The National Ambulance Service Stress Survey 2008

Executive Summary & Action Recommendations
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Carried out by the
Department of Psychology,
Royal College of Surgeons in Ireland

Commissioned by the
Ambulance Service
Critical Incident Stress Management Committee

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1 INTRODUCTION

The National Ambulance Service Critical Incident Stress Management Committee was established in 1997 as a partnership between ambulance services management, staff representative organisations and the Department of Health & Children. It came about as a result of a Labour Court report and recommendation in 1993 and a review in 1997. Funding was provided by the Department for the establishment of a critical incident stress management system to support staff working in the ambulance service. By 2002 substantial progress had been made in establishing the critical incident stress management system and the committee decided to commission research from the Department of Psychology at the Royal College of Surgeons in Ireland in order to:

• obtain an accurate picture of stress levels amongst staff of the service
• assess the impact of the CISM System
• identify targets for future development.

The research was carried out on our behalf by Mr Eunan McCrudden. This document has been produced to accompany the publication of the full research report. In it we summarise the key findings of Eunan’s research, chapter by chapter, accompanied by our opinions on the research findings and, where relevant, the actions which we believe need to be taken as a consequence of those findings.

ACKNOWLEDGEMENTS

A research project of this size is, by any standards, a substantial undertaking and could not have been brought to successful completion without considerable effort, ingenuity and the active cooperation of many.

Firstly, we want to express our appreciation for the work of our researcher, Eunan McCrudden. He has demonstrated energy and enthusiasm for the task combined with scientific and human relationship skills of a very high level. This has resulted in the production of an excellent report which has the potential to have a very significant positive
impact on the development of the ambulance service. In this regard we also want to express our appreciation of the input of Prof. Ciaran O’Boyle, Royal College of Surgeons, for his advice and supervision of the research.

The research would not have been possible without the provision of funding by the Department of Health and Children. We would like to express our sincere appreciation for this support and the contribution of Mr. Paul O’Sullivan, then Assistant Principal Officer in the Department. In this connection, we must also acknowledge the support of Mr. Matt Merrigan, General Secretary SIPTU, in helping us to convince the Department of the value of the project together with his colleague, Mr. Brendan Hayes. We also wish to express our appreciation to Mr. Fred Lowe and Miss Edel O’Hara-Leahy, both clinical psychologists and former members of this committee, for their valuable advice at the formative stages of the research project.

The active support of the Chief Officers of the ambulance services of the former regional Health Boards has also been invaluable. Some have retired since the commencement of the research but many have continued in office under the HSE. We trust that, as they read the report, they will find that their vision in supporting the research has been justified and we hope for their continued support in addressing key issues identified in the research findings.

The efforts of our Peer Supporters and Regional Coordinators in helping to distribute the questionnaire and encouraging staff to take the time to complete it have been invaluable and we are very grateful to all of them for this, in addition to their ongoing commitment to the critical incident management system.

Finally and most importantly, we want to extend our sincere thanks to the more than 500 members of the ambulance service, EMTs, EMCs and officers, who responded to the survey questionnaire by providing us with information about their experiences, thoughts, feelings, emotions and opinions which is the essential raw material of the research. We hope that with the publication of the research they will feel that their time and effort has been well rewarded.

Mr. Paddy Duffy (Chair)
Mr Frank O’Malley (Vice-chair)

Mr. Ray Bonar
Ms. Sharon Gallagher
Mr. Brendan Galwey
Mr. Brian Glanville
Mr. Macartan Hughes

Dr. Geoff King
Ms. Eithne Leonard
Mr. Pat McCreanor
Mr. Gerry Tuohy
Mr. Benny Walsh
Summary of the Report’s Key Findings & the Committee’s Recommendations

CHAPTER 1

Chapter 1 of the report begins by setting out the areas to be investigated by the research and the consultation process which led to their selection. It also describes the methodology used to develop the survey instrument and its piloting.

The areas selected for investigation were:

- General levels of the psychological well-being/distress in ambulance service personnel
- The level of occupational stress experienced by ambulance service personnel including their experience of bullying
- The extent to which ambulance service personnel were affected by traumatic events experienced during the course of duty and the nature of those effects, if any
- The extent to which ambulance service personnel had or were currently experiencing symptoms of significant emotional distress including post traumatic stress disorder (PTSD)
- The level of knowledge about the Ambulance Service Critical Incident Stress Management System amongst service personnel and their experience of using the system.
CHAPTER 2

This chapter describes the research project. It involved cross-sectional self-report surveys of two groups – the first of serving ambulance service personnel, the National Ambulance Service Survey (NASS), and the second of trainee ambulance service personnel at the National Ambulance Training School (NATS). This allowed for comparisons between experienced ambulance service personnel and a sample of those about to enter the service.

