



# Improving the use of Flexible Diuretic Regimens: An integrated model of care in regional NSW



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**Aim:** Chronic heart failure (CHF) is a major health burden in Australia. Flexible Diuretic Regimens (FDRs) have been shown to improve clinical outcomes and admission and re-admission rates. Despite this, potentially avoidable fluid overload related admissions continue to increase. Flexible Diuretic Regimens are commonly prescribed and managed by specialist heart failure services in large metropolitan areas however this is often not the case in rural and regional settings, where General Practitioners (GPs) are principal prescribers. The aims of this study are to improve FDR prescribing practices among GPs in the Tweed District and reduce readmission rates at The Tweed Hospital.

**Design:** This action research project employed a mixed methods research approach. Three main methods of data collection were used: i) clinical audits (n=3); ii) Focus groups among GPs; iii) Focus groups among CHF patients.

A partnership between The Tweed Hospital (TTH), North Coast Primary Health Network (NCPHN), Southern Cross University – Lismore Campus (SCU) and Tweed Health for Everyone Super Clinic (THESC) forms the foundation of the study's Action Research Reference Group (ARRG).

**Results:** Audits (conducted prospectively over an 18 month period) demonstrated an overall increase (from 4% to 20%) in numbers of FDRs found in the inpatient medical record of randomly selected samples of CHF patients presenting to Tweed Emergency Department. A marked linear trend demonstrated increasing numbers of FDRs occurred in the outpatient setting during the study period. The study has not demonstrated a reduction in the number of fluid related admissions across audit time points 1-3. This may be due to several factors:

- 1) The mean co-morbid accompanying illness across time points 1 - 3 were >3;
- 2) By Audit 3, only 20% of randomly selected CHF patients had a FDR in place. Whilst this was a large and significant (P=0.043) improvement over baseline, greater FDR penetration (which will likely impact admission rates) continues to be worked on, but is yet to be achieved
- 3) The progressive nature of heart failure
- 4) Delays in transmission of discharge summaries and
- 5) The omission of instructions to implement FDRs in the 'Plan' section of the discharge summary.

**Conclusions:** Clinical staff are well positioned to promote the use of FDRs. This will help patients understand and learn about the early signs of heart failure and prepare for the many challenges that lie ahead. Implementing the FDR may be mutually beneficial; the patient stays well longer at home and the NNSW LHD benefits through health savings. The improvements in FDR use demonstrated by this project demonstrate that multiple sectors (NNSWLHD, TTH, GPs NCPHN and SCU – Lismore Campus) can work together to achieve real practice gains..

**Implications for practice:** The utilisation of the FDR will provide improved clinical outcomes and quality of life for CHF patients and savings for the NNSW LHD.

*For the full report on this project visit our website, follow the link to the Rural Research Capacity Building Program and click on 'view completed' projects'*

Francesca is a Clinical Nurse Specialist in the area of heart failure. Currently Francesca works as the Heart Failure Liaison Nurse at The Tweed Hospital, working in both the inpatient and outpatient sectors. Her role involves working collaboratively with patients, GPs, Doctors, Specialists and Nurses in the Tweed district to develop a contemporary model of patient centred care aimed at delivering improved quality outcomes for heart failure patients.

