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TECHNOLOGY SOLUTIONS TO SUPPORT CARE CONTINUITY IN HOME CARE: A FOCUS GROUP STUDY

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Abstract

Background—Elevated hospital readmission rates from home care are an indicator of poor care quality, and rates are particularly high for heart failure patients. Readmissions may be avoided by optimizing continuity of care.

Purpose—To explore perceptions among home care clinicians of the barriers they face and the information they need to improve care continuity for patients with heart failure.

Methods—Focus groups were conducted with teams of home care clinicians at a large Certified Home Healthcare Agency in the Northeastern U.S.

Results—In total there were 61 participants across 6 focus groups. Three overarching themes emerged: continuity of care and communication on care transitions; maintaining continuity of care during a home care episode (with subthemes tracking signs and symptoms and patient teaching); and HIT characteristics to support communication and care continuity.

Conclusions—Our study highlights areas of improvement for HIT solutions that could support care delivery for heart failure patients in a home care setting.

Implications—Home care agencies planning to introduce technology can use these findings to assess if and how potential systems can support nurses to provide continuity of care across health care organizations and home care visits.

Keywords

Home health nursing; Nursing informatics; Continuity of patient care; Focus groups

INTRODUCTION

A growing number of elderly individuals receive home healthcare services in the USA.[1] In 2014 it is estimated that approximately 4.9 million individuals in the US were cared for in a home health setting.[2] Home care agencies in the US typically provide care to patients post discharge from a hospital, where they may have received skilled nursing care, rehabilitation therapies (e.g. physical and occupational therapy) and social work support. Hospital readmission of home care patients represents an indicator of poor care quality, and patients

Conflicts of Interest

The authors declare no conflicts of interest.

with heart failure have one of the highest overall re-hospitalization rates across all care settings.[3,4]

One factor that impacts readmission among heart failure patients in home care settings is care continuity. Continuity of care is a multi-dimensional construct that represents how patients experience service integration and coordination.[5] There are three types: *Informational continuity* refers to the transfer of information across the care continuum via medical records, or knowledge of a patient's values and preferences recorded by providers; *Management continuity* reflects the importance of coordination of services across providers when services are provided consistently to meet a patient's changing needs with flexibility; *Relational continuity* reflects how consistently the same individuals provide care to a patient.[5,6]

When continuity of care is suboptimal, fragmentation of care and services (between organizations and care providers) is a significant concern, and considerable research has focused on developing interventions that can support patients at vulnerable points in their care journey. A particular focus is on interventions to improve care transitions between hospital and home care services such as structured monitoring, use of home visiting by specialist individuals, education programs,[7–10] the use of different types of care coordination models[11] and the introduction of care pathways.[12] Interventions to support care transitions have been shown to reduce re-hospitalization rates[8,10] and in some studies have had a positive impact on patient's quality of life.[8] However, there are limitations to these approaches to care continuity; many interventions involve the use of specialized services (such as hospital based Advanced Practice Nurses as individuals making care transition visits),[10,13,14] which do not incorporate long term requirements for care continuity across a home care episode, and are difficult to integrate into existing care delivery systems outside of research studies.[15]

The Role of Health Information Technology in Promoting Home Care Service Continuity

Health Information Technology (HIT) could be used to support both care coordination and transitional care-key components of effective care continuity.[16] Requirements for such systems have been explored in patient centered medical homes, and include a need for technology that can support: the discharge process (such as the availability of a plan of care viewable across settings); exchange of key clinical information between providers (including alerting if the patient transitions between providers); automatic medication reconciliation; and provision of information for patients to assist with their self-care.[17,18] Previous studies have highlighted the challenges that home care nurses face in terms of the gaps in the information they receive when patients are discharged from a hospital[19] and having to rely on telephone and fax to communicate with care providers.[20] This is possibly due to the limited availability of HIT that can effectively support care coordination and care transitions in a home care setting.[21,22] However, to date studies have not explored the specific information needs of home care nurses and how HIT could be developed to support continuity of care across a home care episode.