CHAPTER 3

Chapter 3 describes the two survey groups in detail

The NASS Group

All Ambulance Officers (AOs), Emergency Medical Technicians (EMTs) and Emergency Medical Controllers (EMCs) were invited to participate in the survey. At the time of the survey there were just under 1100 personnel employed in these grades in the eight regional ambulance services operated by the then Health Boards. Of these, 541 personnel responded anonymously – a 50% response rate. This is a sufficiently large sample to allow for meaningful statistical analysis. Of the respondents, 84% were EMTs, 10% were EMCs and 6% AOs.

The group consisted of 87% males and 13% females. Their ages ranged from 22 – 65 with the average being 39.5 years. Of these, 74% were married or in a cohabiting relationship and 61% had at least one child. The majority (70%) was educated to higher secondary or tertiary level. For the vast majority (84%) their job in the Ambulance Service was their sole current paid employment. Previous employment, prior to joining the Ambulance Service, included health care (25%), transportation (20%), clerical/managerial (14%) and Defence Forces (11%). The survey yielded additional demographic information about the NASS group. This included
the fact that the average respondent had just over 10 years experience in the service, worked an average of 13 hours overtime each week with, in the case of EMT’s, an estimated 44% of total work time devoted to A & E type duties and almost all of the remainder given to patient transport services.

In the 12 months prior to the survey 57% of the group had undergone between one and five days of in-service training while 17% had received more than this. However, 26% of respondents reported that they had received no in-service training in the previous year.

Only 6% of the group reported that they had not undertaken additional training courses, beyond basic EMT level - 72% of respondents had completed at least two further courses. This demonstrates a high level of commitment to training at all levels of the service.

Need for Emotional Support amongst the NASS Group

Participants were asked how often they perceived themselves as needing support arising from their work experiences. Of these, 43% of respondents reported that they very rarely or never needed such support, 36% rarely and 21% reported requiring support at least monthly.

The most frequently used sources of support were co-workers (57%), family (53%) and friends (34%). This pattern of support seeking is similar to that reported among staff of a UK regional emergency service (Orner, 2003). Some 8% of respondents reported that they had sought support from a trained Peer Support Worker (PSW), 6% had sought support from their trade union representative and a similar percentage from management.

When asked who should carry out post-trauma support, 58% of respondents expressed a preference for this being provided by ambulance service peers while 41% were of the view that this should be provided from outside the service. A total of 74% of respondents reported that there was a trained PSW in their station/base, 14% had consulted a PSW but 56% reported that they would be reluctant to do so.

At the time of the survey, only one third of respondents had attended a stress awareness training session.
These findings indicate that, at the time of the survey, the National CISM committee still had significant work to do in order to improve the penetration of stress awareness training and to enhance the acceptability of its PSWs amongst ambulance service staff generally. In the intervening three year period we have made a significant investment in training additional PSWs, refreshing and upskilling existing personnel and in enhancing their role as stress awareness trainers. While we do not have up-to-date independent objective information on the effect of these measures, reports from the regional coordinators and other sources suggest that the deficits identified in the survey are being addressed. We plan to carry out a further survey within the next year to establish whether this is the case.

The passing into Irish law of the Health & Safety at Work Act (2005) has provided an important additional stimulus for ambulance service management, staff and the National Committee. All need to redouble their efforts to ensure that those in the service who face significant emotional stress arising from their work are as well prepared as possible to cope with that stress and, when necessary, are well supported when exposed to it.

Bullying

During the consultation process which was part of the development of the survey, bullying was identified as a significant source of stress by all grades in the service. It was seen as a widespread problem.

On the basis of an internationally recognized definition of bullying, 39% of respondents reported that they had been bullied within the previous six months. The level of reported bullying did not differ significantly from one service region to another. Similarly, the level of bullying experienced by each group (EMT, EMC and AO) did not differ - no group was statistically more likely to report being the victim of bullying than any other. However, EMTs were most commonly reported as the source of bullying but given that they make
up the largest grade sub-group within the sample, this may not be surprising. It is important to note that bullying of ambulance service personnel, particularly EMTs, by hospital staff with whom they come in contact is also reported – although to a much lesser extent.

On the basis of the same definition of bullying, 59% of respondents reported that they had witnessed others being bullied in the previous six months. EMTs and EMCs were statistically more likely to have reported witnessing bullying than AOs. A further detailed analysis of the figures showed that bullying in the service was not predominantly a top-down phenomenon but rather that the bulk of it was directed by the perpetrator at a colleague(s) in his/her own grade.

