Department of Health Human Factors Reference Group
Interim Report, 1 March 2012

Clinical human factors can be defined as:

"Enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities and application of that knowledge in clinical settings." (Catchpole 2010)

Introduction from the Chairman

During my last three years at Mid Staffordshire NHS Foundation Trust I have become increasingly (and painfully) aware of the tragic impact of not recognising the part played by human factors in systemic failure on patients, families and clinical staff.

This interim report re-emphasises the need to integrate and mainstream human factors knowledge and understanding in order to ensure the consistent, sustainable delivery of safer care for our patients.

Embedding this knowledge and understanding is not an optional extra. There is clear evidence from within and outside the NHS that human factors are a significant factor in disasters.

The time feels right to re-energise the focus on our approach to embed human factors knowledge into practice, education and regulation and I commend this interim report to you as a sound starting point.

I am grateful to the members of the Reference Group for their untiring commitment and support and to the impressive range of individual and organisational stakeholders who have supported the work of the sub groups. Thanks must also go to Mandi Butterly, PA to the Chairman at Mid Staffs for the support she has given the Reference Group.

Sir Stephen Moss
Chair of the Department of Health Reference Group on Clinical Human Factors

Executive Summary

The Department of Health (**"DH"**) Human Factors Reference Group, a time limited working group established by Professor Sir Bruce Keogh in late 2010, was set up to identify how human factors could be embedded in the future NHS.

There is strong evidence that sustainable systemic improvements in safety and efficiency will only come about when organisational and professional attitudes and patterns of behavior start to shift to reflect the features found in other safety critical industries. This is about shifting the culture - a phrase that is sometimes regarded as "woolly". We contend that the culture is merely a reflection of the reality of frontline practice whether viewed by the professional, the patient, their family or carer(s).

This requires some very difficult conversations at all levels of the NHS. We believe that looking at organisations, systems and people through a human factors lens will facilitate those conversations and that the actions and recommendations in this report provide a foundation for further improvements in quality of care, safety, efficiency and value for money in the NHS.

The Group has gone beyond its remit, by not only delivering recommendations but also by taking some fundamental actions to influence those in positions of authority in organisations where human factors need to be embedded. It was initially intended that this report would be a final report of our work; however, Professor Sir Bruce Keogh has asked that it be framed "interim" providing scope to move much further in 2012/13.

Understanding the inter-relationship of humans to each other and their environment (in this case the workplace) allows us to build systems, equipment and ways of working and encourages focus on professionalism and leadership that delivers reliability in terms of safety, quality and good patient experience.

The delivery of healthcare is complex. Affecting improvement demands influence of more than one part of the system to expect anything to come of it.

Embedding clinical human factors is not about doing one big thing or identifying one thing that will give us the "biggest bang for our bucks"; it is about helping all those who lead, regulate, manage, develop and plan the delivery of the systems of healthcare to make it easy for the frontline to do the right thing - first time, every time. Crucially, it is about educating, training and supporting professionals to make the right decisions when and where things finally rest with them. In support of improvement we have already achieved a number of successes by:

- coordinating effort on a number of important fronts by ensuring that the work of key stakeholders is connected;

- operating with intellectual independence;

- influencing the system, leaving those experts within their domains to "do";
- gaining the support, encouragement and legitimacy of our effort from the Medical Director of the NHS.

We believe that the most important step from now concerns maintaining and supporting the advisory function of the Group and delivering against the recommendations to ensure a discernible and sustainable impact for the benefit of patients and the population as a whole.

Recommendations

1. The DH Human Factors Reference Group continues, working under the "matrix management" of those in the NHS Commissioning Board responsible for quality, safety and improvement but at least for the first year specifically under the remit of the NHS Commissioning Board Medical Director. The Group should be renamed the **NHS Human Factors Advisory Body** and the NHS Commissioning Board should provide expenses, secretarial support and funding to support the attendance at specific meetings of human factors experts from outside the NHS structure.

2. The NHS Human Factors Advisory Body presents to the National Quality Board a stakeholder map and identifies a road map of key individuals and organisations to work with over the coming 5 years to ensure strategic, sustained and focussed effort in embedding human factors across the system.

