Initial Trauma Support at UK airports: An Evidence Based Framework

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This report reviews the literature from 1990 to 2006, which relates to the effects of traumatic stress on the human organism; in particular, early processing and coping.

Research evidence is evaluated and synthesised to develop an original, generic and multi-agency framework for offering Initial Trauma Support to UK airport users, within the structure provided by the UK Civil Contingencies Act 2004.

This framework is simple, applicable to local conditions and conveys measurable benefit to risk holders with any duty of care for airport users.

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This document is based upon a literature review dissertation submitted in partial fulfillment for the award of MSc in Interprofessional Practice- Civil Emergency Management at City University, London.

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Executive Summary

This report focuses on Initial Trauma Support – the immediate humanitarian assistance offered to people in the UK following an extreme event. The practice context of the researcher is an independent crisis social work team within a large UK international airport.

The report evaluates and synthesises evidence from existing literature for the development of a framework for an Initial Trauma Support response for UK airport users, within the structure provided by the UK Civil Contingencies Act 2004.

It uses this evidence to develop an original, generic and culturally competent framework for Initial Trauma Support at UK airports underpinned by crisis social work practice and interprofessional/multi-agency emergency planning. (Figure 1 SPaCE Framework for Initial Trauma Support)

Current convergent indicators of need for such a UK framework are:

- political will, expressed in legislation and guidance
- an emerging paradigm of corporate social responsibility and business continuity planning
- an exponential growth in aviation to, from and through the UK's airports for diverse passenger groups
- the publication of recent research based evidence and guidance for best practice in early intervention after trauma

The report retains a practice focus on airport users, as existing research highlights the needs of workers in an emergency. The emphasis is on support for adults – as individuals and as caregivers for children and young people.

The time which has elapsed post-trauma for those attending an airport reception centre will vary considerably (from 1 to 2 hours for a local airfield incident to up to several weeks for someone who has been recovering from injuries abroad or searching for a loved one).

'Survivors' will vary in terms of gender, age/developmental level, life experience and usual support networks. It is unlikely that there will be much (if any) reliable personal information about 'survivors' available in advance of their arrival. A generic framework is based on this assumption (derived from extensive practice experience).

A generic framework for Initial Trauma Support needs to address the key questions of:

Why is such a service necessary? Is there evidence for a link between effective initial trauma support and positive outcomes for service users (leading to reputation benefit, best value for money and potentially, to management of the risk of litigation for psychiatric injury?)

When should such a service be provided, to be optimally effective?

What should it aim to deliver, and what links may be needed to longer term interventions?

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How (triggers and logistics), **where** (reception facilities) and **who** (needs to be involved), are intended for local and dynamic interpretation, informed by the evidence provided herein.

This report has critically reviewed the literature from 1990 to 2006 relating to human experience of extreme events, variously referred to as emergencies or disasters. It has also examined the effects of such events on people from both Western and non-Western cultures.

Findings from the literature about coping with traumatic stress were as follows:

- the majority of adults dynamically cope with an experience of traumatic stress over time
- children can be additionally impacted by extreme events if their caregivers have been affected
- timescales for coping, although varied, have been suggested
- some key peri and post-traumatic factors have been suggested to positively influence early coping
- links have been proposed between early coping and a reduced risk of developing an enduring related disorder later on

Natural human processing of traumatic stress has been shown to be dynamic and interactional. Evidence that early (within the first month) pro-active intervention helps to prevent longer-term problems is inconclusive, although there is evidence that strategies which help mitigate the initial stress, enhance social support, prevent loss of social resources and provide reassurance, are helpful and that any initial supportive approach should focus on ensuring that these optimal conditions for natural adjustment are in place.

Findings about effective early support for coping with traumatic stress were:

- there are some basic conditions that can promote (and avoid impeding) natural recovery following trauma
- these conditions seem likely to be widely applicable across cultures
- they appear relatively simple to understand, explain and satisfy in most practice situations
- they are congruent with an approach to planning for psycho-social need which facilitates coping and seeks to target those most in need of clinical resources
- they (and the longer-term intervention options with which they need to link) are readily applicable to interprofessional planning for Initial Trauma Support, (see Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006 for detail)

These findings support

- the universal provision of Initial Trauma Support
- an additional emphasis on facilitating people's return to their own social network or context
- refraining from more active interventions within the first month
- building in links to more active interventions for later on for those whose natural recovery is interrupted or lacks resilience

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Therefore key elements of an effective generic framework for Initial Trauma Support are:

1. Restoration of physical safety
2. Appropriate acknowledgement of the perceived magnitude of the trauma
3. Availability of support
4. Provision of information (including links with further support)
5. Facilitation of return to own social setting

An airport-based reception and reunion process to promote early coping after trauma could address those key elements as follows:

Restoration of physical safety

- the provision of a designated area (or areas) that was as safe, private and 'fit for purpose' as local conditions permitted

Appropriate acknowledgement of the perceived magnitude of the trauma

- by appropriately recruited, selected, trained and supported Initial Trauma Support Workers, offering a calm, non-clinical approach

information packs (in accessible formats) which acknowledge the possible impact of the experience

Availability of support

- appropriately recruited, selected, trained and supported workers to provide Initial Trauma Support to the above areas and offer a calm, non-clinical bio-psychosocial (holistic) approach to the offer of support
- information packs (in accessible formats) for further support

Provision of information

- interprofessional planning and management systems that ensure validated information is appropriately shared in a timely manner.
- information packs (in accessible formats) to be given to all, including those people who do not want face to face Initial Trauma Support
- robust and explicit interprofessional links with validated further interventions, support systems and treatment

Facilitation of return to own social setting

- workers providing Initial Trauma Support working collaboratively to an interprofessional plan, facilitating telephone and email access to people's own networks and supportive onward travel planning options

The original, generic and culturally competent evidence-based framework for Initial Trauma Support applicable to UK airports summarised in Figure 1 SPaCE Framework for Initial Trauma Support below offers the following benefits:

- a benchmark for interprofessional planning and response
- a guideline for interpretation of some of the new statutory duties for local authorities and other Category 1 responders and powers for the Category 2 responders (Civil Contingencies Act, 2004)

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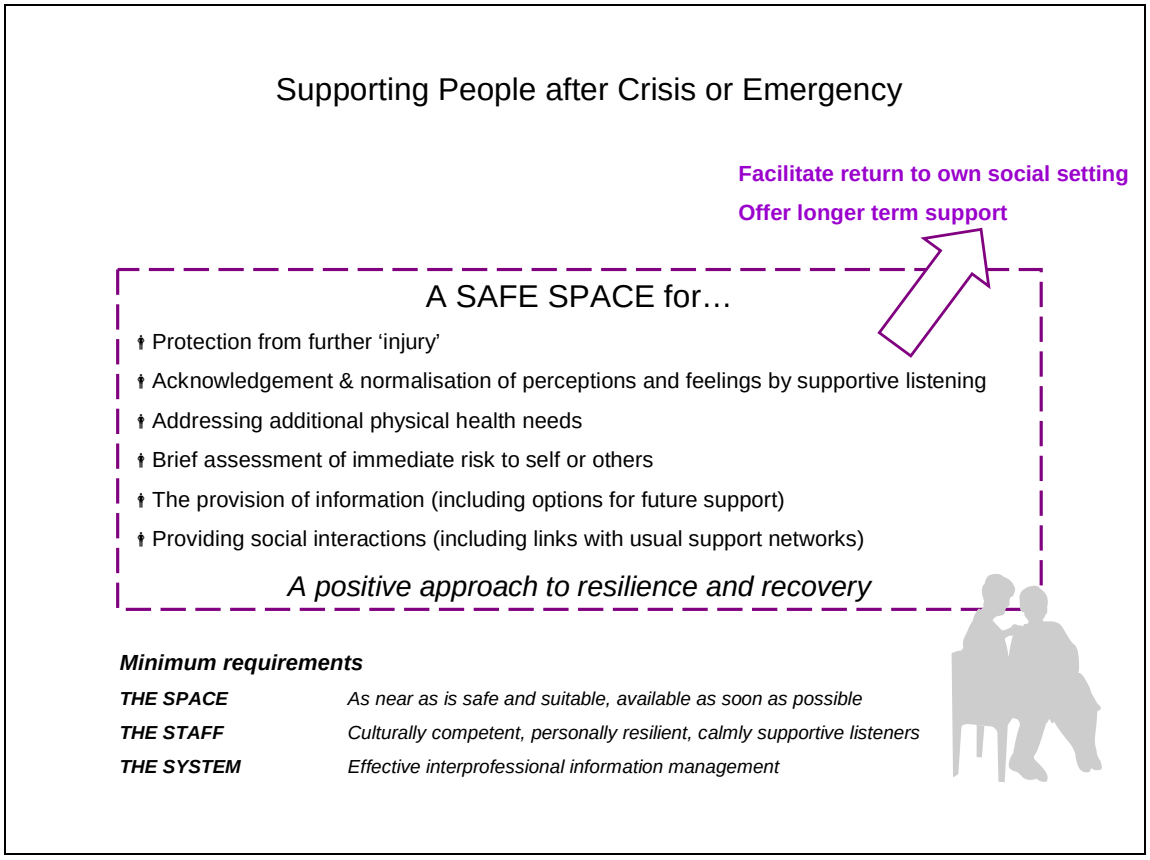
- support for local Business Continuity by mitigating the foreseeable risk of long-term psychiatric disorder (and possibility of subsequent litigation and reputation damage to risk holders)
- a consistency of approach, which also acknowledges local context and variations therein
- a template for consequence based planning in this area which can facilitate reviews of learning, monitoring and evaluation of outcomes by further research.

Figure 1 SPaCE Framework for Initial Trauma Support



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Background

Why Initial Trauma Support?

Experience of traumatic events can, but does not necessarily lead to enduring psychological problems.

For Adults

Extreme events**,** sometimes described in literature as 'traumatic', crises or disasters, are part of human experience. Myers and Wee (2005) cite Norris et al (2002) in noting that on average, a disaster occurs every day somewhere in the world, while Goss (2000) is cited in support of their claim that about five billion U.S dollars is spent worldwide each week on disasters.

Resick (2001, p2) has shown that the extent of experience of a "high magnitude traumatic event" in the adult population is as high as fifty to seventy-five percent of women and sixty to eighty percent of men, while only a minority of these meet the diagnostic criteria for Post Traumatic Stress Disorder (PTSD).

The work of Rothbaum and Foa (1993) and the Co-Morbidity Survey conducted by Kessler et al (1995) show that while 'many' people meet the diagnostic criteria for Post Traumatic Stress Disorder immediately after a traumatic event, numbers reduce rapidly during the subsequent three months and then tend to decline slowly and flatten out after approximately one year. However, as Resick notes, participants in prospective studies such as these, are those who have come to the attention of researchers in some way. Their experience may not be representative of those who did not. (American Psychiatric Association, 1997:
Resick 2001)

The UK National Institute for Clinical Excellence suggests that up to thirty percent of people experiencing a traumatic event may develop Post-Traumatic Stress Disorder, with over eighty-five percent of those developing symptoms immediately (National Institute for Clinical Excellence, 2005)

Estimates of the prevalence of this disorder vary, but a median estimate is about 20% of female and 10% of male trauma victims (Norris et al, 2002 and 2006)

For Children

Bolton et al (2000), Yule et al (2000) and Pynoos et al (1993) suggest that, of children directly experiencing such events, as many as half will meet diagnostic criteria for PTSD and a significant additional number develop other trauma-related disorders of lesser duration.

