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XTend Program Description and Implementation

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**Authors**

Julie Finch SLHD Chronic Care Program Manager

Elizabeth Harris A/Professor Centre for Primary Health Care and Equity

Mark Harris Scientia Professor, Executive Director for UNSW Centre for Primary Health Care and Equity

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# Summary.

This report evaluates the implementation of the Xtend program and its achievement of the first three of its four aims which were to:

* Reduce the 28 day readmission rate for Heart Failure DRGS (F62A, F62B)
* Ensure that 80% of patients see their GP within 5 days of discharge of hospital
* Increase the proportion of patients receiving a home visit within 2 working days of discharge (48hours)
* Improve the quality of life of patients enrolled in the XTend program

The methods included analysis of the first 302 patients referred to the program.

Key findings were:

1. Issues that influenced the establishment and implementation of the Xtend program included:- an agreed scope of practice; role of CHW vis a vis the Chronic Cardiac Care (CCC) nurses; referral pathways and processes for escalation; and supervision and incorporation of CHWs into the health care team.
2. Three quarters of patients had cardiac failure and over 90% were in the heart failure program. 56% spoke a language other than English at home. However only 2% were judged to need an interpreter. At discharge patients had an average of 10.6 medications.
3. 56% of patients were followed up within 48 hours but only 1 referred patient was not able to be followed up. Medications were the most frequent issue identified by the CHW 43.5%, followed by a variety of other social issues. 91% of patients were referred to the CCC program and 78% saw a GP within 5 days.
4. 19.9% of patients were readmitted within 28 days. Multivariate analysis explored the association between readmission and a number of factors including gender, age, number of medications, having a carer, living alone, having heart failure, having problems with medications, seeing a GP within 5 days, and seeing the CHW within 48 hours. Only not speaking English at home was associated with an increased risk of readmission.

Key recommendations are:

* Building on the mapping exercise being undertaken by HERDU, a broad based working group should be established to provide guidance and support for the CHW workforce across SLHD.
* Formal evaluation needs to be funded, given the complexity and interrelationship with other interventions.
* A review of most appropriate services for Xtend CHWs should be undertaken in next 12 months.
* CHWs should receive training in core competencies, including the use of interpreters rather than family members during their visits and contacts (Diversity HUB).
* The evaluation should include an exploration of how language spoken at home influences their impact on readmission.
* Establish processes for feeding back issues identified by CHW at follow up home visits to inpatients services to improve discharge planning.

The report is divided into 3 sections.

* Section 1: An overview of the Xtend Program and it early implementation.
* Section 2: An analysis of first 300 patients who were visited by a Community Health Worker to identify predictors of readmission.
* Section 3: Discussion and Recommendations for the ongoing development of the program.

# Section 1: An overview of the Xtend Program and early implementation

# Background

Hospital readmission rates within 28 days of discharge are recognized as a potentially avoidable cost to patients and to the healthcare system and are thus a key performance measure for health systems (1). Readmission rates for patients with multiple chronic disease are high and innovative systems are needed to improve the health outcomes for patients and reduce the burden of readmissions on health systems (2).

In 2017/18 SLHD piloted a supported discharge program using Community Health Workers [CHWs] to visit patients discharged from hospital within 48 hours. The program targeted patients with a diagnosis of heart failure who were discharged from Royal Prince Alfred Hospital. The pilot was developed to support the Cardiac Chronic Care service and reduce waiting times for community follow up. CHWs with an Assistant in Nursing qualification, visited patients at home to trouble shoot issues and improve the transition of care from acute care back to primary care with the aim of reducing readmission rates within 28 days of discharge.

**Why Community Health Workers.**

The effectiveness of Community Health Workers (CHWs) in improving access to care and outcomes for marginalised and disadvantaged groups is internationally recognised. Community Health Workers are known by a number of names in Australia including community educators, bilingual community educators, care navigators, Aboriginal Health Workers, X-tend CHW workers, co-workers, peer workers educators and cultural support workers. A commonly accepted international definition is that community health workers are *“ frontline public health workers who are trusted members of/ or have an unusually close understanding of the community they serve . This trusted relationship enables CHWs to serve as liaison, link, navigation role between health, social services and the community to facilitate access to services, improve quality and cultural competency”.(3)* They may also reduce costs to the health system, especially in the context of the US Health System.