3. The NHS Human Factors Advisory Body to support the NHS response to the recommendations and findings of the Mid Staffordshire NHS Foundation Trust Public Inquiry.

4. The NHS Human Factors Advisory Body to support the Chief Nursing Officer to continue thematic reviews of 'never events' to identify human factors lessons common to all or distinct to each theme, and to report back on a rolling basis. The working time of the investigator to be funded.

5. The Medical Director of the NHS Commissioning Board to support an inter-collegiate roundtable of surgically oriented professional bodies to garner support from them to lead and promote best practice with their members in the use of the Safer Surgery Checklist and to promote how understanding human factors can mitigate the incidence of 'never events'.

6. The NHS Commissioning Board to improve the quality of investigations when things go 'tragically wrong' by funding a pilot of independent investigation in the NHS; scope and detail to be determined but embracing a multi agency focus and led by external accident investigation experts.

7. NHS Boards to be supported to understand human factors.

8. Building on the inaugural meeting (3 April 2012), called by Chris Outram, establish an independently chaired HEE Education sub-group focussed on human factors education and training for healthcare staff within the NHS, drawing on human factors expertise. This will require funding.

9. The NHS Leadership Academy reviews the Leadership Framework for human factors sensitivity in 2012, informed by human factors expertise.

10. The Medical Director of the NHS Commissioning Board supports an inter-collegiate roundtable with all health professional bodies (including professional and system

regulators), to be facilitated by the Academy of Medical Royal Colleges to identify actions that would encourage adoption of human factors best practice at the frontline.

What have we already achieved through our influence?

1. Supported the current national review of 'never events' by reviewing surgical 'never events' through a human factors lens and thus highlighting system issues and behaviours that are either not seen or given sufficient weight through current reporting approaches.

2. Enabled NHS leaders to understand human factors and deliver the requirements of the NHS Outcomes Framework by producing a human factors leadership learning resource for CEO's and Board Members.

3. Worked with the GMC and NMC to produce a joint statement of professional values which makes extensive reference to human factors in practical terms.

4. Influenced the MEE/HEE Transition Team to prioritise human factors within the operations and leadership function of the HEE as it matures and as the phased transition to local provider-led commissioning of education and training is developed, through Local Education Training Boards (LETB's). We have secured commitment of stakeholders to work with HEE starting with an inaugural meeting convened by Chris Outram on 3 April 2012.

5. Identified key principles and practices of human factors that could be incorporated within current NHS clinical and educational outcomes frameworks, to promote more effective integration of human factors into healthcare training and practice.

6. Created a template/tool describing human factors sensitive indicators and metrics to support commissioning and quality assurance/service improvement. This has been drafted but requires further refinement and wider consultation prior to encouraging adoption by the 'legitimate authority' within the NHS.

7. Influenced the AoMRC and the developers of the NHS Leadership Framework to assess the profile of human factors in the Leadership Framework and examine the extent to which leadership behaviours and non-technical skills (as components of organisational and cognitive ergonomics) are sufficiently explicit. Once the NHS Leadership Academy is established and appropriate mechanisms are in place, it is anticipated that review of the Leadership Framework with regard to human factors will occur within 2012. The process is to be informed by human factors experts.

8. Supported the design of the new National Patient Safety Function within the NHS Commissioning Board Authority which will include in its scope raising awareness of, and promotion of, human factors including the importance of a just culture within healthcare.

9. Consulted with clinical colleagues and experts around issues of culture development and standardisation and have identified further work which could be undertaken in this area.

What have we learnt so far?

At a time of significant change, safeguarding quality and safety must be the singular goal. Attention must be paid to the 'factors' which affect the performance of healthcare professionals using the lessons learned and work to date to support them. We have learnt that to avoid inappropriate organisational drift we must:

- Pay attention to pressures of tasks and time;
- Note the effect of personnel changes across and within teams;
- Promote the significant role that good handover and communication has to play in delivering safe care;
- Publicise the contribution of leadership behaviours that support safety and quality;
- Align professional values and education around these factors;
- Use a singular set of measures to support commissioning and quality assurance.

