Mapping nurse led social care interventions in emergency departments across the UK: A survey and systematic review of their objectives, extent, organisation and function

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List of abbreviations

ASSIA	Applied Social Sciences Index and Abstracts
CCTR	Cochrane Controlled Clinical Trials Register
CDSR	Cochrane Database of Systematic Reviews
CGA	Comprehensive Geriatric Assessment
CINAHL	Cumulative Index to Nursing & Allied Health Literature
DARE	Database of Abstracts and Reviews of Effectiveness
ED	Emergency Department
EMBASE	Excerpta Medica Database
GDS	Geriatric Depression Scale
HMIC	Health Management Information Consortium
MEDLINE	Medical Literature Analysis and Retrieval System Online
MRCount	Making Research Count
NRR	The National Research Register
NSF	National Service Framework
OARS	Older Americans Resources and Services
OT	Occupational therapy or therapist
PCT	Primary Care Trust
PT	Physical therapist
SANE	Sexual Assault Nurse Examiner
SCIE	The Social Sciences Citation Index
SPSS	Statistical package for social sciences
SSCI	The Social Care Institute for Excellence
SWHIN	Social Work and Health Inequalities Network

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[1]The Burdett Trust for Nursing http://www.burdettnursingtrust.org.uk/

Key Findings

- Two thirds of UK emergency departments had access to social care through referrals/links from the ED to external resources.

- One third of all UK emergency departments (EDs) were operating social care initiatives from within the emergency department.

- The extensive range of ED based social care interventions predominantly fell into three categories:
    1. Admission avoidance
    2. Early discharge
    3. Prevention.

- The majority of interventions were designed to avoid admissions to hospital beds.

- The availability of services was inconsistent, and restricted in terms of access, with only 12% offering 24-hour access.

- Most of the services were funded by Acute Trusts (38%) or Primary Care Trusts (38%).

- Predominately these services were nurse led.

Chapter 1 Introduction

1.1. Background

The UK Government set ambitious plans for the reform of the delivery of health and social care.[1-2] One of a number of core principles has been the development of partnerships between health and social care sectors for the provision of integrated 'patient-centred care'[1] as the Government recognises that previous schisms between health and social care have hindered the development of high quality services.[1 3-4] In order to achieve this the Government pledged increased funding for recruitment, an increase in extended roles for nurses, an increase in the number of beds, new hospitals, primary care centres.[1]

The reform of the National Health Service (NHS) has also seen changes in the way that services are delivered, with new ways of working and an emphasis on whole systems approaches. The effect of the adoption of such innovative models is exemplified in emergency care where waits are now less than four hours for 98% of patients,[286-287] a target yet to be achieved in the vast majority of healthcare systems internationally.

One such approach has been the expansion of multidisciplinary teams, in emergency departments, for the delivery of health and social care. Whilst the composition of teams varies, they tend to include the following health care professionals: nurses, physiotherapists, occupational therapists, doctors and social workers[5-9] with a high proportion focusing on admission avoidance.[5 8-11] Facilitated by changes in legislation and policy, the traditional occupational boundaries for these health care professionals, especially nurses, have expanded, for example, nurses are taking on greater responsibility for initiating care in both primary care[12-14] and secondary care settings.[12-14] It is argued that nurses are well placed to take on leadership roles[15] and research has shown that new roles extend to discharge planning,[10 16] managing chronic illness,[10-22] patient transfers,[17] unscheduled care,[18-29] oncology,[30] falls prevention,[31-32] mental health,[33] nurse transcribing,[34-35] public health education,[36-37] managing acute illness[38-39] and care management.[40-45]

It is acknowledged that emergency departments constitute a critical point of access for social care.[46-50] Access to such care is associated with a number of reported benefits to both patients and institutions, including: improvements in short and longer term physical and psychological well-being,[51-52] improved health, reduced ED re-attendance, reduced emergency admission,[53-54]

increased satisfaction,[55-56] and evidence of cost-effective acute hospital care.[57-58]

Yet despite the growth of these new multi-skilled roles, models of care and their potential for improvements in patient care, there is a lack of systematic evidence on their organisation and function. Whilst for example, evaluations of new nurse led ED based social care initiatives have been published, there has been no systematic literature review to synthesise the findings. In addition, the authors found in a regional survey that a number of ED based social care initiatives that had developed through pragmatic localised start-ups remained hidden because accounts of them had not been published.

If the aspirations of integrated health and social care, accessed at the point of entry to the National Health Service are to be realised,[59] then a systematic account of such initiatives is needed, as a basis for evaluating how effective they are in improving patient care.

1.2. Aims

The aim of this project was to undertake the first UK national survey and a systematic review of ED based social care initiatives in order to determine the objectives, organisation (including funding), extent, functions, and evidence on outcomes of such interventions, as a guide to education, policy, and practice in the UK National Health Service.

1.3. Objectives

1.3.1. To undertake a UK wide postal and internet based survey of all ED managers/matrons in UK hospitals with EDs, with responsibility for ED multi-professional social care teams, to determine the teams' objectives, organisation, extent, functions, funding, and evidence on outcomes. Respondents were requested to forward copies of local evaluations. As the research approach is classified as an audit, while participation was on the grounds of informed consent, it was not necessary to obtain clearance through medical ethics committees.

1.3.2. To develop a taxonomy to classify all reported nurse-led multi-professional ED social care initiatives, according to the key criteria above and to identify regional convergences and divergences.

1.3.3. To carry out a systematic review of UK and international literature on nurse-led social care interventions in EDs, including multi-professional care teams, together with a systematic review of local UK evaluations. The review adopted the 'Realist' approach, to enhance the usefulness of results.[60-61] This provides an explanatory analysis aimed at discerning what works for whom, in what circumstances and how, and involves service users/providers in defining research questions. The validity of the findings were reviewed against quantitative, qualitative and service user-led models of study design. A score was given for levels of evidence supporting the outcomes of the teams' ED social care interventions and the review includes a summary of future research needs.

1.3.4. Key stakeholders included service and research commissioners and providers; an independent service users' health and social care research forum; and academics representing multi-professional interests in social care. An advisory sub-group of the Social Work and Health Inequalities Network (SWHIN) an international research network of health and social care academics and practitioners, convened by email provided expert advice.

1.3.5. The project aimed to maximise and evaluate its impact as follows. To encourage further capacity building, service development and audit, it planned to disseminate electronically to all EDs an evidence-based checklist of good practice; managers and practitioners being invited to post feedback evaluating the checklist, and updates on local/regional developments, on a dedicated website (http://www2.warwick.ac.uk/fac/med/research/hsri/emergency care/mapping).

1.3.6. The project aimed to encourage further policy development and research (in addition to academic publications) by dissemination to the Warwick Emergency Care Advisory Group, including the National Clinical Director for Emergency Access; to SCIE; to the annual Emergency Care conference; and to Making Research Count (MRCount) for national social care research dissemination. We aimed to raise the profile of the issue among key service user groups by dissemination to key representative organisations: e.g. Help the Aged/Age Concern (Age UK) and INVOLVE. International electronic dissemination through SWHIN.

Chapter 2 - UK survey of emergency department based social care interventions

2.1. Introduction

Social care can be defined as '… the activities, services and relationships that help us to be independent, active and healthy, as well as to be able to participate in and contribute to society, throughout our lives.'[62] The aim of this survey was to map the objectives, extent, organisation and function of social care interventions located or co-located in UK Emergency Departments (EDs).

2.2. Methods

2.2.1. Methodology

All UK type I (Consultant led 24-hour service with full resuscitation facilities, designated for the reception of ED patients) and II (Consultant led single specialty) EDs, identified from the Department of Health and British Association of Emergency Medicine Survey (2007),[63] were approached and invited to participate in the survey. To ensure a good response rate survey completion was flexible and a number of formats were offered.

2.2.2. Sampling

To identify emergency departments undertaking social care interventions, a letter explaining the nature of the study and what would be required of participating departments was sent to the following people together with a form on which to list any social care interventions:

- Senior Nurse – Emergency Department
- Physiotherapist Manager for hospital
- Social Work Lead for hospital
- Clinical Lead/Director, Care of the Elderly

Respondents listing interventions were offered the opportunity to either complete the survey by requesting a hard copy to be sent by post, electronic version via e-mail, web-based version (www.warwick.ac.uk/go/emergencycare), or undertake a telephone interview.

2.2.3. Data collection

Data were collected on a range of variables using the prompts listed in **Table 1**.

Table 1 – Survey questions

Survey Questions
Title of service?
Where is the service located? (e.g. ED only, ED and community)
Is the service: ▪ permanent ▪ fixed term (specify term length).
Funding provider?
Date of service commencement?
When is the service available?
Are there any constraints on this service?
What were the drivers for instigation of this service
What, if any, were the barriers to the introduction of the service?
What are the primary aim/s of this service
Do you have a mission statement – **if yes**, what is it?
What are the eligibility criteria for this service?
Do you receive direct referrals for this service?, if yes, from whom
Briefly explain what the service comprises
What, if any, are the benefits to patients?
What, if any, are the benefits to ED/hospital etc? (e.g. admissions, waiting time)
What, if any, are the disadvantages to ED/hospital etc?
Has there been an evaluation?
How many staff are attached to the service?
What are their disciplines?
What is their place of work?
Who is the lead for this service?
Are the service staff: ▪ permanent team members ▪ rotate to other areas/services/duties.
Did staff receive any training?

2.2.4. Analysis

The data were collated and analysed using SPSS 15.0 (Statistical Package for Social Sciences).

2.3. Results

2.3.1 Sample

Of the 287 emergency departments approached, 37 were identified as minor injury units or walk-in-centres (Type III) and were therefore ineligible for inclusion in the study. The remaining 250 emergency departments were identified as either Type I or Type II and therefore eligible for inclusion in the study; of the eligible emergency departments 83% (208/250) agreed to participate (**Table 2**).

