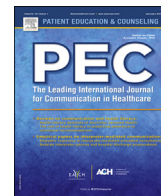




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## A scoping review of communication tools applicable to patients and their primary care providers after discharge from hospital

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### ABSTRACT

**Objective:** Transitions from hospital to home are high-risk episodes. Communication problems between patients/carers and their primary healthcare providers are a central part of the risk. This literature review aimed to identify any existing tools or information (including secondary care instruments) that would facilitate designing new communication instruments for primary care to manage and mitigate risk at discharge.

**Method:** Five databases (Pubmed, Embase, Cinahl, Web of Science and Cochrane) were searched using a three stem approach (primary/transitional care, discharge period, communication). A dual reviewer system was used, following PRISMA guidelines.

**Results:** From 61 full text articles a total of ten tools were found, 25 articles contained other useful content, 19 further tools were found in grey literature. Most material originated from the USA and described hospital-based transitional care interventions.

**Conclusion:** No ready-made patient/provider communication tool for the post-discharge period in primary care was found. Future communication tools should enhance education and engagement of patients so they feel able to initiate communication.

**Practice implications:** Collating post-discharge communication material is of importance to improving the safety of care transitions and will enable creation of new tools specifically designed for primary care. These tools will improve patient activation ('the knowledge, skills and confidence a person has in managing their own health and care') with the ultimate aim of reducing error and harm in primary care through improved communication of healthcare decisions.

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### 1. Introduction

Care transitions from secondary to primary care are a risky part of the patient journey, particularly for older patients with multimorbidity and polypharmacy [1]. The scale of the problem is huge: of the 20.8 million patients admitted to hospital in England in 2018–19, a quarter were aged 75 or older [2]. Rates of readmission for this cohort are also rising in the UK (50 % more than other adults) [3]. Readmission is distressing for older patients and costly for healthcare systems [4]. In the US some insurance scheme beneficiaries have seen reduced rates of readmission between 2010 and 2016, possibly as a result of specific initiatives to improve discharge processes in US hospitals [4].

Communication problems between patients and healthcare providers at discharge are at the heart of many errors and subsequent harms which occur in the post-discharge period [5].

Improved communication is a harm reduction strategy for discharge recommended by the James Lind Alliance for patient safety in primary care [6]. Improving communication has the potential to reduce the 22.8 % rise seen in UK emergency readmissions between 2012 and 2016 [7].

There are three groups of participants in the communication triangle at care transition [8] (1. patients/carers, 2. primary/community care providers and 3. secondary care providers) and yet most national guidance focuses on only inter-professional communication [9,10] or on hospital processes. Recent work shows that clinical management in primary care settings after discharge from hospital causes harm to 8 % of this vulnerable group of patients (aged  $\geq 75$  years) [11]. The reasons for error and harm related to post discharge management in primary care are complex [12] but lack of communication with patients and their carers is, at least in part, responsible. Where communication between informal carers and healthcare professionals is poor, then carers' problems with self-efficacy are exacerbated [13]. Improving patient and carer health literacy is an established strategy for reducing healthcare disparities and improving health outcomes [14].

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Guidelines on transition recommend that primary care should initiate contact with high risk patients within 3 days (UK) [15] and 2 days (US) [16] of discharge. There are no nationally accepted tools in the UK to support either primary care staff or patients/carers with this contact, nor any accepted structure for what consultations with frail/older recently discharged patients should look like. The Royal College of General Practitioners (UK) patient safety toolkit does not contain any such tool and the literature search which formed its basis [17] only revealed tools related to inter-professional communication at discharge, particularly those focussed on medicines reconciliation.

We anticipated that there would remain a research gap in interventions to address the communication at discharge which would be applicable to the primary care environment. We recognised that not only would an update to our previous review [17] be timely, but that a more specific search strategy would be required to find secondary care originating tools for

communication in the post-discharge period which might be adapted to primary care settings. This literature review is of interest to any research groups wishing to develop communication tools for the discharge period in any setting. Our summary of international efforts in post-discharge communication is an ideal starting point for new intervention development.

## 2. Method

### 2.1. Review style

We conducted a thorough scoping review of existing tools and material which might inform a communication tool for patients and primary healthcare providers at the point of discharge. Results were anticipated to include: fully formed tools (validated and unvalidated), guidelines, recommendations from primary research and consensus output. There are no standardised review methods

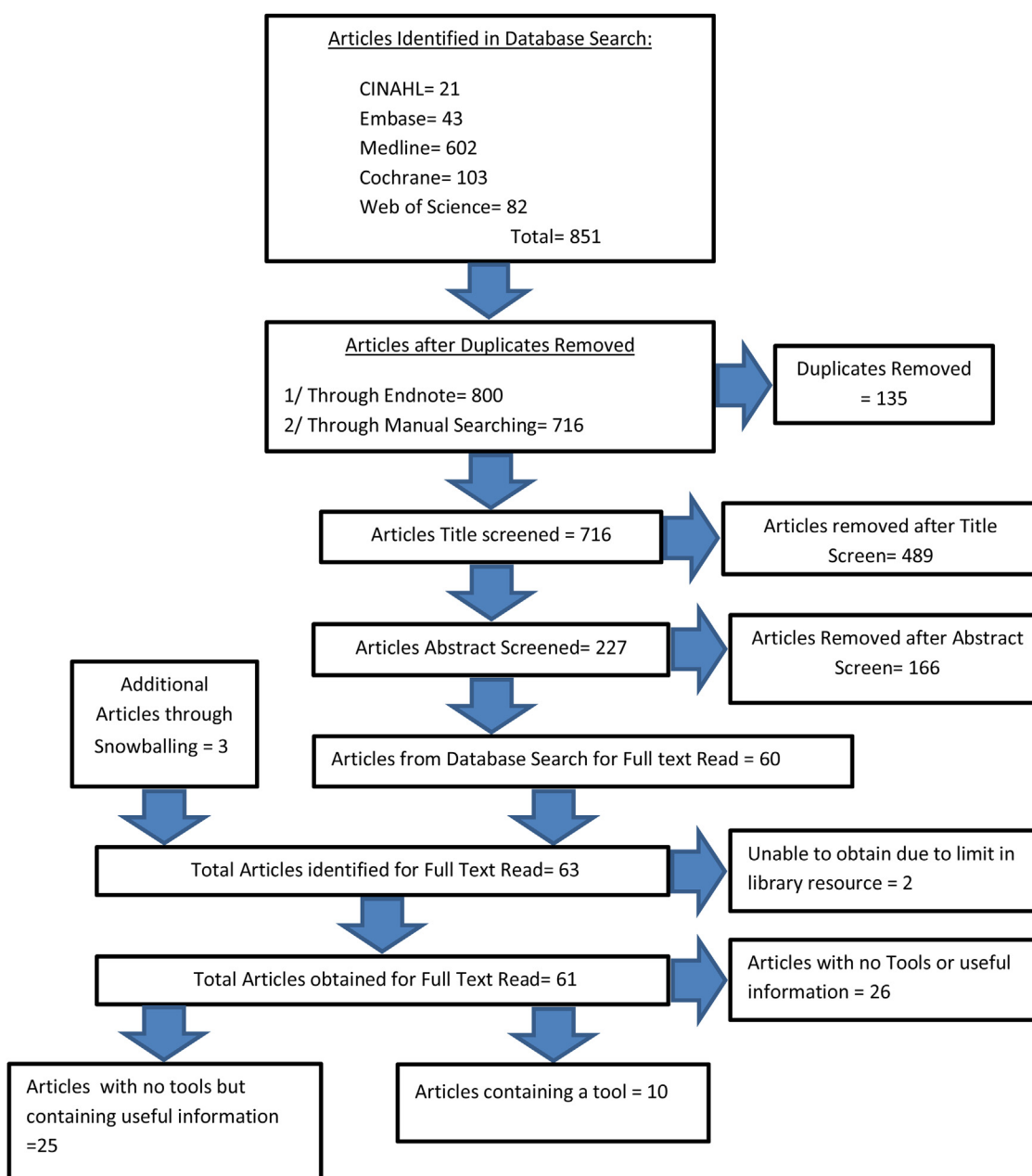


Fig. 1. PRISMA Flow Diagram.

in this context nor are there any accepted quality standards by which to include/exclude material. Our method borrows principles from systematic reviewing and aligns them with best practices when dealing with highly heterogeneous output [18]. Two reviewers conducted a dual reviewer process and adhered to systematic reviewing principles described by PRISMA. Scoping reviews of this nature are complex, given that the Medical Research Council (UK) acknowledge that the “methodology of how to find, review and combine data from complex intervention studies is not yet fully developed” and that it can be challenging to determine the theory of change even once the review is complete [19].

## 2.2. Reviewers and search strategy

Reviewer one (HS) is a former paramedic and current medical student, reviewer two (RS) is a GP Academic specialising in patient safety. Five databases were searched (Pubmed, Embase, Cinahl, Web of Science and Cochrane) on 7/10/19 with no limitations in language or date of publication. We used three search stems (Appendix A) relating to: 1-Primary care or transitional care setting, 2-Discharge events and 3-Any output that might facilitate communication. Using just synonyms for communication in stem three was determined to be too specific a search strategy and was found to miss important literature. Transitional care was included in the setting so as not to miss transferable literature from secondary care which might apply in primary care. We deliberately did not limit our findings to the older patient population (in order not to miss any transferable literature). Grey literature was searched in January 2020 by RS alone using a list of websites established in patient safety literature reviewing [17] (Appendix A).

## 2.3. Reference management

Fig. 1 details numbers of published articles at each stage of the process. Endnote version X9.2 was used for reference management. Duplicates were removed, first automatically and then manually. Title screening of 716 articles was completed using pre-agreed inclusion and exclusion criteria (Box 1). In line with previous patient safety reviews [17,20], tools involving individual drugs were excluded because the findings were likely to be too specific and non-transferable. We were interested in generalizable tools but did include condition-specific communication tools because many of their elements are transferable to other chronic conditions. An inclusive strategy was used at the title screening

### Box 1. Inclusion and Exclusion Criteria.

#### Title Screen inclusion criteria:

- Relevant to the creation of a tool or strategy to facilitate communication between the patient and primary care during the peri-discharge period.

#### Exclusion criteria:

- Secondary care setting with no relevance to primary care.
- Opinion, editorial, newspaper or collection of abstracts.
- Not related to communication between patient and healthcare provider.
- Communication focus purely between Healthcare professionals.
- Not set in discharge period unless transferable findings.
- Abstract and title not in English language.

stage, where neither reviewer could exclude studies felt to be potentially relevant by the other reviewer. A three-level classification system was used to screen titles (definitely include, possibly include, definitely exclude). Where both reviewers were at polar disagreement, or both were unsure (possibly include) each title was individually discussed and the decision to include/exclude mutually agreed. Kappa statistics for this process on a pilot of 108 titles showed moderate agreement (0.53). Abstracts (n = 227) were also subjected to the three-level classification system with discrepancies agreed through discussion, the majority of excluded material at this stage related purely to inter-professional communication.

## 2.4. Data extraction

It was only possible to determine to usefulness of content of the 60 resulting articles by fully reading and assessing each. Two items were unobtainable, the first was a case report and the second a conference proceeding, it was decided not to chase these due to likelihood of low impact findings. Three papers were added from snowballing processes (key references from already included studies). Findings from the remaining 61 papers were extracted by both reviewers independently into an Excel data-charting form (Appendix D) covering demographic information and quality assessment of each article (occasional disagreements were discussed and consensus reached in an iterative process). Quality assessment was performed according to the CASP tool appropriate to the method [21]. We deliberately did not assess the effectiveness of the interventions/tools found in the papers (as we are looking to inform the content of a new tool which will be subject to rigorous testing). We did however, make an assessment of whether the findings were considered validated (either in the index publication itself or in later linked publications or grey literature in the review). Both reviewers also independently extracted information into a Word data-charting form for the 35 papers found to contain tools or useful information (Appendix B) which details the information present in each article that would be of use in tool development. Reviewers' extracted information was combined and no disagreements were found.

## 3. Results

### 3.1. Output of tools

Useful data were extracted from 35 full-text articles (Appendix B). Ten discrete communication tools were found (Appendix C) and 25 papers yielded content which could be used to inform a tool. Grey literature was not included in the above flow diagrams or following statistics but it was very productive of tools (n = 19, referenced in full in Appendix C). The Institute for Healthcare Improvement website (US) was most productive source for grey literature (10 tools). The tools in Appendix C are grouped according to the following foci: transitional care schemes (n = 6), personalised discharge summaries (n = 4), patient/carer-filled discharge journals/checklists (n = 5), provider discharge checklists (n = 6), measurement tools which could inform communication material (n = 4) and other health literacy resources (n = 4).

### 3.2. Published study demographics

Before focussing on the 35 studies which yielded useful information and tools it is worth noting that there were four previous literature reviews found, one focussing on diabetes [22], one on telephone follow-up [23] and one with a broader focus on improving patient safety in transitional care [24]. None of these reviews have the same remit as this study and none of these

reviews are particularly recent (nothing published since 2012), so our review is timely and unique. In contrast, the rest of the literature is very recent (85 % of the 61 papers dated from 2011 onwards).

Considering the 35 published studies which were considered to contain useful information or tools: The majority of studies were quantitative (60 % 21/35), with randomised control trials ( $n = 8$ ) making up 23 % of the total final articles. Qualitative studies were found ( $n = 7$ ) but true mixed-methods studies were uncommon ( $n = 2$ ). Commentary and quality improvement pieces ( $n = 5$ ) were included in the review, particularly as they often highlight grey literature from lesser-known sources. There was a clear preponderance of US literature (49 % 17/35) with the UK and Australia lagging behind (14 % each, 5/35). All but three of the studies containing useful information have been published in the last 10 years.