Norris et al (2002) found:

- sample groups of youth (12 -18) were more likely to have severe impairment than adult sample groups

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- more significant severe or very severe impairment effects in groups of young school-age children (almost fifty-two percent) compared with forty-two percent of adult survivor samples
- pre-school children to be less affected than any other group.
- parental distress is a strong indicator of children's distress.

Other study results have varied mainly in the magnitude of comparative effects shown between nine to twelve year olds and thirteen to sixteen year olds. (Lonigan et al, 1994, cited by Myers and Wee, 2005).

These writers additionally propose that children's further development can be at risk if they are significantly affected by the effects of trauma over time. They also note a range of explanatory factors for children and young people being at higher risk than their adult counterparts as a result of post-traumatic stress. These are:

- developing cognitive skills
- limited experience of coping with adversity
- limited defence mechanisms for managing stress
- developing verbal skills which may impact on processing and expression
- limited in ability to act independently
- dependent on adults for material and social resources

Viewed in combination, these findings suggest that, over time, more than two-thirds of adults who experience an extreme event which could be described as traumatic are able to process their experience to the extent that they do not meet criteria for severe impairment or disorder.

Children and young people involved in these events may be at particular risk of disorder. They are likely to be additionally influenced by the responses and recovery process of their adult care-givers and supporters.

This report will examine possible attributions insofar as they relate to efficacy of support for coping and recovery and the implications for practice in terms of Initial Trauma Support planning and provision.

The effects of traumatic stress

According to the 1994 Diagnostic and Statistical Manual, (DSM-IV) the experience of an extreme event can evoke responses of intense fear, helplessness or horror. It is an event evoking these responses and involving,

> "…actual or threatened death or serious injury, or a threat to the physical integrity of self or others"

that DSM-IV defines as a traumatic event. (American Psychiatric Association, 1997, 309.81, p235)

All human emotion, according to Heller et al (2002) can be understood as a complex set of processes accompanied by cognitive processes involving attention, memory and other information processing, encompassing almost all human activity.

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Cervone and Mischel (2002) cite Davidson (1992), Metcalfe and Mischel (1999) and Posner and DiGirolamo (2000) in asserting that higher level brain regions are involved in human emotional experience and expression.

Trauma is increasingly believed to be experienced, remembered, stored, forgotten and retrieved in particular ways by the human mind-body system**.** (Ursano, McCaughey and Fullerton, 1994: Brewin, 2003)

Therefore, a biopsychosocial health approach to the study of trauma, coping and resilience seems indicated. This approach has been attributed to Moore in Frydenberg, (2002) and is a holistic systems model of wellness, based on Maslow's well-known 1954 hierarchy of needs and underpinned by 'positive psychology'.

Within the human mind-body system described by Moore, there are particular features with explanatory power in terms of the human experience of extreme events and the range of responses to this over time. This writer suggests that while losses do have an impact on people's lives, 'social health' is relationally determined and as important as biological and mental health. She suggests that coping is in fact, striving to maintain homeostasis and is a feature of everyday living as well as coping with trauma.

Coping with traumatic stress is a dynamic process

Brewin (2003) emphasises the impact of memory-related processes on human identity structures as being highly significant in terms of recovery and longer term outcomes. Coping after trauma is suggested to involve the re-integration of the experience and its meaning into the identity or sense of self.

Tolstikova, Fleming and Chartier (2005) cite Davis et al (2000) and Niemeyer (2000), claiming that the importance of the search for meaning after traumatic events has been increasingly agreed by most researchers in the last decade. According to these writers, this can be related to a potential threat to identity and the difficulties inherent in integrating what has happened and making sense of it.

Ursano, McCaughey and Fullerton (1994) note that the construction of meaning is an interactive process – one which requires making structure out of chaos, and which appears to reflexively affect the outcome of the experience of a traumatic event.

A continuum of natural early recovery and meaning-processing has been proposed, with several days to around one month as the initial phase, during which time 'symptoms' can be viewed as 'signs of active coping' rather than as psychopathology. (Brewin, 2003)

Some key factors have been proposed which may influence coping

A cluster of pre, peri and post traumatic factors have been claimed by Brewin (2003) to influence these processes and therefore coping after trauma. These include:

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- previous life experiences and identity issues
- trauma itself and how it was experienced
- the early presence or absence of key human recovery conditions (Brewin, 2003)
- Brewin's final point is particularly significant for this report.

The UK National Institute of Clinical Excellence (NICE) advises that all 'disaster plans' contain fully co-ordinated psycho-social provision – for immediate practical help, support for communities and evidence based specialist assessment and treatment for those who require it one month post-trauma. (National Institute of Clinical Excellence, 2005)

Medium to longer term interventions are under particular scrutiny (Everly and Mitchell, 1999: Roberts, 2005) and are increasingly believed to be most effective when they are not interfering with natural coping and are pro-actively and professionally offered when natural coping may need assistance. (Brewin, 2003: Myers and Wee, 2005)

This report additionally proposes the development and maintenance of interprofessional planning links with the (medium-term and ongoing) Humanitarian Assistance process and with Health providers, to enable identification and pro-active targeting of individuals who may need further support. (Norris et al, 2002: Brewin, 2003: National Institute of Clinical Excellence, 2005)

Initial Trauma Support should be underpinned by evidence-based practice

In order for the initial support offered to people exposed to a potentially traumatic event to be maximally effective, it needs to be based on current research evidence.

Evidence based social work practice is defined by Newman et al (2005) who cite Sackett et al (1996) in describing evidence-based practice as,

> "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individuals."

They further note that it is not as simplistic as finding a 'right answer' but rather as a strategy which aims to maximise the odds in favour of a social work client or increase the probability of good outcomes. (Newman et al, 2005, p4-5)

These writers also assert that while primary social work research is important, the current main project of the social work research community is to "…synthesise accurately what we know about the effectiveness of interventions, disseminate this knowledge to the social care profession, work with practitioners and managers to build on good practice and, where appropriate, effect change." (Newman et al, 2005, p3)

They further note that evidence-based practice calls for considered, rather than reactive decision-making; particularly important, it is claimed, when social work clients are vulnerable and/or disempowered groups or individuals.

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These writers also found that of the three hundred and fifty six articles in the British Journal of Social Work in the 1990's only five were outcome studies. They claim that this is not satisfactory, given that the primary tasks of social work are intervention and change.

On a more positive note, the Social Care Institute for Excellence database has seen a tenfold increase between 1993 and 2003 in the percentage of abstracts containing the keyword 'outcomes'. During this same period, the number of abstracts containing the term 'evidence-based practice' has increased from zero to over one hundred per year (cited in Newman et al, 2005)

Why UK Airports?

Aviation as a form of travel has become more widespread

Aviation is becoming a more affordable and accessible form of travel worldwide. Combined with the contemporaneous increase in public expectations of service and support when travelling, this has led to pressure on U.K. Government and other authorities to plan and respond quickly and effectively to human need following disaster involving travel. (Cabinet Office, 2004: National Audit Office, 2005)

The figures in Table 1 Increasing Annual UK Passenger Numbers are from a large UK airport operator and indicate the scale of the increasing passenger numbers.

Table 1 Increasing Annual UK Passenger Numbers

Year	2002	2003	2004	2005	2006
International passenger movements (millions)	121.9	127.7	133.4	141.7	144.6
Terminal passenger movements (millions)	99.3	102.5	107.4	114.8	117.2

(BAA Ltd Annual Report 2005/6)

The UK has several busy international airports

The UK currently has the world's busiest international passenger airport which by the end of the financial year 2005/6 had 88 airlines registered; transporting 67.4 million passengers per year to 194 destinations. This airport employs approximately 60 thousand staff. (BAA Ltd website)

Over 22 million air passengers travelled through London airports in the financial year 2005/6. The UK is also home to the world's busiest single runway airport and several other busy and growing English and Scottish airports.

At facilities of this nature, on this scale, there is a high likelihood of dealing with people affected by extreme events.

The extensive risk register for a major international airport will include:

- a range of aircraft accidents
- ground incidents (such as fires, floods, spillages)
- systems failure (baggage, air traffic control, check-in, security, utilities)

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- effects of catastrophic events nation-wide and worldwide e.g. natural disasters, pandemics
- 'new generation' risks such as terrorist activity (MATRA)

The consequences of the impact of such disruptive challenges on business continuity and reputation can be significant. Business continuity planning is now a requirement under the Civil Contingencies Act. (Cabinet Office, 2004)

UK airport operators and their business communities can comprise complex commercial operations with a common law duty of care for passengers, other site users and staff.
BAA Limited, which currently operates seven UK airports, publishes a commitment to corporate responsibility. A key strand of this is their stated intention to "…secure continued growth in a way that is socially… responsible." (Heathrow Airport Ltd website)

Therefore this report has shown that planning for foreseeable risks to the site users at UK airports is

- an integral part of emergency and business continuity planning
- a multi-agency/interprofessional task
- a requirement of the Civil Contingencies Act
- an increasing need

A generic initial support response to people affected by disaster at a UK airport is likely to consist of some or all of the following elements:

- a process for identifying those likely to need such support
- a reception area or areas for such people and for those meeting them
- information sharing protocols
- a process for recording key information including decisions made
- a process for identifying and making provision for residual need (Cabinet Office, 2004, Chapter 2)

The November 2006 review of the experiences of UK nationals affected by the Indian Ocean Tsunami notes,

> "Respondents who experienced the reception process at Heathrow Airport felt that it was well thought-through and well-managed.
> The arrangements provide a helpful basis for planning the response for future emergencies.
> However, a third of respondents did not report having received offers of support at all."

This report therefore proposes improvements to the consistency of reception arrangements at best, and at least, the briefing of staff at airports where such arrangements are not in place. (National Audit Office and Zito Trust, 2006, p10)

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Why Now?

Legislation underpins interprofessional planning and responding to emergencies

The Civil Contingencies Act 2004 addresses social care responsibility for planning for, response to and recovery from an emergency with UK impact.