Table 2 - Response rate

Returns	N
Ineligible returns (type III)	**N=37** England n=31 Northern Ireland n=0 Scotland n=4 Wales n=2
Non-responders	**N=42**
Eligible returns	**N=208**
Eligible returns by country	England 82% (n=162/199) Northern Ireland 91% (n=10/11) Scotland 85% (n=22/26) Wales 100% (n=14/14)
Response rate	**83%** (208/250)

2.3.2 Spectrum of social care interventions reported by emergency department

The range of social care interventions reported by emergency departments was extensive. The data were collapsed into four categories to form a typology, with groupings based on service provision (**Figure 1**). The typology was created retrospectively after data collection, based on the primary functions of the most common service provisions indicated by respondents:

1. Admission avoidance.
2. Early discharge.
3. Prevention.
4. Other.

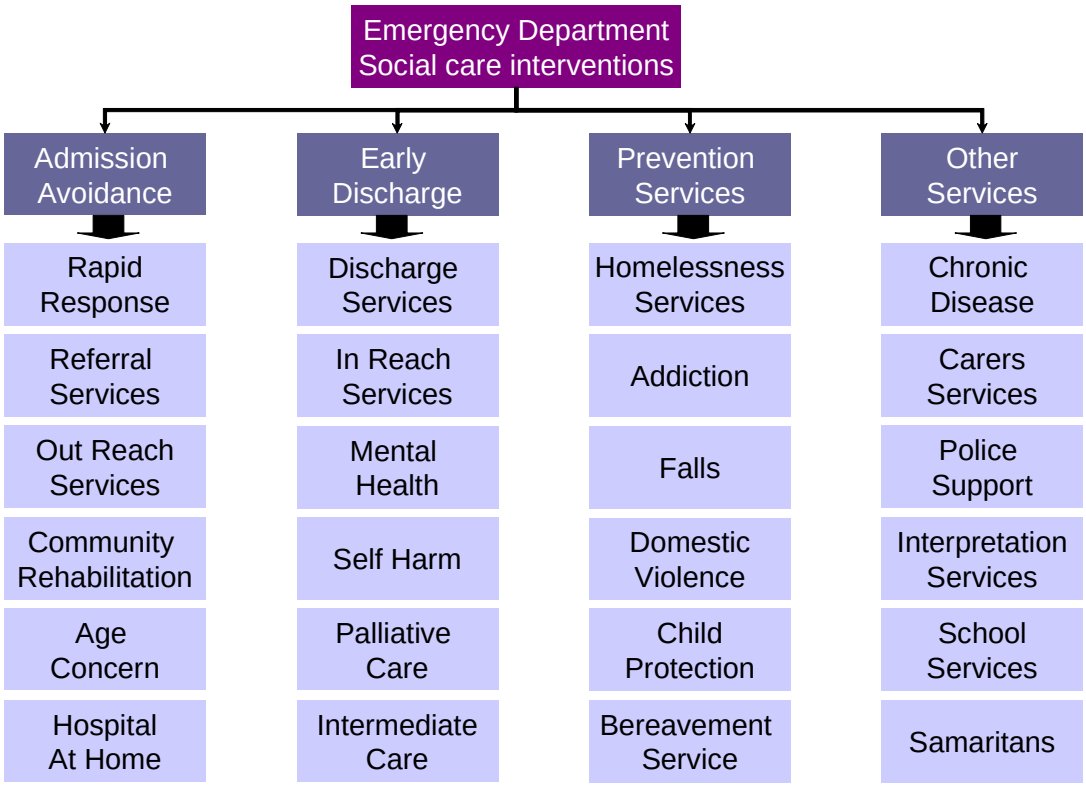

Figure 1 – spectrum of social care interventions reported by emergency departments grouped by primary functions

2.3.3. Distribution of Interventions across the UK

As reported in **Table 2** the response rate from each of the four countries: England, Northern Ireland, Scotland, and Wales was high (>80%).

2.3.4. Extent of Service Provision

Of the 208 emergency departments reporting social care interventions only 35% (n=73/208) were directly involved in undertaking social care interventions within the department, the remainder 65% (n=135/208) reported links or referral pathways to resources outside the ED for these interventions (**Table 3**).

Table 3 – Social care interventions

EDs with social care interventions located or co-located	Referrals to social care interventions from ED
35% (n=73/208)	65% (n=135/208)

Of the 73 emergency departments actively undertaking ED based social care interventions 11% (n=8/73) reported undertaking multiple interventions, thus, the total number of interventions

located or co-located within emergency departments was 84 (**Table 4**).

Table 4 – emergency department by number of social care interventions undertaken

Number of EDs by intervention type	Number of interventions
n=65 - single intervention	65
n=5 – two interventions	10
n=3 - three interventions	9
Total	**N=84**

The remainder of the analysis will be based on **the number of interventions undertaken in emergency departments (N=84)** and not on the number of emergency departments reporting actively undertaking social care interventions. In the following analysis the dominator varies depending on how many respondents answered a particular question, either because respondents did not perceive some questions to be relevant to their circumstances or it was missed.

2.3.5. Organisation of Service Provision

2.3.5.1. type of service

The majority of interventions, 62% (n=52/84), were designed to avoid admissions to hospital beds. Early discharge interventions, 23% (n=19/84), were the next most commonly reported intervention by clinical leads. Interventions designed to prevent or reduce the likelihood of future ill-health and or hospital re-attendance amounted to 16% (n=13/84).

The interventions listed in **Figure 1** under 'other services' served as an adjunct to social care interventions e.g. Interpretation Services, but their primary function was not admission avoidance, early discharge or prevention from ED re-attendance. Almost without exception, none were undertaken in emergency departments, but were dependent on a referral being initiated from emergency departments.

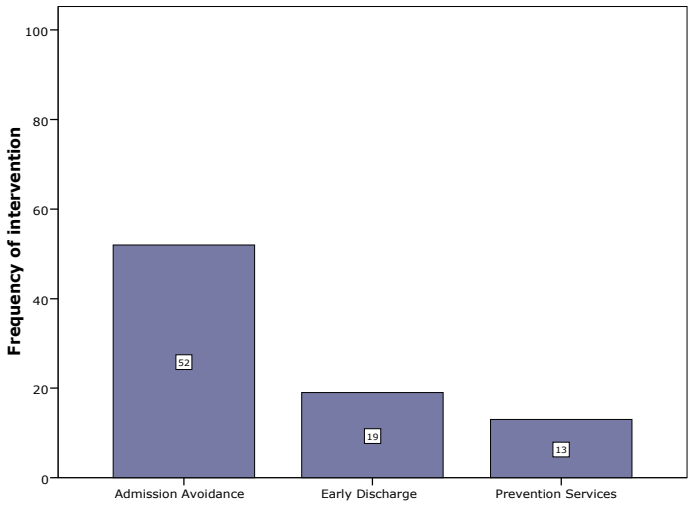

Figure 2 – Interventions by service category

2.3.5.2. location of the service

The majority of interventions, 70% (n=56/80), were solely located in the emergency department, with 30% (n=24/80) co-located within the hospital or local community.

Of the 56 interventions located in the ED, the majority, 61% (n=34/56), were aimed at admission avoidance (**Figure 2**).

2.3.5.3. availability of the service

The services varied in the times they were available with only 12% (n=9/77) offering 24-hour access. The majority of the interventions, 53% (n=41/77), were unable to provide an out-of-hours (OOHs) service and operated within normal working hours. Of the remainder 34% (n=26/77) offered some out-hours provision in addition to in-hours provision although the extent varied greatly and one service only operated OOHs (**Figure 5**).

Table 5 – Service Availability

Service availability	n	%
In-hours[2] only	41/77	53
In-hours with some OOH provision	26/77	34
24-hours	9/77	12
Out-of-hours[3] only	1/77	1

[2] 07.30hrs – 17.30hrs Monday – Friday.
[3] 17.30-07.30 Monday – Friday; all day Saturday and Sunday and Bank Holidays.

2.3.5.4. staffing of the service

The majority of services were staffed by multi-disciplinary teams 54% (n=42/78), with uni-disciplinary teams comprising 46% (n=36/78) and of these the majority were staffed by nurses (94%, 34/36) (**Figure 8**).

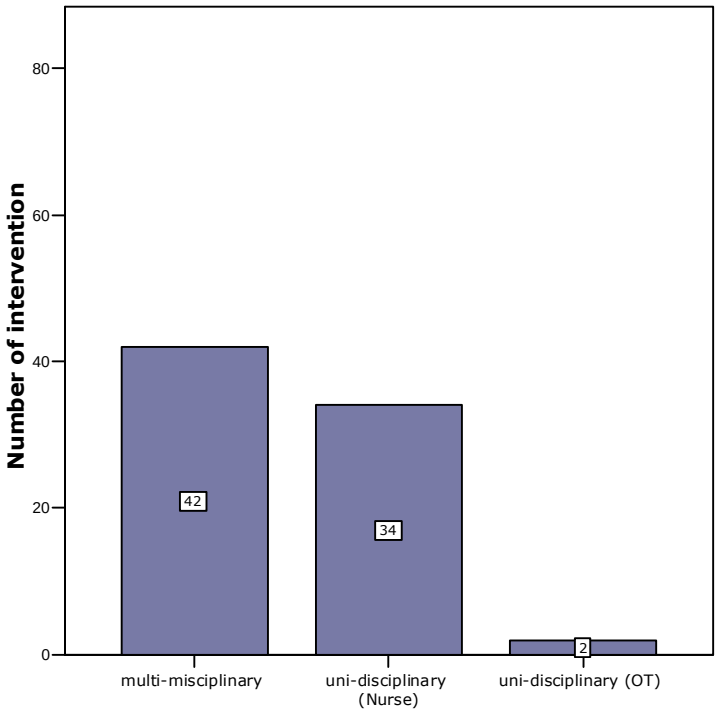

Figure 3 – Staffing structure for interventions

The number of team members was reported by 90% (76/84) of services and the number of team members reported varied widely from 1 to 30 (M=3.80; SD=4.57). The disciplines reported are shown in **Table 16.** Nurses were the most frequently mentioned team member and accounted for more than all other professional groups combined. Occupational therapists were the next most frequently mentioned group, then, physiotherapists, followed by social workers.