Our work has, and is, raising the profile of these issues and has started to provide both the foundations and willing participants to support further work. We now need to mainstream these achievements, integrating the work (and enthusiasm) of the Group into the new structure of the NHS, to facilitate further improvements through co-design and co-production.

This report is divided into the following sections:

- Introduction, definitions and background (pg 9-10);
- Recommendations regarding a focal point for human factors expertise in the NHS (pg 11-12);
- Recommendations regarding "learning from disaster" (pg 13-15);
- Recommendations regarding realising the potential of education and training in human factors, as it pertains to professional accountability and practice (to deliver safe, ethical high quality care in a productive and efficient manner) (pg 16-19);
- Recommendations regarding ensuring the regulation of healthcare encourages learning from disaster and learning about human factors, whilst understanding features of an appropriate safety culture and how they could be encouraged by the "system"; while developing certain specific actions to support this (pg 20-21);
- Comments regarding the contribution that standardisation could bring to supporting safer and more efficient care (pg 22-23).

To support the text there are appendices as follows:

Appendix 1 - List of those contributing to the DH Human Factors Reference Group;

Appendix 2 - "Never", the report into lessons from multiple wrong site surgery events;

Appendix 3 - Three examples of notable practice of human factors training in healthcare;

Appendix 4 - Joint Statement on Professional Values (GMC & NMC);

Appendix 5 - Human Factors Metrics for Education and Training.

Introduction, Definitions and Background

In late 2010 Professor Sir Bruce Keogh initiated the DH Human Factors Reference Group. The Groups' aim has been to understand, explore and initiate a series of processes to embed human factors understanding in healthcare with an ambition that, over time, such processes are located in a 'legitimate authority' within the NHS landscape.

What are Human Factors?

Human factors, (or ergonomics) is the *science* explaining the inter-relationship of humans to their environment and to each other. Understanding this is seen as essential to improving safety and efficiency in other safety critical industries whilst being integral to culture change that has safety as a core tenet of practice day to day. Human factors help us to identify how we can optimise the system to make it easier for people to do the right things, and to do them consistently. This creates reliability and ultimately efficiency and can thus lead to, and sustain, continuous cultural change that assures improvement (arguably culture being merely a reflection of frontline reality). Failings in human factors, whether systemic or individual, are the cause of a majority of accidents in aviation and have been a significant feature in high profile disasters in other industries, such as Piper Alpha, Chernobyl, etc. It is now clear that it is also a significant factor in healthcare disasters and more generally in relation to poor quality of core outcomes.

Clinical human factors can be defined as:

"Enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities and application of that knowledge in clinical settings". (Catchpole 2010)

In 2000, *Organisation with a Memory* highlighted the incidence and impact of error in healthcare, thereafter human factors has received varying degrees of attention, often championed by individual and passionate clinicians or academics, which have often been lone voices in a system that is not sufficiently focussed around either the patient or professional.

Unfortunately human factors are often perceived as concerning '*doing one thing*', such as implementing "Crew Resource Management" training which, although a vital component of a *strategy* for safety, fails to compensate for or address all the challenges of a system. The analogy would be diagnosing someone with diabetes, giving them insulin and sending them home "treated".

A human factors approach provides a means of optimising human clinical potential, effective leadership, value for money and safe care - key ingredients to mitigating widespread systemic failure such as occurred at Mid Staffordshire NHS Foundation Trust. Crucially, we believe this requires multiple interventions at multiple levels, across the system.

At the first meeting of the DH Human Factors Reference Group, Professor Sir Bruce Keogh said "we've been talking about human factors for ten years, but done nothing ..... given the current changes in the NHS and the obvious need for improvement, now is a good time to explore how we can embed human factors into the new landscape".

Drawing on human factors strategies and culture change in other safety critical industries we believe that "multiple interventions at multiple levels with common themes" is fundamental.

We have explored the following areas:

- Stronger leadership and focus around human factors expertise in the NHS;
- *'Learning from disaster'*, properly extrapolating and understanding the *human factor* contribution to failure and thereafter disseminating lessons to facilitate change across systems and in individual behaviour;
- Training and education in *human factors* as it pertains professional accountability to deliver safe, ethical and high quality care in a productive and efficient manner, via undergraduate and post graduate professional education, and thereafter, as a repeating theme of continuing professional development;
- Ensuring the regulation of healthcare encourages the two above strategies consistently across all parts of the system, whilst understanding features of an appropriate safety culture and how they could be encouraged by the "system", while developing certain specific actions to support this;
- Exploring the contribution that standardisation could bring to efficiency and safety.