In this study, we explored perceptions among home care clinicians of the barriers they face and the information they need to improve care continuity for patients with heart failure. We

also explore how technology solutions could be used to support home care nurses to promote care continuity.

METHODS

Design

Focus group interviews were used to explore the technology design features that home care clinicians would find helpful to enhance care continuity for patients in a home care setting.

Participants and Setting

The study was conducted in a large not-for profit certified home care agency located in the Northeastern U.S. In 2015 the agency provided care to over 99,000 patients located in a predominantly urban area. The agency employs over 1,500 Registered Nurses (RN) and Licensed Practice nurses (LPN), who provide skilled nursing services to patients in their homes.

The agency has an internally-developed electronic health record which is accessible to all home care team members, via a personal tablet computer with wireless connectivity for use in the patient's home. The system is designed for seamless data collection at the point of care, and consists of 4 key applications: the Outcomes and Assessment Information Set (OASIS); the home health plan of care; the nursing visit documentation system; and the medications module. On admission nurses complete the OASIS assessment and derive a patient's plan of care. There are pre-existing care plans for patients' with heart failure based on existing guidelines.[23–27]

We identified six potential home care teams to participate in the interviews at random and then approached the manager of each team to ask permission to organize a focus group. All team managers agreed to participate. Five of the focus groups only included home care nurses. The fifth focus group included all home care team members (i.e. RNs, LPNs, physiotherapists (PT), occupational therapists (OT) or speech and language therapists (SLT)). The selected team members were then invited to attend a focus group at a specified time. It was made clear that participation was voluntary.

Ethical Considerations

The study was approved by the Institutional Review Boards at the authors' institutions.

Data Collection

Focus groups took place between November 2015 and February 2016. Prior to conducting the focus groups, the research team extracted 28 statements from the evidence-based guidelines used to develop agency care protocols (Table 1).[23–27] Each statement was placed on a poster; at the beginning of each focus group the posters were attached to the interview room wall and participants were asked to identify the top five evidence based care statements that would be a priority for them to manage during a home care visit for a patient with heart failure. They were provided with color-coded stickers that also had a number (1= top priority through to 5 = least in the top 5) and attached them to the relevant posters.

The subsequent focus group discussion was structured around the statements most important to participants (those receiving the highest priority rankings). The focus group guide consisted of general questions to explore participants' experiences providing care related to each statement, and technology that might be developed to help support their care. All focus group discussions were audio-taped and professionally transcribed.

Data Analysis

The focus group transcripts were entered into a qualitative analysis program (NVivo 11). Firstly, all researchers read the transcripts of two focus groups, to identify an initial set of broad themes related to the data and study aims. Next, two researchers (DD and JM) used the thematic analysis to develop a detailed coding framework, which they then applied to the two transcripts independently. Following this process, they met and discussed their initial coding, and reached consensus on a revised set of codes. This set of codes was used to categorize data across the focus group transcripts and inter-rater reliability was calculated (Kappa = 0.84). Finally, all researchers reviewed the coded data and reached consensus on the findings that emerged from the data.

RESULTS

There were 61 participants in 6 focus groups (53 nurses, 6 PTs, 1 OT and 1 SLT) (Table 2). Three overarching themes emerged: continuity of care and communication on care transitions; maintaining continuity of care during a home care episode (with subthemes tracking signs and symptoms and patient teaching); and HIT characteristics to support communication and care continuity (examples of data for each theme are provided in Tables 3 and 4).

Continuity of Care and Communication on Care Transitions

Informational continuity across care settings and between home visits was identified as important by all focus group participants in relation to care transitions between the hospital and home. A complete and accurate plan of care for the patient, including a full list of diagnoses and medications, was considered essential before going into the home and planning interventions. Participants reported feeling frustrated communicating with the multiple providers caring for each heart failure patient and identified time-consuming barriers. Communication often became an issue when they attempted to reconcile a patient's medication list.