Table 6 – disciplines of team members

Staff disciplines[4]
Nursing (N=59/76): ▪ nurse ▪ district nurse ▪ community psychiatric Nurse ▪ emergency nurse practitioner ▪ specialist nurse.
Occupational therapy (N=53/76): ▪ occupational therapist ▪ occupational therapist assistant.
Physiotherapy (N=35/76): ▪ physiotherapist ▪ physiotherapist assistant.
Social worker (N=25/76)
Manager (N=3/76)
Clerical (N=2/76)
Doctor (N=2/76)
Dietician (N=1/76)
Speech therapist (N=1/76)

Predominantly the services are lead by nurses (63%, n=48/76), followed by occupational therapy leads (18%, n=14/76), then social workers (9%, n=7/76). Some of the services had shared leads (5%, n=4/76) with only 2% (2/84) of services having a medical lead (**Table 17**).

Table 7 – Leads for social care interventions

Intervention Leads	(n)	%
Nurse	48	63%
Occupational Therapist	14	18%
Social worker	7	9%
Physiotherapist	5	7%
Manager (no clinical background)	2	3%
Doctor	2	3%
Shared – Occupational Therapist /Physiotherapist	2	3%
No lead	2	3%
Shared - Nurse/Doctor	1	1%
Shared - Nurse/Physiotherapist	1	1%

The majority of services 92% (n=68/74) reported permanent team members with only 7% (n=5/74) reporting teams that

[4] The majority of services were staffed by multi-disciplinary teams; therefore, the number exceeds 76, the total number of services reporting.

rotate between services. One service reported core permanent members with additional staff as and when needed from other areas of the emergency department. Only 25% (n=21/74) of respondents reported receiving specific training for their role in the team.

2.3.5.5. funding the service

The funding streams for the services undertaken in UK ED were diverse (**Table 6**) and incorporated those provided by Acute Trusts, Primary Care Trusts, Social and Mental Health Services, combinations of these organisations, voluntary and charity organisations, project grants and the Welsh Assembly.

Most services were funded either by Acute Trusts, 38% (n=27/71), or Primary Care Trusts, 38% (n=27/71). Some services reported joint funding 17% (n=12/71) between Acute Trusts, Primary Care Trusts (PCTs) or equivalent, and Social and Mental Health Services. A small proportion of services were funded by charities/voluntary organisations and two pilot studies were funded by project grants.

Of the 57 services reporting constraints, 15% (n=12/78) highlighted funding as a constraint on the current service.

Table 8 – Funding stream for services

Funding source	n	%
Hospital Trusts	27/71	38
PCT or equivalent	27/71	38
Joint funding (PCT, Health Broad/Hospital Trusts/Social/Mental Services)	12/71	17
Project Grant	2/71	3
Social Services	1/71	1
Voluntary/Charity	1/71	1
Welsh Assembly	1/71	1

The funding for the majority of services was permanent (90%, n=71/79), with only 8% (n=6/79) of services having fixed-term funding (**Table 7**). Two of the services reported were pilot projects.

Table 9 – Funding term for services

Funding source	n	%
Permanent	71/79	90
Fixed term <12-months	3/79	4
Fixed term >12-months	3/79	4
Pilot projects <12-months	1/79	1
Pilot projects >12-months	1/79	1

2.3.6. Objectives of Service Provision

2.3.6.1. drivers for instigation of the service

The majority of services 91% (n=71/78) listed drivers for the instigation of the interventions (**Table 8**). The most commonly cited driver was admission avoidance (n=42/71; 59%), with changes in national or local policy the next most commonly reported driver (n=16/84; 19%).

Table 10 – Drivers for the instigation of services

Drivers[5]	n	%
Admission avoidance	42/71	59
Change policy - national/local	16/71	23
Identified need to assist discharge	11/71	15
Needs assessment/ensuring appropriate care	11/71	15
Need to improve care/meet targets	11/71	15
Waiting/turnaround time	9/71	13
Increased presentation of target population	8/71	11
Safe discharge	6/71	8
Bed pressures	5/71	7
Care for patients in the community	5/71	7
Prevent bed blocking	3/71	4
Collaborative instigated	3/71	4
Frequent attenders	3/71	4
Reduce costs	3/71	4
Available funding	2/71	3
Trust employment - discharge nurse	1/71	1
Integrate of OOH	1/71	1
Staff interest	1/71	1
Difficulty in networking with community health/social interventions	1/71	1
Prevention of falls	1/71	1

[5] More than one driver was listed by some services so the total number of drivers listed exceeds 71.

2.3.6.2. barriers to the instigation of the service

Over 47% (n=35/74) of services reported barriers to the instigation of the intervention. The most commonly reported barrier was lack of funding 19% (n=14/74), with making the service known the second most commonly reported barrier 11% (n=8/74). Other barriers for the instigation of interventions were those related to change, time pressures, service provision and manpower issues, these are listed in **Table 9**.

Table 11 – Reported barriers to the instigation of the service

Barriers	n	%
Funding	14/74	19
Making the service known	8/74	11
Connecting with other interventions	4/74	5
Not enough staff/stretched	4/74	5
No space in ED	3/74	4
Difficulty in changing to new system	3/74	4
No support-Trust/staff	2/74	3
Staff negative	2/74	3
Threat to service	2/74	3
Operational delays	1/74	1
Job protection by social workers	1/74	1
Not enough hours	1/74	1

2.3.6.3. primary aims of the service

Previous sections have considered the structure and infrastructure of the services reported by respondents. In this section we consider the primary aims stated by the services.

Primary aims were reported by 86% (n=72/84) of services. Admission avoidance was the most commonly reported primary aim with 69% (n=50/72) of services listing it. Patients receiving appropriate/target interventions (29%, n=21/72) and early discharge were (22%, n=16/72) were the next two most commonly reported aims (**Table 12**).

Table 12 – Primary aims of the service

Primary aims	n	%
Admission avoidance	50/72	69
Patient receiving appropriate/targeted interventions	21/72	29
Early discharge	16/72	22
Patient safety	13/72	18
Care for patients in community	10/72	14
Prevention of re-admission/re-attendance	7/72	10
Fast turnaround	5/72	7
Falls prevention	4/72	6
Provide/organise equipment	3/72	3
Policy requirement	2/72	3
Patient education/reducing harm	2/72	3
Early intervention	1/72	1
Provide treatment/therapy	1/72	1
Reduce referrals to other departments	1/72	1
Patient-centered approach	1/72	1
Assessment	1/72	1

2.3.6.4. eligibility criteria

The majority of interventions 75% (58/77) reported using criteria for the utilisation of the service, with only 25% (19/77) of interventions reporting an open access policy for service utilisation. The most commonly reported criterion was age (49%, n=38/77) followed by safe to discharge/medically fit (18%, n=14/77). Other criteria are listed in **Table 13**.

Table 13 – Eligibility criteria for utilisation of the service

Eligibility Criteria	n	%
Age	38/77	49
Can be safely discharged/medically fit	14/77	18
Needs the service	11/77	14
Within catchment area	9/77	12
Short-term needs	4/77	5
Psychiatric illness	4/77	5
Fall/near fall	4/77	5
Self-harm	3/77	4
Consent to service	2/77	3
Attempted suicide	2/77	3
Bereaved	2/77	3
Fracture-elderly	2/77	3
Injury/condition linked with alcohol	2/77	3
Decreased functioning	2/77	3
Acute health/medical need	2/77	3
Not under the influence of alcohol	1/77	1
Off-feet	1/77	1
Referral from other service	1/77	1

2.3.6.5. referrals to the service

In addition to accessing the service via the emergency department the majority of services 61% (n=40/66) allowed direct referrals to the service, for example, from General Practitioners or service users for services such as falls clinics

2.3.6.6. perceived benefits to patients of the service

Perceived benefits to patients from access to the services, according to staff were reported for 89% (n=75/84) of the interventions. The most commonly reported benefit 32% (n=24/75) was supported/safe/discharge/care package and admission prevention. All other perceived benefits are listed in **Table 12**.

Table 14 – Perceived benefits to patients of utilisation of the service

Service benefits patients	n	%
Prevent admission patients can go home/support/independence	24/75	32
Supported/safe/discharge/care package	24/75	32
Rapid access to community interventions	17/75	23
Avoid admission	13/75	17
Assessment/diagnostics	12/75	16
Less waiting time	10/75	13
Continuity of service/follow-up	10/75	13
Timely discharge	10/75	13
Care in appropriate setting	7/75	9
Address unmet need for interventions	5/75	7
Improved service access	5/75	7
Service available/Immediacy	4/75	5
Receive care/advice in home	4/75	5
Patients find it positive	4/75	5
Fast response	3/75	4
Receive best care/holistic approach	3/75	4
Provide service for patients	3/75	4
Increased awareness of patient needs	2/75	3
Avoid preventable death	2/75	3
Reduces infection	2/75	3
Patients do not have find interventions themselves	2/75	3
Patients preference taken into account	2/75	3
Can stay overnight for further assessment	2/75	3
Less likely to get confused	1/75	1
Relatives like the service	1/75	1
Provide appropriate environment	1/75	1
Greater advocacy	1/75	1

2.3.6.7. benefits to staff/organisation from introduction of the service

Over 85% (n=71/84) of staff reported benefits from the introduction of the service. The most commonly reported benefit was reduction in admissions (27%, n=23/84), 20% (n=17/84) reported reduced stress for staff /peace of mind/confidence and 18% (n=15/84) reported that the release of staff or diverting the workload was a benefit. The reported benefits are listed in **Table15**.

Table 15 – Benefits to staff/organisation for utilisation of the service

Benefits to staff/organisation	n	%
Reduces admissions	23/71	32
Reduces stress for staff /peace of mind/confidence/positive feeling	17/71	24
Release staff/divert workload	15/71	21
Reduced discharge delays/free beds	12/71	17
Time saving	10/71	14
Cost saving	9/71	13
Appropriate use of resources	8/71	11
Streamline service	6/71	8
Safer practice	6/71	8
Greater links between primary/ Secondary care	5/71	7
Further staff skills	5/71	7
Increased awareness	5/71	7
Provide follow-up	3/71	4
Provide holistic approach	3/71	4
No need for ED based specialties e.g. physiotherapy	3/71	4
Increased resources	3/71	4
Undertake assessment	2/71	3
Reach target	2/71	3
Reduction in frequent attenders	2/71	3
Positive approach to service	1/71	1
Immediacy-service near patient	1/71	1
Improved decision making	1/71	1
Help with problem solving	1/71	1
Complaints reduced thanks increased	1/71	1
Access to equipment	1/71	1

2.3.6.8. disadvantages to department/Trust

Only 12% (n=10/84) of services reported disadvantages following the introduction of the intervention. Increased workload, lack of space, and that part of the system failing to function were the main disadvantages reported following the introduction of the service (**Table 16**).

