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Published

2004

Journal Title

Journal of Emergency Primary Health Care

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**STUDENT CONTRIBUTION**

**Mental health and mental illness in paramedic practice:  
A warrant for research and inquiry into accounts of paramedic clinical judgment and  
decision-making**

Article No. 990092

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**ABSTRACT**

This paper is the first in a series that heralds a study examining paramedic accounts and constructs of judgment and decision-making (JDM) of mental health and mental illness. Providing an introduction and background to the evolving study, the paper will establish a warrant for the research and scope of the research agenda and methods of inquiry.

**Background to the Research**

The provision of appropriate mental health services for Australians is an urgent national health priority. The National Mental Health Report 2000 cites that almost one in five (18%) Australians suffers from a mental disorder, and that 3% of the total population live with a serious psychiatric disorder at any one point in time[1]. Fundamental changes to health-care policy in Australia and around the world have led to an increase in the extent to which emergency personnel come into contact with patients experiencing mental health problems [2, 3]. The launch of the National Mental Health Policy by the Australian Health Ministers in 1992 provided the stimulus for significant changes to psychiatric services within the Australian health-care system[4]. Mainstreaming of services was a central feature of these changes, shifting the provision of traditional psychiatric care from dedicated institutions to integration and co-location with mainstream general health services and community settings. Such changes to mental health service delivery have been problematic for health-care workers across many disciplines. The decentralisation of mental health services has resulted in increased attendance at emergency departments and to emergency medical services by patients with mental health problems, something well documented in Australia and around the world [2, 4, 5]. Some facilities have reported a 10-fold increase of the number of patients presenting to the Emergency Department (ED) with mental health problems in 10 years [6]. Health care workers from a variety of disciplines have reported perceiving themselves as lacking the skills and expertise to provide appropriate care and treatment to this client group [1, 4, 5, 7, 8]. Such events and factors have meant that health-care workers, particularly community health and emergency personnel, are increasingly required to manage a variety of patients mental health problems, often complex and chronic in nature [1-4, 6].

In Queensland, legislation has recently undergone major revision in line with national and international reform in the provision of mental health services. The Mental Health Act 2000 (Qld) (MHA)[9] is, broadly speaking, the major legislative instrument regulating involuntary treatment and protection of people who have mental illnesses in Queensland. The MHA provides for the involuntary assessment, treatment, and protection of persons experiencing a mental illness while at the same time safeguarding their rights. While the MHA focuses on

the aspects of mental illness that cannot be dealt with in other legislation, it does not specifically provide for voluntary treatment of mental illness. Voluntary treatment of mental illness is regarded in the same way as treatment for any other illness, with the protection of rights secured by other legislation. The MHA has been drafted to comply with the National Standards for Mental Health Services (1997), the United Nations Principles for the Protection of People with Mental Illness and for the Improvement of Mental Health Care (1997), and a model mental health legislation agreed to by all Australian states and territories. The MHA also reflects contemporary clinical practice, international, national, and state policy directions, and broad community expectations. An important aim of the MHA is to reduce the stigma associated with mental illness.

The MHA provides for the involuntary assessment, treatment, and protection of persons (whether adults or minors) who have mental illness while at the same time safeguarding their rights. Emergency provisions under the MHA exist for police officers, paramedics, and psychiatrists. Pursuant to section 33(1) of the MHA, a paramedic (or a police officer) may make an emergency examination order for involuntary admission where the officer 'reasonably believes' that: (a) a person has a mental illness; and (b) because of the person's illness there is an imminent risk of significant physical harm being sustained by the person or someone else; and (c) proceeding under Division 2 (Justice's examination order) would cause dangerous delay and significantly increase the risk and harm to the person or someone else; and (d) there is no less restrictive way of ensuring the person is assessed[9]. The MHA defines mental illness as 'a condition characterised by a clinically significant disturbance of thought, mood, perception or memory'. The MHA further defines 'belief' as a 'reasonable belief', which is characterised as a 'belief on grounds that are reasonable in the circumstances'. An emergency examination order is dependent on the belief of the paramedic that the patient meets all of the criteria set out in section 33(1) of the MHA. The emergency examination order made by a paramedic or police officer is critically informed by a determination, or a judgment of the paramedic or police officer, that satisfies the criteria for involuntary admission. In the event that an individual does not satisfy the criteria for involuntary assessment, the provisions of the MHA do not apply.