Local Emergencies

The human aspects of most emergencies in the UK would be handled primarily at a local level by the emergency services, local authorities and other local service providers**.** (Civil Contingencies Act 2004: Part1)

Local Responders under the CCA 2004 have newly defined devolved duties and powers.
The statutory duty of an airport operator as a Category 2 responder under this Act is to plan, co-operate and share information with other Category 1 and 2 responders in their sector. (Civil Contingencies Act 2004: Schedule 1, Part 3)

The local authority with unitary responsibilities for social care, that is, with responsibility for adults and children's services, will be the current local Category 1 responder.
They are required to have plans in place to identify, respond to and recover from critical incidents/emergencies affecting the area, with potential for human distress**.** (Civil Contingencies Act 2004: Schedule 1, Part1)

The UK Local Resilience Forum is now the primary mechanism for interprofessional planning in relation to civil protection issues including psycho-social support for those affected by an emergency. This forum and its subgroups are expected to be the vehicle for co-ordinating and developing a continuum of humanitarian assistance from the first twenty-four hours post emergency. (Cabinet Office: UK Resilience website)

Regional Issues

The UK Regional Resilience Fora and Regional Resilience Teams are responsible for benchmarking these activities, identifying and disseminating good practice and supporting wide spread and cross border planning for the impact of 'larger' emergencies (Cabinet Office: UK Resilience website)

The Home Office works closely with the nine Regional Resilience Teams in England and has links with the devolved administrations (Northern Ireland Office and the Scottish Executive). This work is being mirrored by the Welsh Assembly Government. (Home Office, 2004)

The scale, detail, management of and participants in such a response are likely to vary between airport localities according to:

- the particularities of the trigger event/s
- the existing planning and preparedness network
- local operational challenges

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Major or Catastrophic Events

Central Government guidance on dealing with fatalities in emergencies states that events resulting in a large number of fatalities are termed major or catastrophic incidents and will trigger special arrangements at local, regional and/or national levels, dependent on the scale and complexity. A second edition of this guidance is planned for 2007. (Home Office, 2004)

The Home Office Mass Fatalities Section was established in January 2004 as part of the Cabinet Office Capabilities Programme, and is responsible for leading cross-Government planning for managing the consequences of such emergencies. Other Central Government Departments with key roles are the Foreign and Commonwealth Office (F.C.O.) and the Department for Culture, Media and Sport (D.C.M.S.)

In December of 2004, the Mass Fatalities Section commissioned a study of local capability, in England and Wales, to respond to incidents resulting in a large number of fatalities. The study reported a limited readiness to respond and found that local plans needed to be developed on a multi-agency basis. This was a driver for the central assistance programme now in place. (Home Office, 2004)

Its development and outputs are an ongoing process of continuous learning from responses and building on good practice. (Home Office, 2004)

Lessons learnt from recent emergencies affecting the UK are informing current practice development of initial response to emergencies

The Foreign and Commonwealth Office (F.C.O.).

The F.C.O. has recently published their first guidelines for the British public, describing and defining their roles and responsibilities (as informed by the Vienna Convention on Consular Relations of 1963), in providing Consular assistance to British Nationals in difficulty, including those arising as a result of emergencies (Foreign and Commonwealth Office, 2006)

Following the Bali bombing in October 2002, the F.C.O. established a crisis response centre to manage the deployment and co-ordination of Rapid Deployment Teams to respond to the needs of groups of distressed British Nationals worldwide. (National Audit Office, 2005)

After a terrorist attack on the British Consulate in Istanbul in November 2003, the F.C.O. revised their emergency planning guidance to their overseas posts, requiring plans to be exercised and tested. (National Audit Office, 2005)

Embedded learning from the Indian Ocean Tsunami (which affected approximately 10,000 British Nationals in the region, as well as their friends, families and communities in the UK and elsewhere) has resulted in action planning in London and abroad by the F.C.O. which includes:

- enhanced training and guidance to staff in emergency response

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- improvements to Rapid Deployment Teams
- new guidelines for interprofessional working with Police (including Family Liaison Officers)
- improved communications capabilities and casualty reporting
- improved practical arrangements for overseas staff responders
- normal arrangements with Police, D.C.M.S
- agreements with key non-government organisations (N.G.O's)
- work is in progress for an on-line registration system for British travellers with potential for crisis information gathering

(National Audit Office, 2005)

The Department for Culture Media and Sport (D.C.M.S.)

In January 2005, this department was given responsibility for co-ordinating long-term aftercare and information for those affected by the tsunami.

A Humanitarian Assistance Unit was established within D.C.M.S. in 2005 as a response to both expertise gained and lessons learned from the tsunami response and the response to the London bombings on July 7th 2005. The stated role of this unit is as a conduit between British people and their government in terms of emergencies and their aftermath. (Department for Culture, Media and Sport, 2006)

The Humanitarian Assistance Capability Strand of D.C.M.S has had a functioning programme since October 2006, (working in formal partnership with the F.C.O on overseas emergencies) to oversee and advise the humanitarian response to an emergency from the first hours. In further support of this, the Humanitarian Assistance Unit has plans to:

- build an interprofessional evidence base with the Department of Health and others to explore issues around the immediacy of response and treatment.
- to examine reception arrangements for people returning from overseas emergencies
- tour the UK regions and devolved administrations in 2007 to meet and engage with interprofessional emergency planners across sectors
- develop a web-based information system, updated in real time to improve the access to information, advice and services immediately after an emergency
- The Unit is currently not giving primacy to any single model of humanitarian assistance but plans to investigate the concept of Trauma/Crisis support teams in the Biennial National Capability Summary in late 2007.

UK Police Service

The Association of Chief Police Officers (A.C.P.O.) note that the capability of the UK Police Service to respond to mass fatality incidents has been improved significantly since December 2004.

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Developments include:

- formation of a Police National Disaster Victim Identification (D.V.I) Team with a development Officer and Co-ordinator. This team will offer specialist support and assistance to a UK related incident (at home or abroad, if requested).
- revision of Family Liaison Capability and identification of national standards, underpinned by appropriate training.
- improvements to Police Casualty Bureau capability to provide a national response
- a Memorandum of Understanding with the F.C.O. in relation to an emergency abroad. (Metropolitan Police Authority, 2005)

Department of Health (DoH)

The DoH Emergency Preparedness Division published guidance in October 2005 on planning for major incidents. They note on their website that their role in responding to emergencies lies in planning for National Health Service (NHS) based advice and assistance and improved access to approved psychological therapies, for the minority of people who experience mental health problems as a result of involvement in a traumatic event. (Department of Health, 2005)

21st Century risks require consequence based planning to address significant human needs

Myers and Wee (2005) cite Hartsough and Myers (1985) and Flynn (1996) in asserting that particular characteristics of disaster can increase both the magnitude and severity of the psychological effects. They further propose that terrorist events include many of these psychologically high consequence risks and cite Flynn (1998) in noting that the infliction of psychological pain is an objective of terrorist activity.

Further evidencing this, a study by Ohbu et al (1997) and statistics published in 1999 by the State of California, Governor's Office of Emergency Services relating to the chemical attack in the Tokyo subway in March 1995, demonstrated that there were nine 'psychological victims', presenting for services, for every one physical victim and seven hundred and fifty psychological victims for each death. (Cited by Myers and Wee, 2005)

Recent world events which have exposed travellers to potential trauma have increasingly required an interprofessional response that offers returnees from national and international emergencies a support structure which is initially based at an airport or airports. Examples are, the terrorist attacks in USA of September 11th 2001, the Indian Ocean Tsunami of 2004, the North American hurricanes in 2005 and the Bahrain ferry disaster of 2006.

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Adding value to existing work

An evidence based framework for initial trauma support does not currently exist

For general use following UK emergencies

The UK Civil Contingencies Act 2004 enshrines in law the need for structured planning, and provision of support, for all those affected by an emergency, and offers a template for a generic emergency plan. However, this Act does not specify a national framework or guidance for the recruitment, selection, training and deployment of local initial crisis support teams and does not allocate in advance, additional resources for these purposes. (Civil Contingencies Act 2004: Annex 5B)

For UK airport use

UK airport operators are required by their licensing authority, the Civil Aviation Authority, to prepare and test contingency plans to address their risks. (Civil Aviation Authority Safety Regulation Group, 2006)

As this report has already shown, a high consequence risk for airport operators is significant human distress/trauma. In UK law, litigation for psychiatric injury is based on foreseeable risk and acts or omissions relating to this by the holder of a duty of care. Airport operators and other transport providers such as airlines cannot afford to ignore this. (Napier and Wheat, 2002)

Such litigation (and the inevitable media interest) would also be likely to lead to reputation damage and a significant risk to business continuity. (Cabinet Office, 2006)

To benefit local social care teams required to respond

As this report has already shown, key (Category 1) responders to an event involving extensive human distress will be local social care teams.

While evidence-based practice is not new to social work according to Gellis and Reid (2004) particularly in the field of mental health, these writers suggest that particular challenges exist within this profession in transporting research findings to practitioners for use in casework. These are said to include:

- funding for training programmes
- multidimensional clinical programmes
- broad service parameters
- multi-modal approach to intervention
- diversity of practice goals (difficult to standardise)

Proposed ways forward by these writers include the use of:

- application evidence – flexibly collecting data from clinically based interventions involving small numbers of clients
- benchmarking – using a measure from research to see how the results of the intervention with their own clients compared with subjects of a controlled trial

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The development of a framework for initial trauma response based on evidence from literature would be a positive step towards evidence based social care practice.

The single UK practitioner study located which looks solely at the provision of initial psycho-social support following a major incident in the U.K concludes "…that the priority is to develop a variety of proactive strategies that create a framework capable of providing flexible and rapid support…" (Thayre, 1999, p130) The current review of literature has shown that the interprofessional and social context for such a framework is now in place.

This report therefore concludes that convergent indicators for a new and evidence based critique of Initial Trauma Response at UK airports are:

- political will, expressed in legislation and guidance
- an emerging paradigm of UK corporate social responsibility, and business continuity planning
- an exponential growth in aviation to, from and through the UK's airports by individuals and groups from diverse backgrounds
- the publication of contemporary research evidence for best practice in early intervention after trauma

Aims of this report

1. To find and evaluate the evidence in literature for understanding the immediate social care implications of traumatic stress and its interface with initial coping
2. To use this evidence to identify the key elements of an initial trauma response based on research evidence.
3. To relate these findings to the context of a UK airport

To achieve these aims, this report has:

- interrogated the interfaces between traumatic stress, coping and early intervention.
- critiqued and reflected on current paradigms in these fields and their evolution
- reflected on their applicability to diverse and transient airport user 'communities'.

A generic framework for initial trauma support should address the key questions of:

Why? The evidence base for a link between effective initial crisis provision and positive outcomes for service users, leading to reputation benefit, best value for money and potentially to mitigation of the risk of litigation for psychiatric injury.

When? Should such a service be provided, to be optimally effective?

What? Should it aim to deliver and what links may be needed to longer term interventions?

How (triggers and logistics), **Where** (reception facilities) and **Who** needs to be involved, are outside the scope of this report and are intended for local and dynamic interpretation, informed by the evidence provided by this report.

Such a framework can underpin and inform local responses and make explicit interprofessional links to any medium and longer term support structures which may be

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required, including Humanitarian Assistance Centres (Cabinet Office/ACPO, 2006) and/or screen and treat programmes co-ordinated by Health Services. (National Institute for Clinical Excellence, 2005)

This review has shown how emergencies and disasters (both historic and contemporary) and their human consequences, along with the evolution of the worldwide discourse on trauma, stress pathology, coping and recovery have contributed to a paradigm shift in emergency and trauma response.

This ever evolving discourse of trauma, coping and intervention continues to produce lively debate and a body of literature that is complex, contentious and sometimes contradictory. For this report to constitute an effective review of the literature for evidence, it needs to be:

- Grounded in practice
- Reflective
- Reflexive
- Critical

The next section defines the terms used in this report and the strategies used to search for valid evidence from existing literature, relevant to these search terms.

