

Title:

Older persons who re-present to the Emergency Department: an observational study

Running Head (22 characters): Re-presenting older people

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Structured abstract (250 words; n=250)

Background: Models of emergent care evolve in response to an ageing population. The Medical Assessment Unit (MAU) receives patients from the Emergency Department (ED) for up to 48 hours to facilitate assessment, care and treatment before discharge home or to another inpatient unit.

Aim: To describe the clinical and social characteristics of older people who had a stay in the MAU and then re-present to the ED within 28 days of discharge from hospital.

Methods: A retrospective observational study design was used. Data were extracted from electronic medical records of older people who re-presented to two public teaching hospital EDs in Queensland, Australia, over a two-week period in 2014.

Findings: There were 78 older people who made 84 re-presentations. The average age was 79 years; average number of co-morbidities was seven (range 1-18); almost one-quarter (23%) lived alone; more (63%) were female; half (58%) were married; and one-fifth (20%) had some form of cognitive impairment. Of those who re-presented with the same diagnosis, 46% had cardio-respiratory conditions. One-quarter (28%) of the re-presenters had a discharge summary from the last admission.

Discussion: Most of the re-presenters in this study had cardio-respiratory conditions. While a discharge summary was available, it was not consistently completed, raising the importance of discharge summaries as part of continuity across services for older people.

Conclusion: How the ED, MAU and primary health services are coordinated bears further investigation. Research into the value of coordination roles, such as nurse navigators, for older people re-presenting to ED is recommended.

Key words

Chronic disease, older adult, emergency department, re-presentation, medical assessment unit

Summary of relevance

Problem or Issue

Health service planning for older people is increasingly recognised as an important area of development internationally.

What is Already Known

Initiatives in emergency departments such as out-reach services to [aged care facilities](#) and creation of medical assessment units have gone some way to improve care delivery for older people.

What this Paper Adds

This retrospective snapshot of [older people admitted to a Medical Assessment Unit \(MAU\) who then re-present to the ED within 28 days of discharge](#) identified that older people re-presenting are medically complex, tend to be much older than 65 years and tend to be living with others. Findings can be used to inform new strategies, such as reviewing discharge processes and implementing [roles such as](#) nurse navigators to improve the continuity of care for older people.

Introduction

The world population of older people, [aged 65 years and over](#), is projected to grow from almost 1 in 10 (9.2%) in 1990 to more than 1 in 5 (21.1%) by 2050 (United Nations, 2013). As the population ages, the demand for health services is expected to grow and health service planning for older people is increasingly recognised as an important area for strategic development.

The average age of hospitalised people is increasing (DeBrauwere et al., 2014), particularly in the oldest age group of 85 years and older (AIHW, 2015). Older people (aged 65 years and older) constitute 40% of hospital separations (AIHW, 2015) and re-presentation to the Emergency Department (ED) for this group is an international concern. There is emerging evidence that older people are re-presenting with acute exacerbations of chronic illness rather than injuries (McMillan et al., 2011).

Rising ED presentation has been attributed to older people with multiple co-morbidities (Mudge et al., 2011), and ED re-presentations directly have been related to the number of co-morbidities (McMillan et al., 2011). In Australia, it is estimated that up to 5% of avoidable ED presentations are related to [conditions that can be managed in primary care](#) (Page et al., 2007) and older people living in residential aged care facilities are reported to have higher levels of re-presentation (Gabayan et al., 2015; Crilly et al., 2008).

The acute health care system has evolved to include the Medical Assessment Unit (MAU) as one strategy to accommodate the lengthy assessment requirements for emergent presentations (Elder et al., 2015), including older people. The MAU is a service design model that provides comprehensive, multidisciplinary patient-centred care (NSW Government, n.d.) [that aims to expedite access to inpatient specialists and other members of the multidisciplinary team to patients with acute exacerbations of complex medical conditions](#) (Elder et al., 2015). The MAU has been shown to facilitate discharge (McNeill et al., 2011), decrease length of stay (Brand et al., 2010), and reduce waiting in ED (Elder et al., 2015).