### **The Research Problem**

Paramedics are required to undertake rigorous, thorough, and complete assessment of their patients, often in difficult or emergency situations. Paramedic assessment of mental status is essential in determining the appropriate treatment for patients presenting with a mental illness. The introduction of new Queensland mental health legislation precipitated widespread industrial concern within the Queensland Ambulance Service (QAS) regarding the ability of paramedics to comply with explicit legislative requirements, citing poor education in mental illness and assessment techniques. The QAS prepared and distributed an in-service education program on the new MHA, which was designed primarily to orientate paramedics to the administrative functions of the MHA to meet their statutory and professional obligations. Its introduction was problematic. Paramedics expressed concern voiced through the union about the quality of existing education of its members and the ability of paramedics to satisfy legislative requirements owing to limited education and training in mental illness historically. Paramedics at the time expressed concern for their preparedness to manage mental illness in practice given the prevailing policy frameworks and contexts. The introduction of this education program signalled the existence of other issues in this context, and provided an opportunity to examine the relationship between theory and practice in paramedics' judgment and decision-making (JDM). Importantly, it has highlighted the dearth of knowledge and research, substantiated by a literature search, about paramedic knowledge, judgment, and clinical decision-making in the context of mental health, mental illness, and mental health assessments.

Six key themes are discussed that establish the warrant and justification for the research.

### **1. Industrial Relations and Action**

The introduction of new legislation governing the practice of paramedics of the Queensland Ambulance Service (QAS) has precipitated significant industry concern about the ability of paramedics to satisfy legislative requirements citing insufficient education and training in mental illness. These concerns are mirrored in the related literature that examines mental health assessment and management practices in medicine, nursing, and the allied health professions. The related literature of studies into the nursing and medical professions illustrates that generally the recognition and care of mental illness is limited [2-5, 7, 8]. This literature demonstrates the problematic nature of knowledge, recognition, and management of mental illness by health-care professionals, and that further education and training of such professionals is required. To date there has been no published study found that specifically examined paramedic mental health knowledge, judgment, and decision-making practices nationally or internationally.

### **2. Statutory and Legislative Obligations**

The style and working provisions of the various mental health Acts worldwide have attracted intense criticism in the international literature. In particular, the major area of concern relates to the conditions in which clinical judgments that precipitate involuntary assessments are made. Holdsworth and Dodgson [10] report that the Mental Health Act (2004) (UK) seriously impairs the clinical reasoning practices of individuals who act under provisions of the legislation in clinical or practical settings. Stating that the use of criteria that are based on frequentist statistical analysis excludes the ability of the clinician to use information idiosyncratic to the individual in making clinical judgments, Holdsworth and Dodgson [10] argue that legislation of this nature over-values statistical frequency of clinical risk assessment and under-values idiosyncratic qualitative information, which is much more difficult to explicate, represent, or qualify. The use of objective statistical frequency assessments in determining clinical risk without concomitant weight or consideration to idiosyncratic qualitative judgments has been strongly criticised [11]. The workings of Australian mental health Acts are yet to be examined in the published literature and will be examined in detail in this study.

### **3. Paramedic Clinical Practice and Clinical Practice Policy**

In order to improve clinical practice and clinical governance, the QAS has published a clinical practice manual consisting of a series of clinical guidelines, protocols, and flowcharts, including one for the management of 'psychiatric emergencies'. The protocol is designed to provide paramedics with a guide to managing patients who are suffering a 'psychiatric emergency'. In simple terms, the protocol requires that all paramedics transport their patients who they suspect suffer from a 'psychiatric emergency' to definitive medical care. This policy, and its workings, is at odds with provisions of the MHA, which require paramedics to take action based on 'reasonable beliefs in such circumstances'. The workings of this discrepancy in terms of conflict in judgment by paramedics in practices are of interest to this study. Shaban and colleagues [12, 13] suggest that the protocol is problematically constructed, narrow in the breadth of psychotic disorders, not reflective of the spectrum of mental illnesses, heavily biased towards a small percentage of psychotic disorders, and has significant limitations in view of the context and challenges presented to paramedics in the emergency care setting. The protocol will be the subject of further analysis in the continuing study. Anecdotally, the majority of cases reported by paramedics relating specifically to psychiatric emergency are those where there exists unacceptable risk of suicide, self-harm, or harm to others. No definition for 'psychiatric' is provided in the wider context of mental

illness. It is suggested that lack of characterisation of the category limits or biases the use of it in the field. The term 'psychiatric' is narrow and may only reflect states of psychosis or serious psychiatric states (e.g. suicide) rather than broader mental health conditions encountered by paramedics that are more prevalent in the community. The generic classification of mental illness and mental disorders by paramedics as 'psychiatric' is problematic, particularly as it relates to conventional and contemporary definitions of mental illness. No other category exists to which mental illness other than that which is 'psychiatric' could be applied.

