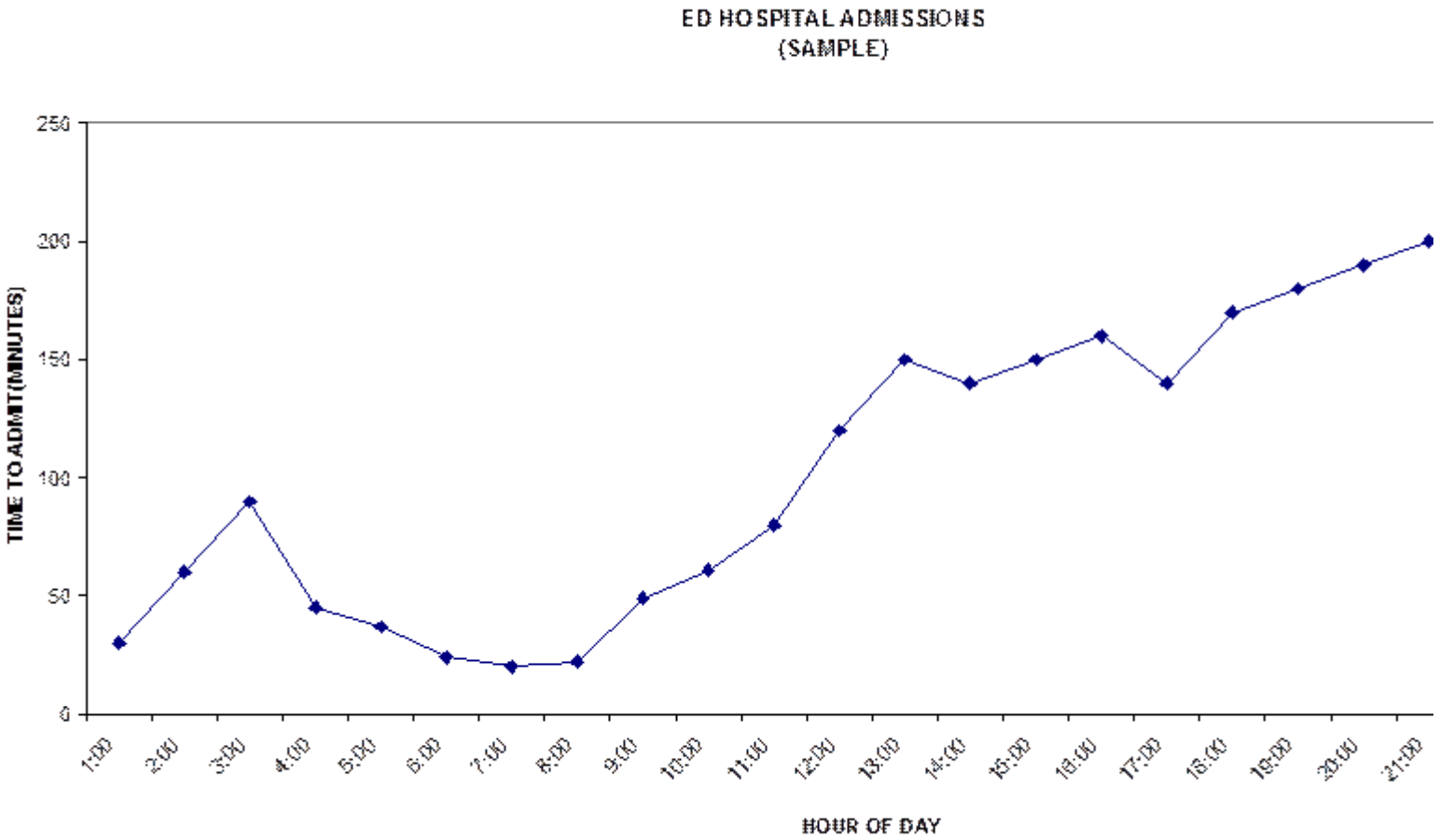
This is an example of an ED patient flow analysis provided by the Institute for Healthcare (IHI). The first page provides the information required the second page provides an example graph. Ref (**http://www.ihi.org/resources/Pages/Tools/EmergencyDepartmentHourlyPatientFlowAnalysis.aspx**