In the following pages we provide a summary of the progress the Group has made over the past year.

It is important to understand, despite the arbitrary headings of each section, that the current, future or completed actions are complimentary to each other. Strong coordination across the various working parties has been a feature of our work to ensure commitment to, and delivery against, the "same themes" as far as possible.

Recommendations regarding stronger leadership and focus for human factors expertise in the NHS.

1. The DH Human Factors Reference Group continues working under the "matrix management" of those in the NHS Commissioning Board responsible for quality, safety and improvement but, at least for the first year, specifically under the remit of the NHS Commissioning Board Medical Director. The Group be renamed the **NHS Human Factors Advisory Body** and that the NHS Commissioning Board provides expenses, secretarial support and funding to support the attendance at specific meetings of human factors experts from outside the NHS structure.

2. The NHS Human Factors Advisory Body presents to the National Quality Board a stakeholder map and identifies a road map of key individuals and organisations to work with over the coming 5 years to ensure strategic, sustained and focussed effort in embedding human factors across the system.

3. The NHS Human Factors Advisory Body to support the NHS response to the recommendations and findings of the Mid Staffordshire NHS Foundation Trust Public Inquiry.

Background

In other safety critical industries, staff are often trained in specific techniques, or use equipment and processes which are founded in good human factors principles. However, the development and design of the overall systems and specific research or strategies often require human factors specialists or ergonomists. As an example, whilst airline pilots, air traffic controllers and maintenance crews are trained in "CRM" and human factors on multiple occasions, the manufacturers of aeroplanes employ ergonomists among their engineering staff; the regulators employ human factors specialists in fields such as training, policy, licencing, etc; and overarching advisory bodies help to inform on strategy and direction.

We believe that having human factors expertise within the system, for example, as part of the MHRA, NICE, CQC, etc, is crucial and, in fact, has long been the case with the NPSA, however, to achieve wider system improvements requires wider thinking.

In the disasters highlighted in the introduction piece, commentators have often noted underlying problems with "culture" as being of great significance. Whilst the Secretary of State for Health (see: http://www.dh.gov.uk/en/MediaCentre/Speeches/DH_116643) and indeed other senior individuals in the health system, have made reference to the need for culture change and/or the need for a "safety culture" this is often seen as being too hard to pin down to specifics. We contend that the culture is merely a reflection of the reality of frontline practice, whether viewed by the professional or user.

Safe care is fundamentally about morally sound professional practice within ethical and principled organisational systems. It is about high quality clinical leadership, effective team working, respect, tolerance and professional humility and, in particular, the avoidance of hubris. It is about curiosity, inquiry, clarity of thinking and approaches and excellence in communication, both with patients and between professionals.

Sustainable systemic improvements in safety will only come about when organisational and professional attitudes and patterns of behavior start to shift to reflect these features.

We need to find ways of creating the conditions for the difficult, sometimes uncomfortable, but ultimately honest conversations that will build those changes. We believe that looking at organisations, systems and people through a human factors lens will facilitate those conversations and that the actions and recommendations in our report will create a foundation for further improvements in safety and efficiency in the NHS.

The Group has already had notable success in starting these difficult conversations by:

- coordinating effort on a number of important fronts by ensuring that the work of key stakeholders is connected;
- operating with intellectual independence;
- influencing the system, leaving those experts within their domains to "do";
- gaining the support, encouragement and legitimacy of our effort from the Medical Director of the NHS.

We believe that the most important step from now, concerns maintaining and supporting the advisory function of the Group and delivering against the recommendations for discernible impact.

Recommendations regarding "learning from disaster"

1. The NHS Human Factors Advisory Body to support the Chief Nursing Officer to continue thematic reviews of 'never events' to identify human factors lessons common to all or distinct to each theme, and to report back on a rolling basis. The working time of the investigator to be funded.

