



# QA activity: Palliative pathway for HARP CHF patients-is there an unmet need?

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# Background

- Chronic heart failure (HF) has an annual mortality of 19% (Heart Foundation, 2016).
- Incurable and life limiting disease, increasing recognition of the need for high quality palliative care (Sandesh ,et al. 2016).
- Recent studies (US) identified a disparity:
  - ½ HF patients reported preference for home terminal care
  - However, only 25% of US adults 65 years or older diagnosed with HF die in their homes (Sandesh,et al, 2017).
- There is growing emphasis on the need for high quality patient centred palliative care for patients with heart failure
- One of the challenges- how do we identify these patients?

# Rationale and Aims

- To explore EOL care in a HARP HF population
- Aims:
  1. Whether a validated tool predicted mortality in this group (REF)
  2. HARP service documentation of End of Life (EOL) wishes
  3. HARP referral to palliative care

## Additional Patient Variables assessed

- Live alone? – Y or N
- Documentation of EOL discussion and wishes
- Referral to palliative care? – Y or N
- Albumin
- eGFR
- In deceased patients, place of death – location and consistency with wish if expressed

# What is HARP?

- HARP = Hospital Admission Risk Program.
  - Provides care in the community for patients identified to be at high risk for readmission by disease focused teams e.g. HF, COPD etc
  
- This program is:
  - State funded
  - Offers individual HF Nurse Specialist follow-up at home
  - Provides Cardiologist assessment in a community setting
  - Offers Centre and home based exercise program options
  - Ongoing liaison between hospital, specialist, GP & other allied health professionals with regard to patient management

# Can we predict survival in HF?

- Predicting survival in heart failure: a risk score. Based on 39,372 patients from 30 studies (EHJ, Pocock et al 2013)
  - Meta-analysis – patients with both HFrEF and HFpEF
  - Allows calculation of risk using a model accessible on the website [www.heartfailurerisk.org](http://www.heartfailurerisk.org) (calculates an Integer score, ranging from 0-50)
- Supported by the Heart Foundation

# Heart Failure Risk Calculator

## Maggic Meta-analysis Global Group in Heart Failure

**Patient Information** [Return to terms and conditions](#)

Patient Reference

Age

Gender

Diabetes  Yes  No

COPD  Yes  No

Heart failure diagnosed within the last 18 months  Yes  No

Current smoker  Yes  No

NYHA Class

Receives beta blockers  Yes  No

Receives ACEi/ARB  Yes  No

BMI  kg/m<sup>2</sup>  
calculate BMI

Systolic blood pressure  mmHg

Creatinine  µmol/L

Ejection fraction  %

**Calculate Risk** **Clear the data**

**Integer score: 36**

**Risk of dying within 1 year: 39.8%**

**Risk of dying within 3 years: 72.5%**

The patient is in the 10<sup>th</sup> decile of risk in a heart failure population.

