Action Points & Minutes
5th Meeting of the CHFG
Weds 8 October 2008

Held at the AfPP Conference, Harrogate, facilities kindly provided by the AfPP.

Attendees: Martin Bromiley, Tony Giddings, Stephen Ramsden, Jane Reid, Nick Sevdalis

Introduction

The move to Harrogate for this meeting as well as combining it with the AfPP Conference at which a number of us were speaking on other days created complications for many, hence the low turnout. For this reason we only concentrated on certain items, arguably the most important.

The following day the CHFG, kindly hosted by the AfPP held a mini conference presenting "human factors" to a largely clinical audience. Martin Bromiley started by talking through his late wife's story. After a break Sir Ian Kennedy chaired a session looking at "practical HF". Tony Giddings gave a first brief airing to a DVD produced by the Alliance for Patient Safety identifying the extent of the HF "problem". Jane Carthey went on to look at practical tools that can help in the workplace. Nikki Maran then looked at behavioural markers as well as showing a powerful video clip from her Simulator reminding the audience that it really is all of us who are prone to human factors. Finally Krishna Moorthy talked about work so far on the Safer Surgery Checklist and his initial observations on its use.

We await feedback from the audience but it certainly seemed to capture a great deal of interest, and on a personal level I felt that it would be a good format to use again with a wider more influential audience.

Martin Bromiley

Item 1 – Working with the "Safety First" campaign (the English patient safety campaign).

Stephen Ramsden who is leading the campaign started with an overview. At this stage 225 organisations have signed up to be part of the process, including 75% of Acute Trusts. At the previous CHFG meeting Stephen requested our assistance with helping bring HF into the campaign. As a result members of the group provided input over the summer to the intervention centred on the Safer Surgery Checklist. However it had also been intended to work on an "HF" or "culture change" centred intervention but we discovered over the summer that other things were happening around us! HF received a good airing at a meeting of the National Patient Safety Forum (chaired by Sir Liam and David Nicholson) thanks to a presentation from Tony Giddings. The result of this was a meeting held in September between the NPSA, NHS Institute, Health Foundation and the CHFG to make sure work was coordinated at a high level between each. Minutes of that meeting are at Appendix 1, (and at Appendix 2 a very useful overview of HF and the NPSA's work presented at that meeting). However one major action was that it was agreed that the CHFG should act as the lead body for developing an "HF how to" guide for the Safety First campaign.

(As an aside, as part of the discussions leading up to the above meeting, it is possible that the National Patient Safety Forum would like to help organise a workshop/meeting/conference for very senior people to generate a wider awareness and acceptance of HF. Suzette Woodward at the NPSA (also on the Forum) has agreed to keep Martin Bromiley up to date on this possibility as it's recognised the CHFG may be best placed to assist with this. At our Harrogate meeting it was agreed that any such programme should involve the highest levels of organisations such as the NHSLA, Quality Commission, GMC, PMETB, NICE etc).

In our meeting in Harrogate there was a great deal of discussion about what form the "HF" intervention might take and more importantly what wouldn't work. However the following was agreed:

- That the CHFG would act as lead body for the development of a "How to Guide" around "understanding and starting to embed some HF principles and tools". The guide will be aimed at Leaders, Boards, Clinical Leaders and Clinicians at all levels. The theme really is "What can YOU do today to make a difference".

- That the guide would start with an overview explaining HF, it's relevance to safety critical work, and that "inappropriate behaviours" at the frontline as perceived by colleagues may actually be "unsafe" behaviours.

- The guide will not aim to provide reams of evidence (although examples will be included); it will instead be built around our current knowledge of tools that may help teamwork – if you like "This is probably a good idea, it'll make life easier for you in the workplace." It will also aim to explain why certain interventions are believed be useful (i.e. the underlying philosophy). It will warn about the potential dangers of implementing a tool without checking what new dangers maybe created.

- The guide will then suggest specific interventions that can be used, such as SBAR, Checklists, Time out, Briefings, Foresight Training. It will also signpost work undertaken on Behavioural Markers such as the work done by the RCS, Aberdeen, Imperial, Oxford etc; as well as our own workgroup on a likely syllabus for HF training and the NHS Institute work on the Productive Operating Theatre. Despite the last item it will attempt to move away from a "surgery" focus onto more general and generic skills/tools appropriate for whole Acute Trusts.

It was agreed that this needs to be coordinated professionally with a significant clinical input. It was felt appropriate to invite certain people from the wider group of supporters after consultation with bodies such as the NPSA and NHS III.