As anticipated, we did extract very heterogeneous data, including recommendations from qualitative studies which were particularly relevant to the setting. When including content from smaller studies a judgement must be made about the relevance to the design of a future communication tool and to the congruency of the findings. For example, a small qualitative study of 20 patient/carer interviews about views on discharge [25], made two key recommendations about design of future discharge communication interventions: 1. Use example questions about the discharge plan that patients and carers can ask health-care practitioners, and 2. Include 'it's ok to ask' type material. These recommendations are entirely congruent with the ethos of the tool we plan to create AND no larger, more relevant studies were found to contain finding to the contrary. 'It's OK to ask' is itself a thoroughly validated approach used internationally to trigger patients to question healthcare providers. Recently the 'Ask me three (questions)' campaign has gained precedence, perhaps to avoid confusion with mental health and problem drinking campaigns with similar names.

### 3.3. Setting – focus on primary care

We are particularly interested in UK primary care as this is where the tool we will develop is intended to be used. Most of the studies, however, were set in secondary care (43 % 15/35) or a combination of secondary and primary care environments (40 % 14/35). Much of the content related to secondary care-based transitional care programmes in the US. Only five of the published studies related mainly to primary care (14 %) and these were mostly related to very specific types of discharge (see discussion). One very small qualitative study (in the authors' home area) aimed to understand experiences of patients with chronic heart and lung conditions during the discharge process and identify areas for improvement [26]. Of note, all 14 participants (average age 74 years) expected their GP to contact after discharge routinely and would have found this reassuring; unfortunately none of the patients in the study reported such contact which they described as 'surprising and disappointing'. Another small but highly informative primary care study (set in the East-Midlands, UK) [27] studied the views of patients after discharge from stroke and hip fracture wards. This paper identified three major threats to safe post-discharge care for this patient group: (i) direct harms e.g. falls, (ii) contributing factors, e.g. waiting for results or follow up care and (iii) latent factors e.g. discharge planning. Community nurses commented that GPs were unlikely to get involved in post-discharge care, even for this vulnerable group, unless there was a problem with care. GPs placed a great deal of reliance on the discharge letter, which was a concern if there had been delay in receipt of this or it was of poor quality. A recently reported trial of a primary care based, nurse led post Emergency Department (ED) discharge telephone follow-up scheme for high risk veterans

(DISPO-ED) [28] did not achieve its primary objective of reducing ED visits for the vulnerable older patient. The intervention did, however, increase the rate of primary care visits at 30 days, demonstrating that this vulnerable group need input from primary care providers and perhaps that they are unable to access this input without help.

In the grey literature a further five tools with a specific focus on primary care were found. The American Academy of Family Physicians checklist [29] supporting the 'initial transitional care contact scheme' allows administrative staff at general practices to enter key information about recently discharged patients on to the GP computer system. The utility of such a tool in the UK is likely to be limited as most of our discharge summaries arrive promptly and via electronic download. The IHI How-to Guide on transitions for general practice [30] contains a checklist, based on the report authors' earlier work (2010), which is an exhaustive schema for what should ideally be covered in a post-discharge visit. Although this is not designed to be used directly with patients it could be used to help construct a communication tool for patients and GPs. No other such checklists for idealised post-discharge primary care visits were found in the review. Material from the Scottish Patient Safety Programme for Primary Care was considered (including updates from our previous patient safety toolkit review [17]). Three tools relevant to communication about post-discharge care in general practice were found – one relating to audit measures of quality of post-discharge care, another to communication of blood test results and a third to medicines reconciliation (Appendix C).

### 3.4. Quality assessment

Validation - An assessment of validation of all tools was made based on information from the source itself and from other material in the review (e.g. if a prototype tool described in an earlier publication had subsequently been part of an extensive RCT found in the review it was considered validated). Overall, 17/29 tools (58 %) were considered validated, grey literature sourced tools were twice as likely to be considered un-validated ( $n = 8$ ) as published literature tools ( $n = 4$ ) (Appendix C).

Quality issues - Only seven of the 35 included studies were assessed having quality issues (either in sampling or methods as indicated in Appendix B, *italic text* in weaknesses column). Only one of the discrete tools originated from a paper with quality concerns [33].

### 3.5. Outcomes of interest

There were two main focuses of published literature: health literacy/patient education (37 % 13/35) and transitional care/discharge planning (40 % 14/35). The remaining papers considered vulnerability factors such as: multi-morbidity, poly-pharmacy, cognitive impairment or old age.

Thirteen papers were identified as being focused on health literacy/patient education, including six of the tools identified. The tools included three personalised discharge summary schemes [31–33] which encourage contact with primary care. A unique tool for assisting patients to describe their social support after discharge was identified [34] which could be adapted to identify those most at risk of poor social support and requiring further input, or as a means of triaging those most vulnerable. Another hospital based scheme used personal journals as tools to empower patients at discharge and measured the confidence of patients in engaging healthcare [35]. The COMPASS model [36] was an alternative approach to patient empowerment. A unique feature of the model is to teach patients when to re-present to healthcare, through recognition of deviation from normality. This concept of physiological boundaries as an element of patient education might

be adapted to primary care management of other conditions after discharge.

There is a conflicting but growing evidence base for transitional care interventions and pathways [37] and although they are potentially important strategies for improving patient experiences post-discharge, these initiatives are led by healthcare staff and are mostly secondary care driven e.g. [38]. Rarely have transitional care schemes been validated in primary care, though the 'Transitional Care Model' is one example [39] and a trial protocol of GPs transitional care for high risk patients [40] was noted. Transitional care schemes which place the patient/carer in the driving seat and facilitate them to manage their own post-discharge care are rarer. Examples of patient led transitional care can be found [35], the results of a trial of a patient centred app for care transition of older rehabilitation patients are awaited [41].

## 4. Discussion and conclusion

### 4.1. Discussion

This review improves our understanding of enhancing communication effectiveness at discharge in a number of ways:

1. Confirming that an individualised plan (personalised discharge summary) containing information specifically designed for patients and carers is a useful AND empowering strategy – though of course this is potentially more time consuming for hospitals at the point of creation.
2. Demonstrating that deterioration scripts and red flag information for patients at discharge are: rare, complex and condition specific – they also require a great deal of research and development to be efficient and safe. More global approaches to individualised information (as in point 1 above) is a strategy which will yield more immediate results.
3. Demonstrating that having nursing/administrative staff call patients after discharge (although commonly used) is a high-cost communication method which does not always yield positive results and may not encourage patient empowerment.
4. Showing that Primary Care is not supported to be involved in post-discharge care to the extent which they could or should be. A key need is to develop an evidence base for increased time investment in patient understanding in primary care post-discharge.

The recent uptake in interest in transitional care is highlighted by the findings of this review; transitional care is a concept of the last decade. Only 15 % of published material in this review dates from prior to 2011 (when our previous primary care patient safety tools review [17] was conducted). This earlier material is useful for informing a tool but no discrete tools were found prior to 2011 (despite a plethora of 114 other patient safety tools for primary care being found in our 2011 review [17]). Grey literature searching was substantially more productive of communication tools for the peri-discharge than was published literature (again akin to the results of our previous scoping reviews for patient safety tools [17]). We should focus future research effort on proving that the tools we have already created are robust to analysis. The global spread of interest in transitional care and discharge planning is evident, but the greatest concentration of activity is to be found in the US (21 of the 27 tools originated in the US). US healthcare systems are substantially more consumer-driven than the NHS in the UK and this is one potential reason for the prevalence of US data.

Payment structure for many US hospitals include a requirement for transitional care and there has been much interest in the quality of this provision, leading to specific transitions theme research funding from the Patient Centred Outcome Research Institute [42].

In improving quality, many secondary care based organisations have sought to have specific provision for patient information in their discharge schemes; this explains the 77 % of US literature from a secondary care base. Most transitions programmes focus on hospital based services reaching out into the community. Despite high costs they often report no difference in long-term outcomes, one review [37] suggests basing transitional care in primary care might improve outcomes but no head-to-head trials has been conducted. Successful transition programmes (such as *Care Bridge* [31] which reduced mortality within six months of discharge) can certainly teach us about training healthcare staff to educate patients about their admissions. The importance of communication with patients after discharge lies not just in reducing readmissions or healthcare costs but also in developing and sustaining positive relationships with healthcare providers, particularly primary care providers who serve patients across their life course [35].

Only five papers were predominantly set in primary care (from a mixture of countries). The five papers of UK origin all related to primary care or involved primary care, one commented on an existing guideline [16]. Unfortunately the others were condition specific: (ICU discharge information to GPs [43], post discharge management of serious accident patients [44]); or were small studies (qualitative study demonstrating poor contact with GP [26], staff views study with only 3 GPs [27]). Grey literature revealed five tools *specific to primary care*, but unfortunately they did not focus on the communication needs of patients (Appendix C). The paucity of information from a primary care specific setting confirmed the validity of the authors' wider search strategy. Tentative indications of lack of engagement of GPs with discharge planning [27] demonstrates a need to involve primary care providers in designing setting specific instruments and to develop greater understanding of barriers to successful discharge planning in primary care. There is great potential for learning from instruments designed in secondary care. As with many other patient safety strategies [20], primary care will have to borrow, and then adapt, communication tools for discharge to suit its own needs.

#### 4.1.1. Strengths

We conducted a rigorous scoping review, adhering where possible to systematic review principles. Our literature review is both unique and important as a basis for developing tools for patient communication in primary care after discharge from hospital. We considered a wide range of databases and many, varied grey literature sources. While no literature review can ever be exhaustive, we believe this scoping review is particularly thorough and an excellent grounding for our future work.

#### 4.1.2. Limitations

It was with some deliberation that we were able to define what output was considered a 'tool' (e.g. *Teach-Back* was considered a tool). We relied on a description of a free-standing intervention in the index source or subsequent work. Defining the primary intent of some complex interventions or tools is also problematic i.e. Scottish Patient Safety Programme tools not specifically created for care transitions were included due to applicability to discharge and to the primary care. Considering the aims of our scoping review, in general, we were inclusive in our strategy. The authors are aware that other tools in medicines reconciliation and test result management exist but it was not the primary intent of this review to gather such material.

#### 4.1.3. Future work

The output from this literature review is an ideal starting point for development of new complex interventions for the post-

discharge period with patient facing elements. Any researcher wishing to develop a tool for transitions should consider our findings in the design of their instrument. One approach to using this material would be to decide which group of tools from [Appendix C](#) the planned intervention most resembles. If no existing instrument exists which might be adapted or further tested, researchers could amalgamate elements of tools that they consider to be relevant.

Having failed to detect a post discharge communication tool for patients in primary care, our intent is to use our findings to feed a co-production process to create one. The four IHI and AHRQ sourced patient/carer filled journals/checklists are likely to be very influential to us. If our co-production process determines that a complementary provider-filled element is desirable then the 'provider discharge checklists' will also be very important.

#### 4.2. Conclusion

We have found 27 published and unpublished tools which might facilitate communication at discharge. Only six of the tools were explicitly designed for primary care and none of these were functioning communication instruments for patients or carers to use in the post-discharge period. The results of this review demonstrate a gap in useful provision, and highlight a need for the development of tools to address it. The existing secondary-care tools we have found will enable new tools to be developed to empower patients to communicate with primary care after discharge. This review will also help to make developers of existing tools aware of competing and complementary tools in the same area.

#### 4.3. Practice implications

There is growing interest in tools which improve patient/carer health literacy in the post-discharge period. The results of this review will be influential for improving care in the handover period at discharge. One improvement strategy would be the development of new interventions to improve communication with patients *after* discharge from hospital. The aim of creating such tools is to improve patient safety in primary care at the time of discharge, through improved communication and recording of healthcare decisions. Our results also have implications for secondary care, the likely point of delivery of such interventions being the point of discharge from hospital. Much of the learning from this review also applies in secondary care based transitional settings.

#### Funding acquisition

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

#### Appendix B. - Data extraction table for published studies

For further description of discrete tools see [Appendix C](#). Italic text denotes quality concerns with the paper. Underlined text serves to highlight findings of particular importance.

| Study Details [number in main paper reference list]  | Summary of aims, method, sampling, and results  | Strengths  | Limitations   | Content which might be used to inform a communication tool for primary care  |
|--|---|--|---|--|
| Allen J, Hutchinson AM, Brown R, Livingston PM. User experience and care for older people transitioning from hospital to | <b>Aim:</b> Assessment of the older patient and their carers perception of discharge and transitional care.<br><b>Method:</b> Qualitative | Based in acute, subacute and community services<br>Viewpoint from patients and carers<br>Fair sample size n = 20 | Sample only included those with carers, excluding those who live alone without support. | Viewpoint of patients and carers involved in the discharge and transition process– some vital considerations when devising a tool:<br>The need to be independent was recognised to exist with a need to adjust and adapt post hospital discharge. Dependence often associated with incarceration, suggesting a tool needs to put |

#### CRediT authorship contribution statement

**Rachel Ann Spencer:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing - original draft, Writing - review & editing. **Harjot Singh Punia:** Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Writing - original draft.

#### Declaration of Competing Interest

The authors report no declarations of interest.

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We would like to acknowledge the peer reviewing and support system at Warwick Unit of Academic Primary Care for reading and commenting on drafts of this paper.