Although originally focused on the follow up of cardiac patients, the program has now expanded to include age care and other patients with chronic disease. The CHWs triage patients and escalate issues to the supervising nurse or General Practitioner. This assists with integration of care between acute, community and primary care and allows clinicians to work to the top of their licence while extending the reach of community services to patients who may not otherwise receive the support they need.

# XTend Program Description

### Aims

The Xtend programme aimed to:

* Reduce the 28 day readmission rate for Heart Failure DRGS (F62A, F62B)
* Ensure that 80% of patients see their GP within 5 days of discharge of hospital
* Increase the proportion of patients receiving a home visit within 2 working days of discharge (48hours)
* Improve the quality of life of patients enrolled in the XTend program

### CHW Role

In the original XTend model of care, Community Health Workers (CHWs) performed early short-term home visiting (up to 4 weeks) for targeted patients who were discharged from hospital. The purpose of these discharge follow-up visits were to:-

* Provide early follow up after discharge from hospital and triage at risk patients to the Cardiac Chronic Care nurses
* identify and address issues relating to general wellbeing
* facilitate a review of medication compliance/management
* link the patient back to their General Practitioner for medical follow up and provision of prescriptions in an appropriate timeframe.

### CHW Activities

The CHWs aimed to see patients within 2 working days of discharge. Following the home visit, the CHWs reported their findings to the supervising Cardiac Chronic Care nurses who were able to advice and/or respond to the issues identified. The CHWs also provided support to the long term patients of the Cardiac Chronic Care service to enable the nurses to respond to new referrals and reduce waiting times.

Patient Reported Medication List - The CHWs worked with the patient to create a written list of medication that were reported by patients. This was then used by the supervising nurse and/or GP to compare to the discharge summary medication list to identify discrepancies or issues.

GP Question List- In discussion with the patient any areas of concern, confusion or needing clarification were included in a written list of questions for the patient to take to their GP. This aimed to facilitate conversations with the GP and assist with health literacy.

Broad Shallow Assessment – The CHW conducted an assessment of how the patient was managing at home, ADLs, transport, social situation etc. The CHWs made referrals to My Aged Care where appropriate and were able to trouble-shoot situations with the patient eg navigating the eligibility process to get new free glasses for the patient who was unable to read medication labels, finding a new local GP, liaising with homecare services to increase personal care services, etc.

# Implementation

### **Staffing**

Six Assistant in Nursing (AIN)/CHW positions were recruited to in April 2017. The pilot commenced with 2 CHWs working with the Cardiac Chronic Care (CCC) staff while the other 4 positions were assigned to inpatient ward positions with the aim of expanding the pilot as demand increased. The 2 CHWs assigned to XTend had prior AIN community experience in aged care and home care services which assisted in their orientation to the role. Due to patient numbers being smaller than expected the 4 ward AINs were not assigned to the XTend project and were instead allocated to existing AIN ward positions.

Concurrently with the recruitment of the CHWs the Cardiac Chronic Care service had an enhancement of 3.1 FTE nursing staff across the district. The additional position allocated to RPAH Cardiac Chronic Care reinforced a nursing model of care and challenged the building of the XTend CHW role in the team. The CHW role within the team took some time to be established but over time they became recognised as important contributors to patient care.

The CHWs visited patients at home, triage patients and escalate issues to the supervising nurse or General Practitioner. This aimed to assist with integration of care between acute, community and primary care and to allow clinicians to work to the top of their licence while extending the reach of community services to patients who may not otherwise receive the support they need.

### **Patient Identification**

The planned model to identify eligible patients during the inpatient stay was a change in practice for the Cardiac Chronic Care (CCC) nurses. The process of identification of patients continued to be modified over the pilot period with most patients being identified from the Cardiac Chronic Care referral list.

### **Effective referral process**

Once identified, eligible patients were supposed to be allocated to the CHWs by the supervising Cardiac Chronic Care nurses. In the original model of care, it was thought that CHW would follow patients up in their homes for 4 weeks. In practice, only 1-3 visits were made before patients returned to the CCC nurses for ongoing management.

