Acute Care at Home (AC@H) Test of Change

Evaluation Report

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Background

To meet increasing demographic and economic challenges, health and social care delivery may require adaptation. One priority is shifting the provision of care from an acute to community settings, with the intention of reducing pressure on hospital beds. A model receiving increasing interest is 'Hospital at Home' (H@H), in which patients receive acute care, usually provided in hospital, in their own home. Prior models predominantly utilise one of two distinct admission pathways: alternative to admission (referrals from community in order to prevent a hospital admission) and supported discharge (referrals from hospital settings to return home sooner and receive the final part of their hospital care at home). These models have demonstrated positive impact at patient and systems levels, however the model was yet to be tested within Aberdeen City.

This report describes the evaluation of a H@H model adapted to the local context and described as 'Acute Care at Home' (AC@H). The aims of this evaluation were to test feasibility, understand service perceptions and to explore mechanisms integral for implementation and scalability.

Methods

The AC@H service became operational in June 2018. The multidisciplinary team consisted of an Advanced Nurse Practitioner, Occupational Therapist, Physiotherapist, 2 x Pharmacy Technicians (covering 0.5 wte) and 5 x Healthcare Support Workers. Issues in recruitment of the Consultant Geriatrician resulted in the supported discharge model being predominantly utilised.

The evaluation framework was co-created in one workshop with the project team. Service data collected included: caseload characteristics (including referral source, number of admissions, care provided and location of discharge). Patient data collected included: patient location 90 days following AC@H admission, re-admission rates, satisfaction questionnaire responses and two detailed case studies. Staff level data collected included a satisfaction questionnaire and semi-structured interviews. A satisfaction survey was also completed by unpaid carers and staff interacting with the service.

Results

Service perspective: Results described are inclusive of the first six months of service operation (12/06/18 - 12/12/18). There were a total of 84 admissions to the service, most of which were from GAU (Geriatric Assessment Unit) using the early discharge model (67%) and consisted of older adults with frailty requiring support following hospital discharge. The majority of the caseload were referred due to mobility concerns or other functional assessments, with social input predominantly provided such as equipment provision and personal care.

In comparison to a GAU admission, more patients from AC@H were living at home 90 days following AC@H discharge (2.5% more) and lower mortality rates were reported (6.8% less),

suggesting the service is no less safe than usual care. Patient acuity in AC@H was not necessarily representative of that of those in GAU so results should be interpreted cautiously.

In order to address medical recruitment challenges, AC@H staff identified a solution to build upon the existing geriatric skills of the patient's own GP or a GP with special interests and other health professionals. It was also identified that referral pathways and operating hours would require expansion for service scaling. IT system issues included AC@H staff not gaining access to all the systems required to plan patient care effectively.

Patient perspective: Patients were highly satisfied with the service (average score 4.1/5), particularly that they felt confident in the team (average score 4.5/5). AC@H staff identified that it was reassuring for people to receive care at a vulnerable time period transitioning from hospital to home and that continuity of staff facilitated relationship building. Potential mechanisms in model success include: rapid access to care and resources, the ability to carry out assessment in a home environment.

Unpaid carer perspective: The majority of unpaid carers were family members (88%), and reported a preference to having their cared for person supported at home as opposed to in hospital (average score 4.3/5), resulting in reductions in self-reported stress levels (average score 4.4/5).

Staff perspective: The AC@H team were satisfied with their job (average score 73%), and a positive team dynamic was present, facilitated by management staff who demonstrated a more inclusive, non-hierarchical management style. Staff were highly satisfied with training provided although, it should be clearly noted, the quantity of training provided limited admissions entering the service.

AC@H Staff overall had a positive experience working other teams. Co-location supported relationship building, however there was dissatisfaction with the office environment. Most AC@H staff had pre-existing relationships that they could engage with which improved intra-professional collaboration. Staff interacting with AC@H also report high satisfaction with the service overall (average score 79%). AC@H staff reported that interacting organisations viewed their service function to address social care needs.

Discussion and recommendations

The service appears no less safe than usual care and satisfactory to patients, unpaid carers, staff and interacting organisations, primarily due to rapid access to care and resources in facilitating reablement. A predominantly transformative management style may have enabled strong team dynamic. Training needs to be managed so that staff can be sufficiently upskilled to deliver a high quality care without negatively impacting service provision. Co-location can be successful, but requires that the office environment is also satisfactory for a sustained benefit. The team's network of pre-existing relationships may be a tool to promote service function, which is described as often mistaken. In the absence of consultant geriatric cover, there are many other health professionals that could be upskilled to deliver a comparable service. If there are adequate solutions to ensure the team can access information on both acute and community systems, this will enhance effective patient care coordination.

Key points

- Acute Care at Home is a feasible model in Aberdeen with care provision appearing to be no less safe than care in hospital.

- Patients, unpaid carers, staff and staff interacting with AC@H were satisfied with the service.

- Unpaid carers had a preference for having their cared for person treated at home rather than in hospital and that this reduced their stress levels.

- Mechanisms that appear to be integral to model success include; care provision at a vulnerable time for patients, continuity of care, rapid access to resources and the ability to carry out assessments in patients' own home.

- Having a more inclusive management style which is non-hierarchical in nature appears to lead to high staff satisfaction.

- Prioritisation between service operation and staff upskilling should be identified – both cannot progress simultaneously.

- Co-location can enhance opportunities for partnership working, however, the environment that colleagues are based in also needs to be satisfactory for this to be sustainable.

- Considering localised recruitment challenges, theoretically-sound models of care delivery should be sought out and adapted to deliver locally to account for these challenges.

- In order for service expansion, broadening of referral pathways and operational hours is necessary, in conjunction with more staff delivering the AC@H approach.

1. Introduction

Scotland's demographic climate is changing, with predictions the population of 65-74 years will increase by 17%, and over 75 years by 79% in the next 25 years[1]. As a result acute services are becoming increasingly challenged, with unscheduled hospital admissions rising primarily from those over 65 years[2]. Furthermore, over 75 years olds make up the majority of delayed discharges from hospital (69%)[3]. Inefficiencies are predominantly due to a lack of resources available in the community which are able to provide escalated levels of care in situations of temporary decline or ill health[4]. The financial environment is also tightening, with Health Boards pushed to make savings of £449.1 million in 2017/18 despite increasing operational costs[5]. It is well recognised nationally that continuing to use current models of health and social care delivery is unsustainable. From a patient perspective, treatment in hospital may not always be the best environment for frail older adults, with potential risks such as functional decline due to immobility[6] and acquiring infections[7], rising with increasing length of stay.

A local[8] and national[9] approach to tackle these challenges is to shift the balance of care from acute settings into the community, with the aim of alleviating pressure on hospital beds. One model of care receiving increasing interest is Hospital at Home (H@H), characterised by providing acute care, which would usually be provided in a hospital setting, in an individual's own home. A coordinated multi-disciplinary team of health professionals provide active treatment for a time limited period, typically between 1 and 7 days. Support from friends, family members and other unpaid networks is an important element to provide patient care in their own home[10]. The model can be categorised by two separate elements and typically when implemented, the focus of care is on one of these two elements. Patients may be admitted through primary care services (e.g. GP) or the emergency department (ED), to receive acute care at home and avoiding a hospital admission (alternative to admission). Patients can also

[1] National Records of Scotland (2017). Projected Population of Scotland (2016-based). National Population Projections by sex and age with UK comparisons. Edinburgh: Scottish Government.

[2] ISD (2018). Acute Hospital Activity and NHS Beds information in Scotland. Annual Year ending 31st March 2018. Information Services Division Scotland.

[3] ISD (2018). Delayed discharges in NHSScotland: Annual summary of occupied bed days and census figures. Figures up to March 2018. Information Services Division Scotland.

[4] Scottish Government (2016). A national clinical strategy for Scotland. Edinburgh: Scottish Government.

[5] Audit Scotland (2018). NHS in Scotland 2018. Edinburgh: Audit Scotland.

[6] Hoogerduijn, J. G., et al. (2007). A systematic review of predictors and screening instruments to identify older hospitalized patients at risk for functional decline. *Journal of Clinical Nursing*, *16*(1), 46-5

[7] Hussain, M., et al. (1996). Prospective survey of the incidence, risk factors and outcome of hospital-acquired infections in the elderly. *Journal of Hospital Infection*, *32*(2), 117-126.

[8] Aberdeen City Health & Social Care Partnership. (2019). Aberdeen City Health and Social Care Partnership Strategic Plan 2019-22. Available from: https://www.aberdeencityhscp.scot/globalassets/strategic-plan-2019-2022.pdf [accessed 11/03/19].

[9] Scottish Government (2013). A Route Map to the 2020 Vision for Health and Social Care. Edinburgh: Scottish Government.

[10] Shepperd, S., et al. (2009). Early Discharge Hospital at Home. *Cochrane Database of Systematic Reviews*, 1.

be admitted from an acute hospital ward, being discharged early to receive the final part of their acute care with the H@H team (active recovery on discharge)[11].

H@H has demonstrated promising results such as reducing length of stay in hospital, with one study demonstrating a 62% shorter stay than those treated in hospital for comparable conditions[12]. Evidence has also shown a reduced risk of living in an institutional setting one year following care[13]. High service satisfaction rates has been reported with 95% of patients and 98% of relatives stating they would recommend the service to others[14]. Reasons reported by patients include being able to receive care at home, receiving frequent visits following hospital discharge when anxiety was high and being actively involved in their treatment plan. In addition, staff felt the provision of rehabilitation at home improved patient engagement[15].

This report describes the evaluation of the H@H model in Aberdeen City, which was adapted and described locally as Acute Care at Home (AC@H, described in the methods section). The aims of this evaluation were; 1) to test feasibility of the H@H model in the local context, 2) to understand service perceptions from multiple perspectives and 3) to understand integral mechanisms necessary for model success and scalability.

[11] Shepperd, S., et al. (2016). Admission avoidance hospital at home. *Cochrane Database of Systematic Reviews*, 9.

[12] Richards, S. H., et al., (1998). Randomised controlled trial comparing effectiveness and acceptability of an early discharge, hospital at home scheme with acute hospital care. *British Medical Journal*, *316*(7147), 1796-1801.

[13] Gonçalves-Bradley, D.C., et al. (2017). Early discharge hospital at home. *Cochrane Database of Systematic Reviews*, 6.

[14] Harris, R., et al. (2005). The effectiveness, acceptability and costs of a hospital-at-home service compared with acute hospital care: a randomized controlled trial. *Journal of Health Services Research & Policy*, *10*(3), 158-166.

[15] Cunliffe, A. L. et al., (2004). Sooner and healthier: a randomised controlled trial and interview study of an early discharge rehabilitation service for older people. *Age and Ageing*, *33*(3), 246-252.

2. Methods

2.1 Service Design

The Acute Care at Home (AC@H) project was funded by Aberdeen City Health and Social Care Partnership's Integrated Joint Board as part of a transformation programme to redesign local services. The service became operational on 12/06/18 and was based at Links Resource Centre, City Hospital (Aberdeen City Centre, Central Locality). The multi-disciplinary team consisted of 1 x Advanced Nurse Practitioner (ANP), 1 x Physiotherapist (PT), 1 x Occupational Therapist (OT), 5 x Health Care Support Workers (HCSWs), 2 x Pharmacy Technicians (PTech, covering 0.5wte post) and overseen by a Team Leader (TL). The AC@H theoretical model follows two distinct patient pathways of activity described previously: 1) alternative to admission and 2) supported discharge. Due to recruitment challenges (described in the results section), the first six months of service operation predominantly utilised the supported discharge model (Appendix A). In December 2018, the service begin receiving referrals from GPs from one locality (West) through the alternative to admission pathway (Appendix B). Inclusion criteria consisted of those over 75 years, either requiring assistance or managing independently with personal care and where support was required during their acute need (or following recovering of an acute condition) e.g. nursing, therapy input was necessary.

2.2 Data collection and analysis

2.2.1 Evaluation framework development

The evaluation framework was developed through a co-creation workshop, informed by theory described elsewhere[16]. A Research & Evaluation Manager and a Public Health Researcher facilitated the four hour workshop with a range of key stakeholders (Table 1) from the project team prior to the service go live date (April 2018). The workshop was separated into two parts: 1) what key outcomes the project would achieve; and 2) how these outcomes would be measured.

In the first part of the workshop, co-creators discussed and agreed which key outcomes should be measured to determine project success. Two types of evaluation were explored; 1) process evaluation (considering the project's implementation); and 2) outcome evaluation (considering the impact of the project on patients, informal carers, staff and at a service level). A scoping review was carried out prior to the co-creation workshop which was presented to co-creators to initiate conversation and stimulate thinking around appropriate measures. Examples from previous literature, for each target group, were presented and co-creators discussed in small groups which outcomes would be important to measure. Ideas were fed back to the wider group and facilitators provided support to identify and prioritise which key components to be measured.

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[16] Leask, C. F. et al. (2019). Framework, principles and recommendations for utilising participatory methodologies in the co-creation and evaluation of public health interventions. *Research Involvement and Engagement*, *5*(1), 2.

The second part of the workshop considered how the outcomes agreed in part 1, would be practically measured (e.g. when, how and who would collect relevant data). Facilitators provided co-creators with information about methods to measure outcomes (e.g. interviews, focus groups and questionnaires) and (dis)advantages to each approach. Co-creators discussed possible approaches in small groups and fed back ideas to the larger group. Facilitators supported in reaching collective agreement on how components would be measured. The information from the workshop was used to develop the project evaluation framework.

The framework developed was an idealistic representation of the evaluation that could be carried out. The complex nature of the new service meant it was necessary that the framework was agile and could adapt if and when circumstances or need changed. There was both acknowledgement and agreement from the co-creators that the developed framework may be required to be adapted once the service had been implemented.

Table 1. Co-creation workshop attendees (N=10)

Workshop Attendees
Research Manager x 1
Public Health Researcher x 1
Team Leader x 1
Senior Healthcare Support Worker x 3
Occupational Therapist x 1
Advanced Nurse Practitioner x 1
Consultant Geriatrician x 1
Transformation Programme Manager x 1

2.2.2 Service level data

Service level data collected included: caseload (total and by month), patient characteristics, length of stay (days), referral reason & source, discharge location and type of input provided.

2.2.3 Patient data collection

Patient location at 90 days was measured (e.g. in a hospital-setting/non-hospital community-setting/deceased). To provide context to these numbers, figures from GAU for the comparable time period were also gathered.

Patient satisfaction was measured using a satisfaction questionnaire which was completed by patients on discharge from AC@H (Appendix C). The questionnaire consisted of four components; 1) overall satisfaction; 2) recommendations to others; 3) confidence in the AC@H

team: and 4) coordination of care. Overall satisfaction was measured using a 10 point Likert scale (1-extremely unsatisfied to 10 – extremely satisfied) and the other components were measured on a 5 point Likert scale (strongly agree-strongly disagree). Qualitative responses were also captured to supplement this data.

Two detailed patient case studies were carried out by AC@H staff which described each patient's experience with the AC@H service (including background, treatment provided and outcomes).

2.2.4 Unpaid carers experience

Unpaid carers' satisfaction with the service was measured using a questionnaire completed on patient discharge (Appendix D). Caseload characteristics were recorded (e.g. gender, age, relationship, time spent in caring role). Components assessed included how key constructs regarding perceived skill and knowledge attainment from the AC@H team, signposting to community assets, and whether responders would prefer individuals to be supported in a hospital or non-hospital setting. Constructs were measured on a 5 point Likert scale (strongly agree-strongly disagree).

2.2.5 AC@H staff measures

Individual interviews were conducted with staff members involved in delivering or managing the service (N=13). Interviews were semi-structured and followed a topic guide to stimulate discussion around their experience working in the new service (Appendix E). The topic guide covered four broad themes: 1) overall experience; 2) enablers to service implementation; 3) barriers to implementation; and 4) considerations for scaling (for topic guide, see supplementary material). Interviews were audio recorded and lasted no longer that 60 minutes. Field notes were taken by the interviewer during the interview, if necessary, for reference during data analysis.