2. The Medical Director to support an inter-collegiate roundtable of surgically oriented Professional Bodies, to garner support for them, to demonstrably lead and promote best practice with their members in the use of the Safer Surgery Checklist and to promote how understanding human factors can mitigate the incidence of 'never events'.

3. The NHS Commissioning Board to improve the quality of investigations when things go 'tragically wrong' by funding a pilot of independent investigation in the NHS. Scope and detail to be determined but embracing a multi-agency focus and led by external accident investigation experts.

4. NHS Boards to be supported to understand human factors.

Background

The NRLS receives an enormous number of incident reports each month and SUI investigations are conducted relatively consistently and reported to the DH. Yet there is consistent evidence that lessons from these investigations are not being learnt. Despite the effort to learn from near misses the Group started with the assumption that there is still a remarkable lack of understanding of what leads to serious incidents and disasters or near misses, this means a lack of "language" of disaster and safety and hence the "quality" of near miss reporting is poor because clinicians often don't see the near miss as a near miss.

We decided to use a number of investigations already undertaken to identify if any human factors issues were present. We then agreed to disseminate the learning from the events, both to achieve benefit from the process and also to learn about the barriers and routes to success for learning from incidents. It so happened we choose to look at DH files on wrong site surgery 'never events'; although it is our belief the same process could be applied to any other sort of incidents.

The root cause analysis investigations into 9 'never events' were analysed from a human factors perspective to answer the question "what role does human factors play in patient disasters?" The 'never events' generally involved the wrong patient, the wrong site and the wrong procedure. The contributory factors included not marking the site properly; changes in environmental factors, such as operating in a different theatre to normal; time pressures, including the surgeon arriving late; staff changes and interruptions; and the way things were written in the patient's notes including misinterpreting abbreviations.

The human factors analysis looked at the non-technical skills that were implicated in these 9 cases. These included:

- situation awareness – such as overlooking anomalies and not checking 'mental pictures' with others;
- decision-making – proceeding with tasks rather than checking when experiencing uncertainty;
- teamwork – failure to speak up when the checklist was not followed; and
- leadership – not demonstrating compliance such as not marking the site prior to surgery.

The analysis demonstrated that incidents are often caused by multiple factors including failures in attention, memory, decision-making and prioritisation and it highlighted that these failures are made more serious when the system in which we work is also flawed.

The analysis of these 9 'never events' clearly highlighted the role that human factors play in patient disasters and serious untoward incidents. The report has been well received and is already being used at numerous Trusts despite only being shared "virally" to date.

This report provides an important status report with regard to 'never events' in surgery. However, it also demonstrates that by applying a human factors lens to the analysis it highlights aspects of behaviour that are either not seen or not given sufficient weight through our current reporting approach.

This work has subsequently been reviewed by a multi-professional team (from the O/T and Management) to consider how it could be used to change the nature of investigations to allow the human factors lens to be applied more frequently. We concluded that in order to generate a different response, a different stimulus or narrative was needed.

Successes and further actions

Publishing the 'Never Events' Report:

The report has been "distributed virally" and is currently being made available via websites and social media. This process will continue. See Appendix 2 or download from http://www.chfg.org/wp-content/uploads/Never-Events-final2.pdf

Formally publishing the 'Never Events' Report in Journals:

Our objective will be to draw attention of wider audiences to a human factors approach to the investigation of 'never events'. It will include a case study from a Grand Round. Further influence will be secured through referencing of papers. The audience will be clinical leads, governance leads, policy leads, academics, educationalists and trainers.

Making a low cost film to accompany a training guide around 'Never Events':

Our objective will be to augment a guide already planned by the Royal College of Surgeons of Edinburgh. The principle audience will be students and trainees.

Develop, test and distribute 'quick tips/challenge sheets' from the existing report:

Our objective will be to increase access to practical report recommendations and provide practical support for frontline staff in their teams prior or following a "shift" in the O/T. It will focus on questions such as: "What do you do that could have prevented this?", "What can you do to demonstrate a human factors approach in your O/T?", "What can you do to make this happen?". We plan to pilot this at a UK Hospital.

