

1. Evidence from peer-reviewed published literature that use of the GSF PIG (Proactive identification guidance) supports earlier identification of patients considered to be in their last year of life.

Date	Location – H - Acute hospital P - primary care C - care home O - Other	Study group	Finding / Conclusion/ Message	Reference
2015	Hospital Australia	Geelong Australia - study in a general hospital admissions	<p><i>The use of an objective clinical tool identifies a high prevalence of patients with palliative care needs in the acute tertiary Australian hospital setting, with a high 1 year mortality and poor return to independence in this population. The low rate of documentation of discussions about treatment limitations in this population suggests palliative care needs are not recognised and discussed in the majority of patients.</i></p>	<p>Sharyn Milnes et al</p> <p>A prospective observational study of prevalence and outcomes of patients with Gold Standard Framework criteria in a tertiary regional Australian Hospital</p> <p>BMJ Supportive & Palliative Care 2015;0:1–8. doi:10.1136/bmjspcare-2015-000864 doi:10.1136/bmjspcare-2015</p>
2012	Hospital UK		A modified GSF PIG identified most patients in last year of life	Mason C Shah S
2012	Hospital UK	Acute Coronary Syndrome	<p>This study has highlighted a potentially large number of ACS patients eligible for EoL care. GSF or GRACE could be used in the hospital setting to help identify these patients. GSF identifies ACS patients with more comorbidity and at increased risk of hospital readmission</p> <p>GSF PIG effective in identifying pts with ACS EOL</p>	<p>Fenning S, Woolcock R, Haga K, Iqbal J, Fox KA, Murray SA, Denvir MA</p> <p>Identifying acute coronary syndrome patients approaching end-of-life. PLoS One. 2012;7(4):e35536. doi: 10.1371/journal.pone.0035536. Epub 2012 Apr 18.</p>
2012	Hospital UK	Emergency admissions	Qualitative study to explore the perspectives of patients palliative care needs were received while in hospital.	Richards N., Gardiner C., Ingleton C., Gott M. Palliative Medicine, June 2012, vol./is.26/4(537- 538),0269-2163
2013	Hospitals UK	Hospitals - high symptom burden	<p>The paper highlights elevated levels of burden experienced by patients with palliative care requirements. Moreover, the paper also indicates that a large proportion of such patients are not in receipt of palliative</p>	<p>Ryan T., et al Symptom burden, palliative care need and predictors of physical and psychological discomfort in two UK hospitals. BMC Palliat Care. 2013 Feb</p>

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			approaches to their care i.e., GSF PIG helps identify patients with a high symptom burden in hospital.	26;12:11. doi: 10.1186/1472-684X-12-11.
2013	New Zealand	Acute hospital	One fifth of hospital inpatients met criteria for palliative care need, the majority of whom were aged >70 years.	Gott M et al BMC Palliat Care . 2013 Mar 28;12:15. doi: 10.1186/1472-684X-12-15. Palliative care need and management in the acute hospital setting: a census of one New Zealand Hospital.
2012	Community UK	Heart Failure	Identifying community based chronic heart failure patients in the last year of life: a comparison of Gold Standards Framework Prognostic Indicator Guide and the Seattle Heart Failure Model. Predicting heart failure patients nearing end of life is difficult- GSF PIG can help (86% identified for final year) but more help might be useful to improve identification.	Heart . 2012 Apr;98(7):579-83. doi: 10.1136/heartjnl-2011-301021. Haga K¹, Murray S, Reid J, Ness A, O'Donnell M, Yellowlees D, Denvir MA.
2013	Hospitals UK	Acute Hospital	GSF helps identify a third of all patients (NB Pre Clarke- paper) The results reveal that according to the GSF prognostic guide, over a third of hospital in-patients meet the criteria for palliative care need.	Gardiner C et al Extent of palliative care need in the acute hospital setting: a survey of two acute hospitals in the UK. Palliat Med . 2013 Jan;27(1):76-83. doi: 10.1177/0269216312447592. Epub 2012 May 22.
2014	New Zealand hospital	Acute Hospital	The sensitivity, specificity and predictive values of the Gold Standards Framework PIG guidance in this study are comparable to, or better than, results of studies identifying patients with a limited life expectancy in particular disease states (e.g. heart failure and renal	O'Callaghan A et al Palliat Med . 2014 May 22. pii: 0269216314536089. Can we predict which hospitalised patients are in their last year of life? A prospective cross-sectional study of the Gold Standards Framework PIG

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			failure). Screening utilising the Gold Standards Framework PIG guidance in the acute setting could be the first step towards implementing a more systematic way of addressing patient need - both current unrecognised and future anticipated - thereby improving outcomes for this population	guidance as a screening tool in the acute hospital setting.
2014	Hospital -Italy	Acute Coronary Syndrome	A study to find the most accurate method of identifying the last year of life in patients presenting with acute coronary syndrome: A multi-centre prospective study.	Moretti
2014	Hospital UK	COPD	This study showed wide variation in survival in a patient population on LTOT. The ADO score could be used as an early trigger for referral to palliative services, thus enhancing end-of-life care, which improves quality of life in COPD. A prospective study of this application would be required to prove this hypothesis le GSF PIG and other tools helps predict COPD patients in the last year of life	Law S¹, Boyd S, Macdonald J, Raeside D, Anderson D Predictors of survival in patients with chronic obstructive pulmonary disease receiving long-term oxygen therapy. BMJ Support Palliat Care . 2014 Mar 25. doi: 10.1136/bmjspcare-2012-000432.
2014	Hospital - New Zealand	General admissions	Can we predict which hospital patients are in their last year of life? A prospective cross-sectional study of the Gold Standards Framework Prognostic Indicator Guidance as a screening tool in the acute hospital setting	O Callahan
2015	Hospital UK	Liver Disease	Screening for poor prognosis can improve end of life care for patients with chronic liver disease.	Hudson et al

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2016	Hospital -Italy	(STORM) Acute Coronary Syndrome patients	A study into risk assessment in acute coronary syndrome in patients towards the end of life.	Moretti et al

Note - The key paper by David Clark in 2014 confirms that 29% of all hospital patients are in their last year of life, and this provides us with the evidence on which to base our aspirations for early identification rates in all our GSF Hospital programmes. Ref Clark et al **Imminence of death among hospital inpatients: Prevalent cohort study**. Palliat.Med. 2014 Mar 17:28(6):474-479