Crew Resource Management within interprofessional teamwork development:
Improving the safety and quality of the patient* pathway in health and social care

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Summary: This paper presents the case for a practical approach for developing the workforce, to safeguard patients and to improve the quality of the patient pathway across health, social care and beyond. Central to this is the inclusion of Crew Resource Management (CRM) (RAeS, 1999) skills learned from the aviation industry, to enhance interprofessional teamwork development and collaborative practice. To address this, we have developed a model for interprofessional teamwork development, focusing on improvement and patient safety which encompasses the entire system involved with the patient pathway. This model includes a transformative cycle of improvement and the processes and interprofessional leadership and membership skills required to achieve an open inclusive culture, providing interprofessional teams with the skills and tools to drive improvement for patient safety and increased satisfaction with services.

Key words: interprofessional teamwork; improvement and patient safety; client safety; Crew Resource Management; Human Factors

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***Note:** The authors recognise the differences between agencies in reference to those who use their services, whether a client, a patient or indeed a service user. To avoid referring to all throughout this paper, 'patient' will be used to represent all terms.

Introduction

To reduce errors and improve patient safety, government polices increasingly require the pooling of resources, integrating teams and effective interprofessional working (DoH, 2010, 2006; DCFS, 2006, 2010; Darzi, 2008). However, while health and social care agencies usually embrace the challenge, too often policy implementation is limited or at worst ignored and subsequently errors continue to occur (HoC, 2009). Preparing the workforce to develop a patient safety focused culture requires a different way of working both within interprofessional teams and across agencies.

This paper presents a case for a practical approach for implementing policy, in developing the workforce, to safeguard patients and to improve the quality of the patient pathway across health, social care and beyond. Central to this is the inclusion of Crew Resource Management (CRM) skills, learned from the aviation industry, to enhance interprofessional teamwork development and collaborative practice. CRM can be defined as a management system which makes optimum use of all available resources – equipment, procedures and people – to promote safety and enhance the efficiency of flight operations (Royal Aeronautical Society, 1999).

The application of CRM / human resources, is increasingly used in the development of operating theatre teams and medical students (McCulloch, 2009; Anderson et al, 2009; Bleakley, 2006), but little is known of adopting CRM to the wider health and social care arena. Improvement and safety is everyone's business and all the professions, disciplines and agencies involved throughout the patient pathway should be included. The patient pathway does not start or stop at the hospital door; it includes primary care teams, social services, support staff and other agencies (Waters, 1997). To address this, we have developed a transformative model for change, focusing on improvement and patient safety which encompasses the entire system involved with the patient pathway. This includes the skills and processes required to achieve an open inclusive culture, where interprofessional teams can drive improvement for patient safety and increased satisfaction with services.

The Transformative Model of Interprofessional Teamwork underpins our Transformative Cycle of Improvement and Interprofessional Team

Development Toolkit. Together these tools provide an interprofessional learning package, including learning needs analysis and skills development enabling teams to work collaboratively across agencies, as well as drive improvement and organisational change. The interprofessional teamwork / collaborative practice workshops form the basis of this learning.

In the context of this paper, we use the following definition of an interprofessional team:

> A group of people from different professional and occupational backgrounds who learn and work together to deliver services and coordinate care programmes across agencies throughout the patient pathway; goals are set collaboratively through consensual decision making to improve practice for patient safety (Adapted from TUFH, 2007)

And the difference between interprofessional *teamskills* and *teamwork*:

> *Teamskills* are those skills required for interprofessional teamwork to be effective, including the various leadership and membership skills.
> *Teamwork* is the overall application of the Teamskills in both the design and delivery of services in and across teams.