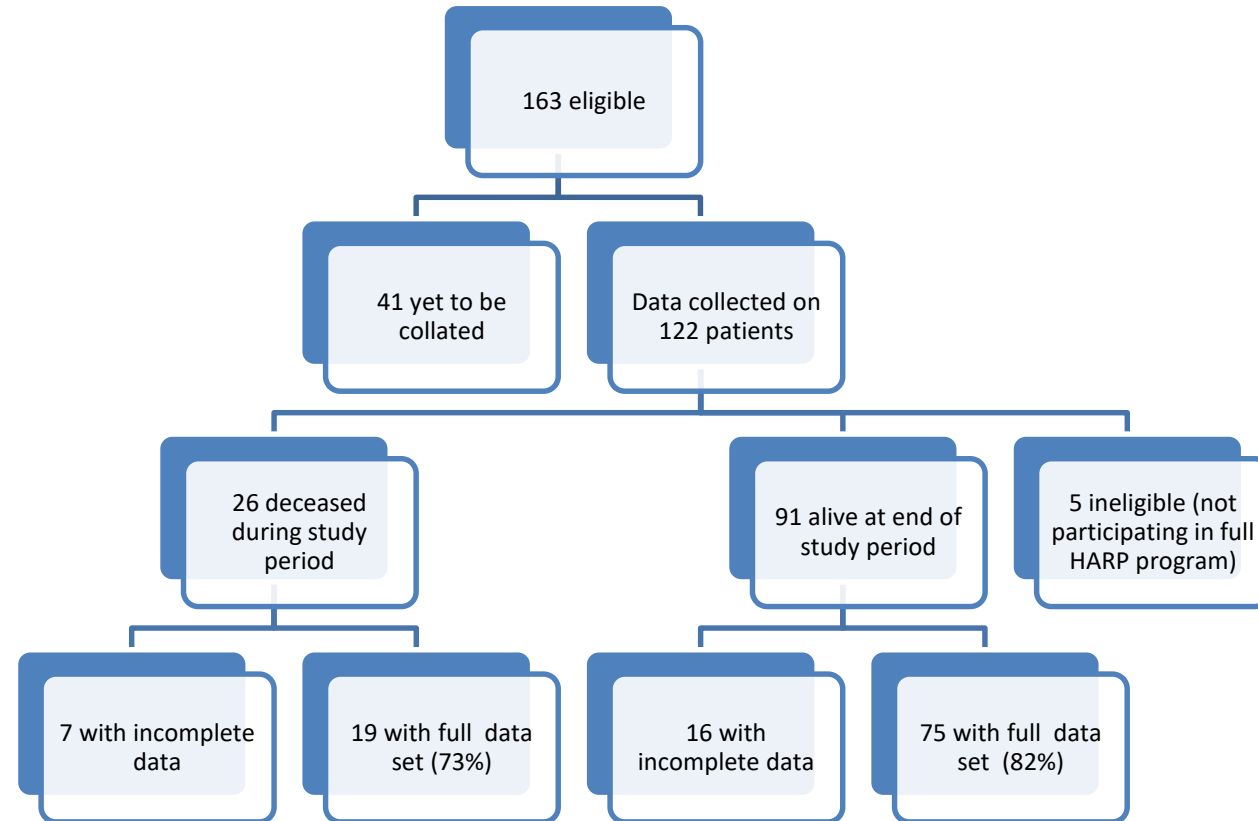
The HARP Complex Care Service operates as a collaboration between cohealth, Merri Health, Royal District Nursing Service and The Royal Melbourne Hospital.

# Methodology

- Consecutive population of patients (n=163, Jan 2014-July 2015) accepted into HARP following a CHF admission
- Ascertained:
  1. Score of a validated mortality risk stratification tool (Meta-Analysis Global Group (MAGGIC) Integer Score was calculated (Pocock, et al 2013))
  2. Collected additional clinical patient variables
  3. Documented whether EOL discussion was undertaken and wishes documented
  4. Collected data on referral to palliative care