Luther Midelfort – Mayo Health System, Eau Claire, Wisconsin, USA
Emergency Department Hourly Patient Flow Analysis

Patients Admission Log

NAME/MED REC #	AGE	ADMITTING DIAGNOSIS	ED MD	ADMITTING MD	ED ARRIVAL TIME	DECISION TO ADMIT TIME	TIME OF ADMISSION TO FLOOR/UNIT& BED NUMBER	PLACEMENT	COMMENTS

Link to other resources for creating dashboards - http://chandoo.org/wp/2011/03/22/healthcare-dashboard/



The scale of the vertical axis should be adjusted to accommodate your institution's current realities and desired g

Appendix R – ICD-10 code mapping

The Emergency Department Information System (EDIS) listed an ICD-10 code regarding the reason for presentation to the ED. There are over 1200 of these codes making analysis of the data difficult. Mapping the ICD-10 codes to 25 designated major categories (MDC) can assist in the analysis for presentations of older persons within major categories such as: Cardiovascular, Dermatology, Endocrine, Gastroenterology, Haematology etc. The designation of these MDC's was done in response to data quality assessments of EDIS data by the Health Statistic Unit, Department of Health, Queensland Government, 2012. (https://www.health.qld.gov.au/__data/assets/pdf_file/0033/355749/ed10.pdf)

Table 2a: list of the 25 major levels

1 = Cardiac
2 = Dermatology
3 = Endocrine
4 = ENT and mouth
5 = Environmental conditions
6 = Gastrointestinal
7 = Haematology
8 = Iatrogenic
9 = Infectious
10 = Metabolic
11 = miscellaneous
12 = Neoplasia
13 = Neurological
14 = OBGYN
15 = Ophthalmology
16 = Orthopaedic
17 = Paediatric
18 = Psychiatric
19 = Renal
20 = Respiratory
21 = Toxicology
22 = Trauma
23 = Urology
24 = Symptoms
25 = Immunological

Appendix S – GEDI nurse data collection sheet

This is an example of the GEDI data collection sheet used for the evaluative research project. It provides details of the types of data collected from patient engagements with the GEDI nurses. Potentially this could provide data for clinical auditing of the GEDI service.

CEDRiC - GEDI Worksheet **Geriatric Emergency Department Intervention Program** Facility: Nambour General Hospital	**Affix patient label here** URN: Family Name: Given Name: Address: Date of Birth Sex: M☐ F☐		**Affix patient label here** URN: Family Name: Given Name: Address: Date of Birth Sex: M☐ F☐		**Affix patient label here** URN: Family Name: Given Name: Address: Date of Birth Sex: M☐ F☐	
Date seen by GEDI:		☐No GEDI Involvement		☐No GEDI Involvement		☐No GEDI Involvement
Staff member						
InterRAI score						
ADDS score						
CGA completed / Clinical note entry	☐ Yes ☐ No ☐Short ☐Long ☐ No		☐ Yes ☐ No ☐Short ☐Long ☐ No		☐ Yes ☐ No ☐Short ☐Long ☐ No	
GEDI clinical initiated intervention #	☐ No ☐Pathology ☐Imaging ☐Education ☐Wound managemt ☐ IV ☐Urinalysis ☐Provides sustinence ☐Mobilising ☐Other _____		☐ No ☐Pathology ☐Imaging ☐Education ☐Wound managemt ☐ IV ☐Urinalysis ☐Provides sustinence ☐Mobilising ☐Other _____		☐ No ☐Pathology ☐Imaging ☐Education ☐Wound managemt ☐ IV ☐Urinalysis ☐Provides sustinence ☐Mobilising ☐Other _____	
Face to face? communications with:	☐ No ☐Carers/NOK ☐ED Dr ☐Geriatrician ☐Allied Health ☐Other _____		☐ No ☐Carers/NOK ☐ED Dr ☐Geriatrician ☐Allied Health ☐Other _____		☐ No ☐Carers/NOK ☐ED Dr ☐Geriatrician ☐Allied Health ☐Other _____	
Referrals to:	☐ No ☐Rapid Response ☐CSRT ☐ NGOs ☐MAC ☐Other _____		☐ No ☐Rapid Response ☐CSRT ☐ NGOs ☐MAC ☐Other _____		☐ No ☐Rapid Response ☐CSRT ☐ NGOs ☐MAC ☐Other _____	
Phone calls to or from?:	☐ No ☐Family ☐RACF ☐ NGO ☐GP ☐Geriatrics ☐Other _____		☐ No ☐Family ☐RACF ☐ NGO ☐GP ☐Geriatrics ☐Other _____		☐ No ☐Family ☐RACF ☐ NGO ☐GP ☐Geriatrics ☐Other _____	