Table 16 – Reported disadvantages to the introduction of the service

Disadvantages	n	%
Increased workload	2/10	20
Parts of system not functioning	2/10	20
Lack of space	2/10	20
Cost	1/10	10

2.3.7. Function of the Service

2.3.7.1. constraints/barriers

Constraints on the current service were reported by over 73% (n=57/78) of interventions. The major cause of constraint was the limited hours of provision of the service (33%, n=26/78). Other constraints to the service are reported in **Table 17**.

Table 17 – Constraints to the service

Constraints	n	%
Limited hours of provision	26/78	33
Staff not available	12/78	15
Financial	12/78	15
Bed pressures	4/78	5
Lack of space	4/78	5
Lack of resources	4/78	5
Time available to provide service	4/78	5
Lack of network with other interventions	4/78	5
Side lined	3/78	4
Lack of support/conflicts	2/78	3
Discrimination against older adults	1/78	1
Fixed term project - need longer	1/78	1
Doctors only surface knowledge	1/78	1
Large number of attendances	1/78	1
Staff recruitment	1/78	1

2.3.7.2. evaluation of the service

The majority of services reporting 66% (39/59) had undertaken some form of evaluation, although, the majority were internal, not available for external review, or unpublished.

2.3.8. National Differences

2.3.8.1 – extent of service provision nationally

As a proportion, emergency departments in England and Wales directly provide more social care interventions and rely less on referring out for services than either Northern Ireland or Scotland (**Table 18**). All of the four countries of the UK have more interventions directed towards admission avoidance and early discharge than preventative interventions (**Table 19**), but in Wales' services seem less focused on admission avoidance than is the case in other countries. In England service funding is split between Trust, PCT and joint funding compared to the other

countries where the majority of funding for services is by Trusts (**Table 20**). In all countries little funding is provide for these services directly from Social Services.

Table 18 – Social care interventions by Country

Country	Number located or co-located in ED
England	72/162 (44%)
Northern Ireland	2/10 (20%)
Scotland	4/22 (19%)
Wales	6/14 (43%)

Table 19 – Number of interventions by category for each country

Country	Admission Avoidance	Early Discharge	Prevention Interventions
England	46/72	15/72	11/72
Northern Ireland	1/2	1/2	-
Scotland	4/4	-	-
Wales	1/6	3/6	2/6
Total:	**52**	**19**	**13**

Table 20 – Funding Stream by Country

Funding Stream	England	Northern Ireland	Scotland	Wales
Trust	20/71	1/2	4/4	2/6
PCT/Health Board	26/71	1/2	-	-
Social services	1/71	-	-	-
Joint[6]	11/71	-	-	1/6
Other[7]	2/71	-	-	2/6

[6] Joint funding (PCT or Health Broad, Hospital Trust, Social Services, Mental Health Services.
[7] Welsh Assembly, Project Grant, Voluntary/Charity.

Chapter 3 - Systematic Review of Social Care Interventions in Emergency Departments

3.1. Introduction

The findings from the national survey suggest that there is widespread access to social care provision from UK emergency departments and that notably, one third of all UK emergency departments are operating social care initiatives from within the emergency department. The survey has provided a systematic account of the extent, objectives, organisation, including funding, of such ED based initiatives. It has also incorporated feedback from staff on perceived outcomes. For more comprehensive systematic evidence on outcomes, the study comprises the first systematic review of international evidence, including previously published UK evidence on ED based social care interventions. Given the extent of such initiatives, as revealed in our survey, it is important to evaluate the existing evidence base. Therefore, this systematic review examines the evidence for the efficacy of social care interventions undertaken in emergency departments so that effective interventions can be identified, to guide education, policy, and practice in the UK National Health Service.

3.2. Methods

3.2.1. design

A systematic review of international and UK literature of ED based social care interventions in emergency care, and of UK locality based evaluations, identifying key lessons for policy, practice and research. No language restrictions were applied. In order to ensure that all the possible available literature was captured in the systematic review, international colleagues were engaged to determine what terms are used internationally to cover teams providing social care in emergency departments.

3.2.2. types of studies

No restrictions were placed on study type. No authoritative definition of social care was available for the purpose of this review and so we relied on the self-definition of participants.

3.2.3. participants and setting

- all patients attending emergency departments requiring social care
- all ages of patients.

3.2.4. eligibility criteria

Studies were included if they evaluated:

- a social care intervention that was initiated from or undertaken in an emergency department
- an intervention with a defined social care element that was initiated from or undertaken in an emergency department.

3.2.5. types of outcome

Studies were included if they reported data on:

- discharge from ED
- admission to hospital
- re-attendance to ED
- change in functional status
- change in well-being
- reduction in targeted behaviour
- reduction in bed days
- patient satisfaction

3.2.6. Search strategy

The search strategies for eligible studies were based on the MEDLINE search and adapted for use for other databases (**Appendix 2**). In addition to known terms to describe social care and emergency departments the descriptors used by emergency departments to describe their social care interventions from the survey were also included. Although, the term '*Emergency Department Assessment Team'* yielded no hits and was excluded from the search strategy. The team also contacted international collaborators (Canada, Australia, New Zealand, US) to check that social care and social worker were known key terms.

The following sources were searched:

- National Research Register achieves (to identify ongoing or recently completed research).
- Cumulative Index to Nursing & Allied Health Literature (CINAHL)
  Medical Literature Analysis and Retrieval System Online (MEDLINE)
- Excerpta Medica Database (EMBASE)
- The Social Sciences Citation Index (SSCI)
- Applied Social Sciences Index and Abstracts (ASSIA)
- Cochrane Database of Systematic Reviews (CDSR)
- Cochrane Controlled Clinical Trials Register (CCTR)
- Database of Abstracts and Reviews of Effectiveness (DARE)
- Health Management Information Consortium (HMIC)
- Research Register for Social Care
- National Library for Health – specialist library:

    - Emergency Care
    - Health Management
- ESRC-supported Evidence Network - systematic reviews in social policy and social care - http://www.york.ac.uk/inst/chp/srspsc/index.htm
- The Social Care Institute for Excellence (SCIE)
- The reference lists of all relevant citations were screened for further material.

3.3. Data Retrieval and Analysis

3.3.1. data retrieval

The titles and the project description were initially screened for overall relevancy by JDF. The titles and abstracts of each potentially relevant citation were then screened for inclusion by two authors from JDF, EMcL, PB, and GS. Disagreements relating to relevancy were judged by MWC, who was not involved in the second stage screening.

3.3.2 data analysis

The aims, intervention, interventionists, outcomes/comparison, and results were extracted into tables by JDF. The social care interventions were grouped by type and a descriptive review was undertaken. The review adopted the 'Realist' approach to data analysis, to enhance the usefulness of results.[60] This provides an explanatory analysis aimed at discerning what works for whom, in what circumstances and how, and involves service users/providers in defining research questions.

3.4. Results

Full details of the methodology will be presented in the published paper using the PRISMA guidlines.[64]

The systematic review retrieved a broad range of interventions that included social care.[8] The studies varied in the extent to which social care was a focus in the intervention. In some studies the social care element was large and was a major focus of the study, whilst in other studies the focus was smaller and patients were referred out to social care. Although there is some overlap, for example, interventions which focus on alcohol dependency/abuse and homelessness. The interventions were mainly directed towards:

a) admission avoidance
b) care of the bereaved
c) dependency/abuse
d) mental health
e) maltreatment
f) homelessness.

The study characteristics for interventions towards patients with mental health problems are detailed in **Table 21.**

a) Admission avoidance

In response to the increase in hospital admissions and the decline in the number of hospital beds, there has been a drive to design interventions to avoid acute hospital admission. The interventions tend to take one of two forms either facilitating discharge or intervening in the care package to prevent functional/clinical decline. Interventions facilitating discharge are generally directed at patients that would normally be admitted, community dwelling, and have short-term rehabilitation needs. Such interventions are variously described e.g. rapid response or discharge planning team. Interventions to prevent functional/clinical decline are directed at patients that would often have chronic illness and are often termed case management.

b) Care of the bereaved

Death of a close family member is one of the most stressful events a person can experience and can lead to increased morbidity and mortality in the first year following bereavement. In addition, when the death is sudden and or traumatic there is a risk of developing complicated grief. Health Care professionals working in emergency departments frequently encounter people who are suddenly bereaved.[289]

[8] No relevant projects were identified from the National Research Register archives.

c) Dependency/abuse

There is growing concern regarding the increase in the number of attendances related to the abuse of drugs and or alcohol. It is suggested that undertaking inventions targeted at dependency/abuse in the emergency department is apposite.[65]

d) Mental health

Patients with mental health problems commonly present and re-present to emergency departments. It is suggested that this reflects a lack of resources[66], for example, if patients are unable to contact their mental health worker/mental health crisis team. Research has found that patients often present with non-medical problems.[66] Social care is an important element in the care of patients with mental health problems, for example, The Royal College of Psychiatrists suggested that all patient's attending with self-harm should undergo a psychosocial assessment with a management programme to include psychiatric and social care.[67]

e) Maltreatment

The victims of maltreatment such as those suffering partner abuse, frequently attend emergency departments. The health consequences of maltreatment may be long-term.[150] Some studies have shown improvements in interventions designed to identify victims of abuse.[94, 150] It is unclear whether intervention in the emergency department is an effective approach for the management of these patients.

f) Homelessness

Research suggests that homeless people utilise emergency departments for their healthcare needs.[68] The homeless often present to emergency departments with medical and social problems.