### **Duplication of services**

At the time of the initial implementation of Xtend, the CCC waiting list was long, with some patients waiting several months to be seen. With the implementation of XTend and with the enhancement of nursing staff to the Cardiac Chronic Care service there was a significant reduction in the waiting list. CCC nurses and the CHWs were often seeing the patients within days of each other. There was inevitable competition between these two workforces. One of implication of this was that it is difficult to disentangle their impacts.

### **Expansion of services**

As the CHWs had capacity to increase the XTend post discharge support consideration was given to expanding the patient group. In July 2018 the CHWs joined the ACCR Chronic Care team where they continue to work with the Cardiac nurses visiting patients with heart failure on their discharge from hospital as well as now seeing patients discharged from geriatric wards at RPAH and Balmain.

### **Supervision**

Supervision has also been problematic. Originally the CCC nurses would supervise the CHW. However over time the CCC nurses reduced their supervisory role and other chronic care nurses were reluctant to take it on as they were unsure of the roles, responsibilities and level of confidence of the CHWs.

### **Governance and evaluation**

The project was initially governed by a committee. However, this has not met recently. While it was always planned that the program would be evaluated, no funding was allocated for this and Julie Finch developed a data collection system in the absence of a formal evaluation.

# Section 2: Description of patients referred to the Xtend program and associations with readmission.

In this section we describe the characteristics of the first 300 users of Xtend Program (between January 2017 and August 2018) and identify factors associated with readmission.

## Project aims

This study aims to describe patients registered with the Xtend program and explore associations with their readmission,

## Introduction

The effectiveness of Community Health Workers (CHWs) in improving access to care and outcomes for marginalised and disadvantaged groups is internationally recognised. Community Health Workers are known by a number of names in Australia including community educators, bilingual community educators, care navigators, Aboriginal Health Workers, X-tend CHW workers, co-workers, peer workers educators and cultural support workers. A commonly accepted international definition is that community health workers are *“frontline public health workers who are trusted members of/ or have an unusually close understanding of the community they serve. This trusted relationship enables CHWs to serve as liaison, link, navigation role between health, social services and the community to facilitate access to services, improve quality and cultural competency”.(3)* They may also reduce costs to the health system, especially in the context of the US Health System.

## Background

The rise in major chronic diseases and 2.3 times the rate of disease burden was experienced in socially and economically disadvantaged Australians. Disadvantaged patients continue to experience barriers accessing and navigating complex health care delivery systems.

The World Health Organization Innovative Care for Chronic Conditions Framework recognised the role of Community Health Workers (CHWs) in improved care coordination and community education on the prevention of chronic diseases. Although originally CHWs were developed in low and middle-income countries, they have been employed extensively in US and Canada with the aim of improving access and quality of care especially in ethnically diverse and disadvantaged communities. However, there is a need for a standardised approach to developing the CHW workforce in Australia. This is reflected in a recent Australian publication arguing for a more strategic approach to use of CHW in Australia (4).

One way in which the health system is responding to rise in chronic disease is through integrated care initiatives. The Xtend Program is an integrated care initiative by SLHD to support patients with a CHW visiting within 48 hours of discharge from hospital. It is hoped that use of CHWs will reduce readmission rates. Their key tasks are to identify needs or problems, link the patient back to primary care, and increase referrals to services within the health and social care systems.

## Method

We analysed deidentified routinely collected data of patients registered with the Xtend CHW between January 2017 and August 2018.

* This involved extraction of the following data from Cerner Electronic Medical Record: age (in years), gender, language spoken, country of birth, socioeconomic status of suburb by SEIFA. length of stay, admission and discharge date, reason for admission, readmission with 28 days
* Data routinely collected by CHW includes: Registration date; Living arrangements; Social situation, Accommodation type; Service offered; Follow-up by Xtend CHWs within 48 hours; seen by GP within 5 days; Key Issues identified by CHW; and type (if any) of patient carer.

Analysis was conducted to describe patient population and referral or readmission.

The Sydney Local Health District Human Research Ethics Committee approved the study.