#### Appendix A. - Search Criteria

##### Search Terms

1. "primary healthcare" OR "general practice" OR "general practitioner" OR "ambulatory care" OR "community health services" OR "Informal care" OR "patient care bundles" OR "transitional care" AND
2. "patient discharge" OR "discharge patient" OR "discharge planning" OR "planning discharge" OR "patient transfer" AND
3. "hospital communication system" OR "Quality Indicator" OR "Health Information Management" OR "Healthcare Survey" OR "Guideline" OR "Practice Guideline" OR "Treatment outcome" OR "Information literacy" OR "Information dissemination" OR "Information seeking Behaviour" OR "Patient outcome assessment" OR "outcome and process assessment" OR "patient safety" OR "patient reported outcome measure" OR "diagnostic self-evaluation" OR "evaluation studies" OR "symptom assessment"

##### Grey Literature sources

WHO, Institute for Healthcare Improvement, Joint Commission on Accreditation of Healthcare, Agency for Healthcare Research and Quality, NHS Institute for Innovation and Improvement, RCGP patient safety toolkit, Scottish Patient Safety Programme, Medical indemnity societies, General Medical Council, Improvement Cymru.

|  |  |  |  |   |
|--|--|--|--|---|
| <p>home: Patients' and carers' perspectives. Health Expectations. 2018 Apr;21(2):518-27.</p>   | <p>exploratory questions looking for common themes in questioning. <b>Sampling:</b> Limited to patients with carers. Age 70+<br/> <b>Results:</b> Total of 20 interviews (13 patients only, 6 both, 1 carer only). Main themes found were: need to become independent and learning to self-care, the supportive relationship with carers and also HCP's, information seeking, and being involved in their care.</p>  | <p>Contains useful information</p>   |  | <p>patient/carer in control. Also important are: <u>caring relationships with healthcare practitioners and being involved with discharge planning</u>. Carer relationships considered important hence a tool should involve them (though consider sample group bias).<br/>                     HCP relationships: <u>Getting to know and trust staff</u> was an important consideration. The transition period increased in difficulty when there was inadequate support or a handover to unknown staff, suggesting a familiar system should be utilised. When seeking information, primary care was considered an essential point of reference, and interviewees recognised the role in providing digestible details. Many participants valued GPs who <u>made time to explain</u> and clarify information. GP is an essential source of information about diagnoses, treatments and medication changes in hospital. Patients/carers know GPs rely on an accurate and timely discharge summary to explain this information. When learning to self-care, primary care support was recognised.<br/>                     Recognition of need for new assessment tools, strategies and approaches during the discharge period. Recommends <u>"example questions about the discharge plan that care recipients and carers can ask health-care practitioners."</u><br/>                     And inclusion of <u>'it's ok to ask' type material</u></p> |
| <p>Arbaje AI, Kansagara DL, Salanitro AH, Englander HL, Kripalani S, Jencks SF, Lindquist LA. Regardless of age: incorporating principles from geriatric medicine to improve care transitions for patients with complex needs. Journal of general internal medicine. 2014 Jun 1;29(6):932-9.</p> | <p><b>Aim:</b> Presentation of a transitional care framework that introduces key aspects into elderly care<br/> <b>Method:</b> Introduces a structure for developing transitional care services by identifying factors that affect transitions and recommending actions to mitigate<br/> <b>Sampling:</b> NA<br/> <b>Results:</b> Review paper concluding that transitions programmes are subject to conflicting evidence and that none have proven to reduce readmissions.</p>                              | <p>Written by consultants in Geriatric medicine, and Public health<br/>                     The principles of geriatric transitions programmes might be applied to complex/comorbid patients of any age<br/>                     Contains useful information</p> | <p>Not tested as yet</p>   | <p>Breaks factors into 3 domains: Health system level, provider level and patient level. They offer recommendations:<br/>                     - <u>Post discharge telephone calls, enhanced with written instructions, or education of care staff,</u><br/>                     - <u>Routinely educate the patients' care network</u>, ensure these meetings take place in the evening too, to accommodate those who work, hence involve family members in discharge planning and <u>Understand your 'receivers'</u> (i.e. care settings outside the hospital)<br/>                     - <u>Ensure engagement of staff by standardising discharge summary, medication lists, etc.</u> Paper reports a CMS study is underway to ensure communication between hospital and post-acute care facilities.<br/>                     - Perform Root Cause Analysis/Failure Modes Effects Analysis on readmissions to look for patient safety problems<br/>                     - <u>Where palliative care is concerned, primary and secondary care should liaise</u> with their communications with the patient, <u>Go further than DNAR status and perform Advance Care Planning.</u><br/>                     Fig. 2 gives a good summary of the vulnerability factors affecting older patients</p>   |
| <p>Auerbach AD, Kripalani S, Vasilevskis EE, Sehgal N, Lindenauer PK, Metlay JP, Fletcher G, Ruhnke GW, Flanders SA, Kim C, Williams MV. Preventability and causes of readmissions in a national cohort of general medicine patients. JAMA internal medicine. 2016 Apr 1;176(4):484-93.</p>      | <p><b>Aim:</b> Determine if an admission was preventable, and identify factors that contribute to readmission (Regardless of preventability).<br/> <b>Method:</b> Observational study, surveying patients, Doctors, notes, Numerous statistical analysis to determine factors in preventing readmission, followed by a structured case review.<br/> <b>Sampling:</b> 1000 medical patients readmitted within 30days of discharge. Median age 55<br/> <b>Results:</b> 1/4 readmissions can be preventable</p> | <p>Adult only sample<br/>                     Comprehensive assessment of individual cases.<br/>                     Contains useful information</p>   | <p>Set within a closed group of hospitals and may not be applicable outside this group<br/>                     Chemo patients and those too ill excluded<br/>                     Non English speakers excluded</p> | <p>Of readmissions, 27% were potentially preventable, of which half are to do with hospital factors in the index admission. Highlights some areas of the transitional care process which might reduce readmission:<br/>                     - <u>Patients not knowing how to contact their primary care physician</u> were more likely to have their readmission considered preventable.<br/>                     - Also need a set plan for symptoms that may develop e.g. dyspnoea, vomiting, pain.<br/>                     In preventable readmissions 18.6% of patients did not know who to contact if they needed help.<br/>                     Readmission was about 4 times as likely with these 4 factors:<br/>                     1. discharge too early<br/>                     2. failing to communicate with GP<br/>                     3. <u>lack of Advance Care Plan being discussed with patient</u><br/>                     4. incorrectly admitted to Emergency Department.</p>   |
| <p>Auger KA, Simmons JM, Tubbs-Cooley HL, Sucharew HJ, Statile AM, Pickler RH, Sauers-Ford HS, Gold JM, Khoury JC, Beck AF, Wade-Murphy S.</p>   | <p><b>Aim:</b> Assessment of paediatric transition aid in the form of a nurse visiting home post discharge.<br/> <b>Method:</b> RCT standard care V single nurse visit</p>   | <p>HCP visits and provides information on who to contact and why.<br/>                     Large sample<br/>                     Contains useful information</p>   | <p>Paediatric only sample, hence parents/carers will be present at all times.<br/>                     Control group found to be less likely to reuse services.</p>  | <p>H20 trial. Secondary care led transitional intervention: Specialist nurse visits patient and family at home (within 4 days of discharge), having introduced themselves whilst in secondary care. Families are provided with a list of Red Flags and advice on who to contact should these develop (includes secondary care and GP). The list was adapted to suit the patient's condition. Also the nurse, whilst visiting, was</p>   |

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| Postdischarge nurse home visits and reuse: the Hospital to Home Outcomes (H2O) trial. Pediatrics. 2018 Jul 1;142(1).   | <b>(Assess and give advice),</b> looking for unplanned return within 30 days<br><b>Sampling:</b> 1500 children post-discharge<br><b>Results:</b> 30 day return found to be higher in those who had a nurse visit, also increased use of urgent care services, increased recognition of red flags this group too.   |  |  | authorised to contact primary or secondary care if concerned, beyond this no detail of the intervention is given.<br>The control group received routine care, which included "Communication from secondary to primary care" (Likely a standard discharge summary).<br><u>Paradoxical increase in hospital episodes after the intervention (as per other paper with a younger cohort)</u><br>Possibly the nurses divert people away from primary care or self-care towards hospital.<br>Findings possibly suggest that communication tools for post-discharge should be specifically focussed on older patients at the opposite end of the age spectrum.   |
| Backman C, Stacey D, Crick M, Cho-Young D, Marck PB. Use of participatory visual narrative methods to explore older adults' experiences of managing multiple chronic conditions during care transitions. BMC health services research. 2018 Dec 1;18(1):482. | <b>Aim:</b> Identify areas of improvement during transitions for elderly patients with multiple conditions after discharge.<br><b>Method:</b> Qualitative study, used visual aids to narrate the patients journey.<br><b>Sampling:</b> Convenience Elderly over 65s with 2 or more chronic conditions (n= 9) mixture of interviews with patients alone, along with family or family alone.<br><b>Results:</b> Themes developed include: Patients involvement in care transition, what went well/challenges during transition, access of community services and engagement. | Novel way of extracting data.<br>Very recent paper so probably good representation of current patient experiences<br>Contains useful information             | Convenience sampling of patients but this has minimal relevance to tool development.<br>9 patients – limited sample  | Reporting of experiences relevant to patient-primary care contact:<br>- <u>Living in a small community facilitated GP and pharmacy contact, also were more familiar with HCP's</u><br>- <u>Describe a mobile phone app</u> (not named, fig 4 in paper) that tracks medication, allows the GP to see what pt is taking, also appointments and HCP details are kept.<br>- Patients identified <u>access to primary care hindered by location</u> (busy town centres, parking, unable to mobilise) and <u>lack of primary care availability</u> .<br>- Describe community nurses as the "Hub" that links various specialities. The paper advises <u>primary care to be this hub</u> (already standard practice in UK)<br>- Patient/carer needing to be actively involved and yet there is a lack of actual involvement during the admission.<br>- Acknowledge carers and family have central role, hence need to be <u>provided with further training to facilitate care</u> .<br>Recommendations for research<br>1. Using a primary care lead patient navigator service<br>2. Using personalised care plans (both in the hospital and once home)<br>3. Develop tools to support carers/families |
| Bench S, Cornish J, Xyrichis A. Intensive care discharge summaries for general practice staff: a focus group study. Br J Gen Pract. 2016 Dec 1;66(653):e904-12.  | <b>Aim:</b> Establish information needs of GP's and practice nurses regarding patients discharged home following ICU admission.<br><b>Method:</b> Qualitative interviews with recovered ICU patients, relatives, and GP staff.<br><b>Sampling:</b> 15 patients, 4 relatives, 20 GP staff<br><b>Results:</b> Poor communication directly affects quality of care, Major barriers were time pressures and access to communication systems.   | Comprehensive interviews, Including an assessor looking at body language<br>Good sample size<br>Contains useful information on GP follow-up                  | No representation of secondary care doctors who produce the summaries<br>Principally about inter-provider communication                                      | Box 1 "Themes and Categories" covers areas that patients and doctors consider important. Would be useful to cross reference this against the design of a tool to ensure it covered the vital aspects.<br>Reports GPs are not receiving specific information from the ITU after patients are discharged and patients know their GPs don't get this information<br>In conclusion they advise the use of a <u>discharge notification template</u> produced by the Royal College of Physicians (a standard widely used in the UK).<br>No clear way forward for this high risk group of patients, limited relevance to more generic communication tool design for older patients but advantage of being set in primary care environment.   |
| Biese K, LaMantia M, Shofer F, McCall B, Roberts E, Stearns SC, Principe S, Kizer JS, Cairns CB, Busby-Whitehead J. A randomized trial exploring the effect of a telephone call follow-up on care plan compliance among older adults                         | <b>Aim:</b> Follow discharge from ED. Assessment of a telephone call from a specialist nurse on follow up with primary care or outpatient.<br><b>Method:</b> RCT, comparing three groups : Intervention (Received a series of phone calls from nurse), Placebo (Received a satisfaction  | RCT<br>Nurse assisted those who had not made arrangements by making appointments on their behalf<br>Contains useful information about primary care follow-up | Patients enrolled during weekdays only<br>English speakers only in sample (patient or carer)<br>Single hospital<br>No considerations of cost in primary care | Transition programme for ED<br>Cheap way to ensure vulnerable patients are not lost in the system with a series of calls post discharge following a prewritten script. The calling nurse "Provided intervention group patients with any necessary assistance in facilitating home services, scheduling follow-up appointments, managing medication and receiving referrals to available community resources"<br>Calls were made at days 1-3, with data collection via phone on days 5-8 and 30-35.<br><u>The only significant finding was that these patients were twice as likely to see their GP</u> – this is presented as a positive finding –  |



discharged home from the emergency department. Academic Emergency Medicine. 2014 Feb;21(2):188-95.

service phone call), Control (No call). **Sampling:** 178 patients randomly selected at a rate of 9/day into the three groups. All age over 65, living at home, and all being advised to seek a form of outpatient follow up. **Results:** Intervention group x1.8 more likely to have seen or made primary care appointment.

though this is disputable. Evaluation says 70% chance of cost reduction but this is also questionable. A larger study is required to assess the hypothesis that ED return visits may be reduced in the control group i.e. only measures the number of patients who made their advised follow up appointment.

Braet A, Weltens C, Bruyneel L, Sermeus W. The quality of transitions from hospital to home: A hospital-based cohort study of patient groups with high and low readmission rates. International Journal of Care Coordination. 2016 Jun;19(1-2):29-41.

**Aim:** Compare the quality of transitions from hospital to home and relate these to discharge outcomes **Method:** Cohort study, Used a Readiness for discharge questionnaire to assess patient readiness, used a subjective Likert scale to assess the GP's opinion on patient and carer understanding and knowledge. Patients were later contacted and medical record reviewed. **Sampling:** Total 233 patients (HF, pneumonia and TKR/THR) completed the study.(293 invited). Across 12 sites in Flemish Belgium. **Results:** Numerous results – see useful findings.

Asked the opinion of primary care physician Compared a variety of factors to establish differences across diverse performing trusts and patient conditions Contains useful information

No direct mention of patient/primary care contact Possibly over complex cohort study Compares surgical patients with medical patients and elective vs emergency admissions

The tool used to measure patient readiness was a version of the Care Transitions Measure (CTM) a validated tool (see Coleman et al., 2005). Version in supplementary document to paper. May be used as part of a tool to assess for patients not comfortable with discharge who hence may require contact sooner. Of note discharge summaries were better in elective cases. Hospitals with lower readmission rates scored higher in patient survey on discharge readiness. The majority of GP's were not consulted prior to their patient discharge, though most felt it would be of benefit. Asked the GPs to evaluate how educated the patients were – a slightly odd approach: 18.8% GPs expressed concerns about one or more topics regarding patient and caregiver education. Education was most frequently evaluated as insufficient for patients admitted for heart failure (26.1%) 90 of 101 GPs (89.1%) indicated that they were not involved in the discharge process, of these, 19 (21.1%) believed that their input was necessary. 12.9% GPs noted that the completeness of the discharge summaries was insufficient to guarantee continuity of care for one or more topics. Patient education was rated poorly for the most sick patients – 1/3 insufficient. “To our knowledge, there is no evidence that GP contributions to the discharge process are associated with better post-discharge outcomes.” LACK OF EVIDENCE DOES NOT MEAN GPs ARE NOT IMPORTANT.