Continuity of care across health and social service sectors for older people living with chronic illness is ideal but often not delivered (Crilly et al., 2006). For older patients discharged from hospital, there can be a wait of two to three weeks before [follow up services including allied health, home-](#)

based care, and general practitioner are available (Dilworth et al., 2012). The difficulty in establishing community-based services following hospitalisation is noted by others (Jamieson et al., 2014). In Australia, there is significant mismatch between hospital (state provided) and community (federal provided) services by region (Giles et al., 2009). When community-based or primary care services are not accessible, chronic conditions may exacerbate, leading to an ED re-presentation. Understanding more about the social and clinical characteristics of older people re-presenting to ED, following discharge from a hospital stay that included an MAU admission, can inform continuous service development for older people.

Literature Review

For many older people, the increasing number of presentations to the ED is related to the advancing chronic disease trajectory (Mudge et al., 2011; Whyatt et al., 2014), with the time between presentations decreasing as the chronic disease progresses (Whyatt et al., 2014). And for those people with multiple co-morbidities, there is a correlation between the number of comorbidities and the number of re-presentations (McMillan, 2011). In one Australian study, re-presentations for medical patients were associated with chronic disease, depressive symptoms and underweight (Mudge et al., 2011).

Presentations to ED appear to relate to social, as well as medical, reasons. In a systematic review of ED use, outpatient and primary care services were found to be the most significant in reducing ED use (McCusker & Verdon, 2006). In a systematic review of older persons' presentations to ED, older age and living alone were identified as risk factors associated with increased presentations (Aminzadeh & Dalziel, 2002). One qualitative study found that older people and their families were reluctant to access ED but believed it was important to the older person's wellbeing (Considine et al., 2010). Furthermore, in a review of the literature, Langer et al. (2013) found that socially and economically marginal older people logically viewed unscheduled care, such as ED presentations, as providing access to health services that are not otherwise available. One Australian retrospective cohort study of ED re-presentations over a two-year period, found that a high risk for re-

presentation was attributed to patients receiving a government pension, compared with those who did not (Moore et al., 2007).

Anderson (1995) has identified the primary determinants of health as a multi-part system of (1) the health care system (external environment), (2) the need produced by the difference between predisposing characteristics and available resources, (3) personal health practices (use of health services), and (4) perceived health status. In a study of almost 268,000 Australians over 45 years, socio-demographic composition, health and population behaviours were found to explain almost one-third of variation of hospitalization rates (Falster et al., 2015). While the MAU appears to support the care of older people presenting to the ED (Elder et al., 2015), the influence of the MAU model of care on re-presentation to ED is not established. The aim of this study was to describe the clinical and social characteristics of older people who re-present to the ED within 28 days of discharge from a hospital stay that included an MAU admission.

Methods

A descriptive, retrospective observational study design was used to guide this study. Descriptive statistics provide information about a study sample as a baseline (Polit & Beck, 2012) to identify areas for improvement in care delivery.

The study setting was two Queensland public teaching hospitals located within the same health service. One is a regional facility, the other a tertiary facility. Both hospitals have an MAU. In 2013-14, there were 143,000 presentations to the two EDs, 83,000 and 60,000 respectively. Both EDs treat adults and children. Both hospitals have criteria and pathways to inform ED to MAU admission decisions.

A retrospective review of the electronic medical records, of the patients who met the following inclusion criteria was undertaken:

- All patients 65 years or older and 55 years or older for Aboriginal and Torres Strait Islander people; and
- Re-present to the ED within 28 days of discharge; and

- Were admitted to the MAU on previous admission.

The data was collected from all re-presentations recorded during a two-week period between 18 to 31 August 2014. The two-week period was selected as a snapshot of service use; it was a relatively quick method to explore some of the elements that may be worthy of further study. The Hospital Informatics Directorate provided a list of identification numbers for patients who met the inclusion criteria so that a member of the research team with clinical experience in the MAU setting could review and extract data from the electronic medical records and enter these into an excel spreadsheet. The reviewer (AA) met regularly with another research team member (LG) to discuss progress and coding decisions.

