APPENDIX 1

A Literature Review

of the Ambulance Industry

December 2014

APPENDIX 1

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1. INTRODUCTION

1.1 Background

In October 2013 the ACT Government announced the requirement to conduct a review of the ACT Ambulance Service (ACTAS) culture (Knaus, 2013). Emergency Services Minister Simon Corbell stated:

> I think both the employees and the employer recognise that there are a range of issues around culture that would benefit from a detailed look at the ACT Ambulance Service (Knaus, 2013).

This review of ACTAS started in May 2014 under a Terms of Reference requiring, in part, a 'literature review of ambulance industry culture from both Australia and overseas identifying cultural attributes of progressive ambulance organisations.'

The aim of this literature review is to baseline the **ambulance industry** and provide a foundation for the effective assessment of the ACTAS culture. Furthermore, this literature review fulfils, in part, the agreed Terms of Reference.

1.2 Method

A literature review assesses the available body of knowledge in a given field. Webster and Watson (2002) define an effective literature review as one that 'creates a firm foundation for advancing knowledge' (p.13). This foundation rests upon the analysis and synthesis of related material. The format for this review combines elements of an annotated bibliography with the overall literature review to highlight salient points and supporting references.

The literature review covered the following electronic databases: EBSCO, Scopus, PubMEDLINE, Google Scholar and PsychInfo. The search strategy used terms such as ambulance service reviews, ambulance service culture and organisational reviews. The search strategy yielded 1031 records. These records were reviewed for relevance with a preliminary list extracted for assessment. Additionally, the references of the preliminary list were searched and additional records added. The strategy also covered relevant websites such as:

- Paramedics Australia (https://www.paramedics.org/)
- Council of Ambulance Authorities (http://www.caa.net.au/)
- International Paramedics (http://internationalparamedic.org/).

Key review stakeholders and experts in the fields of the search strategy were contacted to gather further records. The reference list for the literature review is at Section 7.

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1.3 Structure

Key terms from the Terms of Reference include: ambulance industry, culture and attributes of progressive ambulance organisations. An analysis of these key terms provides the basis for the structure of the literature review.

Section	Title	Content
1	Introduction	Background, purpose, method, structure
2	Organisational culture	Defining, layers and communities, links to capability, risks
3	Ambulance industry	Levels of culture, features of industry, nature of work
4	Progressive attributes	Identifies key attributes for effective change
5	Change strategies	Methodology for conducting change
6	Change threats	A series of potential roadblocks to effecting change

Each section starts with a Section Synopsis. This provides a summary of the pertinent points found within the literature relevant to that Section. Each Section then covers these points in further detail.

APPENDIX 1

2. ORGANISATIONAL CULTURE

Section Synopsis

What is organisational culture? Organisational culture is a social construct based on shared assumptions that drive beliefs, values, behaviours, thoughts and feelings of the group.

Four levels of culture

1. Executive
2. Manager
3. Engineer
4. Operator

This provides a framework for organisational cultural analysis. Dysfunctional environments will undermine organisational effectiveness (in people, performance, processes or potentially all three).

Health organisations have tended to focus on reviewing performance of capability rather than culture.

2.1 Overview

This Section explores the concept of organisational culture from a Western world viewpoint. The Section covers the following areas: concept definition, occupational communities within an organisation, impact of male domination of organisations and consideration of the relationship between performance and culture. Organisational culture is a vast topic. The literature review has focused on aspects of organisational culture relevant to the guiding purpose of identifying a *baseline for the ambulance industry*.

The concept of organisational culture has generated considerable interest and literature. A quick Google Scholar search of the term reveals over 54,000 scholarly articles. The initial source for this level of interest stems from the American business response to the economic rise of Japan in the 1980s. *In Search of Excellence: Lessons from America's Best Run Companies* is perhaps the seminal, certainly the most well-known, investigation into corporate or organisational culture from that period. Essentially, effective organisational culture was identified as a potential panacea to American economic malaise. The initial business focus in the topic quickly spread to other industries and organisations. Increasingly the health sector has recognised the potential relationship between organisational culture and performance (Scott et al, 2003; Mannion, 2005; Wankhade, 2010).

Defining organisational culture remains both an important and elusive task. A simplistic almost colloquial understanding of the term is 'the way we do things around here' (Bower, 1966). This definition, attributable to Marvin Bower, who was McKinsey and Company's managing director 1950-67, prompts an investigation of:

- what things?
- what way?
- who is we?
- where is here?

Before starting this investigation (in Section 3), an analogous way to think about organisational culture is that 'culture is to an organisation what personality is to the individual' (Callahan and Ruchlin, 2003). While, several commentators (Parmelli et al., 2011; Wankhade and Brinkman, 2014; Doherty et al., 2013) acknowledge the primacy of Edgar Schein's definition:

Definition of organisational culture

the pattern of shared basic assumption – invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration – that has worked well enough to be considered valid and therefore to be taught to new members as the correct way to perceive, think and feel in relationship to those problems.

Schein, 1985

Culture in organisational terms relates to what is shared between people from that organisation such as beliefs, values, methods of operating, behaviours, language, traditions, meaning and sense-making. Just as cement binds bricks to form a house, culture operates the same way for people within an organisation. Organisational history and the nature of the work form part of this cultural context for an organisation. For example, the nature of police work and political work differ as the history of aviation differs to the history of the ambulance industry. Consequently, the culture of these types of organisations will also differ.

This broad understanding leads to the challenge of identifying a framework to analyse organisational culture. Once again, the theory of culture offers a range of possibilities. Examples include Hofstede's (2001) dimensions of national cultures, Deal and Kennedy's (1982) model based on the risk-reward relationship within organisation to Handy's (1976) four types of culture: power, role, task and person. This brief discussion of frameworks establishes that culture is widely accepted as operating in layers.

Selecting an appropriate framework for conducting cultural analysis is an essential component of both the literature review and the overall Report. Schein's (1985, 2010) identification of three layers and three levels of culture within an organisation provides the necessary framework. Health organisations such as Schein's framework has been used to analyse numerous health organisations including the United Kingdom's National Health Service.

2.2 Schein's framework

Schein (2010) describes three layers of culture:

- **Layer 1 – Artefacts**. These are the most visible aspects of culture and include dress codes or uniforms, rituals, rewards and ceremonies. Typically, this level is associated with the observable behaviours. An example of this level is the green uniform of the paramedic.

- **Layer 2 – Beliefs and values**. These elements provide a rationale for the selection, conscious or unconscious, of observable behaviours. Time is of the essence and speed of response to an emergency are two examples of how these beliefs may manifest in the ambulance industry.

- **Layer 3 – Assumptions**. These are the unspoken rules and guidelines that underpin culture. The assumption that education and training as a paramedic is important to holding a managerial or leadership position within the industry.

These layers are like a cake viewed from the top with artefacts the icing, beliefs and values the filling and assumptions forming the base. Understanding the three layers provides a mechanism to analyse organisational culture.

Schein (2010) also recognises that within an organisation there are distinctive occupational communities. Schein especially emphasises the relationship of technology to the occupational community and the interaction between the communities. Understanding these communities is also critical to ascertaining the culture of an organisation.

2.2.1 Culture of Operators

The conduct of local operations in a given organisation provide the basis for this community. Operator culture can be identified in locations such as call centres, hospitals, manufacturing plants and offices. The conduct of the business or operation has a significant impact on this group. The conduct of the business or work both reflect and influence the technology used for the work. Schein (1996) notes 'as those core technologies themselves evolve, the nature of operations changes'. For example, the introduction of the word processor and individual computers into offices rendered typing pools obsolete. Where operations are complex, operators develop a high level of trust and interdependence within their teams, especially when dealing with unexpected events. Schein (1996) states:

> Rules and hierarchy often get in the way in unpredicted conditions. Operators become highly sensitive to the degree to which the production process is a system of interdependent functions, all of which must work together to be efficient and effective (p.13).

In other words, operators require a stable and effective process to ensure efficient delivery of their service or product. From the operators perspective a breach in this process, no matter how small, is disruptive, unnecessary and potentially hazardous to the operator outcome. Consequently, an operators' sensitivity can be viewed as critical, intrusive and aggressive from the perspective of others. Operator assumptions include:

- success is based on human interaction

- work is conducted in an unpredictable world
- knowledge is local and relies on the core technology of the organisation
- work involves interdependent teams based on openness, trust and commitment.

And the final word on the operator culture goes to Schein (1996):

> The tragedy of most organizations is that the operators know that, to get the job done effectively, they must adhere to the assumptions stated above, but that neither the incentive system nor the day-to-day management system may support those assumptions. Operators thus learn to subvert what they know to be true and "work to rule," or use their learning ability to thwart management's efforts to improve productivity (p.13).

2.2.2 Culture of Engineering

This community focuses on the basic design of the technology that supports the work of the organisation. Typically this level includes the engineers, designers and implementers of technology within an organisation i.e. IT staff. During the design of complex systems this level prefers a technical process to a human team. This community aims for automation with safety built into the system. Broadly, engineers are designers of products and systems with utility, efficiency and safety. These products and systems are 'basically designed to require standard responses from their human operators, or, ideally, to have no human operators at all' (Schein, 1996, p.14). Engineer assumptions include:

- optimism about mastering nature
- a preference for technical solutions
- safety orientation
- linear, cause and effect thinking.

2.2.3 Culture of Executives

High level executives in all organisations and in all industries confront similar problems. Consequently, they form a common worldview about the nature of business and what is needed to successfully run a business. This worldview is based on an organisation's health and is likely to focus on stakeholder outcomes – shareholders, markets, investors and boards (or, in the public sector, government and citizens). Organisational health for this community is a synonym for growth and financial success. Interestingly, Schein (1996) highlights this worldview is especially applicable to 'CEOs who have risen through the ranks and been promoted to their jobs.' (p.15)

The rise of executives through the management chain increases their proximity from, and ability to, influence the basic work of the organisation. This leads to a focus on financial or other organisational measures and the need to manage from a distance. The executive community installs increasingly impersonal control systems and routines. These two

factors can create a sense of loneliness for the executive. Moreover, accountability always flows to the top of the organisation. Indeed, the higher the level the less executives there are at level to connect with. Schein (1996) adds that the executive and engineering levels:

> see people as impersonal resources that generate problems rather than solutions…and view people and relationships as means to the end of efficiency and productivity, not as ends in themselves (p.16).

Executive assumptions are:

- financial focus for growth and survival
- relies on own judgment
- hierarchal focus –measures status and success and provides the means of control, risk is extended only where the executive retains control
- Individual focus – the organisation is a team accountable to an individual
- task and control focus.

2.2.4 A fourth community

Wankhade (2010) suggests the addition of a fourth community: managers. Specifically, this group represents middle management. There remains some conjecture as to a definition; however, this community typically connect the executive level to the operational aspects of the organisation. This group often find themselves caught between executive demands to deliver on performance targets and operator demands for changes to process.

2.2.5 Implications

Effective alignment between levels is essential to meeting the needs of these disparate cultural groups. Organisational renewal efforts due to changes in technology or the environment may cause collisions between these communities. This cultural clash is likely to cause negative emotions, low productivity, personnel problems and a failure to innovate. Research into nuclear plants found ‘the lack of alignment among the three cultures often led to inaction and the continuation of practices that were viewed as less efficient or effective’ (Schein, 1996, p.16). Workplace examples include:

- aviation – an airline crash due to the pilot functioning as the CEO failing to heed warnings from the flight engineer
- information technology – executives viewing IT as intrinsic to organisational control while IT specialists saw the elimination of hierarchy
- education – teachers (operators) valuing human interaction with students unwilling to adopt new technology designed by the engineers to improve teaching outcomes.

Importantly, the four different worldviews (operators, engineers, executives, management) are valid from their own viewpoint. People largely see themselves as good people trying to do good things, but 'they' get in our way. 'They', in this case, being one or more of the other cultural groups. The key to organisational progress is creating *mutual understanding between the levels* to evolve *shared practical solutions*. A common plan is necessary to enable all levels of the organisation to understand and commit to action.

The diagnosing of problems can also lead to cultural clash. Even where executives and engineers agree that people are the problem, they may disagree on the approach to fix the problem. This disagreement is the source of considerable angst and conflict within many organisations. Again involving both groups in 'seeing' the problem from a different perspective is essential to effecting a solution. Finally, Schein (1996) contends:

Until executives, engineers, and operators discover that they use *different languages* and make *different assumptions* about what is important, and until they *learn to treat the other cultures as valid and normal, organizational learning efforts will continue to fail*. (p.18) [emphasis added]

2.3 Managerial behaviour

> *…we know that virtually all human behaviour is transmitted by culture. We also know that biology has an important effect on the origin of culture and its transmission. The question remaining is how biology and culture interact.*
>
> Wilson (1998) in Braithwaite, 2008, p.534

Power and rewards are recognised as key elements of culture in a range of theoretical models (Handy, 1976; Hofstede, 2001). Organisational structures develop hierarchies for control of effort and delivery of performance. Within organisations, communities potentially compete and clash over respective needs. Individuals may also compete to fulfil their own needs and receive organisational recognition or rewards.

Many organisations are male dominated and the introduction of females into this environment can contribute to altered behaviours from males. Examples include the military, mining industry and police. The inclusion of females with males for the conduct of officer training has seen a progression on reports culminating the Australian Human Rights Commission investigation and subsequent report: *Report on the Review into the Treatment of Women in the Australian Defence Force Academy Part 1 2011*.