Bushnell CD, Duncan PW, Lycan SL, Condon CN, Pastva AM, Lutz BJ, Halladay JR, Cummings DM, Arnan MK, Jones SB, Sissine ME. A person-centered approach to poststroke care: The COMprehensive post-acute stroke services model. Journal of the American Geriatrics Society. 2018 May;66(5):1025-30.

**Aim:** Introduction of a Stroke care pathway, which includes aspects of communication **Method:** A comprehensive model of working that includes access to online resources that aid in communication **Sampling:** Ongoing study, not all papers collected, this one reports the aim of recruiting 6000 patients across 41 sites in North Carolina **Results:** NA, model description

Includes communication tool between pt and primary care, plus others Integrates secondary and community care Describes the development of COMPASS tool – a health literacy scheme for self-management in the post discharge period.

USA study, looking at reducing readmission rates, not all COMPASS papers have been read as this is an extremely comprehensive study.

Aimed exclusively at CVA/ TIA patients who are being discharged home; with the aim of improving care. The authors report no current standards for care despite high risk of complications, readmission and deterioration. Authors also report the model can be adapted to suit other conditions. Aspects:  
 - Standardised messages: Places an emphasis on patients to know their normal observations, to engage healthcare, and take responsibility for their well-being.  
 - Electronic care plan: Individual assessments to produce care plans that detail preferences, who to contact in an emergency, routine appointments, etc. These are copied to primary care, pharmacy and rehabilitation centres  
 - Community resource directory: Currently only for North Carolina, will automatically update the individual care plan to provide details of local services (Pharmacy, rehab, support, falls, etc). Accessible via a sign in dedicated website (<https://www.nccompass-study.org/>)  
 - Education Material  
 - Ongoing assessment  
 Potential for adaption to apply to any illness to improve health efficacy with a LTC. The IT which backs up the system sounds comprehensive– it automatically generates information for GPs too. It is part of a complex intervention supported by nurse coordinators who also phone patients at home.

Buurman BM, Verhaegh KJ, Smeulders M, Vermeulen H, Geerlings SE, Smorenburg S, de Rooij SE. Improving handoff communication from hospital to home: the

**Aim:** Assessment of a personalised discharge letter as compared to normal practice in a single hospital in the Netherlands **Method:** No control group, comparing pre and post

Authors acknowledge limitations and advise further study Contains a tool

Small scale study that currently may not be applicable to a wider population. Time consuming, took junior doc 1/2 an hour to write and they felt they lacked training to produce the letters

Introduction of a personalised discharge letter for patients in the Netherlands. Including a copy to the GP (contained information on: diagnosis, treatment, medications, potential complications and lifestyle advice). Free text and very long, however the following unique features may be useful:  
 1/ Focus on conversation and combining written and verbal information  
 2/ Language is assessed for lay understanding.  
 3/ Information on who to contact and advice to take the

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| development, implementation and evaluation of a personalized patient discharge letter. International Journal for quality in health care. 2016 Jun 1;28 (3):384-90.   | implementation (QI NOT research)<br><b>Sampling:</b> No calculation, small scale limited to 4 wards in a single hospital.<br><b>Results:</b> Progressive design of the Personalised discharge letter, Assessment of satisfaction improved through the study, also observed conversations regarding discharge were noted to increase   |  |  | <u>discharge letter to all medical consultations</u><br>After a training programme for junior doctors the implementation rates rose to 57% but perhaps still indicates significant problems.<br>An example of a personalised letter is the appendix of this paper.  |
| Cawthon C, Walia S, Osborn CY, Niesner KJ, Schnipper JL, Kripalani S. Improving care transitions: the patient perspective. Journal of health communication. 2012 Oct 1;17(sup3):312-24.  | <b>Aim:</b> Analysis of patient opinion towards a pharmacist led medication reconciliation, counselling and a follow up call.<br><b>Method:</b> Quantitative analysis. Questionnaire.<br><b>Sampling:</b> Subjects already part of a RCT, who were in the intervention stem of a low health literacy trial, ?age group<br><b>Results:</b> In order of most helpful, patients found:<br>1/ Speaking to a pharmacist<br>2/ An illustrated medicine schedule<br>3/ Follow up phone call at home<br>.. most helpful | Study looked from the patients perspective<br>Contains useful information  | Small sample, already involved in an RCT, having received interventions as part of a similar study<br>PILL-CVD does not reduce medication errors in other papers (Kripalani et al 2012)  | Subset of data relating to health literacy from a medication reconciliation intervention set in a hospital pharmacy. Known as PILL-CVD.<br>Included as provides a unique result:<br><u>Patients reported following the three pronged intervention from the pharmacist of education, provision of an illustrated prescription and follow up phone call they felt more confident in contacting their primary care doctor and discussing their health.</u><br>This was suggested in the survey results, where 60% of the sample reported an increase in comfort in talking to their doctor after this intervention (Table 3).<br><u>Patients with the lowest health literacy levels reported that the intervention helped them the most.</u><br>The psychological aspect of communicating with Primary care has not been covered as yet.   |
| Christie N, Beckett K, Earchy S, Kellezi B, Sleney J, Barnes J, Jones T, Kendrick D. Seeking support after hospitalisation for injury: a nested qualitative study of the role of primary care. Br J Gen Pract. 2016 Jan 1;66(642): e24-31. | <b>Aim:</b> To identify patient needs and healthcare good practice in patients with accidental injury.<br><b>Method:</b> Qualitative nested<br><b>Sampling:</b> 45 patients, 40 service providers including 3 GP's across 4 sites<br><b>Results:</b> Main patient themes were the availability or lack of GP appointments, needing to feel listened to, analgesia.  | Covers various injuries across four sites.<br>Large sample of patients<br>Younger population than other studies – av age 56<br>Contains useful information | Only 3 GP's interviewed, No input from social care or counselling<br>Issues presented by the patients are condition specific to injuries and relate more to experiences of interactions with their GPs than communication failures or ways to improve communication. | No tool, but key proposed measures that maybe influential when considering a communication tool:<br><u>Discharge management plan:</u> injury, treatment, anticipated recovery, time scales for returning to ADLs/work, pain management, psychological reactions, how and when to seek help.<br><u>After care information:</u> how to access rehab, information on psychological reaction to trauma and self-help literature<br><u>Data Sharing:</u> electronic summary to primary care, updates on services for patients<br>see: <a href="#">Fig. 1 Proposed measures to improve services for patients discharged from hospital after serious injury.</a><br>Patients noted a gap in care between hospital discharge and accessing primary care. Also felt that any psychological issues were brushed off.<br>GP's acknowledged their role in analgesia, sick certification, and medico-legal issues. They felt that feeling sad following an injury was normal and were reluctant to refer onwards as patients would feel better soon. |
| Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Archives of internal medicine. 2006 Sep 25;166(17):1822-8. (snowballed paper from Laugaland, K., et al. (2012).      | <b>Aim:</b> assessment of the Care Transition Intervention. Described in useful information box<br><b>Method:</b> Intervention group given a nurse coach and teaching on the four Pillars.<br><b>Control:</b> Standard discharge practice<br><b>Sample:</b> Age over 65,  | Attempts made to remove bias from sample<br>Rigorously developed with full factor analysis<br>Description of a tool  |  | Four Pillars of Care Transition Intervention:<br>“(1) assistance with medication self-management,<br>(2) a patient-centered record owned and maintained by the patient to facilitate cross-site information transfer<br>(3) timely follow-up with primary or specialty care<br>(4) a list of “red flags” indicative of a worsening condition and instructions on how to respond to them.”<br>Nurse Coach, as above: Encourages and teaches assertive techniques in accessing healthcare.<br>- Full tool found at <a href="https://caretransitions.org/">https://caretransitions.org/</a><br>PDF downloadable (CTM-15)<br>The overall score reflects the quality of the care transition.   |

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| <p>"Interventions to improve patient safety in transitional care - a review of the evidence." Work-a Journal of Prevention Assessment &amp; Rehabilitation 41: 2915-2924.)</p>  | <p>Admitted for a physical illness, Residing in the community, local to study. Comprehensive list of Chronic inclusion criteria<br/>Assessed by readmission rates<br/><b>Result:</b> Reduction in intervention group rehospitalisation rate and costs</p>   |  |  | <p>No average values given in scoring file<br/>- Website also has a three point score (CTM-3)</p>   |
| <p>Crocker JB, Crocker JT, Greenwald JL. Telephone follow-up as a primary care intervention for postdischarge outcomes improvement: a systematic review. The American journal of medicine. 2012 Sep 1;125(9):915-21.</p>  | <p><b>Aim:</b> Systematic review of literature looking at a post discharge phone call originating from Primary care)<br/><b>Method:</b> Literature RV<br/><b>Sampling:</b> Electronic search of Ovid Medline and Nursing, PsychINFO, EBM reviews and EMBASE. Using key words around Primary care, post discharge, and readmission.<br/><b>Results:</b> Two articles found in the search, plus a further one through snowballing.</p>  | <p>May improve primary care- patient interaction<br/>Contains useful information on GP post-discharge phone calls</p>                              | <p>Very small amount of literature on primary care telephone contact post discharge.<br/>? too exclusive about the intervention being ONLY telephone based<br/><i>Very little evidence for them to base their findings on, just 3 papers</i></p> | <p>Three studies found: All RCT's. None suggested a significant effect of calling the patient from Primary care. Only one included the telephone script (Balaban et al., 2008). <u>Unfortunately</u> having accessed the paper It reports the script is available on request from the lead author, and not included in an appendix.<br/>However the contents of the conversation were:<br/><u>Assessment of medical status, discuss discharge form, questions answered, scheduled follow-up appointments confirmed.</u><br/>Interventions were arranged as required including medication refills or changes.<br/>This information was forwarded electronically to the GP. <u>No evidence for whom is best placed among the primary care team to offer this follow-up</u><br/>Their main finding is that 'there is no clinical evidence for effectiveness of this intervention on readmission rates' but lack of evidence is the main problem.<br/>Findings of the review are inconclusive because although the 3 trials did not have positive findings they were also underpowered/poorly designed. They recommend that <u>high risk candidates for follow-up should be selected using an established readmission risk score.</u></p> |
| <p>Doos L, Bradley E, Rushton CA, Satchithananda D, Davies SJ, Kadam UT. Heart failure and chronic obstructive pulmonary disease multimorbidity at hospital discharge transition: a study of patient and carer experience. Health Expectations. 2015 Dec;18(6):2401-12.</p> | <p><b>Aim:</b> Understand experiences of patients with COPD and HF (Multimorbid) patients during the discharge process and identify areas for improvement<br/><b>Method:</b> Mixed method study, using qualitative interview and a quantitative 17 question tool aimed at assessing health care providers<br/><b>Sampling:</b> single hospital, three wards, 14 patients completed the survey. Interviews completed with 5 patients and 5 carers. Average age 74<br/><b>Results:</b> They expected to be informed on how to manage symptoms, and not just those requiring an emergency intervention, they also would have liked a contact point for help or a follow up phone call from the hospital.</p> | <p>UK study<br/>Looks at patient perspective<br/>Uses a validated tool to understand the healthcare experience<br/>Contains useful information</p> | <p><i>Single site</i><br/><i>Small sample:</i> Only 14 patients in the survey and only 6 interviewed<br/>No mention of Primary care: Patient communication<br/><i>Not true mixed methods</i></p>   | <p>The tool used to assess patient views on the healthcare providers is the 'American Hospital consumer assessment of healthcare providers and systems' (HCAHPS) questionnaire. This was not unique to the paper and due to its generic nature has not been snowballed for the review.<br/>HCAHPS questionnaire can be found at: <a href="https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalHCAHPS">https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalHCAHPS</a><br/>Possibly adaptable once a communication tool has been developed to assess user satisfaction.<br/>Paints a dire situation of the level of communication with patients in UK hospitals and has a little information related to communication with the GP: "All participants had expected to be contacted by their GP soon after their discharge (as 'routine'). However, none of them had been contacted by their GP and were both surprised and disappointed." Concerns about small sample size affecting this finding.</p>   |
| <p>Flink M, Glas SB, Airosa F, Öhlén G, Barach P, Hansagi H, Brommels M, Olsson M. Patient-centered handovers between hospital and primary health care: an assessment of medical records. International journal of medical informatics. 2015 May 1;84(5):355-62.</p>        | <p><b>Aim:</b> Assess patient handovers which occur between primary and secondary care, by grading how patient centred they are and if continuity of management can be traced in the records<br/><b>Method:</b> Analysis of all hospital documentation and comparing these details to any handover</p>  | <p>Defined each criteria<br/>Contains useful information</p>   | <p><i>Small sample size</i><br/>Sample from non-elective admissions only<br/><i>Selective Sample:</i><br/><i>"only patients with sufficient personal or social resources to contact the PHC receive timely, follow-up care."</i></p>             | <p>Finds that <u>discharge summaries alone are insufficient to ensure continuity of care, suggesting an alternative way to ensure communication with primary care is required.</u><br/>With regards to quality of information (the patient centred part) a well-used definition (Stewart et al 2003) was used:<br/>- Exploring both the patient and the disease<br/>- Understanding the whole person<br/>- Finding common ground<br/>Part of the European Handover study – see: <a href="https://qualitysafety.bmj.com/content/21/Suppl_1/i1.short">https://qualitysafety.bmj.com/content/21/Suppl_1/i1.short</a></p>   |