Participants across all focus groups discussed issues with discharge documentation and the challenges faced by both themselves and their patients when they receive information that is not tailored to the patient's needs. This included patients sent home with information they could not read.

They also reported specific issues around reaching doctors; including hospitalists, specialists and primary care physicians (PCP). These included not being able to contact a doctor directly (instead leaving messages in which the urgency of an issue may not be communicated) which may result in significant delays, PCP's being unaware of a patient's recent hospital stay, and a lack of reconciliation between PCP/outpatient cardiologist orders

and hospital orders. In many cases they suggested that the need for a call could be eliminated by a standing PRN (as needed) order at discharge (e.g. if weight gain is greater than X then give Y) (Table 3).

Maintaining continuity during a home care episode

a) Tracking signs and symptoms—At initial admission and every subsequent visit, nurses monitor patients' vital signs and symptoms. Weight tracking is a primary parameter for monitoring HF status during home visits, accompanied by blood pressure measurement, edema checks and lung auscultation. Nurses reported practical barriers to accurately tracking weight over time including patients' access to a scale, their ability to stand, and obesity (e.g. if a patient was over 350lbs they did not have a scale that could monitor their weight). To monitor weight effectively, nurses indicated the importance of keeping logs to assess trends over time.

b) Patient teaching—Nurses emphasized the short-term nature of their work and an urgent need to accomplish as much as possible within a limited time. To do so they need to establish a consistent trajectory for teaching interventions. Quickly discerning what patients already know about their disease and how to manage it was viewed as imperative for a focused and efficient home visit. The educational interventions conducted in past visits and evaluations of a patient's ability to *"teach back to you what they learned"* [FG5] were viewed as important feedback that allow them to reinforce knowledge gaps and avoid *"redundantly teaching [patients] the same thing"* [FG5]. During the initial visit, nurses wanted to be able to pull up the education done with patients at the time of hospital discharge as a baseline for planning their own education efforts (e.g. awareness of diagnosis, recognizing symptoms, knowledge of medications).

HIT characteristics to support communication and care continuity

Two sub-themes related to HIT were identified; issues surrounding interoperability of HIT during care transitions and specific functionality of HIT such as Electronic Health record systems in a home care setting. With regard to HIT to support care transitions (interoperability of HIT) nurses valued seeing information about patients at the point of admission or referral to the agency. There was considerable discussion about the lack of data on admission, and how useful and important it would be to have this information in summary format.

Linked to this was the importance of knowing a patient's health history, previous admissions to home care and history of re-hospitalization. For example, the number of times a patient has been hospitalized for heart failure lets a nurse gauge how well managed the patient is. A technology system that enables the nurse to walk in to a patient's home and see what's going on with the patient right up front without having to look through discharge papers to find important information such as hospital risk score, frequency of visits, fluid restrictions, or presence of rales would help support patient continuity of care.

In relation to HIT functionality specific to the home care context, nurses suggested a flag (alert) system for patients who are at a higher risk of hospitalization when they are admitted

to the agency, to alert both schedulers (who are not clinicians) and nurses, and a means to easily identify if a patient has had a follow up MD visit. Medication changes and medication reconciliation were reported as an ongoing issue; a system that provides a pop up indicating if/when orders for heart failure medications (e.g. Lasix) have changed were thought to help with ensuring patients were taking the right medication. One nurse discussed how a medication summary for the patient to bring to follow up appointments would also help with care continuity.

In relation to the discussion regarding the importance of monitoring vital signs, particularly weight, over time, nurses felt that providing trends in the form of a visual graph, with thresholds to illustrate if/when a patient had a change that was problematic would be beneficial.

They saw trending as good way of monitoring the patient's condition and also as the basis for discussions about self-management. There was consensus across the focus groups for trended data on patient status every visit. In one focus group they mentioned that they would like to be able to access this information anytime, so that if necessary they could plan care in advance.