There are no comprehensive published studies of workplace bullying across a broad range of occupations in Ireland. However, a recently published survey in the UK reported that 10% of respondents had experienced bullying in the workplace. However, within the health services 33% of respondents reported being bullied indicating a very substantial problem in this work environment. Judged against this standard, it seems possible that Irish ambulance service personnel may have experienced even higher levels of bullying.

These findings confirm the view that bullying is a widespread problem within the ambulance service. The stress and unhappiness created by bullying is likely to be very significant and, when added to that generated by what is, in any event, a demanding and stressful job, represents a substantial threat to health, safety and staff morale. It is widely recognized that the primary responsibility for addressing this issue rests with management of the organisation at all levels. However, these findings demonstrate that bullying in the ambulance service is not primarily a top-down phenomenon.
All staff need to have a significantly enhanced awareness of:

- the emotional and psychological impact of bullying,
- the costs at both individual and organisational level and
- have a much greater sense of empowerment in reporting bullying, or intervening to challenge it, whether as a victim or a witness.

Our committee and the CISM system have a role to play in this process and we intend to further develop our contribution in this regard.

The NATS Group

The NATS group consisted of 82 participants in three consecutive new entrant courses at the National Ambulance Training School - 81% were male and 19% were female. The average age of the group was 31 years, 82% had educational qualifications to higher secondary or tertiary level, 42% were either married or cohabiting and 40% had at least one child. Previous employment history of the group included Health Care (32%), Clerical/Managerial (25%), transportation (15%) and emergency service (10%).

The principal reason for including the NATS Group in the study was in order to have a comparison for the NASS Group. In terms of demographic variables there were only two areas where the groups differed significantly: firstly, and not surprisingly, the NATS Group was significantly younger (on average about eight years), and, secondly, the proportion of people who had a previous employment history in clerical/managerial work was significantly higher. In all other respects the groups were similar, the only exception being that the NATS group had no experience of working in the Health Boards ambulance services. On the basis of these findings, it was concluded that it would be valid to make comparisons between the results of the two groups and to draw inferences from any significant differences in survey findings. A number of very significant differences emerged and these are discussed in detail below.
CHAPTER 4

Chapter 4 reports the survey’s findings on levels of psychological distress in the two groups (NASS and NATS). It also compares the findings with those from other comparable groups and discusses them in the context of the literature more generally.

Measuring Psychological Distress

Psychological distress was measured using the 28-item version of the General Health Questionnaire (GHQ-28). This is a very commonly used screening instrument for the identification of mental health problems and has been widely used in other studies of emergency service personnel. It has four sub-scales which measure respectively somatic symptoms, anxiety and insomnia, social dysfunction and depression.

A comparison of NASS respondents from the different service regions (East, West and South) showed that there were no significant differences between the regions in terms of the levels of reported distress. A similar comparison between the operational grades of respondents (EMT, EMC and AO) also found no significant differences. Therefore, no region or grade within the service is at any greater risk of experiencing psychological distress than any other. Conversely, no group has a significantly lower risk of experiencing mental health problems than any other.

Comparison with the general Irish population

In 1991 Whelan et al carried out a study of psychological distress in the general Irish population using a shorter version of the GHQ, the GHQ-12. Studies have shown that results from the two versions are comparable. Whelan et al found that 17% of the Irish general population scored high enough to be categorised as "cases". To be categorised as a ‘case’ the respondent has to score above the threshold which indicates that they are probably suffering from clinically significant levels of psychological distress.
The proportion of ‘cases’ identified in the NATS sample was 20% which is essentially the same as the general population. However, 33% of experienced personnel in the NASS sample scored high enough to be categorised as ‘cases’. This is significantly higher than the level in the general population. A comparison of the sub-scale scores of the NASS and NATS groups showed that the former scored significantly higher on all five sub-scales. Thus, their higher overall levels of distress derived from all five sub-categories (see above). These findings further substantiate the evidence from other studies: namely, that working in the ambulance service has an adverse effect on mental health.

A comparison of these findings with those obtained from a sample of Dublin fire-fighters (Shalloo, 1999a) showed that NASS study participants had significantly higher levels of somatic symptomatology than their fire-fighter colleagues but were otherwise similar. Studies of ambulance personnel in the UK (Clohessy & Ehlers, 1999, and Alexander & Klein, 2001) indicate similar or, perhaps, somewhat lower levels of psychological distress there although the differences are not statistically significant. Therefore, it is reasonable to conclude that levels of psychological distress were similar across ambulance services in England, Scotland, and the Republic of Ireland.