Standards and supporting documents

Non-Mandatory standards, guidelines, benchmarks, policies and frameworks
Age-friendly principles and practices. Managing older people in the health service environment. Developed on behalf of the Australian Health Ministers' Advisory Council (AHMAC) by the Care of Older Australians Working Group. Endorsed by Australian Health Ministers, July 2004. www.health.vic.gov.au/acute-agedcare

World Health Organisation (WHO) 2008, Making health systems work: Technical brief no.1: Integrated health services – what and why? World Health Organisation. Online: http://www.who.int/healthsystems/service_delivery_techbrief1.pdf

Australian commission in Safety and Quality in Health Care (ACSQHC) 2016, Delirium Clinical Care Standard. Commonwealth of Australia. Sydney. Online: https://www.safetyandquality.gov.au/wp-content/uploads/2016/07/Delirium-Clinical-Care-Standard-Web-PDF.pdf

British Geriatric Society [BGS] 2012, Quality care for older people with urgent and emergency care needs: 'The Silver Book'. BGS. Online: http://www.bgs.org.uk/campaigns/silverb/silver_book_complete.pdf

EQuIP National Standards (ACSQHC)

Standard 12 criterion 1 – Assessment and care planning ensure that current and ongoing needs of the consumer/ patient are identified.

Standard 12 criterion 3 – Systems for ongoing care and discharge/ transfer are coordinated and effective and meet the needs of the consumer/ patient.

Other related or supporting documents

Various other templates are available by contacting your local Hospital and Health Service Procedural Governance Unit.

Audit and compliance strategy

Level of risk	Medium
Audit strategy and frequency	6 monthly review of EDIS data for applicable patient groups. Review of early representations to ED for patient groups
Key elements, indicators or outcomes	All frail elderly patients presenting to the ED are assessed appropriately as per the GEDI system. Absence of adverse outcomes for these patients.

References

Ackroyd-Stolarz, S., Read Guernsey, J., Mackinnon, N. J., & Kovacs, G. (2011). The association between a prolonged stay in the emergency department and adverse events in older patients admitted to hospital: a retrospective cohort study. *BMJ Qual Saf, 20*. doi:10.1136/bmjqs.2009.034926

Aldeen, A. Z., Courtney, D. M., Lindquist, L. A., Dresden, S. M., & Gravenor, S. J. (2014). Geriatric emergency department innovations: preliminary data for the geriatric nurse liaison model. *J Am Geriatr Soc, 62*. doi:10.1111/jgs.12979

American College of Emergency Physicians, A. G. S., Emergency Nurses Association, and The Society for Academic Emergency Medicine. (2013). *Geriatric Emergency Department Guidelines*.

Arendts, G., & Howard, K. (2010). The interface between residential aged care and the emergency department: a systematic review. *Age Ageing, 39*. doi:10.1093/ageing/afq008

Asomaning, N., & Van den Broek, K. (2011). Enhancing geriatric care in the emergency department. *Can Nurse, 107*(8), 12.