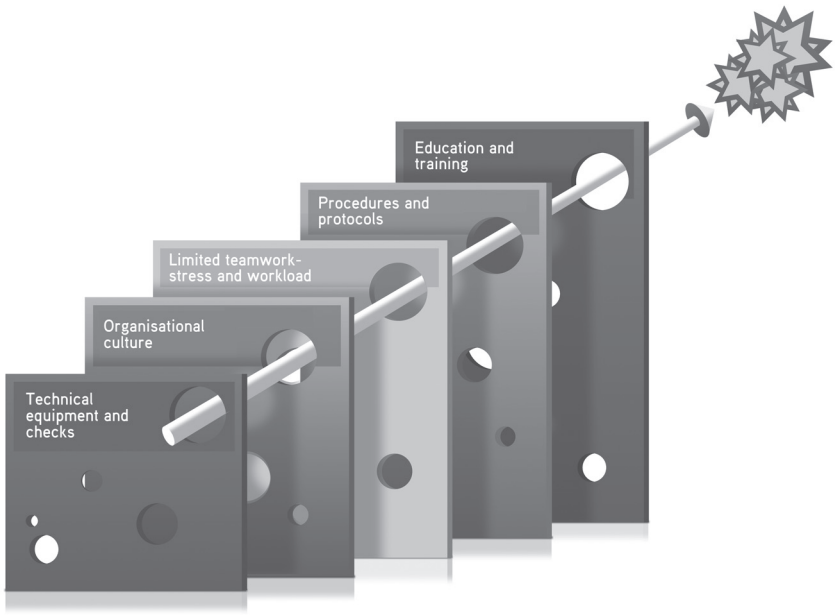
Patient safety

Tens of thousands of patients suffer unnecessary harm each year and in consequence there is a huge cost to the NHS and other healthcare systems (HoC, 2009). The House of Commons, Report review of patients' case notes revealed systemic failure is more likely to cause risk or harm to patients than the actions of individual healthcare workers. Fear of litigation and a blame culture can lead to significant under reporting of incidents (HoC, 2009). Other safety critical industries address the safety issue by implementing a Safety Management System (CAA, 2008), and this is driven not only by safety but also cost savings to their business.

Although accidents are usually perceived to begin with some combination of human error, limited non-technical skills, and non-adherence to management or clinical procedures by those working

in direct contact with patients, the source errors usually start at an earlier stage in the system. In examining why accidents occur, Reason (2004), in his critical analysis of accident causation, found the sources that contributed towards these events can be located at many levels in the system. He illustrates this concept with 'slices of Swiss cheese' each representing a number of causal factors for potential errors. The adaptation of Reason's diagram in Figure 1 shows the holes (potential/ latent errors) in the cheese; if the holes line up at the same time an accident occurs, otherwise they lie dormant as potential traps.

Fig. 1.
Locating Errors, adapted from Reason's model of accident causation (2004)



Raising awareness of potential error is therefore crucial for all involved throughout the patient pathway, as well as more effective leadership and communication. The House of Commons, Report (HoC, 2009) recognises that these limited non-technical skills and understanding of human factors within the NHS can have fatal consequences for patients, and that the NHS is lagging unacceptably behind other safety-critical industries, such as aviation. Interprofessional team development that

includes aviation CRM / teamskills and human factors can address this deficit, leading to positive attitudes towards interprofessional teamwork to improve patient safety (Anderson, et al, 2009; Bleakley et al, 2006).

To increase 'error wisdom' at the frontline, interprofessional team development therefore also needs to include knowledge of the causes of accidents. However, to be effective, teams need to work within an open culture (see Appendix 3), as in the aviation industry; ready to self assess for potential errors and learn from accidents and near misses. This is where our model of transformative interprofessional teamwork development can be applied.

The Model of transformative interprofessional teamwork for improvement and patient safety

Our model evolved initially through the planning, delivery and evaluation of workshops for the development of teams within a global manufacturing organisation in Finland and the UK, and subsequently within health and social care within the context of patient safety.

Method

Workshops were run for senior management teams, each member having responsibility for other teams. The workshops included small group work: examining examples of interprofessional teamwork from video clips of various aviation scenarios; identifying good teamwork and areas for improvement; identifying interprofessional teamskills (both leadership and membership); skills gaps and training needs for individual and teams; and simulation for skills development through role play using aviation and health and social care case studies.

During the planning and delivery of the series of workshops we adopted an Action Research approach (Winter & Munn-Giddings, 2001) as a collaborative model for service improvement and change, involving a continuous cycle of action and reflection. An Appreciative Inquiry approach (Cooperrider et al, 2000; Reed, 2006) was also used, which enables teams and organisations to co-construct their future

through initially identifying what currently works well and how. Guided reflection with workshop participants, the teams and their managers, while learning *with, from and about* (CAIPE) each other to explore their current interprofessional teamwork practices and areas for improvement, also informed the development of the model and the interprofessional teamwork development tools. The focus was on what they felt important elements for effective interprofessional / multidisciplinary teams and their development. The evaluations of the workshops also informed the model and refinement of the workshops.