Action - Martin Bromiley will talk to various people to establish a working group to produce this, the goal being a guide ready to include in the Safety First interventions within 3 months.

Item 2 – The Human Factors Training Workstream

Martin Bromiley brought us up to date on this project. Nikki Maran spoke with Martin a few weeks ago; the group postponed its last meeting as work was still on-going. However Nikki felt that at last the group had started to identify a model for a syllabus that was clinically more appropriate than the traditional aviation model. The Workstream are proposing to meet later this year to review the "model" syllabus in first draft form and debate its appropriateness.

There was some discussion at Harrogate about how much we should "push" the syllabus and it was agreed that until it can be tried and tested it would have to remain a "recommendation". Although this mirrors work being undertaken by the NHS III under Hugh Rogers it is felt it will still be useful to have a recommended syllabus from those who have been most involved in delivery which can then be fed into work such as the Productive Operating Theatre. As always it's part of learning and moving forward and any work will not stay static for long.

Action – Nikki Maran to share minutes of the next meeting of the workstream with the whole group.

Item 3 – Awareness Raising

Although most of the Group will be unaware, the CHFG has submitted written evidence to the Health Committee Parliamentary Inquiry. A sub group to work on this was formed at short notice over the summer. Unfortunately we are not allowed to publish our document until Parliament has given us permission (likely within the next month). When we are able to do so it will be sent around. However, sincere thanks to all those involved and all those who provided observations and thoughts.

Item 4 – Work at Imperial, London

Nick Sevdalis brought the group up to date with work at Imperial. The Clinical Safety Research Unit has 40 people specialising in behavioural work, organised into 4 areas: Surgical, Clinical Decision Making, Emergency Care, Training and Education. Work at the moment includes:

> Communication in Theatre, stress in surgeons, the WHO checklist, including patients involvement in clinical decisions, NOTECHS and Technical skills in ODP's and Nurses; impact of interruptions; development of lo fidelity portable simulators to re-create OT's in meeting rooms, identifying generic "safety skills" applicable to all clinicians.

Nick also talked about the meeting at Oxford on 4&5 September around "clinical human factors" involving the key researchers in the UK and felt that this had been very successful. Nick reminded the group that on 13 Nov the next annual meeting of all Patient Safety Research organisations was being hosted at the NPSA.

People at the meeting were able to make connections with the work that Nick was describing and their own areas of interest. It was agreed that we should take up Charles Vincent's offer to hold the next CHFG meeting at Imperial and Nick agreed that it with give us all the opportunity to look round their facility.

Action – Martin Bromiley to liaise with Charles Vincent.

Item 5 – The Productive Operating Theatre

Hugh Rogers briefed Martin Bromiley on the phone & email about this project. A slide presentation is attached as Appendix 3. However Hugh felt that the project really is hoping to provide evidence for once and for all that HF training really makes a difference in a clinical setting.

Item 6 – Admin matters

It was agreed that although Jane Reid is standing down from her position as AfPP President she should remain on the Standing Group.

Martin Bromiley announced that the CHFG now has its own money in its own bank account (£5,000) which will allow us to cover expenses for continued meetings and minor project expenditure.

Next Meeting – It is proposed that the next meeting be held at Imperial in the New Year. Martin will discuss this with Charles Vincent.

Appendix 1

Notes of meeting: National Work on Human Factors and Patient Safety Tuesday, 9th September 2008, held at NPSA

Attending:

Martin Fletcher (MF)	Chief Executive, NPSA
Suzette Woodward (SW)	Director of Patient Safety Strategy and Nursing Lead for Patient Safety, NPSA
Peter Hibbert (PW)	Associate Director, NPSA
Beverley Norris (BN)	Human Factors Lead, NPSA
Stephen Ramsden (SR)	Luton and Dunstable Hospital/English Patient Safety Campaign
Kate Jones (KJ)	NHS Institute for Innovation and Improvement
Karen Marshall	Group Coordinator, Clinical Teams

Apologies:

Martin Bromiley	Clinical Human Factors Group
Rhona Flin	Aberdeen University
Mark Emerton	NHS Institute for Innovation and Improvement
Tony Giddings	Royal College of Surgeons
Jo Bibby	Health Foundation
Murray Anderson-Wallace	Field Strategy Lead, Patient Safety First Campaign

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Matters Arising:

1. Definition and scope of 'Human Factors'

1. BN circulated a document (attached) which presented some definitions of human factors and a model of the systems approach to safety:
   - Ergonomics (or human factors) is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design to optimize human well-being and overall system performance *(The International Ergonomics Association http://www.iea.cc/ and Human Factors and Ergonomics Society (USA) http://www.hfes.org)*
   - 'Human Factors' refers to environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work in a way which can affect health and safety *(UK Health and Safety Executive: Reducing error and influencing behaviour, HSG48, 2005, HMSO http://www.hse.gov.uk/)*

2. SR stated that human factors sometimes gets confused with human failures, as compared to system factors and system failures. BN stated that the term 'human factors' is often thought of as 'people factors'. PH suggested that 'ergonomics' is often thought of as designing to fit human physical characteristics only, all agreed.