Audio recordings were transcribed verbatim using internal audio typists, and were analysed thematically using NVivo software. Thematic analysis is a method of identifying patterns in data around a specific area of interest, in this case, staff experience of working in the AC@H team[17]. Data analysis using this approach, described by Braun and Clarke[18] follows a six step framework: 1) data familiarisation; 2) initial code development; 3) searching for themes; 4) reviewing of themes; 5) defining themes and 6) results write up. Two researchers independently analysed the data then compared findings and made adaptations, where necessary, until agreement was reached.

Interviews were supplemented with a questionnaire comprised of numerous constructs of interest that would impact on the implementation of the service (Appendix F). These included: perceived development opportunities; workload; team working and communication.

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[17] Maguire, M & Delahunt, B. (2017). Doing a thematic analysis: a practical, step-by-step guide for learning and teaching scholars. *AISHE-J*; 9(3).

[18] Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research Psychology*, 3(2), 77-101.

A questionnaire was also distributed to staff interacting with AC@H, including other health and social care professionals (Appendix G). Responders assessed the AC@H communication qualities, referral process and overall satisfaction of their collaborative experience.

3. Results

3.1 Service overview

3.1.1 Caseload characteristics

To provide consistency, the results described were collected for the first six months of service operation (12/06/18 - 12/12/18) unless otherwise stated.

Table 2 displays characteristics of the AC@H caseload. There were approximately even numbers of male and females using the service, of which the majority were older adults. There was a roughly even split of those entering the service from the most affluent (SIMD 4 & 5, 47.6%) and most deprived areas (SIMD 1 & 2, 34.2%). Days spent in the service and number of visits required ranged widely possibly explained by variability in number of previous medical conditions reported, implicating a range of differing levels of need present in the caseload.

Table 2. Characteristics of AC@H caseload

Characteristic	Total
Caseload, N	84
Female, N (%)	54.8 (45.2)
Age, mean (range)	86.2 (67-102)
SIMD Scores N (%)	
1	9 (10.7)
2	19 (22.6)
3	6 (7.1)
4	10 (11.9)
5	31 (36.9)
Not reported	9 (10.7)
Caseload days, mean (range)	5.2 (1-17)
Mileage, mean (range)	4.1 (1-7)
Travel time per visit, minutes, mean (range)	14.6 (5-30)
Number of visits per patient (mean, range)	5 (1-21)
Admissions per month, mean (range)	14.1 (4-20)
Previous conditions reported, mean (range)	4 (1-10)
Disciplines inputted into care, mean (range)	1.6 (1-4)

NB: SIMD = Scottish index of multiple deprivation with scores from 1 (most deprived) to 5 (least deprived)

3.1.2 Admissions

The number of service admissions by month is described in Figure 1. Data is inclusive of 12/06/18 – 31/12/18, with only half a month of data presented for June when the first admission was received.

Admissions by Month to AC@H
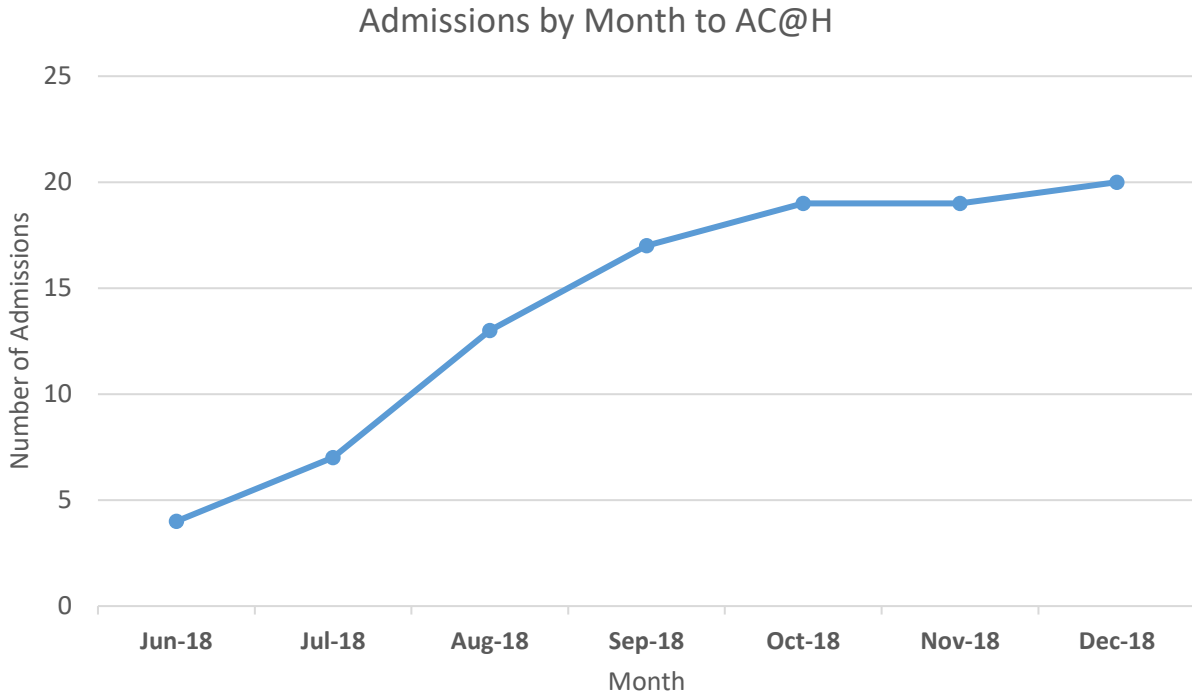
Figure 1. AC@H monthly admission rates (N=84)

Referral sources (N=84) are displayed in Figure 2 with the majority from the Geriatric Assessment Unit (GAU, 67%). A small number of referrals (8%) came from two sources; GAU and Community Links Service. Referrals sources described in the 'other' category (5%) were from; Link Geriatrician (n=1), Physiotherapy/Community Adult Assessment and Rehabilitation Service (n=1), Woodend Hospital (n=1) and Ward 105 (n=1).

Patient Referral Source

- Geriatric Assessment Unit
- Community Links Service
- Geriatric Assessment Unit & Community Links Service
- Other
- Not reported
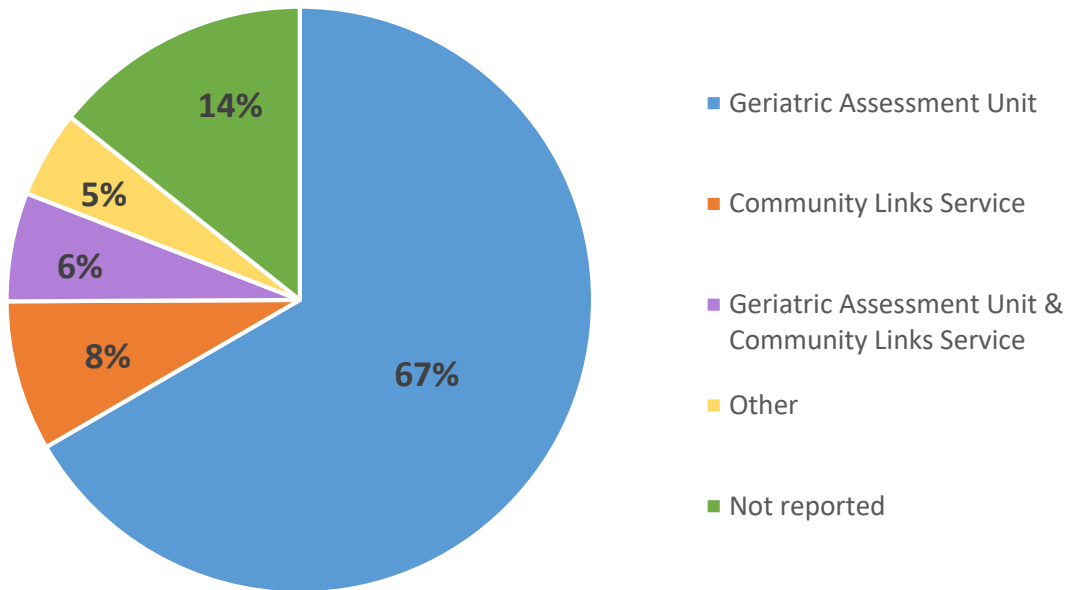
Figure 2. AC@H referral source

Figure 3 shows most frequently reported relevant past medical history, with many patients displaying multiple health conditions (N=171). Wide variability was present with many patients displaying comorbidities which highlights the complexity of the caseload. Most frequently reported conditions in the 'other' category include; kidney disease (4%), cognitive impairment (4%) and bowel condition (4%).

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Relevant Past Medical History
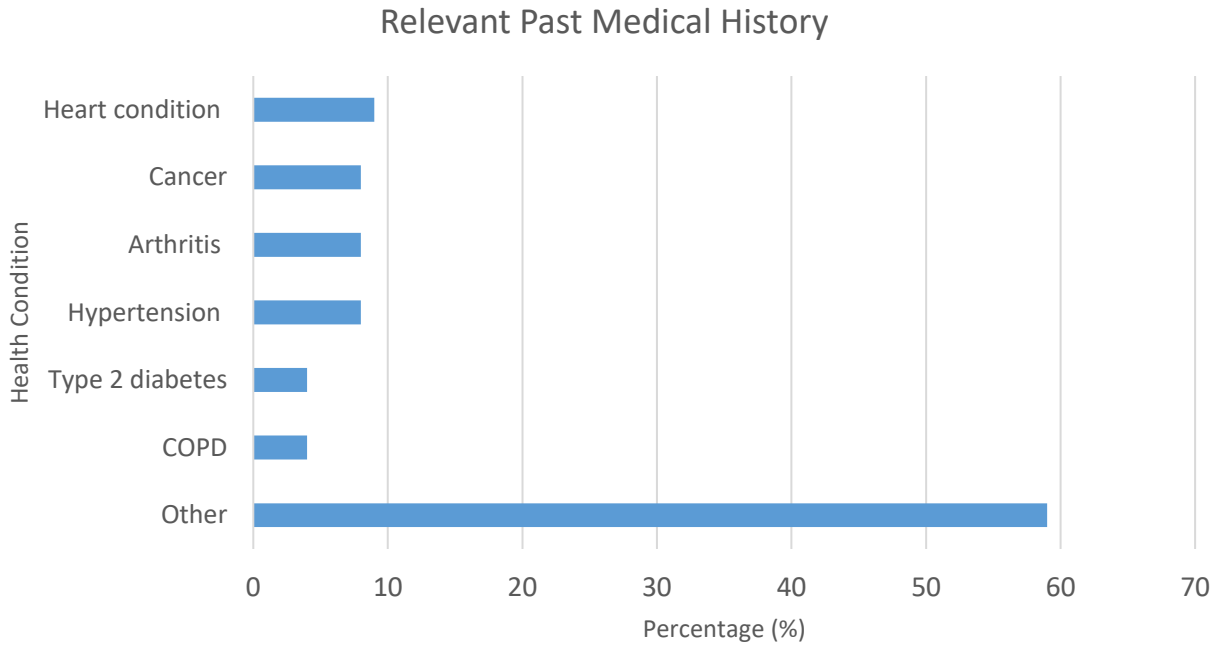
Figure 3. Relevant past medical history of the AC@H caseload

Figure 4 describes primary referral reasons to the AC@H service (N=84). Reasons for admission included in the 'other' category include; chest infection (1.2%), frailty (1.2%), fracture (1.2%) and OT equipment (1.2%).
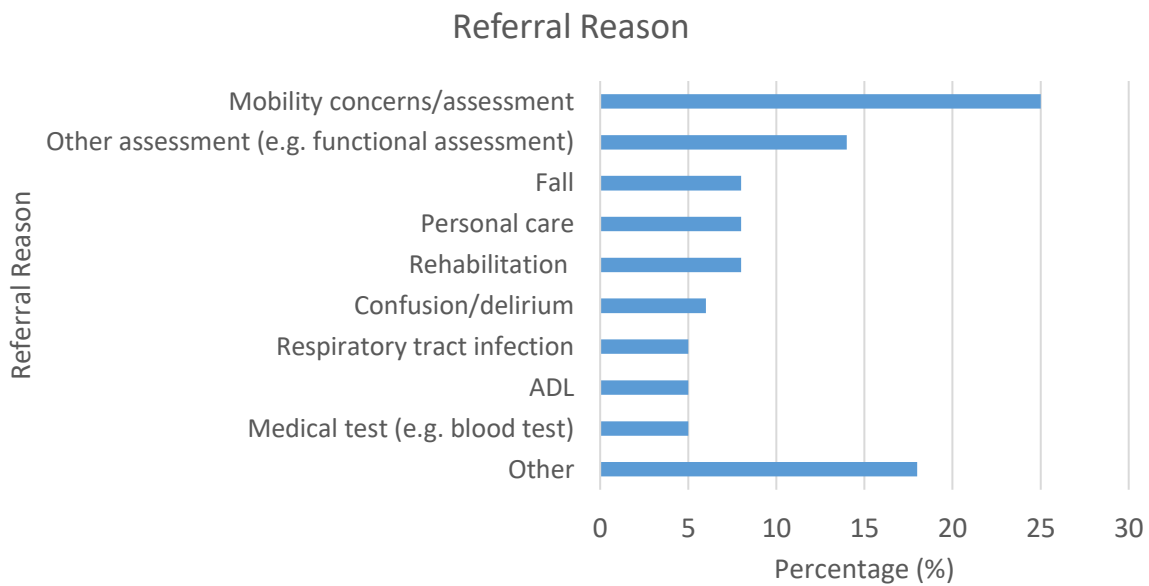
Referral Reason

Figure 4. Primary AC@H referral reasons

Figure 5 displays primary diagnosis reasons, if reported, with patients often diagnosed with more than one issue (N=137). 'Other' category diagnosis reasons include; personal care (3%), dizziness (3%), fracture (3%) and heart condition (3%).
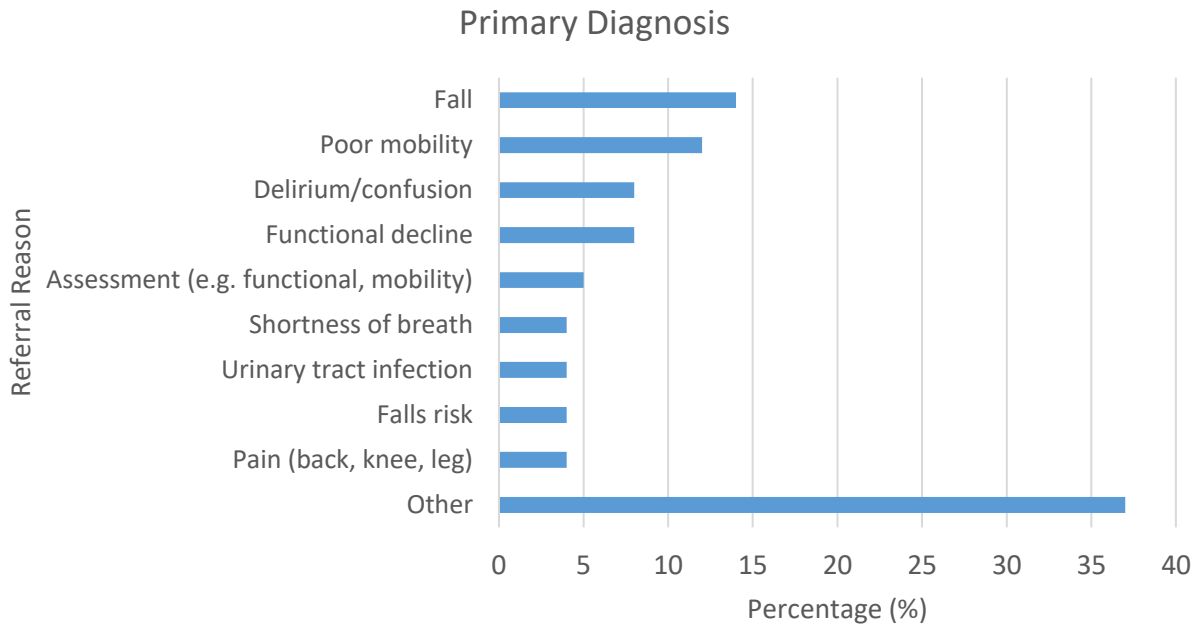
Primary Diagnosis

Figure 5. Primary diagnosis of the AC@H caseload

3.1.3 Patient discharge location

Discharge location following admission to AC@H is described in Figure 6, with the majority of patients discharged home (68%).