With regard to patient understanding of self-management, and whether or not nurses had provided education in various areas, there was considerable discussion about feedback on whether specific education goals had been achieved. Suggestions for providing this information effectively included a display showing a list of self-management topics in the teaching plan with a rating scale to record the patient's return demonstration of knowledge. The display could include a rating of how receptive or self-directed a patient (or their caregiver) is in each area.

LIMITATIONS

This study was conducted at a single U.S. home health care agency. The agency serves a large and diverse patient population and uses an internally-developed EHR, rather than a vendor supplied system. These agency characteristics do limit the potential generalizability of our findings to other home care agencies. However, we have provided details on the agency, sample population and EHR system characteristics to enable readers to identify the potential similarities to their own context. In addition, our findings replicate those found in previous studies in relation to care continuity and the challenges of fragmentation, which would suggest the HIT solutions we discuss in this paper may have resonance beyond the one agency that participated in this study.

DISCUSSION

The aim of this study was to explore nurses' perceptions of their information needs surrounding providing care continuity for patients with heart failure in a home care setting, and potential technology solutions that could be developed to assist care continuity. The results replicate findings in other studies related to care continuity: nurses experience considerable challenges related to information continuity across care settings.[20] Fragmentation stemming from lack of communication and coordination of care interventions

across organizations and care providers has consistently been identified as contributing to poor care quality.[28–31] Nurses in our study provided details on how these issues relate to home care: difficulties identifying and contacting clinicians to answer patient care questions; clinician failure to respond; and lack of appropriate information provided to patients upon discharge from the hospital.

Nurses suggested potential solutions to these issues which could be addressed using HIT: accurate contact information for care providers; PRN discharge orders; and discharge information tailored to the patient (e.g. in an appropriate language), including documentation of patient teaching. Many of these functions have been recommended for the electronic Summary of Care Document transferred on a patient's discharge using Health Information Exchange (HIE) systems,[32] part of national and regional efforts toward making Electronic Health Record (EHR) systems interoperable. Although HIE systems exist in some areas, their use in practice is currently limited, and there is little evidence that home health care agencies are regularly participating in such exchanges.[33]

Specific information that nurses value when a patient with heart failure is discharged from hospital and admitted to home care relates to the context of the care setting. Recent research has demonstrated that frontloading of home care nurse visits (early and intensive visits within the first week) combined with a physician visit within the first week reduce a patient's likelihood of 30 day rehospitalization.[34] Given this, information related to a patient's risk of hospitalization provided electronically on admission[35,36] could be used to prioritize nurse visits and other resources more effectively.

In addition, the nurses in our study identified particular needs surrounding both informational and management continuity to support care coordination. Episodes of home care are typically short and nurses have limited time both within and across visits to ensure that patients with heart failure are educated, managed and monitored effectively. They identified issues with monitoring and tracking signs and symptoms, and for tracking educational interventions and advice tailored to a patient's level of understanding.

CONCLUSIONS

This study is to our knowledge the first to explore the experiences and challenges faced by home care nurses related to continuity of care, and to elicit HIT solutions that could support their care delivery for heart failure patients. These include improved interoperability of EHRs across health care organizations to support communication between care providers, and functionality of technology within a home care context to identify patients on admission to home care who may be at increased risk of hospitalization to enable better allocation of care resource, and to display vital signs trends. In addition, the ability to quickly ascertain a patients' achievement of self-management and educational goals were seen to be important.

IMPLICATIONS

Our study highlights the functionality that home care nurses would like to see incorporated into EHR systems to support their care of HF patients on discharge from hospital. Home care agencies planning to introduce updated or new technology can use these findings to

assess if and how potential systems can support nurses to provide continuity of care across health care organizations and home care visits.