3. BN pointed out that during her scoping work with NPSA Patient Safety Managers and Trust staff last year to find out their understanding of human factors, it was simply summed up as "making it easy to do the right thing".

4. PH stated that that the diagram provided in BN's document helped explain human factors more easily than the definition.

5. SR pointed out that human factors is sometimes seen as associated with safety culture. BN stated that safety culture is a part of human factors; human factors is a discipline that considers the interaction of all elements of a system, and how this affects the delivery of care, rather than looking at them separately. Safety culture would therefore be part of the organisational level of the system. BN thought that awareness and understanding of human factors is still relatively un-developed in healthcare.

6. BN also stated that human factors is often used to refer to non-technical skills (NTS)/CRM-type training, and that this is one of the most active areas of 'human factors' in healthcare at the moment. Both KJ and SR stated that they thought uptake of the training was sporadic and not very widespread due to cost, and SR asked whether there was any data on the uptake of human factors training. BN stated there were no data on the numbers being trained but many Trusts are developing their own NTS training, based in simulation centres. BN attended the 2 day International Workshop on Teamwork and Safety in Surgery in Oxford last week and was very impressed with the work that is underway looking at the evidence for NTS training and the development of tools to support it.

7. BN briefly outlined her previous work with the rail industry to demonstrate some of the other areas of human factors work that is not currently developed in healthcare, such as mental workload assessment tools and Human Factors Integration models that are used when introducing system re-design, for instance the introduction of new technology or working practices.

8. It was noted that when change model processes are being implemented that aspects of human factors are commonly being used to improve systems but they may not always being recognised as such.

9. MF summed up by saying that the main concern was that we should guard against human factors being seen too narrowly, and that there is a clear need for more education and awareness around human factors. All agreed.

2. Update on programmes of work from all parties

NHS Institute for Improvement and Innovation

KJ summarised the work that the Institute is carrying out around human factors:

- The Productive Ward and Productive Theatre initiatives are based on Lean Management techniques, and include a system approach to designing the delivery of care; human factors were being integrated well, aside from perhaps equipment and devices.
- The Leading Improvement in Patient Safety (LIPS) programme includes a full day on an introduction to human factors, including violations, system reliability, standardisation and fair and open cultures.
- Work is beginning with junior doctors to improve awareness of patient safety, linking with PMEDB and 29 Universities are involved.

NPSA
BN referred to her document which included a list of the NPSA human factors work to date, which have focused primarily in the areas of safety culture, team work and design. The NPSA are currently developing a HF resource area on their website which will signpost to human factors resources and tools from healthcare and other industries, with the aim of developing an understanding of the breadth of human factors. Completion planned by the end of the year.

Patient Safety Campaign
The Campaign is interested in developing a supporting tool/document that explains human factors and links to the initiatives on the campaign.

Luton and Dunstable Hospital
The Trust is currently commissioning team training for obstetrics.

Health Foundation
An email from Jo Bibby and Gill Hastings was read which informed the meeting that the Health Foundation are 'in discussion with Allan Frankel about the possibility of running some small scale demonstration projects on applying the team approaches he is working on to improve patient safety. It is still at an early stage of thinking but it is likely that we will open the offer to participate to SPI sites (3-4 max)'.

3. Areas of common interest and gaps

1. SR pointed out that most CEOs would struggle to grasp what human factors is about and that the message was not reaching the NHS. It was agreed that as well as examplars of human factors being applied to specific areas, awareness is definitely needed at leadership level, to ensure spread and ownership beyond those areas.

2. Practical ways of raising awareness of CEOs was needed. It was agreed by all that a 'one-stop' area where this information could be found would be a useful addition to the NPSA website, signposting to available and relevant tools.

Action: BN to share the progress of the NPSA website resource area as this develops.