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Search Strategy

This narrative review has identified, compared and contrasted qualitative studies, recent empirical meta-analyses, books, journal articles and reports relating to the key themes of trauma, stress and coping and the interfaces between them.

The design of this report and particularly its process has been reflexively influenced by its aims. (Hart, 1998) A narrative review approach facilitated a holistic and inclusive standpoint and allowed the inclusion of source materials that would not have been comparable in a systematic review format. This was consistent with the aim of interrogating the interface between theories of stress, trauma and coping and synthesising the findings in terms of applicability to diverse populations.

Initial basic concept mapping and general reading was used to define terms and clarify theoretical perspective. Connecting and related ideas were then added to the concept map as they were developed. Time parameters for the report were chosen on the basis of the 'critical period' in the current discourse of trauma, informed by lessons learned from real events and development of relevant branches of neuroscience.
(Mischel and Corvone, 2002: Brewin, 2003: Myers and Wee, 2005)

Analytic and evaluative reading described by Hart (1998, p110) as "systematically extracting key ideas, theories, concepts and making new connections", was combined with an inductive approach to analysis, in line with the focus on 'researcher as practitioner' (accumulating evidence of probability based on experience) (Hart, 1998)

This exploratory applied research, has been designed to lead to reliable recommendations for practice (Hart, 1998)

Search terms

Initial search terms proved to be imprecise and required refining and thoughtful combination. For example, a search for "trauma" alone often yielded a wealth of orthopaedic references in addition to relevant texts. Terminology in this field varies between American English and UK English as well as between professions and other groups within the UK.

For example, 'disaster mental health' is an American description which can (but doesn't always) encompass initial trauma support as well as longer term interventions. These potentially confounding factors, combined with the strong links in the literature between psychological and physical aspects of trauma and stress affirmed the value of an initial holistic approach to the reviewing process, followed by careful definition and use of terminology.

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Definitions

A subjective view

It has been suggested by Dulmus and Hilarski (2003, p27) that both researchers and practitioners are imprecise in their use of the terms stress, trauma and crisis, which commonly describe both events and responses. They further assert that "correct use of terms is essential for appropriate assessment, intervention and outcome measurement."

These writers cite Roberts and Corcoran (2000) and Valentine, Roberts and Burgess (1998) in suggesting that events do not, of themselves, constitute trauma or crisis. The level of distress and destabilisation which is triggered by an event relates to the person's perception of it, in turn dependent on personal characteristics and context. This psycho-social view is supported by Hoff and Adamowski (1998) who disagree with medicalising or pathologising normal life events.

Myers and Wee (2005) note that there are forty eight definitions of disaster given in a 2001 course entitled 'Hazards, Disasters and the U.S Emergency Management System' produced by the Federal Emergency Management Agency (FEMA). They further assert that there is no consensus on this definition in the U.S. or the rest of the world. (Myers and Wee, 2005, p3)

Size matters?

According to Myers and Wee, a distinction can be drawn in the field of emergency management between disasters and emergencies. They define emergencies as "routine" adverse events which can be managed by local resources, while disasters are events with vast impact, which can overwhelm local resources and which are, by their nature, a traumatic event, affecting a community or a large part of a community. (Myers and Wee, 2005, p4)

It is the assertion of Dulmus and Hilarski (2003), who cite Mueser et al (2001), that there is no generally accepted definition of what constitutes a trauma-producing event.

However, DSM-IV-TR (the current text revised version of the widely used Diagnostic and Statistical Manual) describes two groups of features of an event with the potential to trigger Post Traumatic Stress disorder. (American Psychiatric Association, July 2000)

This report focuses on the initial response to the human aspects/consequences of an extreme event (also called variously, an emergency, crisis or disaster) – the effect on people, and the evidence base for meeting their initial basic needs. A practice-based approach to the definition of terms is therefore applicable.

It is informed by a social (as distinct from a medical) model of human distress that underpins social work practice and is validated by those who have survived/been bereaved by previous 'crises' (cited by Hodgkinson and Stewart, 1998: Gist and Lubin, 1999: Disaster Action, 2005)

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Emergency – an extreme event

Terminology newly redefined by the UK Civil Contingencies Act 2004 is not yet widely used in the literature. This Act has updated the previous definition of emergency for the UK to take account of twenty-first century risks.

Part 1 of the Act (applicable to local planning) notes that an event or situation threatening serious damage to human welfare, the environment or security is an emergency. (Civil Contingencies Act 2004, Part 1. s1)

Shared understanding of this legislation and its accompanying guidance is key to effective UK interprofessional planning and crisis response. This report makes links between the language of research evidence and the language of the Act – arguably a parallel process to the links between theory and practice in social care.

This report therefore uses the term 'emergency' as defined by the Act as a potential trigger for the experience of trauma in the practice population at a UK airport, while recognising that not all emergencies will be perceived as traumatic by all individuals at all times.

The term disaster is also used in this report as synonymous with emergency. In retaining a practice focus on generic consequence based planning, this report does not require a size-based differentiation.

Trauma – the experience of such an event

Twenty first century definitions of trauma and related concepts have evolved with the related discourse. In an early Diagnostic and Statistical Manual (DSM-III-R) – a key medico-legal mental health reference, trauma is defined as

> "Something outside the range of human experience" (American Psychiatric Association, 1987, p178)

Seven years later, in the next edition - DSM-IV, it becomes
"An event that involved actual or threatened death or serious injury or a threat to the physical integrity of self or others" (American Psychiatric Association, 1994, p235)
This definition is unchanged in the 2000 text revision - DSM-IV-TR, which is the current edition.

It has been suggested that the classification process and associated criteria relating to trauma are both subjective and rigid (March, 1993). This arguably reflects a dynamic between traumatic events and the individual in terms of cause and effect that seems complex, not only psychologically, but semantically.

Dulmus and Hilarski (2001, p30) propose a definition of crisis as the progression of a person's perception of trauma as unresolved stress, which has led them to experience instability and disorganisation, while Woodcock (2000) argues that broad agreement around the meaning of 'traumatic event' is a feature of Western medical practice.

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This writer cites Punamaki (1990, 1993) and Dawes et al (1992) in suggesting the use of 'extreme event' in preference to trauma. This additionally validates this report's use of the term 'emergency' to describe a potential trigger for human distress.

Definitions of trauma developed for particular applicability to children have been broader in scope (Pynoos and Eth, 1986: Terr, 1991 cited by Pandit and Shah, in Dwivedi 2000)

In this report, the definition of trauma used is that of the DSM-IV – experience of an unusually traumatic event that involved actual or threatened death or serious injury to the person or others whereby the person felt intense fear, horror or helplessness (American Psychiatric Association, 1997)

This definition has been selected because the dissemination, acceptance and application of any potential evidence-based practice framework are likely to be contingent on a risk/benefit analysis within an accepted medico-legal context.

Stress – threat, perception or interaction?

There is a lack of consensus in the literature on a definition of stress. (Rutter, 1999)
In clinical and biological terms, it is seen as a threat to the homeostasis (or internal dynamic balance) of an organism. Responses to stress are seen by biological theorists primarily as adaptive or allostatic responses designed to restore homeostasis. The 'allostatic load' refers to the strain of maintaining these responses over time. (Prasad, 2000, p39-40)

Dulmus and Hilarski (2001) take a more subjective view, in arguing that stress is one's perception of an event. In this report, a definition from psychology is used as it is widely applicable to a practice context where people's individual perceptions will be unknown as the service is being planned.

> "Stress is …the process where a person and the environment interact."
> (Schartzer and Taubertin, in Frydenberg, 2002, p19)

This definition was used as a basis for selection of a definition of 'traumatic stress'.

Traumatic stress

For the purpose of this report, it is the collection of mind-body processes which can be triggered when a person or people interact with an extreme event, as defined in DSM above as a traumatic event and by the Civil Contingencies Act UK as an emergency. This definition seems broad enough to take account of non-Western psychological paradigms and other aspects of diversity.

Traumatic stress is in no way assumed by the researcher to automatically lead to disorder. A range of Traumatic Stress Reactions are widely accepted as signifiers of the mind-body system processing and beginning to make sense of an extreme event.
Myers and Wee (2005, p26) cite Green, Wilson and Lindy (1985), who note that the processing of post-traumatic stress is both natural and dynamic as the survivor tries to integrate a traumatic event into his/her self-structure. This process should not be viewed as pathological or disordered, unless it is prolonged, blocked, exceeds tolerable levels or interferes with functioning to a significant extent. This is supported by DSM-IV – criteria

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for PTSD cannot be satisfied sooner than a month. (American Psychiatric Association, 1997)

Coping

This report uses a definition of reactive coping as one highly applicable to coping with extreme or traumatic events i.e. emergencies,
"Reactive coping can be defined as an effort to deal with a past or present stressful encounter or to compensate for or accept harm or loss as a dynamic process over time." (Frydenberg, 2002, p25)

Resilience

This has been defined by Dulmus and Hilarski (2003, p32), (citing Rutter, 1987: Garmezy, 1991: Masten, 2001: Shalev, 2002) as the dynamic ability to effectively use internal and external resources to cope with challenges. This definition shows that the characteristic of resilience is seen as a signifier of effective coping. Other proposed features of resilience are a sense of control, self-worth and security (Janoff-Bulman, 1992)

Initial Trauma Support

Initial Trauma Support at a UK airport, in this report, refers to the immediate emotional and practical support offered to groups of passengers and/or visitors to a UK airport (in excess of a single family group) affected or potentially affected by an extreme event.
This event may have a local, national or international focus.

Potential service users may be outbound passengers involved in or stranded by a local event, inbound returnees or transit passengers from other destinations as well as friends, relatives and contacts of any/all of these groups.

Time elapsed since exposure to the extreme event may be one or two hours or as much as several weeks, in the case of events abroad involving delays in evacuation for health or logistical reasons.

Such a support service is envisaged to have a lead agency (a local social care provider) and strong and explicit interprofessional links with planning and provider partners, in line with the requirements of the UK Civil Contingencies Act 2004.

The title reflects a focus on support rather than pathology. DeWolfe (1992) is cited by Myers and Wee (2005) in suggesting that services with assistance or support in the title rather than mental health or psychology may be perceived as less threatening to potential users.

Social Support

For the purpose of this report, social support for those directly impacted by an extreme event includes:

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- Interim constructs such as Initial Trauma Support (individuals working in teams as part of an interprofessional service provision in a designated reception area) – the focus of this report.
- Recent (but often significant) social networks formed at the scene of an extreme event, on board transport away from the scene, in a medical or other early assistance facility
- Usual, enhanced or potential social networks or communities of interest, geographically based or based around significant others. Increasingly, this can include fragmented and compound and diverse families and cyber communities.