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|   | documentation sent from secondary to primary care<br><b>Sampling:</b> 22 patients<br>11 Male, median age 67.<br>All had to have 6+ meds<br><b>Results:</b><br>Documentation found to be not patient centred (Definition in useful information), and written discharge plans alone could not guarantee continuity of patient care (eg. Follow up or arrange further tests)   |   |   |  |
| Forstner J, Straßner C, Kunz A, Uhlmann L, Freund T, Peters-Klimm F, Wensing M, Kümmel S, El-Kurd N, Rück R, Handlos B. Improving continuity of patient care across sectors: study protocol of a quasi-experimental multi-centre study regarding an admission and discharge model in Germany (VESPEERA). BMC health services research. 2019 Dec;19 (1):206. | <b>Aim:</b> Protocol to analyse a structured model (VESPEERA) to see if it improves the admission and discharge procedure<br><b>Method:</b> trial protocol 4 intervention groups and 1 control<br><b>Sampling:</b> Significant study that has calculated a sample size in the 1000's, 25 hospitals and 115 GP sites<br><b>Results:</b> Awaiting (Primary outcome will be readmissions)  | Attempts to integrate admissions, discharge, patient and GP input., Trial protocol with useful findings   | Not yet completed<br>Attempt to access further details on VESPEERA, unfortunately websites all in German. | Use of a hospital score which indicates the risk of rehospitalisation in 30 days. In the study this will be relayed to primary care. Possible to use as a triage to prioritise contact with patients when discharged?<br>Unable to find an original source for this score, but present on MD CALC Website:<br><a href="https://www.mdiscalc.com/hospital-score-readmissions">https://www.mdiscalc.com/hospital-score-readmissions</a><br>Validated by Donze et al (2016)<br>Certain markers important for certain diagnoses e.g. haemoglobin, if discharge from oncology, sodium levels in acute medicine. Also important are: ICD-9 coding, type of admission, number of previous admission, length of recent admission. The VESPEERA trial programme will be managed by IT called "care cockpit" which will integrate with GP systems. GPs will offer phone follow-up to patients who have a high risk of readmission score on the discharge summary (1 <sup>st</sup> call within 2 weeks and thereafter set by the GP up to a max of 3 months).<br><u>No results but the design of this trial could be influential to future communication tools – the method is supportive of GP telephone follow-up for the most at risk individuals.</u> |
| Hahn-Goldberg S, Okrainec K, Damba C, Huynh T, Lau D, Maxwell J, Abrams HB. Implementing patient-oriented discharge summaries (PODS): a multisite pilot across early adopter hospitals. Healthc Q. 2016;19 (1):42-8.  | <b>Aim:</b> Introduction and early results of implementation of a structured patient friendly discharge tool<br><b>Method:</b> This study assesses patient understanding through a Likert type questionnaire.<br><b>Sampling:</b> Eight sites in study. Report indicates at 1 site 200 patients were sent home with this Tool (PODS). All ages<br><b>Results:</b> Increased patient satisfaction, Improvement in patient awareness of warning signs, Better understanding of discharge instruction. | Patient satisfaction<br>If done correctly appears to be a restructuring of work, rather than an addition.<br>Tool present is PODS= Patient Orientated Discharge summary   | Concern over increased workload<br>Not fully evaluated as no cost effectiveness data                      | The original development study introduced a website that allowed early adopters to construct their own tool (Discharge summary card). Accessible at :<br><a href="http://pods-toolkit.uhnopenlab.ca/">http://pods-toolkit.uhnopenlab.ca/</a><br>The PODS template used in the early adopter site is available online Including:<br>Patient friendly medication lists<br>4 sample templates in slightly different styles filled in for different conditions.<br>Advice on how to adapt to your local setting.<br>Quite secondary care focussed but could be adapted.<br>Previous research has designed this tool with input from patients' carers and providers. The reason for this being that traditional discharge summaries are aimed at primary care and were jargon rich with little patient useful information.<br>Reliant on clinician participation to complete the details. PODS is very different from the usual discharge summary and would take a while to fill in?<br>Physicians DID NOT use this tool  |
| Hastings SN, Betts E, Schmader KE, Weinberger M, Van Houtven CH, Hendrix CC, Coffman CJ, Stechuchak KM, Weiner M, Morris K, Kessler C. Discharge information and support for veterans Receiving Outpatient Care in the  | <b>Aim:</b> Evaluation of a primary care based nurse telephone system, aimed at reducing repeat visits to ED.<br><b>Method:</b> Trial protocol<br><b>Sampling:</b> Veterans who were deemed as high risk, (Those who had visited ED or been admitted in the last  | RCT.<br>Direct increase in contact between primary care and patient.<br>Full report and results accessed<br>Using 'teach back' in the intervention<br>Tool: DISPO-ED:<br>Discharge information and Support for patients | Selective sample of veterans in a USA system.<br>Primarily assessing repeat ED visits                     | Key terms:<br>PACTS: Patient aligned care team: body who aim to increase Veteran use of Primary care clinics, hence reduce ED use. Patient were enrolled when treated and released from ED. If they wish to opt out they are given details how.<br>The intervention consists of three phone calls, full details in supplementary file:<br>1/ Focus on unmet health needs and visit to ED, Review of discharge medication. Current functional status and any referrals required<br>2/ Assess for further need, assess for further referral (Community service or Veterans service, etc.)  |

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| <p>Emergency Department: Study design and methods. Contemporary clinical trials. 2014 Nov 1;39(2):342-50.*</p>  | <p>6months prior to the current ED visit and had two or more chronic conditions)<br/><b>Results:</b> From Hastings Et al (2019).<br/>Intervention group found to have higher rate of primary care visits at 30days, higher rate of access to a weight management program, access to DM and nutrition advice and higher use of phone access to health services. But no reduction in use of ED services.</p>   | <p>receiving outpatient care in the ED.</p>   |  | <p>3/ Optional call, as patient requires.<br/>Also/ Option of a phone number that the patient can call for questions or need. (Available 30d)<br/>*Final trial published as:<br/>Hastings SN, Stechuchak KM, Coffman CJ, Mahanna EP, Weinberger M, Van Houtven CH, Schmader KE, Hendrix CC, Kessler C, Hughes JM, Ramos K. Discharge Information and Support for Patients Discharged from the Emergency Department: Results from a Randomized Controlled Trial. Journal of General Internal Medicine. 2020 Jan 1;35(1):79-86.</p>   |
| <p>Hirschman KB, Shaid E, McCauley K, Pauly MV, Naylor MD. Continuity of care: The transitional care model. Online Journal of Issues in Nursing. 2015;20(3).</p>  | <p><b>Aim:</b> Summary of the Transitional Care model, with an evidence base.<br/><b>Method:</b> Review paper, Introduction to the key aspects of the model, then literature RV of supporting evidence<br/><b>Sampling:</b> NA<br/><b>Results:</b> In Brief a 9 stage model that is nurse led, which has evolved over 20 years, Run by an APRN (Advanced practice registered nurse)</p>  | <p>A well evidenced tool for caring for older patients with multiple morbidities. In use in the USA.</p>  | <p>Not focused on patient: primary care contact. Though some aspects encourage self directed care. Time intensive intervention, requiring commitment from patients as well as staff (including weekly visits to the home for the 1<sup>st</sup> month)</p> | <p>9 facets to the Transitional Care Model described briefly in supporting document. Of most interest are:<br/>- <u>Screening</u>, which can identify those patients that are most vulnerable when transitioning from hospital to home<br/>- <u>Education/promotion of self management</u>, which promotes self referral to the appropriate source when deterioration may be evident.<br/>- <u>Fostering co-ordination: Between healthcare professionals</u> (Mary Naylor et al., 1994, 1999 and 2004 – big RCTs showing benefits including cost analyses). They are just starting to test TCM in primary care.<br/>Key screening criteria for using the TCM are: 5 or more conditions, dementia, MH, deficits in ADLs, recent fall, hospitalised (in last month or 2 times in last 6 months) could use these to target a communication tool.<br/>Table 2 describes the multitude of assessment tools that are used to gather info on functional/health status – these might be particularly useful: Health Care Empowerment Inventory (HCEI) (Johnson, Rose, Dilworth, &amp; Neilands, 2012) AND Brief Health Literacy Scale (BHLS) (SandJecklin &amp; Coyle, 2014) <b>ENTITY NOT DEFINED !!!</b> Wallston et al., 2014)</p>   |
| <p>Horwitz, L. I. "Self-care after hospital discharge: knowledge is not enough." BMJ Quality &amp; Safety 26 (1): 7-8.<br/>Named the DISCHARGE study (Diagnosing systematic failures, complexities and Harm in Geriatric discharge)</p> | <p><b>Aim:</b> Assessment of patient evaluation of transitional care<br/><b>Method:</b> Observational study.<br/><b>Sampling:</b> Patients over 65 admitted with ACS, HF or Pneumonia. In a single site EXCLUDING those with dementia<br/><b>Results:</b> 2/3 of patients were not given a follow up appointment, 1/3 could not describe their diagnosis, 50% of those with appointments were aware of them. However patients were mostly positive of their experience, suggesting more objective assessment is warranted.</p> | <p>Use of tools that appear to be tested for telephone conversations. Real focus on patient understanding. Medical jargon terms in appendix B might be useful – though condition specific to the 3 conditions<br/>Contains useful information</p> | <p>What if medical records were incorrect?<br/>limited Sample<br/>Some patients later excluded for not making sense<br/>Cannot capture verbal instructions.<br/>Unable to draw conclusions about readmissions due to small sample size</p>                 | <p>Researchers looked for suitable patients by analysis of recent admittance. Those suitable were telephoned one week after discharge and asked questions around their knowledge of: what symptoms to look out for and who to contact, instructions on activity and diet, if follow up had been arranged, how much notice was given on their discharge, and if support was required at home. This was compared to their medical records (assumed to be correct). Includes tools which have been found elsewhere in the review including:<br/>CTM-3, HCAHPS<br/>Conclusion of "patient perceptions of discharge practices and self-rated understanding may be more optimistic than direct evaluations of practice or understanding would warrant"<br/><u>p.1721, may suggest that any tool will need an objective assessment and not be too reliant on patient perception.</u><br/>The quality of their patient information was actually very good – though they describe it as poor. There is a problem with patient self -reported levels of medical understanding because it does not stand up under testing. <u>These patients are vulnerable even though they don't have cognitive impairment – particularly where follow-up is not arranged for them (only 50% of them remembered that they needed follow-up).</u><br/>This group have impaired ability to retain instructions: "79% of patients aged 55 to 85 years hospitalized in the general medicine service showed evidence of mild cognitive impairment.(ref 37)"</p> |
| <p>Kable A, Pond D, HULLICK C, Chenoweth L, Duggan A, Attia J, Oldmeadow C. An evaluation of discharge documentation for people with dementia discharged home from hospital–A cross-sectional pilot</p>                                 | <p><b>Aim:</b> Evaluation of discharge documentation against expected criteria in vulnerable patients (Dementia)<br/><b>Method:</b> Discharge document evaluated with an Audit form (Not in paper or online). Post discharge survey</p>  | <p>Possible considerations in conclusion when designing communication tool. Interesting use of carer stress instrument. Contains useful information</p>   | <p>Small sample<br/>Study reports a low return rate of carer questionnaires and queries carer fatigue. Carers survey only 12% response rate</p>  | <p>There is an inconsistent approach to discharge documentation, advising improvement in medication, dose, investigation follow up, home review, and risk assessment information. Suggesting that a communication aid include these factors.<br/>See table 1: Rates of compliance with various types of discharge instructions.<br/>Short stay hospital environments discharge People With Dementia with less information than longer stay ones.<br/><u>Information on functional status is usually contained in Allied Healthcare Professional summaries which are not routinely supplied to either GP or patient.</u></p>   |

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| Study Details [number in main paper reference list]  | Summary of aims, method, sampling, and results  | Strengths   | Limitations  | Content which might be used to inform a communication tool for primary care  |
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| study. Dementia. 2019 Jul;18(5):1764-76.   | <p>emailed to carers.<br/> <b>Sampling:</b> Over course of study 313 patients discharged with diagnosis of dementia, of these 73 were discharged to their own home or a participating facility,<br/> <b>Results:</b> Results were broken down into information provided to GP and Information to patient or carer,</p>  |   |  |  |
| Meehan P, Grande D, Kangovi S, Long JA, Shannon R, Mitra N. Perceptions of readmitted patients on the transition from hospital to home. Journal of Hospital Medicine. 2012 Nov 1;7(9). | <p><b>Aim:</b> To better understand the patients perspective when they are readmitted.<br/> <b>Method:</b> A 36 point questionnaire was developed and readmitted inpatients were asked to complete Readmitted patients were identified by administration staff, and study staff administered the survey.<br/> <b>Sampling:</b> There were 3881 patients identified and 1084 selected for the study. Ineligibility reasons include lack of capacity and admitted from another hospital.<br/> <b>Results:</b> Medication counselling may alleviate fears, and nonadherence. Lower social group patients were more likely to return.</p> | <p>Large sample size<br/>                     Looks at patients perspective<br/>                     General approach to post-discharge issues which is not condition specific<br/>                     Contains useful information</p> | <p>Single site<br/>                     2012 paper, based on American readmission criteria<br/>                     Some problems they identify with the survey itself – also administered by hospital staff ?bias</p> | <p>36-item survey: Developed by a variety of health staff, aiming to assess discharge preparedness, delay in seeking help, adherence to medication, primary care follow up, other challenges.<br/>                     Full PDF available online – supplemental to paper.<br/>                     “The most commonly reported issues contributing to readmission were: 1) feeling unprepared for discharge (11.8%); 2)difficulty performing activities of daily living (ADLs) (10.6%); 3) trouble adhering to discharge medications (5.7%); 4) difficulty accessing discharge medications (5.0%); and 5) lack of social support (4.7%).”<br/>                     So most of this issues (apart from 1) relate to the community NOT the hospital<br/> <u>They conclude that visiting your GP results in a higher chance of readmission.</u><br/> <u>Patients with low income had a 2 fold increase in readmission – food poverty and substance abuse are cited as reasons.</u><br/>                     Of relevance to tool development; Primary care follow up, though vital for care, did not reduce readmission.</p>  |
| Lenaghan NA. Transitional care and empowerment of the older adult. Geriatric Nursing. 2019 Mar 1;40(2):148-53.   | <p><b>Aim:</b> Confidence of an elderly population in asking questions pre and post intervention<br/> <b>Method:</b> Single group (no control). Confidence measured by the SEAPS survey.<br/> <b>Sampling:</b> Adults &gt;65 years from a nursing facility, fluent English requiring 1 or more chronic illness, with a planned discharge.<br/> <b>Results:</b> Post Intervention the sample reported a statistically significant increase in confidence and belief in self advocacy behaviours</p>  | <p>This paper gives detail of the materials used to empower patients through a transitional care programme. The journal is considered a tool and certainly has transferable findings.</p>   | <p>Labour intensive input required to increase confidence. Sessions total 4hours excluding travel and admin<br/>                     Small sample from a single site.</p>  | <p>The transition programme intervention uses nurse practitioners to provide coaching before and after discharge around a patient-controlled health journal.<br/>                     • 2x visits during the admission where they are encouraged to complete the journal (hence increasing personal responsibility).<br/>                     • 2x home visits post discharge, where journals are updated, questions encouraged and role-play occurs simulating the patient asking relevant questions.<br/>                     A measure of how confident patients are about communication with healthcare professionals might gauge the likelihood of the patient making contact, and allow steps to be taken to protect higher risk patients, or have the confidence to leave patients alone, safe in the knowledge they have the ability to flag concerns. They used the SEAPS (Senior Empowerment and Patient Safety) Survey. Elder et al. (2007) 21 item self-administered survey, measure of confidence of the elderly in health interactions.<br/>                     Content of journal: medical history, questions for healthcare providers, a record of medical appointments, plans to manage symptoms, and information about, diagnostic tests, medications and treatment plans - see supplemental file which contains the journal.<br/>                     Older patients struggled to formulate questions for healthcare providers and felt overwhelmed when asked to keep track of their health information. They need help from a “coaching relationship with a clinician who is familiar with the trajectory of the illness, as well as the patient’s unique story”. Multiply morbid patients with poly-pharmacy benefitted the MOST.</p> |

Patients need education about the importance of self-efficacy in order to engage with self-care.