Table 21 – Evidence tables – emergency department interventions

Study ID, Design, Country,	Service	Interventionists	Population	Intervention	Outcome/s	Findings
Moss et al., 2002[69] Observation Australia	Admission Avoidance "…ED patients were provided with services that would facilitate their return to, or maintenance in, the community"	Nursing and allied health care professionals	N=43,405 Frail elderly People living alone Frequent ED attenders Need assistance-ADL Complex medical problems/discharge Not eligible for hospital at home Homeless Drug/alcohol problems	▪ Home care ▪ Personal care ▪ Physiotherapy ▪ Occupational therapy ▪ Transport ▪ Child care	Hospital admission from ED	Significant reduction in hospital admission ($p<0.001$) from ED
Hardy et al., 2001[70] Observation United Kingdom	Admission Avoidance	**ED team:** clinical assistant Nurse **Community team:** Nurse and health care assistants	N=785 Upper and/or lower limb trauma >16 years Able to transfer if living alone Resident in the area Community dwelling Registered with a GP Access to a telephone In need of nursing/therapy not exceeding 2 weeks.	Rapid medical assessment/management. Fast track OT/PT assessments. Discharged to RRCT.	Admission avoidance Reduction in bed days	The authors claim a significant reduction in bed days and admissions avoided but no inferential statistics were undertaken. The methods are poorly described.
Poncia et al., 2000[71] Observation United Kingdom	To identify at risk patients and implement multidisciplinary interventions to maintain	**Community:** Community liaison nurse	N=551 Patients ≥ 75 years Discharged from ED Community dwelling Access to a telephone	Next day telephone follow-up and advice and referral to relevant services e.g. GP, health visitor, social services,	Descriptive – no comparisons	8% (n=44) home support insufficient and 8% (n=45) in need of immediate intervention.

	independence			community diabetes, stoma, and asthma nurses, age concern etc.		
Phillips et al., 2006[72] Retrospective cohort analysis Australia	To evaluate multidisciplinary case management.	Medical Nursing Social work, Primary Health Care Community care, Psychiatry Drug and alcohol.	N=65 Frequent attenders (3-10 visits p.a.) Excluded: Patients receiving CM Patients with chronic medical conditions receiving medical support Patients receiving full supportive care.	An integrated approach to intensive patient care Adopting a multi-disciplinary approach Available 09:00 to 21:00 every day. Limited details on the exact nature of the intervention.	ED attendances: length of stay, triage category, ambulance transport, disposition, attendances at the only two EDs nearby.	No statistical difference in the number of ED visits following introduction of CM.
Yeaw and Burlingame, 2003[73] Observation United States	To determine appropriateness of discharge planning (aims risk assessment, consistent documentation, a nursing standard for prevention interventions)	Nurse assessment	N=610 > 65 years	3-months intervention 3-months follow-up Assessed using High Risk Discharge Assessment Instrument (HRDAI) and interventions as indicated e.g. social services, nursing home	Not described	Majority (no data presented) high risk patients discharged. 17% increase in referrals to social service Poorly described study
Guttman et al., 2004[7] Before and After design Canada	Individualised discharge planning intervention	**ED team:** Nurse discharge plan co-ordinator (NDPC)	Control – N=905 Intervention – N819 Patients ≥ 75 years Discharged from ED Community dwelling Resident in the area Access to a telephone	**Intervention** Comprehensive individualised discharge planning intervention. Patient education Coordination of appointments, telephone follow-up,	Unscheduled return to ED within 14 days Satisfaction Adherence OARS well-being	Significant reduction in unscheduled return to ED, Significant increase in satisfaction of discharge information.

			Speak English or translator available	access to NDPC. **Contro**l: usual discharge care		
Gagnon et al., 1999 Randomized controlled trial	Compared nurse case management with usual care	nurse case management	N=427 frail older people (> or = 70 years of age and at risk for repeated hospital admissions) discharged home from the emergency department.	**Intervention** Experimental: Nurse case management, which consisted of coordination and provision of healthcare services by nurses, both in and out of hospital, for a 10-month period. **Control** Usual care, which varied by healthcare provider and community health center.	ED Re-attendance Admission to hospital Length of hospital stay Quality of life, Satisfaction with care Functional status, Outcomes were assessed 10 months post-randomization by telephone and/or home interview and by medical record review.	No significant differences were found in quality of life, satisfaction with care, functional status, admission to hospital, or length of hospital stay. Nurse-case-managed older adults were readmitted to ED significantly more often than their usual care counterparts.
Walsh et al., 2003[9] Observation United States	Appropriate care to optimize patient functioning	Nurse case manager	N=150	ED Case Management: Case finding, screening, assessment, intervention – tailored plan of care	Safe discharge	150 patients were transferred safely to from EDs to appropriate facilities. Poorly described
McCusker et al., 2001[74] and McCusker et al., 2003[8] Randomized controlled trial Canada	To reduce functional decline and depressive systems	Nurses	Patients ≥ 65 years Discharged from ED Community dwelling ≥ 2 on ISAR English/French speakers	**Intervention** n=178 1. Screening with ISAR 2. Standardised geriatric nursing assessment: physical/mental function, medical status, social factors.	Change in functional status (OARS), depression (GDS), Caregiver physical /mental health status (SF-36), satisfaction	Increase in referrals to primary care physician, home care services. Significant reduction in functional decline at four months. No effect for depressive systems or satisfaction.

				3. Referral to medical/community services – health and social services. **Control** n=210 Usual care		
Mion et al., 2003[75] Block randomized controlled trial United States	Comprehensive geriatric assessment	Nurse	N=650 Patients ≥65 years Discharged from ED Community dwelling Resident in the area Access to a telephone Able to hear Understand/speak English	**Intervention** n=326 Comprehensive geriatric assessment (nurse specialist-geriatrics) to identify unmet need. Design a discharge plan **Control** n=324 Usual care	ED return Admission (hospital, nursing home) Health care costs	No effect on Health care costs 30/120 days; significant reduction in nursing home admission
Mion et al., 2001[76] Before and after design (not known if historical baseline data) United States	1] To improve case finding of at-risk older patients in ED, care planning and referral returning to community. 2] Create a coordinated network of medical, nursing, social services.	Nurse Geriatric nurse specialist Project coordinator (discipline not specified)	Community dwelling Patients ≥ 65 years Community dwelling Resident in the area Previously enrolled in the study	**Intervention** Two-stage screening (TRST)/assessment and link to community services. 1] Triage nurse screens using TRST. 2] Geriatric nurse screens those to be discharged for intervention e.g. referral to primary care provider, community services, outpatients-either in ED or telephone within 72 hours.	Re-attend ED within 30 days	Return to ED within 30 days reduced by 0%-7%. Significant increase in referrals.
Caplan et al., 2004[6]	To assess whether CGA	Nurse	Patients ≥ 75 years Discharged from ED	N=1425 (assessed) N=739 (randomised)	Admission within 30 days.	Significant reduction compared with

Randomised Controlled Trial Australia	would decrease hospital admission and improve health and functional assessment in ≥ 75 years.			**Intervention** (n=370) 1] Comprehensive geriatric assessment. 2] Discussion with GP. 3] Design care plan 4] initiate interventions and referrals (GP, specialist, community nurse, community services) 5] Present at interdisciplinary weekly meeting – further intervention/referrals as necessary. **Control** (n=369) Usual care	Admission to nursing home. Physical function (Barthel and IADL). Cognitive function (MSQ)	control for: All admissions 30 days (16.5% vs 22.2%). Emergency admissions at 18-months days (44.4% vs 54.3%). Longer time to first of admission (382 vs 348).
Basic et al., 2002[77] randomised controlled trial Australia	To assess early geriatric assessment	Aged care nurse	The elderly	N=224 **Intervention** n=114 Liaised with the carers and health care providers Organised referrals/assessment /support services **Control patients** n=110	Hospital admission Length of inpatient stay Functional decline	No significant effect on: admission to the hospital (OR, 0.7; CI, 0.3-1.7) LOS (hazard ratio, 1.1; CI, 0.7-1.5) Functional decline (OR, 1.3; CI, 0.5-3.3)
Basic and Conforti, 2005[78] Australia	To evaluate a nurse practitioner in geriatrics in ED to assess high-risk elderly	Nurse	The elderly	N=469 **Intervention** (n=142) Referrals to the Aged and Care Assessment Team.	Hospital admission Discharge from ED	A comprehensive set of data was obtained for 71% patients 30% referred

Hegney et al., 2006[79] Before and after design Australia	To determine whether risk assessment by community nurse, for older people>70, decreased re-attendance within seven days	Nurse	Patients >70 years Able to consent Community dwelling Within diagnostic group	N=2139 **Intervention** Risk screening tool Discharge and Referral to Services (DARTS) Community nurse	Decreased re-attendance within seven days.	Significant decrease (16%) in re-attendance to ED
Sinclair and Ackroyd-Stolarz, 2000[80] Observational study Canada	Evaluate Quick Response Program	Discharge planning nurse Emergency physician	Resident in the area Acute illness or condition Need service ≥five days Have a doctor Fit to be discharged Require nursing/homecare services	N=177 **Intervention** Identify suitable patients, undertake an assessment and access home care services.	Discharge from ED	
Gold and Bergman, 1997[81] Sinoff et al., 1998[288] Canada	Rapid disposition: Discharge home Admission to acute geriatrics ward or other services	ED consultation team: Geriatrician Nurse clinician Physical occupational therapist		N=326 **Intervention** Assessment of medical and psychosocial Coordinating geriatric follow-up for patients discharged home Home visits or linkage to other community resources	Discharge from ED	At follow-up 64% admitted to hospital. 34% mortality rate. 52% institutionalised.
Conn et al., 2000[82-83] United states	Effectively maximise patient-care quality.	ED case manager ED staff Physician Social worker	No details	Review admission charts Assess appropriateness of admission. Alternative for social	No data presented brief overview.	No data presented brief overview.