Interprofessional Working

References to interprofessional working in the literature of social care are limited. No attributions for this were found in the literature. Emergency planning uses the term 'multi-agency' to describe the spectrum of collaboration. Interprofessional working is a term used primarily in health contexts. The concept of interprofessionality is described by D'amour and Oandason (2005) as "…the development of a cohesive and integrated health care practice among professionals in response to client' needs." (D'amour and Oandasan, 2005, p8)

These writers further propose that research is essential in the development of interprofessionality in order to document links among individual learners, teachers and professionals, organisations and systems.

In this report, interprofessional working means collaborative working to address joint risk with all recognised and potential partners in a UK multi-agency emergency plan.
These partners may include Central and Local Government, Emergency Services, Health (at strategic and operational levels) agencies and individuals from the voluntary and community sector and local business risk-holders (such as airport operators, transport providers and retail personnel).

Sources to be searched and search parameters

Having identified and defined key relevant terms on which to focus, initial searches were designed to yield high recall, for immersion in the literature (gathering a large number of references with less accuracy of key words) and practise at evaluative reading, while later searches were aimed at lower recall but higher specificity (using more accurate key words and word combinations) (Hart, 1998, p9: Lipp, 2003, p2)

Snowballing techniques and citation searches were used to find linked material via bibliographies and citation. It was also necessary to search and read around some of the related emerging concepts of neuroscience in order to fully understand and evaluate the links being proposed between traumatic stress, processing and coping.

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This report has reviewed English-language literature from the last 16 years (1990 to 2006) - a critical period in the evolution of discourses relating to trauma and stress, memory, and their possible correlations with neuroscience. (Brewin, 2003)

As this report will show, the effects of trauma have been documented since the 14th century. From the mid 19th century, the discourse has gained momentum, with professional and public concern for those affected by World Wars and other armed conflicts and later, natural and manmade civil disasters.

Theoretical perspectives have moved from individual pathology through psychodynamic and behavioural attributions towards a more integrated biopsychosocial standpoint, (originally proposed by Engel1, 1977) - a scientific model which takes account of the potential for interactions between health and psychosocial contexts and issues. (Shalev, 1996)

The focus required for an effective review of this size means that this report critiques only the current paradigms of trauma, traumatic stress and coping, but with a recognition that these have evolved from and built on earlier understandings. Many recent writers cite earlier work that has influenced and informed them.

Specific searches were used to explore the history and current theories of the three key fields of:

- experience of trauma – what does it mean and how does it affect people?
- post-traumatic stress responses – what do they indicate and how do they link with outcomes?
- coping – what is it, when and how does it start, what encourages it, what hinders it?

These terms were then used in combination, identifying the areas of overlap which required further exploration. These themes were used as organising principles for reviewing each area of literature, while the interfaces between them offered opportunities for synthesis and potential for links with interprofessional practice.

Electronic alerts for current and recent peer reviewed journals facilitated this scrutiny.
A cut-off point for searching was identified relating to:
the lead time for the acquisition and processing of new material by the British Library, University and specialist libraries
the need to assimilate, reflect on and integrate information into the report

The underpinning interprofessional dimension of this report was addressed by additional searches incorporating identifiers of key partner agencies – Police, Health services, airport operators, Central and Local Government and the voluntary sector both in the UK and (in the United States, as the role of the voluntary sector there is overtly central to emergency planning and service delivery). Specialist libraries (Police Centrex and the Emergency Planning College Library) and interprofessional networking resources to generate specialist leads were also used.

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Quality assurance of the literature selected

Greenhalgh (2001, p145) cites Wyatt et al (1998) in raising a note of caution,
"…researchers have been shown to be less objective in appraising evidence in their own field of expertise than in someone else's."

In addition, the research studies in this field include retrospective studies (which ask subjects to look back at a past event), prospective studies (which start at the time of the event and move forward) and longitudinal studies (studying subjects at regular intervals after the event). They vary in their inclusion criteria, sampling methods ands instruments used. In a narrative review of this size, these factors could not be separately listed for each study or publication of interest.

The risk to the findings of this report was mitigated by:

- obtaining, wherever possible, multiple data sources in the same subject area to maximise validity of conclusions
- interrogating literature initially for relevance, then critiquing the data for competency (evaluating truth claims for each line of argument on the basis of what is known or can be deduced about the author/s method, focus, experience, bias and whether their writing has been peer reviewed before being accepted for publication) (Hart, 1998)
- reading secondary sources - interpretations based on primary sources (those directly generated during the period under research) to facilitate ideas, but wherever possible seeking out the primary sources. (Bell, 1999)
- including large meta-analytical reviews of previous studies (Brewin, Andrews and Valentine, 2000: Norris et al, 2002) which show they have rigorously critiqued and standardised aspects of smaller studies for selection.

The use of electronic indexes enabled supplementary searches for particular sub-themes in documents (books and journals) published in English and peer-reviewed. Conference proceedings, reports and other 'grey literature' was used as a guide to the field and for citation searches rather than as primary source material.

The National Audit Office and Zito Trust (2006) review of the experiences of UK nationals following the tsunami, was exceptionally included in this review as validation of evidence found, despite its limitations as a research study. The Department for Culture, Media and Sport is using the recommendations from this report within their current work programme about services in this field and their impact on people – a clear link to practice development.

Managing data by note taking, indexing and development of a personal filing system enabled cross referencing, ranking and organisation of large amounts of material. Legitimacy was maximised by careful citation and use of the information found.

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Data saturation was indicated when searches revealed only references already collected and references without direct relevance to the focus of the report. The process of this report has been congruent with both the stated aims of this report and the approach to practice from which the research question arose.

By starting from a 'macro' perspective on the human themes of this report – trauma, stress and coping, then moving on to focus on the complex interfaces between them, this report is able to identify the 'micro' implications for practice supported by the evidence from literature.

Strengths and limitations of this report

In order to maximise the effectiveness of such a small, practitioner-based enquiry, this report does not focus in separate detail on the needs of workers following an emergency, as a body of such research already exists, which is applicable to the airport context (Lagadec, 1993: Shapiro, 1995: Everly and Mitchell, 1999: Ehlers and Clark, 2000 : Saari, 2005.)

Also outside the scope of this report are responses to pandemics and chemical, radiological biological and nuclear (CBRN) emergencies. An initial response to the human distress evoked by those situations would require medically led risk assessments and health and safety based parameters.

While this report briefly examines the differential effects of traumatic stress on children and young people, its practice focus remains on adults (as individuals and as caregivers)
In practice, accompanied children would be cared for with and by their attendant caregivers and unaccompanied minors would be referred to local statutory services at the earliest opportunity. Norris et al (2002, p247) propose that

> "…providing care and support to their parents might be among the most effective ways to provide care and support to children affected by disasters."

This view is endorsed by Saylor, Belter and Stokes, (1997, p361) who affirm that "…the research in this area supports a strong relationship between the coping and adjustment of children and that of their parents or other family members."

The report is also limited in terms of universal applicability. An airport is a gateway, used by a diverse mix of microcultures, from the UK and abroad. Research which is fit for purpose for this context requires cultural competence, - use by the researcher of appropriate behaviours, attitudes and ways of working that facilitate successful working in cross-cultural situations (King, Sims and Osher, 2000 cited in Hall, 2005, p38)

A truly holocultural approach to research is not possible, due to resource constraints. Only publications in English are studied. This report, in line with its stated aims, assumes a fundamentally 'etic' approach – with its main focus on human universals. In contrast, an 'emic' approach would look at how these may be expressed differently**.** (Hall, 2005)

An important strength of this report is its grounding in interprofessional social work practice. Extensive practice experience by the researcher and her colleagues in the specific

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context of airport reception of distressed people and strong interprofessional links in the field mean that the outputs are likely to be useful and applicable to all UK airports. The use of a narrative review format is appropriate for and reflective of, the integration and synthesis of the discourses of trauma, coping, crisis social work and airport emergency planning and business continuity which form the practice context of this report.

Ethics

A literature review was chosen as the research design best suited to the practice question for largely ethical reasons.

Although there are few studies which have examined the impact of trauma research participation upon trauma survivors, Griffin et al (2003), suggest that participants experience was generally not distressing, but viewed as valuable.

In contrast, Halek, Murdoch and Fortier, (2005), noted emotional upset and additional health care utilization among war veterans diagnosed with PTSD who had received a potentially upsetting survey.

The researcher is not in a position to:

- plan and implement a study of outcomes following trauma to individuals and family groups that could yield statistically significant results
- justify access to contact details of survivors of crisis and their friends and relatives who have received initial support at a UK airport.
- provide the support that may be needed to the above groups following a reawakening of their experiences by a researcher.

In the next section, the conceptual framework of this report is explained and justified, using evidence from literature in the areas of traumatic stress, related disorder, coping and recovery, with particular focus on social support, as a key component of Initial Trauma Support.

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Conceptual Framework

The first aim of this report is to find and evaluate the evidence in literature for understanding the immediate social care implications of traumatic stress and its interface with initial coping.

The underpinning conceptual framework is therefore based on an understanding of traumatic stress and human processing of and coping with such stress, derived from a critique of the literature.

Trauma and Traumatic Stress

History of the Discourse

The effects of trauma on human behaviour have been occasionally described in literature since at least the 14th century (Daly, 1983 cited by Leach, 1995) and regularly described.

Since the mid 19th century reported concern about and interest in the observed psychological effects of trauma was primarily warfare related. (Leach, 1995: Brewin, 2003)

World War 1, which produced large numbers of psychological injuries, saw some acceptance of 'battle-fatigue or 'shell-shock' as a disorder rather than 'cowardice' or 'lack of moral fibre' – the previous attributions. (Leach, 1995)

Freud wrote of the impact of trauma around this time. He described 'traumatic neurosis,' some of the symptoms of which, are consistent with contemporary Post Traumatic Stress Disorder symptoms (Freud, 1917, cited by Resick, 2001)

During World War 2, the concept was broadened to that of 'war neurosis' and additional symptoms were recognised. (Leach, 1995: Brewin, 2003)

Post Traumatic Stress Disorder (PTSD)

Post Traumatic Stress Disorder (PTSD) is the clinical label for an intrusive and distressing anxiety disorder associated with prior exposure to a traumatic event. Professional (mainly medical) use of this term dates from the early 20th century and increased as it was recognised that the concept was applicable to victims of natural disasters. (Leach, 1995)

This diagnosis is made only when the person meets a required combination of criteria in relation to the stressor, the responses, the duration and effects on functioning of the said responses. (American Psychiatric Association, 1997)

Little systematic research on PTSD was documented prior to the 1980's when it was defined as a psychiatric disorder in the American Diagnostic and Statistical Manual (DSM-III) (American Psychiatric Association, 1987)

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Political impetus was then added to the debate by calls for recognition from Vietnam War veterans. This effectively shifted the problem from the 'patient' to the cause or trigger, thereby introducing a largely new paradigm in this field. (Brewin, 2003)

Since then many studies have been made of the effects of trauma on human well-being. Definitions and attributions have been highly contentious and have informed a range of approaches and responses to critical incidents and those affected by them.