Key Findings

Major themes elicited during the development process which informed the model include:

- Importance of organisational support to achieve quality outcomes: An organisation that learns from critical incidents and supports the development of interprofessional teams can ensure quality, improvement, productivity and patient safety.
- With this support, interprofessional teams can drive improvement; working together to learn from experience, and agree protocols and procedures through joint decision making for quality improvement.
- Engaging the wider team, valuing and involving those with the appropriate expertise and skills to make informed decisions, prevent errors and manage crises.
- Situation awareness and good communication are key to reducing errors; for example, awareness of own stress and that of other members of the team, and when to raise concerns, ask for help, support others, etc. Also appropriate use of the authority gradient and being able to challenge authority.

The model

We place people very clearly at the centre of our model, and highlight the importance of the organisation's valuing it that the entire workforce, patients and carers, are all involved in improvement and shaping services. Patient safety is everybody's business. The workforce is

perceived as competent, confident and caring, and there is an embedded improvement and safety strategy. The patient has a perception that the delivery of care takes into account their needs and that corners are not cut.

The model therefore encompasses the entire system, including the processes and skills required to achieve this vision. A wheel and axle analogy is used to illustrate interprofessional teams as the driving force for improvement and patient safety throughout the patient pathway (see Figure 2). The patient is at the centre, the 'hub' of the wheel, with the interprofessional team around the patient driving improvement supported by the 'tyre', interprofessional teamwork skills. The communication and decision making processes are a synthesis of four complementary elements:

- Interprofessional Learning (IPL) (Freeth et al, 2005);
- Appreciative Inquiry (AI) (Cooperrider et al, 2000; Reed, 2006);
- Continuous Quality Improvement (CQI) (Wilcock et al, 2002, 2003); and
- Crew Resource Management (CRM)(RSA, 1999)'

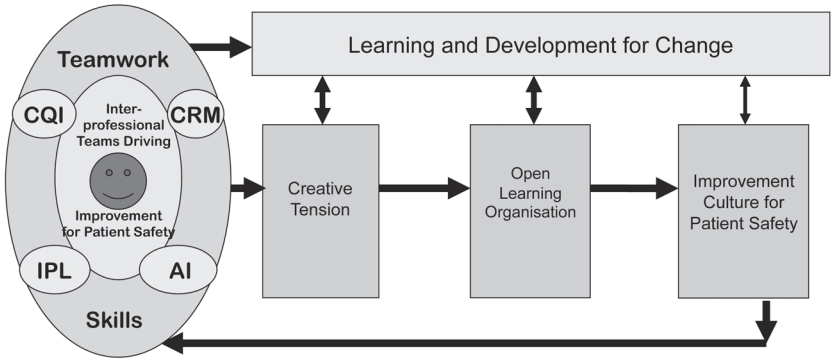
their contributions will be discussed in more detail later.

The interprofessional teamskills which underpin the model include:

- the need to have awareness of and valuing the other professions' roles, responsibilities, priorities and expertise and how these interface with their own;
- awareness of the wider team involved throughout the patient pathway, their contribution and how they can work effectively together to provide quality care;
- the ability to apply the above to work collaboratively with all involved in the patient pathway to achieve improvement and patient safety. (Adapted from CUILU, 2004)

Our model builds on these skills, focusing on leadership and membership within the context of improvement and patient safety (Fig.2 overleaf).

Fig. 2
Transformative model of interprofessional teamwork development for patient safety



(Lamb & Clutton, 2007)

The outcome of the synthesis of the above processes facilitates both interprofessional team and organisational development for change and improvement. This process of change causes tension. The skill is to introduce changes so as to harness the tensions to inspire innovation, creativity, ownership and motivation for both the team and individual. This will orientate teams towards working together for improvement, transforming the system to help create an open learning organisational culture (Donaldson, 2002) with strategies for quality improvement and patient safety.

The 'output' of the development of change – the 'axle' – then feeds back into the process, to sustain continuous improvement and an open, inclusive and creative culture. This type of culture is needed to embed safety in an organisation.

The model highlights the importance of the culture of the organisation in which teams operate around the patient. The ability to react positively to unexpected events, to work with the uncertainty, change and complexity inherent in health and social care, is best achieved within this type of culture where learning is encouraged and continual development available.

The Transformative Cycle of Improvement

The ability to initiate change needs to range from the CEO to the clinical team at the frontline, support staff, patients and carers. The patients and carers are likely to have a unique perception of team/individual behaviours, efficiencies and errors. Therefore the Transformational Cycle of Improvement (TCI), Figure 3, provides inclusive decision making processes for managing change and developing improvement and client safety strategies throughout the client pathway.