A data extraction spreadsheet was developed by the research team based on Anderson's Health Belief Model (Anderson, 1995). The type of data extracted from the electronic medical records can be seen in Table 1. Age, time in ED and time in MAU were entered in numerical form and data for discharge summary, general practitioner, sex, Aboriginal and Torres Strait Islander, and driving were entered as dichotomous responses (i.e. Yes/No, Male/Female). Data was recorded descriptively for other items.

[please insert Table 1 around here]

Descriptive and inferential statistics were used to analyse data. Data were analysed using SPSS v19.0 (SPSS Inc, Ill, USA). Statistical significance was set as $p < 0.05$. Mean and standard deviation were used for normally distributed data and median (md) and interquartile range (IQR) for data that were not normally distributed. Frequencies and percentages were used to summarize the demographic characteristics (e.g. age, gender) and the re-presentation characteristics (e.g. day presented and re-presentation diagnosis category). Groups of older people re-presenting with the same diagnoses or not and older people with a discharge summary or not, were compared using inferential statistics (chi square test of association). If the expected cell count was less than 5 Fisher's exact test was interpreted.

The outcomes measures included median ED length of stay (LOS) in hours, percentage of people with an ED LOS greater than four hours, median MAU LOS in hours, and median days to re-presentation. For non-parametric data, ED LOS, MAU LOS, and days to re-presentation, a Mann Whitney U test was conducted.

Two groups were considered to be at higher risk of re-presentation based on the literature: those who (1) lived alone (Aminzadeh & Dalziel, 2002) and (2) were much older than 65 years (Aminzadeh & Dalziel, 2002), in this case we selected 85 years of age and older. We were also interested in the characteristics of those who re-presented within seven days of discharge.

The [name] Hospital and Health Service Human Research Ethics Committee (14/QGC/206) and [Name] University Human Research Ethics Committee (NRS/02/15/HREC) approved this study.

Results

The data are presented in three parts. First, the demographic description of the total sample is provided, second the nature of the ED presentations is described and third, the descriptive subgroup analyses are presented.

Demographic characteristics

There were 78 people, aged 65 years and older, who constituted 84 re-presentations within 28 days of discharge from a hospital admission that included a stay in the MAU. Only the first re-presentation is counted in these findings (n=78). Of those who re-presented more than once, four re-presented a second time within 28 days and one person re-presented a second and third time within 28 days. There were no Aboriginal or Torres Strait Islanders under the age of 65 years identified in the original sample and two in the over 65 years sample.

The demographic characteristics of the sample are presented in Table 2. The age of the sample ranged from 65 years (set by the inclusion criteria) up to 97 years, with an average of 79.3 years (SD 7.4). Sixty-three percent were female (n=49), around half were married or defacto (58%; n=45), one-fifth had some form of cognitive impairment (20%; n=16), almost one-quarter lived alone (23%; n=18), and a small proportion were prescribed dietary supplements (9%; n=7).

Almost half (44.9%) of the sample was diagnosed with the same condition when they re-presented and just over one quarter (28.2%, n=22) had a discharge summary from the previous admission. The characteristics (age, sex, marital status, living arrangements, nutritional status, cognitive impairment, co-morbidities) of those re-presenting with the same diagnosis or a different diagnosis did not differ significantly. Except for age, the characteristics of those re-presenting who did and did not have a discharge summary from their previous admission did not differ significantly. The average age of people who had a discharge summary (82.4, SD 6.8 years) was significantly different than those who did not have a discharge summary (78.1, SD 7.3 years, $t(76) = 2.39, p=0.02$) (Table 2).

[Please insert table 2 about here]

Nature of ED re-presentations within 28 days

The nature of ED re-presentations is described for the overall sample (n=78) and then compared for those readmitted with the same or different diagnosis and those discharged with a discharge summary or not (see Table 3). The most common day of re-presentation was Saturday followed by Thursday. There was a significant difference in the diagnosis of re-presentations (grouped by system), with almost half (46.2%) of all re-presentations for cardio-respiratory conditions. It is also notable that most (55.4%) of those re-presenting with cardio-respiratory conditions did not have a discharge summary

[Please insert Table 3 about here]

For this sample, the median time in ED was 3.5 hours (IQR: 2.2-5.5) and in MAU was 21.1 hours (IQR: 15.0-26.3). There were no significant differences between people who re-presented with the same diagnoses and those who re-presented with different diagnoses. Around half (54.5%) of those who re-presented with a discharge summary exceeded the four-hour ED LOS target, compared to one-third (30.4%) of those who did not have a discharge summary.