Kardiner's (1959) description of PTSD as a 'physio-neurosis' built on earlier Freudian psychodynamic theory and incorporated both physical and psychological attributions for symptom causation. (cited by Pandit and Shah, 2000)

Theoretical perspectives on PTSD have included cognitive processing approaches such as 'stress response syndromes' (Horrowitz, 1986), and 'information-processing theory.' (Foa and Kozak, 1986: Foa et al, 1989: cited by Pandit and Shah, 2000)

Behavioural theories have been largely based on learning, conditioning, stimulus and response (Charney et al, 1993) while biologically based attributions emphasise the role of neurotransmitters and the biochemistry of the endocrine system.

The biological bases of reactions to trauma involve the sympathetic division of the autonomic nervous system which serves the internal organs, and the neuroendocrine system, which sends chemical triggers and extinguishers for arousal responses. (Charney et al, 1993: True, Rice and Eisen 1993: Grillon, Southwick and Charney 1996: van der Kolk, 1997)

These responses are believed to be adaptive and/or protective mechanisms to enable emergencies to be dealt with optimally by the mind-body system. Prolonged hyper activation of these mechanisms can interact to produce side effects unwanted over time, such as depressed immune function (Resick, 2001)

Norris et al (2002, p241) assert that the "alternating cycles of intrusion and avoidance" characteristic of posttraumatic stress are evidence of the person's need to process the experience until it can be assimilated.

The widely acknowledged complexities of this disorder have also triggered further examination of prior research and clinical observations, with a view to further explaining the underlying processes and reconciling information processing and social-cognitive theories. Developments in experimental neuroscience such as neuro-imaging, combined with more traditional dysfunction or lesion studies have enabled a greater understanding of brain function and a framework for understanding some of the complex relationships between cognition and emotion (Broks, 2004) and between experience of trauma, memory, identity, recovery, longer term pathology and treatment modalities.(Brewin, 2001)

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Holocultural Applicability of Post Traumatic Stress Disorder

With regard to the potential for universal application of the diagnostic concept of Post Traumatic Stress Disorder, both Bracken (2002) and Summerfield (2001) have argued that it is not universally applicable, but is unique to North American and European culture. They express concern at an apparently exclusive focus on individuality, a lack of recognition of other, for example, somatic expressions of post traumatic stress and a lack of data about collective coping in non-Western societies.

However, Norris et al (2001), assert that, of the few non-Western cultures that have been studied systematically, symptoms equivalent to those of PTSD are significantly consistent.

For example, Resick, (2001) cites Carlson and Rosser-Hogan (1991) whose research showed a significant relationship between severity of trauma, dissociative symptoms and PTSD symptoms in Cambodian refugees and also Shalev (1996) who found peritraumatic dissociation as a significant indicator of later PTSD in a research sample of people treated in an emergency ward in Jerusalem. (Resick, 2001, p112)

Norris et al (2006) also cite Mollica, Poole and Tor (1998), de Jong et al (2001) and Basoglu et al (2003) in claiming that studies following trauma and disaster in developing countries have found higher estimates of PTSD than those predicted in the developed world.

Some non-Western cultural traditions name and attribute particular disorders to the stress of extreme events. For example; in Southeast Asia, *amok* is a so-called culture bound syndrome characterised by aggressive, even homicidal behaviour of limited duration. It is apparently triggered by losses (in mainly men) that are living away from home, and associated conditions include depression, dissociative disorder and somatic symptoms. (Westermeyer, 1973, cited by Hall, 2005, p9)

Ataque de nervios (in English – attack of nerves) is a culture specific condition triggered by stress, described by Latinos. It has both bodily and psychological features (Guarniccio, 1993 cited by Hall, 2005, p15)

Susto is another condition reported by Latino communities. It is attributed to a frightening event which causes the soul to leave the body. Symptoms appear from days after the event (to years afterwards) and both physical and psychological symptoms are comparable with Western models of responses to stress. (Gaw, 2001, cited by Hall, 2005, p157)

These examples show that a widely applicable model of posttraumatic stress and resultant disorder needs to be integrative, to take account of reactions or symptoms that affect the body, emotions, cognition and the lived experience of the person grounded in their social context.

Holistic models of PTSD have been proposed, for example, that of Shalev (1996) who describes a 'biopsychosocial trap' – acknowledging links and connections between mind and body and social context in reactions to trauma.

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As Norris et al (2002) note, no single set of recommendations will apply to all cultural communities; however, as the focus of this report is towards a generic framework for local and particular interpretation, an integrative model of PTSD has been shown to satisfy as a conceptual standpoint.

Post Traumatic Stress and Memory

According to Eysenck (1990), the number and nature of memory systems is the major project of contemporary memory research. In 1996, Brewin, Dalgleish and Joseph offered a dual representation theory of memory.

This theory proposes both conscious and nonconscious processing of sensory input during an extreme event. Those consciously processed, the writers argue, become verbally accessible memories (VAMs), which those unconsciously processed become situationally accessed memories (SAMs).

These proposed memory processes have explanatory power in relation to reported symptoms (such as flashbacks), to emotional reactions and also to cognitive processing and to social-cognitive efforts towards meaning-making which have not previously been fully explained by any one body of theory.

Broks (2004) supports this theoretical approach in asserting that modern neuropsychology offers strong evidence for unconscious mental processing and further notes a 'well-established distinction' between "explicit" or conscious and "implicit" or unconscious memory systems. He refers to the brain's 'emotional memory centres' suggesting that moods, emotions and memories can be triggered by events that are not consciously registered.

Dual representation theory is an integrative construct, which has been evaluated and developed since 1996 by further research. (Brewin, Andrews and Valentine, 2000: Brewin Andrews and Rose, 2000)

Brewin and his collaborators above have examined in some detail the concept of PTSD, its constituent parts and the historical and current explanations for them.

In his summative book, Brewin (2003) asserts, on the basis of his extensive clinical practice and research,

- that the concept is valid
- that a distinct pathological state or states have been identified
- that a set of memory processes relating to the trauma itself are significant over time
- that a set of processes related to the impact of the trauma on people's lives, their identities as individuals and social beings and the associated meanings are also significant

This report uses Brewin's integrative dual representation theory and associated critique of the concept of traumatic stress and disorder as a conceptual guide.

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Other Trauma Related Diagnoses

A diagnosis of adjustment disorder (American Psychiatric Association, 1994) may be applicable to short term reactions to a stressor which are judged to be in excess of what would typically be observed in others experiencing the same stressor, although these reactions do not meet the diagnostic criteria for Post Traumatic Stress Disorder

Acute stress disorder is newly introduced in DSM-IV (American Psychiatric Association, 1997) to allow for an early diagnosis of those experiencing clinically significant distress or impairment, and thought to be unlikely to recover naturally on the grounds of their level of dissociation during or after the traumatic event. (Resick, 2001) submits this as a controversial and largely unproven indicator of later Post Traumatic Stress Disorder. Dissociative disorders are an additional group of symptom clusters associated with experience of traumatic stress (American Psychiatric Association, 1997)

Other diagnosable disorders have been related to exposure to traumatic stress. Examples of these are adjustment problems, functional impairment, and stress-related physical illness (Resick, 2001)

These clinical concepts represent further evidence of the effects of extreme stress as a potential (although not inevitable) trigger for pathology – both psychological and physical.

As Brewin (2001, p42) notes,

> "It is not the symptoms themselves, but rather their frequency, their persistence, their intensity, and their failure to become more benign with time that defines the disorder."

Indeed, much of the formal support offered to those affected in recent years has been contingent on proof of significant and enduring morbidity as defined by DSM-IV.

The theory of coping with extreme stress described in the next section can offer a further standpoint from which to examine human reactions to traumatic events – one which has strong links with the social model of human distress which underpins this report.

Stress and Coping – The Theory

The literature of coping theory has built on the discourse of stress and other psychologies. Freud's clinical work on psychological defences in the 1900's proposed a theory of how anxiety was managed**.** (Freud, 1964)

Frydenberg (2002) notes that Cannon (1932) proposed the 'fight or flight' model of response to stress, recently challenged by Taylor et al (2000); that Selye (1950) studied stress in the laboratory, while Holmes and Rahe (1967) developed checklists of stressful life events.

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Lazarus' early work, in the 1960's has been seen as a important trigger for more recent studies, such as that of Lazarus and Folkman (1991) who described a dynamic process involving appraisal, coping and social support.

A basic definition of coping suggested by Lazarus (1996), relates to the process of changing cognitive and behavioural efforts to manage psychological stress.

Speilberger (2002) examines the roles of human attitudes, emotions and personality in coping with stress. He also notes two important influences in this field:

- an emphasis in psychology generally since the Second World War on pathology and recovery from damage and impairment (a deficit model)
- an emphasis on attributions and a bipolar locus of causation – individual or environment.

Shneider (2001), Schwartzer and Taubert (2002) and Frydenberg (2002) acknowledge a shift in this field towards 'positive psychology' – a focus on holistic well-being rather than mere adaptation, and an interactionist view of causes and effects. Also, earlier work on coping with stress was directed at unconscious processes, while more recent research has utilised self-report measures of coping behaviours (Greenglass, 2002)

The interface between cognition and coping with stress assumes greater significance if coping is viewed as part of a functional psychosocial process with relationships to consciousness, social support, self-efficacy and resilience, as has been posited by Somerfield and McCrae (2000) and supported by Bandura (2001) both cited by Greenglass (2002, p39)

Frydenberg describes coping as

> "… a dynamic interaction between persons and their environments." (Frydenberg, 2002, p1)

Hobfoll's 1989 interactionist 'Conservation of Resources' (COR) theory of coping gives almost equal attention to internal and environmental processes. The underpinning concept is the primacy of loss over the potential benefits of gain. The proposed investment or stockpiling of personal social and economic resources against the possibility of loss becomes a motivation for proactive coping.

This writer's later work also proposes that the 'self' is developed from attachments to groups and the individual is meaningfully situated or 'nested' within a family system, community and/or cultural context (Hobfoll, 2001). This emphasis on interdependence renders COR theory potentially applicable across cultures, given that the nature and amount of resources available are likely to vary widely.

The social context of coping – how significant is it?

While a cross-cultural study (of American and Spanish students) by Lepore et al (2004) was found which suggests that that social context, rather than merely social support may be a

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key influence on adjustment after trauma, the evidence from literature between 1990 and 2006 endorses a link between social support and later adjustment to and processing of, experience of an extreme event.

Hillman 2002 asserts that,

> "A wealth of rigorous, empirical studies provides valuable evidence that both the actual and perceived quality of an individual's social support can bear significantly upon a patient's response to a crisis or transitional life event"

In support of this claim she cites examples from the work of Brissette, Scheier and Carver (2002). (Hillman, 2002, p47)

A 2000 study by Smith and Freedy used the Conservation of Resources stress model to examine the significance of loss of psychosocial resources over time following a natural disaster in the United States. Their findings suggested that interventions designed to prevent psychosocial resource loss may reduce the long term effects of disaster.

Sattler et al (2002) also used this model in their cross-national study which looked at resource loss and psychological distress in college students in four countries affected by a hurricane. Resource loss and loss of social support were among the factors correlated with greater psychological distress, thereby supporting the theory.