Discharge Location
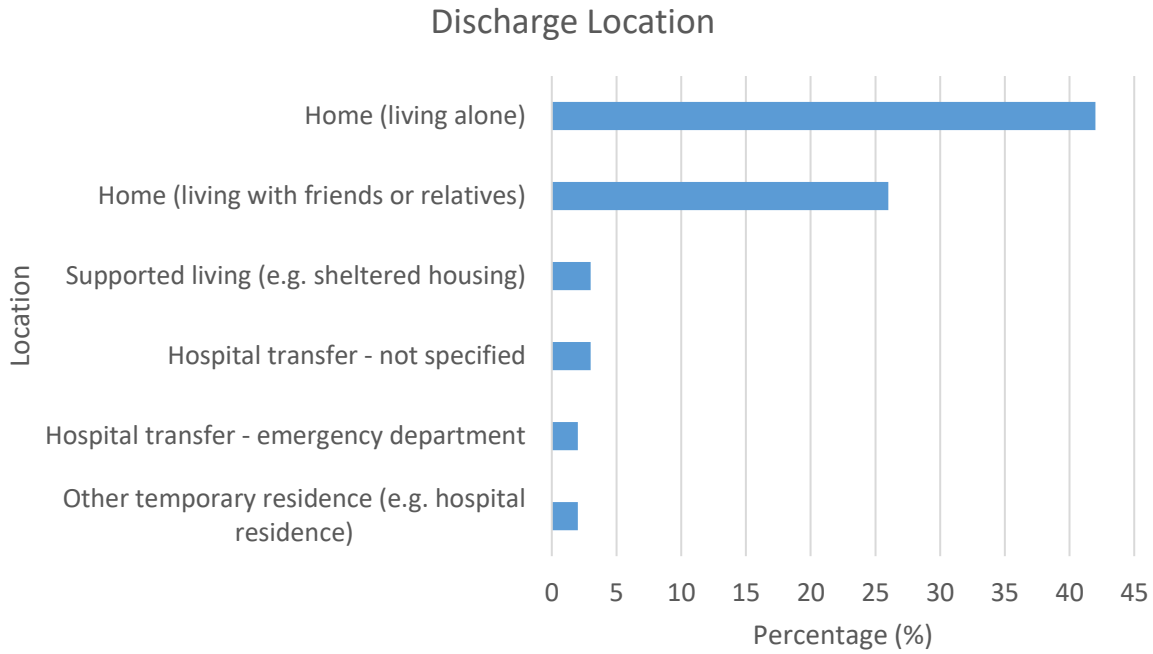
Figure 6. AC@H location of discharge (N=84)

3.1.4 Interventions

Figure 7 describes primary actions undertaken during an admission by the AC@H team, with numerous activities reported for each patient (N=215).

Reported Actions
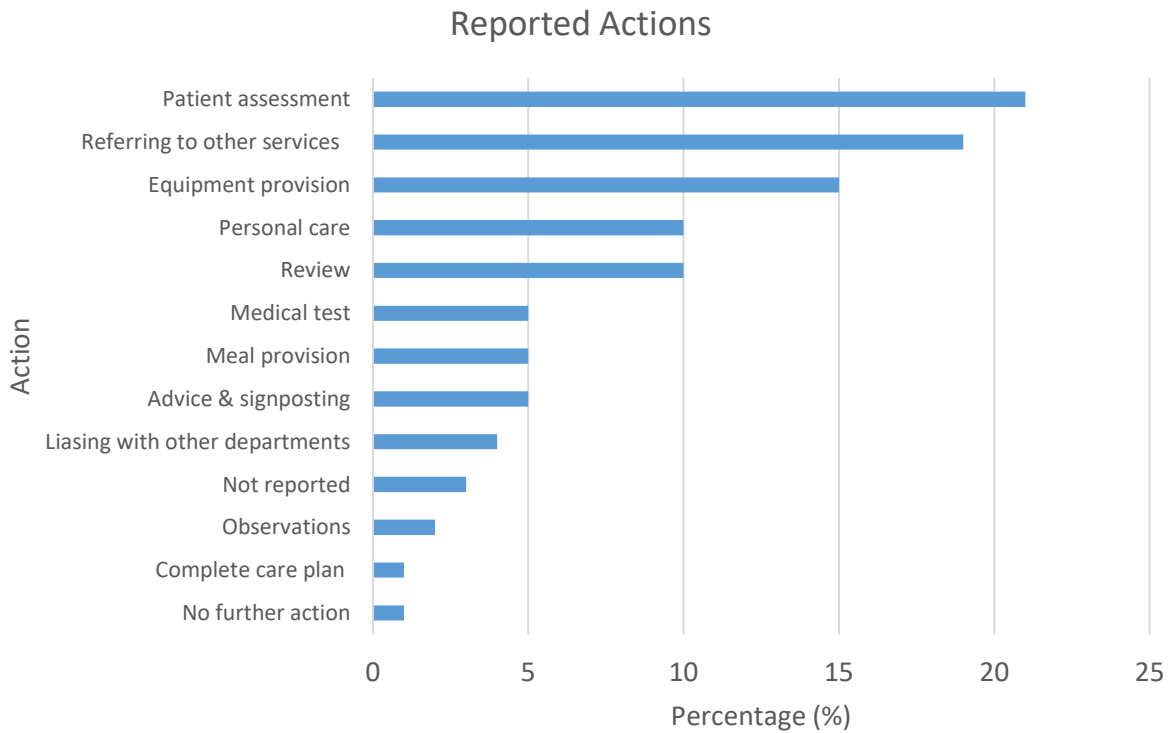
Figure 7. Primary actions carried out by the AC@H team

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The type of specialities that provided input per admission, over and above care provided by HCSWs, are described in Figure 8. Most patients were seen by more than one speciality, pre-dominantly OT and PT (N=123), which is reflective of the needs of patients referred into the service.
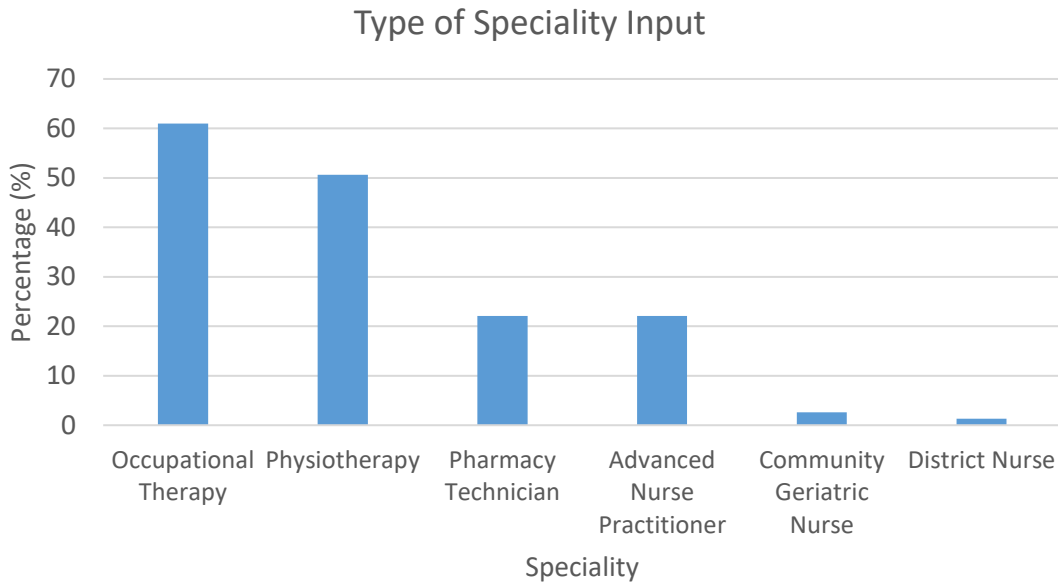
Figure 8. AC@H caseload speciality input type

Figure 9 displays the number of specialities that inputted into care per admission over and above care provided by HCSWs. Most were seen by 1 or 2 different specialities (74.1%), with only 6.5% seen by four different specialities during their episode of care. Speciality input was not reported for 15.9% (N=13) of the caseload.
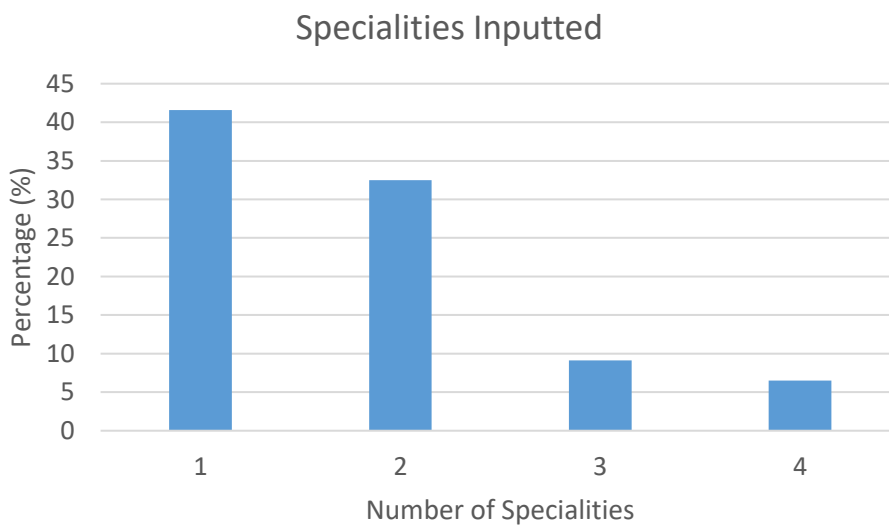
Figure 9. Number of specialities inputted into caseload

3.2 Patient results

3.2.1 Patient outcomes

Patient location 90 days following an AC@H and GAU admission is described in Table 3 (N=82). Due to data extraction timing, not all patients admitted to AC@H in the first six months were eligible to be followed up to 90 days. More patients were at home or a community setting 90 days following admission to AC@H than those admitted to GAU. Mortality rates were lower 90 days following admission to AC@H than GAU. However, slightly more of the AC@H case-load in hospital 90 days post admission, than those admitted to GAU. Readmission rates, 28 days following discharge, were comparable for both AC@H (32.9%) and GAU (32.4%). For the period of implementation, the acuity of patients was not necessarily representative of that of those in GAU so results should be interpreted with caution (as described later).

Table 3. Patient location 90 days following AC@H or GAU admission

Patient Location at 3 months	AC@H (N=82)	GAU (N=1028)
Hospital N, (%)	8 (10)	59 (5.7)
Deceased N, (%)	9 (11)	183 (17.8)
At home/community setting N, (%)	65 (79)	786 (76.5)

3.2.2 Patient service satisfaction

Responses to the patient service satisfaction questionnaire are displayed in Table 4. Satisfaction with the AC@H service was reported highly, with agreement or strong agreement they were satisfied with the service and would recommend it to others. Open-ended responses provided were all positive, including that they felt staff were skilled, knowledgeable, kind and caring and that patients felt comfortable. One responder reported: "*I was amazed at the amount of help I received. Each person knew exactly what they were going to do and did it all so cheerfully and willingly. Thank you all*" (Responder x). Another said: "*All of the members of the acute team I have met are well informed about the help that is out in the community*" (Responder x).

Due to the vulnerable nature of the patient cohort, most responses were completed by friends or family members: "*My mum was not really able to complete this but I know she enjoyed the care and attention of the team*" (Responder x). Another family member said: "*This home team is a great service, more info was passed on and explained than during the hospital stay. The nurses were able to spend time with my relative, listen to him, watch him and make a true assessment of his needs. The help put in place will allow him to stay at home and have as good a quality of life as possible. This service has also given us as a family peace of mind*" (Responder x).

Table 4. Patient satisfaction questionnaire scores (N=16)

Questionnaire components	Mean Score
Confidence in the team	4
Well-coordinated care	3.9
Recommend to others	4.1
Satisfied with the service	4.1

NB: Scores reflect Likert-scale responses (1 - strongly disagree to 5 - strongly agree)

3.2.3 Patient case studies

Two case studies describe two patient experiences of the AC@H service. Demographic details from case studies are described in Table 5 (Case study 1 – Mrs A) & 6 (Case study 2 – Mrs B).

Table 5. Case study 1: Mrs A's characteristics

Characteristic	Description
Age	92
Sex	Female
Patient location	Lives alone at home
Prior care needs	Care once a day, assisted with main meals provision
Referral pathway	Alternative to admission
Primary challenge	Falls recovery
Referral source	GP

Mrs A's Story

Mrs A fell alone in her own home. She pressed the community alarm she had in place and her daughter came round and took her to ED. She was x-rayed and no fracture was found so she was sent home with the promise of a nursing support visit overnight and carers once daily. Mrs A was in pain and found it difficult to mobilise. Her daughter didn't feel comfortable leaving her mother alone so stayed overnight. The following morning, Mrs A's daughter phoned the GP as no carers had arrived overnight and concern over how they would manage with carers only once a day. The GP referred Mrs A to AC@H, preventing admission to hospital.

Mrs A and her daughter were in distress following the events of past 24 hours. Mrs A complained of pain in her leg and she felt unable to weight bear on it. She was tired, physically fatigued, and felt a burden on her daughter. The OT from AC@H assessed Mrs A's ability to transfer and mobilise, and gave her recommendations regarding walking equipment. The OT

felt a toilet frame would be helpful as Mrs A was unable to transfer from the toilet without full assistance. She listened to Mrs A and her daughter's account of the past 24 hours, and offered understanding, support and reassurance. The OT contacted the hospital to request she attend the OT store to collect a toilet frame before they closed, however the duty staff offered to come to Mrs A's house and provide equipment immediately. A great example of partnership working.

The HCSWs visited twice daily assisting with personal care and meal preparation. Advice was given about returning to previous level of independence and encouraged her to do more for herself. After 48 hours, Mrs A was brighter, had improved confidence and mobility and almost back to baseline function. Mrs A's Daughter was delighted with her improvements and support received, which enabled her to continue working. She also understood the importance of Mrs A being kept at home rather than to be admitted to hospital as she had returned to 'normal' far quicker, and felt happier being in her own home.

The OT completed a care management care plan and requested an increase in her care package to 3 x daily in the short-term, to assist with personal care and all meals. It was recommended that as Mrs A recovered from her fall, the care could be reduced to twice daily. A preventative approach was adopted where morning support was provided including personal care in order to prevent fatigue lasting the rest of the day, thus reducing the risk of Mrs B falling. The OT also liaised with the GP informing him of AC@H intervention.

Table 6. Case study 2: Mrs B's characteristics

Characteristic	Description
Age	81
Sex	Female
Patient location	Lives at home
Past medical history	Alzheimer's, vascular dementia, hypertension, meningioma & raised cholesterol
Prior car needs	Mobilises independently with no aids, no care services. Husband was her full time carer until his own recent hospital admission, due to deteriorating health.
Referral pathway	Admission from GAU as well as alternative to admission from A&E
Primary challenge	Falls recovery
Referral source	GAU

Mrs B's story

Mrs B fell when she was walking to her local shop. She was taken to GAU where she was x-rayed and no fractures were found. Mrs B had sustained a superficial injury to her foot. She was referred to AC@H from ED, avoiding a hospital admission.

During Mrs B's initial visit from the AC@H team, the PT & ANP suspected she had delirium. The HCSW took routine observations such as blood pressure, temperature, respirations, oxygen saturations and pulse. On next visit, Mrs B was hallucinating and a urine sample test confirmed a urinary tract infection. Mrs B's mood was low on several occasions, stating she felt a burden as well as a nuisance towards her family and AC@H staff.

The AC@H team recommended Mrs B should have carers 3 x daily care to support with personal hygiene, diet and medication prompt. Mrs B required regular reminders not to go out walking alone, due to high fall risk. Family members were sign posted to relevant services which may benefit Mrs B's ability to remain at home safely (e.g. community alarm, key safe, city home helpers). The family decided to install a key safe following this advice. The TL completed a care management care plan. Due to care package not being in place and husband still in hospital, AC@H decided not to discharge Mrs B.