[Insert Table 4 about here]

Sub-group analysis

The data for specific groups (people who lived alone, who were 85 years and older, and who re-presented within seven days) were further analysed. People who lived alone (n=18) were mostly female (78%; n=14), comprised a low proportion of cognitive impairment (11%; n=2) and 39% were married (n=7).

People older than 85 years (n=19) were mostly female (79%; n=15). Thirty-seven percent were cognitively impaired (n=7), most were widowed (79%; n=15) and one-third (32%; n=6) lived alone.

People who returned in less than one week (n=27) were mostly male (56%; n=15), less than one-fifth had cognitive impairment (19%; n=5), most were married (70%; n=19) and one-fifth (19%; n=5) lived alone.

Discussion

This study aimed to explore the characteristics of older people re-presenting to one health service in one Australian jurisdiction. Within this sample of older people, there was a high prevalence of chronic disease, supporting previous studies that associate re-presentations with advancing chronic disease trajectories (Mudge et al., 2011; McMillan et al., 2011). When considered together, the findings that (1) almost half of this sample re-presented with cardio-respiratory conditions, and (2) two-thirds of those *re-presenting for the same condition* had cardio-respiratory conditions and (3) discharge summaries were fewer for those with cardio-respiratory conditions, suggests that targeted discharge planning may be appropriate for older people with cardio-respiratory conditions.

The MAU was initiated as a model of care to reduce waiting in the ED (Elder et al., 2015). In this study, the median LOS in the MAU was 21 hours, consistent with the national standard of 36-48 hours (Internal Medicine Society of Australia and New Zealand, 2006). The longer time in

MAU, compared to ED, provides opportunities for thorough assessment and if necessary, education. While not tested in this study, other studies note that many people leave the hospital without adequate understanding of future care needs (Slatyer et al., 2013), leading to future re-presentations. Rather than continuing to perceive re-presentations in older populations as a problem, it may be timely to view frequent re-presentations as a reflection of the declining wellness trajectory and embrace the opportunity to discuss the need for supportive and palliative approaches to care, where required.

The median LOS in the ED was 3.5 hours, within the national target of four hours (AIHW, 2012). However, in this study, the ED length of stay tended to exceed the four-hour target when there was no discharge summary; and discharge summaries were not available for almost 70% of the sample. Completing discharge summaries for older people provides good information for families, community-based services, or nursing home. In this study, discharge summaries were more often completed for those who were older. While it is difficult to determine the nature of the specific discharge processes, the low percentage of discharge summaries suggests that discharge process, including the quality of the discharge summary, is an area for further investigation.

Based on earlier studies (Mudge et al., 2011), it was expected that poor nutrition would be associated with re-presentation within 28 days but this was not the case. In fact, less than 10% of the sample had poor nutrition (based on dietary order). The older people who re-presented in this study had multiple chronic diseases, consistent with other studies (Mudge et al., 2011; McMillan et al., 2011). People, including older people, need enough information to be confident to manage their illness (Wagner, 1998), especially if they are living alone (Aminzadeh & Dalziell, 2002). Information is often provided during hospitalisation, with recommendations to commence discharge planning for older people on presentation to hospital and also to include families and ongoing support at home (Bauer et al., 2009), to reduce the chance of re-presentation (Scott, 2010). The concept of an advanced practice nurse or nurse navigator (Oncology Nursing Society, 2013) may provide continuity between community and hospital-based services for older people with chronic illness (Pruitt & Sportsman, 2013).