4. Identification of future work and/or collaboration

SR stated that he was keen for the Campaign to provide an 'introduction to human factors' document/resource to support the implementation of the specific initiatives on the Campaign. Jane Reid of the AfPP was particularly interested in this and so surgery may be an area to target. BN said that the Oxford meeting had focused on surgery and this was one of the specialities where NTS and team training was more developed than others. SR had already approached the Clinical Human Factors Group for them to take the lead on this, and the meeting agreed that the CHFG was the right organisation to do this since it had representation from most national organisations. The CHFG would therefore be asked to lead on this at their next meeting

Action: SR to further discuss the development of a Human Factors resource for the Campaign with CHFG

A question was raised as to whether there was any merit in communicating information wider than the three organisations represented at the meeting. It was agreed that feedback would be given at the next National Patient Safety Forum.

5. Future Meetings

It was agreed that there was no immediate need to meet again, but that the notes of the meeting would be distributed to the wider group invited to the meeting.

Action: BN to disseminate meeting notes

6. AOB

None

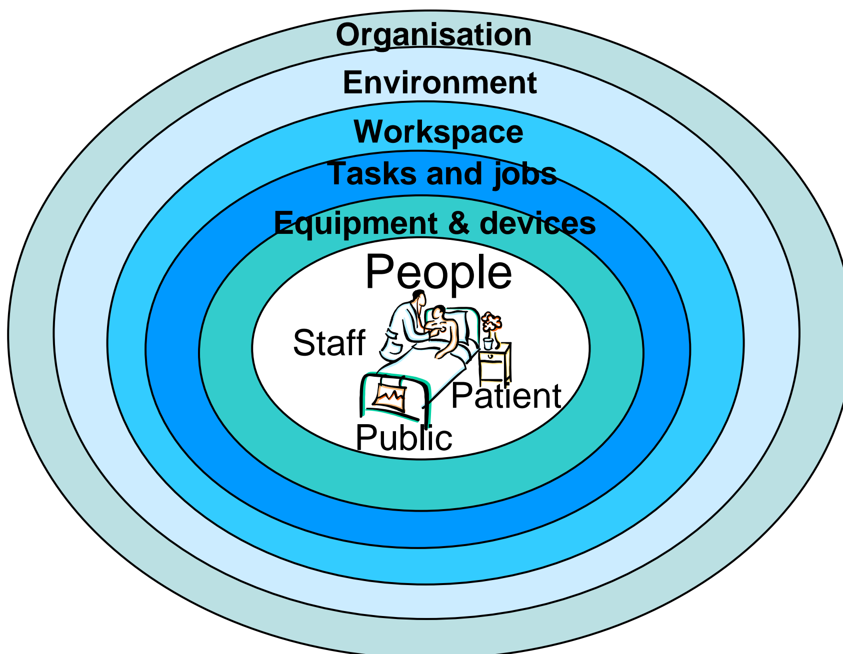
Appendix 2

1. Definitions of human factors

- Ergonomics (or human factors) is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance
  The International Ergonomics Association http://www.iea.cc/ and
  Human Factors and Ergonomics Society (USA) http://www.hfes.org

- 'Human factors refer to environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work in a way which can affect health and safety. A simple way to view human factors is to think about three aspects: the job, the individual and the organisation and how they impact on people's health an safety-related behaviour'
  UK Health and Safety Executive (Reducing error and influencing behaviour, HSG48, 2005, HMSO) http://www.hse.gov.uk/

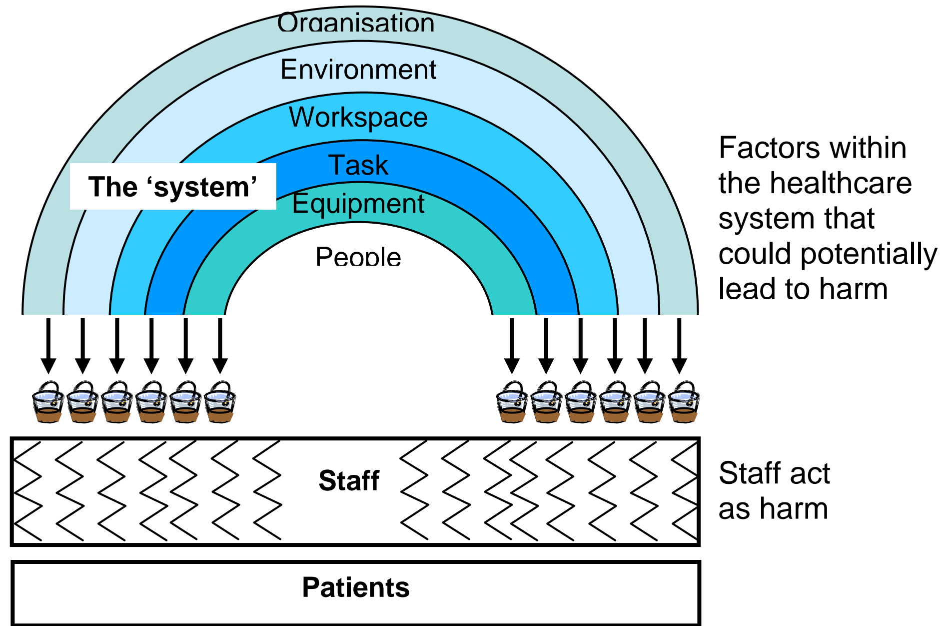
2. Human factors and the systems approach