Australian Commission on Safety and Quality in Health Care (2008) Australian Charter of Healthcare Rights.Online: https://www.safetyandquality.gov.au/national-priorities/charter-of-healthcare-rights/

Australian Institute of Health and Welfare. (2011). *Older Aboriginal and Torres Straight Islander people*. (ISBN 978-1-74249-147-9). Canberra: AIHW.

Baker, R., Camosso-Stefinovic, J., Gillies, C., Shaw, E. J., Cheater, F., Flottorp, S., . . . Jäger, C. (2015). Tailored interventions to address determinants of practice. *Cochrane Database Syst Rev.* Issue 4. Art. No.: CD005470, 117. doi:DOI: 10.1002/14651858.CD005470.pub3.

Batras, D., Duff, C., & Smith, B. J. (2016). Organizational change theory: implications for health promotion practice. Health Promot Int, 31(1), 231-241. doi:10.1093/heapro/dau098

Briggs, R., Coughlan, T., Collins, R., O'Neill, D., & Kennelly, S. P. (2013). Nursing home residents attending the emergency department: clinical characteristics and outcomes. *QJM, 106*. doi:10.1093/qjmed/hct136

Bulut, H., Yazici, G., Demircan, A., Keles, A., & Guler Demir, S. (2015). Determining emergency physicians' and nurses' views concerning older patients: a mixed-method study. *Int Emerg Nurs, 23*(2), 179-184. doi:10.1016/j.ienj.2014.08.002

Castilho-Weinert, L. V., Sibele Yoko Mattozo, T., Bittencourt Guimãraes, A. T., Gonçalves, A. M., Zanini, L. M., Cavalcanti, A. I., . . . Ximendes, G. S. (2014). Functional Performance and Quality of Life in Institutionalized Elderly Individuals. *Top Geriatr Rehabil, 30*(4), 270-275 276p. doi:10.1097/TGR.0000000000000036

Charles, C., Gafni, A., & Whelan, T. (1997). Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango). *Soc Sci Med*, 44(5), 681-692.

Conroy, S. P., Ansari, K., Williams, M., Laithwaite, E., Teasdale, B., Dawson, J., . . . Banerjee, J. (2014). A controlled evaluation of comprehensive geriatric assessment in the emergency department: the 'Emergency Frailty Unit'. *Age Ageing, 43*(1), 109-114. doi:10.1093/ageing/aft087

Conway, J., Dilworth, S., Hullick, C., Hewitt, J., Turner, C., & Higgins, I. (2015). A multi-organisation aged care emergency service for acute care management of older residents in aged care facilities. *Aust Health Rev, 39*(5), 514-516. doi:http://dx.doi.org/10.1071/AH15049

Cook, M., Oliver, D., & Burns, A. (2012). *Quality standards for the care of older people with urgent & emergency care needs: The "silver book"*. United Kingdom: British Geriatric Society,NHS.

Craswell, A., Marsden, E., Taylor, A., & Wallis, M. (2016). Emergency Department presentation of frail older people and interventions for management: Geriatric Emergency Department Intervention. *Saf Health, 2*(14), 6. doi:10.1186/s40886-016-0049-y

Deasey, D., Kable, A., & Jeong, S. (2014). Influence of nurses' knowledge of ageing and attitudes towards older people on therapeutic interactions in emergency care: a literature review. *Australas J Ageing, 33*(4), 229-236. doi:10.1111/ajag.12169

Deasey, D., Kable, A., & Jeong, S. (2016). Results of a national survey of Australian nurses' practice caring for older people in an emergency department. *Jf Clinl Nurs, 25*(19-20), 3049-3057. doi:10.1111/jocn.13365

Donabedian, A. (2003). An Introduction to Quality Assurance in Health Care. Oxford, UK,: Oxford University Press.