Low socio-economic status has been associated with ED re-presentations (Moore et al., 2007). In this sample, all except three people were on a pension so we were unable to determine a relationship between a pension and ED re-presentations. It was expected that social isolation and loneliness may contribute to re-presentations (Aminzadeh & Dalziell, 2002) but there was no difference in re-presentations between people living alone or with others or for people over 85 years of age. For those who returned within seven days, one-quarter lived alone, indicating that those living alone, without a family member or formal carer monitoring their well-being, may present less often than those living with others. This finding is consistent with other research, indicating that families and carers may use ED to ensure older persons' well-being (Considine et al., 2010) or use the ED service when other services are not available (Langer et al., 2013; Moore et al., 2007). Descriptions and understanding of the social, as well as functional, abilities of older people who re-present are recommended.

The older people re-presenting to ED in this study had multiple co-morbidities, many of which are chronic diseases. Future studies should explore the connections between ED presentations, MAU admissions, community-based services, and General Practitioner chronic disease management plans. A systematic approach is required to develop individual confidence in self-management (Wagner 1998) for those who are independent but also consider the patient's carer for those who are not independent.

Limitations

Limitations to this study pertain to the sample and design. Regarding the sample, the sample size for this exploratory study was small, and findings may not be generalizable. This study focused on people who re-present to the ED and did not include people who may be unplanned admissions direct to the ward or outpatient services, such as people with renal disease or cancer.

Regarding the design, data collection was based on the hospital episode of care. Information about the general practitioner, whether there was a chronic disease management plan, and date of last general practitioner visit was not collected. For those people who were transferred to a hospital ward following MAU, data were not collected on where the patients went or for how

long they were admitted. In regard to the discharge summary, a description of the quality of the summary was not collected. Despite these limitations, this study provides direction regarding areas where further research should focus.

Implications for practice

The care of older people living with chronic diseases has been primarily researched in the primary health setting. Consistent with other studies, we found that older people have increasingly frequent contact with emergent and acute services as the chronic disease progresses. The discharge summary is a valuable element of healthcare for this population. The longer time in the MAU raises opportunities to actively incorporate education and advanced care planning into nursing care. Nurses working in MAU settings can take the lead in developing a template for the discharge summary that addresses the integration between MAU and established primary health services. Given that many older people are living with someone, developing discharge plans that draw upon established social networks is another area for nursing development. The nurse navigator role is emerging as a key element to strongly integrated care in cancer nursing; this role may be important in chronic disease nursing as well.

Conclusion

Older people who re-present to ED within 28 days tend to be much older, living with multiple chronic diseases, and living with others. While the MAU model of care was originally designed to reduce LOS in ED, it provides an opportunity for a model of integrated care, incorporating the primary health care system more formally. Finally, further research is required to identify predictors of re-presentation in this rapidly increasing hospital population group, including use of general practitioner services and a qualitative phenomenological study of their hospital experience.

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Table 1. [Data extraction variables sourced from electronic medical record](#)

| Variable | Description |
|---------------------------------------|---|
| Age | Age of patient, in years |
| Sex | Sex of patient (male / female) |
| Marital status | Single, married, widowed, divorced |
| Aboriginal or Torres Strait Islander | Yes/no |
| Culturally and linguistically diverse | Australian, name other country |
| Income source | Pension/ self funded retiree/ employed |
| Co-morbidities | Past medical/surgical history as per the medical clinical notes by type |
| Disability | These were listed according to the technical definition of disability by the Australian Institute of Health and Welfare (AIHW), World Health Organisation (WHO) and International Classification of Functioning, Disability and Health (ICF)by type |
| General practitioner | Yes/ no |
| Social support | Named service provider/ none |
| Driving | Yes/no |
| Living arrangements | With family/alone/ residential aged care facility |
| Type of diet ordered | Nil special diet/ Gluten-free or diabetic diet/ Nutritional supplement ie. sustagen |
| Mental Health | Noted dementia, depression, anxiety |
| Reason for presentation | Chief complaint at presentation |
| Current diagnosis | Diagnosis on discharge (DRG) |
| Previous diagnosis | Diagnosis on discharge (DRG) |
| Date of discharge for index admission | Year, month, date |
| Discharge summary | Completed, yes or no |

| | |
|---------------------------|--|
| ED length of stay (hours) | Time from arrival at ED to discharge from ED |
|---------------------------|--|

| | |
|--------------------|-------|
| MAU length of stay | Hours |
|--------------------|-------|