Within organisations the executive and manager levels remain predominately male. The 2012 Census of Australian women in leadership revealed that only 12.3% of ASX 200 company directors are women. An expansion of the Census to the ASX 500 companies actually lowers the percentage to 9.2%. Lisa McNamara (2013) highlights the percentages of females leading government departments or working as department secretaries was 37%. While this ranked second behind Canada in the G20 index, this is still someway short of the 57.4% of women in the public workforce. Finally, of 19 members of the current Cabinet only one is a woman, Minister for Foreign Affairs Julie Bishop MP (see Figure 1).

So, understanding male behaviour and especially male behaviour towards women is an important aspect of understanding organisational culture.

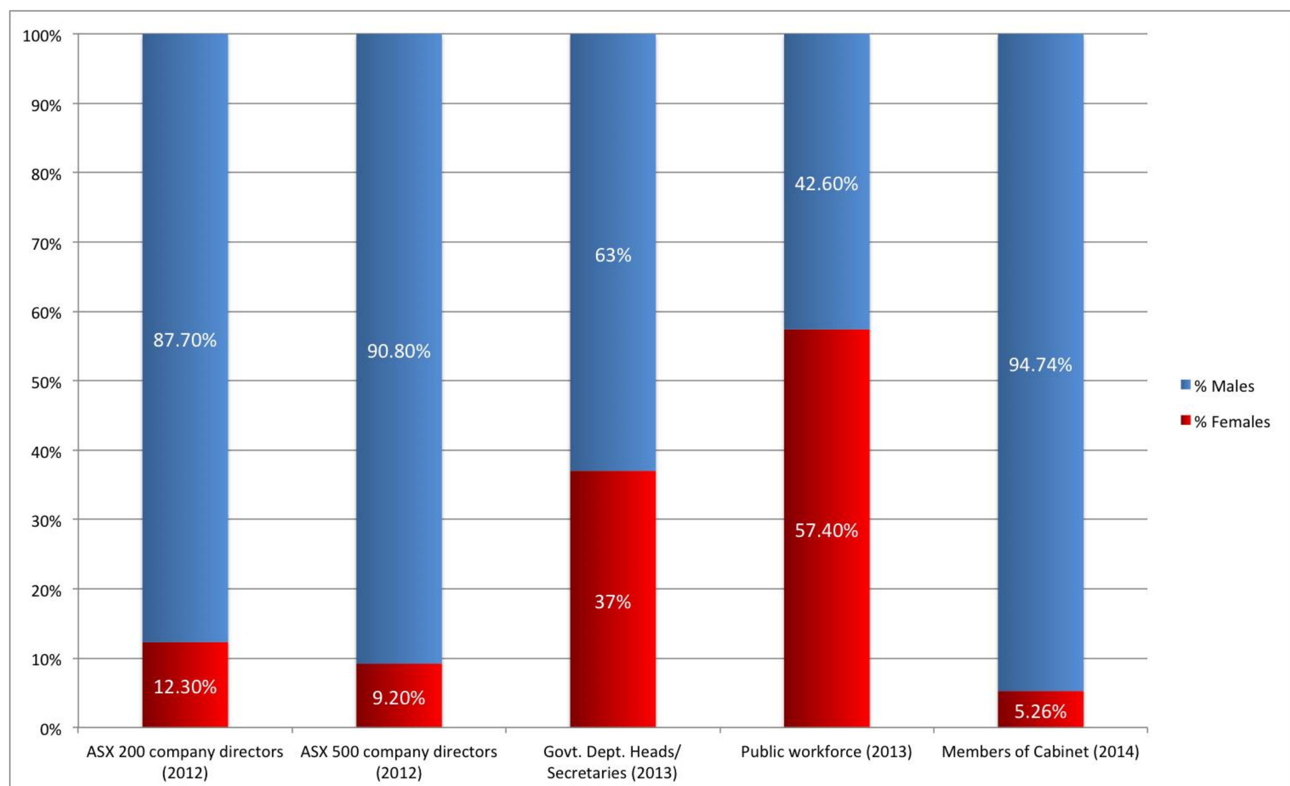

Figure 1: Women in the Workforce

Braithwaite's (2008) ethological study of Australian male management behaviour highlights the impact of biology in this regard. Males in numerous species from the animal world use lekking behaviour to attract females. Typically, this behaviour involves strutting, use of physical characteristics, colour and vocal efforts. Similarly, Braithwaite (2008) reports that male managers conduct similar displays mainly by power dressing, positioning, and exercising power and influence via verbal and behavioural means (p.529). The rewards for these behaviours are power, status, respect, income, perks and status symbols within the organisation.

2.4 Performance and capability

Since Peters and Waterman (1982) searched for the cultural corporate characteristics of 'excellence' considerable research has investigated the links between organisational culture and performance (Doherty et al, 2013). Performance, like culture, is a contested term with a variety of meanings. Many consultants conflate the two terms, 'performance-based culture', causing further ambiguity. Moreover, organisational performance often measured through financial indicators can also be associated with capability. In turn, capability is then measured through time, growth, distance and other metrics.

Understanding and defining organisational performance and capability are essential to organisational success. To use a sporting analogy, modern football now captures data on distance covered by the players, outcome of short and long passes, tackles made. This

performance data tends to focus on the trees at the expense of seeing the forest. *In other words focusing on measures of efficiency may miss measures of effectiveness*. Organisations need to determine the capability they deliver and measure the performance of this capability rather than the other way around. Organisations also need to understand any link between capability and culture.

In this respect health organisations such as national health systems, hospitals and ambulance services typically focus on performance and capability reviews without tackling the culture. Figure 2 illustrates the sources of information for the literature review.

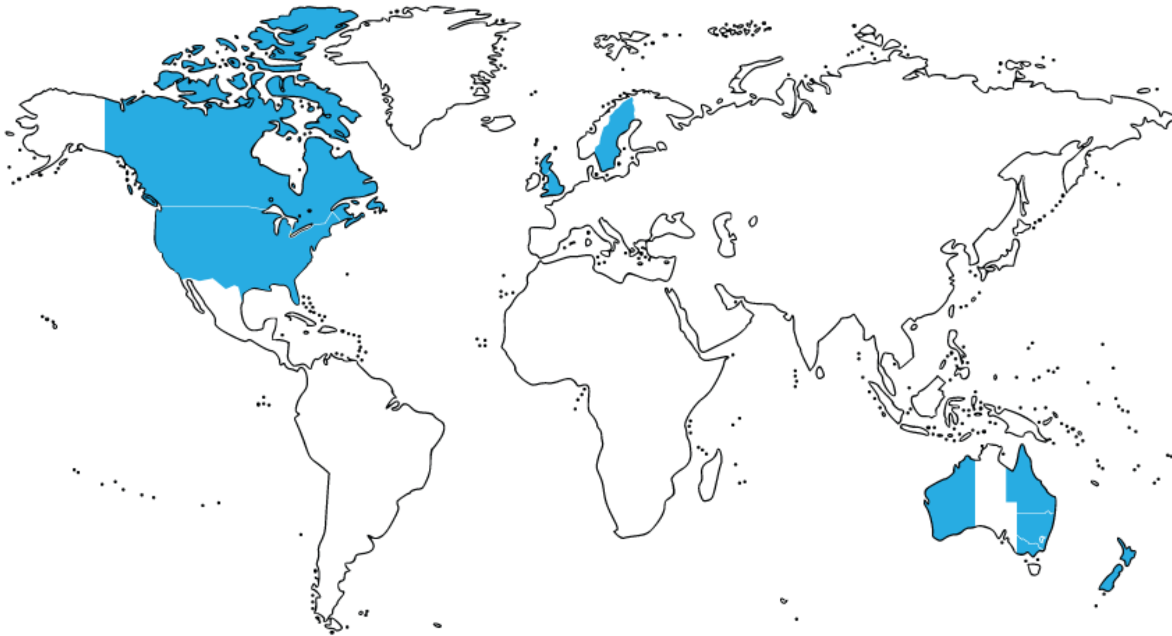

Figure 2: Information sources for the literature review

Table 1 provides a selection of recent reviews of health organisations. In Australia, Ambulance Tasmania, NSW Ambulance, Ambulance Victoria and SA Ambulance have all released strategic plans providing vision and direction for their organisation, staff and community. Ambulance Tasmania have also released a business plan covering 2013-2016. In all bar one of these reports performance of capability is the focal point. The exception is the NHS report evaluating progress, problems and promise (serial 13 of the table). However, this report derived from a policy research programme as opposed to an organisational review.

Doherty et al (2013) report that there is wide acceptance of the link between culture and performance within the corporate world. A number of scholars question the veracity of this link (Wankhade, 2010; Doherty et al, 2013, p.8; Wankhade and Brinkman, 2014). Nonetheless, scholarship and research into the emergency services, especially the ambulance service, has focused on this link. Wankhade and Brinkman (2014) report that 'some of the issues concerning ambulance performance targets and their unintended consequences might have their origins in the underlying occupational cultures in the ambulance service' (p.3). Indeed, the potential of culture in performance is attracting the interest of the broader health care sector (Doherty et al, 2013):

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In their February 2012 report, the CHKS Top Hospitals Programme advisory group acknowledged that '*organisational culture is one of the five elements that we have discovered to be common across award winning acute sector organisations in the UK*.' (p.8 – emphasis added by Doherty et al, 2013). However, empirical evidence supporting this observation is generally lacking. Doherty et al (2013) again:

> A comprehensive qualitative review by Scott et al identified over 1700 bibliographical records examining culture and performance. However, of the 69 full articles retrieved, only 10 health care studies were included in the final analysis – 8 of these were conducted in America, 1 in Canada, and 1 in the UK (p.8).

Key findings from this study include:

- health care organisations differ in their dominant cultural orientation
- culture is associated with performance
- understanding the dominant culture is likely to unlock the door to performance

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Ser	Year	Review	Content	Location
1	2006	Review of the Governance and Effectiveness of Rural Ambulance Victoria	Internal and external governance, business systems, financial and asset management, the allocation of roles and responsibilities between Head Office and Area Offices and RAV area boundaries.	Australia (VIC)
2	2007	Queensland Ambulance Service Audit Report	Overall efficiency and effectiveness of the QAS and conducted extensive research on different service delivery models and funding arrangements both interstate and overseas.	Australia (QLD)
3	2008	Inquiry into the provision of ambulance services in New Zealand	In order to determine possible improvements in the provision of ambulance services, this inquiry examined legislation, crewing levels, funding of services, restructuring, and training provision and standards.	New Zealand
4	2008	The management and operations of the Ambulance Service of NSW	Focus on management structure and responsibilities, staff issues, occupational health and safety	Australia (NSW)
5	2009	The Scottish Ambulance Service: A Service for Life	Achievements and performance of the emergency ambulance service of the Scottish Ambulance Service	Scotland
6	2009	ACT Auditor-General's Office Performance Audit Report	Delivery of ambulance services to the ACT	Australia (ACT)
7	2009	St John Ambulance Inquiry	Investigate performance, management, staffing, clinical governance	Australia (WA)
8	2010	Lennox Report	Review of ACT Ambulance Service Positioning the service to meet future challenges – funding, management structure, clinical governance	Australia (ACT)
9	2010	Audit summary of Access to	Response times post the amalgamation of metropolitan and rural	Australia

		Ambulance Services	ambulance services into Ambulance Victoria	(VIC)
10	2011	Transforming NHS ambulance services	Performance and value for money	England
11	2012	Reform Plan for NSW Ambulance	Setting the five key strategic directions	Australia (NSW)
12	2013	Newfoundland and Labrador Ambulance Program Review	Oversight and accountability of performance	Canada
13	2013	Quality and Safety in the NHS: Evaluating Progress, Problems and Promise	Assess the extent to which NHS organisations in England have cultures in which the most important values are those of providing and improving high quality and safe patient care.	England
14	2013	A Strategic Review of Welsh Ambulance Services	Effectiveness of current funding, accountability and governance arrangements, and identifying resilient options for the future strategic structure for ambulance services. The efficacy of current targets and the performance of ambulance services.	Wales
15	2014	Lennox Report	Evaluation of progress made in implementing the recommendations of an external review of the ACT Ambulance Service carried out by Grant Lennox in 2009/10.	Australia (ACT)

Table 1: Selected reviews of health organisations

Doherty et al (2013) provide further evidence supporting the relationship between performance in the health sector and culture. Ultimately, their summary of their investigation into the link between these areas is to view the field as an absence of evidence rather than evidence of absence. (p.10).

The risk of poor culture

There is an assumption tacit within the literature that *good* performance may link with *good* culture. Conversely, *poor* culture may contribute to *poor* performance. A poor culture may still produce good performance: although, this may be in a less efficient way. The effects of the poor culture will still be apparent within the organisation. This raises the following questions: are organisations willing to accept poor culture for good performance? Where are the effects of poor culture occurring within the organisation?

2.5 A performance model

Yonek et al (2010) identify the following features of high-performing health systems:

- **Organisational focus**. Shared, system-wide commitment to achieve the system's quality and patient safety goals.
- **Strategic planning and delivery**. The use of strategic goals for quality and safety along with frequent monitoring of progress towards achieving those goals.
- **Best practice**. Extensive opportunities and vehicles for organisations to *collaborate* and share best practices for improving quality and safety.
- **Transparency**. Around reporting performance, both internally and externally.
- **Teamwork**. To improve quality and safety and shared accountability for good outcomes.
- **Progressive thinking**. Having a mindset of perfect care and dramatic increases or stretch goals as compared to incremental improvement.

Clearly, this is a positively constructed model and assists organisation to either baseline themselves or underpin the development of future paths. The converse of this positive model is provided by Lencioni's (2002) model, which illustrates the five dysfunctions of a team (see Figure 3).

