# The PEOPLE Study (New Zealand): Prospective Evaluation of Outcome in Patients with Heart Failure with Preserved Left Ventricular Ejection Fraction)

## Objectives

The PEOPLE study is an multicentre observational study that seeks to characterise the prevalence, clinical characteristics and outcomes of heart failure with preserved left ventricular ejection fraction.

The PEOPLE study is run in parallel with a study in Singapore: The SHOP Study Singapore Heart failure Outcomes & Phenotypes. These 2 studies follow identical protocols and have been running concurrently.

## Specific aims are:

1. To determine the proportion of patients with heart failure who have Heart Failure with preserved ejection fraction (HFpEF) according to newly proposed ESC criteria.

2. To determine clinical outcome for patients with heart failure with preserved ejection fraction compared with patients with heart failure with low ejection fraction.

3. To determine clinical, echocardiographic and neurohormonal characteristics and predictors of outcome in HFpEF compared to HFrEF.

## Progress

The PEOPLE study has completed recruitment with a total of 941 patients enrolled in the study at 4 centres in NZ: University of Auckland 375, Waikato Hospital 49, Middlemore Hospital 192 and Christchurch Hospital 325.

The SHOP study has also completed recruitment with a total of 1098 patients enrolled from 6 centres in Singapore.

***Baseline data:***

For the whole study (NZ and Singapore combined), median age was 65 years (inter-quartile range 56 – 76; range 23 to 97 years) and 551 (27%) were women.

Based on the baseline echocardiogram: 574 (28%) patients had HFpEF and 1465 (72%) had HFrEF. In New Zealand 331 (35%) had HFpEF and in Singapore, 243 (22%) patients had HFpEF.

When compared with patients with HFrEF, patients with HFpEF were older (mean age 72 years SD 11.8 vs. 63 years SD 13.2), were more often women (48% vs. 19%), more likely to have a history of hypertension (78% vs. 64%), more likely to have atrial fibrillation (52% vs. 36%) and less often a history of coronary artery disease (41% vs. 54%).

Medications used to treat heart failure were commonly used, with 1715 (84%) of the whole groups receiving an ACE inhibitor or ARB (HFpEF group 78% and HFrEF group 86%), 1729 (85%) receiving a beta-blocker (HFpEF group 79% and HFrEF group 87%), and 1849 (91%) a loop diuretic (HFpEF group 86% and HFrEF group 93%).

***Follow up and outcomes***

In NZ, data for death and hospital readmission have been obtained from the NZ Health Information Service and in Singapore from each centre according to the protocols. Patients have followed for 2 years and data on death status was available for all patients. During 2 years of follow up 343 (17%) patients died from any cause (182/941 [19%] in New Zealand and 161/1098 [15%] in Singapore). 80 (14%) patients with HFpEF died compared with 263 (18%) of those with HFrEF.

Currently (April 2016) analyses are progressing of the determinants of these clinical outcomes and data will be available by May 2016.

## Lay summary

The PEOPLE and SHOP studies collectively form a large observational study which will provide unique data to improve the understanding of the main pumping chamber of the heart affects patients with heart failure and what impact this has on clinical presentation and outcomes. The study has completed recruitment in both NZ and Singapore and data analyses are in final stages of completion.

## Research Report Publications

The protocol has been published:

Santhanakrishnan R, Ng TP, Cameron VA, Gamble GD, Ling LH, Sim D, Leong GKT, Yeo PSD, Ong HY, Jaufeerally F, Wong R C-C, Chai P, Low AF, Lund M, Devlin G, Troughton R, Richards AM, Doughty RN, Lam, CSP et al. The Singapore Heart Failure Outcomes and Phenotypes (SHOP) Study and Prospective Evaluation of Outcome in Patients With Heart Failure With Preserved Left Ventricular Ejection Fraction (PEOPLE) Study: Rationale and Design. ***J of Cardiac Failure*** 2013;19(3):156-62

Further presentations and publications will arise from this study during 2016.

## Dissemination and Implementation of Results

Data analyses are due to be completed shortly and will be presented at national and international conferences and prepared for publication in major international journals. It is expected that the PEOPLE study will provide unique insights that will improve our understanding of heart failure within the New Zealand context and in comparison to Singapore. It is expected that the study findings will inform clinical practice and could lead to changes in how healthcare is delivered for patients with heart failure.