Table 2. Characteristics of older patients re-presenting to ED following discharge from hospital stay that included stay in MAU (n=78)

| Characteristic | Re-presenting Diagnosis | | | Discharge summary | | | |
|----------------|-------------------------|-----------------------------------|--|-------------------|---------------------|--------------------|-------------|
| | Total N=78 (%) | Same Diagnosis N=35 (44.9%) | Different Diagnosis N=43 (55.1%) | P value | Yes N=22 (28.2%) | No N=56 (71.8%) | P value |
| Mean Age (SD) | 79.3 (7.4) | 78.6 (6.8) | 79.8 (7.9) | 0.47 | 82.4 (6.9) | 78.1 (7.3) | 0.02 |
| Age Group | | | | 0.81 | | | 0.09 |
| 65-74 | 22 (28.2) | 10 (28.6) | 12 (27.9) | | 2 (9.1) | 20 (35.7) | |
| 75-79 | 19 (24.4) | 10 (28.6) | 9 (20.9) | | 7 (31.8) | 12 (23.2) | |
| 80-84 | 18 (23.1) | 8 (22.9) | 10 (23.3) | | 5 (22.7) | 13 (23.2) | |
| 85+ | 19 (24.4) | 7 (20.0) | 12 (28.3) | | 8 (36.4) | 11 (19.6) | |
| Sex, male | 29 (37.2) | 15 (42.9) | 14 (32.6) | 0.35 | 7 (31.8) | 22 (39.3) | 0.54 |

| | | | | | | |
|-------------------------------|-----------|-----------|-----------|------|-----------|-----------|
| Marital status | | | | 0.41 | | 0.72 |
| Married, yes | 45 (57.7) | 23 (62.9) | 23 (53.5) | | 12 (54.5) | 33 (58.9) |
| Single, widowed, or divorced | 33 (42.3) | 13 (37.1) | 20 (46.5) | | 10 (45.5) | 23 (41.1) |
| Living arrangements | | | | 0.96 | | 0.96 |
| Live alone | 18 (23.1) | 8 (22.9) | 10 (23.3) | | 5 (22.7) | 13 (23.2) |
| Live with others ^a | 60 (76.9) | 27 (77.1) | 33 (76.7) | | 17 (77.3) | 43 (76.8) |
| Nutritional supplement | | | | 0.27 | | |
| Yes | 7 (9.0) | 2 (5.7) | 5 (11.6) | | 3 (13.6) | 4 (7.1) |
| No | 69 (88.5) | 33 (94.3) | 36 (83.7) | | 18 (81.8) | 51 (91.1) |
| Diet undocumented | 2 (2.6) | 0 (0.0) | 2 (4.7) | | 1 (4.5) | 1 (1.8) |
| Cognitive impairment (CI) | | | | 0.51 | | 0.35 |
| CI, yes | 16 (20.5) | 6 (17.1) | 10 (23.3) | | 6 (27.3) | 10 (17.9) |
| CI, not reported ^b | 62 (79.5) | 29 (82.9) | 33 (76.7) | | 16 (72.7) | 46 (82.1) |

| | | | | | | |
|--------------------------|-----------|-----------|-----------|------|-----------|-----------|
| Number of co-morbidities | | | | 0.75 | | 0.34 |
| 0-7 | 43 (55.1) | 20 (57.1) | 23 (53.5) | | 14 (63.6) | 29 (51.8) |
| 8+ | 35 (44.9) | 15 (42.9) | 20 (46.5) | | 8 (36.4) | 27 (48.2) |

a. Live with family or in a residential care facility; b. CI is only counted if stated, specific assessment for CI was not consistently used