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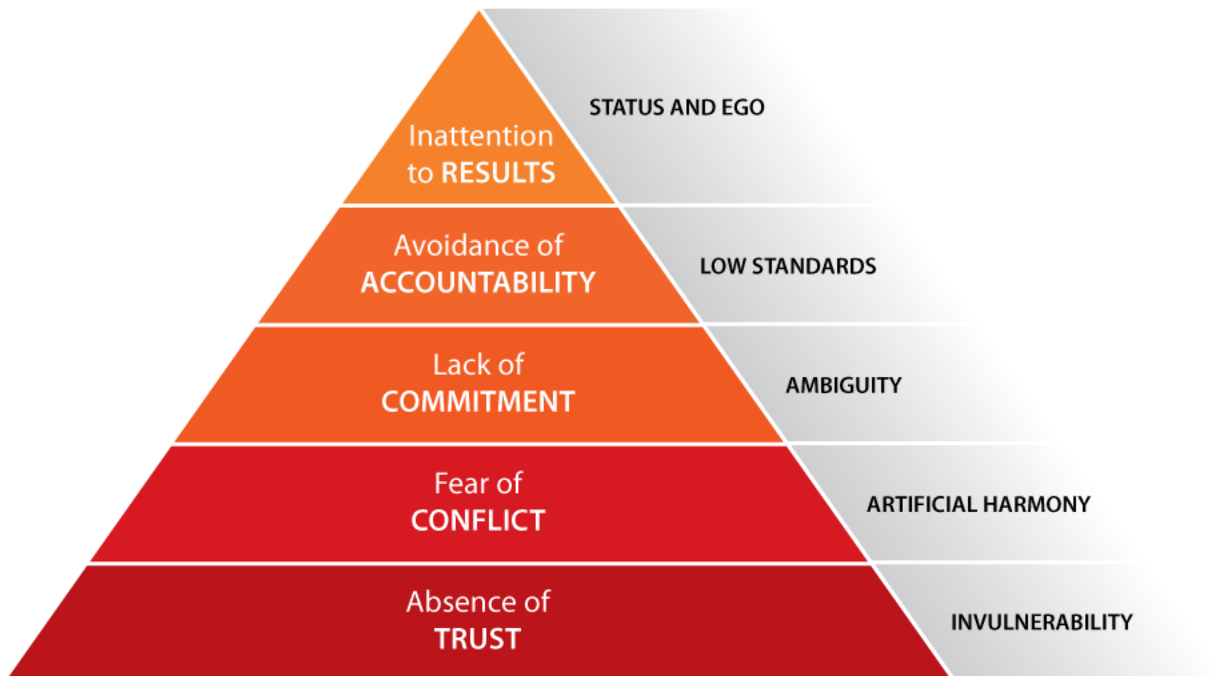

Figure 3: Five dysfunctions of a team

Lencioni contends that some of the features of these dysfunctions are:

- **Absence of trust** – hold grudges, concealment, hesitation, avoid spending time together, which leads to an unwillingness to be vulnerable within the group
- **Fear of conflict** – boring meetings, personal attacks, ignore controversy, posture, which leads to artificial harmony
- **Lack of commitment** – ambiguity about direction, excessive analysis, lack of confidence, second-guessing among members
- **Avoidance of accountability** – resentment, encourages mediocrity, miss deadlines, undue burden on leader as sole source of discipline, which sets low standards
- **Inattention to results** – stagnates, loses achievement-orientated employees, keeps employees for wrong reasons, rarely staves off rivals, places personal ambitions and outcomes before professional and team success.

APPENDIX 1

3. The Ambulance Industry

Section Synopsis

Key question. Is the ambulance service the emergency arm of the health system or the health arm of the emergency system?

Industry features

- Leadership style – command and appointment driven
- Risk – at the heart of every decision
- Capability reviews – many reviews for little action?
- Blame – 'us' versus 'them' creates stagnation
- Unionisation – high levels of union membership
- Engagement with staff – tendency to focus on capability at expense of staff.

3.1 Overview

This Section explores the concept of the ambulance industry from a Western world viewpoint. The Section covers the following areas: history, nature of the work, application of occupational communities within the industry and features of the industry.

Is the ambulance service the emergency arm of the health system or the health arm of the emergency system?

This is a key question for the ambulance industry and respective ambulance services to answer. For the answer to this question assists ambulances services to look, feel, behave and deliver accordingly. Consequently, this question assists to frame this chapter investigating and baselining the ambulance industry. More specifically, the 'industry' centres on Western world ambulance services such as those found in other jurisdictions of Australia, New Zealand, Canada, the United States of America and the United Kingdom. Services within this industry may use different models – emergency response versus health operated, private versus publicly run, volunteer versus professional – yet all exist to act as likely first health system responder in a health situation and all are influenced by modern technology.

This exploration of the culture of the ambulance industry focuses on the 'what things, what way, who is we and where is here' questions raised in the previous section.

3.2 History

In 1487 the Spanish Army introduced field hospitals – *ambulancias* – for the wounded. The military contributed to the development of triage procedures, transportation of the wounded and emergency care and equipment. The first hospital based ambulance service began in the United States in 1865. Metz (1981) contends the first service to be 1869 operated out

of Bellevue Hospital in New York City (p.4). The founder of the service, Edward Dalton, believed speed was necessary to effect a positive patient outcome. A belief that persists to this day in many jurisdictions. The St John Ambulance Brigade began dedicated ambulance services in London in 1887. St John's was modelled on a military command and discipline system. Interestingly, 'until the early 1970s morticians operated more ambulance services in the United States than any other kind of provider' (Metz, 1981, p.2). An interesting comment on the expected outcome of the patient!

Highlighting the military origins of the service, the first ambulance service in NSW – the Civil Ambulance and Transport Brigade – started operations in 1895. In the ACT from 1935-55 Fire Service members provided ambulance services. In 1955 the Canberra Ambulance was established as a separate entity form the Fire Service.

Even this brief history highlights the role of uniformed services, belief in speed as the best cure and relationship to transport – especially vehicles – as the modus operandi for the service. The last aspect reinforced through the growth of the motor vehicle and concomitant growth in roads throughout the Western world.

3.3 Nature of the work

Ambulance services deal with pre-hospital emergencies on a daily basis. This is a large part of their core business. The features of this type of work were:

- **Emergencies**. Dealing with traumatic, high adrenaline life and death situations such as road accidents
- **Reactive**. Unscheduled events requiring instantaneous and speedy action
- **Ongoing**. Operating 24/7 through shift work
- **Low skill levels**. Better than public levels less than hospital staff levels
- **Transport focussed**. Movement to better care at hospitals was the primary goal
- **Demand**. Population growth contributes to increased service usage
- **High levels of stress**. Major traumatic incidents, little rest, confronting emotional situations demanding compassion contributes to the build-up of stress and related issues
- **Emotionally demanding**. The dispassionate delivery of compassionate services and care in emergency situations requires emotional control and regulation
- **Small team focused**. The predominant operator culture centres on pairs functioning together. Trust, reciprocity and loyalty are hallmarks of this type of relationship towards each other.

The nature of this work is dramatically shifting as Lennox (2010), drawing upon the UK's National Health Service, notes:

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Our nation's ambulance services have changed focus from 'taking patients to health care' to 'taking health care to patients' with high level pre-hospital medical care now provided direct to patients and continuing until handover to emergency medical specialists in hospital Emergency Departments (p.5).

3.4 Occupational communities within the industry

The four occupational communities (operators, engineers, executives and managers) within a typical organisation are now applied to a typical ambulance organisation. Consequently, the occupational communities are explored to identify the main contributors to that culture as opposed to a discussion of every work group found within an ambulance service.

3.4.1 Culture of Operators

Paramedics represent the foundation of any ambulance service. The road crews provide the health expertise on site at a health emergency or situation. Paramedics are likely to constitute the majority of the workforce and as the physical representation of the service raison d'etre form the dominant culture of the service. Paramedics assess and initiate any pre-hospital medical treatment and care. Increasingly, the assessment of the patient, based on the qualification of the paramedic, may lead to a non-hospital health provider. Categories vary across Australian jurisdictions with current key qualifications centring on ambulance paramedic, intensive care paramedic and extended care paramedic. Typically, a two-crewed ambulance vehicle attends a 000 call and this crew is likely to have a mix of levels. The required introductory knowledge and skills are local as each jurisdiction in Australia typically organises training based on the area that they serve and their core technology. Note that recently a base level qualification for entry into the ambulance service as a paramedic requires a tertiary qualification.

The ambulance crew have an expected time of response based on the priority given to the emergency by the Communications staff. Daily workload is variable and unpredictable with operators ready and alert to respond to the unexpected. Acceptance of this type of work and adaptable are useful attributes for operators.

3.4.2 Culture of engineers

> From the point of view of delivering performance, the first point of call has to be the control room. If you get the control room right then the rest will fall into place. If you haven't got your control room processes, procedures right, you haven't got a cat in hell's chance of getting your road staff sorted in that respect. It has to start from the centre and move its way out – UK Senior Board Executive (Wankhade, 2010, p.14).

The 24 hour Communications Centre is the hub of ambulance service operations. The centre receives 000 calls for assistance and translates this information into an appropriate health response. Typically, this results in the despatch of an ambulance to the emergency situation. The communications centre has an array of modern information communication technology to support service delivery. Technology enables ambulance tracking through satellite navigation and instantaneous communication with operators. Each shift within the centre consists of call takers, call dispatchers, clinical specialists and a supervisory officer.

The size of the ambulance service and expected demand from the supported area determine the staffing levels of the communications centre.

Call takers are trained communicators that categorise emergency calls in an objective and logical manner by asking the caller structured questions. These questions enable the quick identification of key health symptoms and rapid response from the service. Call takers have a basic level of first aid and life saving knowledge to deliver emergency support when required. Call takers have a set time to respond to a 000 call and set in motion the appropriate response.

Call dispatchers receive the information from the call takers and assign a vehicle (s) to the call. This is based on location of the vehicle, priority of the call and availability of the crew. Calls and communication between the operators and the communications centre are recorded for legislative and training purposes.

Management of the resources (ambulance vehicles) is the sole responsibility of the communications centre. The twin pressures of time and resource allocation require the engineers of the ambulance industry to keep a close track on the performance, progress and location of the operator. The focus is on service delivery in the allotted time. Nonetheless, communications centre staff monitor operator work levels to assist with sustainment of an effective service throughout the shift.

3.4.3 Culture of executives

Executives focus on managing service delivery at a macro level. This entails a focus on financial aspects of the business, relationships with key stakeholders such as government, relevant union, other emergency services, health departments, hospitals and health providers. A key priority is obtaining sufficient funding to enable organisational survival and effectiveness. The executives are likely to compete for funding in a hostile and competitive environment with other organisations, whether emergency or health focused. There is a clear responsibility to ensure the service performs at or above expectations in a range of metrics: financial, capability and response. An inability to achieve these targets is likely to be viewed as a personal failure.

3.4.4 Culture of managers

This culture links the strategic level of the executives to the daily operations of the operators and engineers. This strata of middle managers are responsible for, yet removed from, the conduct of operations. Broadly speaking, they are the conduit between the operators/engineers and executives. Consequently, managers divide their time between delivering work up the chain and down the chain. As in any organisation, middle managers are necessary, essential yet often under-utilised resource as they sit uneasily between the other cultures. Operators and engineers, for example, are likely to see middle management as obtrusive, intrusive and ineffective as their requests for information get in the way of doing the job. Yet, this information is what the executives require to make strategic decisions. Executives blame middle management when this information is either absent or late.

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3.5 Features of the industry

The literature review identified several features of the ambulance industry. These features appeared across both the literature and different ambulance services.

3.5.1 Leadership style

Perhaps stemming from the history of the industry many ambulance services use a 'command and control' leadership style (Bradley, 2005; Paramor, 2008; Wankhade, 2010; Wankhade and Brinkman, 2014). While this claim misrepresents the style of leadership, the roots of the industry lie within the uniformed services, specifically the military.

Initially, Western based militaries were highly regimented and ordered in structure and performance. This style of leadership provided the basis to control the resources in an effective fashion. Hierarchy and command were entrenched within these organisations. As the nature of the military changed – with less resources, more potent and accurate weapons all operating within a more complex environment – so too did the nature of the leadership style. Western militaries adopted a form of command and control providing greater focus on the ability of lower tier commanders to make decisions within the context of *understanding the direction of superior commanders and their overall organisation*.

Ambulance services have used a command and hierarchy focused style of leadership to direct the resources and deliver performance. As Wankhade (2010) points out:

> the organisation was too focussed on operational performance and had to deal with the historical and legacy factors of command and control culture of a uniformed service in which there was a culture not to question the decisions made by seniors (p.20).

Given the operational nature of their work, this style of leadership is useful in certain situation such as the emergencies and health events that constitute the core of the business for an ambulance service. Understandably then, this form of leadership becomes ingrained within the people of the organisation. While this form of leadership has a place in modern ambulance services, there is considerable scope to adopt different styles to suit the complexities and challenges the industry currently confronts.

The misuse of this leadership style can be mis(construed) as bullying and harassment. There are multiple press reports (Catalano, 2007; Miller, 2008; Phillips, 2008; Knaus, 2013; James et al, 2014) highlighting potential bullying and harassment issues within the ambulance industry across Australia, including Victoria, NSW, ACT and the Northern Territory.

3.5.2 Risk

Risk is at the heart of every decision and step along the pathway from reception of the initial 000 call to effecting the right level of healthcare for the patient. At one end of the healthcare spectrum the ambulance industry is at the frontline of saving lives. Decisions made by call takers, dispatchers, team leaders and paramedics effect people's lives everyday. Procedures and processes are designed to minimise risk for the patient and as

a by-product the organisation. The Western Australian inquiry into their ambulance service in 2009 stated:

> An ambulance service can do things right nearly all of the time but still be criticised when mistakes occur because of the grave consequences (Government of Western Australia, 2009).