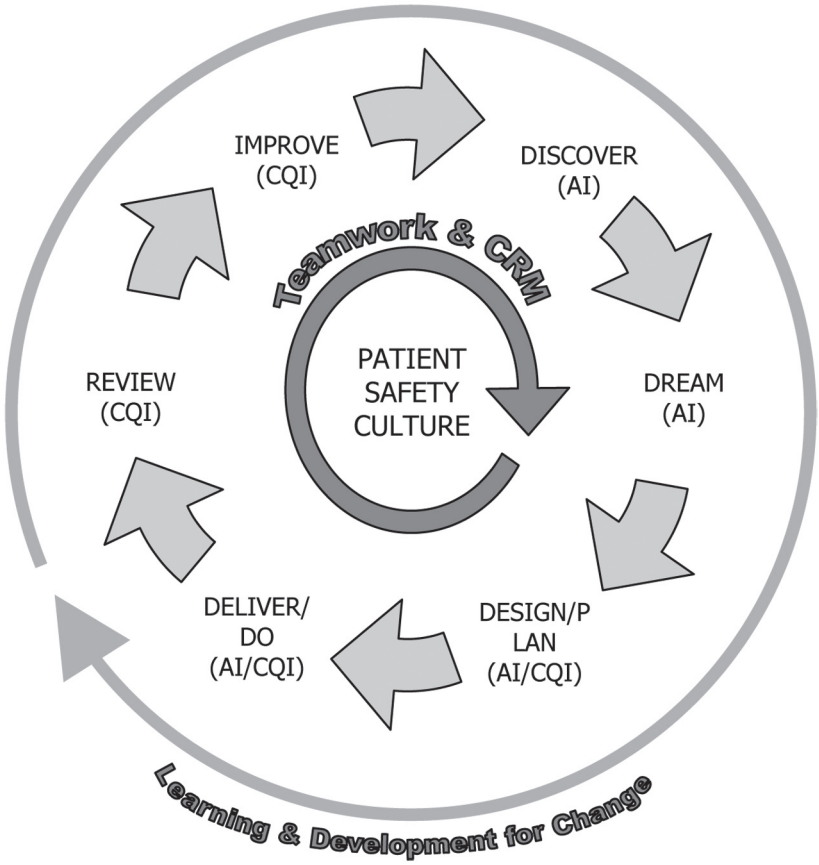
The six stages of TCI are the outcome of integrating the key approaches to improvement, underpinning teamwork within our model: the AI cycle (Cooperrider et al, 2000) - discover, dream, design and deliver - and the CQI cycle (Wilcock et al, 2003) - plan, do, study, act. The first two stages enable teams and organisations to work together for improvement by focusing on what already exists that works well (AI - *Discover*) and together build on this to co-create a vision for the future (AI - *Dream*), to contribute towards decisions and plans for improvement. This transformative approach for change is used within an 'open culture' in organisations. The next two stages, 3 and 4 - *Design* and *Deliver*, equate with the Plan and Do initial stages of the CQI cycle.

The final stages of TCI extend the AI cycle to *Review* the actions taken which are then refined as required to *Improve* services and patient safety, relating closely to the *Study* and *Act* stages of CQI. If the *Review* reveals that the outcome is not entirely successful, the process moves on to the discovery stage again to build on what does work. The complete TCI cycle also reflects decision making processes used in the aviation industry (Fig. 3 overleaf).

Throughout TCI, interactive processes are at work maximising teams and organisations collective strengths and expertise to make changes for improvement and patient safety (outer arrow). In learning and working together, within and across agencies, skills gaps to achieve improvement and patient safety can be identified, including teamskills and teamwork (inner arrow). This cyclic process can facilitate a sense of ownership to both the patient and the teams(s) involved and thus contributes to the sustainability of continuous improvement.

For each of the six stages within TCI Table 1 overleaf identifies the processes involved and the application of the CRM / teamskills required throughout the cycle. The latter are examples of skills drawn from our Interprofessional Team Development Toolkit (Lamb & Clutton,

Fig. 3
Transformative cycle for improvement and patient safety



2005). In addition to the definitions of interprofessional teamskills and teamwork provided earlier, CRM / teamskills can be defined as, skills that together achieve the best use of all available resources, underpinned by the open culture that enables the wider team to drive safety. See Appendix 1 for an example of CRM training within the airline industry.