A&E informed AC@H that Mrs B fallen overnight and was in the department with a head injury receiving treatment. AC@H was informed Mrs B was to be admitted to GAU, however after discussion it was decided that AC@H would take over care, preventing hospital admission.

AC@H staff continued to provide 3 x daily care while awaiting Mrs B care package. The PTech liaised with care providers regarding medication. Mrs B was then discharged from AC@H and her care was handed over to the DN regarding Mrs B's ongoing care of foot dressing as well as the staple removal from head injury.

3.3 Unpaid carers' experience of service

Characteristics of unpaid carers who responded to the satisfaction questionnaire are described in Table 7. The majority of responders were female (87%), older adults and from affluent backgrounds (81.3%, SIMD 4 & 5). Most were family members (88%) and had been in their caring role for less than 5 years (57%).

Table 7. Characteristics of AC@H unpaid carers questionnaire responders (N=16)

Characteristic	Total
Female, N (%)	13 (87)
Age, mean (range)	73.6 (53-95)
SIMD Scores N (%)	
1	1 (6.3)
2	1 (6.3)
3	0 (0)
4	3 (18.8)
5	10 (62.5)
Not reported	1 (6.3)
Relationship N (%)	
Family Member	14 (88)
Friend	1 (6)
Not reported	1 (6)
Time spent caring N (%)	
Less than 6 months	2 (13)
Over 1 year but less than 3 years	3 (19)
Over 3 years but less than 5 years	4 (25)
Over 5 years but less than 10 years	3 (19)
Over 10 years but less than 15 years	1 (6)
20 years or more	1 (6)
Not reported	2 (13)

NB: SIMD = Scottish index of multiple deprivation with scores from 1 (most deprived) to 5 (least deprived)

Responses to the unpaid carer questionnaire are described in Table 8. Unpaid carers reported high satisfaction in all components. In particular, responders strongly agreed they preferred their cared for person was supported at home rather than in hospital. Responders also strongly agreed they would recommend the service to others and that they were given encouragement and support. Open-ended responses (N=11) were predominantly positive with unpaid carers describing AC@H staff as friendly, supportive and that they displayed effective partnership working: "*Very impressed with the well-coordinated, joined up care, supporting*

the transition from hospital to care management system…Excellent communication between team members, GP, care management and with me and my mum" (Responder x). Responders felt reassured with care provided, therefore able to take a break from caring: "*I could get my 3 hours social visit and had no worries about my mum, she was safe with him and I had a very relaxed time out shopping*" (Responder x). However, one responder had concerns around longer-term support which AC@H doesn't provide: "*I would have appreciated to see the AC@H for longer. My husband really did very well under the guidance of the lady from AC@H. He was very disappointed when he realised that she wouldn't be back*" (Responder x). Another responder highlighted the desire for continuity of care, which in their experience did not oc-cur: "*I did appreciate the people who came to see mum for the week. It was a little confusing for her with so many people in and out - remembering all the names and the job title was difficult*" (Responder x).

Of responders, 37.5% (6/16) confirmed they had been signposted to a community resource, of which 83.3% (5/6) report that they contacted this recommended service.

Table 8. Unpaid carers satisfaction questionnaire scores (N=16)

Questionnaire components	Mean Score
Provided with extra resources, knowledge or skills needed to look after person?	4.6
Given encouragement and support?	4.8
Involved as much as wanted?	4.5
Less stressed?	4.4
Rather them at home?	4.3
Recommend service?	4.8

NB: Scores reflect Likert-scale responses (1 - strongly disagree to 5 - strongly agree)

3.4 AC@H staff results
3.4.1 AC@H staff satisfaction
Staff satisfaction questionnaire responses are described in Table 9. Staff were highly satisfied working in the AC@H service (average score 73%). In particular, staff felt supported by man-agement staff, they felt it was easy to communicate with all members of the AC@H team and that they were shown recognition for performing well. However, staff had concerns around IT systems being fit for purpose and did not necessarily feel that the model was conducive to career progression.

Table 9. Staff satisfaction questionnaire scores (N=10)

Questionnaire components	Mean Score (%)
Support	72
Training	66
Development	56
Communication	72
Workload	62
Progression	50
Recognition	72
Teamwork	64
Systems	58
Satisfaction	73

3.4.2 AC@H staff experience

Characteristics of the AC@H team and key management staff interviewed are displayed in Table 10. Interviews were conducted from November 2018 to January 2019, therefore describe some developments that occurred from December onwards, not reflected in the service level data. The majority of the team (80%) had over a decade of experience prior to assuming their positions within this team. To ensure anonymity with a small sample of interviewees, the ANP, PT and OT have been grouped into 'Advanced Practitioners' (APs), The TL, Consultant Geriatrician (CG) and Senior Service Manager have been grouped into 'Management' and patient ID has been removed from quotes provided in the interview analysis.

Table 10. Characteristics of interviewed AC@H staff (N=13)

Participant ID	Sex (M/F)	Experience (yrs.)	Role
P1	F	>10	Advanced Practitioner
P2	F	>10	Advanced Practitioner
P3	F	>10	Advanced Practitioner
P4	M	2-5 years	Health Care Support Worker
P5	F	>10	Health Care Support Worker
P6	F	>10	Health Care Support Worker
P7	F	6-10 years	Health Care Support Worker
P8	F	>10	Health Care Support Worker
P9	F	>10	Pharmacy Technician
P10	F	>10	Pharmacy Technician
P11	F	-	Management
P12	M	-	Management
P14	F	-	Management

4.4.1.1 Themes

Thematic analysis of staff interviews resulted in the emergence of four key themes with corresponding subthemes; service development (steps put in place for the team to function effectively), service operation (characteristics of how the service operated), relationships (how the team worked together and with other services) and scaling considerations (key barriers and issues to consider in expanding the service) (Table 11).

Table 11. Themes and sub-themes derived from AC@H team interview analysis

Theme	Sub-theme
Service development	Upskilling
	Resources
Service operation	Care delivery
	Satisfaction
	Agility
Relationships	Inter-team collaboration
	Intra-team collaboration
Scaling considerations	Medical input solutions
	Operational adjustments

4.4.1.1.1 Service development

Upskilling - There was high satisfaction among staff with the wide range of training received in both clinical (such as venepuncture, cannulation and bladder scanning) and non-clinical (including food hygiene and note writing) areas. Professional development opportunities focused on specific areas and skills which staff would utilise frequently: "*I think it is just everything we are learning is necessary to do the job. I don't think they would put us on training just to do it. It is based around what we will be doing*" (Responder x). In addition, APs enrolled in an MSc (Clinical Practice) and gained management skills, which were new for most, including responsibility for professional development of the HCSWs: "*With the HCSWs it has been really helpful. That was something that was definitely new for me … managing HCSWs with regards to having them on the team or being responsible for kind of their education and development and that, that's new*" (Responder x).

Staff felt empowered to seek their own professional development opportunities, with encouragement to suggest training they felt beneficial to undertake: "*Anything that we can identify that we need training for, [management staff name] is brilliant at organising so we can do it*" (Responder x). There was a balance required between uptake of training opportunities and ensuring sufficient staff were available for service operation. APs described tensions between time required to undertake the MSc course and its impact on capacity to run the service,

particularly due to limited APs within the team: "*So I just couldn't understand how it would all work and it did not work and is not working, even now the other two have assignments due in tomorrow and have been off all week, so this has a massive effect on how many patients we can take into the service because there is only me here to assess them*" (Responder x). This resulted in one AP deciding to defer the MSc course for a year to ensure the service continued to function.

Staff were highly satisfied with training opportunities, however some raised concerns regarding gaining sufficient opportunities to utilise prior and newly acquired clinical skills: "*I have not really done a lot of other clinical skills we are all trained in venepuncture and all that, we do not really get to use that often, so we are all feeling de-skilling in things*" (Responder x). To help address this, management staff sought opportunities out with the service for staff to utilise these skills. For example, APs provided additional support to Geriatricians to gain opportunities to assess acutely unwell patient while HCSWs provided supported in clinics for patients with Parkinson's disease and were able to support community nurses: "*I got to go out with the CGN (Community Geriatric Nurse) Team…they are out regular doing bloods and ECG's so if a new member of staff starts, I mean they have the opportunity to go out with them and practice their skills*" (Responder x).

Resources – The team office at time of interview was a temporary location but brought about numerous challenges. Staff felt the office was overcrowded and not conducive to productivity: "*Where we are based it is a small room with a lot of people cramped in to it. It is very noisy, I think because everyone is there if there is any questions, you know, it is very difficult to concentrate and focus on bits of work because there are constant interruptions while you are there. Just at times it feels like you are a tin of sardines*" (Responder x). Solutions were sought out to cope with this challenge such as to keep busy out with the office and to book meeting rooms for space to concentrate. Staff overall remained optimistic about an imminent move to their permanent location: "*We will all have our own space. It is just a lot bigger, it is a lot nicer, it's a lot better*" (Responder x).

4.4.1.1.2   Service operation

Care delivery - The majority of referrals were received through GAU for social care and therapy needs utilising the supported discharge pathway, with only a few received from GPs with acute needs through the alternative to admission pathway. As a result, reablement care was predominantly provided which included taking observations, house modifications (including equipment provision), encouraging patients to mobilise safely at home and supporting daily tasks: "*Going in and assisting with personal hygiene, meal prep, bed prep, you know some medication prompt, we have had some physiotherapy where we have been going in and doing a bit of exercise with them…that is the majority of our work*" (Responder x). Initially, few referrals were received, leading to staff members feeling frustrated: "*Certainly to start with because we did not have a lot of patients, a bit soul destroying*" (Responder x). This was particularly challenging for unregistered staff (e.g. HCSWs) as once they had completed their training requirements (e.g. e-learning, mandatory training and additional training), they was

limited patient activity as the full complement of registered practitioners were not yet in place and those recruited had additional tasks to keep them busy: "*for those registered practitioners…the workload that they had was different because they have some of the development stuff, the patients that they do have require a lot of notes to be written and paperwork to do, so there was always that activity for them whereas it was a lull for the HCSWs because there was not the number of patients but now that patients numbers have increased slightly and the complexity of some of the patient we are seeing, has required a bit more input from the HCSWs*" (Responder x).

Positive patient outcomes were reported as a result of AC@H input, predominantly improvements in functional status with staff enabling patients to live as independently as possible: "*they have them [the patient] in the kitchen, they have given them various tasks that you want them to maybe practice in the kitchen with the person. I have given them an exercise programme that I want them to do with the patient. At the end of the seven days the person is actually back to their baseline and we are actually able to pull out*" (Responder x). More complex patients began entering the service and they showed improvements in acute symptoms; "*Chest infections. There have been a few over Christmas, we had seen a big improvement from when we started from day one to seeing them on their last day*" (Responder x). As care was received in patients' own homes, this also reduced concerns around infections acquired in hospital: "*Again the risks, they are exposed to more bugs and germs, they are at a higher risk for their health*" (Responder x).

Characteristics of the service that staff felt functioned well included assessment of patients' in their own home which was felt to be much more effective in identifying actual patient need, as opposed to assessing patients in hospital: "*You see a very small snapshot of how somebody actually functionally manages when you see them in an acute setting as oppose to when you see them at home*" (Responder x). In addition, service-specific efficiencies were reported such as rapid access to blood test results and equipment provision (such as raised toilet seats): "*Patients can get equipment faster through the OT rather than normally having to wait for the referral to go in. They get referred that morning, we go pick it up, the patient gets it that day. That doesn't happen usually so quickly*" (Responder x). Staff members also strived to ensure patients would be seen by the same staff members at each visit, where logistically feasible, as this helped build rapport: "*They all like continuity, they like the same person going in, which is not always the best thing for us but they look forward to you coming*" (Responder x).

Satisfaction - Staff received predominantly positive feedback from patients about the service, in particular being able to receive care in their own home: "*giving people the opportunity to stay at home, you know, and people actually appreciate and you can see, you know, they actually tell you that they think that we are a wonderful service and that is coming from patients and families*" (Responder x). Patients found having the team to support them at a critical time, transitioning home from hospital, was important to building confidence during their recovery:

"they just feel relieved, more secure, comfortable realising that they have not just been put out of hospital and abandoned. They have been put out and we are coming in and making sure that they are settled and that you are alright" (Responder x).

Agility – The service model was new in Aberdeen, and therefore required adjustments and modifications during initial operation to address unexpected contextual challenges. A key issue was being unable to recruit a CG, resulting in the inability to admit acutely unwell patients. Consequently, the model shifted its focus from clinical care provision, to an enablement focused model: *"it has been away from that kind of disease focused management or very medical kind of modelling, particularly because we have no medic leading, so we have been away from the medical model"* (Responder x). This was achieved by referrals being accepted from GAU once a CG had ensured the patient was medically fit: *"… because of the limited medical input, that's one reason we ended up going to a more of a rapid supported discharge type thing from ward (number) because at least then we would have control over the patients being medically stable so that we knew they would not be requiring huge amounts of our input that we couldn't necessarily provide"* (Responder x).

The daily functioning of the service was adapted to ensure the most efficient care was provided. In particular, the format that the team carried out visits changed over time to ensure most effective patient engagement: *"What we have discovered is that it is perhaps easier to do the visits individually rather than tag along with an OT or a PT because they are sort of wanting to talk about their side of things and we want to talk about our side of things. I think it can be a bit overwhelming for people sometimes if you are trying to ask them to much, especially a lot of our patients are just out of hospital and maybe still a wee bit wobbly"* (Responder x). The approach of providing numerous individual visits left the team with apprehensions it may become burdensome to patients, despite mimicking acute conditions: *"I suppose that's where we struggle with AC@H because we are sometimes almost tag tailing each other. I don't know if people feel overwhelmed at having so many people coming to their door all the time but again if they were in hospital on a ward it would be very busy and people would just come to them when they were available"* (Responder x).

4.4.1.1.3   Relationships

Inter-team collaboration - The AC@H team described having a positive relationship with each other and that they worked well together. Staff felt supported and valued team members regardless of their role: *"Staff over all get on, it's a great team, they get on really, really well you know. There is no like, you know, hierarchy or things like that. Everyone is treated as an equal"* (Responder x). One interviewee felt that their bond had grown stronger due to the challenges they had faced together: *"I think we have gelled because of the challenges that we face I think has let us get to know each other well, so this period of time where we have been stuck in a room together has had good and bad but I think it has helped us get to know each other and understand our ways of working and our experiences"* (Responder x).

A mechanism that facilitated this strong team dynamic was the high satisfaction with management staff, in particular, with the TL due to her personable qualities: "*She is really dynamic, very positive and you can see her passion for the whole project and wanting to drive it forward*" (Responder x). Management were seen to be transparent and involved staff members in all aspects of service development: "*I think the senior team members are good team players they are, how they include you in everything. [APs] have included you in everything, we know what's happening*" (Responder x). Staff also felt involved in decision making around patient care: "*any changes with the patient, we have a meeting and discuss the patient and we're asked for feedback once we've seen the patient so I do feel like we are really included*" (Responder x). In addition, management were seem as supportive and approachable, particularly for APs who were learning new and more advanced skills: "*I think we are very fortunate that [management staff name] is the one leading us. I think that any of us can go to her if her we are struggling or do not know, she always has an answer. This is really reassuring as well because at other times, I know myself, I would just be floundering just wondering where to go next*" (Responder x).

In addition to the team developing a strong bond, the presence of key personality traits played an integral role in enabling service success. This included having a caring personality, confidence and strong communication skills due to wide partnership working and the public facing nature of the role: "*Well you obviously have to have a good sense of humour and be able to communicate as I said you are going out to people's houses and you are meeting all different kinds of agencies out in the community*" (Responder x). The attribute of open mindedness was deemed particularly important due to the agile nature of the service, in which staff were required to be open to continual operational adaptations and to manage the unpredictable nature of home visits: "*Obviously being used to going into people's houses, because you just never really know what you are going to find when you go in. That would probably help unless you are quite open to that and you don't mind*" (Responder x).