				care admission – coordinating home care, medical equipment. Identify risk factors for discharge planning. Liaise with primary care physician.		
Carlill et al., 2002[84] Retrospective case-note analysis	Effectiveness of occupational therapy and social work service	Occupational Therapist	N = 209 Patients discharged from ED	Medical review Assessment by OT for dressing, mobility and transfers Refer social worker if necessary	Referrals Age of patients Reason for referral Discharge destination Patients admitted	18.7% (39/209) were admitted 48% (100/209) were not admitted as a direct result of the service (authors opinion no comparison data). 10% (17/170) re-attended with same complaint.
Jones et al., 1997[85] prospective, cohort study United States	Follow-up for elder patients	Research nurse	N = 1048 ≥ 60 years Discharged from ED	Telephone call within 72 hours. Current medical status Impact on self-care	Referrals	26 were referred to a medical social worker for psychosocial concerns. 31 were advised to return to the ED for re-evaluation
Wand, 2004[86] Observation Australia	To evaluate MHNP	Mental Health Nurse Practitioner (MHNP)	N=600 Patients with: Major mental illnesses/disorders Drug and alcohol problems Behavioural and emotional disturbances Psychosocial issues	Mental health assessment	Length of time that patients Discharge from ED	Improved patient support 40% seen by MHNP within 1-hour of arrival 75% seen and discharged within 1-hour ED staff perceived

			difficulty coping with physical illness			positive improvement in care for patients The process of evaluation is for this intervention is extremely weak
Lightbody et al., 2002[31] Randomised Controlled Trial	Falls prevention	ED-Nurse Community-Falls nurse	N=348 Older people Fall Discharged from ED	**Intervention** Home assessment (medication, ECG, blood pressure, cognition, visual acuity, hearing, vestibular dysfunction, balance, mobility, feet and footwear) - address risk factors for falls. **Control** Usual care.	Re-attendance at ED Admission to hospital. Further falls Functional ability	No significant difference in number of falls, re-attendance or admissions (P>0.05). Significant difference for function ability (P<0.05) and mobility within the community (P<0.02).
Bridges et al., 2000[87] Observation United Kingdom	Enhanced discharge from ED	Health visitor	N=212 ≥75-years Discharged from ED	Interventions: health education referral to other agencies patient or family counselling	Referral to gerontology	Positive evaluation by ED staff The process of evaluation is for this intervention is extremely weak
Witbeck et al., 2000[88] Observation (Pilot) United States	Case management	Social care	Substance abusing Mental disorder Homeless	Advice and referral to services	ED utilisation	Significant decrease in ED utilisation for intervention group (p <.03)
Tait et al., 2004[89]	Alcohol prevention	Medical staff	N=127 Adolescents 12-19 years	**Intervention** n=60 Referral to an external treatment agency enhanced by a consistent support	Re-attendance for substance use treatment Number of hospital AOD ED presentations	There was no significant difference in ED visits (p=.29) There was a significant reduction in AOD (p=.07)

				person who would follow-up by telephone and offer to transport or accompany them to their first appointment. **Control** N=67 Usual care	Change in AOD consumption Psychological wellbeing (GHQ-12)	
LeBrocq et al., 2003[90] Australia	Bereavement	Multidisciplinary	Unclear whether the intervention includes children.	Development of bereavement guidelines for ED to improve care in ED and to introduce follow-up care including counselling.	Not stated	The study was poorly described as where the results and the evaluation. Therefore it is not possible to infer any benefit following the introduction of this intervention.
Callahan et al., 2001[91]	Evaluate effectiveness of ED mental	Mental health nurses Social workers Psychiatrists	N=949 Patients with mental health problems	Fast assessment and management of presenting patients	Time to be seen Waiting times	The majority of referrals (33%) were seen immediately upon arrival Average waiting time was 10 minutes.

Table 22 – Papers indicating social care referrals

Study ID, Design, Country,	Population	Comments
Resnick et al., 2000[92] Overview N/A	Victims of sexual assault and violence.	An overview paper for staff in ED outlining the nature of possible injuries and associated outcomes, psychological effects, screening, mandatory reporting, and interventions for assault and rape victims. **Social care** - Reference to the importance of making referrals to social care agencies.
Houmes et al., 2003[93] Review US	Victims of sexual assault.	Review describing developing a Sexual Assault Nurse Examiner (SANE) **Social care** - Reference to advocacy and counselling from a variety of services including social workers.
Morris and Gordon, 2006[47] Overview US	Homeless and disadvantaged.	An overview of role of the ED in the management of the homeless and disadvantaged. **Social care** - emphasises the need of and integrated approach to health and social care.
Gordon et al., 2001[49] Survey US	Socially deprived.	A survey of social deprivation among ED attenders to investigate the link between health and welfare utilisation.
Spinola et al., 1998[94] Before and after study New Zealand	Partner abuse.	A five step intervention designed to identify, treat and refer victims of partner abuse by nursing, medical and administrative ED staff. **Social care** – Referral to social care.
Close et al., 1999[95] Randomised Controlled Trial United Kingdom	Prevention of falls.	An intervention with detailed medical/OT assessment in ED designed to reduce the number of falls. **Social care** – Referral to social care.

Chapter 4 – Key Points and Conclusion

Key Points

Survey

- Extensive access to social care provision from UK emergency departments.
- One third of all UK emergency departments were operating social care initiatives from within their department.
- ED based social care interventions comprised a varied range of initiatives but predominantly falling into three categories: admission avoidance, early discharge, prevention.
- The majority of interventions were designed to avoid admissions to hospital beds.
- The availability of services was inconsistent, and restricted in terms of access, with only 12% offering 24-hour access.
- Most of the services were funded by Acute Trusts (38%) or Primary Care Trusts (38%).
- Predominately these services were nurse led.

Systematic Review

- The systematic review identified a wide range of interventions that include social care.
- The review findings map directly to the UK survey findings describing interventions directed towards admission avoidance, care of the bereaved, dependency/abuse, mental health, maltreatment, and homelessness.
- The research tended to come from the United Kingdom, United States, Canada, and Australia.
- Social care interventions were not represented as discreet services, but incorporated into a whole systems approach to patient care.
- The review highlighted a multidisciplinary approach as characterising the provision of ED based social care services.

- There is some evidence for effectiveness, in terms of outcomes such as hospital admissions, and re-attendance. There is also some evidence of effectiveness for interventions such as admission avoidance/rapid response. However, generally the evidence base is weak.

Conclusion

There is reported widespread access to social care from emergency departments in the UK. However, the majority of access is via referral pathways to resources external to the ED. Only a third of all EDs are directly involved in initiatives that include social care.

The focus of social care services varies between EDs with the majority targeting admission avoidance. Although the quality of patient experience emerges as a prominent aim, the major categories used by staff to define and describe service provision could be said primarily to reflect organisational needs (such as reduced admissions and earlier discharges). The hours during which ED based social care services are available varies substantially with the majority only available in hours.

Funding patterns also vary within and between countries. Local authority social care services give low priority to funding such provision. This may reflect the perception that admission prevention and early discharge can benefit health service provider organisations but increase costs for local authority social care providers.

ED based social care initiatives undertaken during the last ten years or so have now become embedded in a significant proportion of EDs. However, the survey reported here was not designed to provide data on the number or proportion of patients accessing social care through EDs, nor to explore unmet needs, including accessibility of services to counter social disadvantage. However, access to services is revealed as inequitable in terms of the extent of service provision and availability across the day.

UK ED based social care initiatives are primarily nurse led, reflecting the more general expansion of nurse led project management in health/social care identified in Chapter 1 Nevertheless, the staffing mix in such initiatives varies substantially reflecting international findings. Social care provision is also not a discrete element of care provided by or through social workers, but is more commonly included in a package of care with a number of different elements delivered by

multidisciplinary teams of health care professionals, and involving interagency collaboration.[96-97]

The review provides weak evidence for some ED based social care interventions being of benefit to patients, ED staff and service organisations, but the evidence is far from substantial. This is partly because models of social care provision are very diverse, or frequently poorly developed, but also because the majority of services do not report or publish evaluations of their service and for those that do it is often underpinned by weak research design.

The literature review underlines the evidence from our survey that ED based social care initiatives, often well received by professionals are extending the lottery of care. The fact that many of the UK initiatives now have permanent funding and are staffed by professionals on permanent contracts reinforces the need for answers to a series of key questions including;

- What kinds and volume of social care services should be provided by what patterns of multidisciplinary staff groups to which ED patients, during which hours, with what expected outcomes?
- What are patients' priorities for ED based social care services?
- How can funding streams and staff resources for such services reflect patient and not simply organisational priorities?

These further research questions need to be addressed in order to ensure the best social care outcomes for ED patients.

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Appendix 1 – Search Strategies

The search strategies were based on the MEDLINE search and adapted for use for other databases.

MEDLINE search (OVID interface)

1 exp Social Work/ 12869
2 exp "Delivery of Health Care"/og, sd, ut [Organization & Administration, Supply & Distribution, Utilization] 39184
3 exp "Health Services Needs and Demand"/og, ut [Organization & Administration, Utilization] 678
4 Social Care.mp. 1391
5 exp Case Management/og, ut [Organization & Administration, Utilization] 1923
6 exp Patient Care Planning/og, ut [Organization & Administration, Utilization] 4246
7 exp Substance-Related Disorders/di, pc [Diagnosis, Prevention & Control] 30250
8 exp Accidental Falls/pc [Prevention & Control] 3109
9 exp Child Abuse/di, pc [Diagnosis, Prevention & Control] 6419
10 Bereavement/ 2700
11 exp Mental Health/ 13956
12 Crisis Intervention/ 4642
13 Crisis Intervention/og [Organization & Administration] 246
14 exp Self-Injurious Behavior/di, pc [Diagnosis, Prevention & Control] 7437
15 exp Domestic Violence/pc [Prevention & Control] 5376
16 Homeless Persons/ 4100
17 Voluntary Health Agencies/ 3827
18 Samaritans.mp. 91
19 Admission Avoidance.mp. 14
20 Admission Prevention.mp. 7
21 exp Patient Discharge/ 13431
22 Bed Block$.mp. 52
23 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 143974
24 exp Emergency Medical Services/ 66351
25 exp Emergency Service, Hospital/ 32056
26 (Accident and Emergency).mp. [mp=title, original title, abstract, name of substance word, subject heading word] 5644
27 Casualty.mp. 2635
28 24 or 25 or 26 or 27 70582
29 23 and 28 4226
30 limit 29 to (humans and yr="1998 - 2008") 2541