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| <p>Mi R, Hollander MM, Jones CM, DuGoff EH, Caprio TV, Cushman JT, Kind AJ, Lohmeier M, Shah MN. A randomized controlled trial testing the effectiveness of a paramedic-delivered care transitions intervention to reduce emergency department revisits. <i>BMC geriatrics</i>. 2018 Dec 1;18(1):104.</p>  | <p><b>Aim:</b> Study protocol for a quantitative assessment of the Care Transitions Intervention (CTI), adapted for use by a paramedic visiting elderly patients at home having been discharge from ED.<br/><b>Method:</b> Single Blinded RCT.<br/><b>Sampling:</b> Patients over 60, English speaking, resident close to study hospitals (3), recruited through ED.<br/><b>Results:</b> Study protocol</p>  | <p>Validated model, adapted for paramedic use.<br/>Contains useful information</p>  | <p>Study protocol with no results<br/>Resource intensive intervention<br/><i>Sample number not stated</i></p>  | <p>Intervention consists of: four week program, with one inpatient visit, one outpatient home visit and up to three phone calls. Aiming to coach and improve behaviour to enhance: Medicine management, Primary care follow up, Red-flag awareness, and Maintaining own health record. Follow up phone calls include advice on who to contact.<br/>Adapted for this study by using paramedics rather than advanced nurses and initial onward coaching was substituted for an introductory talk which the researchers felt was better suited to ED. Important distinction is that the HCP acts as a coach, so doesn't directly act on the patients behalf.<br/>Fully modified CTI flow diagram in supplementary file<br/>Transferable findings are that paramedics might be well placed to offer counselling post discharge but the study has not yet been reported. The Original CTI is reported to be validated and widely used to reduce rehospitalisation.</p> |
| <p>Naylor MD, Shaid EC, Carpenter D, Gass B, Levine C, Li J, Malley A, McCauley K, Nguyen HQ, Watson H, Brock J. Components of comprehensive and effective transitional care. <i>Journal of the American Geriatrics Society</i>. 2017 Jun;65(6):1119-25.<br/>snowballed from Zurlo et al.</p>  | <p><b>Aim:</b> identification of TC components that yield desired patient and caregiver outcomes. Report findings of project ACHIEVE from PCORI<br/><b>Method:</b> Mixed-methods, interviewing with patients, working groups and literature review<br/><b>Sampling:</b> appropriate to the mixed methods, medicare beneficiaries<br/><b>Results:</b> A core set of 8 transitional care components. Table 2 in the paper gives strategies for each component.</p>           | <p>Focus on high risk of re-hospitalisation patient sample, hence greater relevance to the older, vulnerable population we intend to address.<br/>Contains useful information</p> | <p>Did not consider how mental health and lack of caregiver support affects communication. They suggest their case study population lacks diversity.</p>   | <p>Not a communication tool per se but later became a PCORI report describing essential features of transitional care: "patient engagement, caregiver engagement, complexity and medication management, patient education, caregiver education, patients' and caregivers' well-being, care continuity, and accountability"<br/>These could well form headings in a future communication tool. The strategies in table 2 are very general e.g. "Confirming patients' understanding of instructions" but could be built upon to develop the communication tool</p>  |
| <p>Newnham HH, Gibbs HH, Ritchie ES, Hitchcock KI, Nagalingam V, Hoiles A, Wallace E, Georgeson E, Holton S. A feasibility study of the provision of a personalized interdisciplinary audiovisual summary to facilitate care transfer care at hospital discharge: Care Transfer Video (CareTV). <i>International Journal for Quality in Health Care</i>. 2015 Apr 1;27(2):105-9.</p> | <p><b>Aim:</b> Pilot of a discharge summary specifically for patients which was filmed and given to the patient on a choice of media<br/><b>Method:</b> Pilot study<br/><b>Sampling:</b> 20 patients, discharged from acute interdisciplinary ward, English speaking<br/><b>Results:</b> 1 patient viewed the video with their GP, all 20 recalled they had been advised to visit their GP after discharge. All were at least satisfied and would recommend the media.</p> | <p>Well received, alternative way of presenting data in an understandable way. Primary care also received a traditional discharge summary<br/>Considered a tool</p>               | <p>Pilot, conducted on a small number of <i>carefully selected patients</i>. Increased resources and time required to make the material. Not all patients may benefit</p>  | <p>Video recorded by various members of the MDT. Questionnaire sent to the patient to assess for usefulness<br/>A tool for encouraging contact with primary care, where patients have been concerned about initiating contact. Appendix of report contains basics of script and instructions<br/>Contents of video as follows:<br/>- Presenting symptoms and final Diagnosis,<br/>- Major investigations<br/>- Treatment and Response.<br/>- Outstanding investigations still to be completed/results to be checked at follow-up and follow-up appointments (made or planned).<br/>- Invite patient/family to comment or ask questions.<br/>- Bedside nurse's report – including follow-up<br/>- Pharmacist's report</p>  |
| <p>Preen DB, Bailey BE, Wright A, Kendall P, Phillips M, Hung J, Hendriks R, Mather A, Williams E. Effects of a multidisciplinary, post-discharge continuance of care intervention on quality of life, discharge satisfaction, and hospital length of stay: a randomized controlled trial. <i>International Journal</i></p>  | <p><b>Aim:</b> Assessment of a hospital discharge plan that interviews patients to get their input into their discharge. The plan is then sent their primary carer who approves it, sends it back prior to patient discharge<br/><b>Method:</b> RCT, control = normal discharge practice. Quality of life and opinions assessed by patient and GP</p>  | <p>A very novel approach the only study that communicates with primary care prior to discharge<br/>Contains useful information</p>  | <p>Requires co-ordination and swift replies from all parties to meet the demands of discharge. Where discharge is conducted quickly it may not be possible to complete to satisfaction.<br/><i>Small sample of patients (20)</i></p> | <p>Name of plan is the 'Australian Enhanced Primary Care Package': Nil found on internet search. However full process is as follows (From paper)<br/>(i) Problems identified from notes and assessment.<br/>(ii) Goals developed and agreed with patient and care providers.<br/>(iii) A computer generated care plan completed approximately 24-48 hours before anticipated discharge and sent to GP for review and alteration. GP also makes an appointment for within 7 days of discharge. The document is returned to the hospital.<br/>(iv) The post discharge care plan is explained to the patient/care-giver, and they are given a copy<br/>(v) Copies faxed to all service providers identified on the care plan.<br/>If the material had not been returned by the general practitioner within 24 hours, follow-up was performed by a research nurse. Script for Care TV from the appendix:</p>  |

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| for Quality in Health Care. 2005 Feb 1;17 (1):43-51.  | questionnaire.<br><b>Sampling:</b> 189 inpatients from two Australian hospitals, all with a diagnosis of Cardiorespiratory disease<br><b>Results:</b> Those in the intervention group were found to have better involvement in discharge planning, access to healthcare, and satisfaction. Plus a significant improvement in primary care communication times.   |  |  | Summary<br><ul style="list-style-type: none"> <li>• Presenting symptoms and final diagnosis,</li> <li>• Major investigations (that justify the diagnosis or cause doubt)</li> <li>• Treatment and Response.</li> <li>• Outstanding investigations still to be completed/results to be checked at follow-up and follow-up appointments (made or planned).</li> </ul> Invite patient/family to comment or ask questions.<br>Bedside nurse's report – including follow-up arrangements<br>Pharmacist's report – changes to medications with reasons if possible<br>Allied health report   |
| Qureshi R, Asha SE, Zahra M, Howell S. Factors associated with failure to follow up with a general practitioner after discharge from the emergency department. Emergency Medicine Australasia. 2012 Dec;24(6):604-9.                        | <b>Aim:</b> Identify patient factors associated with failure to follow up with their GP when discharged from either ED or emergency admissions<br><b>Method:</b> Prospective cohort study at a single site. By telephone interview 2weeks after discharge<br><b>Sampling:</b> Asked to see GP after discharge, aged over 18, requiring further investigations. (n=247)<br><b>Results:</b> Numerous factors affect follow-up including demographics | Asked patients directly. Good sample size. Contains useful information   | Single site<br>Main reason for not attending GP was that patients did not consider this necessary – needs further exploration.<br><i>Concerns about the statistics – multiple end points</i> | Statistically significant variables for not following up with GP as asked: Discharged direct from ED directly, not having a regular GP, not being aware of the reasons for attending GP, not having health insurance.<br>The most common reasons for not attending were that:<br>- Did not consider necessary (53%)<br>- Did not have time,<br>Did not realise they had to see GP<br>Physically too frail (No reason)<br>Key Conclusions: Good communication in ED means more patients see their GP when they are instructed to. It remains unclear what they consider to be 'good' communication or how it is specifically managed in EMU rather than other areas of the ED (other than having more time for explanation).<br>The 'regular' GP concerns are less transferable to the UK setting.  |
| Røstad T, Garåsen H, Steinsbekk A, Sletvoll O, Grimsmo A. Development of a patient-centred care pathway across healthcare providers: a qualitative study. BMC health services research. 2013 Dec;13 (1):121.                                | <b>Aim:</b> Explore the process of developing discharge pathways<br><b>Method:</b> Qualitative methods using focus groups and interviews<br><b>Sampling:</b> Multisite, 3 hospitals and 6 "areas", Participants included those "used to collaborative thinking", healthcare staff (Community and in hospital) and GPs and Physicians.<br><b>Results:</b> 5 Main themes developed from the process and a common care pathway concept.               | Initiation of the process of integrating primary, secondary and community care and assessment of barriers in the process. Good numbers of community participants<br>GPs were initially underrepresented and a further focus group was conducted. Contains useful information | Currently just a concept. Has not asked the patients' viewpoint, which in the case of patient: GP communication is vital.  | Part of a larger study which aims to improve care coordination and follow up from hospital to home through the development of integrated care pathways.<br>Common care pathway included in Supplementary document.<br>"Main Themes:<br>- Process experiences: Participants from different areas understood the task of making a model differently. Both in terms of flow, but also in perspectives, e.g. hospital staff were focused on the disease, but the community on function<br>- Tug of war between professional goals, Hospital staff tended to focus on single diseases, but again the community focused on function.<br>- Collaboration in Primary care: Was found to be limiting care, e.g. district nurses wanted closer communication between secondary and primary care, and GPs felt that home services did not react quickly enough when patients deteriorated."<br>Disease specific pathways were not applicable to older people with comorbidities.<br>The pathway (target patient group is not clearly described 'older patients') - They propose district nurse visit at day 3, GP consult within 14 days and DN visit again at 4 weeks. |
| Rytter L, Jakobsen HN, Rønholt F, Hammer AV, Andreassen AH, Nissen A, Kjellberg J. Comprehensive discharge follow-up in patients' homes by GPs and district nurses of elderly patients: A randomized controlled trial. Scandinavian journal | <b>Aim:</b> Comparison of readmission rates between normal discharge practice and intervention of GP and District nurse visit x3<br><b>Method:</b> RCT<br><b>Sample:</b> 331 patients. Aged over 78, discharged from a single site<br><b>Result:</b> Control group significantly more likely   | Compared to Thygesen et al 2015 higher proportion of visits completed. Contains useful information   |  | Routine GP and DN visit post discharge improves medication compliance and reduces re-admissions. Primary care staff can participate successfully in transitional care.   |