Having a multi-disciplinary team with a positive dynamic enabled the team to gain benefits from each other's' expertise such as becoming upskilled in different approaches to care: "*Things that I was never exposed to. We had PTs and OTs but they never really mix with you on the wards. I think it has really been educational, certainly for me and it still is*" (Responder x). Another key benefit was the ability to discuss patient care from multiple perspectives, in particular the pace in which that support and advice from other specialities could be provided: "*…having that expertise from their perspective yeah, it is quite good to go and be able to go back and put that question or ask how we can refer on or sign post on, we have got an answer sort of there and then instead of waiting, no referring*" (Responder x). Coordination of care was also more efficient in addressing patients' needs: "*we can put things in place sort of really quickly where as if they weren't there then possibly I don't know how long these things take*" (Responder x).

Intra-team collaboration – Staff overall described positive relationships with other teams both in acute and community settings. One reason for this was that the AC@H team were co-located with other services whilst based at their temporary location: "*because we have the community OTs, PTs, Dietitians, Speech and Language. I think there are a lot of services, in fact the services that we would refer on to apart from Care Management are within the building. So from that point of view it has been great*" (Responder x). There were some concerns raised that communication may become more challenging following the move their permanent location: "*It will involve a lot more phone calls and things I would imagine once we move away from all being on one site*" (Responder x). Effective partnership working was also enabled by relationships staff members had developed prior to taking up their posts, such as therapists who had gained connections during rotational posts, an AP who had previously worked in the CGN team and the TL who had a range connections to utilise. These established relationships facilitated efficient patient care co-coordination across services: "*with the CARS Team, I think that being based here and with those guys knowing already what the CGNs did and what AC@H is trying to achieve, it has been very easy to forge that working relationship with them and referral pathways*" (Responder x).

Partnership working was seen as positive, however a wider lack of awareness of the service and its function emerged. Many interacting services were unaware acute treatment could be provided (e.g. take bloods) and there was a perception that the service only provided social care input: "*They do, they think that we are there and even families, we do explain but it is just other agencies, it is just "Oh the Carers are in". Even the ambulance, we have had Paramedics and that "Oh the Carers". The Police as well*" (Responder x). Embedding awareness was challenging due to the quantity of services required to communicate with: "*The difficulty is at the moment, I suppose again it is that logistical thing. We are covering the whole city, there is loads of different GP Practices, lots of GP's in all of them, lots of different District Nurses in all of them and all of them, everybody nearly needs to be told individually and have that explained to them individually and what the service is doing*" (Responder x). Concerns were further raised around ensuring services understood how AC@H could complement and not duplicate current processes: "*I think at times other teams might see that we are not needed because that is what they do but you know we are not trying to stop other people doing their jobs but we are there to support them*" (Responder x). To improve understanding and awareness, the TL had approached GP practices and provided education sessions to GAU ward staff.

4.4.1.1.4   Scaling considerations

Medical input solutions – A potential option in addressing the lack of dedicated CG cover described was to build upon the expertise of GPs and to increase input from skilled APs in running the service: "*we just keep with GP as a responsible clinician but they have input from PA's or training GP, so we are exploring all of those possibilities at the minute. With skilled ANP's or APs I think is as good a concept, as long as we make sure it is safe and there is clear governance structures within that, so we have clear route to a GP if they were the responsible*

clinician to ensure links are not broken because we already have links with geriatrician's, so there is advice on hand it doesn't have to be a CG" (Responder x). There is potential for the responsible clinician (Consultant or GP) to support in the upskilling APs, along with formal training, ultimately leading to them to able to increase caseload responsibility safely: "*because there is a confidence between the medic, could that be the consultant or the GP with the team members, that there is less engagement between them as there is a confidence that has been built there so there is a need for a bit of supervision in there in checking but you are getting to know what that individual is doing*" (Responder x).

Operational adjustments – A key expansion consideration that emerged was to broaden the referral pathway to receive referrals from acute departments (such as ED) and GP practices: "*It will be very slow until it feeds into the GP practices. We could take a lot of load from them if they meet us half way. We can hopefully stop their patients getting admitted into hospital*" (Responder x). In addition, operational hours were seen as insufficient with staff describing the need for a more flexible service to suits to needs of patients: "*I think what I can see as being as much of a barrier really to doing the admission avoidance is that we have not had the staffing to kind of extend our hours in to the evenings and weekends as yet. You know you are taking on a sick patient, I mean they do not stop being sick at 4 o'clock or on a Friday*" (Responder x).

IT concerns were raised which should be considered in future service expansion. Challenges were apparent in operating a service which sits on the boundary between acute and community when their independent IT systems. Staff only had access to the acute IT system which made it difficult to plan patient care, the majority of which is in the community, as they were unable to see what prior community input had been provided. In order to address this in the short-term, staff felt it would be beneficial if GPs provided key patient information to them on admission: "*to have a GP summary of kind of their last visits and whatever else. I think this would be really helpful, at least we would know "well look, the DN's go in twice a week" you know these are the people who are normally involved in this patient's care that would be the best person to touch base with*" (Responder x). IT efficiencies required included the need for an IT system where letter templates are saved as opposed to typing or dictating a letters, to have a shared drive in order to have easy access to key documents and remote access capability: "*I do have a laptop and we are supposed to be able to access that from wherever but even when I go home to use to the laptop, I can only access emails I cannot do anything else*" (Responder x).

4.4.3 Staff interacting with AC@H satisfaction

Table 12 shows the roles of staff interacting with the AC@H team who completed the questionnaire, with findings described in Table 13. There was overall high satisfaction interacting with the AC@H team (average score 79%), particularly interacting staff found the team easy to contact.

Table 12. Profession of staff interacting with AC@H who completed the satisfaction questionnaire (N=8)

Profession	Frequency (%)
Physiotherapist	3 (37.5)
General Practitioner	2 (25)
District Nurse	2 (25)
Occupational Therapist	1 (12.5)

Table 13. Staff interacting with AC@H satisfaction questionnaire scores (N=8)

Questionnaire component	Mean Score (%)
The AC@H team are easy to contact	90
The referral process is easy to follow	84
The AC@H team communicated well with my team	78
The AC@H team are easy to work with	82
Experience working with AC@H team overall	79

Aspects staff interacting with the AC@H service report worked well and areas for improvement are described in Figure 10 & 11 respectively. What worked particularly well was that the team were easy to contact through a direct line and the close proximity the AC@H team had to staff they were interacting with, enabling effective partnership working: "*We are very lucky to have AC@H on site with us here at [temporary location name] and this is possibly why it is so easy to work with the staff in that team. This is about change and may impact in working relations, however I hope that we can preserve good practice*" (Responder x).

Despite high satisfaction, responders felt AC@H should have clearer referral pathways with community services and improved engagement with other staff around co-ordinating patient care: "*In order for the service to work there has to be clear communication as to what they are doing, what services they have been referred to, what care requires to be done after their input has finished and being respectful of my role in this*" (Responder x). One responder was concerned AC@H may be duplicating current services and showed concern around this reducing her workload: "*I do feel that my role will be diluted further by another team doing assessments/tasks that I more than qualified for. I feel there may be too much overlapping of services here*" (Responder x).

What works well in the AC@H service?
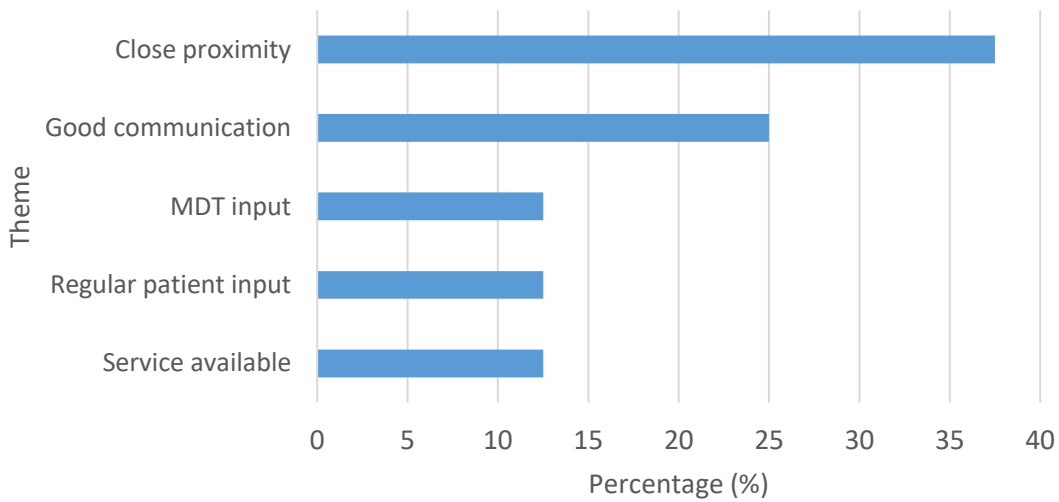

Figure 10. Staff interacting with the AC@H service perceptions of what worked well (N=8)

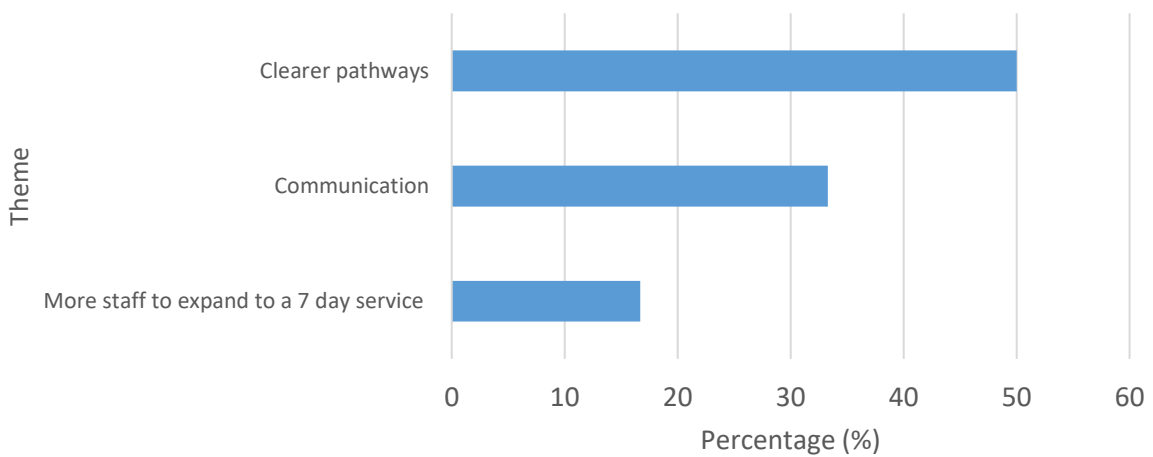## What could be improved in the AC@H service?

Figure 11. Staff interacting with the AC@H service perceptions of what could be improved (N=6)

4. Discussion

This report presents the evaluation findings of the AC@H service, specifically the impact on patients, unpaid carers, staff and resources. Results described explore aspects of implementation that appear to have functioned sufficiently and recommendations to inform service development and direction.

Service Perspective

The AC@H model appeared no less safe than usual care, with more patients in a community setting (79% AC@H, 76.5% GAU) and lower mortality rates (11% AC@H, 17.8% GAU) 90 days following AC@H discharge than from GAU. The main challenges the service encountered was the lack of medical input patients were able to receive due to difficulties in recruitment of a CG. Difficulties filling CG posts are evident nationally[19], with recruitment barriers (excluding those pertinent to the geographical location of Aberdeen) including a lack of doctors choosing to specialise in geriatric medicine, and a large majority who do, choosing to work part-time[20] [21]. One solution identified by AC@H staff was to build upon the existing elderly medicine skills of the patients own GP or another with interests in geriatrics. Considerable strain is already placed on primary care workloads due to increasing complexity of patients, resulting in more GPs choosing to work part-time or retire early[22]. National and local strategies have been developed specifically to reduce pressure on primary care by shifting workload, where appropriate, from GPs to other primary care professionals. As a result this theoretically should increase GP capacity, working as expert medical generalists, to focus input on patients more appropriately aligned to their skillset such as more complex patients with co-morbidities[23] [24]. If GP workload can be realigned to more appropriate professionals safely, GPs may be able to use their additional capacity to support services such as AC@H. It should be emphasised that when implementing a theoretical model, there needs to be appropriate plans in place to recruit the necessary skillset for the model to function and if there are any doubts that this can be achieved, there needs to be a clear plan about how the model can be adapted to provide the same function (e.g. to be able to provide acute care).

Staff identified another solution to the medical input limitations could be to better utilise other health professionals, such as APs. As alluded to previously, initiatives aim to shift com-

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[19] ISD Scotland (2019) Medical and dental workforce of NHS Scotland.

[20] Fisher, J. M., Garside, M., Hunt, K., & Lo, N. (2014). Geriatric medicine workforce planning: a giant geriatric problem or has the tide turned?. *Clinical Medicine*, *14*(2), 102-106.

[21] NHS Grampian (2018). Workforce plan 2018-2021.

[22] Baird, B. et al., (2016). Understanding Pressures in General Practice. The King's Fund, London.

[23] Aberdeen City Health & Social Care Partnership (2018) Primary Care Improvement Plan. Aberdeen.

[24] Scottish Government (2018). The GMS General Medical Services Contract in Scotland. Scottish Government, Edinburgh.

munity patient care from GPs, where appropriate, to other specialities including ANPs, Physician Associates, Clinical Development Fellows and specialised HCSW roles[25]. Embedded within this approach is the more effective utilisation of the workforce through provision of upskilling opportunities so staff can safely provide maximum contribution to health and social care delivery[26]. This model could potentially be operationalised through a specialist GP or Geriatrician, providing a supervisory function to allow for safe delivery of care[27][28]. Replacing GPs consultation with nurses, where safe and appropriate, has been shown to generate similar health outcomes, with patients preferring nurse appointments when requiring urgent attention possibly due to longer consultations and more information provided[29]. Innovative utilisation of highly skilled nurses has shown promising results in Aberdeen in which an ANP carried out afternoon home visits on behalf of the patient's GP. This model reduced GP workload and high satisfaction rates were reported from both GPs (90%) and patients (100%), demonstrating a high quality service provision[30]. Therefore, there is opportunity to utilise a wide range of specialists in addressing recruitment challenges to continue delivering high quality care.

Staff identified the need to broaden referral pathways and operational hours to enable service expansion. Similar to other H@H models, a logical step is to test referral pathways from General Practice and other acute wards, such as ED, with the aim of preventing hospital admissions and reducing hospital stays[31][32][33]. Expansion of operational hours aligns with a key national priority to deliver a seven day service, allowing patients to receive high quality care across the whole healthcare system whenever they need it[34]. It is well evidenced that admission to hospital outside of standard working hours, particularly at weekends, is related to a significantly higher mortality risk, possibly due to lower staffing or less high grade doctors present[35][36]. There appears value in testing new referral pathways and extending operational hours, in conjunction with an increase in the team composition, to provide a service that can support the wider system to deliver high quality care.

[25] NHS Health Scotland (2018). NHS Health Scotland's Workforce Plan: Delivering better health for everyone 2018-2019. NHS Health Scotland, Edinburgh.

[26] NHS Grampian (2018). Workforce plan 2018-2021.

[27] Sibbald, B. S., Laurant, M. G. H., & Reeves, D. (2006). Advanced nurse roles in UK primary care. *MJA*.

[28] McDonnell, A., Goodwin, E., Kennedy, F., Hawley, K., Gerrish, K., & Smith, C. (2015). An evaluation of the implementation of Advanced Nurse Practitioner (ANP) roles in an acute hospital setting. *Journal of Advanced Nursing*, *71*(4), 789-799.

[29] Laurant, M., Reeves, D., Hermens, R., Braspenning, J., Grol, R., & Sibbald, B. (2005). Substitution of doctors by nurses in primary care. *Cochrane database of systematic reviews*, (2).

[30] Leask, C. F. and Tennant, H. (2019). Evaluation of an unscheduled care model delivered by advanced nurse practitioners in a primary care setting. *Journal of Research in Nursing* [In Press].

[31] Gonçalves-Bradley, D.C., et al. (2017). Early discharge hospital at home. *Cochrane Database of Systematic Reviews*, 6.