The *Design* and *Review* stages of TCI are the most crucial for identifying skills that need developing both within teams and across organisations. The authors use their Interprofessional Team Development Toolkit here for assessing training needs and reviewing team climate, leadership and membership skills.

Table 1
Transformative Cycle of Improvement. Interprofessional team development for improvement and patient safety

Stages in Cycle: Process	CRM/Teamskills that can be applied to the Processes (See 'inner arrow' figure 4)
Discover • Involve the wider team including service users • Interaction is key • View patient pathway as a complex system • Identify what works well and why - build on best practice within system • Use patient stories to identify areas for improvement	Valuing other teams & professions • Valuing contribution from all • Limitations and safety implications if team confined by barriers Safety, situation awareness & error management • Information acquisition and processing • Ability to anticipate problems - active as well as latent • Knowledge of standard operating procedures (e.g. clinical / rules) • Situational awareness of self, team, environment and equipment • Stress, fatigue and workload management Communication and assertiveness • Communication – between people, teams & organisations • Appropriate means of communication – advantages and limitations • Reporting systems – the requirement for an open culture and non-defensive two-way feedback • Ability for individuals and teams at all levels to challenge Decision making, briefing and debriefing • Communication protocol • Knowledge of procedures/rules • Clear decision making processes • Allocation of tasks according to ability and workload • Regular review of outcomes • Apply feedback loop to all involved. Leadership, Membership • Understanding assertiveness and cultural variations both tribal and organisational • Collaboration across boundaries without feeling of threat – the wider team • Use of the Authority Gradient • Identification and management of patient human factors.
Dream • Develop conversations for shared images to shape the future • Identify changes that can be made that will result in improvement	
Design/Plan • Work together to plan the future • Prioritise 'dreams' • Define leadership • Develop improvement plans • Decide on outcome measures • Decide how / know when improvement has been achieved	
Deliver/Do • Together, carry out plans, taking ownership of process	
Review • Review outcomes • Measure impact • Evaluate process • Has it worked as expected? • If not, why not?	
Improve • Change practice • Disseminate across organisations	

The Interprofessional Team Development Toolkit (Lamb & Clutton, 2005), is also used by the authors for review and training needs analysis in parallel with the Transformative Improvement Cycle and is a central component of the author's interprofessional team development workshops. The Toolkit includes quality interprofessional teamwork *Characteristics* and *Processes together with Leadership and Membership Skills,* a synthesis of guidance and skills for effective teamwork. These are mapped against *Organisational Management Culture (OMC), Managing People / Team Climate, Service Planning* and *Service Delivery.*

The first level within the Toolkit, OMC, recognises the impact that the organisation has on teamwork and the need for teams to work with other teams, organisations and agencies involved in the patient journey for improvement and increased patient safety. The other levels relate to how people within the teams are managed and the way in which the teams work together to improve and deliver services. This is shown in the case studies in Appendix 2, examples of an aviation incident and the journey of a hernia patient.

The development of the Toolkit was informed by organisational development literature (West, 2003; Goleman, 1999); authentic and transformational leadership (Gardner & Schermerhorn, 2004; Alimo-Metcalfe & Alban-Metcalfe, 2004); medical education with application to interprofessional teams (Headrick et al, 1998); improvement and leadership programmes (NHS, 2002, 2003); and NASA funded research into successful engineering team design (Nowacyk & Zang, 1998); as well as CRM training literature (Burke et al, 2004; Salas et al, 2001).

Together the TCI model and Toolkit provide criteria for a safety focused way of working and guidance for review and development:
Review of interprofessional education and training:- focusing on teamskills and teamwork, including leadership and membership skills development, for improvement and patient safety:

- Individual leaders, managers or team members:- self-assessment to identify current strengths and training needs, and guidance for personal development to enhance their role in safety and improvement;
- Teams:– review of current strengths and training needs, and guidance for development to drive improvement and safety throughout the patient pathway;

- Organisations: - strategic review for patient safety, including workforce development strategy.

Together with stakeholders views, the Toolkit informed the *Effective Interprofessional Leadership Grids* within the 'Creating an Interprofessional Workforce: an Education and Training Framework for Health and Social Care in England' (Lamb & Clutton, 2007), used as a guide for promoting a change of culture to sustain interprofessional learning and working.