Doran, D. I., Sidani, S., Keatings, M., & Doidge, D. (2002). An empirical test of the Nursing Role Effectiveness Model. *J Adv Nurs, 38*(1), 29-39.

Dwyer, R., Gabbe, B., Stoelwinder, J. U., & Lowthian, J. (2014). A systematic review of outcomes following emergency transfer to hospital for residents of aged care facilities. *Age Ageing, 43*(6), 759-766. doi:10.1093/ageing/afu117

Ellis, G., Marshall, T., & Ritchie, C. (2014). Comprehensive geriatric assessment in the emergency department. *Clin Interv Aging, 9*, 2033-2043. doi:10.2147/cia.s29662
Frosch, D. L., & Kaplan, R. M. (1999). Shared decision making in clinical medicine: past research and future directions. Am J Prev Med, 17(4), 285-294. doi:https://doi.org/10.1016/S0749-3797(99)00097-5
Harvey, G., & Kitson, A. (2016). PARIHS revisited: from heuristic to integrated framework for the successful implementation of knowledge into practice. *Implement Sci, 11*, 33. doi:10.1186/s13012-016-0398-2
Hubbard, R. E., Peel, N. M., Smith, M., Dawson, B., Lambat, Z., Bak, M., . . . Johnson, D. W. (2015). Feasibility and construct validity of a Frailty index for patients with chronic kidney disease. *Australas J Ageing, 34*(3), E9-E12. doi:10.1111/ajag.12231
Jones, D. M., Song, X., & Rockwood, K. (2004). Operationalizing a frailty index from a standardized comprehensive geriatric assessment. *J Am Geriatr Soc, 52*(11), 1929-1933. doi:10.1111/j.1532-5415.2004.52521.x
Irvine, D., Sidani, S., & Hall, L. M. (1998). Linking outcomes to nurses' roles in health care. Nurs Econ, 16(2), 58-87.
Kelley, M. L., Parke, B., Jokinen, N., Stones, M., & Renaud, D. (2011). Senior-friendly emergency department care: an environmental assessment. *J Health Serv Res Policy, 16*(1), 6-12. doi:10.1258/jhsrp.2010.009132
Klein, G. (1998). *Sources of Power: How people make desicions*. Cambridge: MIT Press.
Kydd, L. (2016). Developing a postal screening tool for frailty in primary care: a secondary data analysis. *Br J Community Nurs, 21*(7), 335-341.
Lafont, C., Gérard, S., Voisin, T., Pahor, M., & Vellas, B. (2011). Reducing “iatrogenic disability” in the hospitalized frail elderly. *J Nutr Health Aging, 15*(8), 645-660. doi:10.1007/s12603-011-0335-7
Lekan, D. A., Wallace, D. C., McCoy, T. P., Hu, J., Silva, S. G., & Whitson, H. E. (2017). Frailty Assessment in Hospitalized Older Adults Using the Electronic Health Record. *Biol Res Nurs, 19*(2), 213-228. doi:doi:10.1177/1099800416679730
Marsden, E., Taylor, A., Wallis, M., Craswell, A., Broadbent, M., Barnett, A., . . . Glenwright, A. (2017). A structure, process and outcome evaluation of the Geriatric Emergency Department Intervention model of care: a study protocol. *BMC Geriatr, 17*(1), 76. doi:10.1186/s12877-017-0462-z
Medical Research Council. (2006). *Developing and evaluating complex interventions: new guidance*. Medical Research Council.
Mudge, A. M., Denaro, C. P., & O'Rourke, P. (2012). Improving hospital outcomes in patients admitted from residential aged care: results from a controlled trial. *Age Ageing, 41*(5), 670-673. doi:10.1093/ageing/afs045
O'Loughlin, J., Renaud, L., Richard, L., Gomez, L. S., & Paradis, G. (1998). Correlates of the sustainability of community-based heart health promotion interventions. *Prev Med*, 27(5 Pt 1), 702-712. doi:10.1006/pmed.1998.0348
Probst, M. A., Kanzaria, H. K., Schoenfeld, E. M., Menchine, M. D., Breslin, M., Walsh, C., . . . Hess, E. P. (2017). Shared Decisionmaking in the Emergency Department: A Guiding Framework for Clinicians. *Ann Emerg Med*. doi:10.1016/j.annemergmed.2017.03.063
Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., . . . Hensley, M. (2011). Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda. *Adm Policy Ment Health Health, 38*(2), 65-76. doi:10.1007/s10488-010-0319-7
Robinson, S., & Mercer, S. (2007). Older adult care in the emergency department: identifying strategies that foster best practice. *J Gerontol Nurs, 33*(7), 40-47.
Rockwood, K., & Mitnitski, A. (2007). Frailty in Relation to the Accumulation of Deficits. *The Journals of Gerontology: Series A, 62*(7), 722-727. doi:10.1093/gerona/62.7.722
Rogers, E. M. (2003). Diffusion of Innovations (5th ed.). New York: The Free Press.
Rolfson, D. B., Majumdar, S. R., Tsuyuki, R. T., Tahir, A., & Rockwood, K. (2006). Validity and reliability of the Edmonton Frail Scale. *Age Ageing, 35*(5), 526-529. doi:10.1093/ageing/afl041
SCHHS. (2014). Queensland Governement, Queensland Health, Sunshine Coast Hospital and Health Service: Our Priorities. Retrieved from https://www.health.qld.gov.au/sunshinecoast/html/vision
Schnitker, L., Martin-Khan, M., Beattie, E., & Gray, L. (2011). Negative health outcomes and adverse events in older people attending emergency departments: a systematic review. *Australas Emerg Nurs J, 14*. doi:10.1016/j.aenj.2011.04.001
Schnitker, L. M., Beattie, R. A., Martin-Khan, M., Burkett, E., & Gray, L. C. (2016). Characteristics of older people with cognitive impairment attending emergency departments: A descriptive study. *Australas Emerg Nurs J, 19*(2), 118-126. doi:10.1016/j.aenj.2016.04.002