[32] Shepperd, S., et al. (2016). Admission avoidance hospital at home. *Cochrane Database of Systematic Reviews*, 9.

[33] Bowen, DJ et al. (2009). How we design feasibility studies. *American Journal of Preventative Medicine*. 36(5), 452-457.

[34] The Scottish Government (2015) Sustainability and Seven Day Services Taskforce. Interim Report.

[35] Potluri, R. (2015). Is it time to re-appraise the weekend effect?. *Journal of the Royal Society of Medicine*, 108 (10), 382-383.

[36] Bray, B. D., & Steventon, A. (2017). What have we learnt after 15 years of research into the 'weekend effect'?. BMJ Quality & Safety, 26, 607-610.

Staff reported average scores of 58% agreement that IT systems were fit for purpose. A key concern was that staff were positioned on the boundary between acute and community when only receiving access to the acute IT system. Having access to relevant IT systems aids care coordination activities such as monitoring, follow up for scheduled activities, information transfer and enable communication[37][38]. In contrast, care coordination across different settings can be limited if IT systems are not either shared, integrated or there is an effective health information exchange is in place (e.g. electronic summary transferred, information sharing incentives)[39]. In the absence of communicating IT systems, electronic discharge summaries could be provided to the AC@H team which shorten communication delivery times, however do often lack important health information including diagnostic test results, hospital treatment, discharge medication, pending test results and follow up plans[40]. Effective health information transfer is necessary for high quality coordinated care and considerable effort needs to be invested into identifying effective solutions.

Patient perspective

The AC@H service appears acceptable to patients, who reported high satisfaction (average score 4.1/5) and confidence in the AC@H team (average score 4/5). Staff interviews identified provision of support during the transitioning from hospital to home (a critical time when patients are highly vulnerable) as particularly beneficial. Hospital stays are associated with extended inactivity, with estimates showing patients spent just 5% per day standing or walking[41]. Risks of prolonged sedentary periods include reduced muscle strength[42] and functional decline[43] which can lead to hazardous events such as falls[44]. The timely provision of support following hospital discharge (within 7 days) has been shown to reduce likelihood of hospital

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[37] Almost, J., Wolff, A. C., Stewart-Pyne, A., McCormick, L. G., Strachan, D., & D'souza, C. (2016). Managing and mitigating conflict in healthcare teams: an integrative review. *Journal of advanced nursing*, *72*(7), 1490-1505.

[38] Graetz, I., Reed, M., Rundall, T., Bellows, J., Brand, R., & Hsu, J. (2009). Care coordination and electronic health records: connecting clinicians. In *AMIA Annual Symposium Proceedings* (Vol. 2009, p. 208). American Medical Informatics Association.

[39] Graetz, I., Reed, M. E., Shortell, S. M., Rundall, T. G., Bellows, J., & Hsu, J. (2014). The next step towards making use meaningful: electronic information exchange and care coordination across clinicians and delivery sites. *Medical care*, *52*(12), 1037.

[40] Kripalani, S., LeFevre, F., Phillips, C. O., Williams, M. V., Basaviah, P., & Baker, D. W. (2007). Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *Jama*, *297*(8), 831-841.

[41] Grant, P. M., Granat, M. H., Thow, M. K., & Maclaren, W. M. (2010). Analyzing free-living physical activity of older adults in different environments using body-worn activity monitors. *Journal of Aging and Physical Activity*, *18*(2), 171-184.

[42] Kortebein, P., Symons, T. B., Ferrando, A., Paddon-Jones, D., Ronsen, O., Protas, E., ... & Evans, W. J. (2008). Functional impact of 10 days of bed rest in healthy older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, *63*(10), 1076-1081.

[43] Egerton, T., Maxwell, D. J., & Granat, M. H. (2006). Mobility activity of stroke patients during inpatient rehabilitation. *Hong Kong Physiotherapy Journal*, *24*(1), 8-15.

[44] Czernuszenko, A., & Czlonkowska, A. (2009). Risk factors for falls in stroke patients during inpatient rehabilitation. *Clinical Rehabilitation*, *23*(2), 176-188.

readmissions in those presenting with co-morbidities and high clinical complexity, demonstrating its value as a core component of transitional care[45]. This highlights that if it is safe enough to transition the patient from hospital to hospital at home, it may help mitigate deconditioning risks associated with hospital admissions and instead facilitate the reablement process.

Staff identified positive feedback from patients regarding continuity of care, which appeared to facilitate relationship building between these groups. This is congruent with other community models developed and tested in Aberdeen, such as INCA, where continuity of care was a key, facilitating mechanism identified by both professionals and patients during the implementation of this service[46]. Consistency in staff providing care does not solely increase patient and staff satisfaction rates, but has also been demonstrated to improve patient outcomes[47], improve treatment adherence[48] and reduce resource utilisation (including prescription costs and hospital admissions[49]. Achieving said outcomes is facilitated by ensuring sufficient high quality conversation between professional and patient, in addition to adequate time provided to address the needs of the patient[50]. This reinforces the value of having a small cohort of staff delivering regular care to a defined cohort of patients and empowering staff to deliver a person-centred package of care to help achieve impact at both patient and system levels.

A theme that emerged from analysis that may have contributed to improvements in functional ability included rapid access to test results (e.g. blood test) and OT equipment (e.g. raised toilet seat). Prompt delivery of appropriate interventions is necessary to ensure timely care provision in addition to supporting independent living[51] [52]. Equipment can allow patients to feel safer and increases confidence whilst reducing anxiety and likelihood of a fall[53]. In-

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[45] Jackson, C., Shahsahebi, M., Wedlake, T., & DuBard, C. A. (2015). Timeliness of outpatient follow-up: an evidence-based approach for planning after hospital discharge. *The Annals of Family Medicine*, *13*(2), 115-122.

[46] Leask, C. (2018). Integrated Neighbourhood Care Aberdeen (INCA) Test of Change: Evaluation Report. Aberdeen City Health & Social Care Partnership.

[47] Saultz, J. W., & Lochner, J. (2005). Interpersonal continuity of care and care outcomes: a critical review. *The Annals of Family Medicine*, *3*(2), 159-166.

[48]Brookhart, M. A., Patrick, A. R., Schneeweiss, S., Avorn, J., Dormuth, C., Shrank, W., ... & Solomon, D. H. (2007). Physician follow-up and provider continuity are associated with long-term medication adherence: a study of the dynamics of statin use. *Archives of Internal Medicine*, *167*(8), 847-852.

[49] Raddish, M., Horn, S. D., & Sharkey, P. D. (1999). Continuity of care: is it cost effective. *American Journal Management Care*, *5*(6), 727-34.

[50] Freeman, G., & Hughes, J. (2010). Continuity of care and the patient experience. *The Kings Fund,* 1-64.

[51] Hoffmann, T., & McKenna, K. (2004). A survey of assistive equipment use by older people following hospital discharge. *British Journal of Occupational Therapy*, *67*(2), 75-82.

[52] Kwan, J. L., & Cram, P. (2015). Do not assume that no news is good news: test result management and communication in primary care. BMJ Quality & Safety, 24(11), 664-666.

[53] Sainty, M., Lambkin, C., & Maile, L. (2009). 'I feel so much safer': unravelling community equipment outcomes. *British Journal of Occupational Therapy*, *72*(11), 499-506.

creased usage is seen when patients are both involved and perceive it is as beneficial, suggesting a person-centred approach is crucial[54]. This emphasises the value that providing the timely resource and care, that suits their individual needs, may have in supporting reablement.

Staff highlighted advantages of carrying out assessments at home as opposed to hospital, including more accurate identification of patient needs. Home visits may allow health professionals to see the real life environment in which an individual functions, thus aiding the process of assessing and implementing care provision, specifically identification of hazards and appropriate household modifications[55]. Indeed environmental assessment, specifically by OTs, has been shown to significantly reduce the quantity of people falling and number of times individuals fall due to the detailed consideration of the person in their own environment[56]. Carrying out functional assessments in a patient's own home, as opposed to a hospital setting, may be important in identifying most effective strategies for self-management, independence and preventing adverse events.

Unpaid carer's perspective

Unpaid carers reported a preference to have the person they care for supported at home rather than in hospital (average score 4.3/5), resulting in a reduction of self-reported stress (average score 4.4/5). This may be due to the high satisfaction reported with support and encouragement in their caring role from AC@H staff and that they were reassured their cared for person was provided with high quality care. A preference with having their cared for person treated at home has also been demonstrated in other H@H models to be due to regular contact with the service team who provided more information about their cared for person, greater patient care involvement and alleviating travel requirements for hospital visiting[57]. Unpaid carers reported reductions in stress levels, a particularly beneficial finding considering the rise in unpaid carers and levels of carer they provide as a result of increasing population and epidemiological challenges[58]. With approximately 759,000 unpaid carers in Scotland[59], whom, in conjunction with other unpaid carers across Britain, save the UK as estimated £132

[54] Wielandt, T., McKenna, K., Tooth, L., & Strong, J. (2002). Post Discharge Use of Bathing Equipment Prescribed by Occupational Therapists: What Lessons to Be Learned?. *Physical & Occupational Therapy in Geriatrics*, *19*(3), 49-65.

[55] Pardessus, V., Puisieux, F., Di Pompeo, C., Gaudefroy, C., Thevenon, A., & Dewailly, P. (2002). Benefits of home visits for falls and autonomy in the elderly: a randomized trial study. *American Journal of Physical Medicine & Rehabilitation*, *81*(4), 247-252.

[56] Pighills, A., Ballinger, C., Pickering, R., & Chari, S. (2016). A critical review of the effectiveness of environmental assessment and modification in the prevention of falls amongst community dwelling older people. *British Journal of Occupational Therapy*, *79*(3), 133-143.

[57] Wilson, A., Wynn, A., & Parker, H. (2002). Patient and carer satisfaction with 'hospital at home': quantitative and qualitative results from a randomised controlled trial. *British Journal of General Practice*, *52*(474), 9-13.

[58] Buckner, L. & Yeandle, S. (2015). *Valuing Carers 2015: The rising value of carers' support.* University of Sheffield, University of Leeds and CIRCLE, Carers UK.

[59] Scottish Government (2015) Scotland's Carers. Scottish Government.

billion a year on health care costs, their role as part of the health and social care system cannot be understated[60]. However, unpaid carers self-report caregiving as detrimental to their health and evidence suggests there is a doubling of risk of a poor health outcomes for those in a caring role[61] [62], which subsequently could negatively impact the already tight demands on health and social care services. Therefore, it appears that this model does not just directly benefit the patients who are in receipt of care, but their friends and family who provide a caring role for them too.

Of the unpaid carers who engaged in the evaluation progress, 37.5% reported that the AC@H team had signposted them to a community resource and of which 83.3% contacted the service indicating a willingness to engage in these services. Community assets can help support their non-clinical needs including emotional, financial and physical health issues[63]. This is important because the majority (70%) of unpaid carers don't access available support[64], but we know that if they do, it can help improve their wellbeing (e.g. self-confidence) and reduce pressure (e.g. reduced demand for GPs, A&E attendances)[65] [66]. Patient engagement can be enhanced, particularly for those with more complex issues, by onward referrals to social prescribing professionals such as the Link Practitioner service in Aberdeen who provide increased knowledge of community resources and support[67] [68]. Signposting more people to services like Link Practitioners, doesn't just address the needs of unpaid carers (e.g. financial, stress), but also can, by association, improve their wellbeing and reduce pressure on health and social care services.

Staff satisfaction

AC@H staff reported an average job satisfaction score of 73%, a score 5.1% higher than the average job satisfaction score across all NHS Scotland staff[69]. It emerged that the team had a positive dynamic facilitated by management staff who were particularly supportive (average

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[60] Buckner, L. & Yeandle, S. (2015). *Valuing Carers 2015: The rising value of carers' support.* University of Sheffield, University of Leeds and CIRCLE, Carers UK.

[61] Carers UK (2013). The state of caring 2013. *Carers UK, The voice of carers*.

[62] Carers UK (2004). In poor health: The impact of caring on health. *Carers UK*

[63] Macmillan (2017). Identifying cancer carers and signposting them to support. Background and guidance. *Macmillan Cancer Support*.

[64] Scottish Government (2015) Scotland's Carers. Scottish Government.

[65] Chatterjee, H. J., Camic, P. M., Lockyer, B., & Thomson, L. J. (2018). Non-clinical community interventions: a systematised review of social prescribing schemes. *Arts & Health*, *10*(2), 97-123.

[66] Polley, M. J., & Pilkington, K. (2017). *A review of the evidence assessing impact of social prescribing on healthcare demand and cost implications*. University of Westminster.

[67] Brandling, J., & House, W. (2009). Social prescribing in general practice: adding meaning to medicine. *British Journal of General Practice*, *59*(563), 454-456.

[68] Aberdeen City Health and Social Care Partnership (2018). Community Link Working.

[69] NHS Scotland (2018) Health & Social Care iMatter Report 2017. *NHS Scotland*.

score 72%). Traditionally the NHS followed an autocratic leadership style where tasks are directed and success rewarded[70], however a 'transformative leadership' style has gained increased momentum[71], characterised by a collaborative effort between management and their staff to build morale, achieve shared goals and involve staff and patients in decisions[72]. Staff articulated qualities such as inclusive decision making, the lack of hierarchy and autonomy to solve issues such as home visit scheduling, all indicative of a transformative leadership style, shown to empower employees, increase job satisfaction and promotes effective team working[73] [74]. It does appear both management styles are valuable and that leaders need to adapt their style to suit individual needs. An autocratic style may be more beneficial for staff with less experience, knowledge and skills (to help them develop these) or in times of a crisis (where a quick decision needs to be made), whereas a transformative style may work better with more skilled individuals, such as the AC@H team in which most had over 10 years' experience working in health and social care[75] [76]. One exception may be the APs who were newly transitioning into a more skilled role, and they may have required a more mixed leadership style whilst they gained confidence. Considering the recruitment and retention challenges locally (annual NHS staff turnover 10.3%), coupled with the association between low job satisfaction and staff turnover, implementing a person-centred management style may not just ensure adequate staff provision, but improve collaboration and facilitate professional development[77] [78].

Staff valued the wide variety of clinical and non-clinical training that they were offered and were encouraged to seek out. Ensuring appropriate opportunities for professional development does not solely increase their knowledge, skills and abilities to carry out their job effec-

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[70] Barr, J., & Dowding, L. (2013). *Leadership in Health Care*. SAGE Publications Limited.

[71] Hill, B. (2017). Does leadership style of modern matrons contribute to safer and more effective clinical services?. *Nursing Management*, *24*(1), 21-25.

[72] Burns J (1978) Leadership. Harper and Row, New York.

[73] Greco, P., Laschinger, H. K. S., & Wong, C. (2006). Leader empowering behaviours, staff nurse empowerment and work engagement/burnout. *Nursing Leadership*, *19*(4), 41-56.

[74] Clements, D., Dault, M., & Priest, A. (2007). Effective teamwork in healthcare: research and reality. *Healthcare Papers*, *7*(I), 26.

[75] McCleskey, J. A. (2014). Situational, transformational, and transactional leadership and leadership development. *Journal of Business Studies Quarterly*, *5*(4), 117.

[76] Hill, B. (2017). Does leadership style of modern matrons contribute to safer and more effective clinical services?. *Nursing Management*, *24*(1), 21-25.

[77] Greco, P., Laschinger, H. K. S., & Wong, C. (2006). Leader empowering behaviours, staff nurse empowerment and work engagement/burnout. *Nursing Leadership*, *19*(4), 41-56.

[78] Kitson, A., Marshall, A., Bassett, K., & Zeitz, K. (2013). What are the core elements of patient-centred care? A narrative review and synthesis of the literature from health policy, medicine and nursing. *Journal of Advanced Nursing*, *69*(1), 4-15.

tively, but may also improve staff satisfaction and wellbeing consequently leading to reductions in adverse events[79] [80] [81]. Staff were satisfied that they were involved in decision making processes around their personal development opportunities, reinforcing the effectiveness of transformative management in this context[82]. Due to the small size of team, and in particular only one of each AP, there was a tension between staff completion of training and having sufficient cover for service operation. Here, particularly whilst APs were undergoing advanced clinical training during the time of service operation, this inhibited the number and acuity of patients that could safely enter the service. Therefore, it should be stressed that, if staff require significant investment of time during their working hours towards attaining required training and skills, this will directly impact the pace at which the service can expand in this context.