#### **4. Paramedic Education and Training Programs**

Accredited paramedic and ambulance officer education and training programs are relatively new [12, 13]. The practice of paramedics and ambulance officers on a state, national, and international level may be characterised as a craft or guild. With the exception of a recent in-service undergraduate degree, all ambulance education programs are of a competency-based training (CBT) nature. CBT, an extension of competency-based education based on behavioural learning theory, focuses primarily on demonstrated outcomes rather than inputs. It is concerned with what someone may be expected to do, rather than on what actual learning processes occur [14]. The capacity of paramedics with either CBT or Diploma based qualifications to conduct complex cognitive assessments, such as mental health assessments, has not been examined. Shaban and colleagues [12, 13] suggest that in, in principle, the level of existing ambulance qualifications does not adequately prepare paramedics to make clinical judgments in contexts outside those they have learned, and may be of limited relevance in complex or uncertain environments and ecologies.

In view of this, even more problematic is the notion that paramedics are performing tasks that may or may not lead them to a 'belief' that someone is mentally ill when in fact the characteristics or assumptions that determine it to be 'belief' have not been described or examined. Patel, Arocha, and Kaufman [15] argue that the concept of 'belief' is justified and is based on knowledge explicitly formulated in symbolic forms. These symbolic forms or 'beliefs' of paramedics surrounding mental health, mental illness, and mental health assessments have not been examined in the published research. The widespread systemic and profound negative stereotyping of mental illness within the community is well documented nationally and internationally[16].

An analysis of QAS education, training, and professional development materials used from 1991 to 2003 [12, 13] reported an absence of explicit education and training in mental health assessment practices, clinical judgment, and decision-making. Analysis of this information, which included training materials, curricula, syllabi, clinical practice policies, and education records, suggests that ambulance officers and paramedics are not trained in comprehensive mental health assessment practice or clinical judgment and decision-making as it relates to mental health. The QAS Clinical Practice Manual (2003) [17] provides a list of cues that officers should look for when managing someone with a 'psychiatric emergency'. However, it does not detail declarative judgment processes as to how to conduct the assessment or how judgments would, should, or could be formed.

#### **5. National and International Trends in Mental Health Care**

The National Mental Health Report 2000 recommends increased participation of a wide range of health, welfare, and disability professionals and organisations in the provision of services to people with mental disorders[1]. Further, the report calls for increased knowledge and understanding of mental health and mental disorders for all health-care professionals, an awareness of additional needs with increased co-ordination of services provided to consumers and carers, and increased community interest and involvement in mental health issues. In

order to contribute to and participate in the national mental health reform agenda, paramedics must be provided with comprehensive education and training opportunities with particular focus on judgment and classification, and management of mental disorders within appropriate professional practice, policy, and legislative frameworks. The role or potential role, impact, and influence of paramedics in the wider mental health agenda have not been examined in the published literature nationally or internationally in this context.

## **6. The Literature**

The largest body of research located in support of JDM relating to mental illness is limited to the professions of medicine, nursing, and police. While much research has been undertaken to investigate mental health assessment practices in the domain of psychiatry, research into practices in the ambulance or paramedic setting is limited. Few studies were found from other health-care disciplines (such as multi-disciplinary technical services) with no studies relating to the specific research problem of this study.

Studies of paramedic JDM in cases of mental illness or psychiatric emergency referrals are rare. A search of the national and international literature sourced ten articles that examined paramedic JDM. All the articles found related to the examination of paramedic JDM as it related to cardiac arrest, trauma, triage, or decision to transport patients to definitive medical care. No articles were located that examined the JDM practices of paramedics in the domain of mental health, mental illness, or mental health assessments.