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Table 1

List of Evidence Based Statements (In order of priority identified by nurses in focus groups)

Ranking	Statement (potential format of feedback)
1	Track vital signs, lung sounds, activity tolerance, frequency of symptoms, weights/weight changes daily. Pay special attention to fluid overload. Notify MD if weight gain over 3lbs overnight, and over 5lbs in 7 or fewer days (pattern of symptoms – weights over time, fatigue over time)
2	Provide heart failure care log (vital signs, weight log, medication list, dietary log) (have they got the log Y/N?)
3	Determine risk of hospitalization at SOC/ROC – provide frontloaded contacts for patients with risk of ≥5 for hospitalization for the first 2 weeks of care (patient is at risk of hospitalization Y/N; If Y- then monitoring of frequency of visits, alert if needs one)
4	Every patient with HF should have clear, detailed, evidence-based plan of care (do they have a care plan? Y/N; is it up to date and detailed? Y/N)
5	Develop system for medication management have a system of medication management in place Y/N)
6	Assess learning needs and identify barriers. Educate about importance of adherence (carried out assessment of learning needs Y/N; feedback on education provided Y/N)
7	Coach patient on early symptom management and actions to take at each visit (have carried out education on symptom management Y/N)
8	Reconcile medications at SOC/ROC (medications have been reconciled Y/N)
9	Evaluate every visit, document changes and actions taken
10	Coach patient to schedule follow up visit within 7 days of discharge (has had follow up visit Y/N)
11	Sodium intake – read food labels, avoid high sodium foods, avoid adding sodium to meals (advice given Y/N)
12	Understand disease processes and link signs and symptoms to disease and behavioral choices (patient is able to do this Y/N)
13	Plan care based on patient stated reason for hospitalization/home care and patient stated goals (has plan Y/N)
14	Develop action plan for how to notify MD (has an action plan and patient knows what to do Y/N)
15	HF patients should be vaccinated against influenza and pneumococcal disease (have they had a vaccination? Y/N; if not have you organized for it be carried out? Y/N)
16	Evaluate for telehealth (do they need telehealth Y/N – have they been referred and has it been installed Y/N)
17	Evaluate need for social work and behavioral health if patient has depression (alert if screened for depression – then have they been referred to SW/BH Y/N)
18	Clarify if using any medications causing adverse effects – diuretics, NSAIDS, OTC drugs (checked for OTC, NSAID use Y/N)
19	Assess need for palliative/hospice care for patients with advanced HF (is patient in advanced HF? Y/N; if Y have you discussed palliative/hospice care Y/N)
20	Assist patient to identify self-care goals (specific, realistic, measurable) (has the patient got self-care goals? Y/N)
21*	Clarify fluid orders with MD (clarified/not clarified)
21*	Evaluate need for nutritionist referral (referral needed Y/N; referral made Y/N)
21*	Avoid use of high potassium salt substitutes (advice given Y/N)
21*	Routine serum electrolytes – serial measurement of serum potassium, routing renal function (alert when routine laboratory tests required)
21*	Assess functional status/mental status (assessment carried out and documented Y/N)
21*	Obtain diet orders – restriction of sodium (orders sent/not sent)
21*	Exercise training as safe and effective adhere to guidelines. Regular physical activity is strongly recommended for patients with CHF (monitoring of physical activity over time)
21*	Cardiac rehab in clinically stable patients (they have been referred to cardiac rehab if appropriate Y/N)

* none of these statements were identified as priorities during focus group interviews

SOC: Start of Care

ROC: Resumption of Care

Table 2

Focus Group Participants

Participant Characteristic	N or Mean (Range)
Gender (female/male/missing) (N)	54/5/2 (61)
Age, mean (range)	48 (29–66)
Race/Ethnicity (N)	
Hispanic/Latino	9
White	27
African American/Black	19
Asian	4
Native Hawaiian/Other Pacific Islander	1
More than one race	2
Missing	8
Years of experience, mean (range)	19 (3–40)