This feature permeates the industry as ambulance services remain cautious in their approach. At times unnecessary process and layers of bureaucracy can obscure the outcome and can restrict accountability. Indeed, any and all potential changes – whether introducing technology, modernising culture and leadership, adjusting clinical procedures or conducting organisational re-structure – need to be risk based assessments. That is, what are the consequences (both intended and unintended) of the proposed change? Any analysis must be viewed in light of the performance and requirements of the ambulance service. In modern parlance this means taking healthcare to the patient in an expedient and effective method.

3.5.3 Capability reviews

The ambulance industry is a much reviewed industry. Professor Siobhan McClelland the Chair of a strategic review into the Welsh ambulance service noted 'I was conscious that this work was seen by some as "yet another Review" creating anxiety and uncertainty and with little chance of significant improvements for patients' (2013, p.4). The snapshot of reviews in Section 2 numbers 15 reviews. The ACT has conducted three major reviews since 2009, this review constitutes the fourth. There is a clear sense of review fatigue, especially within Australia:

> Unfortunately ambulance jurisdictions in Australia, including Western Australia, are beguiled by many lengthy reports and little action. There is always the risk this will happen with this Report (Government of Western Australia, 2009, p.v).

The majority of reviews are in response to incidents where something has gone awry, The Western Australian review into their ambulance service – St John's – derived from a Four Corners report in July 2009. The program 'detailed four deaths resulting from inadequate responses by the ambulance service that required immediate investigation' (Government of Western Australia, 2009. Doherty et al (2013) notes the genesis of the review of organisational culture sprung from 'serious adverse incidents in healthcare, in the United States, Europe and the UK' (p.3). Typically, these reviews focus on capability and performance at the potential expenses of the impact of broader organisational culture on organisational activities and achievements (see Section 2).

Admittedly a small number of reviews have partly targeted culture. Victoria conducted a review of Rural Ambulance Victoria in 2006 in response to 'public concern regarding the organisational culture of RAV including complaints and allegations of sexual harassment and a culture of workplace bullying and other inappropriate behaviours' (Government of Victoria, 2006). Likewise, NSW conducted a review in 2008 investigating the culture because 'the incidence and mismanagement of bullying and harassment was a major impetus for this Inquiry' (NSW Parliament General Purpose Standing Committee No. 2, 2008, p.3).

Results of these reviews have been somewhat mixed. In 2006 when the UK National Health Service re-organised the ambulance trusts from 32 to 11, there remained considerable cultural dissonance and disaffection *across all levels of the culture*. Wankhade (2010) in a review of the outcomes ‘the concept of culture needs to be taken more seriously than has been done in the past (p.24). NSW instituted a Healthy Workplace Program to improve staff morale and workplace culture.

The NSW *A Respectful Workplace* training program was a major component of the overall strategy with all 4000 staff trained over 12 months in simple techniques for raising and responding to concerns about workplace behaviours (Pickering et al, 2009, p.8). A formal management development course including staff management and health workplace elements was compulsory for the first three levels of frontline management. Notably, the credibility of this self-reported information is based on the numbers (the efficiency) rather than any behavioural shift (the effectiveness). Indeed, a media article in 2010 highlighted that the state’s top bureaucrats said ‘It will take years to stamp out the **culture** of bullying and harassment within the **Ambulance Service**, despite more than $1 million being spent on establishing "healthy workplace" strategies’ (Hall, 2010). The centrepiece of the strategy according to the article is a mandatory four-hour training session. In the same article Professor Picone – Director-General NSW Health – was quoted as saying ‘We can't achieve cultural change in an organisation of this standing with a 115-year history through a single training course in a year; it is going to be a long-term process’. Which raises the question: why institute something doomed to fail and entrench the difficulty of making any future progress because of that failure?

3.5.4 Blame

The nature of the occupational communities within an organisation and their worldview (see Section 2) creates the potential for blame to part of the culture. That is, each occupational community defends and protects their own view at the expense of others. This can result in ‘blame-shifting’ whereby ‘they’ as opposed to ‘us’ are the problem. They are typically ambiguously described, but usually this can be summed up as ‘not us’. ‘Us’ means the immediate workgroup or team. The further away from ‘us’ the more blame is attributable.

Blame is about protection – of the worldview, of my team, of me and my competence. Blame is an avoidance tactic whereby responsibility and accountability for individual actions are passed to ‘they’. This cultural feature stymies individual development and effectiveness and contributes to organisational stagnation. Lennox (2014) highlights this point:

> The most difficult and challenging situations to deal with (for managers, fellow staff, unions and professional bodies) are those few practitioners who refuse to accept deficiencies in their care, who “put up shutters” and defence mechanisms and expect an all-out battle to “clear their name” rather than accept clear deficiencies in their care for a particular case and then take onboard opportunities to learn from the care deficiency through education and training (p.32).

Blame occurs when different levels, different people, different cultures focus on their own monologues rather than constructing dialogues. Schein (1996) highlights what needs to

happen: 'We must find ways to communicate across the cultural boundaries, first, by establishing some communication that stimulates mutual understanding rather than mutual blame' (p.19).

Overcoming this issue is challenging enough without boundary blame. This is where organisations pass responsibility for failings to other organisations or groups. A clear example of this in the ambulance industry is where union action conflicts with executive and management focus on organisational outcomes.

A UK Commission of Health Improvement found in 2003 that the ambulance service had a tendency to blame. Lennox (2014) reported that a guiding principle of the ACTAS clinical governance framework was a focus on 'continuing professional development rather than allocation of blame and punishment' (p.29). Similarly, Doherty et al (2013) found that organisations across the NHS employed a blame culture (p.18). Doherty (2013) also reports instances of this feature in the United States, specifically the Dana-Faber Cancer Institute in Boston (p.19).

3.5.5 Unions

Within Australia a range of unions are associated with the ambulance industry including the Transport Workers' Union (ACT), Health Services Union (NSW) and the Liquor, Hospitality and Miscellaneous Union (WA). Union links to ambulance services derive from the history of the industry and vary according to jurisdiction. The ambulance industry started life as typically unskilled blue collar work. This is an observation made by Metz (1981, p.59) and supported by a Swedish paramedic 'we used to give care with the gas pedal' (Samuelsson and Berner, 2013, p.723). Indeed, Samuelsson and Berner (2013) comment:

> Ambulance crews, with only limited medical training and with no sophisticated medical technology at hand, sought to provide quality care primarily by driving fast and delivering patients quickly to the hospital. Studies conducted in countries outside of Sweden (e.g., Douglas 1969) have found a similar pattern (p.723).

Different unions will drive different agenda depending on their workforce and the background of the union. Certainly, the Transport Workers Union may be expected to drive an agenda for safe driving and transport, while the Health Services Union may focus more on the health aspects of the organisation. Ultimately, unions will represent their members as that is their purpose. The Western Australian inquiry noted 'a "Strained" relationship between the union and management, with the potential for major disruption to the ambulance service' (Government of Western Australia, 2009, p.14). One senior executive in the UK noted: 'I am being realistic and it is very unionized making it much more difficult to make changes' (Wankhade and Brinkman, 2014, p.17). A further challenge is the vocal minority of ambulance staff that drive their unions to aggressively deal with many issues, which can include responses to poor clinical performance.

Clearly when unions engage constructively with the ambulance industry – a dialogue rather than a diatribe – this results in a positive outcome. One example is the Ambulance Tasmania –Positive Workplace Strategy 2013, which was a joint statement with the union establishing values and positive communication training.

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3.5.6 Engagement level

The engagement of staff within their workplace seems variable. Increasingly many Australian jurisdictions are recognising the role of engaging staff to achieve organisational outcomes. This comes through in the strategic plans and statements of Tasmania, NSW and South Australia. Statements represent intent; however, the activation of the intent is unknown. Various reports and studies tend to highlight a lack of engagement with staff as highlighted by the following quotes:

> The success of *Taking Healthcare to the Patient* (DoH, 2005a) largely depends upon the active participation and motivation of the frontline paramedics who deal with 999 emergencies. A de-motivated workforce can seriously impinge on the success of any culture change programme:
>
> *"We see non-core activity being ruled down to help to balance the operational resource. What matters is delivering the bottom line performance target. So we might get there very quickly but will do in a kind of poor vehicle, poorly trained and poorly motivated staff that would have the negative impact on the organisation" (*Wankhade, 2010, p.24).
>
> Cultural change is high on the Government agenda and involves all elements of cultural and organisational changes with key elements including amongst other things, empowering front line staff to use their skills and knowledge to develop innovative services with more say in how services are delivered and resources are allocated, and changing the NHS culture and structure by devolving power and decision-making to frontline staff led by clinicians and local people (Wankhade 2010, p.3).
>
> Ambulance officers painted a bleak picture of their workplaces during the Inquiry. They described highly dysfunctional environments characterised by low staff morale, unresolved conflict and a nepotistic 'old boys club' – report on NSW from Parker, 2008, p.xiii.
>
> Indeed, it has been found that the ambulance industry suffers serious management cultural problems, resulting in high levels of unresolved conflict within a dysfunctional working environment – TWU official Ben Sweaney quoted in Knaus, 2013, p.1.

3.6 Transformation

3.6.1 A health profession?

The Australian Health Practitioner Regulation Agency (AHPRA) supports the 14 National Boards representing various health professions such as dental, medical, nursing and midwifery, and pharmacy (for a full list see http://www.ahpra.gov.au/National-Boards.aspx). One of the roles of the Boards is to register their health practitioners and students. This is accomplished in conjunction with AHPRA through a Health professional Agreement. AHPRA manages the registration and renewal processes for health practitioners and students around Australia. With some exceptions AHPRA, on behalf of

the Boards, manages investigations into the professional conduct, performance or health of registered health practitioners. Registered health practitioners maintain their competence, currency and credentials in accordance with the stipulations of their National Board.

Health professions face a high level of scrutiny from both the public and their own health practitioners. The homepage of the AHPRA website enables *anyone* to make a complaint about a health practitioner. Consequently, health professions hold themselves accountable and are assisted in this process through acceptance of the need for transparency and scrutiny of their qualifications, capability and performance.

A professional

A professional is an individual who:

- takes responsibility for their own actions
- adheres to good governance that direct behaviour
- meets entry and ongoing competence standards
- abides by ethical and moral principles
- whose practices contribute to leadership in their profession.

Lennox (2014), p.33

Numerous ambulance services are in the process of professionalising. The UK national ambulance review built upon efforts modernising paramedic education through degrees, increasing regulation through the Health Professional Council and streamlining performance (Wankhade, 2014, p.6). Suserud (2005) notes the professionalisation of the Swedish ambulance services has caused the workforce and small teams to close ranks (p.34). Interestingly, Suserud (2005) further reports that professionalisation included the integration of the ambulance service into the total healthcare system. On the ground this meant that *specialist ambulance nurses replaced paramedics* (p.34). This was causing a shift in the culture from 'a traditional "fire brigade culture" to a more egalitarian and gender balanced "healthcare culture".

Lennox (2010) notes of ACTAS: 'The increasing professionalism of paramedic care is now progressively being recognised through transition of paramedics into health professional pay scales alongside nurses and a range of other health professionals' (p.5). Pay is a simplistic measurement of a profession as Lennox (2014) adds mindset is a key element of the shift to a profession: 'To fully embrace a high level of personal and professional accountability for the safety and quality of care provided to patients is not always a small mindset shift for every staff member' (p.32).

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3.6.2 Shifting from blue collar

In essence, the potential transformation to a regulated health profession requires a shift away from the blue collar nature of the industry. Here are a range of quotes highlighting this perspective:

> We have made paramedics professionals, but that was just a piece of legislation that was passed that protected the title. Historically it's a blue collar service. It's been run similar to the police and fire service – very operationally – and it's about bringing that clinical focus back in to run it as a clinical service as opposed to an operational one. But you've got a huge workforce there that is set in their ways – Senior Executive from a UK health trust (Wankhade and Brinkman, 2014, p.14).
>
> I vividly recall attending my first national meeting of senior ambulance managers in 1994. When we discussed some of the worst examples of (then) current industrial issues across Australia a very experienced senior person from a large state said we would do well to remember that many ambos were "like wharfies in the tea room but professionals at the bedside". I would have to say that from stories picked up over my career from various parts of Australia there are some "blue collar" attitudes held by some ambulance staff, some lack of appreciation of professionalism by some and …..at the other extreme some true professionals who justifiably earn the high esteem in which they are held by the public" – Interview with Grant Lennox.
>
> One big challenge before [the] Ambulance Service is how to professionalise a blue collar trade – UK Senior Board Executive (Wankhade, 2010, p.16).
>
> I think staff is finding it hard to understand the transition from trade to profession. They don't realise that some of the practices they perhaps got away in the past, they can actually be under an enquiry from the Professional Council for some of these practices Senior Manager (Wankhade and Brinkman, 2014, p.11).
>
> I think what we actually need to do is we need a take a non-professional blue collar workforce and migrate it into being a professional workforce – Senior Board Executive (Wankhade and Brinkman, 2014, p.18).

3.6.3 Nature of work

The nature of the work is changing as the arrival of sophisticated and modern communication technology increases the amount of information available to health professionals. As Samuelsson and Berner (2013) highlight this means 'The ambulance service has thus, in principle, been transformed from a swift transport unit into a complex information-gathering unit' (p.722). New technologies from smartphones to telemedicine enable ambulance crews to transmit a vast amount of information from prehospital and emergency situations to the receiving hospital. The effective introduction and best use of the available technology for the patient requires increased skill and a shift in mind set. A mind set focused on service delivery and outcomes. This will also require addressing the social and organisational aspects of the work setting.