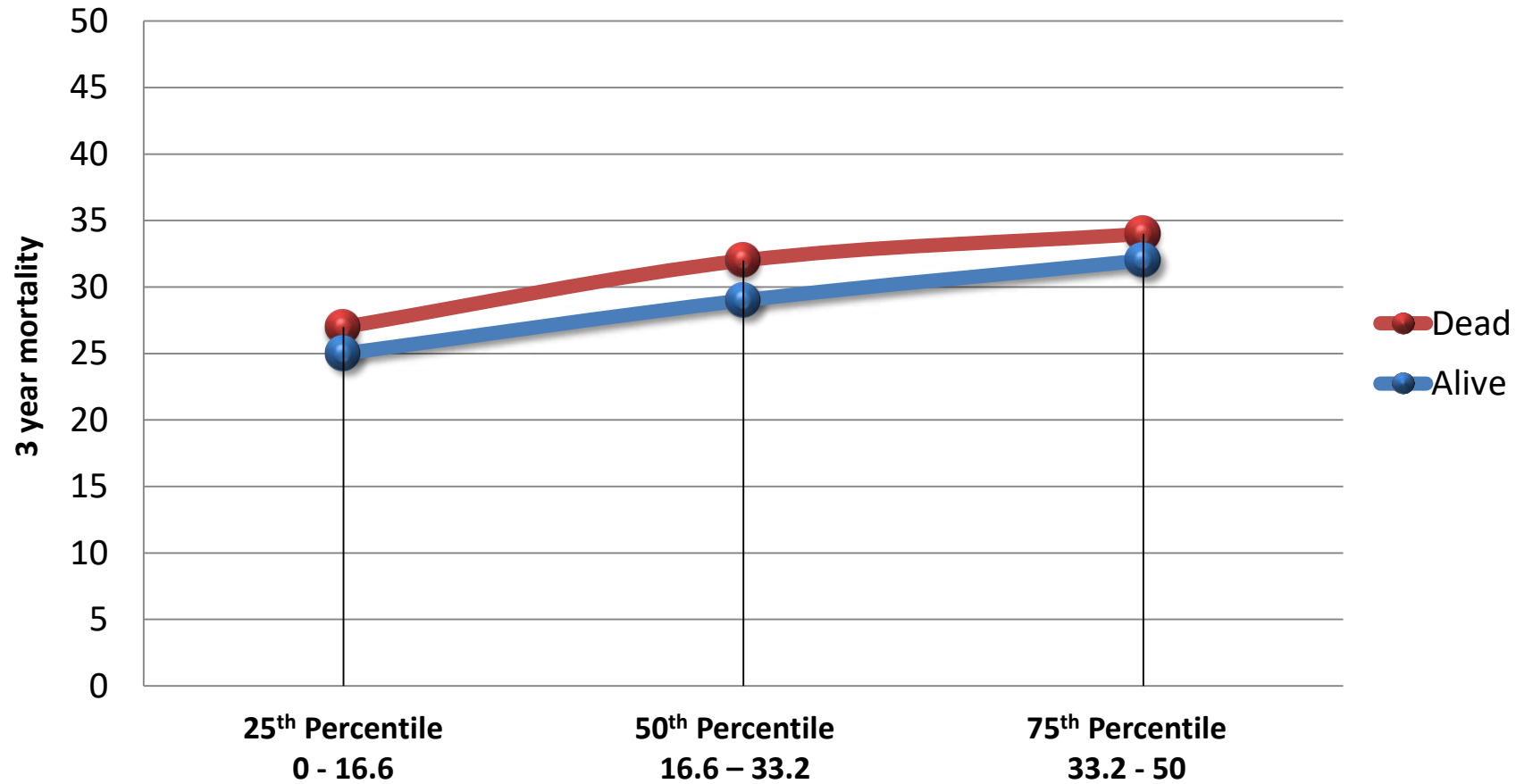
# Data collection



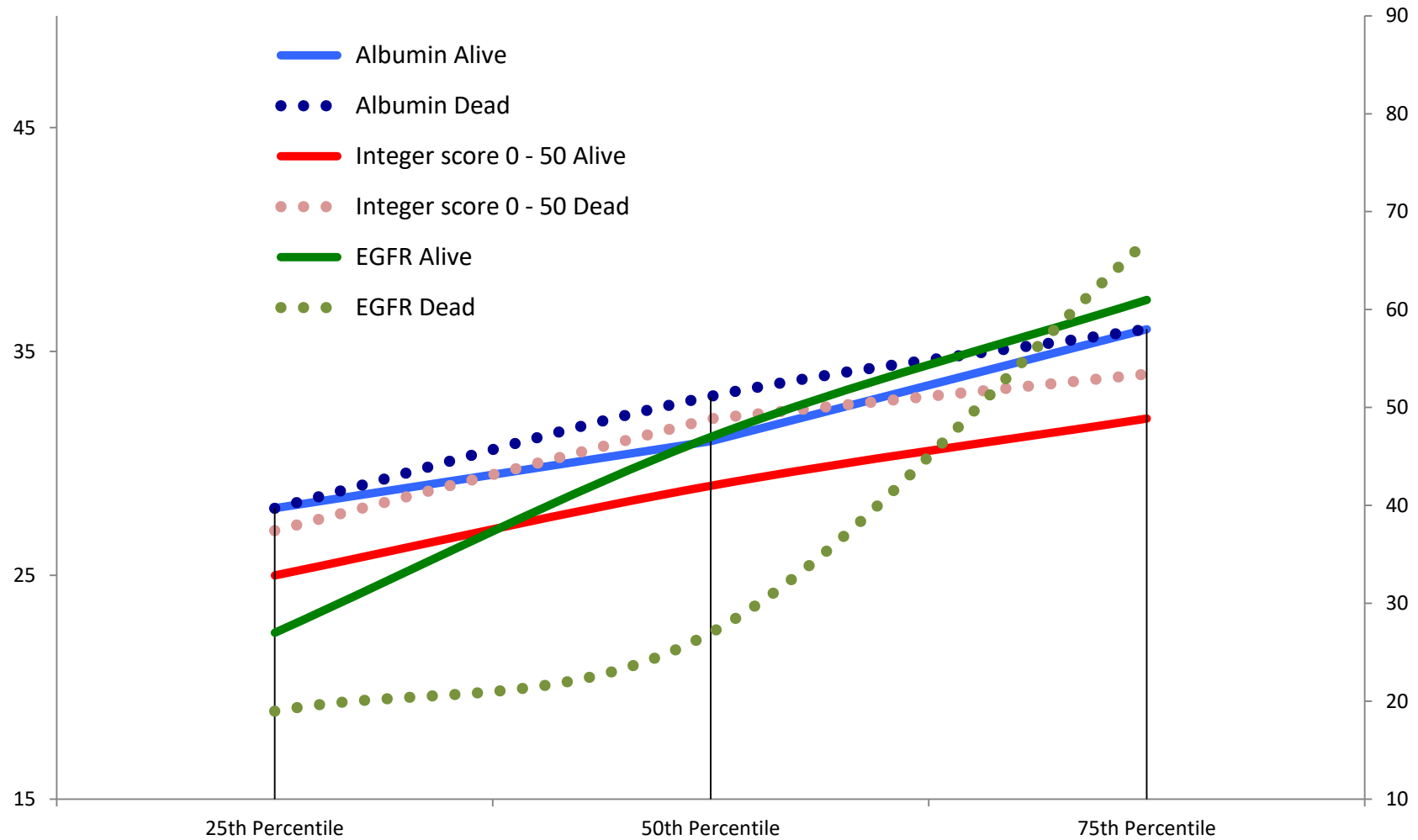
## Descriptive statistics for baseline variables