Schnitker, L. M, Martin-Khan , M., Burkett, E., Brand, C., Beattie, E., Jones, R., Gray, L., The Research Collaboration for Qulaity Care of Older Persons: Emergency Care Panel. (2015). Structural quality indicators to support quality of care for older people with cognitive impairment in emergency departments. *Acad Emerg Med*, 33(3), 273-284. Doi:10.1111/acem.12617

Silvester, K. M., Mohammed, M. A., Harriman, P., Girolami, A., & Downes, T. W. (2014). Timely care for frail older people referred to hospital improves efficiency and reduces mortality without the need for extra resources. *Age Ageing, 43*(4), 472-477. doi:10.1093/ageing/aft170

Skar, P., Bruce, A., & Sheets, D. (2015). The organizational culture of emergency departments and the effect on care of older adults: A modified scoping study. *Int Emerg Nurs, 23*(2), 174-178. doi:https://doi.org/10.1016/j.ienj.2014.11.002

Uscher-Pines, L., Pines, J., Kellermann, A., Gillen, E., & Mehrotra, A. (2013). Deciding to Visit the Emergency Department for Non-Urgent Conditions: A Systematic Review of the Literature. *Am J of Manag Care, 19*(1), 47-59.

Warden, V., Hurley, A. C., & Volicer, L. (2003). Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. J Am Med Dir Assoc, 4(1), 9-15. doi:10.1097/01.jam.0000043422.31640.f7

World Health Organisation (WHO). (2008). *Making Health Systems Work: Technical Brief No. 1: Integrated health services - what and why?* : World Health Organisation.

Wright, P. N., Tan, G., Iliffe, S., & Lee, D. (2014). The impact of a new emergency admission avoidance system for older people on length of stay and same-day discharges. *Age Ageing, 43*(1), 116-121. doi:10.1093/ageing/aft086