The best recognition of this shift is the taking healthcare to the patient approach, which started with the UK in 2005. Bradley's Report – *Taking Healthcare to the Patient: Transforming NHS Ambulance Services* – was a watershed moment for the Ambulance Services in the UK. Bradley (2005) provided a blueprint for:

> how ambulance services can be transformed from a service focusing primarily on resuscitation, trauma and acute care towards becoming the mobile health resource for the whole NHS – taking healthcare to the patient in the community (p.5).

The blueprint covered leadership, organisational performance and measurement, patient outcomes and developing an empowered workforce. In Bradley's view implementing changes in these areas would produce a more proactive and dynamic service (Bradley, 2005, p.3). This highlights a change in both the nature of work and community expectations linked to technology, professionals and engagement with society in general.

Modern technology enables instant answers, feedback and engagement. Modern technology also enables the rapid passage of any type of information to a wide audience. The community expects a proactive and professional response from any organisation or entity, including government and the ambulance service. In other words, ambulance services are in the midst of shifting from a reactive relatively low skilled militarily organised force to a proactive highly skilled modern and professional organisation.

3.6.4 Investment in management

There is growing recognition that professionalisation of an industry includes a concomitant professionalisation of organisational leadership and management.

> Whilst clinical and emergency planning roles are seen to require professional qualifications, management is often perceived as something that can be learned on the job. Leadership and organisational management expertise must receive an increased level of attention and investment if the ambulance service is to fulfil its potential (Bradley, 2005, p. 11).

As noted by one UK Senior Board Executive in 2007, implementing this type of investment can be challenging:

> My biggest challenge is really continuing to keep clinical leadership and management at the top of the agenda. This is because it's going to require effort from the managers; it's going to require change and it's going to require money and none of those things have been mandated by political or local targets (Wankhade and Brinkman, 2014, p.12).

Notably, this need for investment transcends the health sector to many modern organisations. A Nous Group review of the University of Queensland in 2013 found:

> Limited experience and training or development means that UQ's managers are most likely to rely on learned behaviour from observing their direct manager. Where the manager's leadership style is not effective, this perpetuates a cycle of poor leadership practice. Others avoid their people management responsibilities altogether (Nous Group, 2013, p.22).

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Chief Executive Jayne Barnes CBE commented that she "was very conscious that the organisation over the years had been through a lot of change and it had been a very unsettling time. Five Chief Executives and seven Chairs over a relatively short period of time is good going for any organisation. When we were tendering for management training, I really was looking for something different. A new way of looking at management and leadership, that not only taught the theory but challenged perceptions, behaviour and discussed integrity. It is early days but already I can see a difference in the organisation."

Bradley, 2005, p.30

Leadership and management are clearly on the agenda of a number of jurisdictions. Ambulance Tasmania recognises *to lead with purpose* as a key organisational value, the 2006 review of Rural Ambulance Victoria noted the need to address organisational leadership, so too did NSW (NSW Ministry of Health, 2012). South Australia incorporated leadership as a strategic direction in 2009. Bradley (2005) identified leadership as a key area of investment to effect cultural change in the UK: 'The Department should fund a programme of management and leadership development for ambulance staff, having first commissioned research to understand development needs' (p.290.

A 2009 Report of the UK National Steering Group on clinical leadership in the ambulance service found the need to develop clinical leaders and clinical leadership within the ambulance service. The report defined clinical leadership as 'the ability to both create and sustain an organisational culture of excellence through continual development and improvement' (Pintar et al, 2007). The report also proposed a medical leadership competency framework (p.19) noting there is scope to develop ambulance officers into clinical leaders (see Table 2).

Competencies	Domains	Attributes
1. Personal qualities	• Self awareness – aware of own values • Self management – organising and management • Self direction – CPD • Acting with integrity – open and ethical	Personal mastery
2. Working with others	• Working within teams – deliver / improve services • Encouraging contribution – creating a contributive environment • Building and maintaining relationships – listening / supporting others • Developing networks – partnership working	Enabling team leaning
3. Managing services	• Planning – actively contribute to service goals • Managing resources – awareness and effective use • Managing people – providing direction / reviewing	Systems thinking

	performance • Managing performance - accountability	
4. Improving services	• Ensuring patient safety – assess / manage risk • Critically evaluating – thinking analytically • Encouraging innovation – climate of continuous service improvement • Facilitating transformation – contribute to the change process	Developing a shared vision
5. Setting direction	• Identify contexts for change – aware of other factors • Applying knowledge and evidence – gathering evidence-based information • Making decisions – making informed decisions • Evaluating impact – measuring / evaluating outcomes	Developing a shared vision Personal mastery

Table 2: Medical Leadership Competency Framework

3.7 Supporting documents

The following documents provide some additional insights onto the nature of the literature and emphasis key themes. The documents are presented in the form of annotated bibliography summarises the document through identifying aspects such as the executive summary, abstract and key quotes. Commentary on each document is also provided to link the document to the review. Note, the review team added all italicised passages within this annotated bibliography to draw attention to specific points.

3.7.1 A Strategic Review of Welsh Ambulance Services

Reference: McClelland, S., (2013), *A Strategic Review of Welsh Ambulance Services*.
Abstract / Executive Summary: Following longstanding concern about the delivery of ambulance services in Wales, the former Minister for Health and Social Services announced in November 2012 that a Review would commence in January 2013. The Review was tasked with making recommendations to enable high quality and sustainable ambulance services for the people of Wales. To do this, the Review has focused on appraising the effectiveness of current funding, accountability and governance arrangements, and identifying resilient options for the future strategic structure for ambulance services. The efficacy of current targets and the performance of ambulance services in Wales were

also assessed, alongside considerations of the management of WAST as an organisation.

The Review was conducted over a short period of time and took a targeted and pragmatic approach to gathering and analysing evidence. A rapid literature review was conducted to analyse best practice within the UK and internationally, and analysis of previous Reviews of ambulance services in Wales was undertaken, including progress against the recommendations of those Reviews.

Evidence was also gathered from engagement with a wide range of stakeholders, including WAST staff, political representatives and Union members, and evidence was thematically analysed to generate understandings of the key issues facing the ambulance service. This report contains 12 recommendations that invoke the requirement for an agreed vision for ambulance services, and identify the key challenges which need to be mitigated. It sets out a range of suggestions which will enable progression towards delivery of robustly managed, sustainable ambulance services which play a central role in an integrated, whole system approach to the delivery of unscheduled care.

The ambulance service has probably been reviewed more than any other part of NHS Wales, and in part this constant cycle of Reviews has created some of the problems it seeks to resolve.

It has also been difficult to establish the extent to which the recommendations from previous reviews have been fully enacted and is, therefore, imperative that the cycle of review upon review is broken to allow the future model for the delivery of ambulance services to mature. Ultimately, any future recommendations need to be accompanied by a clearly measurable work programme.

Articulating and agreeing a clear **vision** for ambulance services is the key to any recommendations and future developments which may commence as a result of this Review. Everything else, including how services are planned, delivered and funded should flow from this vision.

Further, ambulance services will play a key role in the shaping of future models of service delivery, and it is vital that they are considered as part of the wider context of any plans for service change for NHS Wales.

The vision for Emergency Medical Services (EMS) - that is emergency ambulance response service - is for the delivery of a robust, **clinical** service that is a fundamental and embedded component of the wider unscheduled care system.

Aligned to an agreed vision for the EMS element of ambulance services, is the future of Patient Care Services (PCS), which deliver planned, non-emergency transport for patients to outpatient, day treatment and other services at NHS Wales hospitals.

PCS should be locally responsive, cost effective and provided on clear eligibility and accessibility criteria, and similarly to EMS, should be seen as a core part of service change proposals. They should also be considered a high priority for whoever is responsible for their delivery.

This Review should be read in conjunction with the Griffiths *Review of Non Emergency*

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Patient Transport in Wales (2010), and the three-year national programme of non-emergency patient transport pilots. Decisions regarding future direction for PCS should be linked to the outcomes of these pilots.

The Review found *a fundamental problem with the current accountability and governance arrangements for ambulance services in Wales which are multiple, complex and lacking in clarity and transparency. This needs to be addressed to create arrangements which are simple, clear and aligned to the agreed vision for service delivery*.

Current arrangements require strategic commissioning but the mechanics and levers for achieving this, such as service specifications, Service Level Agreements (SLAs) and contract management, are not being used. Moreover, there is limited capacity and capability to undertake effective commissioning within NHS Wales.

The structural, organisational and systematic problems experienced by WAST make it difficult to establish whether current funding is sufficient or used as effectively and efficiently as it might be. There are, however, some particular problems with funding for capital development. Any future funding formula should be clearly linked to the achievement of the vision for the delivery of ambulance services.

Previous Reviews and actions have placed significant focus on changes to the detail of organisation and management of ambulance services, and the number of changes WAST has experienced at the most senior management levels in particular. Despite this many of the problems previously identified remain. This suggests a much more fundamental problem with the organisation itself and how the system it has operated within has impacted on it. This is a difficult and complex issue which does, however, need to be clearly addressed.

There are a number of structural options which could address the current problems which all have advantages and disadvantages and this report sets out three potential strategic options to improve on existing arrangements: a 'Strategic Health Board' model, a LHB Commissioning Model and an LHB Delivery and Management Model.

These options should be assessed against a series of core guiding principles to ensure form follows function. Any future direction of travel should be firmly embedded in an agreed vision for the delivery of ambulance services within the wider health care system.

There is no 'magic bullet' that will resolve the structural difficulties. However, it is important to make a clear decision on the most suitable model, co-create the development of the details of the model with key stakeholders, and implement and allow the arrangements to mature.

Further, there are significant opportunities for NHS Wales to build on existing, alternative care pathways to reduce pressure on overburdened Accident & Emergency (A&E) departments, and ensure patients receive the most appropriate care, from the right clinician, at the right time and in the right place.

Aligned to the development of care pathways is the need for a skilled workforce to make appropriate decisions. To this end, *there is a general consensus that the development of a clinical service requires an up skilled workforce with greater levels of autonomy and clinical*

decision making. It also requires a high level of clinical understanding, support and leadership from within the ambulance service and from other clinicians working in unscheduled and primary care.

The national response time target, which requires 65% of patients categorised as 'life-threatened' to receive a response within 8 minutes, is currently the primary focus for performance management. It is, however, a very limited way of judging and incentivising the performance of ambulance services. Speed is particularly important for some conditions such as cardiac arrest but there is little clinical evidence to support the blanket 8 minute national target.

There is a general consensus that a more intelligent suite of targets and standards which incentivise change and provide a greater focus on patient experience and outcomes should be developed, and these should form part of a range of measures across the unscheduled care system.

Accurate and easily accessible data is fundamental to facilitating rigorous performance management and understanding demand and there is a clear lack of integrated data across the patient journey. Improving data systems and information on patient outcomes should be progressed as a priority to support the delivery of emergency ambulance services within a whole system context.

Further, there is limited useful comparative information available to assess performance, quality of care, efficiency and effectiveness, and although WAST has plans in place to ensure more regular and accurate benchmarking, this mechanism needs to be widened to include other comparison measures.

Given the common challenges faced, additional comparative and collaborative research across the UK and internationally should also be supported and encouraged. Finally, regardless of the future strategic direction and structure of ambulance service delivery, it is imperative that resilient and universally agreed interim arrangements are put in place during any transitional period, to ensure clinically safe services continue without difficulty.

Key quotes:

Concerns were expressed, specifically by some frontline staff, during focus groups about the visibility and leadership skills of both the senior Executive team and the Board. *Some focus group members also suggested senior staff were not engaging at appropriate levels across Wales.*

It was felt by some stakeholders that senior management focused on current operational issues rather than develop the organisation in a strategic manner.

Further, a number of frontline staff felt *the organisation's structure contained too many management tiers, stating that this organisational structure reduced accountability and encouraged inefficiencies in operations and decision making.*

There was a general feeling that there is a lack of clinical governance and support within the organisation. An element of focus group members felt that the senior team operate very much in their own silos and are too far removed from those delivering the service. *It*

was also stated by an element of staff at a focus group that staff morale was at rock bottom and anecdotal evidence of bullying was mentioned on a number of occasions. *An element of representatives at focus groups felt there is a general culture of fear amongst sections of the organisation. Concerns were expressed by some stakeholders that staff do not feel empowered or comfortable with making decisions as they feel there is little or no support from management.* *Other stakeholders perceived the organisational culture as negative and suggested there was no positive experience of change which resulted in a resistance to it. WAST was seen as a military style organisation by sections of WAST staff.* *It was felt by some stakeholders that the current structure, policies and strategies are not appropriate for a modern ambulance service* and a section of focus group members felt there were not enough human and vehicle resources – qualified paramedics, ambulances, uniform, essential kit or NHSDW call centre staff.
Comments: The focus of this review was clinical capability. This emphasises one of the features of the industry is the tendency to generate capability reviews. The limited coverage of culture reflects the features of leadership style and staff engagement. The review also raises issues concerning organisational structure.