Producing a short Human Factors Leadership summary for CEO's and Board Members:

Our task will be to start engaging leadership teams using the report as an example of the impact of safety problems within the system and how a different way of viewing these problems by the Board and Senior Management can pre-empt disaster. This project has already been externally funded by the Clinical Human Factors Group supported by the Health Foundation.

Recommendations regarding realising the potential of education and training in *human factors*, as it pertains to professional accountability and practice (to deliver safe, ethical high quality care in a productive and efficient manner).

1. Building on the inaugural meeting (3 April 2012) called by Chris Outram; establish an independently chaired HEE Education sub-group focussed on human factors education and training for the NHS, drawing on human factors expertise. This will require funding.

2. The NHS Leadership Academy reviews the Leadership Framework for human factors sensitivity in 2012, informed by human factors expertise.

Background

Attempting to influence the education and training system that supports healthcare is a significant and complex undertaking. We resolved not to propose a wholesale re-writing of curricula, etc, but to identify how the system might be exploited to embed human factors so that it becomes central to day-to-day work, systems and procedures. Our scope was undergraduate and postgraduate professional education and thereafter human factors as a repeating theme integral to continuing professional development (CPD). Given the interdependence of human factors and patient safety, it is recommended that human factors should form a key element of appraisal and revalidation.

Although a complex problem we believe that:

'Our only march on time, is by starting the educational journey today'

Recognising the expertise required to explore human factors sensitive education and training, a multi-professional stakeholder group comprising Directors of Education and individuals with experience in human factors was established (see Appendix 1). Our stakeholders acknowledged that, despite the evidence base of safety science, the relevance and proven value of *human factors sensitive* education in enhancing professional practice beyond some noted 'centres of innovative practice' (individual Trusts and Deaneries) (see Appendix 3), human factors is not mainstream, routinely commissioned at scale, or 'signposted' reliably in professional curricula. Stakeholders were resolute that while 'future proofing' commands focus on education and training, it is but one piece of the *'system'* and that a 'culture shift' on the scale required for safety improvement, calls for far more than mere 'curricula change'. Ambition for transformation is dependent on effective and visible leadership, at both the top of organisations and middle management, and optimisation of *system levers,* including commissioning across the NHS landscape as a whole and at several levels. Safe patient care needs to be seen by all as a non-negotiable element of all publically funded healthcare, and management behaviours must be seen consistently and reliably to support this principle, as must those of all healthcare professionals and other employed staff.

Stakeholders identified a number of opportunities with the potential to positively influence a future and necessary focus on human factors and safety science:

a) Identify the common professional behaviours (human factors) required of all health professionals and the explicit leadership behaviours (human factors) that will promote a responsive, patient safety aware culture in the NHS where prevention and avoidance of harm is at the centre of all we do.

b) Develop a proactive commissioning strategy that supports inter-professional team-based education (pre and post qualification), aligned to developing service needs/pathways of care, utilising the patient safety curriculum tool developed by the NHS Institute of Innovation and Improvement or other materials developed by notable providers of human factors education.

c) Exploit the commissioning for patient safety 'function' of the NHS Commissioning Board (through the CCGs), as a lever/'design agent' in the development of a human factors oriented statement of requirement within commissioning contracts.

d) Develop human factors indicators and metrics for education commissioning and quality assurance/improvement; this will require the 'legitimate authority' within the new NHS landscape to take it forward successfully.

e) Exploit Local Education and Training Boards (LETBs) through, or with HEE, to exercise leverage with 'provider' organisations by stipulating that future monies that follow the students and trainees, will be in part withheld, when/if organisations fail to deliver the requirements of commissioning contracts with particular respect to ensuring and promoting safe care environments.

f) Exploit the resource and expertise of the NHS III to develop clinical/academic faculty capacity and influence MEE/HEE Transition team to focus on human factors as 'core business'.

Successes and further actions

Human Factors, Professional Values & Practice

Worked with the GMC and NMC to produce a joint statement on professional values, highlighting the relationship of human factors to assuring safe, high quality and improving patient care (see Appendix 4). The GMC and NMC have committed to publishing this in advance of the publication of the Report of the Francis Inquiry.