Studies of ambulance service workers in Northern Ireland (Rodgers, 1998a and 1998b) have indicated higher levels of attrition than amongst other groups of NHS staff. This can give rise to what has been called the "healthy worker effect" where those who are psychologically vulnerable leave the service while those who are robust remain. This is an important safety mechanism.

Given the high level of psychological distress found in the NASS group when compared with the general Irish population, an important subject for future research will be to establish whether there are appropriate avenues open to those who experience very high and prolonged levels of distress which would allow them to leave the service.
Comparisons within the NASS Group

Only 33% of experienced ambulance service personnel had attended a stress awareness training session. The figure is comparable for each of the three regions. The levels of psychological distress, as measured by the GHQ-28, were not significantly different in those who had attended a stress awareness training session when compared with those who had not.

It has generally been assumed that one of the effects of stress awareness training is to enhance participants’ capacity to cope with stress. This finding does not support that assumption and indicates that we need to carry out more detailed research on the effects of stress awareness training and how to maximise its impact.

Those who reported attending a peer support worker (PSW) had significantly higher levels of psychological distress than the remainder of the group who had not done so. In fact, they were more than twice as likely to be categorised as ‘cases’ on the GHQ. This indicates that they had good reason for consulting their PSW and endorses the role which PSWs play in supporting colleagues in difficulty.

The levels of psychological distress in those who reported having been bullied was very significantly greater than the remainder of the group. In fact, they were three times more likely to be categorised as ‘cases’ on the GHQ than those who did not report having been bullied.

This finding further emphasises the importance of addressing the problem of bullying which has been shown to be widespread and which we have already referred to above. Clearly, it has a very significant adverse impact on the mental health of the bullied.
CHAPTER 5

The ambulance service has long been recognised as a high stress occupation. The survey measured the level of occupational stress in the NASS group using the Sources of Pressure Scale (SPS) which has previously been used in a number of studies of emergency services. One of these was a study of UK ambulance service personnel (Young & Cooper, 1995 and 1999).

The NASS group reported significantly lower levels of occupational stress on four of the sub-scales of the SPS but similar levels on the other two sub-scales. It is possible that the higher levels reported by Young and Cooper were the result of an industrial dispute which was ongoing in the UK service at the time of their survey.

CHAPTER 6

The working lives of ambulance service personnel are punctuated by repeated, but unpredictable and therefore difficult to prepare for, exposure to a whole range of events which are outside the range of usual human experience and which would cause significant distress to almost anyone. There is good evidence to show that a history of exposure to previous traumatic events may predispose those involved in a current event to develop post-traumatic stress symptoms. Studies of emergency service personnel from a number of countries have shown that the following incident characteristics are important in determining whether a ‘call’ is rated as stressful or distressing:

- incidents that were experienced as personally meaningful – e.g. because of a personal threat to the emergency responder, a colleague or emotional attachment to the victim(s)
- incidents involving children
• vicarious incidents where personnel had the opportunity to ‘contextualise’ their patients
• unusually gruesome incidents.

As part of this study, a structured instrument for identifying and measuring potentially traumatic incidents in ambulance service personnel was developed. So far as is known, no such instrument has previously been devised. The Ambulance Trauma Index (ATI) consists of 11 items in the four categories described above. Respondents are asked to rate the frequency of their exposure to such events on a four point scale.

In the NASS group, 93% of respondents reported trauma exposure of some description. The type of incident most commonly reported was attending at “a particularly disturbing suicide” followed by incidents involving contact with gruesome injuries or human remains. Almost 60% of respondents had treated a member of their own family or colleagues in the emergency services and almost 10 per cent reported attending the suicide of a colleague. The majority of respondents, 59%, reported that they had been attacked while on duty and 40% had had their lives threatened as a result of duty related incidents. Three-quarters of respondents reported that they had had to deal with unusually gruesome incidents and more than half had attended a cot death of a child.

_for us, the striking conclusion of this chapter of the survey is that, for the first time, it provides objective evidence of the range and extent of potentially traumatising experiences to which ambulance service personnel are exposed during their working lives._
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CHAPTER 7

The diagnosis of Post Traumatic Stress Disorder (PTSD) is based on criteria set out in the Diagnostic and Statistical Manual of the American Psychiatric Association, 4th Edition (DSM IV). For a person to be diagnosed as suffering from PTSD a number of sets of criteria have to be satisfied. Criterion A defines the nature of the event or incident to which the person must have been exposed as one where “the person witnessed or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others and the person's response involved intense fear, helplessness or horror” (APA 2000).