3.7.2 NZ Inquiry into provision of ambulance services 2008

Reference: Report of the Health Committee. (2008), *Inquiry into the provision of ambulance services in New Zealand (Chair: Sue Kedgley)*
Abstract / Executive Summary: The Health Committee initiated an inquiry into the provision of ambulance services in New Zealand at the request of the New Zealand Ambulance Association, which is an ambulance union. The association is concerned that the provision of emergency ambulance services coverage is inadequate and *ad hoc*, and that there are significant variations in provision from place to place. In particular, it is concerned that the high incidence of single-crewing of ambulances in some parts of New Zealand poses a risk to patients' health and at times ambulance officer safety. In order to determine possible improvements in the provision of ambulance services, this inquiry examined legislation, crewing levels, funding of services, restructuring, and training provision and standards.
Key Quotes: Following a review of the provision of ambulance services, the ministry published the Ambulance Services Sustainable Funding Review in January 2005. The review did not see any need for a significant change in funding for the provision of ambulance services, stating that revenue had been growing more quickly than costs. This does not appear to still be true, however: St John informed us that it expects demand to increase at a rate of 6

to 8 percent per year for the next 10 years, because of such factors as the growth and ageing of the population, and the increase in chronic disease such as Type 2 diabetes. (p. 15)

Comments:

The report mentions neither morale issues nor any related cultural matter. The review does, however, confirm in the quote offered that **demand** (see nature of the work in Section 3)for and provision of ambulance services is increasing much as elsewhere.

3.7.3 Commentary on NZ Inquiry into provision of ambulance services 2008

Reference: Johnston, S. (2008). Commentary on the Report of the Health Committee - Inquiry into the provision of Ambulance Services in New Zealand. ***Australasian Journal of Paramedicine***, *6*(3).

Abstract / Executive Summary:

N/A

Key Quotes:

The ambulance service [in WA] has grown exponentially over the last 3 years with paid staff numbers growing from 250 in 2003/04 to in excess of 500 in 2008. The infrastructure required to cope with this expansion, and what will surely continue moving into a new contract period in 2009, has not yet been put in place. Additionally recruitment and retention of staff, like all employer groups in Western Australia, has and remains a significant issue.

Comments:

Draws strong attention to rapid growth and (by omission) to lack of consideration of scalability.

3.7.4 Still Blue-Collar after all these years? 2013

Reference: Leo McCann, Edward Granter, Paula Hyde and John Hassard ‘Still Blue-Collar after all these Years? An Ethnography of the Professionalization of Emergency Ambulance Work’, *Journal of Management Studies* 50:5 July 2013

Abstract / Executive Summary:

This paper explores the professionalization project of paramedics, based on an ethnographic study of UK National Health Service (NHS) ambulance personnel. Drawing on concepts derived from institutional theory and the sociology of professions, we argue that the project is enacted at two levels, namely a formal, structural and senior level

reflecting changing legitimation demands made on NHS practitioners and pursued through institutional entrepreneurship, and an informal, agentic, 'street level' enacted by the practitioners themselves via 'institutional work'. Focusing on this latter, front-line level, our ethnographic data demonstrate that the overall impact of the senior level professionalization project on the working lives of paramedics has been somewhat muted, mostly because it has had limited power over the organizations that employ paramedics. Given the slow progress of the senior level professionalization project, paramedics at street level continue to enact subtle forms of institutional work which serve to maintain 'blue-collar professionalism' – a form originally identified in Donald Metz's ethnography of ambulance work. Our analysis draws attention to the complex and contested nature of professionalization projects, in that their enactment at senior and street levels can be somewhat misaligned and possibly contradictory.

Key Quotes:

Our data suggest that the formal, senior level professionalization project has had limited effects at street level, and that the professional status of paramedics and Emergency Medical Technicians (EMTs) remains weak. Faced with the limited success of this formal strategy of institutional entrepreneurship, paramedics and other ambulance workers at street level simultaneously pursue a different kind of professionalization project; one based more on institutional work, comprising an informal, subtle, everyday project that reproduces 'blue-collar professionalism' (see Metz, 1981, pp. 57–81), as paramedics 'negotiate the tricky pathways of their own organization, establishing for themselves a sense of their own position' (Tangherlini, 2000, p. 63). [751]

Paramedics have yet to achieve a sense of occupational closure at senior levels. As perceived from 'street level', a variety of practical obstacles serves to problematize and obscure from view the senior level professional project. These obstructions include conflict between paramedics and the organizations that employ them, jurisdictional disputes with other NHS professionals/para-professionals, and factors inherent in the very nature of emergency ambulance work. Given such impediments, a key role for paramedics and EMTs 'on the ground' becomes the informal enactment of institutional work, which has the effect of defining more clearly (and also defending) their sense of professional identity. Institutional work thus represents the medium through which occupational closure is sought on the front line. Our analysis draws attention to the remarkable persistence of such 'blue-collar professionalism' at street level, a concept first indentified in Metz's (1981) ethnography of ambulance work. Metz (1981, pp. 57–81) described EMTs and paramedics as dedicated individuals with an ideal of public service, who enjoy some autonomy in decision-making and share a desire to further an occupational mission despite stressful and exhausting working conditions, poor pay, and limited prospects for upward mobility. We argue that blue-collar professionalism, in contrast to a formal or senior level professional project or a form of institutional entrepreneurship, is best conceptualized as a type of institutional work that has sustained and reproduced itself for decades. [753-4]

In recent years, several actors and organizations have been attempting to raise the status and heighten the sophistication of emergency ambulance work. This has included the development of national policies which emphasize 'taking healthcare to the patient' rather than the traditional focus on 'transportation to definitive care' (Department of Health, 2005). In addition, the introduction of new 'patient pathways' provides paramedics (in

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certain geographic regions) with an increased degree of clinical decision-making (at least in theory). Related developments have seen the creation of a professional association, the College of Paramedics, which has pursued a classical professionalization strategy of institutional entrepreneurship. It aims to gain more recognition and influence for the profession at higher levels, to lobby government, to influence the development of training curricula, and to help shape the protocols that paramedics work to in the field, but it faces major challenges. Seen from the viewpoints of middle management and the front line, this senior level professionalization strategy has had rather limited impacts on entrenched organizational and political priorities which still emphasize the rationing of resources and the pursuit of target response times. Meanwhile, both the morale and working conditions of front-line ambulance staff remain poor (and in some senses may be worsening) as demand increases and resources stretch.

This situation encapsulates the deep contradiction at the heart of New Public Management as exemplified by recent UK governments. Up-skilling and better pay and conditions are encouraged, yet public organizations such as ambulance trusts find themselves heavily audited, under strong cost-control pressures, and struggling to cope with a plethora of sometimes ill-considered performance management targets (Hood, 2006). Caught between a dominant elite of medical professionals and management dynamics geared towards adherence to targets, cost control, and shifting sets of policies, many ambulance crews see few advantageous developments emerging from the professionalization project and instead apply themselves to the everyday institutional work of reproducing 'blue-collar professionalism'. The crews know, for example, that taking every patent to A&E by default is not sensible, but it is the easiest and safest course for them to take. At the same time, this contradicts with the realization of a more sophisticated ambulance care model, which the College of Paramedics continues to exert great effort in trying to define, develop, and protect.

Ambulance services claim to be shifting towards a model of paramedicine that would necessitate more autonomous clinical decision-making for road staff. At the same time, however, in a paradox which is often present in large organizations, ambulance trusts are introducing a new role of ECA, a post less skilled than that of EMT. This runs counter to the up-skilling of paramedics, the development of advanced ECP and PP roles, and of 'taking healthcare to the patient'. ECAs receive 6–8 weeks of training and are paid below EMTs, on bands 2 or 3.[11] With the ECA role mostly involving driving and the manual handling of patients, and the clinically-trained and very versatile EMT role being phased out, this may herald something of a return to 'strong backs and stomachs' (Mannon, 1992, p. 2) as the basic requirements for the most elementary forms of ambulance work. This fragments the occupation, giving staff employed in these posts little reason to join the College of Paramedics or to support its professionalization project.

Much recent research points to profound institutional change in healthcare and other public sector fields in the UK and USA (Ashworth et al., 2007; Kitchener, 1998; Scott et al., 2000). But if we are to understand fully the effects of such forces on professional and professionalizing occupations, we need to go beyond abstract, theoretical, formal, and structural levels of analysis, and examine 'how things work' (Watson, 2011) in practice on a daily basis (Abbott, 1988). The focus on work has been arguably lacking in much research on organization and management, including much institutional theory (Barley and Kunda, 2001; Lawrence et al., 2011, p. 52). While change at the formal level is relevant,

and efforts at institutional entrepreneurship (by bodies such as the College of Paramedics) can potentially enhance paramedics' status, our paper shows how for ambulance services the senior level entrepreneurship that constitutes the official professionalization project often fails to translate into changed daily rhythms and routines in front-line ambulance work. This paper thus highlights the many and immediate forces that represent, on a daily basis, the enactment of institutional structures old and new. The extensive nature of such forces, coupled with the diffuse power resources of different players, means it would require radical organizational change (and massive additional funding) if the professionalization project for ambulance staff were to have more substantial effects in changing workplace behaviour. It is probable that fields occupied by other 'professionalizing' occupations are characterized by similar power imbalances, with attempts at change constituting similarly complex and contested combinations of senior level institutional entrepreneurship and lower level institutional work. [769-771]
Comments: The idea of the tension between the professionalisation of the work of ambulance paramedics and the continuation of a 'blue collar' culture reflects the findings of the literature review.

3.7.5 'Swift Transport versus Information Gathering', 2013

Reference: Tobias Samuelsson and Boel Berner (2013) 'Swift Transport versus Information Gathering: Telemedicine and New Tensions in the Ambulance Service'. ***Journal of Contemporary Ethnography*** 42: 722
Abstract / Executive Summary: Swift transport used to be the predominant way ambulance services provided care. During the past few decades, advanced information and communication technologies have increased the amount of patient information that ambulance crews can transmit to hospitals. The ambulance service has thus, in principle, been transformed from a swift transport unit into a complex information-gathering unit. The new telemedicine technologies available to crews are linked to demands concerning organizational changes and alterations in work procedures that challenge traditional ways of providing "good" ambulance care. In this article, we draw on both ethnographic observations and concepts from the field of science and technology studies to demonstrate how established work practices and complex local situations format the ambulance crews' use of information-gathering technologies. We highlight how ambulance crews employ strategies of localization, including taming and deliberate nonuse of telemedicine technologies, to align these technologies with their established stance about how everyday ambulance care is best implemented.
Key Quotes: Thus, one could argue that the *introduction of telemedicine has changed the role of the ambulance service from that of a swift transport unit—"giving care with the gas pedal" and*

delivering the patient safely to the casualty department—to a unit working as much with sophisticated medical information gathering and transmission.

Similar to other kinds of technologies, however, *intentions and use do not always coincide*. The new technologies are accompanied by organizational changes and changes in work procedures that may upset established ways of providing "good" ambulance care. In this article, we examine and discuss some of the resulting tensions. Drawing on ethnographic material derived from rides with the ambulance service in a midsized Swedish town, we portray how ambulance crews handle the demands inscribed in telemedicine technologies and attendant rules of procedure in their everyday practices. We also *discuss the various strategies used by crews to deal with the tensions between applying the new technologies, which they tend to think slows them down, and their preferred work routines, which involve acting quickly to provide what they view as the best ambulance care possible.*

…… Similarly, Nelsen (1997) shows that *ambulance staff use different strategies to work their way around institutional directives to accomplish what they think their work demands. Other researchers have described how ambulance crews use procedural shortcuts to eliminate and avoid unappreciated steps in a treatment protocol* (Hutchinson 1983; Nelsen 1997; Palmer and Gonsoulin 1990). ….The themes we discovered during the analysis included the need for speed and complaints *about how the crews and their superiors did not see eye to eye regarding the best use of time.*

….Samuelsson asked them afterward why they had chosen to deviate from the guidelines in this way. They replied that it did not feel right to initiate an ECG process in front of the teenager's friends; this would have worried them. According to the guidelines, the user should not take such local social conditions into account. *But the ambulance crew let human considerations overrule the script. In addition, the ambulance crew argued that they did not really think this was an emergency case. Based on their experience,* and given the patient's symptoms and his age, they concluded that this did not seem to be a case of heart problems. *Making decisions like this, the crew members thus took into account both the situation at large and the received information on the patient's status*

Comments:

This article, while specialised, shows that staff can resist and reinterpret changes. This is particularly true with situations like those in ambulance work where the staff are, for much of the time, out of the sight of their supervisors. This shows why trust is so essential to successful operations and, in the absence of trust, the difficulty of imposing control upon a group of skilled workers.

3.7.6 Expanding paramedic scope of practice 2013

Reference: Blair L. Bigham, et al Expanding paramedic scope of practice in the community: a systematic review of the literature ***Prehospital Emergency Care*** July/September 2013 Volume 17 / No. 3

Abstract / Executive Summary:

N/A
Key Quotes: Health care demand is increasing around the world as populations grow and age. Emergency medical services (EMS) systems have been impacted by the increasing need for their services, with requests for emergency ambulances rising by as much as 8% annually. Many of the patients for whom EMS is summoned do not require emergent interventions by prehospital care providers and may best be served by other health services through referral by prehospital care providers. However, most EMS models only allow providers to transport patients to an emergency department (ED) for physician services, although as many as 50% of patients transported to ED by EMS are discharged without significant treatment or referral. Articles from the United Kingdom, Canada, and the United States have estimated that 30% to 50% of all ambulance transports to the ED are inappropriate and that some patients transported to the ED by EMS leave without ever being seen. The increase in demand for emergency care has led to a suboptimal situation that is not benefiting patients, providers, or health care systems. These challenges, in addition to the longstanding difficulty of providing health care to rural communities, have sparked calls for increased use of allied health professionals to carry out assessments and treatments traditionally delivered by physicians.
Comments: The quote highlights how the increase in demand is having scalability impacts.