Intra-professional relationships were described as positive both by AC@H staff and those interacting with them (average score 79%), particularly that having the teams co-located was valuable. AC@H staff, however found their temporary office environment unsatisfactory due factors such as overcrowding and noise levels. When professionals are located in close proximity to each other, it can facilitate more effective partnership working and patient care co-ordination through increased opportunity for informal contacts, rapid communication, reductions in duplication, and cross speciality learning and knowledge transfer[83] [84]. However, this is only successful in conjunction with satisfactory environmental factors such as noise levels, amenities, temperatures, office layout and lighting, all of which impact employee satisfaction and productivity levels[85]. Locating employees in close proximity can provide an environment conductive to more effective communication and patient care collaboration which in turn may reduce prescriptions and contribute to improving system blockages such as delayed discharges[86] [87]. It is therefore of significant importance to ensure when staff are co-located, their environment is also satisfactory.

[79] Barling, J., Kelloway, E. K., & Iverson, R. D. (2003). High-quality work, job satisfaction, and occupational injuries. *Journal of Applied Psychology*, *88*(2), 276.

[80] Ogbonnaya, C., Tillman, C. J., & Gonzalez, K. (2018). Perceived organizational support in health care: the importance of teamwork and training for employee well-being and patient satisfaction. *Group & Organization Management*, *43*(3), 475-503.

[81] Weaver, S. J., Dy, S. M., & Rosen, M. A. (2014). Team-training in healthcare: a narrative synthesis of the literature. *BMJ Quality & Safety*, *23*(5), 359-372.

[82] Greco, P., Laschinger, H. K. S., & Wong, C. (2006). Leader empowering behaviours, staff nurse empowerment and work engagement/burnout. *Nursing Leadership*, *19*(4), 41-56.

[83] Leask, C. (2018). Integrated Neighbourhood Care Aberdeen (INCA) Test of Change: Evaluation Report. Aberdeen City Health & Social Care Partnership.

[84] Bonciani, M. et al. (2018). The benefits of co-location in primary care practices: The perspectives of general practitioners and patients in 34 countries. *BMC Health Service Research, 18*(1), 132.

[85] Al Horr, Y., Arif, M., Kaushik, A., Mazroei, A., Katafygiotou, M., & Elsarrag, E. (2016). Occupant productivity and office indoor environment quality: A review of the literature. *Building and Environment*, *105*, 369-389.

[86] Zwarenstein, M., Goldman, J., & Reeves, S. (2009). Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, (3).

[87] Bryan, K. (2010). Policies for reducing delayed discharge from hospital. *British Medical Bulletin*, *95*(1), 33-46.

Many of the AC@H team identified pre-existing relationships which they could utilise whilst working in the AC@H team. Relationship development may have been facilitated by the length of time staff had worked for prior to taking up their AC@H role, with 80% of the team having worked for over 10 years. The longer employees have to develop relationships, the more opportunities they are presented with to demonstrate competency and credibility, develop trust and relationship commitment[88]. Strong workplace connections can enable inter-professional collaboration through knowledge and idea sharing and can diffuse innovative change[89]. These maintained relationships may not have only facilitated partnership working, but be utilised as an effective tool to raise awareness of the purpose and function of the AC@H service as it develops, with concerns services perceived AC@H as a carers service. Awareness raising through employee networks can be enhanced by communicating evidence of project effectiveness, particularly quantitative data, and adequate supply of resources (active promotion of innovation) including through awards, media and academic publications to widen reach[90]. The breadth of maintained relationships already established within the team could be the mechanism by which service awareness increases.

Limiting Factors

There are some important limitations to consider in this evaluation. The cohort of patients may not be representative of those entering the service as it expands in the future. This evaluation covered the initial stages of service development whilst there was considerable refinement of processes, and congruent with other evaluations[91], these initial patients were less fail and independent to ensure patient safety. As the service grows in confidence and processes develop further, the patient cohort may in turn become more complex.

When considering service level data, GAU was used as a proxy measure in which comparisons were made with the AC@H service, however this should be interpreted with caution as GAU treats acutely unwell patients. Due to the limited medical input, there was an acceptance that, for the most part, patients referred to the AC@H team were not acutely unwell. Finally, cost-effectiveness analysis or wider impact on acute service utilisation (e.g. reduced bed days, delayed discharges) was not considered. Although these would have been desirable, the primary function of this evaluation was to test model feasibility, to initially determine if the service can work, before consideration of future impact of scaling up[92].

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[88] Zillich, A. J., McDonough, R. P., Carter, B. L., & Doucette, W. R. (2004). Influential characteristics of physician/pharmacist collaborative relationships. *Annuals of Pharmacotherapy*, *38*(5), 764-770.

[89] Tasselli, S. (2014). Social networks of professionals in health care organizations: a review. *Medical Care Research and Review*, *71*(6), 619-660.

[90] Barnett, J., Vasileiou, K., Djemil, F., Brooks, L., & Young, T. (2011). Understanding innovators' experiences of barriers and facilitators in implementation and diffusion of healthcare service innovations: a qualitative study. *BMC Health Services Research*, *11*(1), 342.

[91] Gilmour, M. (2014). An Evaluation of Fife's Integrated Community Assessment & Support Service (ICASS). Final Report: August 2014. *Department of Public Health, NHS Fife*.

[92] Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., ... & Fernandez, M. (2009). How we design feasibility studies. *American Journal of Preventive Medicine*, *36*(5), 452-457.

From a patient perspective, whilst patient location was a primary outcome, there were secondary outcomes that weren't explored such as physical and mental wellbeing. However, we did receive positive feedback from questionnaires regarding patients experience with the service as preliminary evidence. It was only possible to follow up patients for 90 days after admission and this was due to both the small numbers of patients entering the service and the time constraints of delivering this evaluation. Conducting interviews for both patients and unpaid carers would have provided richer data on service experience, however it was decided that this may be burdensome for this cohort as many were vulnerable, unwell and had limited capacity.

From a staff perspective, the sample of professionals who interacted with the AC@H service and provided feedback was limited, therefore, may not be a representative view on the wider AC@H service perception. This was constrained by the responses received from the survey and could be explored in more depth in future to understand the wider impact on the service of other staff members.

5. Conclusion and recommendations

AC@H appears no less safe than usual care and which patients, unpaid carers, staff and interacting organisations were satisfied with. AC@H staff identified that the rapid access to both care and resources at a considerably vulnerable time, the ability to carry out functional assessments in a patient's own home and providing continuity of care were particularly beneficial in supporting patient reablement. When considering scaling this model, these components should remain integral to the system.

The challenges with geriatric input into the AC@H service potentially could be resolved through upskilling other health professionals, such as specialist GPs providing a supervisory role to either APs, Physician Associates or Clinical Development Fellows. In order to scale the service, broadening of referral pathways and operational hours would be required along with more staff to ensure effective person-centred care is delivered. Finally, due to the challenges accessing information from community IT systems, there needs to be a clear process of allowing staff to access this information through system access or well populated patient summary documents to enhance effective patient care planning.

From an unpaid carers perspective, there was a preference for their cared for person to be treated at home which reduced self-reported stress levels, suggesting the model positively impacts the wellbeing of family and friends. There appeared to be a willingness from unpaid carers to attend community services when these were recommended by AC@H staff, demonstrating that both signposting and onward referrals to Link Practitioners for more complex patients, is a feasible strategy in supporting unpaid carers within the AC@H service.

Staff described high satisfaction working in the AC@H service, with the team having a positive dynamic particularly due to the presence of a transformative management style. It appears a

more participatory management style enabled the strong team dynamic, possibly due to the level of expertise present within the team. Staff valued the wide range of training provided in both clinical and non-clinical skills, however, the attendance of training during service operational hours restricted the level of service provision that could be delivered, particular due to the small size of team. Frequent staff training during operational hours to upskill staff inhibits both caseload size and patient acuity levels in this context, therefore, will limit service expansion. Prioritisation needs to be considered around which aspect to focus as both cannot progress simultaneously.

Co-location of the AC@H team with other staff members appeared beneficial in collaborative working although there was a tension between the benefits of this and the unsatisfactory office environment. For co-location to effectively facilitate collaborative working and for staff to be most productive, adequate working environment (such as not overcrowded and noisy) needs to be provided. Pre-existing relationships may have also facilitated positive intra-collaborative working which could be an important tool to utilise when raising awareness of service function as it develops. Promoting regular AC@H progress updates through these communication channels will enhance the service function and reduce the quantity of inaccurate service perceptions.

6. Acknowledgements

7. References

Aberdeen City Health and Social Care Partnership (2018). Community Link Working. Available from: https://www.aberdeencityhscp.scot/our-innovations/community-link-working/ [Accessed 11/04/2019].

Aberdeen City Health & Social Care Partnership (2018) Primary Care Improvement Plan. Aberdeen.

Aberdeen City Health & Social Care Partnership. (2019). Aberdeen City Health and Social Care Partnership Strategic Plan 2019-22. Available from: https://www.aberdeencityhscp.scot/globalassets/strategic-plan-2019-2022.pdf [accessed 11/03/19].

Al Horr, Y., Arif, M., Kaushik, A., Mazroei, A., Katafygiotou, M., & Elsarrag, E. (2016). Occupant productivity and office indoor environment quality: A review of the literature. *Building and Environment*, *105*, 369-389.

Almost, J., Wolff, A. C., Stewart-Pyne, A., McCormick, L. G., Strachan, D., & D'souza, C. (2016). Managing and mitigating conflict in healthcare teams: an integrative review. *Journal of advanced nursing*, *72*(7), 1490-1505.

Audit Scotland (2018). NHS in Scotland 2018. Edinburgh: Audit Scotland.

Baird, B. et al., (2016). Understanding Pressures in General Practice. The King's Fund, London.

Barling, J., Kelloway, E. K., & Iverson, R. D. (2003). High-quality work, job satisfaction, and occupational injuries. *Journal of Applied Psychology*, *88*(2), 276.

Barnett, J., Vasileiou, K., Djemil, F., Brooks, L., & Young, T. (2011). Understanding innovators' experiences of barriers and facilitators in implementation and diffusion of healthcare service innovations: a qualitative study. *BMC Health Services Research*, *11*(1), 342.

Barr, J., & Dowding, L. (2013). *Leadership in Health Care*. SAGE Publications Limited.

Bonciani, M. et al. (2018). The benefits of co-location in primary care practices: The perspectives of general practitioners and patients in 34 countries. *BMC Health Service Research, 18*(1), 132.

Bowen, D. J., et al. (2009). How we design feasibility studies. *American Journal of Preventative Medicine*. 36(5), 452-457.

Brandling, J., & House, W. (2009). Social prescribing in general practice: adding meaning to medicine. *British Journal of General Practice*, *59*(563), 454-456.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research Psychology*, 3(2), 77-101.

Bray, B. D., & Steventon, A. (2017). What have we learnt after 15 years of research into the 'weekend effect'?. BMJ Quality & Safety, 26, 607-610.

Brookhart, M. A., Patrick, A. R., Schneeweiss, S., Avorn, J., Dormuth, C., Shrank, W., ... & Solomon, D. H. (2007). Physician follow-up and provider continuity are associated with long-term medication adherence: a study of the dynamics of statin use. *Archives of Internal Medicine*, *167*(8), 847-852.

Bryan, K. (2010). Policies for reducing delayed discharge from hospital. *British Medical Bulletin*, *95*(1), 33-46.

Buckner, L. & Yeandle, S. (2015). *Valuing Carers 2015: The rising value of carers' support.* University of Sheffield, University of Leeds and CIRCLE, Carers UK.

Burns J (1978) Leadership. Harper and Row, New York.

Carers UK (2004). In poor health: The impact of caring on health. *Carers UK*

Carers UK (2013). The state of caring 2013. *Carers UK, The voice of carers*.

Chatterjee, H. J., Camic, P. M., Lockyer, B., & Thomson, L. J. (2018). Non-clinical community interventions: a systematised review of social prescribing schemes. *Arts & Health*, *10*(2), 97-123.

Clements, D., Dault, M., & Priest, A. (2007). Effective teamwork in healthcare: research and reality. *Healthcare Papers*, *7*(I), 26.

Cunliffe, A. L. et al., (2004). Sooner and healthier: a randomised controlled trial and interview study of an early discharge rehabilitation service for older people. *Age and Ageing*, *33*(3), 246-252.

Czernuszenko, A., & Czlonkowska, A. (2009). Risk factors for falls in stroke patients during inpatient rehabilitation. *Clinical Rehabilitation*, *23*(2), 176-188.

Egerton, T., Maxwell, D. J., & Granat, M. H. (2006). Mobility activity of stroke patients during inpatient rehabilitation. *Hong Kong Physiotherapy Journal*, *24*(1), 8-15.

Freeman, G., & Hughes, J. (2010). Continuity of care and the patient experience. *The Kings Fund,* 1-64.

Fisher, J. M., Garside, M., Hunt, K., & Lo, N. (2014). Geriatric medicine workforce planning: a giant geriatric problem or has the tide turned?. *Clinical Medicine*, *14*(2), 102-106.

Gilmour, M. (2014). An Evaluation of Fife's Integrated Community Assessment & Support Service (ICASS). Final Report: August 2014. *Department of Public Health, NHS Fife*.

Gonçalves-Bradley, D.C., et al. (2017). Early discharge hospital at home. *Cochrane Database of Systematic Reviews*, 6.

Grant, P. M., Granat, M. H., Thow, M. K., & Maclaren, W. M. (2010). Analyzing free-living physical activity of older adults in different environments using body-worn activity monitors. *Journal of Aging and Physical Activity*, *18*(2), 171-184.

Graetz, I., Reed, M., Rundall, T., Bellows, J., Brand, R., & Hsu, J. (2009). Care coordination and electronic health records: connecting clinicians. In *AMIA Annual Symposium Proceedings* (Vol. 2009, p. 208). American Medical Informatics Association.

Graetz, I., Reed, M. E., Shortell, S. M., Rundall, T. G., Bellows, J., & Hsu, J. (2014). The next step towards making use meaningful: electronic information exchange and care coordination across clinicians and delivery sites. *Medical care*, *52*(12), 1037.

Greco, P., Laschinger, H. K. S., & Wong, C. (2006). Leader empowering behaviours, staff nurse empowerment and work engagement/burnout. *Nursing Leadership*, *19*(4), 41-56.

Harris, R., et al. (2005). The effectiveness, acceptability and costs of a hospital-at-home service compared with acute hospital care: a randomized controlled trial. *Journal of Health Services Research & Policy*, *10*(3), 158-166.

Hill, B. (2017). Does leadership style of modern matrons contribute to safer and more effective clinical services?. *Nursing Management*, *24*(1), 21-25.

Hoffmann, T., & McKenna, K. (2004). A survey of assistive equipment use by older people following hospital discharge. *British Journal of Occupational Therapy*, *67*(2), 75-82.

Hoogerduijn, J. G., et al. (2007). A systematic review of predictors and screening instruments to identify older hospitalized patients at risk for functional decline. *Journal of Clinical Nursing*, *16*(1), 46-57.

Hussain, M., et al. (1996). Prospective survey of the incidence, risk factors and outcome of hospital-acquired infections in the elderly. *Journal of Hospital Infection*, *32*(2), 117-126.

ISD (2018). Acute Hospital Activity and NHS Beds information in Scotland. Annual Year ending 31st March 2018. Information Services Division Scotland.

ISD (2018). Delayed discharges in NHSScotland: Annual summary of occupied bed days and census figures. Figures up to March 2018. Information Services Division Scotland.

ISD Scotland (2019) Medical and dental workforce of NHS Scotland. Accessed from: https://www.isdscotland.org/Health-Topics/Workforce/Publications/2019-03-05/Medical-and-Dental.asp [10/02/2019].

Jackson, C., Shahsahebi, M., Wedlake, T., & DuBard, C. A. (2015). Timeliness of outpatient follow-up: an evidence-based approach for planning after hospital discharge. *The Annuals of Family Medicine*, *13*(2), 115-122.