Conclusion

This paper has explored the rationale for our transformative model of interprofessional teamwork development and given an overview of the tools, including the important contribution of CRM from the aviation industry, and their application in supporting the development of improvement and patient safety strategies. The complexity of this model reflects the challenge for health and social care organisations to achieve effective interprofessional and collaborative working, in assuming that interprofessional team development is not enough, in itself, to drive improvement and patient safety across organisations. It requires support from senior management working within an open, inclusive and creative organisational culture.

This type of culture, built upon openness and accountability, allows individuals and teams across the organisation, to learn from errors, value contributions from all and develop strategies which enable collaborative decision making, planning, implementation and monitoring, as well as provide education and training. This reflects the Inclusive Safety Culture (NHS, 2009a) advocated by Patient Safety First (2009b), see Appendix 3, for a summary.

Government policy for health and social care requires the pooling of resources and the use of integrated team working. We have proposed that by drawing on the experience and expertise of interprofessional teams from within and outside heath and social care, and combining these with what has worked well, a route to improvement and increased patient safety can be found.

Errors degrade the patient's pathway, and cost organisations through

duplication of work, re-admissions and litigation. Reduction of error will represent a tangible saving. CRM with Human Factors training alone has been demonstrated to reduce error (McCulloch et al, 2009). Linking this to the other elements of AI, CQI and IPL through the application of the model can add to the effectiveness of error reduction, help meet Government policy directives and both create a patient centred culture and improve safety throughout the patient's pathway.

Our Transformative Cycle of Improvement and Interprofessional Team Development Toolkit can facilitate interprofessional teams to drive improvement within their own systems of care, based on patient focused pathways. Use of this model is likely to reap significant effectiveness and efficiency benefits for patient safety and health and social care organisations.

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Appendix 1: Crew Resource Management (CRM) within the airline industry

Pilots and cabin crew are trained in CRM (RAeS, 1999) through an initial course and then with annual training. This training integrates HF within CRM. The annual training covers the scope of the syllabus and any issues that have been highlighted by the safety reporting system. In addition, the pilots are assessed on their CRM and teamwork skills bi-annually in the simulator, occasionally with cabin crew observing. Though recurrent CRM training is often done jointly with pilots and cabin crew, they are subject to separate checks and assessments during routine flights. No one can fail for lack of CRM skills, but errors made during either an assessment or incident can usually be traced back to being all or in part related to CRM issues, and developmental training is provided as necessary. If an individual changes either their role or company, additional CRM training is required.

The scope of CRM/teamskills can be illustrated in the following example of decision making – one that might be used in a simulator exercise - that requires effective communication, a shallow authority gradient and uses the situational awareness of every team member to best advantage:

- An aircraft is flying at height when one of its two engines fails. The two pilots carry out the appropriate drill and the checklist finishes by stating: 'land at the nearest suitable airfield'.
- An initial review is carried out at this stage to confirm that the pilots have responded to the correct indications – and not either carried out the wrong drill or shut down the wrong engine (error – confirmation bias). 'Has the outcome been as expected, and are there any failure indications that we have still not addressed?'
- The Captain is responsible for the decisions made, and, in this scenario, there are three airfields that would be suitable and they are roughly equidistant.
- The crew's CRM training results in the Captain asking an open question to the First Officer before voicing his/her own opinion: 'Where do you think we should go'?
- This gives the First Officer an opportunity to express their opinion without feeling the need to just agree with whatever the Captain

says. This style of questioning is not a sign of weakness on the part of the Captain, but shows how a shallow authority gradient invites the view from all team members.

- If the First Officer's view differs from the Captains, then the Captain can ask for the reasons that the First Officer chose another airfield. The First Officer may well have based his/her choice on information that the Captain did not have, thus improving the quality of the resultant decision.
- This philosophy of questioning also illustrates how there is an understanding that the situational awareness of each team member may well differ and that it can be resolved by effective communication.
- The cabin crew need to be briefed. This follows a simple format. As a result of CRM training, the limitations of verbal communication are understood (stress/ listening skills), and the Senior cabin crew member, who comes onto the flight deck to receive the face-to-face brief, usually writes down and reads back the brief. This prevents the brief from being too long, and helps avoid error/misinterpretation when Senior leaves flight deck and briefs rest of the crew. This time spent on the flight deck is also an opportunity for the Captain and Senior to discuss the situation in the cabin and decide if any special considerations need to be taken into account.
- Air Traffic Control is brought in as part of the 'extended team'. These controllers are able to provide information such as the weather, the runway in use and the availability of approach aids at these airfields. They will often be able to 'clear the way' for you so as to reduce your workload.
- Company Operations need to be informed so that they can give their view on the preferred airfield from the point of view of commercial implications, passenger and aircraft handling, including engineering support.
- Handling agent at selected destination – whose contact frequency would have been provided by Company Operations – need to be contacted so that they can be forewarned of any special issues, such as wheel chair passengers.
- Another Review then needs to be carried out to ensure that all members of the team, including the extended team, have the same 'mental model' of the situation – team and individual Situational Awareness – and that all relevant points have been addressed.