CINAHL search – (EBSCO interface)

1 exp Social Work/ 5133
2 exp Health Care Delivery/ut [Utilization] 775
3 Social Care.mp. 1533
4 exp Case Management/ut [Utilization] 35
5 exp Needs Assessment/ut [Utilization] 4
6 exp Geriatric Assessment/ut [Utilization] 7
7 exp Substance Abuse/ci, di, og, pc, ut [Chemically Induced, Diagnosis, Organizations, Prevention and Control, Utilization] 2774
8 exp ACCIDENTAL FALLS/pc [Prevention and Control] 2522
9 exp Child Abuse/og, di, pc [Organizations, Diagnosis, Prevention and Control] 1666
10 BEREAVEMENT/ 2395
11 exp Mental Health/ 5017
12 exp Crisis Intervention/ut [Utilization] 5
13 exp Injuries, Self-Inflicted/og, di, pc [Organizations, Diagnosis, Prevention and Control] 119
14 exp Domestic Violence/di, og, pc [Diagnosis, Organizations, Prevention and Control] 3421
15 Homeless Persons/ 1462
16 Voluntary Health Agencies/ 317
17 Samaritans.mp. 25
18 Admission Avoidance.mp. 13
19 Admission Prevention.mp. 4
20 exp PATIENT DISCHARGE/ or exp DISCHARGE PLANNING/ or exp EARLY PATIENT DISCHARGE/ or exp TRANSFER, DISCHARGE/ 8803
21 Bed Block$.mp. 52
22 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 33485
23 exp Emergency Medical Services/ 29339
24 exp Emergency Service/ 13095
25 exp Emergency Care/ 15306
26 (Accident and Emergency).mp. [mp=title, subject heading word, abstract, instrumentation] 1544
27 Casualty.mp. 604
28 23 or 24 or 25 or 26 or 27 40966
29 22 and 28 1571
30 limit 29 to yr="1998 - 2008" 1320

EMBASE search (OVID interface)

1 exp Social Work/ 2933
2 exp Social Care/ 28866
3 Case Management/ 440
4 exp Patient Care Planning/ 364
5 exp Substance Abuse/di [Diagnosis] 1
6 exp Substance Abuse/ 16703
7 exp Falling/ 8652
8 exp Child Abuse/di, pc [Diagnosis, Prevention] 792
9 BEREAVEMENT/ 1710
10 exp Mental Health/ 23487
11 exp Crisis Intervention/ 976
12 exp Automutilation/pc, di, rh [Prevention, Diagnosis, Rehabilitation] 272
13 exp Domestic Violence/di, pc, rh [Diagnosis, Prevention, Rehabilitation] 1038
14 exp Homelessness/ 2342
15 Voluntary Health Agencies.mp. 6
16 Samaritans.mp. 16
17 Admission Avoidance.mp. 7
18 Admission Prevention.mp. 5
19 exp Hospital Discharge/ 23806
20 Bed Block$.mp. 11
21 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 101677
22 exp Emergency Health Service/ 10430
23 exp Emergency Care/ 4586
24 (Accident and Emergency).ab,ti. 2550
25 Casualty.mp. 945
26 22 or 23 or 24 or 25 17222
27 21 and 26 1814
28 limit 27 to (human and yr="1998 - 2008") 1586

Appendix 2 – Table of Exclusions

Study	Exclusion
Ahmed and Mackway-Jones, 2007[98]	Review – Relevant data extracted.
Ailor 2008[99]	No data.
Aitken and Wiltshire. 2005[100]	Patient satisfaction with department.
Alvin, 2002[101]	Survey of adolescent emergency department utilization – no social care elements.
American College of Emergency Physicians, 2005[102]	Position statement.
Anon, 2006[103]	Not relevant comment on Rhodes.[104]
Anon, 2008[105]	Not relevant report of the Monti et al., 2007 article.[106]
Barrett et al., 2006[107]	Cost effectiveness study with no social care intervention but includes subsequent social care utilisation in the economic model.
Bates and Brown, 1998[108]	No intervention – study of existing knowledge, attitudes, management for domestic violence victims among nurses and doctors.
Benedict et al., 2006[109]	Not based in ED.
Benger and Pearce, 2002[110]	Inclusion of a reminder increases awareness.
Bennewith et al., 2005[111]	Reasons for not receiving a self-harm assessment and the characteristics patients with self-discharge or planned discharge without an assessment.
Bergmann et al., 2005[112]	Not based in ED.
Bernabei et al., 2008[113]	Not based in ED.
Bolli et al., 2005[114]	Not social care.
Bolton, 2006[115]	Commonly presenting psychiatric conditions.
Brand et al., 2004[116]	Not based in ED.
Braye and Preston-Shoot, 2007[117]	Academic paper on the process of systematic reviews in social work.
Brooker et al., 2007[118]	Not an intervention a study to gather information about people presenting to an emergency mental health assessment service may clarify the skills that are required to deliver effective crisis resolution and home treatment services.

	Not ED.
Bunn et al., 2004[119]	Telephone consultation prior to service utilisation – exploring health care utilisation and satisfaction.
Burke et al, 2005[120]	No social care element.
Callery. 1998[39]	Not based in ED.
Campbell et al., 2001[121]	Evaluation of a training model for Intimate Partner Violence in ED.
Caplan et al., 1998[122]	Development of a risk assessment tool for elderly patients admitted to ED.
Cheema et al., 2007[17]	Not social care.
Cherpitel, 1998[123]	Comparison of alcohol dependence and harmful drinking/abuse screening instruments by ethnicity – no intervention.
Chiu, 2007[124]	No social care element.
Chung, 2002[125]	Audit – no intervention.
Clarke et al., 2000[126]	Community based not ED.
Cole et al., 2006	Not ED based.
Cole et al., 2006[127]	Not located/co-located in ED.
Coleman et al., 2001[128]	Not ED based.
Cook[129]	Review – no intervention reported.
Cooper and Schriger, 1999	Comment on Barlas et al, 1999.[130]
Copelan et al., 2006[131]	No social care element.
Counsell et al., 2007	Not ED based - community-based health centers.
Crilly et al., 2006	Not ED based.
Cronin and Wright, 2005[132]	Fast track in ED.
Currie et al., 2005[133]	Not based in ED.
Curry. 2006[134]	Satisfaction for new nurse-led urgent care team (UCT).
Daeppen et al., 2008[135]	Commentary on Havard et al., 2008
Dawood. 1998[24]	Not social care.
Dempsey, 2004	Not based in ED.
Digonnet and Leyreloup, 1998[136] Tenconi, 2003[137] Dauriac, 2003[138]	In French.

D'Onofrio G, 2005[139]	
Dolan and Holt, 2000[140]	Book chapter – not an intervention.
Donnan et al., 2008[141]	Model for predicating ED admissions not an interventional study.
D'Onofrio et al., 1998[142]	Overview of assessment of observation techniques in alcohol abuse in ED.
D'Onofrio et al., 1998[143]	Assessment of brief alcohol screening tools for use in ED.
Doyle, 2000[144]	Opinion piece about social work in ED.
Drennan and Goodman, 2004[145]	Not based in ED.
Drennan and Goodman, 2004[145]	An overview of case management.
Dunnion and Kelly, 2005[146]	Survey - perceptions of ED and PC staff not an intervention.
Eales and Johnson, 2006[147]	Evaluation of a mental health service – intervention reported elsewhere.
Edelsohn et al., 2003[148]	Developing a model to predict attendance at a psychiatric emergency service.
El-Guebaly, 1998[149]	Articles contained in the review too old (1984 to 1995).
Elley et al., 2006	Not ED based – primary care.
Fanslow, 1998[150]	Evaluation of an intimate partner abuse protocol – intervention reported elsewhere.
Fatovich et al., 2005[151]	Access block and waiting times.
Fleming et al., 2002[152]	Doctor led. Alcohol prevention only no social care element.
Fleming, 2007[153]	Study on frequency of alcohol use and associated tobacco and drug use among ED patients.
Folse et al., 2006[154]	Determining the validity of the 4-item RSQ for screening adolescents.
Forbes et al., 2006[155]	Not based in ED - Specialist nurses and multiple sclerosis.
Foresman-capuzzi, 2007[156]	Commentary on bereavement in ED - not an intervention.
Forster et al., 2005	Not based in ED.
Foster et al., 2001[157]	Exploring older people's experiences and perceptions of different models of general practice out-of-hours services.
Fulmer et al., 2003[158]	Not an intervention - exploring the demographic profile of neglect and non-neglect groups.
Furbee et al.,	Screening for domestic violence no intervention.