Secured commitment to collaborate and upload the joint statement, to the websites of the GMC, NMC and Clinical Human Factors Group. This will provide links and signposts to relevant case studies that detail the contribution and value of non technical skills, especially the importance of 'speaking up' to safeguard quality and patient safety and which build on the existing publication *Raising and acting on concerns about patient safety (GMC 2011).*

We have also secured commitment to increasing the profile in the professional literature of human factors and to raise awareness of the relationship between human factors and patient safety and hence high quality care.

Human Factors, Leadership for Safety

The evidence base that effective and committed leadership is crucial to promoting and safeguarding patient safety is significant. During 2011, the NHS Leadership Framework was launched encouraging the Group to question a) the profile of human factors within the Framework; and b) the extent to which leadership behaviours and non-technical skills (as components of organisational and cognitive ergonomics) observe shared terms and are explicitly promoted to the NHS. Working with colleagues who led on the development of the Framework, discussions over time acknowledged the benefit of incorporating the questions posed within the scope of future review. Recognising that the NHS Leadership Academy is relatively recently established and appointment of key personnel is ongoing the review will be dependent on the Academy having first established itself and having appropriate processes in place. It is anticipated that review of the Leadership Framework could occur within 2012 and that the process would be usefully supported by a panel of individuals with human factors expertise.

Scope of Education and Training Commissioning/Delivery

Meeting and correspondence with Chris Outram and the MEE/HEE Transition Team to explore how human factors education might be prioritised within the operations and leadership function of the HEE as it matures and as the phased transition to local provider-led commissioning of education and training is developed through LETB's. As a result a stakeholder meeting hosted by the Transition Team is scheduled for 3 April at Skipton House. Its scope will include, but not be limited to, the recommendations of the Reference Group; namely faculty capacity, commissioning, inter-professional learning and human factors sensitive metrics for quality assurance.

Human Factors and Quality Assurance

A template/tool describing human factors sensitive indicators and metrics has been drafted to support education commissioning and quality assurance/service improvement. This is still a 'work in progress' and will require further refinement and wider consultation prior to encouraging adoption by the 'legitimate authority' within the NHS.

Human Factors: Commissioning for Safety

We have been assured that the design of the new National Patient Safety Function within the NHS Commissioning Board Authority will include in its scope the raising awareness of and promotion of human factors including the importance of a just culture within healthcare.

The new national function will build on the work to-date, transferring some of the functions from the NPSA to embed patient safety in its entirety (which includes human factors) throughout the work of the Board including its work focussed on commissioning, clinical engagement, systems design, improvement and transformation, evaluation, patient

engagement, insight and informatics. This work has been led by Dr Suzette Woodward, Director of Patient Safety NPSA and Workstream Design Lead for the NHS Commissioning Board Authority (NHSCBA).

Human Factors Metrics in Training and Education

A substantial workstream have identified an indicative set of metrics that are evidence-based and represent current best healthcare practice. A paper produced by the workstream is shown at Appendix 5. The Group believe it should be possible for these metrics to be integrated within established clinical and educational frameworks.

Recommendations regarding ensuring the regulation of healthcare encourages learning from disaster and learning about human factors, whilst understand features of an appropriate safety culture and how they could be encouraged by the "system"; while developing certain specific actions to support this.

1. The Medical Director of the NHS Commissioning Board supports an inter-collegiate roundtable with all health professional bodies (including professional and system regulators), to be facilitated by the Academy of Medical Royal Colleges. To identify actions that would encourage adoption of human factors best practice at the frontline.

Background

Although "cultural" considerations have been a key feature of the work of the Group, a small workstream was developed to provide some specific focus on organisational and professional cultures. The Group began its work in November 2011 and is therefore embryonic. Three key questions associated with human factors and the cultural dynamics of healthcare have been framed as follows:

- How we understand error and blame;
- How we deal with the aftermath of disaster, major untoward incident or 'never event';
- How a culture of denial and fear can develop, thus creating unsafe and "error-producing" conditions as the norm.

The Francis Inquiry has been exploring the complex regulatory environment in considerable depth over recent months and it would therefore be inappropriate to pre-empt the Inquiry outcomes here. Nevertheless, the Mid Staffs story, along with other recent high profile cases, highlight a number of very important "cultural" questions, all of which lend themselves to exploration using the lens of human factors.