	Alive (n= 75)		Died (n= 19)	
Integer score , median (IQR)	<b>29</b>		<b>32</b>	
Age (median, IQR)	80		83	
Gender, F: M %	42 33	(M)56% (F)44%	11 8	(M)57.8% (F)42.1%
Lives alone, n (%)	23	30.6%	6	31.5 %
Body Mass Index (kg/m <sup>2</sup> ) (median, IQR)	27		26	
Current smoker, %	8	10.6%	4	21.0%
HFpEF %	33	44%	8	36.8%
HFrEF %	42	56%	11	57.8%
Ejection fraction % (median, IQR)	50%		45%	
NYHA Class I , n (%)	0	0	1	36.8%
NYHA Class II , n (%)	32	42%	8	68.4%
NYHA Class III , n (%)	40	53%	8	42.1%
NYHA Class IV , n (%)	3	4%	2	10.5%
Creatinine , (median, IQR)	115		169	
EGFR (median, IQR)	47		27	
Albumin (median, IQR)	31		33	
Diabetes, n (%)	42	56%	11	57.8%
COPD, n (%)	24	32%	10	52.6%
Hypertension, n (%)	50	66.6%	11	57.8%
Beta Blocker, %	54	72%	13	68.4%
ACE / ARB's, %	59	66.6%	11	57.8%

## Predicted risk of dying (within 3 years) in our cohort



# Albumin, EGFR, & Integer Score



## Of those recruited patients:

The **MAGGIC** tool and specific patient variables are used to explore whether they may assist our patients to:

- Initiate discussion re EOL wishes and preferred place of death
- identify those who would benefit from referral to a palliative care pathway and
- when, in their CHF trajectory, to refer to palliative care

# Deceased patients

		Palliative care referral	Not referred to Palliative Care
		N = 9	N = 10
Type of HF	HFrEF	4	5
	HFpEF	6	2
Place of Death	Hospital	3	9
	Home	4	1
	Hospice	2	
	Not documented	0	1
End of Life wishes discussed	Yes	3	0
	No	3	8
	Not documented	3	2
Advance Care Plan present	Yes	5	5
	No	0	0
	Not documented	4	5

# CONCLUSION

Within the deceased cohort:

- older
- Higher number of males
- Slightly higher number of those with diabetes & COPD
- Creatinine was higher
- eGFR slightly lower in the deceased cohort
- Slightly higher number of patients that live alone in the deceased group

Other observations:

- BMI appeared insignificant between the groups
- NYHA symptoms of class II-III in both cohorts
- 72% of patients had a BB prescribed
- No significant difference in Albumin levels between the 2 cohorts
- Poor documentation of both EOL wishes & ACP

# Implications for Practice

Current evidence regarding preferences of patients with HF suggest substantial opportunities for improvement of EOL HF care (Sandesh et, al 2016).