Chapter 7 reports on the measurement of Criterion A event exposure in both the NASS and NATS samples. This is particularly important in understanding the aetiology of PTSD. While other studies of ambulance service populations have measured the extent of PTSD, none has previously reported directly on the nature of the events that have precipitated the development of the disorder.

Of the 72 students who participated in the NATS survey, 61 reported exposure to trauma of some kind but only 18, 25% of the total, reported having been exposed to an incident that they had found very difficult and distressing to deal with. This is important since it gives some indication of what the baseline trauma exposure of entrants to the ambulance service might be. Comparing these findings with an epidemiological study of psychological trauma and PTSD in the general population in Munich (Perkonigg et al, 2000) suggests that the NATS sample is not significantly different.

Participants in the NASS survey were asked to give details of the incident in their professional experience in the ambulance service which they had found most difficult to
deal with personally. Responses were sorted into five categories. The most frequently reported category was events which were personally meaningful for the respondent. Almost 30% of events fell into this category. This was very closely followed by the category of child death (29%). The single most commonly reported traumatic incident was that of sudden infant death syndrome (SIDS).

The NASS group of experienced personnel had a very significantly higher rate of Criterion A events (80%) than the NATS trainee group (25%).

These findings clearly demonstrate the extent to which ambulance service personnel are exposed to potentially distressing, not to say psychologically traumatising, events when compared with new entrants to the profession and, by inference, the general population.

CHAPTER 8

Chapter 8 explores the prevalence of post traumatic stress disorder (PTSD) in the study samples. Essentially, PTSD is an anxiety disorder characterised by symptoms of arousal, avoidance and re-experiencing of the traumatic event or some aspect of it. In a survey of trauma in the general population of the Detroit area of the US in 1998, Breslau et al found a lifetime prevalence rate of 9.2%. In other words, 9.2% of the general population could expect to experience PTSD in their lifetime. Perkonigg et al (2000) conducted a similar study in the Munich area of Germany and found the lifetime rate of PTSD to be 7.8%. Other European studies have found lower lifetime rates.

Many of those exposed to a potentially traumatising event do not develop the full range of symptoms of PTSD which would justify making the diagnosis. Nevertheless, they may develop some of the symptoms and these can give rise to significant levels of distress. This is generally referred to as ‘partial PTSD’.
The phenomenon of vicarious traumatisation, sometimes described as ‘compassion fatigue’, is now widely recognized as having the potential to lead to the development of PTSD. This occurs in people who witness the traumas experienced by others – often repeatedly.

The extent of PTSD in the study samples was measured using the Post-Traumatic Symptoms Scale-Self Report Version (PSS-SR) (Foa et al, 1993). This has been used in studies of at least two other ambulance services in other countries and this was an important reason for choosing it in this instance.

Four hundred and thirty two (80%) of the NASS sample reported experiencing a personally distressing trauma at some time in the course of their work. Some 75% of the sample experienced at least one symptom of PTSD. A third of the sample (33%) reported a sufficient number and range of symptoms as to indicate that they had at some time suffered from full PTSD arising from line of work experience(s). A further 17% reported sufficient symptoms to indicate that they had experienced partial PTSD.

Some 80% of those who reported that they had been exposed to a traumatic event reported having upsetting intrusive thoughts or images about the event afterwards. Some 58% of respondents reported sleep disturbances, while 55% reported concentration problems and 50% reported feelings of heightened irritability or fits of anger.

*Increased levels of sleep disturbance, concentration problems and heightened irritability are likely to have very significant implications for service delivery.*

The vast majority of the traumas that precipitated a full PTSD reaction had occurred in the five years prior to the survey.
Amongst the trainee group (NATS) the rate of full PTSD was 4% and that of partial PTSD was 7%. This was comparable with the rates reported for the general populations in the US (Breslau et al, 1998) and Germany (Perkonigg, 2000) and is in marked contrast with that found in the NASS sample of experienced personnel. Experienced personnel are 12 times more likely to report full PTSD than trainees.

Clohessy and Ehlers (1999) in their study of a UK regional ambulance service found a prevalence rate of PTSD of 21%. A comparison with the 33% rate in the NASS study indicates that they are not statistically different. However, it is possible that this may be the result of differences in the size of the two samples.

**CONCLUSION**

This study has provided clear evidence of the impact which working in the ambulance service has on the mental health and emotional well-being of those who choose to serve the community in this profession. Clearly, they put themselves at significant psychological risk when compared with the generality of the population.

The challenge for all of us is to minimise that risk and ensure that those who are affected are provided with the best possible care and support.