## Findings

### Characteristics

There were 302 patients in the study sample. 50% were female with a mean age of 77.3 years (SD 17.3). 56.1% (163) spoke a language other than English at home although only 2.2% were recorded as requiring an interpreter. The most frequent of these other languages were Greek (54), Italian (35), Portuguese (16), Arabic (10) and Chinese (11). 62.1% (197) has a carer; 34.7% (110) were unpaid, 13.6% (43) were paid and 12.9% (41) had both paid and unpaid carers. 32.4% (103) lived alone and 13.9% (29) did not have social support.

### Admission and discharge

The primary reason for admission was congestive cardiac failure for 76.3% (242). Other reasons included coronary artery disease (4.4%, 14), diabetes (0.3%, 1), Renal Failure (0.6%, 2), COPD (0.6%, 2) and other (10.7%, 34). The average length of stay was 7.5 days (SD 6.3). Most patients were in the heart failure program (92.7%, 294).

### Medications

Patients were discharged on an average of 10.6 medications (SD 4.3). On discharge 36% (114) were dispensed medications, 8% (2.5) were given only a prescription, 46.1% (146) were given both medications and a prescription and 10.4% (33) were given neither.

### Xtend home visit

Follow up by the Xtend program was completed within 48 hours for 56.3% (169) of patients. 41.0% (130) completed outside 48 hours and only 1 did not complete. Reasons for not completing within 48 hours included staff and resources (54) and patient unavailable or uncontactable (74).Key issues were identified by the CHW in 62.8% (184) of patients and no issues in 37.2% (118). Medication issues were the most frequent (43.5%, 138), followed by housework (6.9%, 22), carer stress (5.4%, 17), transport (3.5%, 11), shopping (2.5%, 8), personal care (2.2%, 7), mobility (1.9%, 6), meals (1.6%, 5) and other (10.1%, 32).

Figure 1: Issues identified by CHW (% of patients)

Referrals after assessment were made to the Chronic care program (90.9%, 288), My Aged Care (6.6%, 21), Allied health (1.6%, 5), rehabilitation (0.9%, 3), Aboriginal coordinated care (0.3%, 1), other (2%, 6).

77.6% (246) saw a GP within 5 days; 10.7% (34) in 6-7 days; 2.2% (7) between 8-14 days; 4.1% (13) were not seen and data was not recorded for 5.4% (17).

Figure 2: Time (days) until seen by GP (% of patients)

### Readmissions

60 patients (19.9%) were readmitted within 28 days. Among those patients with cardiac failure (242), 50 were readmitted (20.7%).

In Univariate analysis speaking a language other than English at home and having a length of stay >7days, were associated with a greater risk of re-admission (Table 1).

### Table 1: Univariate association with readmission in 28 days.

|  |  |  |  |
| --- | --- | --- | --- |
| Factor | Patients with factor who were readmitted (%) | Patients without factor who were readmitted (%) | Chi square (p) |
| Female | 31 (20.5) | 29 (19.2) | 0.02 (NS) |
| Age 75+ | 46 (22.0) | 13 (17.1) | 0.54 (NS) |
| Length of stay (7+ days) | 29 (27.4) | 25 (15.1) | **5.40 (0.02)** |
| Cardiac failure | 50 (20.7) | 10 (16.7) | 0.26 (NS) |
| Non-English Language at home | 41 (25.2) | 19 (13.7) | **5.52 (0.02)** |
| Lives alone | 25 (24.3) | 35 (17.5) | 1.51 (NS) |
| Patient has a carer | 38 (19.3) | 21 (20.6) | 0.02 (NS) |
| Medications (10+) | 33 (24.6) | 21 (16.5) | 2.13 (NS) |
| Key issue medications | 31 (22.5) | 29 (17.7 | 0.80 (NS) |
| CHW follow up > 48 hours | 32 (24.1) | 28 (16.6) | 2.18 (NS) |
| GP Follow-up >5 days after discharge | 11 (19.6) | 49 (19.9) | 0 (NS) |

In multivariate logistic regression analysis, these were included together with gender, age, number of medications, having a carer, living alone, having heart failure, having problems with medications, seeing a GP within 5 days, and seeing the CHW within 48 hours. Not speaking English language at home was found to be associated with risk of admission (p=0.024) (Table 2).