3.7.7 Revealed: The hidden crisis in Britain's ambulance services 2014

Reference: Mary Wakefield, “Revealed: The hidden crisis in Britain's ambulance services”, ***Spectator Magazine***, Aug. 30, 2014, access at http://www.spectator.co.uk/features/9299482/londons-999-emergency/
Abstract / Executive Summary: Nil available
Key Quotes: Article quite brief: does not require extraction
Comments: This piece is journalistic; however, the article is well researched and based on more than a few interviews. The article is also supported by a wide range of online comments from across the UK and internationally. This reveals a similar pattern of cultural issues.

4. Progressive Attributes

Section Synopsis

Progressive attributes

- Adaptability
- Resilience
- Flexibility
- Leadership.

4.1 Overview

This Section examines the theory of a range of progressive types of organisations. The Section reveals a series of key attributes of these organisations.

The Ambulance industry provides a service where a single clinical, procedural or organisational fault or failure can be both devastating and catastrophic. Ambulance services face these scenarios on a daily basis. A number of organisations deal in similar high risk scenarios, including nuclear power plants, aircraft carriers, bush fire brigades and the aviation industry. Examining these types of organisations provides an opportunity to elicit lessons for the ambulance industry.

4.1.1 High Reliability Organisations

Maintaining a safety record through a safety culture is a driver for organisations dealing with high risk scenarios. Often these entities are referred to as high reliability organisations (HRO).

Principles of HROs

- preoccupation with FAILURE
- reluctance to SIMPLIFY
- sensitive to OPERATIONS
- committed to RESILIENCE
- defer to EXPERTISE

Mugford, (http://tinyurl.com/msm9r59)

Expanding on these principles a HRO sees failure as a learning opportunity with near misses treated as near hits. Sophisticated systems manage complexity in tandem with

encouraging multiple views on operations. Redundancy exists within the organisation to provide flexibility and resilience; specifically, an appointment is detailed maintain overall situational awareness and create redundancy. Experience and knowledge carry weight over hierarchy and command to 'manage the inevitable unforseen behaviour of imperfect designs and processes' (http://tinyurl.com/msm9r59). Optimum human stress is maintained along with a positive yet pensive watch on trends. This last feature aimed at preparation for the next surprise.

4.1.2 Peak Performing Organisations

Complementary to HRO are peak performing organisations (PPO). Gilson et al (2001) exploration of lessons from sports organisations covers such groups as Football Club Bayern Munich, Netball Australia, the All Blacks and the San Francisco 49ers. Peters and Waterman (1982) looked for similar excellence in the corporate world. Gilson et al (2001) argue that there are three key principles to PPO: peak purpose, peak practices and peak flow. Figure 4 outlines the relationship between PPO theory.

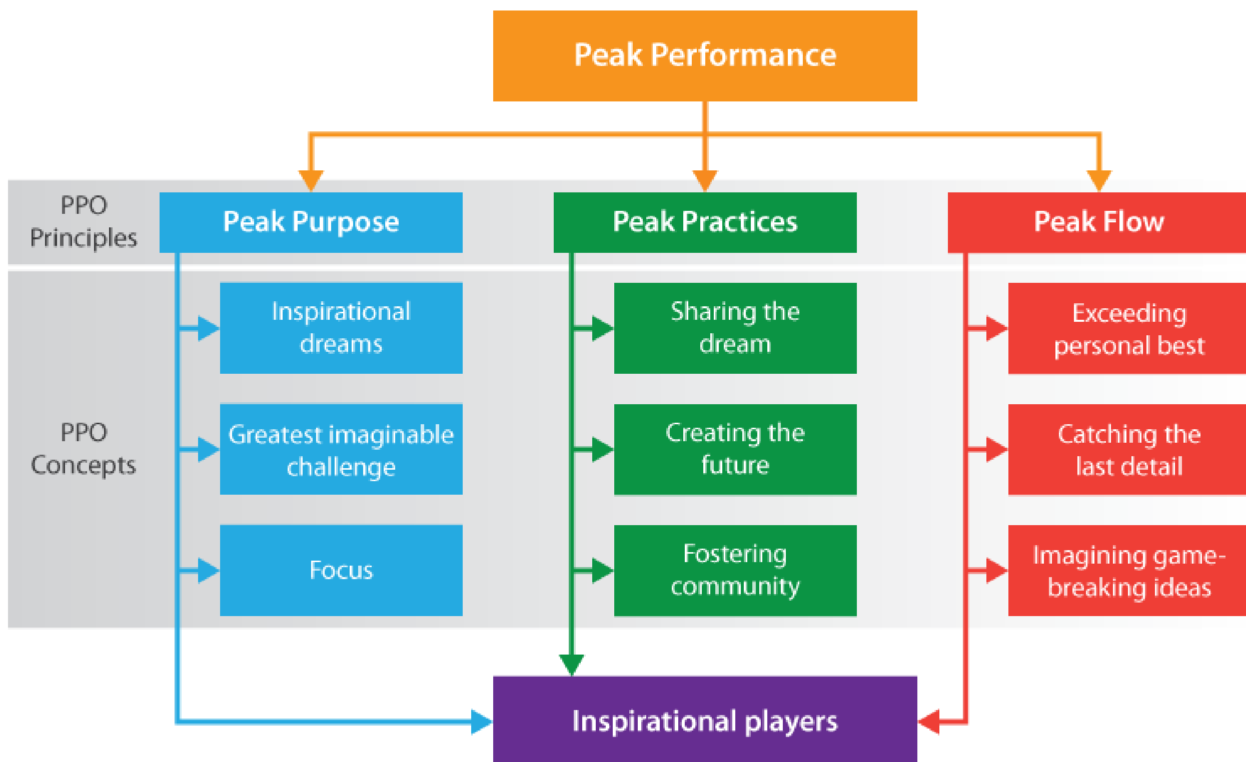

Figure 4: PPO Theory

4.1.3 Learning Organisations

Learning organisation theory identifies the need for organisations to embrace and adapt to change. Imbuing their employees with a mindset open to change – often referred to as a growth mindset – allows adaptive learning. Chris Argyris and Donald Schon outlined their thoughts on developing a learning model as early as 1976 in *Organisational Learning*. Management guru Peter Senge in his classic *The Fifth Discipline: The Art and Practice of*

the Learning Organization identified five key disciplines underpinning an organisation's ability to learn. Francis and Mazany (1996) suggest there are three major constructs for an ambulance service to become a learning organisation: dynamic strategic planning with high levels of employee involvement, high performing *team-oriented* culture and an effective continuous improvement process (p.5). They add: 'Supporting these three systems is leadership which is proactive and visionary, and learning which is experientially based (Francis and Mazany, 1996, p.5). Further, reports on ambulance services often acknowledge the need to develop attributes associated with learning organisations:

> All of these approaches on adaptation have largely inspired the basis of the high reliability organization's theoretical framework and the need for organizational learning in health care (Amalberti et al, 2006, p.i68).
>
> The team recognised that '*introducing the principles of fair and just culture is a gradual process ... that requires continual education and discussion among staff at all levels and a commitment to examining and changing many of the systems, policies and procedures that guide the organisation's work'*. (Doherty et al, 2013, p.20).
>
> The ACT Ambulance Service Clinical Governance Framework encompassing….an emphasis on learning-acknowledging that mistakes are inevitable so focus needs to be on identifying lessons learned and continuing professional development rather than allocation of blame and punishment (Lennox, 2014, p.29).

4.1.4 Managing violations

Amalberti et al (2006) explore the impact of violations within healthcare. Violations are deliberate deviations from standard procedures. Violations, even in fields with excellent safety records, are quite common. For example, one study found intentional non-compliance of airline crews 'represented 55% of all errors and violations, but only 3% of these affected the flight in any adverse way' (Amalberti et al, 2006, p.i66). Violations occur within health care settings and pose the following questions:

- Are some violations acceptable if they do not lead to danger or harm?
- Are acceptable and unacceptable violations part of the same continuum?
- What are the criteria for tolerance?
- Should they lead to different safety approaches?

Systems evolve, technology changes and often these may contribute to a violation. As Amalberti et al (2006) point out 'A system lives and changes and these transformations must be accepted' (p.i69). Therefore, Violations cannot be eliminated but can be managed. The start point for this management is understanding any pattern associated with the violations and accompanying system migration. Then a measured shift of staff behaviour with in these systems can occur. Management strategy consists of:

- continual monitoring of performance to detect violations and system migration at an early stage
- ongoing dialogue between operators, engineers executives and managers to establish a shared safety culture
- operator discussions on standards of safe practice and acceptable and unacceptable deviations from rules and standards
- the use of peer control to assist in violation management
- remedial action for individuals committing extreme violations

4.2 Attributes

This brief exploration of successful organisations provides the basis to identify a set of guiding principles for organisations seeking similar effectiveness. These are:

- adaptability
- resilience
- flexibility
- leadership.

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5. Strategies to Change

Section Synopsis

Organisational culture is a necessary part of health system reform.

Selecting the right strategy is critical to successful change.

There is risk in change, just as there is risk in inaction.

Success revolves around effective leadership communicating a shared purpose through dialogue.

5.1 Overview

This Section explores a range of strategic for the conduct of organisational cultural change. The Section highlights risk is part of any change process and selecting the right strategy and process can mitigate this risk.

There is general acceptance that organisational culture is a necessary part of health system reform (Parmelli et al, 2011, p.2). In 2012, the CHKS Top Hospitals Programme advisory group acknowledged that 'organisational culture is one of the five elements that we have discovered to be common across award winning acute sector organisations in the UK' (Doherty et al, 2013, p.8). Bradley (2005) also recognises this is especially relevant to the ambulance industry:

Ambulance services need to look, feel and behave differently. Improving skill levels and introducing greater career progression opportunities will be a vital ingredient of this change but it will not be enough. To achieve higher levels of job satisfaction in a positive culture of continuous improvement requires strong leadership and effective management which ensures that all staff feel well informed, supported, valued, listened to and involved in the future development of their organisation and their profession (p.28).

Moreover, preceding sections of this review clearly identify the link between culture (and what this is) and organisations. The key, therefore, is the identification of a suitable methodology to implement the cultural reform for a health care organisation. A major review of the available literature found that 'current available evidence does not identify any effective, generalisable strategies to change organisational culture' (Parmelli et al, 2011, p.1). Essentially, Parmelli's review (2011) found an absence of evidence concluding:

Healthcare organisations considering implementing interventions aimed at changing culture should seriously consider conducting an evaluation (using a robust design, e.g., Interrupted Time Series analyses) to strengthen the evidence about this topic (p.1)

The key message from this review is that any strategy for organisational cultural reform benefits from clearly enunciating what is to change, how this will be measured and implementing a robust scientific method to support analysis of the outcome.

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5.2 Approaches

Numerous cultural change approaches exist and are used extensively in organisational change. A change strategy can opt for two approaches. The first is building on what an organisation already does well. The second is a complete overhaul, typically used where a culture is toxic, stagnant or dysfunctional. A review of aseries of approaches to various organisations including health focused groups provide an opportunity to identify common elements of a cultural change approach.

5.2.1 University of Queensland and Department of Defence

The Nous Group consider six levers of change as the basis for conducting organisational change (see Figure 5). Nous have used this for reform programs with University of Queensland and the Department of Defence.

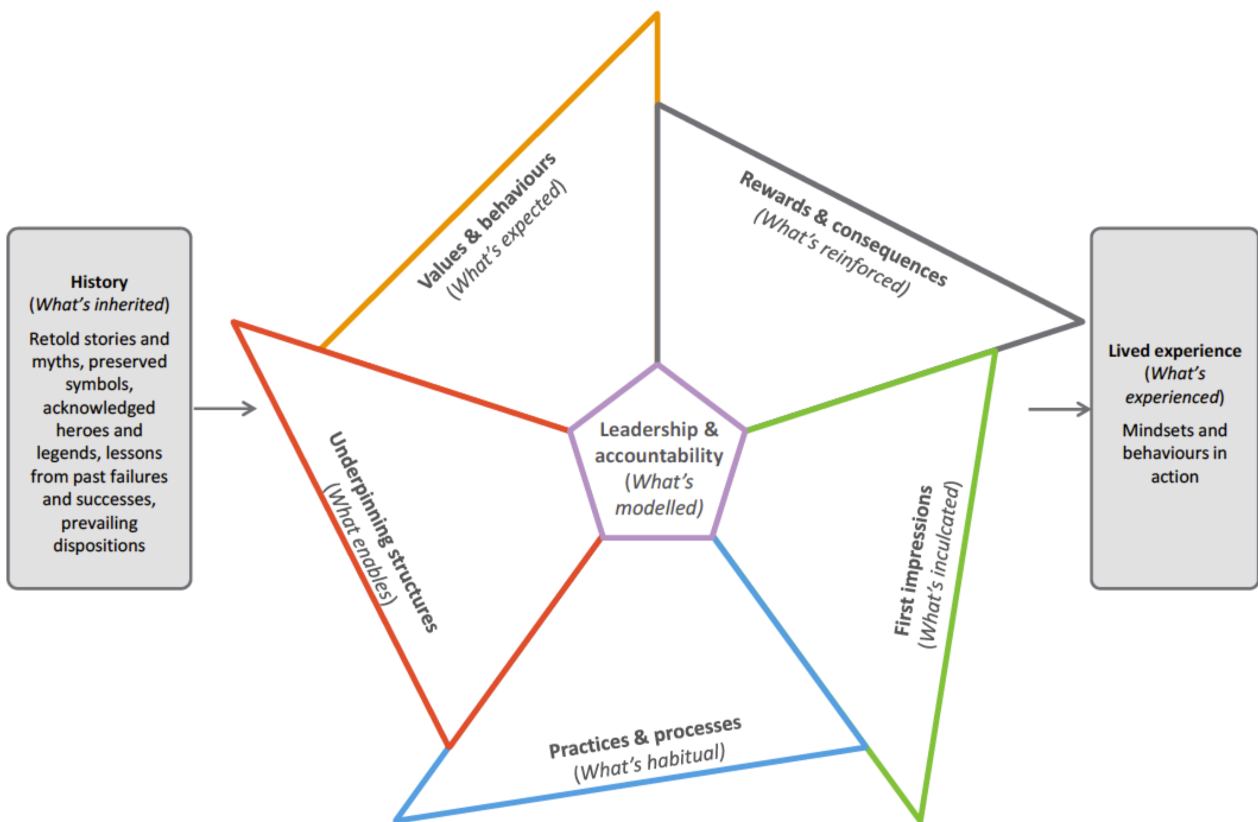

Figure 5: Nous Levers for Change

Nous emphasis the incorporation of a clear vision, leadership capability and supportive systems and processes is essential when developing and implementing a culture strategy. Successful cultural change also involves developing a supporting communication strategy, part of which involves discussing and sharing cultural findings with staff in a timely manner.