Appendix 2: Case Studies

The Diabetes Case Study

The following case study of an in-flight incident that involved a passenger with diabetes has been used by the authors as a scenario for workshop simulation. Conflicts arise over regulations, means of communication, and interprofessional decision making.

The table below illustrates how examples of leadership and membership skills are identified, using the Interprofessional Teamwork Development Toolkit combined with TCI, as the event unfolds

Event: Passenger falls in and out of consciousness an hour into the flight

Questions:

- Have the cabin crew sought the information required from all available sources?
- Have the cabin crew used the wider IP team? E.g. is a medical specialist on board?
- How well do the cabin crew communicate with the pilots, and collaborate across boundaries without feeling of threat?
- How effective is the management of workload amongst the team?
- Has the Captain created an environment for a quality decision?

IP Teamwork : leadership and membership skills

- Appropriate acknowledgement of workload amongst team.
- Maintaining current situational awareness of the team, patient, equipment, regulations and resources.
- Inclusion of the patient's friend in the information gathering process – thus team not confined by barriers.
- Use of a wider team and valuing contribution from others.

Event: Cabin crew report to pilots that one passenger not well

Questions

- Does this have implications for the progress of the flight?
- Are there actions that the pilots could take to assist the cabin crew in this incident?
- How long before there needs to be a review of the situation?

IP Teamwork : leadership and membership skills

- Ability to anticipate problems, active as well as latent.

- Allocation of tasks.
- Knowledge of procedures.
- Decision making process. Reviews can be carried out at any stage.

Event: Cabin crew tell the pilots that there is a nurse on board who specialises in diabetes. She has examined the patient and decided that she needs to talk to a doctor.

Questions:
- How are the crew to organise this communications link and avoid errors?
- Can the nurse talk directly to the doctor, and would there be problems with a 'locked flight deck door' policy?

IP Teamwork : leadership and membership skills
- Appropriate means of communication – advantages and limitations.
- Assertiveness.
- Knowledge of rules and procedures including security implications.

The Toolkit is used to facilitate the simulation and ensuing team discussions, to reflect on how effectively they used their leadership and membership interprofessional teamskills, and apply this to their own work situation and identify areas for improvement and development.

The Hernia Patient Case Study

In this case study, the 'pathway' of a hernia patient is used to illustrate the relevance of the Transformative Cycle of Improvement (Table 1), combined with the skills identified using the Toolkit, for Training Needs Analysis (TNA).

The hospital is tight on staff due to financial constraints experienced by the Trust and there is pressure on bed availability. Though a hernia operation is expected to be a 'one day' affair, the patient is an elderly lady who is kept in overnight and after 24 hrs she is considered for discharge.

At the Discharge Meeting – equivalent to the *Review* stage - a number of questions need to be considered. The way these questions are addressed will reflect on the quality of interprofessional working across the wider team.

Discharge Meeting

Patient's Situation

- The patient is responsible for administering medicine to her husband at home.
- What can the patient do in context of her home environment?
- Has there been a holistic assessment of her home situation?

Key Elements

- The Trust has financial targets imposed upon it, so certain areas of care are given a low priority. Are these limitations likely to affect this patient?
- Would Social Services have the staff for effective monitoring of this case? If they don't, who can?

Patient's Situation: Review highlights following IP/TW problems:

- Inadequate and inappropriate points of contact with Social Services for this case

Key Elements : Proposed solution

- High level meeting to remove communication barriers.
- Improve cross agency collaboration using the Transformative Cycle of Improvement.
- Agree appropriate responsibility throughout the patient's pathway.
- The establishment of feedback to all teams and team members involved in the patient's pathway.

Patient's Situation

The patient is quiet and does not like 'making a fuss'. She does appear quite distracted in the ward

Key Elements

- Has the patient exhibited any other problems that might have bearing on their ability to cope at home? For example: if people, particularly the elderly, are moved out of their 'home' environment for a period of time, other, previously minor issues, can surface that become significant and may need addressing – such as dementia.