### Table 2: Logistic regression models: Readmission within 28 days

|  |  |
| --- | --- |
| Factor (comparator) | All patients |
|  | B (SE) | Sig | OR (95% CI) |
| Male (Female) | 0.29 (0.33) | NS | 1.34 (0.70-2.55) |
| Age (years) | -0.02 (0.01) | NS | 0.98 (0.95-1.01) |
| Number of medications | -0.07 (0.36) | 0.05 | 0.93 (0.87-1.00) |
| Medication issue | 0.02 (0.31) | NS | 0.98 (0.53-1.81)\_ |
| Language not English at home | 0.73 (0.34) | **0.03** | **2.09 (1.06-4.09)** |
| Length of stay (days) | -0.03 (0.02) | NS | 0.97 (0.93-1.02) |
| No carer (carer) | 0.25 (0.37) | NS | 1.28 (0.63-2.62) |
| Lives with others (alone) | 0.56 (0.36) | NS | 1.75 (0.86-3.55) |
| GP seen within 5 days (longer) | -0.12 (0.40) | NS | 0.89 (0.41-1.95) |
| Seen by CHW within 48 hours (Longer) | 0.42 (0.32) | NS | 1.52 (0.81-2.82) |
| Heart failure | 0.25 (0.40) | NS | 1.29 (0.59-2.83) |

## Section 3: Discussion and Recommendations for the ongoing development of the program

## Discussion

These findings raise a number of important issues. There is no comparison group and so it is not possible to attribute outcomes to the CHW intervention. We have not explored the confounding effect of visits by Cardiac Nurses. Applications have been made to NHMRC for a partnership grant to conduct a controlled study.

### 1. Establishment and implementation of the Xtend program

There were a number of issues that influenced the establishment and implementation of the Xtend program. These included:- an agreed scope of practice; role of CHW vis a vis the Chronic Cardiac Care nurses ; referral pathways and processes for escalation; and supervision and incorporation of CHWs into the health care team.

At the time the Xtend program was established there were long waiting lists for visits from cardiac chronic care nurses. Enhancements to the Cardiac Chronic Care program means this is no longer the case. The number of referrals to the CHWs decreased and time the CHWs followed up patients was reduced (90% of patients were referred back to CCC). Supervision of the CHW nursing staff was difficult to establish and accept and CHW have not been incorporated into multidisciplinary teams. This suggests that cardiac care may not be the best use of Xtend. Transfer to another service may also allow a more robust evaluation.

### 2. Evaluation of the impact of Xtend program on hospital readmissions

In a multivariate analysis of data from the first 300 people referred to the Extend program, the only factor that was predictive of readmission was speaking a language other than English at home. International literature would suggest that age, gender, living alone and social isolation were associated with readmission. This suggests that current models are dealing with these issues. Nearly half the patients spoke a language other than English at home. Despite this the need for interpreters was identified in only 7 cases. It is also not clear whether language was itself the main factor or a marker for cultural background or health literacy (as this was not also assessed). Given the number of languages involved simple matching of patients and CHW by language may not be feasible.

Across SLHD there are many workers who could be described as community health workers. The HERDU Advisory Committee has commissioned HERDU to conduct a mapping of the location, roles, governance, training and supervision of these workers. It is clear that there are clusters of clinical issues (such as medication management, navigation to other services) and psycho-social issues (such as language and culture, housing, isolation, financial problems) being addressed by these workers. The establishment of the Cultural Support Workers will increase the scope of this workforce. For many of these groups there are ongoing common issues related to scope of practice, training, supervision and governance that may benefit from a more integrated approach.

International research and experience suggest that CHWs play an important role in improving access to health and social care services by marginalised and disadvantaged groups to preventive care (such as immunisation, breast and bowel screening) and community education programs such as oral health, women’s health and child development (5). Some workers such as the Community Link Workers in Can Get Health in Canterbury also have important roles in community development and organisation.

The first goal of the Extend program is to reduce the 28-day readmission rate especially for those with heart failure. SLHD readmission rates are lower than the NSW average. Readmission rates for patients with cardiac failure were lower than reported by BHI for RPAH (25%) between 2012-2015 (6). However, without a comparison group it is not possible to say whether either the Cardiac nurse program or Xtend program reduced readmission rates.