Table 3

Themes and Illustrative Quotes: Continuity of Care

Continuity of Care and Communication on Care Transitions
Communication with multiple providers:
"Because the patient may be seeing multiple doctors that's prescribing different medications…. So you don't know which medication the patient should be taking. So you have to call three or four doctors to clarify that" [FG1]
"that's where you have to call the Cardiologist for the Cardiac Meds, the Nephrologist' for some the meds. The Neurologist with the pain meds ….. you know you could be looking in three different spots and you still may not find that was their problem." [FG5]
"You know, one thing I noticed is that they put the hospitalist's name, they don't list the cardiologist, they don't list the PCP. So you have to look through. Okay so who is your doctor? "Doctor Hernandez" and who's your cardiologist? "I don't know" It's incomplete with the most vital information which is the doctor's." [FG4]
"PCP, cardiologist, arrhythmia doctor, and all three are prescribing. And I'm like, okay, so which one? And no one knows anything." [FG4]
Discharge documentation:
"Nurse 1: And then you have to look through that thick book of discharge papers and they're in English ---
Nurse 2: I don't know what that is and the majority of our patients are Hispanics and some of them, they don't know how to read." [FG4]
"we would need to know current medications that the patient is taking and which ones are from the past that they should not be taking. That's what we need to know because the patient might not know and the hospital discharge is not very clear." [FG2]
"we check it all the time because a few times I saw the discharge papers were another person instead of the patient. At least two times I had it and because I see his medications at home and are completely different medications. It's a completely different person." [FG2]
"we're checking the discharge papers and what not, but is there any like further with the heart medications they're not always accurate from the hospital." [FG5]
Communicating with doctors:
"A lot of the doctor's offices have these secretaries and they don't know anything about terminology. No medical knowledge at all, so when you're telling the secretary something...it's like...they don't understand the importance of the message that you're leaving." [FG1]
"It's wonderful that we make a call and we tell the doctor, "Doctor, this patient gained a pound, or two pounds". It would be nice if they called you back. That is the main thing because what is the use of us coming in there, making all this wonderful assessment, putting on the notes, making the calls, and you don't get that call back. So, one or two days later, in the meantime, because it's heart failure patient, we're sending him to a walk-in clinic to have the Lasix adjusted." [FG4]
"Exactly, because most of the time, we are in the field trying to reach the doctor patient, weight increase, five or more pounds. We cannot get a hold of the doctor, we have to call 911." [FG3]
"If they are on Coumadin their dose can vary very frequently and we don't always have it updated in the plan of care because the doctor's office is calling them to update and we don't know it was updated three day ago and now we have lab work again" [FG5]
"would be great if they would give us like a standard order say if three pounds in one day do X, Y, Z or…" [FG3]
Maintaining continuity during a home care episode
Tracking signs and symptoms:
"Especially weight is the biggest thing with heart failing patients. If their weight is more than three pounds from one day to the next then that's a problem. If it's more than five pounds in one week, that's a problem." [FG2]
"Nurse 1: I have a patient you know that I have met yesterday, she's heart failure but she weighs 300 pounds
Nurse 3: So we have a problem with that getting scales for those patients that are above 350." [FG1]
"Those are usually the most obvious signs, between the lungs and weight. Those are the two biggest indicators or at least the most visible that you can see, quickly, and that's the key to catch any changes early." [FG5]
"If it's not written down like if there isn't someone there weighing and you can say "Okay, do you have a log? Can we see the log?" because sometimes they keep logs, sometimes they don't. It's us if we're go in. If you can't physically see a log then you have to rely on backtracking through notes." [FG5]
"most of at least my CHF patients, you know, are taught how to keep a log…of their weight and whatever is needed, their blood pressures and finger sticks and everything." [FG3]
"If the patient goes [outside the range] of the parameter then you have a red flag" [FG6]
Patient Teaching:
"Diet, exercise, medication, following the whole plan… if we have an idea of whether or not they're aware or their education level regarding these items then we can know how we're going to educate them." [FG1]
"if you have an idea of what they have been educated on consistently, than perhaps you can either pick up from where the other person's left off or maybe identify some other deficit that you can address" [FG1]
"It has to be.... the whole deal. Diet, exercise, medication, following the whole plan. And so if we have an idea of whether or not they're aware or their education level regarding these items then we can know how we're going to educate them." [FG2]
"Are they able to retain what we've already taught them, are we just being redundantly teaching them the same thing over and over and they're never going to learn that concept" [FG5]
"at start of care it gives you a baseline and it gives you a sense of knowledge to which way you expect the patient to go and how to plan your care and how to – and how to provide teaching." [FG3]
"teaching the patient though. We're not going to be here forever. You have to know, if you gain three pounds over night or five pounds, you need to call the doctor and they need to give you the water pill." [FG6]