Based on various models e.g. Moray, N., 1994, Error Reduction as a system problem. In: M. S. Bogner (ed), Human error in medicine, 67-91, Lawrence Erlbaum Associates Inc.

Adapted from REASON, 2005

3.



Potential applications of human factors:

Design and safety of:	Examples
Equipment and devices e.g.	▪ Control and displays ▪ Software and programming ▪ IT systems (barcoding, prescribing systems) ▪ Labelling and symbols ▪ Instructions for use and training ▪ Medication (sound-a-like medicines, colour coding systems, packaging) ▪ Patient environments ▪ Portable equipment and systems ▪ Design for maintenance and cleaning ▪ ▪
Task and job design e.g.	▪ Protocols and procedures (double checking, handover) ▪ (Team work) ▪ Checklists ▪ Information systems and communication (patient notes, care pathways, algorithms) ▪ Roles and responsibilities ▪ Shift-work and rotas ▪ Training and competencies ▪ ▪
Workspace e.g.	▪ Shared workspaces ▪ Storage (medicines, equipment, consumables etc.) ▪ Movement spaces ▪ Travel distances ▪ Lines of sight to patients ▪ Beep black spots ▪ ▪
Environment and facilities e.g.	▪ Building design (single patient rooms, infection control etc.) ▪ Patient journeys ▪ Lighting ▪ Noise ▪ Temperature ▪ People flow ▪ Signage ▪ Designing for aggression, violence, patient dignity ▪ Cleaning ▪
Organisational and management issues e.g.	▪ Safety culture ▪ (Teamwork) ▪ Leadership ▪ Management of change ▪ Reporting systems
System design e.g.	▪ Human factors integration ▪ Systems analysis ▪ Transformation teams

4. Human factors activities

Activity:	Examples of current activities in healthcare:
Methods to investigate human behaviour	▪ Teamwork (e.g. Team Climate Assessment Measure) ▪
Investigations and analysis	▪ Root Cause Analysis ▪ Incident Decision Tree ▪ Prospective hazard analysis ▪ ▪
Human factors engineering (design)	▪ NPSA Design for patient safety publications ▪ Innovation centres etc. ▪ PASA Centre for Evidence based purchasing (CEP) ▪
Systems design and integrating human factors (including design of tasks)	▪ Lean/Productive Ward and Theatres ▪ ▪ ▪
Training and education	▪ Human factors/non-technical skills training ▪ Simulation centres ▪ LIPS ▪ Foresight training ▪ ▪
Influencing culture	▪ MAPSAF ▪ Being Open ▪ NPSA Seven Steps to Patient Safety ▪ Patient Safety Campaign

5. NPSA work and products

Activity	Current activities	NPSA outputs
Methods to investigate human behaviour		▪ Team Climate Assessment Mea ▪ Team Self Review (briefing tool)
Investigations and analysis	▪ Research - Prospective hazard analysis	▪ Root Cause Analysis ▪ Incident Decision Tree
Human factors engineering (design)	▪ Innovation centres etc. ▪ PASA Centre for Evidence based purchasing (CEP)	Design for patient safety: ▪ Information Design (medication ▪ Future Ambulances ▪ A guide to the design of dispens ▪ A guide to the design of the disp ▪ A guide to labelling and packagi ▪ Winter 08: ▪ Guidance from high hazard indu ▪ A guide to the design of infusion ▪ User centred design methods fo ▪ Patient identification and wristba Supply Chain)
Systems design and integrating human factors (including design of tasks)	▪ Lean/Productive Ward and Theatres	▪ Human factors resource area ar
Training and education	▪ Human factors/non-technical skills training ▪ Simulation centres ▪ LIPS	▪ Foresight training ▪ 'MOSES' evaluation of simulator release October 08)
Influencing culture	▪ Patient Safety Campaign	▪ Seven Steps to patient safety ▪ Being Open ▪ Manchester Patient Safety Fram ▪ Team Climate Assessment Mea ▪ Team Self Review briefing tool