Hobfoll (2002) himself cites Fukuyama (1995) in noting that in familial cultures, the central focus of agency (or action) is the family, rather than the individual or the society as a whole. His theoretical construct of coping is transferable across what he calls individual-familial, collective-familial, individual-non-familial or collective non-familial types of cultures. (Hobfoll, 2002, p76)

This proposition is supported by the findings of a 2004 qualitative study of Mexican disaster survivors and coping in three city locations following three separate disasters measured and rated coping strategies used. Seeking support was the most common strategy, while others varied in relation to contextual factors. The writers have proposed that seeking support, therefore, may be a universal coping strategy for survivors of disaster**.** (Ibanez et al, 2004)

Another non-Western result of interest is a 2002 Israeli study using simulated stressful encounters to examine coping (and affective or emotional reactions). The results supported the hypothesis that social resources affect the use of coping strategies, (although not necessarily affective reactions) (Ben-Zur, 2002)

The proposed positive effect of social resources was supported by a comparative longitudinal study of people exposed to natural disasters. Early social support and collective efficacy were found to have a buffering effect against psychological distress after a year**.** (Benight, 2004)

Norris and Kaniasty (1996) asserted that adverse psychological outcomes following a natural disaster were related to a decline in perceived social support.

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The above evidence lends breadth and support to Hobfoll's COR theory of coping with stress which this report uses as part of its conceptual framework.

The first aim of this report is,
'To find and evaluate the evidence in literature for understanding the immediate social care implications of traumatic stress and its interface with initial coping.'

While the precise relationship between coping processes and recovery from traumatic stress has not yet been proved consistently, the literature has shown that:

- 'natural recovery' from exposure to trauma is both possible and desirable
- social support is widely believed to be a positive contributor (even if indirectly)
- processing of, or coping with traumatic stress begins early and continues over time

It is therefore important to understand how these findings can be related to generic initial support or intervention, what the optimal timing of such interventions are likely to be, and how to link this initial support with additional or follow-on options for those individuals who may need more or different interventions.

The following discussion of research evidence, conclusions and implications for practice at UK airports are based on a synthesis of these findings.

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Discussion

Trauma and Traumatic Stress

This report has critically reviewed the literature relating to human experience of extreme events, variously referred to as emergencies or disasters. It has also examined the effects of such events on people – adults, from both Western and non-Western cultures, children and young people.

The report has shown that experience of traumatic events, while having an effect on the human mind and body across cultures, does not necessarily lead to enduring psychological problems. It has further suggested that a widely applicable model of post traumatic stress and possible resultant disorder needs to be holistic – taking account of the range of post traumatic stress reactions that can affect:

- the human body, its biochemistry and the potential effect on its immune function
- the human mind and neuroscience, including the processing of emotional experiences and responses, making meaning of experience, human identity and selfhood and how these functions relate to memory structures and systems.
- the human social context – the self, the existential experience and the sense of belonging to groups such as family, cultures and communities

Such a model also needs to be integrative – acknowledging the potential links between these responses.

Recent large scale research supports these findings. One of the largest and most comprehensive recent studies was conducted by Brewin, Andrews and Valentine in 2000 - a meta-analytic review of seventy-seven studies involving people exposed to trauma.

Each study reviewed included at least one risk factor for PTSD and one measure of post-traumatic symptoms. Effects were comparable in forty-nine studies, both prospective and retrospective (involving 13,653 individuals). Subjective measures of trauma severity were included (in accordance with the trauma definitions used for this report)

The findings of this team also support the approach of the DSM-IV, used as a guide by this report, in asserting that (perceived) trauma severity is an important risk factor for later disorder. This report also rated a range of other risk factors in order of effect size and found that the top three factors were peri and post-traumatic – lack of social support being the highest, followed by post-trauma life stress, then trauma severity as already discussed. (Key findings of this study have been synthesised by Brewin (2003) and are listed in Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006.)

Norris et al, 2002, also completed a large meta-analysis which described results for one hundred and sixty distinct samples composed of over sixty thousand individuals, diverse in age, nationality and background, with experience of one hundred and two different events. This study concluded that psychosocial resources are important in promoting and

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maintaining resilience. They suggest practice applications of their findings (listed in Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006)

Summary and Conclusions – Trauma and Traumatic Stress

The findings of this report suggest a continuum that encompasses a spectrum from recovery (or adequate biopsychosocial functioning) despite earlier exposure to an extreme event, through to biopsychosocial disorder, necessitating professional assessment and a range of evidence informed treatment options.

The discourse of attributions for this proposed continuum is outside the scope of this report, which retains a focus on the evidence from literature of whether coping with traumatic stress can be supported at an early stage and if so, how?.

Stress and Coping

This report has shown how theories of coping with stress have evolved:

- from psychological deficit models of damage and impairment through to a focus on adaptation and further to a positive psychology model of holistic well-being
- from attributions to *either* the individual *or* their environment through to more transactional views of causes and effects and a dynamic interaction between people and their environment
- from an emphasis on unconscious processes to adaptation by effort through to the idea of resilience and self-efficacy, where precious personal resources are made meaningful by a complex social context of interdependence

What has also been shown:

- the majority of adults dynamically cope with an experience of traumatic stress over time
- children can be additionally impacted by extreme events if their caregivers have been affected
- timescales for coping, although varied, have been suggested
- some key peri and post-traumatic factors have been suggested to positively influence early coping
- links have been proposed between early coping and reduced risk of later development of enduring related disorder

Supporting coping after trauma – early intervention

The evidence from literature, as this report has shown, points to a dynamic and interactional coping process which takes account of embodied human cognition, emotion and social support.

Brewin (2003) further cites Greenberg (1995), Rothbaum and Foa (1993), Shalev (1992) and Koren et al (1999) in support of his contention that natural human processing of traumatic stress has been shown to take several days after an event perceived as a ‘mild’ trauma or around a month for an event perceived as a ‘severe’ trauma.

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Brewin (2003) additionally concludes that any proactive intervention carried out during this initial processing time is coinciding and may be actually interfering with, natural recovery and the unpredictable evolution of coping responses. He cites Pynoos and Nader, (1988) and Shalev (2002, p188) in support of this and his further assertion that any initial supportive approach should focus on ensuring that the optimal conditions for natural adjustment are in place.

For these reasons, Brewin (2003), endorses the approach known as psychological first aid, which aims to satisfy essential conditions for promoting natural adjustment after an experience of trauma (see Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006)

Norris et al (2002) however, assert that evidence that early intervention helps to prevent longer-term problems is limited and is not sufficient to endorse or reject any particular approach, although they concede that crisis intervention strategies that help mitigate the initial stress, enhance social support, prevent loss of social resources and provide reassurance may be helpful. (see Appendix 1)

This report has also shown how Hobfoll's 1989 Conservation of Resources model of coping with traumatic stress could be applied to coping with trauma. If, as this writer's later work suggests, the coping 'self' is developed from meaningful attachments to groups - family systems, communities and cultural groups, (Hobfoll, 2001) this body of theory supports the initial and universal provision of psychological first aid, as described above, with an additional emphasis on facilitating people's return to their own available social network or context as soon as is reasonably possible.

Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006 of this report is a table of the key elements and principles suggested in literature to correlate with effective initial trauma support. Information has been drawn from the research of Woodcock (2000), Norris et al (2002) and Myers and Wee (2005), who cite DeWolfe (2000), Myers (1989), Norris et al (2002) and Young et al (1998) in proposing practice guidelines for early interventions for people who have experienced an extreme event

The contents of this table are consistent with Brewin's assertion that initial support for natural recovery is best achieved by:

- offering 'psychological first aid' to all those affected as soon as possible
- refraining from more active interventions within the first 4 weeks
- building in links (both planning and informational) to more active later interventions for those whose natural recovery is interrupted or lacks resilience. (Brewin, 2003, p188-190)

McNally et al (2003) are cited by Myers and Wee (2005) who suggest that any form of psychological first aid must be led by the individual service user to avoid conflict with their own coping methods, processing of their experience and readiness to participate. They further assert that it is important to offer but not require survivors to partake of services. (Myers and Wee, 2005, p144-5)

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These writers concur with Brewin (2003) in suggesting that these relatively simple early interventions can have a powerful positive effect on recovery by:

- providing evidence that assistance is available
- protecting victims from further trauma
- providing initial resources for coping
- setting a positive expectation for recovery. (Myers and Wee, 2005, p162)

Dyregrov (2001, p173) notes that the initial needs of children following an emergency are likely to be for comfort, reassurance (equivalent to social support) and age-appropriate information – all congruent with Brewin's model of 'psychological first aid'.

Planning for Ongoing Support

Although the focus of this report is on initial responses to perceived trauma or crisis and on earliest service provision, there is an obvious need to retain an overview in terms of interprofessional planning for medium to longer-term service provision.

Norris et al (2002, p246), writing of early intervention strategies, suggests inclusion of mechanisms for identifying and referring the minority requiring professional treatment.

The National Audit Office and Zito Trust (2006, p12) review of the experiences of UK nationals following the tsunami concludes,

> "Arrangements need to be in place, not least at UK entry points, to provide basic information explaining access to future support…"

Recognising the phases of disaster, the related stages and circumstances of human response and associated human need is noted by Myers and Wee (2005) as important. These writers draw on the model of phases of disaster attributed to DeWolfe (2000). The phases within this model most relevant to this report are:

- impact – triggering traumatic stress responses, focus is usually on survival
- heroic – or rescue phase, characterised by action and activity
- inventory – this phase may overlap the others. People try to assess what has happened and what it means for them, seeking information is a key goal
- honeymoon – or 'remedy' phase, characterised by relief. (Myers and Wee, 2005, p32)

As potential users of an Initial Trauma Support service at U.K. airports may be at different stages within this model, it is important to build in flexibility and an ethos of respect for and being led by, the individual.

If, as suggested, many people who have experienced an extreme event are likely to enter or pass through some or all of these early stages, a meaningful link with medium to longer term support is an essential component of early interprofessional planning.

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The U.K. National Institute for Clinical Excellence (NICE) guidelines suggest 'watchful waiting' as an approach for us with both adults and children who's 'symptoms' are mild or are less than four weeks duration. They also suggest practical social and emotional support. These guidelines further propose 'consideration' of the routine use of a brief screening instrument at one month post-trauma for individuals at a high risk of developing PTSD. (National Institute for Clinical Excellence, 2005)

The approach known as 'screen and treat' Myers and Wee (2005) and National Institute for Clinical Excellence (2005) requires initial contact with survivors immediately post-incident for information exchange and so dovetails with the provision of initial non-intrusive trauma support for coping.

Use of a simple screening instrument has been suggested for use at three weeks post-trauma or later (example by Brewin, Rose et al, 2002, Appendix 2 - Trauma Screening Questionnaire). These researchers found that eighty-six percent of people who marked 'Yes' to six or more of the questions in the screening questionnaire, were found to meet diagnostic criteria for PTSD in subsequent clinical assessment, compared to seven percent of those who marked 'Yes' to fewer than six items. This was compared with a separate sample of assault victims for which screening results were similar. (Brewin, 2003, p190-191)

Monitoring of these symptoms over an evidence-based time-frame and offering referrals for further assessment and treatment to individuals whose symptoms do not subside to a level manageable for them should add value to the initial support proposed by this report.