Table 4

Themes and Illustrative Quotes: HIT characteristics

HIT characteristics to support communication and care continuity
Interoperability of HIT: *"We need to have a clear-cut way to get a hold of the physicians to get them involved – more involved in the plan of care"* [FG3] *"a referral from the hospital. I think there should be some sort of link, that you can tap on and see how the patient appeared at the hospital, what was done and how he came home. So, then, from there we can take offers to see what we need to do."* [FG4] *"Information about their admission, that particular admission…. being able to pull up information about the patient's care team and who's on it"* [FG4] *"So if we had like better supporting documentation of their history which goes back to same like looking at their past 18 months of their MRN too, we would be able to establish that plan to care better at start of care."* [FG5] *"The history of the hospital stay. What went on when the person was in the hospital? A lot of small, little history. What went on when they were hospitalized?"* [FG4] *"Speaker 5: so you can see how many times they were hospitalized before that if you had access and maybe it was cholesterol first and then down the line it is heart failure, may be to know about the previous admissions.* *Speaker 4: that's big, knowing about the previous multiple hospital admissions and how often."* [FG1] ***Functionality of home care HIT systems:*** *"Coming with the referral is already flagging it for the non-clinical staff saying that if you have 20 start of cares but you don't have 20 clinicians, these are the five that must be prioritized. So for the non-clinical people, this will alert them."* [FG3] *…"if there were discrepancies* [regarding medications] *if that* [was] *highlighted right on the dashboard …we would know in that visit that's what I have to find out…"* [FG5] *"Speaker 3: Medication is important too because if there is a change, so that would give them a change you know you have to reinforce, well you know, you have taken two Lasix today instead of one* *Speaker 1: so that might be an alert or something that is pops up to tell you that the doctor's orders have changed"* [FG1] *"there is medication vial seen, pharmacy list. Then in other under the reconciliation. What the issue was, was it reconciled yes or no."* [FG6] *"Anybody can walk in and understand what's been going on with the patient right? I don't have to look back to see …. What's the weight now?"* [FG4] *"There's no -- unless they take a record of it. There's no way -- they have to go back every note, every note, every note. There's not like a, if you hit the blood pressure we give you for a graph of what blood pressures were or the weights. That would be a great help."* [FG5] *"if we're able to trend it then we can kind of know is the patient improving, is the patient diminishing, and it will – informs us to intervene or prompt us to refer or to communicate with that physician because of care, because that is what you're developing, some kind of quick plans."* [FG3] *"Int: So how often would it be helpful to have this information?* *Speaker 2: Every visit".* [FG6] *"Speaker 5: I want to access it at any time. Because I may want to look at it tonight because I'm going to see her tomorrow* *Speaker 3: In case you should be able to, it should be...* *Speaker 2:I may not in planning on visiting the patient, but I just want to see what's been going on with them so I want to see that you know especially [pause] the way were going...* *Speaker 5: You should be able to bring it up whenever, at any time* *Speaker 2: Within 24 hours of start of care"* [FG5] *"So say if we have noticed that we have CHF plan and the teaching – the parts of the teaching plan and then as the patient has successfully achieved that goal, you have check or it's bubbled around something. That's a visual cue like okay, fine. I don't have to repeat this. I can move forward because that's completed. Let me go on to the next goal statement."* [FG6]