Table 3. Older people re-presentation characteristics

| Characteristic | Re-admitting Diagnosis | | | Discharge summary | | | |
|-----------------|------------------------|---------------|---------------|-------------------|--------|--------|-------------|
| | Total | Same | Different | P | Yes | No | P |
| | N=78 | Diagnosi s | Diagnosi s | value | N=22 | N=56 | value |
| | (%) | N=35 | N=43 | | (28.2% | (71.8% | |
| | | (44.9%) | (55.1%) | |) |) | |
| Day of arrival | | | | 0.80 | | | 0.23 |
| Monday | 12 | 5 | 7 | | 3 | 9 | |
| | (15.4) | (14.3) | (16.3) | | (13.6) | (16.1) | |
| Tuesday | 11 | 6 | 5 | | 5 | 6 | |
| | (14.1) | (17.1) | (11.6) | | (22.7) | (10.7) | |
| Wednesday | 8 | 2 | 6 | | 0 | 8 | |
| | (10.3) | (5.7) | (14.0) | | (0.0) | (14.3) | |
| Thursday | 16 | 9 | 7 | | 5 | 11 | |
| | (20.5) | (25.7) | (16.3) | | (22.7) | (19.6) | |
| Friday | 8 | 4 | 4 | | 4 | 4 | |
| | (10.3) | (11.4) | (9.3) | | (18.2) | (7.1) | |
| Saturday | 17 | 7 | 10 | | 3 | 14 | |
| | (21.8) | (20.0) | (23.3) | | (13.6) | (25.0) | |
| Sunday | 6 | 2 | 4 | | 2 | 4 | |
| | (7.7) | (5.7) | (9.3) | | (9.1) | (7.1) | |
| Re-presentation | | | | 0.05 | | | 0.03 |
| diagnosis by | | | | | | | |
| system | | | | | | | |

| | | | | | |
|--------------------|--------|--------|--------|--------|--------|
| Cardiovascular- | 36 | 22 | 14 | 5 | 31 |
| Respiratory | (46.2) | (62.9) | (32.6) | (22.7) | (55.4) |
| Musculoskeletal | 17 | 4 | 13 | 7 | 10 |
| - | (21.8) | (11.4) | (30.2) | (31.8) | (17.9) |
| Skin | | | | | |
| Abdominal | 14 | 5 | 9 | 7 | 7 |
| | (17.9) | (14.3) | (20.9) | (31.8) | (12.5) |
| Other ^a | 11 | 4 | 7 | 3 | 8 |
| | (14.1) | (11.4) | (16.3) | (13.6) | (14.3) |

a. Other includes central nervous system, endocrine, mental health, and pyrexia of unknown origin

Table 4. Outcomes for older people re-presenting to ED

| Outcomes | Total | Re-admitting Diagnosis | | | Discharge summary (DcS) | | |
|--|-------------------|------------------------|------------------------|----------------|-------------------------|---------------------|----------------|
| | | Same Diagnosis | Different Diagnosis | P valu e | Yes DcS | No DcS | P valu e |
| | N=78 (%) | N=35 (44.9%) | N=43 (55.1%) | | N=22 (28.2%) | N=56 (71.8%) | |
| Median (IQR) ED LOS, hours | 3.5 (2.2-5.5) | 3.3 (2.2-4.5) | 3.6 (2.2-5.8) | 0.31 | 5.3 (2.2-7.1) | 3.3 (2.2-4.4) | 0.08 |
| ED LOS 4+ hrs, n (%) | 29 (37.2) | 11 (31.4) | 18 (41.9) | 0.34 | 12 (54.5) | 17 (30.4) | 0.05 |
| Median (IQR) MAU LOS, hours | 21.1 (15-26.3) | 19.5 (14.2-24.4) | 22.7 (15.3-30.8) | 0.17 | 22.3 (18.5-35.6) | 19.5 (14.0-25.8) | 0.06 |
| Median (IQR) Days to re- presentation ^{a,b} | 11 (5.0-19.0) | 9.0 (4.0-17.5) | 14.0 (5.0-20.0) | 0.21 | 8.0 (3.0-20.8) | 11 (7.0-18.0) | 0.57 |

a. 34 re-presenters (same diagnosis)

b. 55 re-presenters (no discharge summary)