The second goal is that 80% of patients attend their GPs within 5 days of discharge. This was almost achieved with 78% of patients reporting seeing their GP within 5 days. The third goal is that 75% of patients receive a home visit within 2 working days of discharge (48hours). This was not achieved with only 56% of patients were seen within 48 hours and only 1 patient was not successfully followed up.

The fourth goal was to improve the quality of life for patients enrolled in Xtend. This data is still being analysed. However, follow up data is available only for a third of the patients.

The Xtend program workers identified issues which needed to be addressed in two thirds of patients. Medications issues were the most frequent which was appropriate given the very large number of different types of medications prescribed on discharge (an average of over 10). The CHW also identified a range of non-medical issues in a third of patients (some of which are outlined in the patient stories in the Appendix). Most patients were referred to Chronic Care Programs with few referrals to other services.

Other research has shown that people over 65 years of age are more likely to be readmitted if they are older, live alone, have multiple morbidity, multiple prescribers involved in their care, inadequate assessment of functional limitations and preventable complications (7-9). These factors were included in the analysis but were not associated with readmission. One inference from this lack of association could be that issues associated with age, number of medications and living alone were adequately addressed by the program.

The factor associated with readmission in this cohort of patients was language spoken at home. This suggests that the Xtend program did not sufficiently address language (and/or possibly culture) as a risk factor. This needs to be clarified in further research: is it poorer English language skills, lower health literacy or lower levels of acculturation. It may be improved by additional training of CHW in cultural sensitivity and improved linkages to facilitate referral to ethnic health, social care and community organisations or addressing views of staff that people who do not speak English will not be able to participate in or benefit from the program.

### 3. Ongoing Development of the Program.

With the association between language and readmission risk consideration should be given to matching the language and cultural background of the CHW to the patient’s language and cultural back ground. The SLHD Aboriginal workforce has recognised the importance of shared experience and cultural background for many years and provides a model for patients that could be extended to patients from multicultural backgrounds.

Further work is needed to develop the CHW role and formalise their roles in the health team. The development of training in core skills for a CHW role would help to support and develop the workforce .Defining the CHW role and scope of practice could also improve the understanding and acceptance by the larger health team.

#### 3.1. Roles and responsibilities of CHW

The Xtend program has provided important insights into the benefits and challenges of establishing CHW programs in SLHD. The planned expansion of CHWs suggests it may be timely to provide guidance on the ongoing development of these programs, particularly scope, training and supervision (particularly clinical supervision).

##### Recommendation

Building on the mapping exercise being undertaken by HERDU, a broad based working group should be established to provide guidance and support for the CHW workforce across SLHD.

#### 3.2. Research and evaluation

To enable any formal evaluation of the Xtend program there needs to be a clear delineation of roles of CCC program and Xtend, especially as over 90% of Xtend patients are referred to this service. Given the significant enhancement of the CCC program and the referral of 90% of patients from Xtend to CCC, it is timely to reflect on whether there are other services would benefit more from CHW involvement such as geriatric or respiratory patients identified for post discharge follow up

Recommendation:
Formal evaluation needs to be funded, given the complexity and interrelationship with other interventions.

Recommendation:
A review of most appropriate services for the Xtend CHWs should be undertaken in next 12 months.

#### 3.3. Language and Culture.

The only significant predictor of readmission in this study was speaking a language other than English at home.

Recommendation:
CHWs should receive training in the use of interpreters rather than family members during their visits and contacts (Diversity HUB).

##### Recommendation

The evaluation should include an exploration of how language spoken at home influences their impact on readmission.

#### 3.4. Feedback from Xtend program

The Xtend CHWs identified a number of issues that potentially may impact on the risk of readmission including the number of medications on discharge.

##### Recommendation

Establish processes for feeding back issues identified by CHW at follow up home visits to inpatients services to improve discharge planning.