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| <p>of primary health care. 2010 Sep 1;28 (3):146–53.<br/>                 Snowballed from Laugaland et al. 2012</p>  | <p>to be admitted. Also control had larger proportion of patients who were taking medication the GP was not aware of, and a larger proportion not taking prescribed medication</p>   | <p>Literature reviewed and tested at several sites. A tool for risk stratification</p>   | <p>American system, aimed primarily at reducing readmission. Description of care bundle difficult to assess in this report</p>              | <p>The system itself is based around a risk stratification tool: LACE (Length of stay, acuity of admission, Co-morbidities, Emergency Room Visits). The report advises this was validated and gives a score as to the risk of the patient being readmitted: <a href="https://www.mdischargecalc.com/lace-index-readmission">https://www.mdischargecalc.com/lace-index-readmission</a><br/>                 The score is used to decide the interventions required from the program, which consists of:<br/>                 1/ Risk Stratification<br/>                 2/ Standardised electronic discharge summary. Including: pending results, medication changes, equipment and referrals.<br/>                 3/ Medication reconciliation<br/>                 4/ Discharge Phone number to contact the hospital to confirm instructions.<br/>                 5/ Follow up phone call: Post discharge in those patients rated at high risk on the LACE tool.<br/>                 6/ GP visit within 7 days. Report a 10% readmission rate v 31% for those who did not see their GP.<br/>                 7/ Palliative care consultation for those at high risk<br/>                 8/ Case Management RV for those at high risk.<br/>                 - Paragraph on p61 about the importance of a visit to a primary care provider within 30 days of discharge quotes other researchers but doesn't come up with any new findings.</p> |
| <p>Tuso P, Huynh DN, Garofalo L, Lindsay G, Watson HL, Lenaburg DL, Lau H, Florence B, Jones J, Harvey P, Kanter MH. The readmission reduction program of Kaiser Permanente Southern California—knowledge transfer and performance improvement. The Permanente Journal. 2013;17(3):58.</p> | <p><b>Aim:</b> Report on how one group of hospitals in the USA reduced readmissions by use of a 'Transitional Bundle of Care Program'<br/> <b>Method:</b> Through utilising a pre-existing system and modifying the approach through a literature review.<br/> <b>Sampling:</b> NA<br/> <b>Results:</b> The report advises a significant reduction in readmission.</p>   | <p>Literature reviewed and tested at several sites. A tool for risk stratification</p>   | <p>American system, aimed primarily at reducing readmission. Description of care bundle difficult to assess in this report</p>              | <p>The system itself is based around a risk stratification tool: LACE (Length of stay, acuity of admission, Co-morbidities, Emergency Room Visits). The report advises this was validated and gives a score as to the risk of the patient being readmitted: <a href="https://www.mdischargecalc.com/lace-index-readmission">https://www.mdischargecalc.com/lace-index-readmission</a><br/>                 The score is used to decide the interventions required from the program, which consists of:<br/>                 1/ Risk Stratification<br/>                 2/ Standardised electronic discharge summary. Including: pending results, medication changes, equipment and referrals.<br/>                 3/ Medication reconciliation<br/>                 4/ Discharge Phone number to contact the hospital to confirm instructions.<br/>                 5/ Follow up phone call: Post discharge in those patients rated at high risk on the LACE tool.<br/>                 6/ GP visit within 7 days. Report a 10% readmission rate v 31% for those who did not see their GP.<br/>                 7/ Palliative care consultation for those at high risk<br/>                 8/ Case Management RV for those at high risk.<br/>                 - Paragraph on p61 about the importance of a visit to a primary care provider within 30 days of discharge quotes other researchers but doesn't come up with any new findings.</p> |
| <p>Wallace AS, Pierce NL, Davisson E, Manges K, Tripp-Reimer T. Social resource assessment: Application of a novel communication tool during hospital discharge. Patient education and counseling. 2019 Mar 1;102(3):542–9.</p>  | <p><b>Aim:</b> Assess a communication tools designed to assist patients in correctly conveying the amount of social support they have at home.<br/> <b>Method:</b> Tools described in useful information box, Several used in the study to compare nurses responses to the patients social situation<br/> <b>Sampling:</b> 18 Veterans admitted to a single site medical centre. Those with severe cognitive impairment were excluded due to the need for tool assessment<br/> <b>Results:</b> The main tool tested (D-CEGRM) may provide a useful assessment of patients home situation and a guide for care. The others have been listed and briefly described</p> | <p>Numerous tools used. D-CEGRM has been considered a communication tool.</p>  | <p>Focus on readmission Information collected on day of discharge, hence insufficient time to make changes. VA population specific?</p>     | <p>D-CEGRM: Allows communication of all support systems a patient has. Starts with family tree, followed by other close associations, e.g. friends, work colleagues, support groups, then health care professionals e.g. primary care, physiotherapy. Finally any pertinent omissions are recorded, e.g. children far away/divorced.<br/>                 Other tools present in the paper (not considered to be communication tools about discharge):<br/>                 NVS (Newest Vital Sign): Health literacy score<br/>                 RHDS: Readiness for Hospital Discharge Scale: Screens the areas of Personal status, knowledge, coping ability and expected support.<br/>                 PDISCHARGEDS: Post Discharge coping difficulty scale: Retrospective review of patient coping. Doesn't match this study' aim, but ideal to identify those who coped well/did not after discharge.<br/>                 Vulnerable groups include : "less education, lower literacy levels, and with fewer individuals living at home"</p>  |
| <p>Waring J, Bishop S, Marshall F. A qualitative study of professional and carer perceptions of the threats to safe hospital discharge for stroke and hip fracture patients in the English National Health Service. BMC health services research. 2016 Dec;16 (1):297.</p>                 | <p><b>Aim:</b> Discuss the views of patients and health professionals on the dangers during discharge of patients in stroke and hip fracture.<br/> <b>Method:</b> Narrative interviews<br/> <b>Sampling:</b> Two site, 213 stakeholders: variety of hospital staff. Also recruited patients and carers (n=53).<br/> <b>Results:</b> Supports good communication and working as a team</p>  | <p>Based in UK Useful literature search highlighting the issues around safe discharge Very large sample Contains useful information for primary care</p> | <p>Complex and long paper. Only divided findings into three stems Struggled to get GP (n=3), hence further focus group set up for them.</p> | <p>3 stems identified as the major threats:<br/>                 Direct harms: e.g. falls<br/>                 Contributing factors: e.g. waiting for results, follow up care<br/>                 Latent Factors: discharge planning, Referrals<br/>                 Main comments regarding primary care communication: Community nurses say that the GP doesn't get involved unless there is a problem. (Repeated through paper)<br/>                 GPs have concerns over medication changes or incomplete medication dispensed<br/>                 Everybody recognises that GPs rely on discharge letter, which was a concern if it was delayed or of poor quality.<br/>                 Stroke and hip replacement discharges where the population are frail and have ongoing health need - ?population specific findings</p>  |

(Continued)

| Study Details [number in main paper reference list]  | Summary of aims, method, sampling, and results   | Strengths   | Limitations | Content which might be used to inform a communication tool for primary care   |
|--|--|---|-------------|---|
|  | across the care spectrum.  |   |             |   |
| Winfield A, Burns E. Let's all get home safely: a commentary on NICE and SCIE guidelines (NG27) transition between inpatient hospital settings and community or care home settings. Age and ageing. 2016 Nov 2;45(6):757-60. | <b>Aim:</b> Review by the Author of the 2015 NICE and SCIE (Social care Institute for Excellence) guidelines on transition between inpatient and community care home setting<br><b>Method:</b> NA<br><b>Sampling:</b> NA<br><b>Results:</b> NA | Commentary on associated NICE Guidance<br>Contains useful information |             | Advises that the hospital teams should work closely with primary care and take personal interest in their patients<br>Focus on complete information sharing<br>Primary care should make contact with high risk patients within 72hr (call or visit) – this is not included in the NICE guidance.<br>Emphasis on patient voice and person centred care |

**Appendix C. - Table of tools for communication with patients after discharge from hospital (published and grey literature sources)**

| Provenance [number in main reference list]  | Name of tool                        | Environment For use (intended audience)              | Type of communication        | Timing of use               | Country of Origin | Validation status                            | Description of tool  |
|---|-------------------------------------|--|------------------------------|-----------------------------|-------------------|--|--|
| <b>Transitional Care Schemes</b>  |                                     |  |                              |                             |                   |  |  |
| Bushnell et al. (2018) [36]   | COMPASS                             | Secondary care (clinicians and patients)             | Synchronous and asynchronous | Peri and post-discharge     | USA               | Validated                                    | Secondary care based complex intervention with focus on health literacy for stroke/TIA patients post discharge. See <a href="#">Appendix B</a>   |
| Hastings et al. (2014) original reference <a href="https://clinicaltrials.gov/ct2/show/NCT01717976">https://clinicaltrials.gov/ct2/show/NCT01717976</a><br>And later paper [28] | DISPO-ED                            | Primary care (nurses and patients)                   | Synchronous                  | Post-discharge              | USA               | Validated                                    | DISPO-ED: Discharge information and Support for patients receiving outpatient care in the Emergency Department. Evaluation of a primary care based nurse telephone system, aimed at reducing repeat visits to ED. See <a href="#">Appendix B</a>   |
| Hirschman et al. (2015) [39]  | Transitional Care Model             | Primary and secondary care (Nurses and patients)     | Synchronous and asynchronous | Pre,peri and post-discharge | USA               | Validated, including primary care validation | This paper reviews a well-developed scheme across secondary and primary care using a complex 9 step, nurse led model. Screening criteria might be used to target specific populations. See <a href="#">Appendix B</a>  |
| Tuso et al.(2013) [38]  | Transitional Bundle of Care Program | Secondary care (Clinicians and patients)             | Synchronous and asynchronous | Pre,peri and post-discharge | USA               | Not validated                                | Transitional care programme in one hospital group which clearly described promotion of patient health literacy. Using an established and validated risk scoring system called 'LACE' but the combined approach is not considered validated. See <a href="#">Appendix B</a>   |
| Multiple IHI reports on discharge   | Teach Back                          | Primary and secondary care (Clinicians and patients) | Synchronous                  | Pre,peri and post-discharge | USA               | Validated                                    | Extensively employed method for improving patient health literacy. Not specifically designed for discharge but used in many transitional care schemes in the published literature. Available at: <a href="http://www.teachbacktraining.com">www.teachbacktraining.com</a> Accessed 25/6/20   |
| Aafp  | Initial transi-tional care contact  | Primary care (administrative team and patients)      | Synchronous                  | Post-discharge              | USA               | Not validated                                | Downloadable initial contact form for primary care provider to document first Transitional Care Contact. Contains information about the admission, medication reconciliation, tests required and follow-up. Brief form checklist with no space for free-text entries. Designed to be filled in by administrative staff. Available at: <a href="https://www.aafp.org/fpm/2013/0500/p12.html">https://www.aafp.org/fpm/2013/0500/p12.html</a> Accessed 25/6/20 |
| <b>Personalised Discharge Summaries</b>   |                                     |  |                              |                             |                   |  |  |
| Buurman et al. (2016) [31]  | NA                                  | Secondary care (patients and clinicians)             | Asynchronous                 | Peri-discharge              | Netherlands       | Not validated                                | Small scale secondary care study in quality improvement looking at personalised discharge letters to promote patient health literacy. See <a href="#">Appendix B</a>   |

|   |   |  |                              |                              |           |   |   |
|---|---|--|------------------------------|------------------------------|-----------|---|---|
| Hahn-Goldberg et al. (2016) [32]  | Patient Orientated Discharge Summary (PODS)                   | Secondary care (patients and clinicians) | Asynchronous                 | Peri-discharge               | Canada    | Validated                                       | Medium scale secondary care study to develop patient specific discharge instructions with particular focus on medications health literacy. See <a href="#">Appendix B</a>   |
| Newnham et al (2015) [33]   | NA  | Secondary care (patients and clinicians) | Asynchronous                 | Peri-discharge               | Australia | Not validated                                   | Small pilot of patient specific discharge videos. See <a href="#">Appendix B</a>  |
| Wallace et al. (2019) [34]  | D-CEGRM Social Resource Interview                             | Secondary care (nurses and patients)     | Synchronous and asynchronous | Peri-discharge               | USA       | Validated                                       | Single site testing of a secondary care intervention designed to help patients identify sources of social support on discharge. See <a href="#">Appendix B</a>  |
| <b>Patient/carer-filled discharge journals/checklists</b>   |   |  |                              |                              |           |   |   |
| P115 IHI How-to Guide: Improving Transitions from the Hospital to Community Settings to Reduce Avoidable Rehospitalizations   | Taking Care of Myself – A guide for when I leave the hospital | Secondary care (Patients)                | Asynchronous                 | Pre, peri and post discharge | USA       | Validated                                       | 10 page booklet for patient to fill in about all aspects of admission and discharge. Focuses on medications (4 pages of booklet). Available at: <a href="https://www.ahrq.gov/patients-consumers/diagnosis-treatment/hospitals-clinics/goinghome/index.html">https://www.ahrq.gov/patients-consumers/diagnosis-treatment/hospitals-clinics/goinghome/index.html</a> Accessed 25/6/20  |
| P 120 IHI How-to Guide: Improving Transitions from the Hospital to Community Settings to Reduce Avoidable Rehospitalizations From Project BOOST®                          | Patient PASS – a transition record                            | Secondary care (patients)                | Asynchronous                 | Peri and post discharge      | USA       | Validated                                       | Originally from AHRQ<br>Simple 1 page document for patient to fill out – main focus is on follow-up appointments and contacts. Unfortunately spaces for handwriting on are rather small and some of the questions are non-specific. Available at: <a href="http://www.ih.org/resources/Pages/Tools/howtuguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx">http://www.ih.org/resources/Pages/Tools/howtuguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx</a> Accessed 25/6/20  |
| P110 How-to Guide: Improving Transitions from the Hospital to Community Settings to Reduce Avoidable Rehospitalizations, originally part of the Always Events™ programme. | Be smart: leave SMART   | Secondary care (patients)                | Asynchronous                 | Peri and post discharge      | USA       | Not validated                                   | 1 page patient filled document backed up with an education programme at the hospital. Discharge summaries continued as usual. SMART = (Signs, Medications, Appointments, Results, and Talk with me) Available at: <a href="http://www.ih.org/resources/Pages/Tools/howtuguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx">http://www.ih.org/resources/Pages/Tools/howtuguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx</a> Accessed 25/6/20  |
| AHRQ – Care Transitions from Hospital to Home: IDEAL (Include Discuss Educate Assess Listen) Discharge Planning   | Be Prepared To Go Home Checklist                              | Secondary care (Patients)                | Asynchronous                 | Peri and post discharge      | USA       | Validated                                       | Trifold checklist and 14 page booklet for patients to be given out and filled in at the hospital. Just two sections of this long booklet looks like they could be used to frame communication with a GP but it has a very specific focus on the hospital setting and would need adaptation. The medications reconciliation page has a rather long list of questions for patients to ask, is it possibly too comprehensive? Available at: <a href="https://www.ahrq.gov/professionals/systems/hospital/engagingfamilies/strategy4/index.html">https://www.ahrq.gov/professionals/systems/hospital/engagingfamilies/strategy4/index.html</a> Accessed 25/6/20 |
| Implementation Handbook   |   |  |                              |                              |           |   |   |
| Lenaghan (2018) [35]  | Patient Controlled Health Journal                             | Secondary care (Patients)                | Asynchronous                 | Peri and post discharge      | USA       | Not validated                                   | Single site secondary care study using a patient held and completed record to empower health literacy. See <a href="#">Appendix B</a>   |
| <b>Provider Discharge Checklists</b>  |   |  |                              |                              |           |   |   |
| P107 IHI How-to Guide: Improving Transitions from the Hospital to Community Settings to Reduce Avoidable Rehospitalizations   | Next Step in Care   | Secondary care (Nurses and patients)     | Synchronous and asynchronous | Peri-discharge               | USA       | Probably validated – from a very large provider | 4 page nurse filled document in preparation for discharge with requirement to discuss with patient/caregiver. Contains the following headings: admission/discharge, services and supplies, follow-up and family/caregiver notes<br>Available at: <a href="http://www.ih.org/resources/Pages/Tools/howtuguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx">http://www.ih.org/resources/Pages/Tools/howtuguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx</a> Accessed 25/6/20   |
| IHI How-to Guide: Improving   | NA (checklist is not named)                                   | Primary care (Clinicians)                | Synchronous                  | Post discharge               | USA       | Not validated                                   | The checklist can be used to stimulate communication with patients and is an  |