Patient's Situation : Review highlights following IP/TW problems

- Failure to regard patient and carers as part of the hospital team.
- Possible breakdown of communication between community team members and teams within the hospital.

Key Elements : Proposed solution

- IP Team Training with exercises in the value of the wider team, and the

use of open communication within and across teams.
- TNA - Development of listening skills in a time pressure environment.
- Potential for improvement of the patient pathway by all staff involved.

Patient's Situation

Her GP practice is well staffed, but past experience has shown that their communication links with other agencies could be better.

Key Elements
- Has a brief been prepared on the patient that gives the practice a full picture of the patient's situation?
- Would either a checklist or an Aide Memoire have helped the members at the meeting to prepare such a brief – eg: 'Availability of voluntary organisations?'

Patient's Situation: Review highlights following IP/TW problems

- Frail communication links.
- Lack of concern by one or both parties to such a deficiency.
- Lack of a robust accountable reporting system.

Proposed solution
- High level meeting to establish need for improvement in communication across agencies.
- Use of TCI to review and improve communication strategy.

Deficiencies could result in the patient's pathway being less than satisfactory with the result that the NHS Trust and other care services could be vulnerable to incurring additional costs.

The TCI is used to reinvigorate the thinking in both teams and the organisation, and so develop a positive approach within the Inclusive Safety Culture (Appendix 3). The two routines of Stage and Process shown in the TCI diagram (Table 1) provide a framework for the use of the IP Teamskills Toolkit.

The Review process would allow the areas where barriers and source errors exist to be identified, with the ensuing provision of developmental training (TNA). Such training would help progress the whole organisation towards more efficient and sustainable way of working.

Appendix 3: An Inclusive Safety Culture

Adapted from: *Leadership for Safety: Implementing Human Factors in Healthcare www.patientsafetyfirst.nhs.uk*

In establishing an open, inclusive culture, the aim is to 'park a blame culture' and includes, as part, a 'just culture' (Bleakely, 2006; HoC, 2009) which addresses problems of violation of regulations by individuals who have elected to disregard established procedures without justification.

In the past, organisational culture has been viewed simplistically as either a 'blame' or 'no-blame' culture. A 'blame' culture has the associated problem of effectively closing down a reporting system that attempts to learn and develop safety protocols. A 'no-blame' culture does not allow management to deal with individuals or teams that, as indicated above, flagrantly violate procedures without valid justification. The former is a repressive system that invites a downward spiral of risk and incidents. The latter is nearly as bad, for it allows individuals and teams to believe that it is acceptable to violate procedures without consequence.

An Inclusive Safety Culture is illustrated in the table below. It comprises a number of sub-cultures that operate in unison. These cultures impose responsibility on both leaders and members across the organisation for all must have a sense of ownership of safety.

Perhaps the most difficult element is that of a 'just' culture, for justice 'has to be seen to be done' by the rest of the team. Incorrectly handled, and actions could be perceived as falling within a 'blame' culture. The needs of confidentiality have to be balanced against the requirements of the other elements of the Inclusive Safety Culture.

Reason (2004) pointed out that the most experienced and highly qualified people are still vulnerable to making mistakes, and this has long been known in the field of aviation. He also pointed out that disciplinary actions and further training are not always the optimal solutions, even though they are often the most commonly applied. In addition, the source of the error might lie within the structure of the organisation, and this source error manifests itself in team behaviours that result in an incident with an apparent error made by an individual/ team.

Element of safety culture	Characteristics
Open culture	• Staff feel comfortable discussing patient safety incidents and raising safety issues with both colleagues and senior managers.
Just culture	• Staff, patients and carers are treated fairly, with empathy and consideration when they have been involved in a patient safety incident or have raised a safety issue
Reporting culture	• Staff have confidence in the local incident reporting system and use it to notify healthcare managers of incidents that are occurring, including near misses • Barriers to incident reporting have been identified and removed: • staff are not blamed and punished when they report incidents • they receive constructive feedback after submitting an incident report • the reporting process itself is easy
Learning culture	• The organisation: • is committed to learn safety lessons • communicates them to colleagues • remembers them over time
Informed culture	• The organisation has learnt from past experience and has the ability to identify and mitigate future incidents because it: • learns from events that have already happened (for example, incident reports and investigations).

Source*: Leadership for Safety: Implementing Human Factors in Healthcare*
www.patientsafetyfirst.nhs.uk