1998[159]	
Gaddis, 2004[160]	Commentary on 12-step approach – not an intervention.
Gautney, 2004[14]	Not a social care intervention.
Gentilello, 2005[161]	No social care interventions.
Gerson et al., 2005[162]	effectiveness of distributing fall prevention information to patients 65 years.
Gervais, 2005[163]	A study to estimate the proportion of patients admitted with an asthma exacerbation who received a management plan at discharge.
Glasby et al., 2004[164]	Review of delayed discharges.
Hadida et al., 2001[165]	Identifying alcohol related problems not an intervention. No social care elements.
Hallgrimsdottir, 2004[166-167]	Critical illness and nurse perceptions of care.
Halpern, 2006[168]	To test the validity of the intimate partner violence.
Harrison et al., 2002[169]	Not based in ED.
Hastings, 2005[170]	Review refs checked.
Hawke, 1999[171]	No evaluation reported.
Hayes, 2000[172]	Study looking at ED patients or caregivers ability to read discharge information/instructions.
Hayes. 1998[173]	Study looking at two methods of medication instruction.
Head et al., 1999[174]	Exploring if deliberate self-harm is recorded adequately in the case notes.
Hebert et al., 2000	Not based in ED.
Herr, 1998[175]	Not relevant – discussion of what is an emergency in the context of managed care.
HM Government[4]	Not an intervention.
Hogstel[176]	Not an intervention study.
Hollingsworthand Ford-Gilboe, 2006[177]	Theoretical paper exploring nurses self-efficacy (Bandura's theory of self-efficacy) and response to woman abuse in the ED.
Hollister and Digiorgio, 2006[178]	Discussion piece – not an intervention.
Horn et al., 2002[179]	Identifying s young adult Emergency Department (ED) patients.
Hosking et al., 2007[180]	Chart review for documentation of alcohol screening and intervention.
House, 2002[181]	Not relevant comment on Guthrie.[182]
Huckson, 2008[183]	Implementation approach of mental health triage tool.
Hungerford et al., 2000[184-186]	Emergency department-based screening and brief intervention for alcohol problems - No social

	care element.
Hurley et al., 2005[187]	To assess patients' opinions of IPV screening.
Hurry and Storey, 2000[188]	Description of psychosocial assessment for 12- to 24-year-old following deliberate self-harm.
Hutt et al., 2002[189]	No intervention – exploring what precipitates rehospitalisation.
Inouye et al., 1998[190]	Not based in ED.
Jousselme, 2007[191] Passamar, 2002[192]	Article in French.
Karnick et al., 2007[193]	Not based in ED.
Kasthuri et al., 2007[13]	Not social care.
Kauh et al., 2005	Not ED based.
Keene et al., 2001[194]	Not an intervention/exploring agency overlap.
Kennedy, 2005 [195]	Not an intervention.
Kesby, 2002[15]	Opinion document exploring.
Kihlgren et al., 2005	Interview study to explore what constitutes good nursing care.
Kinmond and Bent, 2000[196]	Changes in rates of self-harm/demographic characteristics in ED patients.
Kobb et al., 2003	Not based in ED.
Kolbasovsky and Futterman, 2007[197]	Predicting ED visits by patient's with psychiatric disorders.
Kramer, 2002[198]	Not an intervention.
Kwok et al., 2004	Not based in ED.
Kwok et al., 2004[199]	Not based in ED.
Kwok et al., 2008	Not based in ED. Not social care.
Latour et al., 2007[41]	Not based in ED.
Lee et al., 2007[200]	Use of a personal emergency response systems.
Levy et al., 2000[201]	Asthma – no social care element.
Li et al., 2002[202]	Survey of bereaved experience of care in ED.
Limmer et al., 2006[203]	Pre-hospital care – information paper.
Lipley, 2002[204]	Comment on article by MW Cooke.
Macduff et al., 2001[205]	Not based in ED.

Mahfouz et al., 2007[206]	No intervention – study exploring equipment, facilities, physicians' practices and attitudes, patients' utilization of and satisfaction with emergency services in primary health care centres.
Mahoney et al., 2007	Not ED based – community based care.
Malangoni, 2005[207]	No social care interventions – opinion piece.
Marek and Baker, 2006	Home based not ED.
Marin and Angerami, 2000[208]	Article in Portuguese.
Marriott et al., 2003[209]	Cross-sectional survey looking at whether an assessment for suicide was undertaken in older patients.
Mason et al, 2006[210]	Description of ECP role Schemes in terms of operational framework and cost.
Mason et al., 2003[211]	Not ED based.
Mayer et al., 2005[212]	No intervention – recommendations to reduce ED attendance.
McDonald, 1990[213]	Not an intervention.
McIlfatrick et al., 2002[214]	Opinion document exploring multidisciplinary working.
McLeod and Olsson, 2006[48]	User perception of ED social care – no intervention.
McMillian et al., 2006[215]	Comparison of screening tools for intimate partner violence (IPV) in ED.
Mello et al., 2005[216]	No social care elements.
Meyer et al., 1999[217]	Explores the organisation of care for older people – no intervention.
Milisen et al., 2001	Not social care.
Milisen et al., 2006	Home based not ED.
Milisen et al., 2006[32]	Not ED based.
Miralles et al., 2000[218]	Article in Spanish.
Miro et al., 2001[219]	Not an intervention – exploring whether the quality markers of emergency care are affected by ED crowding. Article in Spanish.
Monti et al., 1999[220]	No social care element.
Moons et al.,	Not an intervention/Review of the literature.

2003[221]	
Neumann et al., 2006[222]	No social care element.
Newbury et al., 2001	Not based in ED.
Nordqvist et al., 2006[223]	Study was to evaluate the feasibility of alcohol screening in ED.
Norris and Melby, 2006[224]	Opinions of nurses and doctors working in emergency departments on the new role of Acute Care Nurse Practitioner.
Nucero and Connor, 2002[225]	Use of a (button) worn by nursing staff in the ED to determine if increases the number of reported domestic violence incidences.
O'Rourke, 2006[226]	Doctors attitudes to alcohol and support and practice of intervention.
Olive, 2007[227]	A review of care for ED patients experiencing domestic violence.
Patel and Vinson, 2005[228]	Fast track in ED.
Patton2002[229]	Argument for using the PAT in primary care.
Pelkonen et al., 2003[230]	Epidemiological study.
Piesik, 1998[231]	Not an intervention.
Ping, 2002[232]	Methods poorly described – referral onto bereavement services.
Pittman, 2007[233]	No intervention reported.
Putman. 1998[234]	Not social care.
Bristow and Herrick 2002[11]	A literature review.
Richardson et al., 2005[235]	Soft tissue injury without fracture.
Richardson et al., 2007[236]	Patients experience of transfer from ED.
Richardson, 2002[237]	Access block and waiting times.
Riddell and Clouse, 2004[238]	Review – no intervention.
Robertson et al., 2001	Nurse-led but community based and not social care.
Robinson and Street, 2004[239]	Ward based not ED.
Robinson and Street, 2004[239]	Not based in ED.
Robinson et al., 2005[240]	Not an intervention, a study of work-force issues in ED.
Rotheram-Borus, er al., 2000[241]	No social care element.

Roux, 1999[242] Le Moenne, 2006[243]	Article in French.
Royer-Cohen[244]	Exploring the problems for ED staff by the rising number of homeless people attending. Also article in French.
Salmon et al., 2000[22]	Not social care.
Selway, 2006[245]	Case study of an alcohol screening intervention - no social care element.
Sanchez et al., 2007[246]	Factors associated with ED utilization by urban lesbian, gay, and bisexual individuals – not an intervention.
Segatto et al., 2007[247]	No social care element.
Sherwood and Lewis, 2000[248]	Transport and access.
Sinclair et al., 2005	Post discharge from inpatient - cardiac care.
Sinclair et al., 2006[33]	No social care interventions
Smith et al., 2005[249]	A framework for evaluating. organizational change.
Socorro et al., 2001[250]	Exploring the experience of emergency nurses. Not an intervention.
Sommers et al., 2000[251]	Primary care based not ED.
Spade, 2005[252]	No intervention.
Spirito and Lewander, 2004[253]	ED procedure for the disposition of adolescents who attempt suicide is discussed.
Sullivan, and Rivera, 2000[254]	Not an intervention – detailing profiles of services and patients.
Tait et al., 2005[255]	No social care intervention.
Tan et al, 2007	Audit of stroke care for medical inpatient services
Themessl-Huber et al., 2007[256]	Survey exploring experience of emergency admissions.
Thibodeau et al., 2000[257]	Rate of incorrect contact telephone numbers recorded during emergency department registration.
Thienhaus and Piasecki, 2004[258]	Not based in ED.
Touquet and Brown, 2006[259]	Overview – no intervention.
Tummey. 2001[260]	Not social care.
van Haastregt et al., 2000[261]	Not based in ED.
Vandewoude et	Not social care.

al., 2006	
Vinker et al., 2000[262]	Community based not ED.
Vinker, 2004[263]	Evaluation of continuity of care of adult ED visitors.
Wand and Fisher, 2006[264]	No direct mention social care involvement.
Wand and White, 2007	Mental health not social care.
Wand and White, 2007[265]	Not an intervention a scoping study exploring the scope of the Emergency Department mental health nurse practitioner role.
Wand, 2004[266]	Not an intervention – review exploring issues relating to the management of deliberate self-harm in ED.
Wand, 2006[267]	Survey evaluating a Mental Health Liaison Nurse (MHLN) role in the ED – no intervention.
Washington et al., 2002[268]	Referral to next-day primary care for non-acute conditions.
Welling, 2006[269]	A survey to establish the number of children's nurses employed ED and their specific roles and responsibilities.
Weng et al., 2007[270]	Not social care - paediatric asthma.
Wesseldine et al., 1999[271]	Not based in ED - nurse-led discharge package for children admitted to hospital with acute asthma.
Whitson et al., 2008	Not based in ED.
Whyte and Blewett, 2001[272]	An audit of deliberate self-harm – no social care intervention.
Williams, 2003[273]	Advocating referral to SAFE program.
Williams. 2003[274]	Not based in ED.
Wilson et al., 2008[275]	CDHPs and health care costs.
Wong, 2004[276]	No social care intervention.
Wymen et al., 2007	Not based in ED. Not social care.
Yallop et al., 2006[277]	Not social care Telephone based support - self-management strategies to CHF patients.
Ziegler et al., 2005[278]	An audit of children with a fracture in ED.
Zimmer et al., 1985[279]	Too old. Not located/co-located in ED.
Zun, 2006[280]	Health care not a social care intervention.
Segal et al.,	Emergency Psychiatric Service not based in ED.

2001[281]	
Barr et al.,2005[67]	Exploring whether psychosocial assessments in for patients with self-harm is undertaken.
Rodriguez et al., 2009[50]	Structured interviews to explore the reasons homeless people attend ED. No intervention.
Redelmeier et al., 1995[282]	Study exploring compassionate care by volunteers reduces re-attendance. Buddy intervention.
Dill et al., 2004[283]	A review of alcohol screening tools and interventions in ED.
Oliver et al., 2001[284]	ED bereavement intervention undertaken by chaplains. No social care element.
Lyons and Paterson, 2009[285]	Not an intervention. Interviews exploring what aspects of ED care are important to older people.
Rhodes et al., 2002[104]	Evaluation of a computer-based ED screening for intimate partner violence compared to physician documentation
Bristow and Herrick 2002[11]	A review of case management including including nurses and social workers

Updates on this research project can be found at http://www2.warwick.ac.uk/fac/med/research/hsri/emergencycare/mapping/