Kitson, A., Marshall, A., Bassett, K., & Zeitz, K. (2013). What are the core elements of patient-centred care? A narrative review and synthesis of the literature from health policy, medicine and nursing. *Journal of Advanced Nursing*, *69*(1), 4-15.

Kortebein, P., Symons, T. B., Ferrando, A., Paddon-Jones, D., Ronsen, O., Protas, E., ... & Evans, W. J. (2008). Functional impact of 10 days of bed rest in healthy older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, *63*(10), 1076-1081.

Kripalani, S., LeFevre, F., Phillips, C. O., Williams, M. V., Basaviah, P., & Baker, D. W. (2007). Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *Jama*, *297*(8), 831-841.

Kwan, J. L., & Cram, P. (2015). Do not assume that no news is good news: test result management and communication in primary care. BMJ Quality & Safety, 24(11), 664-666.

Laurant, M., Reeves, D., Hermens, R., Braspenning, J., Grol, R., & Sibbald, B. (2005). Substitution of doctors by nurses in primary care. *Cochrane database of systematic reviews*, (2).

Leask, C. (2018). Integrated Neighbourhood Care Aberdeen (INCA) Test of Change: Evaluation Report. Aberdeen City Health & Social Care Partnership.

Leask, C. F. et al. (2019). Framework, principles and recommendations for utilising participatory methodologies in the co-creation and evaluation of public health interventions. *Research Involvement and Engagement*, *5*(1), 2.

Leask, C. F. and Tennant, H. (2019). Evaluation of an unscheduled care model delivered by advanced nurse practitioners in a primary care setting. *Journal of Research in Nursing* [In Press].

Maguire, M & Delahunt, B. (2017). Doing a thematic analysis: a practical, step-by-step guide for learning and teaching scholars. *AISHE-J*; 9(3).

Macmillan (2017). Identifying cancer carers and signposting them to support. Background and guidance. *Macmillan Cancer Support*.

McCleskey, J. A. (2014). Situational, transformational, and transactional leadership and leadership development. *Journal of Business Studies Quarterly*, *5*(4), 117.

McDonnell, A., Goodwin, E., Kennedy, F., Hawley, K., Gerrish, K., & Smith, C. (2015). An evaluation of the implementation of Advanced Nurse Practitioner (ANP) roles in an acute hospital setting. *Journal of Advanced Nursing*, *71*(4), 789-799.

National Records of Scotland (2017). Projected Population of Scotland (2016-based). National Population Projections by sex and age with UK comparisons. Edinburgh: Scottish Government.

NHS Grampian (2018). Workforce plan 2018-2021.

NHS Scotland (2018) Health & Social Care iMatter Report 2017. *NHS Scotland*.

NHS Health Scotland (2018). NHS Health Scotland's Workforce Plan: Delivering better health for everyone 2018-2019. NHS Health Scotland, Edinburgh.

Ogbonnaya, C., Tillman, C. J., & Gonzalez, K. (2018). Perceived organizational support in health care: the importance of teamwork and training for employee well-being and patient satisfaction. *Group & Organization Management*, *43*(3), 475-503.

Pardessus, V., Puisieux, F., Di Pompeo, C., Gaudefroy, C., Thevenon, A., & Dewailly, P. (2002). Benefits of home visits for falls and autonomy in the elderly: a randomized trial study. *American Journal of Physical Medicine & Rehabilitation*, *81*(4), 247-252.

Pighills, A., Ballinger, C., Pickering, R., & Chari, S. (2016). A critical review of the effectiveness of environmental assessment and modification in the prevention of falls amongst community dwelling older people. *British Journal of Occupational Therapy*, *79*(3), 133-143.

Polley, M. J., & Pilkington, K. (2017). *A review of the evidence assessing impact of social prescribing on healthcare demand and cost implications*. University of Westminster.

Potluri, R. (2015). Is it time to re-appraise the weekend effect?. *Journal of the Royal Society of Medicine*, 108 (10), 382-383.

Raddish, M., Horn, S. D., & Sharkey, P. D. (1999). Continuity of care: is it cost effective. *American Journal Management Care*, *5*(6), 727-34.

Richards, S. H., et al., (1998). Randomised controlled trial comparing effectiveness and acceptability of an early discharge, hospital at home scheme with acute hospital care. *British Medical Journal*, *316*(7147), 1796-1801.

Sainty, M., Lambkin, C., & Maile, L. (2009). 'I feel so much safer': unravelling community equipment outcomes. *British Journal of Occupational Therapy*, *72*(11), 499-506.

Saultz, J. W., & Lochner, J. (2005). Interpersonal continuity of care and care outcomes: a critical review. *The Annuals of Family Medicine*, *3*(2), 159-166.

Scottish Government (2013). A Route Map to the 2020 Vision for Health and Social Care. Edinburgh: Scottish Government.

Scottish Government (2015) Scotland's Carers. Scottish Government. Available from:

https://www.gov.scot/publications/scotlands-carers/ [Accessed 11/04/2019].

Scottish Government (2015) Sustainability and Seven Day Services Taskforce. Interim Report.

Scottish Government (2016). A national clinical strategy for Scotland. Edinburgh: Scottish Government.

Scottish Government (2018). The GMS General Medical Services Contract in Scotland. Scottish Government, Edinburgh.

Shepperd, S., et al. (2009). Early Discharge Hospital at Home. *Cochrane Database of Systematic Reviews*, 1.

Shepperd, S., et al. (2016). Admission avoidance hospital at home. *Cochrane Database of Systematic Reviews*, 9.

Sibbald, B. S., Laurant, M. G. H., & Reeves, D. (2006). Advanced nurse roles in UK primary care. *MJA*.

Tasselli, S. (2014). Social networks of professionals in health care organizations: a review. *Medical Care Research and Review*, *71*(6), 619-660.

Weaver, S. J., Dy, S. M., & Rosen, M. A. (2014). Team-training in healthcare: a narrative synthesis of the literature. *BMJ Quality & Safety*, *23*(5), 359-372.

Wielandt, T., McKenna, K., Tooth, L., & Strong, J. (2002). Post Discharge Use of Bathing Equipment Prescribed by Occupational Therapists: What Lessons to Be Learned?. *Physical & Occupational Therapy in Geriatrics*, *19*(3), 49-65.

Wilson, A., Wynn, A., & Parker, H. (2002). Patient and carer satisfaction with 'hospital at home': quantitative and qualitative results from a randomised controlled trial. *British Journal of General Practice*, *52*(474), 9-13.

Zillich, A. J., McDonough, R. P., Carter, B. L., & Doucette, W. R. (2004). Influential characteristics of physician/pharmacist collaborative relationships. *Annuals of Pharmacotherapy*, *38*(5), 764-770.

Zwarenstein, M., Goldman, J., & Reeves, S. (2009). Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, (3).

Alternative to Admission Pathways - Option 3: admit to GAU but discharge early under AC@H

Phase

GP

Patient unwell – can admission be avoided? — No → Admit to ARI

Geriatrician advice and support enables GP to maintain patient at home

No – advice sufficient

3 — Septic (needs iv fluid/abx briefly)
Unsafe to be at home even with additional support; D&V???
Chest infection needing oxygen briefly
History of fall - ? Needs head CT as more confused. ?pubic rami # as off legs

Discharge letter to patient and GP

Consultant

Possibly — with support

Call to Link Geriatrician → Call to ACH Phone → Further Assessments Needed?

No - but Care need identified → Light additional care support to enable GP to maintain patient at home

Yes

Schedule Geriatrician Visit

Complex

Develop Treatment / Care Plan → MDT Review of patient and plan → Patient fit for discharge?

Yes

No but could receive last elements of treatment safely at home

ACH Team

Advanced Practitioner (Nurse, OT, Physio) & HCSW attend within 2 hrs → Examination & Diagnostics completed (Bloods, Urine, Obs, ECG) → Can person be cared for at home?

Yes

No → Admit to ARI

Results

HCSW takes samples to labs

Ongoing Treatment / Care

Acceptance onto ACH Ward

No

Information

Referral, access to KIS, GP summary

Workflow / e-referral to appropriate team member

Recording and sharing of initial obs

Ordering of labs from home?

Description of Plan and recording of interventions by all MDT members

Appendix B – Alternative to Admission Pathway

Alternative to Admission Pathways – Option 2: Care taken over by AC@H

Phase

GP

Patient unwell – can admission be avoided?

No → Admit to ARI

Geriatrician advice and support enables GP to maintain patient at home

No – advice sufficient

2 — Not coping at home/temporarily bed bound and unsafe to be left/bathroom downstairs/not able to cook for themselves.
At risk of OOH call out/admission by worried/scared relative/carer
Frail elderly with UTI, chest infection, delirium, cellulitis, de-compensated heart failure, off legs, mild flu.

Discharge letter to patient and GP

Consultant

Possibly — with support

Call to Link Geriatrician

Call to ACH Phone

Further Assessments Needed?

No - but Care need identified

Light additional care support to enable GP to maintain patient at home

Schedule Geriatrician Visit

Complex

Develop Treatment / Care Plan

MDT Review of patient and plan

Patient fit for discharge?

Yes

Yes

ACH Team

Advanced Practitioner (Nurse, OT, Physio) & HCSW attend within 2 hrs

Examination & Diagnostics completed (Bloods, Urine, Obs, ECG)

Can person be cared for at home?

Yes

No

Admit to ARI

Ongoing Treatment / Care

Results

HCSW takes samples to labs

No but could receive last elements of treatment safely at home

Acceptance onto ACH Ward from Hospital Ward

No

Information

Referral, access to KIS, GP summary

Workflow / e-referral to appropriate team member

Recording and sharing of initial obs

Ordering of labs from home?

Description of Plan and recording of interventions by all MDT members

Acute Care at Home – Patient/Citizen Discharge Questionnaire

We are hoping to gather as many views as possible from patients to helps us recognise what we do well and what we can do to improve our Acute Care at Home service. Please take a few minutes to answer the questions below. All information collected in anonymous so please be honest. Once completed, place this questionnaire into the pre-paid return envelope (no stamp required) provided and send back to us.

To what extent do you agree or disagree with the following statements

	Strongly Agree	Agree	Neither Agree/Disagree	Disagree	Strongly Disagree
I am satisfied with the Acute Care at Home service I have received					
I would recommend the Acute Care at Home service to others					
I have confidence in the Acute Care at Home team members supporting me					
My care through the Acute Care at Home team was well co-ordinated					

Please use the space provided below to describe any other experiences you would like to tell us about or to write any other comments you would like to make.

Thank you for your time.

Appendix D – Unpaid Carers Questionnaire

We are hoping to gather as many views as possible from family members / friends of patients to help us recognise what we do well and what we can do to improve our Acute Care at Home service. Please take a few minutes to complete this questionnaire. All information is anonymous, so please be honest. Once completed, place this questionnaire into the pre-paid envelope provided (no stamp required) and post it back to us.

Date of Birth:_____   **Postcode:** _____

What best describes your gender?   Male ☐   Female ☐   Other ☐

Relationship to cared for person?   Friend ☐   Family Member ☐

Your Experience of Acute Care at Home

To what extent do you agree or disagree with the following statements around your experience with Acute Care at Home.

	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
The Acute Care at Home team provided me with any extra resources, knowledge or skills I needed to look after the person I care for					
The Acute Care at Home team gave me encouragement and support in my caring role					
I was involved or consulted by the Acute Care at Home team as much as I wanted to be, in discussions about the support or services provided to the person I care for					
I was less stressed having my cared for person treated at home than in hospital					
I would rather my cared for person was treated at home than in hospital					
I would recommend the Acute Care at Home service to others					

Did the Acute Care at Home team suggest any source of help or support in the community for you (for example, community groups or social activities)?

Yes ☐   No ☐   Can't Remember ☐

If YES, did you have contact with them?

Yes ☐   No ☐   Can't Remember ☐

Time Spent Caring

About how long have you been looking after or helping the person you care for?

-Less than 6 months	☐	-Over 5 years but less than 10 years	☐
-Over 6 months but less than a year	☐	-Over 10 years but less than 15 years	☐
-Over 1 year but less than 3 years	☐	-Over 15 years but less than 20 years	☐
-Over 3 years but less than 5 years	☐	-20 years or more	☐

Please use the space provided below to describe any other experiences you would like to tell us about or to write any other comments you would like to make

Thank you for completing this questionnaire

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Introductory Questions

1. Tell me about your experience of working in the AC@H team?
2. How have you found working as part of a multi-disciplinary team?
3. Tell me about the training you have received for this job?
   a. Prompts: during induction and ongoing training. Have these met your needs?
4. Tell me about the caseload of patients that you have cared for?
   a. Prompts: numbers; acuity
5. How have you got on interacting with colleagues outside of the team
   a. Prompts: such as in GAU; GPs; community nursing teams

Positives of working in this way/Enablers

6. What has worked well in AC@H?
7. Was there anything that helped to make this new way of working successful?
8. What have you enjoyed most about this way of working?
9. Were these positives common for all team members?

Negatives of working in this way/Barriers

10. What have been the (biggest) challenges to this new way of working?
    a. IT / team base
11. How did you try and overcome these? Was this successful?
12. Were there any barriers that stopped you overcoming these challenges?
13. Did all staff face different types of challenges? (Were there differences in the types of challenges staff faced?
    a. Prompts: If so, what were they? Why were there differences?)

Future considerations

14. If a new AC@H team member started, what advice would you give them coming into this new way of working?
15. In what way do you think the AC@H model/service could be improved in Aberdeen?
16. Is there anything else you would like to tell me about your experience working in the AC@H team?

Appendix F – AC@H Staff Satisfaction Questionnaire

What is your occupation? (*tick one option only*)

Geriatrician ☐   Advanced Nurse Practitioner ☐   Physiotherapist ☐

Occupational Therapist ☐   Health Care Support Worker ☐   Pharmacy technician ☐

Other (*please specify*): _____

How many years' experience do you have working in either health or social care?

<2 years ☐   2-5 years ☐   6-10 years ☐   >10 years ☐

To what extent do you agree with the following statements (tick one box only):

Construct	Question	Strongly disagree	Disagree	Agree	Strongly agree
Supported	*I feel supported by AC@H management staff*				
Training	*I am provided with all necessary training to do my job*				
Development	*I have adequate opportunities to develop my professional skills*				
Communication	*I feel I can easily communicate with members from all levels of the team*				
Workload	*The amount of work I am expected to finish each week is reasonable*				
Progression	*I am satisfied with my chances for promotion*				
Recognition	*I am appropriately recognised when I perform well at my regular work duties*				
Teamwork	*My co-workers and I work well together*				
Systems	*The IT systems I use to do my job are fit for purpose*				
Satisfaction	*How would you rate AC@H as a place to work on a scale of 1 (the worst) to 10 (the best)?*	1 2 3 4 5 6 7 8 9 10 **Worst** ....**Best**			

Please let us know if you have any additional comments below.

_____
_____
_____

Thank you for taking the time to complete this questionnaire

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Appendix G – Staff Interacting with AC@H Satisfaction Questionnaire

What is your occupation? (*tick one option only*)

Geriatrician ☐   General Practitioner ☐   Advanced Nurse Practitioner ☐

Acute Nurse ☐   Community Nurse ☐   Physiotherapist ☐

Occupational Therapist ☐   Health Care Support Worker ☐   Pharmacy technician ☐

Third Sector ☐   Other (*please specify*): _____

To what extent do you agree with the following statements (tick one box only):

Construct	Question	Strongly disagree	Disagree	Agree	Strongly agree
Teamwork	The AC@H team are easy to work with				
Communication	The AC@H team communicate well with my team				
Contact	The AC@H team are easy to contact				
Referral Pathway	The referral process to AC@H is easy to follow				
Satisfaction	*How would you rate your experience working with the AC@H service on a scale of 1 (the worst) to 10 (the best)?*	1 2 3 4 5 6 7 8 9 10 Worst …………………………………………….Best			

What do you think are the benefits of having the AC@H service?

_____
_____
_____

What parts of the AC@H service could be improved?

_____
_____
_____

Please let us know if you have any additional comments below.

_____
_____
_____

Thank you for taking the time to complete this questionnaire

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