The literature and theories on judgment and decision-making are as extensive as they are controversial. The fragmented nature of studies to date within the general health disciplines addressing aspects of clinical judgment process has not yet resulted in a comprehensive understanding of the phenomena [18] or a suitable universal model or theoretical framework. Studies have traditionally followed or engaged one particular JDM paradigm or philosophy exclusively. Few, if any, have sought to view or examine JDM in more than one paradigm, which is a recent and growing criticism of the current body of research [18]. Much of the work to date has applied descriptive approaches, such as information processing theory, in an attempt to contribute greater understanding of how judgments are made. In doing so, these studies, in the main, have provided greater insight into the cognitive process involved, particularly with respect to assessment practices. However, the ecological validity of many of these studies has been questioned [19-21], particularly with the criticism that they have focused on the representativeness of the judgment tasks presented [18]. Many JDM studies have occurred in contexts and ecologies away from the clinical setting and therefore do not induce the same cognitive effect commensurate with the context [18, 19].

Conversely, some studies have focused primarily or exclusively on the accuracy or quality of the judgment or judgment process. To date, these studies have focused on judgment error in particular disciplines, largely the operations and management sciences [11]. A major criticism of these studies, that are normative in nature, is that they negate to value of context, ecology, and interaction in examining the JDM processes [18, 22, 23]. Other authors have criticised the methods by which risk, uncertainty, and stress have been quantified, arguing that no matter how quantified, the full effect of such factors can never fully be understood outside the context of the individual [24, 25]. Sources of judgment errors in other contexts and disciplines need to be examined and explored. The use of prescriptive approaches, which attempt to improve JDM and help individuals to make better judgments, has also been criticised as a single paradigm of inquiry [18, 22]. Used considerably in teaching or instruction contexts and intervention studies, prescriptive models have been used to help individuals make better judgments and improve the quality of both the judgment and decision-making process. However, most studies have worked only within the prescriptive

paradigm, resulting in significant limitations on the value of their findings in other contexts and paradigms [26]. Further, a number of studies have attempted to improve JDM in the absence of any normative or descriptive data or constructs, and have failed because of a lack of understanding of the judgment process or the quality of a good judgments [18, 22].

It is clear that there are differing and competing accounts of judgment and decision-making in the literature and in research. In considering this study, it is apparent that none of the theories, philosophies and accounts of JDM individually are sufficient to address the specific research problems. There exists a dearth of judgment research in paramedic practice. A thorough literature review failed to locate research that examines the mental health assessment practices of paramedics. Given the recency of paramedic practice and pre-hospital care as a recognised discipline in healthcare, this omission is not unexpected [12, 27].

There is a paucity of published work on critical thinking and clinical reasoning in this setting, which could suggest that the value of these skills are not yet fully appreciated in the field of pre-hospital care [12, 27]. The few studies that have been conducted have examined JDM as it related to specific cases and instances (particularly cardiac arrest and trauma) and have worked within one particular JDM paradigm or theoretical construct, such as normative or prescriptive theory. These studies, as discussed earlier, are significantly problematic and have significant limitations due to study design or philosophical context. No article could be located that addresses either generally or specifically paramedic JDM practices with respect to mental illness, mental health, and mental health assessments, despite a growing warrant for this research. The absence of published research examining paramedic practice to achieve more accurate judgments (or indeed JDM at all) in the context of mental illness and mental health has meant that the impact of significant changes to practices precipitated by the MHA and trends in mental health care have occurred unexamined. The complexity of clinical situations faced by paramedics, where for example multiple contexts exists with significant levels of uncertainty, risk, and time criticality, most of which make clinical judgment process difficult has not been examined. The identification of strategies to support a more effective judgment processes a challenge has not been attempted [18].

### **Summary and Future Considerations**

The rapid change in paramedic practice and ambulance care over the last decade has precipitated a number of challenges to the profession to ensure the sufficiency of professional practice standards, education and training programs, clinical standards, and policy for ensuring quality practice and accountability in the field. This paper has presented the background and warrant for of an ongoing study into one important area of paramedic practice: the management of the mentally ill. At issue in this ongoing study and warrant for research is the preparedness of the role of paramedic and the ambulance profession to recognise, assess, and manage mental illness in everyday practice. This research provides for a unique opportunity to examine the relationship between theory and practice in paramedics' judgment and decision-making JDM in the context of mental illness and mental health assessment.

### **Acknowledgments**

The author would like to acknowledge and thank Mr Jim Higgins, Commissioner QAS, and Dr Richard Bonham, Medical Director QAS for their approval and support of this research. I would also like to acknowledge and thank Associate Professor Claire Wyatt-Smith and Professor Joy Cumming for their supervision and support, and Mr Jason Emmett for his editorial review of this manuscript.

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