Summary and Conclusions – Supporting Coping after Trauma

The particular focus of this report is initial support following an extreme event. This report has found some evidence in literature that most adults will begin to process a potentially traumatic experience of their own accord.

The literature also suggests that this processing can begin once they perceive themselves to be in a location of relative safety i.e. they are not still dealing with the event itself. There is also some evidence to suggest that social support and provision of information can have positive effects on this process at an early stage.

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Conclusions

Reflection on this report

The aims of this report are:

- to find and evaluate the evidence in literature for understanding the immediate social care implications of traumatic stress and its interface with initial coping
- to use this evidence to identify the key elements of an initial trauma response based on research evidence.
- to relate these findings to the context of a UK airport

To achieve these aims the researcher:

- researched the historical discourse and critiqued current paradigms in the key subject areas of traumatic stress and related coping and disorder
- interrogated the interfaces between traumatic stress, coping and early intervention.
- reflected on the applicability of these findings to the practice application with diverse and transient airport user 'communities' in a dynamic timeframe.

The stated aims of this report have been met.

I. The report has found and evaluated evidence in literature for understanding the immediate social care implications of traumatic stress and its interface with initial coping
II. It has used this evidence to identify the key elements of an initial trauma response
III. The next section will relate these findings to the practice context of a UK airport and identify evidence-based implications

The researcher has noted the following challenges inherent in this process:

- the existential anxiety that can be triggered by the nature of the subject matter evokes impassioned debate and strongly held views (by the researcher, intraprofessional and interprofessional colleagues and many others in this field around the world.)
- terminology used varies widely, particularly between North America and Europe
- ethical issues pose challenges to the scope (and cost) of research studies
- the field of recovery from trauma is potentially lucrative and high-profile for individuals and organisations. This can give rise to 'ambulance-chasing' and to contracts being awarded to individuals and organisations whose practice may not be rigorously evidence-informed or well-matched to the particular context.
- the progressive evolution of the subject areas and their interfaces can mean relatively rapid changes in both theory and practice

Reflection can be the foundation of purposeful learning from work and life experience according to Amulya (2004). The reflexive process of this study described earlier has combined reflection on crisis social work practice and emergency planning with research, with a view to further developing 'reflective practice' which Raelian (2002) (cited by Amulya, 2004, p2) claims 'illuminates what the self and others have experienced'.

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Reflection has been consciously and explicitly used during the process of this study to retain the link between theory and practice required while maintaining the research rigour necessary to produce a valid evidence-based proposal which can add value to business continuity planning.

Reflection on the findings of this report

This report has found that:

- there are some basic conditions that can both promote (and avoid impeding) natural recovery following trauma
- these conditions seem likely to be widely applicable across cultures
- they appear relatively simple to understand, explain and satisfy in most practice situations
- they are congruent with an approach to planning for psycho-social need which facilitates coping and seeks to target those most in need of clinical resources
- they (and the longer-term intervention options with which they need to link) are readily applicable to interprofessional planning for Initial Trauma Support

The next section of this report will identify the implications for practice of the findings of this review.

Areas for further study

The findings of this report also suggest that further longitudinal studies are indicated to compare and contrast outcomes over time for individuals and diverse groups who have been offered timely and effective evidence-based Initial Trauma Support with those who have not.

For users of an airport-based Initial Trauma Support service, time elapsed since exposure to the extreme event may be one or two hours or as much as several weeks, in the case of events abroad involving delays in evacuation for health or logistical reasons. No mention of this important contextual differential that was directly applicable to generic reception planning could be found in the literature.

Further evaluation of early provision of support is needed. This proposed framework could enable this by standardizing some key aspects of provision, based on best available evidence. Westen and Morrison (2001) cited by Gellis and Reid (2004) suggest that practitioners evaluate interventions in their own practice with a view to identifying those which may warrant testing by randomized controlled trials.

Additional evaluation of medium to longer term interventions and supports such as screen and treat and support/self-help groups, Humanitarian Assistance Centres, cultural issues and effective linking mechanisms could also be valuable.

Controlled outcome studies on a range of ‘trauma populations’ and service delivery contexts could also be valuable in identifying with greater certainty, the factors which

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influence outcomes for those who have experienced an extreme event, and the relative strengths of their effects.

Action research to test theories of early intervention and possible correlations with positive psychobiological outcomes would add to the potential for evidence-informed practice applications.

Implications for Practice

That the key elements of psychological first aid synthesised from the findings of this review and summarised in Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006, can be used to inform a generic interprofessional planning framework for Initial Trauma Support for local operational interpretation at UK Airports
That this framework should have robust and explicit interprofessional links with medium and longer term evidence based intervention.
That further evidence should be collected about the efficacy of the application of such a framework in practice

The findings of this report support a generic framework for Initial Trauma Response which focuses on the following key elements adapted from the model of psychological first aid.

- Restoration of physical safety
- Appropriate acknowledgement of the perceived magnitude of the trauma
- Availability of support
- Provision of information (including links with further support)
- Facilitation of return to own social setting

Time elapsed post-trauma for those attending an airport reception centre will vary considerably (from 1 to 2 hours for a local airfield incident to up to several weeks for someone who has been recovering from injuries abroad or searching for a loved one).

'Survivors' will vary in terms of gender, age/developmental level, life experience and usual support networks. It is unlikely that there will be much (if any) reliable personal information about 'survivors' available in advance of their arrival. A generic framework would be based on this assumption (derived from extensive practice experience).

An airport-based reception process designed to promote early coping after trauma could address key elements as follows:

Restoration of physical safety

the provision of a designated area (or areas) that was as safe, private and 'fit for purpose' as local conditions permitted.

Appropriate acknowledgement of the perceived magnitude of the trauma

- appropriately recruited, selected, trained and supported workers to provide Initial Trauma Support in the above areas to offer a calm, non-clinical bio-psychosocial approach and acknowledgment of the perceived magnitude of the trauma

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- information packs (in accessible formats) which acknowledge trauma

Availability of support

- appropriately recruited, selected, trained and supported workers in the above areas to offer a calm, non-clinical bio-psychosocial approach to the offer of support
- information packs (in accessible formats) for further support

Provision of information

- interprofessional planning and management systems that ensure validated information is appropriately shared in a timely manner.
- information packs (in accessible formats) for further support and acknowledgement of trauma (to be given also to those people who do not want face to face Initial Trauma Support)
- robust and explicit interprofessional links with further interventions, support systems and treatment (such as screening after three weeks minimum from event)

Facilitation of return to own social setting

workers providing Initial Trauma Support working collaboratively to an interprofessional plan, for facilitating telephone and email access to people's own networks, and supportive onward travel planning options

The researcher proposes an original evidence-based framework for Initial Trauma Support applicable to UK airports. (Summarised in Figure 1 SPaCE Framework for Initial Trauma Support)

This report has shown that this framework can offer the following benefits:

- a benchmark for interprofessional planning and response
- a guideline for interpretation of some of the new statutory duties for local authorities and other Category 1 responders and powers for the Category 2 responders (Civil Contingencies Act, 2004)
- support for local Business Continuity by mitigating the foreseeable risk of long-term psychiatric disorder (and subsequent possible litigation and reputation damage to risk holders)
- a consistency of approach, which also acknowledges local context and variations therein
- a template for consequence based planning in this area which can facilitate reviews of learning, monitoring and evaluation of outcomes by further research

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Appendix 1 – Initial Trauma Support – Evidence from the Literature 1990 - 2006

Elements and Principles Proposed in Literature and applicable to generic initial support	Adapted from
Initial Trauma Support needs to	**Holloway and Fullerton** 1994 p40
Provide a safe environment	
Provide rest and respite	
Protect against further 'injury'/stigmatisation	
Allow for the expression of anger	
Validate/normalise feelings	
Be aware of pre-existing psychiatric disturbances/significant life events	
Initial Trauma Support needs to	**Myers** (in Myers and Wee 2005) 2000 p161-2
Detect – brief assessment of immediate needs	
Direct – be brief, clear and repetitive if necessary when imparting a sense of calm control	
Protect – people from further harm by establishing a quiet neutral private environment	
Connect – individuals to the assistance and/or resources they need -includes information and social support	
Key elements for children	**Woodcock** 2000 p218
Provision of a safe transitional space	
To listen, bear witness and validating experience	
Key Elements for everyone	**Norris et al** 2002 p248
Keep people in their natural groups as far as possible	
Facilitate return to normal activities as soon as possible	
Provide opportunities for routine social interactions (helps normalise post-traumatic stress reactions)	
Ensuring that natural helping networks are not undermined	
Psychological First Aid	**Brewin** 2003 p188-190
Restoration of physical safety (for processing, the mind-body system must perceive end to active threat)	
Appropriate acknowledgement of magnitude of trauma – 'permission' to begin/continue adjustment	
Availability of support - the person's own network and/or a professional construct	
The provision of information - used by the person in processing, evaluating and making meaning	

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Elements and Principles Proposed in Literature	Adapted from
Requirements of initial trauma support Proximity – providing the assistance where the person is experiencing the distress Immediacy - providing the assistance close to the time when the person experiences the distress Expectancy –expectation that the person will return to more stable functioning as soon as possible following the provision of support	Myers and Wee 2005 p158
Also Survivors of a recent traumatic event are mostly normal people experiencing normal reactions to an abnormal event – they are unlikely to want or need mainstream mental health services Support programmes should have a name and an identity culturally and socially acceptable to the service user community Such programmes must have community acceptance and support and be culturally competent Confidentiality and information management are important Services and programmes must be creative and innovative in providing services Initial support programmes must also identify and refer those individuals who need additional services	p78-80
Programmes should: Address physical health problems Provide supportive listening and opportunity to talk in detail about disaster experience Give opportunities for grieving over losses Assist with prioritising and problem solving Offer information on disaster stress, coping, children's reactions and impact of disaster on family Facilitate communication among family members Encourage use of social supports Promote practical steps to resolve pressing immediate problems Promote practical steps to resume ordinary routines and roles Teach relaxation techniques Provide information on further resources Assess and refer where indicated	p52

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Appendix 2 - Trauma Screening Questionnaire

Your Own Reactions Now to the Traumatic Event

Please consider the following reactions that sometimes occur after a traumatic event. This questionnaire is concerned with your personal reactions to the traumatic event that happened a few weeks ago. Please indicate whether or not you have experienced any of the following AT LEAST TWICE IN THE PAST WEEK:

	Yes, at least twice in the past week	**No**
1. Upsetting thoughts or memories about the event that have come into your mind against your will		
2. Upsetting dreams about the event		
3. Acting or feeling as if the event were happening again		
4. Feeling upset by reminders of the event		
5. Bodily reactions (such as fast heartbeat, stomach churning, sweatiness, dizziness) when reminded of the event		
6. Difficulty falling or staying asleep		
7. Irritability or outbursts of anger		
8. Difficulty concentrating		
9. Heightened awareness of potential dangers to yourself and others		
10. Being jumpy or startled at something unexpected		

Brewin, Rose et al 2002 developed this instrument and used it on survivors of the Ladbroke Grove train crash in London in October 1999.
The ten elements correspond to the re-experiencing and arousal symptoms of PTSD.

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