(Continued)

| Provenance [number in main reference list]   | Name of tool   | Environment For use (intended audience)             | Type of communication | Timing of use             | Country of Origin | Validation status | Description of tool  |
|--|--|---|-----------------------|---------------------------|-------------------|-------------------|--|
|  | Transitions from the Hospital to the Clinical Office Practice to Reduce Avoidable Rehospitalizations |   |                       |                           |                   |                   | exhaustive schema for what should ideally be covered in a post-discharge visit.<br>Fig. 4 based on: Coleman EA. The Post-Hospital Follow-Up Visit: A Physician Checklist to Reduce Readmissions: California Health Care Foundation Issue Brief; October 2010.<br>Available at: <a href="http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitionshospitaltoofficepracticereducerehospitalizations.aspx">http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitionshospitaltoofficepracticereducerehospitalizations.aspx</a><br>Accessed 25/6/20   |
| United Hospital Fund 2011  |  |   |                       |                           |                   |                   | Available at: <a href="http://www.ihl.org/resources/Pages/Tools/outptmedrecform.aspx">http://www.ihl.org/resources/Pages/Tools/outptmedrecform.aspx</a><br>Accessed 25/6/20  |
| IHI medicines reconciliation tools   | Outpatient/ Ambulatory Medication Reconciliation Form  | Secondary care (clinicians and patients)            | Synchronous           | Not specific to discharge | USA               | Not validated     | Discrete tool in the form of the OP/ ambulatory medicines reconciliation form which could be adapted for use at discharge.<br>Available at: <a href="http://www.ihl.org/resources/Pages/Tools/outptmedrecform.aspx">http://www.ihl.org/resources/Pages/Tools/outptmedrecform.aspx</a><br>Accessed 25/6/20  |
| Cooper University Hospital   |  |   |                       |                           |                   |                   | Available at: <a href="http://www.ihl.org/resources/Pages/Tools/outptmedrecform.aspx">http://www.ihl.org/resources/Pages/Tools/outptmedrecform.aspx</a><br>Accessed 25/6/20  |
| AHRQ – Re-Engineered Discharge project, Allied Health Care Professional call patients 2–3 days after discharge                   | Post discharge follow-up phone call script and document  | Secondary care (nurses/AHPs)                        | Synchronous           | Post discharge            | USA               | Validated         | This post discharge call script for clinicians is a 'perfect' telephone consultation in some respects. Elements of it could be borrowed for use in primary care by different healthcare professionals and similarly the documentation template.<br>Available at: <a href="https://psnet.ahrq.gov/issue/re-engineered-discharge-red-toolkit">https://psnet.ahrq.gov/issue/re-engineered-discharge-red-toolkit</a> Accessed 25/6/20  |
|  | Template   |   |                       |                           |                   |                   |  |
| AHRQ aspire Designing and delivering whole-person transitional care  | Tool 10: discharge process checklist   | Secondary care (clinical and non-clinical staff)    | Asynchronous          | Pre-discharge             | USA               | Validated         | This discharge checklist contains several patient communication elements which must be ticked off including: customised self-care instructions and follow-up arrangements.<br>Available at: <a href="https://www.ahrq.gov/patient-safety/settings/hospital/resource/guide/index.html">https://www.ahrq.gov/patient-safety/settings/hospital/resource/guide/index.html</a> Accessed 25/6/20   |
| The hospital guide to reducing medicaid readmissions   |  |   |                       |                           |                   |                   | Available at: <a href="https://www.ahrq.gov/patient-safety/settings/hospital/resource/guide/index.html">https://www.ahrq.gov/patient-safety/settings/hospital/resource/guide/index.html</a> Accessed 25/6/20   |
| <b>Measurement tools which could inform communication material</b>   |  |   |                       |                           |                   |                   |  |
| Ahrq - hospital care transitions measure <a href="http://www.cahps.ahrq.gov/">www.cahps.ahrq.gov/</a>                            | HCAHPS   | Secondary care (clinicians and managers)            | Asynchronous          | Pre and peri-discharge    | USA               | Validated         | See p 67 of the IHI STAAR discharge guide for hospitals for questions used as outcome measures. This tool does not aim to aid communication with patients but it does measure it. The measurement items may be extrapolated back to inform a communication tool.<br>Available at: <a href="http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx">http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitionstoreduceavoidablerehospitalizations.aspx</a><br>Accessed 25/6/20  |
| IHI How-to Guide: Improving Transitions from the Hospital to the Clinical Office Practice to Reduce Avoidable Rehospitalizations | Patient experience of rehospitalisation survey – Diagnostic Interview Worksheet                      | Secondary care (clinicians and managers)            | synchronous           | Pre and Peri-discharge    | USA               | Not validated     | Present in all 4 STAAR guides in slightly differing formats specific to the setting. This is a questionnaire designed to use in-patient experience of discharge audit. Actually an audit measurement tool but contains many elements of what ideal communication at discharge should look like. Could be used as a semi-structured interview guide.<br>Available at: <a href="http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitions hospitaltoofficepracticereducerehospitalizations.aspx">http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitions hospitaltoofficepracticereducerehospitalizations.aspx</a><br>Accessed 25/6/20 |
| P 83   |  |   |                       |                           |                   |                   | Available at: <a href="http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitions hospitaltoofficepracticereducerehospitalizations.aspx">http://www.ihl.org/resources/Pages/Tools/howtoguideimprovingtransitions hospitaltoofficepracticereducerehospitalizations.aspx</a><br>Accessed 25/6/20  |
| Coleman et al. (2006) [45]   | Care Transitions Measure   | Secondary care (administrative staff or clinicians) | Synchronous           | Post discharge            | USA               | Validated         | Large scale secondary care study which developed a PROM which assesses quality of care transitions.  |

|   |   |  |              |                              |     |   |   |
|---|---|--|--------------|------------------------------|-----|---|---|
| Also available at:<br><a href="https://caretransitions.org/all-tools-and-resources/">https://caretransitions.org/all-tools-and-resources/</a>   |   | or researchers WITH patients)  |              |                              |     |   | Supportive tools for CTM 15 and CTM 3 available online alongside a family caregiver version (FCAT)  |
| Scottish patient safety programme   | Driver diagram and change package                   | Primary care (clinicians and management staff for the purposes of audit) | Asynchronous | Post discharge               | UK  | Validated   | <p>Directly taken measures from PDSA cycle ideas:</p> <p>"GP practices to check:</p> <ul style="list-style-type: none"> <li>• The letter has been actioned by the appropriate clinician within 2 working days</li> <li>• The change in the management plan has been clearly implemented</li> <li>• The patient has been notified of the change in the management plan"</li> </ul> <p>The audit measures do include a requirement to discuss with patients in the post-discharge period<br/>                     Available at: <a href="https://ihub.scot/media/2204/safe-and-reliable-patient-care.pdf">https://ihub.scot/media/2204/safe-and-reliable-patient-care.pdf</a> Accessed 25/6/20</p>  |
| Safe and reliable patient care within practice and across the interface   |   |  |              |                              |     |   |   |
| <b>Other Health Literacy Resources</b>  |   |  |              |                              |     |   |   |
| IHI How To Guide - prevent adverse drug events by medicines reconciliation  | A Fact Sheet For Patients and Their Family Members  | Primary and secondary care (patients)                                    | Asynchronous | Post-discharge               | USA | Not validated. Originally from the 5 million lives campaign | <p>Contains some useful patient education material on medicines reconciliation and what patients can do to prevent medication errors at care transition.<br/>                     Available at: <a href="http://www.ihl.org/resources/Pages/Tools/howtoguidepreventadversedrugevents.aspx">http://www.ihl.org/resources/Pages/Tools/howtoguidepreventadversedrugevents.aspx</a> Accessed 25/6/20</p>  |
| P 37 What You Need to Know about Medication Errors  |   |  |              |                              |     |   |   |
| JCAHO - Speak Up Avoid a Return Trip to the Hospital  | Video and infographic                               | Primary and secondary care (Patients)                                    | Asynchronous | Pre, Peri and Post-discharge | USA | Validated   | <p>Available in English and Spanish. Video talks mainly about post-discharge destination for ongoing care. Promotes the importance of activation and question asking by patients. Cartoon video a little simplistic, info-graphic contains useful tips and a pre-discharge checklist for patients. Nowhere on the info-graphic to document information.<br/>                     Available at: <a href="https://www.jointcommission.org/en/resources/for-consumers/speak-up-campaigns/avoid-a-return-trip-to-the-hospital/">https://www.jointcommission.org/en/resources/for-consumers/speak-up-campaigns/avoid-a-return-trip-to-the-hospital/</a> Accessed 25/6/20</p>   |
| <a href="https://www.jointcommission.org/en/resources/for-consumers/speak-up-campaigns/avoid-a-return-trip-to-the-hospital/">https://www.jointcommission.org/en/resources/for-consumers/speak-up-campaigns/avoid-a-return-trip-to-the-hospital/</a> |   |  |              |                              |     |   |   |
| SPSP Blood test results communication   | Leaflet and experience survey                       | Primary care (patients and clinicians)                                   | Asynchronous | Post-discharge               | UK  | Not validated   | <p>This tool includes a patient leaflet describing when and how they will get their test results in general practice. This is a communication tool of direct relevance to the peri-discharge. There are accompanying feedback question suggestions for practices to ask their patients about experiences of results handling.<br/>                     Available at: <a href="https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-primary-care/creating-the-conditions-for-safety/">https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-primary-care/creating-the-conditions-for-safety/</a> under the heading 'communication' AND <a href="https://ihub.scot/media/1708/examples-of-communication.pdf">https://ihub.scot/media/1708/examples-of-communication.pdf</a> Accessed 25/6/20</p> |
| SPSP Not Sure – Just Ask  | Questions for patients to ask about new medications | Primary care (patients)  | Synchronous  | Post-discharge               | UK  | Not validated   | <p>'Ok to ask' type material, relevant to the peri-discharge when patients have been prescribed new medications. Part of the medicine reconciliation bundle:<br/> <a href="https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-medicines-collaborative/reducing-medicines-harm-across-transitions/">https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-medicines-collaborative/reducing-medicines-harm-across-transitions/</a><br/>                     Patient material available at: <a href="https://ihub.scot/media/1994/nsjacardv11.pdf">https://ihub.scot/media/1994/nsjacardv11.pdf</a> Accessed 25/6/20</p>  |

IHI = Institute for Healthcare Improvement, SPSP = Scottish Patient Safety Programme, AHRQ = Agency for Healthcare Research and Quality, JCAHO = Joint Commission on Accreditation of Healthcare Organisations, AAFP = American Academy of Family Physicians.

**Appendix D. Excel data extraction form template**

| Reference details | Year of publication | Setting   | Country of origin  | Study type   | Tool present   | Validation                              | Appropriate aims                     | Appropriate sample                   | Theme   |
|-------------------|---------------------|---|--|--|--|---|--------------------------------------|--------------------------------------|---|
|                   |                     | 1= primary care<br>2= Secondary care<br>3= Both primary and secondary care<br>4= Nursing home<br>5= ambulance | 1=UK<br>2= USA<br>3=Australia<br>4= Italy<br>5= Japan  | 1=RCT<br>2=Literature Review<br>3=Systematic Review<br>4=Qualitative<br>5=Other quantitative | 0= No<br>1= Yes<br>2= No, but useful info contained in the paper | 0= No<br>1= Not a tool<br>2=Yes, tested | 0=No<br>1=Yes<br>2= Unclear<br>3= NA | 0=No<br>1=Yes<br>2= Unclear<br>3= NA | 1= Medication<br>2=Vulnerability factor<br>3= Multiple Morbidity<br>4= Health Literacy<br>5= Discharge planning / transitional care<br>6=not related to discharge communication |
|                   |                     | 6 = social care   | 6=China<br>7 = Denmark<br>8=Norway<br>9=Canada<br>10 = Switz.<br>11=Germany<br>12=Sweden<br>13=Netherlands<br>14 = Belgium | 6=Commentary or thought piece<br>7 =Mixed methods<br>8 =Quality Improvement                  |  |   |                                      |                                      |   |

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