- Use of a validated clinical prediction tool integrated with individual data to improve understanding of a person's illness trajectory
- Initiate discussions with hospital and community palliative care service to develop a referral pathway for these patients
- Improve documentation of EOL wishes.
- Expand the scope of HF nursing care to include EOL care
- Expand scope of hospice and palliative care providers in the EOL care of patients with HF particularly around symptom management



# Limitations

- There is a further 41 patients to collate data & obtain Integer score
- This study does not identify / discuss the unique challenge of palliative care for HF which includes the management of implantable devices

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# References

- Preferences of people with advanced heart failure – a structure narrative literature review to inform decision making in the palliative care setting

Sandesh Dev, MD, Amy P. Abernethy, MD, Joseph G Rogers, MD and Christopher M. O'Connor, MD Phoenix, AZ and Durham, NC

ClinicalKey.com.au at University of Melbourne August 16, 2016

- Heart Failure Risk Prediction Models. What have We Learned?

Wayne C. Levy, MD Inder S. Anand, MD

JACC Heart Failure 2014 By the American College of Cardiology Foundation Vol 2 No.5 2014

- Use of Risk Models to Predict Death in the Next Year Among Individual Ambulatory Patients With Heart Failure

Larry A. Allen MD, MHS; Daniel D. Matlock, MD, MPH; Susan M. Shetterly, MS; Stanley Xu, PHD, Wayne C. Levy, MD, Laura B. Portalupi, MSW. Colleen K. Mcilvennan, DNP, ANP, Jerry H. Gurwitz, MD. Eric S. Johnson, PHD, MPH; David J. Magid, MD, MPH

JAMA Cardiol 2017: 2 (4)-435-441 doi: 10.1001/ December 21 2016

# References

- Predicting survival in heart failure: a risk score based on 39 372 patients from 30 studies

Stuart J. Pocock, Cono A. Ariti, John J. V. McMurray, Aldo Maggioni, Lars Kober, Iain B. Squires, Karl Swedberg, Joanna Dobson, Katrina K. Pope, Gillian A. Whalley, and Rob N Doughty, on behalf of the Meta-Analysis Global Group in Chronic Heart Failure (MAGGIC)

European Heart Journal (2013) 34, 1404-1413

Doi:10.1093/eurheartj/ehs337

## Palliative care in Heart Failure. The PAL-HF Randomized, Controlled Clinical Trial

Joseph G. Rogers, MD, Chetan, B. Pate, MD, Robert J. Mentz, MD, Bradi B. Granger, PHD MSN RN, Karen E. Steinhauser, PHD, Mona Fiuzat, PHARMD, Patricia A. Adams, BSN, CCRC, Adam Speck, BS, Kimberley S. Johnson, MD, Arun Krishnamoorthy, MD, Hongqiu Yang, PHD, Kevin J. Anstrom, PHD, Gwen C. Dodson, MSN, Donalds H, Taylor, J PHD, MPA, Jerry L. Kirchner, BS, CCRP, Daniel B. Mark, MD, Christopher m. O'Connor, MD James A. Tulsky, MD

Journal of The American College of Cardiology 2017. VOL 70 No3 2017

# References

- Triage After Hospitalization With Advanced Heart Failure

The Escape (Evaluation Study of Congestive Heart Failure and Pulmonary Artery Cauterization Effectiveness) Risk Model and Discharge Score

Christopher M. O'Connor, MD, Vic Hasselblad, PHD, Rajendra H, Mehta, MD, MS Gudaye Tasissa, PhD, Robert M. Califf, MD, Mona Fiuzat, PHARM.D, Joseph G. Rogers, MD, Carl V. leier, MD Lynne W. Stevenson MD.

Journal of the American College of Cardiology @2010 by the American College of Cardiology of cardiology Foundation Vol. 55 No. 9 2010

- Risk Prediction in Patients With Heart Failure A systemic Review and Analysis

Kazem Rahimi , DM, Derrick Bennett, PHD, Nathalie Conrad, MSc, Timothy M. Williams, MD, Joyee Basu, MD, Jeremy Dwight, MD, Mark Woodward, PHD, Anushka patel, PHD, John Mc Murray, MD, Stephen MacMahon, PHD

JACC Heart Failure The American College of Cardiology Foundation VOL 2 NO5. 2014

# References

- Factors Influencing the Predictive Power of Models for Predicting Mortality and/or Heart Failure Hospitalization in Patients With Heart Failure

Wouter Ouwerkerk, MSc, Adrian A. Voors, MD, PHD, Aeilko H. Zwinderman PHD

JACC Heart Failure. The American College of Cardiology Foundation Vol 2 No 5. 2014

- 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure – Wb Addenda

The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

European Heart Journal doi:10, 1093/eurheart/ehw128