There is no doubt that the impact of the Francis Inquiry has been due to the focus on patient and family experience of poor care. Narrative evidence has been crucial as is empirical evidence that we must create greater opportunities for patients, relatives and family members to have an input in to the education, training and regulatory framework, as well as having the opportunity to directly share personal experience with those who deliver care at all levels of the system.

The Group has been significantly informed in its early work by numerous valuable contributions to the Mid Staffs Inquiry seminars and the research and insights of the Group members and their close colleagues. The personal testimonies of Clare Bowen, Lisa Richards-Everton and Beatrix Fatuk-Campbell, all of whom have very personal experience of avoidable harm in healthcare, have also been very influential.

Of course, arguments around these issues are not straightforward. The relationship between individual and collective professional responsibility and accountability is complex and often highly contextually specific. The issue of what is permissible and what is blame-worthy in healthcare is rarely simple.

A human factors based approach recognises that every "solution" creates the context for a new problem. Thus, approaches to change that are linear, politically motivated or expedient are unlikely to yield the long-term or sustainable gains needed to establish new cultures over time.

Thinking culturally about safety is complex and multi-factorial. There are no "silver bullets" and we must resist the "myth of leverage" (i.e, the notion that one critical move in the system will create and sustain fundamental cultural change). It requires thoughtful, creative and sophisticated responses and intelligent regulation and responsive leadership.

However, numerous conversations and observations, both expert and circumstantial suggest that the professional regulatory framework would benefit from alignment around more common goals. This would both support the GMC & NMC joint statement on professional values (see previously) and would hopefully reduce some of the regulatory burden. It would also allow professionals to facilitate improvements in professional practice that other regulatory or advisory bodies have failed to achieve.

An initial "thought piece" has been written based on the Group's early insights and further conversations with a wider group are planned. Incorporating the perceptions of roles, harm and the relationships between care giver and patient will be crucial to restoring public confidence in the NHS. We need to see the person in the patient but we also need to see the person in the clinician who has been involved in cases of serious harm.

We believe that further work to explore how the healthcare system can be optimised to support both those harmed and those staff involved in cases of serious harm is crucial and we will do this as part of our further work.

Comments regarding the contribution that standardisation could bring to supporting safer and more efficient care

At this stage there are no recommendations in this area as further work is required.

Background

Standardisation has been shown to be an effective mechanism for reducing human error in complex processes or situations. Conversely, the lack of it can increase risk and make human error more likely and in some cases even inevitable. In order to inform the DH Human Factors Reference Group, we conducted a rapid on-line survey asking CHFG supporters about the top 5 priority areas which, in their view, if standardised, would make a positive contribution to improving patient safety, as well as making their work easier and more effective overall.

When considering the results of this survey it is worth noting that:

- Medically qualified practitioners working in surgical and/or anaesthetics practice were very strongly represented in the sample. The sample might be best described as a self-selecting group of informed enthusiasts and is not representative or reflective of the NHS as a whole.

- Respondents offered more than 50 additional free text comments. Within these responses there was a wide variation in how the term "standardisation" was being understood and used.

In summary, three main priorities stood out in the analysis:

1. **Protocols** – this relates to all comments associated with what might otherwise be called "standard operating procedures" for a range of specific clinical circumstances.

2. **Medicines handling** – this relates to all comments associated with prescription, storage and administration of medicines but excludes drug labelling which has been treated as a separate category (NB: If combined this would elevate "Medicines" to first position).

3. **Equipment** – this relates to all comments associated with commonly used monitoring, treatment and other specialist equipment.

It is clear to us that we need to be careful not to confuse the standardisation of the practice with the implementation approach and best practice principles around improvement that need to be observed. Determining the scope of standardisation needs to be carefully considered. Some practices are more appropriately adopted intra- rather than inter-organisationally.

There is very little research into this area, however, we believe based on other safety critical industries that some of the biggest safety gains are likely to be achieved through standardisation of equipment and medicines and thus the focus of influence should be on manufacturers and those responsible for procurement not purely clinicians (though their engagement is key).