Useful examples of the development of a vision statement include Bradley's (2005) review of the NHS:

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The review outlines a clear national strategic vision for the future of the ambulance service. An ambulance service that provides both high quality call handling and clinical advice (**hear and treat**), and safe and effective mobile healthcare (**see and treat**).

5.2.2 London Ambulance Service

In 2000, London Ambulance Service NHS Trust launched a five year service improvement program aimed at making demonstrable improvements in performance, patient care and for its staff's working lives (Bradley, 2005, p.28). The key principles underpinning the improvement program were:

- communication
- staff involvement and empowerment
- modernisation and service redesign
- Management capacity and capability
- vision and values
- structures and systems.

5.2.3 Adaption of Blair's Ten Point plan

As British Prime Minister Tony Blair was responsible for negotiating the Good Friday Peace Agreement in Northern Ireland. Doherty et al (2013) demonstrate how this can be applied to the NHS culture (p.25). Table 3 is an adaption of Blair's 10 point plan for an ambulance service

Blair's 10 point plan for negotiating peace agreement	Principles applied to ambulance service culture change
1. 'At the heart of any conflict resolution must be a framework based on agreed principles'	Agree the features of aspirational ambulance service culture
2. Then to proceed to resolution, the things need to be gripped and focused on.'	Organisational and systemic process aligned to leadership
3. 'In conflict resolution, small things can be big things.'	Quick wins through small changes of behaviours etc
4. 'Be creative'	Creativity derives from mixing staff vertically and horizontally

5. 'The conflict won't be resolved by the parties if left to themselves.'	Involve all stakeholders including external support as circuit breakers where necessary
6. 'Realise that for both sides resolving the conflict is a journey, a process, not an event.	Identify and leave stakeholder baggage at the door of culture change
7. 'The path to peace will be deliberately disrupted by those who believe the conflict must continue'	Identify the groups and individuals likely to resist, lag or hijack the process. Identify ways to disarm this opposition
8. 'Leaders matter'	Who are the leaders across the organisation
9. The external circumstances must militate in favour of, not against, peace.'	Union and public support
10. 'Never give up'	Long term process – see 2 and 8

Table 3: Adaption of Blair's 10 point plan for an ambulance service

5.2.4 Doherty et al

With regards to culture change in the health sector, Doherty et al (2013) state:

There is no one size fits all route to achieving this goal, however, it is well recognised that dispersed leadership, meaningful engagement of staff, effective team working and communication, form the cornerstones on which change should be built (p.3).

Moreover, they highlight the literature concerning cultural change strategy covers the following dimensions:

- **Structural**. Clearly identify the nature of the culture to be changed. Effective diagnosis enables effective intervention.
- **Process**. How do cultures change? An emergent model enables the organisation to catch and ride the wave of culture to deliver change. When the wave of culture comes from a different direction three outcomes are possible: deflect waves through their own momentum (reframing), wait for powerful waves to pass and create new ones (new wave) and hitch a ride when a new wave goes in the right direction (opportunistic).
- **Contextual**. Fit assessment of culture with wider environment including identifying any cultural lag – the gap between current and aspirational culture.

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5.3 Risks

There is a risk to changing culture as there is a risk to any change. Naturally, there is a risk of doing nothing as well! The start of any change process requires a clear identification of the risks involved with the change and the mitigation possible for each risk. Moreover, what parts of the culture are to change: nature of work, people's behaviour, values, attitudes?

As a high profile and ideally high reliability organisation, the ambulance industry is also subject to external scrutiny and influence. The most visible of these influences are the public, the media and regulatory frameworks. Understanding the likely impact on the various levels of culture within the organisation represents a significant challenge to cultural change.

5.3.1 Leadership

Organisational leaders motivate, inspire and create a learning environment. Leadership at all levels is necessary to identify the purpose of the organisation and the benefits of the change. Purpose provides people an opportunity to become involved in both the organisation and the change. Peters and Waterman (1982) state: 'people's greatest need is to find meaning in their working lives and the main managerial task is to create meaning' (p.1). This reinforces the need for a clear and agreed mission statement (purpose) and vision. Doherty et al (2013) points out that Jaskyte (2010) highlights: 'numerous authors have stressed the leader's role in shaping culture and suggest that the original cultural values originate from the leaders' (p.22).

5.3.2 Staff engagement

People within the organisation – the engineers and the operators – know their work the best. People seek meaning and need involvement to generate that meaning for themselves. Typically, when people focus on their pay and conditions they are looking for an offset to a lack of meaning within their work. For Doherty et al (2013) 'people live what they have helped create.'

5.3.3 Communication

Communication means a shared dialogue between all levels within an organisation. Multiple studies highlight the value of this type of communication in building culture and meaning (Wankhade, 2010; Doherty et al, 2013; Johnstone and Peeraji, 2014)

The team recognised that 'introducing the principles of fair and just culture is a gradual process ... that requires continual education and discussion among staff at all levels and a commitment to examining and changing many of the systems, policies and procedures that guide the organisation's work' (Doherty et al, 2013, p.20)

Communication is vital to people's identity, involvement and morale. In these cases, communication does not merely have to be top down, but also bottom up and laterally in order to create a sense of organisational belonging and therefore commitment to the organisational change goals. (Johnstone and Peeraji, 2014, p.75)

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Tips for Success

- Purpose
- Leadership
- Engagement and empowerment of staff
- Communication – shared dialogue

6. Change Threats

Section Synopsis

Key threats to change are:

- No progress
- Hijacked process
- Cultural erosion
- Ivory tower approach
- Inattention to symbolism
- Ritualisation of culture change
- Behavioural compliance.

6.1 Overview

This Section covers the main threats to implementing successful cultural change. Understanding these threats enables the design of a program to offset or mitigate these threats.

Change adoption is similar to the diffusion process and the technology adoption cycle, which identifies a series of responses to the introduction of technology or change. These responses range from the 'innovators' (a group of people quick to accept and experiment with the change) through to laggards (this group likely to be highly resistant to change). Understanding the different reactions to change are a normal part of the change process enable organisational leaders to respond effectively to groups and individuals. For example, one of these reactions is fear. Change can often be seen as a threat for a multitude of reasons; for example, a threat to stability, to job security, to how we have always done things and to my power and place in the organisation. Anticipating likely reactions enables organisational leaders to develop change strategies to take their people on the change journey. For similar reasons organisational leaders of cultural change must understand the potential impacts of change as well as the threats to the change.

6.2 Threats

Wankhade and Brinkman (2014) identify a series of unintended consequences arising from cultural change programs and changes within organisations:

- **No progress**. Kotter in *Leading Change* advocates for realising 'quick wins' to establish the change as visible rather than risible. A lack of progress can produce a belief that nothing has actually occurred. For example:

  > We've now got to consider the whole area and we've now been basically told clinically this is what your performance measure should be and what we're

> measuring against and I don't necessarily think that that is the best way of doing it. I still think that there's quite a lot of this corporate central urban view that seems to be pushed out to everywhere else that I don't think's always appropriate – UK Senior Manager (Wankhade and Brinkman, 2014, p.11).

- **Hijacked process**. Inertia and resistance may quickly undermine or hijack the change process. Relatively clear aims and change objectives may become challenging to keep at the forefront of the agenda. Organisational imperatives such as meeting performance targets may hijack change efforts.

> My biggest challenge is really continuing to keep clinical leadership and management at the top of the agenda. This is because it's going to require effort from the managers; it's going to require change and it's going to require money and none of those things have been mandated by political or local targets – UK Senior Board Executive (Wankhade and Brinkman, 2014, p.12).

- **Cultural erosion**. Change requires ongoing support to be successful. Setting the bar and expectation and then holding the organisation to account is critical in this regard. So, the initial surge of interest enthusiasm can wane without the leadership sustaining the effort until the change takes hold.

> Well most of the senior executives have shown their face, but they don't get out and see the staff when they come to this building. It's not about coming to HQ and going into control and talking to the control staff. It's being seen out and about so the staff get the understanding and the belief that they've got a team – UK Senior Manager (Wankhade and Brinkman, 2014, p.13).

Similarly, leadership can distract themselves with other imperatives.

> The lack of clinical governance is still there. There is a clear divide between operational management versus clinical direction. The organisation is still run very operationally – UK Clinical Governance Manager (Wankhade and Brinkman, 2014, p.13).

- **Ivory tower approach**. Understanding and applying the realities of the workforce to any change is essential for success. An ivory tower approach is offset through engagement and buy-in from throughout the organisation. Incorporating the diversity of views into the change framework ensures everyone is inside the change tent.

> We have made paramedics professionals, but that was just a piece of legislation that was passed that protected the title. Historically it's a blue collar service. It's been run similar to the police and fire service – very operationally – and it's about bringing that clinical focus back in to run it as a clinical service as opposed to an operational one. But you've got a huge workforce there that is set in their ways – UK Senior Area Executive (Wankhade and Brinkman, 2014, p.14).

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- **Inattention to symbolism**. Each of the cultures within the organisation (operators, engineers etc) are attached to various symbols such as equipment, uniforms, training opportunities, staff facilities, visibility of managers. These symbols require attention for to the relevant cultural level these are the *visible and real* signs of any progress or change.

  > When you consider what matters to operational staff, they want to ensure that they've got quality vehicles, quality equipment, that they get regular meal breaks and receive a reasonable remuneration for what they do and they're well trained. Now if you crack those few things off you've got a fairly satisfied workforce. We've put in no new vehicles, hardly any staff, which has led to extra pressures on existing staff – UK Senior Area Manager (Wankhade and Brinkman, 2014, p.15).

- **Ritualisation of culture change**. The change transforms into a ritual – a sort of tick off the agenda go through the motions exercise. Inherent conservatism may also contribute to this stasis or ritualisation.

  > There have been a lot of arguments, national appeals about meal breaks, grading and things like that, but it has revealed, I think, something more fundamental. There is a certain conservatism, a certain unwillingness to change. You can't push anybody to be flexible and adaptable so far. Sooner or later they step back to what they are familiar with – UK Ambulance Trust Specialist (Wankhade and Brinkman, 2014, p.17).

- **Behavioural compliance**. Cultural change typically addresses the values and beliefs of the organisation. These fundamental aspects of organisations require transformation for real shifts in the culture. For example, shifting a belief that education instead of speed provides healthcare represents a substantial leap. And, this maybe a leap that is too far or too soon for some in the organisation. On the surface level behaviours may alter to accommodate the change and to act as a protective mechanism for the individual or group concerned.

  > Those of who I would have classed as disinterested have taken an interest and have suggested, "Oh we'll have a go at that because that's the future. That's the way we want to go" – UK Senior Paramedic (Wankhade and Brinkman, 2014, p.18).

7. Conclusion

The literatures reviewed here show a number of themes directly relevant to the work with ACTAS. Specifically:

1. **Links to military systems**. Ambulance services have a long history as 'uniformed' hierarchies with a 'command and control' logic. This seems largely unquestioned, which is problematic since the application of this methodology does not strongly conform to military best practice on the one hand nor, on the other, does this fit the changing nature of ambulance work (see 2 below).

2. **Scalability**. Ambulance services are experiencing rapid changes and growth worldwide. Most reviews reference this, but fail to ask whether the changes in scale and nature can be accommodated within existing organisational models.

3. **Nature of the workplace**. Conflict and distrust seem to be widespread across ambulance services. Few real explanations are offered for this beyond the existence of work pressure (both in terms of the amount of work and its challenging nature) and the lack of fully adaptive organisational structures. Little if anything is said concerning the needs for and delivery of leadership and management training. In organisations where the leaders are typically promoted from the staff workers, this is a major lacuna.

4. **Blame and bullying**. Linked to 3, issues of blaming and bullying (alleged or actual) are widespread features of the ambulance world according to the literature.

5. **Professionalisation**. There is considerable discussion of the growing professionalisation of the ambulance workforce, but this body of work not only neglects questions about professional development (see 3) but also does not fully resolve issues about professional status and union membership nor the closely related question of status culture (white collar vs blue collar).

6. **Adaptive organisations**. More broadly than the ambulance service literature, excellent work exists on the attributes of peak performing and high reliability organisations with strong adaptive cultures that transcend blaming. While well known in the general world of organisation theory, discussion of these issues hardly appears in the relevant ambulance review work, suggesting that this takes place largely inside a 'bubble' of localised expertise that is unconnected with more general expertise.

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