## Appendix

### Patient Stories

|  |
| --- |
| The CHW’s identified that the patient had been without glasses and unable to read his medications and discharge instructions. He did not have the means to address the issue or access an Optometrist. The CHW investigated ways to get a new pair of glasses for the patient through discussions with Centrelink and after assisting the patient with the appropriate documentation the patient was able to access glasses free of charge. |
| The CHW identified that the patient was not taking the new medications outlined in the discharge summary and had returned to his pre-hospitalisation Webster Pack. This was escalated to the nurse who liaised with the GP/pharmacist to update his Webster Pack |
| The CHW identified that the patient was taking Furosemide 40mg instead of 80mg. The CHW completed a GP Medication list and notified the supervising RN. The patient visited their GP to update the medications and the CHW confirmed with the patient and the family that all the medication issues had been rectified. No further issues were identified at follow up visits.  |
| The CHW identified the situation where a son had filled his mother’s dosette box with medications but had unknowingly mixed it up. Instead of antibiotics 3x a day and aspirin every 2nd day the patient was taking aspirin 3x a day and antibiotic every 2 day. The son was able to correct this and the correct medication was then taken. |
| The CHW identified a heart failure patient on a 1.2 litre fluid restriction who had been given instructions to drink the 3 litres of fluid in preparation for a colonoscopy. This was escalated to the Cardiac nurse to prevent fluid overload and a possible readmission |
| The CHWs have identified patients who had difficulty with the cost of medication and the number of different medications. This was listed on the GP Question List to prompt discussion with the GP and consideration of a medication review |
| The CHW tactfully discussed the patient’s strong odour and identified inflamed and infected skin in this obese man’s stomach folds. With the sensitivity shown by the CHW the patient was able to address the issue by accepting assistance with showering and personal care through his homecare provider |
| The CHW identified a patient who had a poor relationship with her GP and was refusing to make an appointment for follow up and medication prescriptions. The CHW explained the risk of hospitalisation if mediations were not continued. The patient agreed to see a different GP and an appointment was organised that afternoon with a new local GP. The patient subsequently reported she was very happy with the new GP and had organised follow up appointments already.  |
| The CHW identified that a patient was taking his medication from his Webster pack vertically rather that horizontally. This resulted in the patient taking the morning dose several times a day and missing other medication. The CHW drew a horizontal arrow on the Webster pack to show the direction and pointed out and explained the difference between the morning, afternoon and evening sections for each day. This was reported and escalated to the supervising nurse |

## For Further information

Contact Julie finch: Manager Chronic Care Program SLHD
Phone: 0429696710

Full report available: -

## References

1. Kocher RP, Adashi EY. Hospital readmissions and the Affordable Care Act: paying for coordinated quality care. Jama. 2011;306(16):1794-5.

2. Basu J, Avila R, Ricciardi R. Hospital Readmission Rates in U.S. States: Are Readmissions Higher Where More Patients with Multiple Chronic Conditions Cluster? Health Services Research. 2016;51(3):1135-51.

3. Barbero C, Gilchrist S, Chriqui JF, Martin MA, Wennerstrom A, VanderVeur J, et al. Do State Community Health Worker Laws Align with Best Available Evidence? Journal of Community Health. 2016;41(2):315-25.

4. Javanparast S, Windle A, Freeman T, Baum F. Community health worker programs to improve healthcare access and equity: are they only relevant to low-and middle-income countries. Int J Health Policy Manag. 2018.

5. Viswanathan M, Kraschnewski JL, Nishikawa B, Morgan LC, Honeycutt AA, Thieda P, et al. Outcomes and costs of community health worker interventions: a systematic review. Medical care. 2010;48(9):792-808.

6. Bureau of Health Information. The Insights Series: Return to acute care following hospitalisation, Insights into readmissions, NSW public hospitals, July 2009 – June 2012. Sydney (NSW): BHI; 2015.

7. Caughey GE, Pratt NL, Barratt JD, Shakib S, Kemp-Casey AR, Roughead EE. Understanding 30-day re-admission after hospitalisation of older patients for diabetes: identifying those at greatest risk. Med J Aust. 2017;206(4):170-5.

8. Scott I, Shohag H, Ahmed M. Quality of care factors associated with unplanned readmissions of older medical patients: a case–control study. Internal Medicine Journal. 2014;44(2):161-70.

9. Roughead EE, Semple SJ, Rosenfeld E. The extent of medication errors and adverse drug reactions throughout the patient journey in acute care in Australia. International journal of evidence-based healthcare. 2016;14(3-4):113-22.