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The “Reflections” are a compendium of sentiments and perspectives, an outgrowth of Dan’s years of experience working to benefit patients through enhancements in clinical quality and patient safety. They are intended to stimulate thought and encourage learning. We sincerely hope you will enjoy reading these and encourage you to share them widely.

Dr. Dan Cohen

International Medical Director, Datix
“Stop the Line” – A Human Patient Safety Alerting System

Healthcare is complicated, too complicated for any one person to actually own or control the processes of diagnosis and care. Patients come into our hospitals for care, and for their benefit and safety we all need to look upon ourselves as part of the “system” of care. Risks are all around, but often we fail to see them as our workplace environment becomes more or less background noise. Complacency is our enemy and therefore each patient’s enemy.

In highly reliable organisations, those that really focus on risk identification, prevention and modulation; a culture of systems-thinking has taken hold where each member of staff is regarded as a cog in the system, part of the interactive gear-box that enables the entire machine to work. Pilots become part of their airplanes in a pseudo-transcendental sense, and they are probably the most vulnerable parts of the system because they make mistakes, quite naturally, as we all do. The culture of highly reliable organisations supports members by encouraging them to speak up, to become human early warning systems.

In the Toyota manufacturing model this translates to “stop the assembly line.” As automobiles move along the assembly line, each employee makes their contribution within time parameters appropriate to the skills required. Everyone has a role to play. When employees encounter problems along the assembly line, each is empowered to slow down the line and in some instances to actually stop the line. In doing so, they are not letting defective or unfinished components move beyond the reach of the worker and onward to the next step in the process. Well, human safety alerts should be the same. We should all be empowered to “stop the line” when we see something hazardous. Given that our patients are relying on us to keep them safe, our threshold for “stopping the line” should be pretty low.

A friend told me a story recently that illustrates this precisely………and thank goodness she was alert. She was a junior house officer on a paediatric ward and was writing some notes in charts when the dining service staff brought up the lunch food for the children. There were many complex patients on this general ward including oncology patients and children with cystic fibrosis; both of whom are very prone to serious infections. On this particular day the dining service staff had brought up a large aluminium pot filled with water and in the water pork sausages were bobbing around helter-skelter, hither and yon. I know this picture is anything but appetizing, but bear with me because it gets a lot worse.

What struck my friend as unusual was that the water had a bluish-green tint. At first she passed this off as due to lighting problems in the food-serving room, but the colour nagged at her a bit. So, she placed a sample of the water into a red-topped blood drawing tube and compared this to an identical tube filled with tap water. The blue-green colour didn’t go away. Lighting wasn’t the issue.

Now, for anyone with some background in microbiology, a blue-green pigment colour in water should immediately signal Pseudomonas aeruginosa and pyocyanin, the blue-green virulence factor that this organism secretes. It certainly did to my friend and guess what? She stopped the line!

Over the protestations of the Director of Dining and Nutrition Services who chastised my friend for overreacting, she stood her ground. None of her children were going to eat that lunch that day; not one! The Director actually told my friend that the water was often discoloured after cooking sausages. Hmmmm – blue-green, really?

Well, it turns out my friend was right as the water yielded a pure culture of Pseudomonas, and whereas she had been chastised by someone in a leadership role, my friend was ultimately recognized by her institutional leadership as a prime example of a staff member who put patients first.

My highly reliable friend recognized the potential for harm and responded, just like a safety alerting system, and thank goodness she did.

Be careful………it’s dangerous out there!
Complaining Patients – What do they really want and why does it matter?

Patient complaints may or may not be well-grounded, but what really matters is why, in the complexity of what we call modern healthcare, clinician-patient communication has failed to satisfy the needs and wants of individuals who require understanding and care. This is particularly the case when sharing uncomfortable or troubling news with patients and caregivers. Admittedly some patients, especially those with more limited capacity to understand the multifaceted issues relating to their illnesses, may harbor unrealistic expectations; and this may contribute to miscommunication. But more often than not, patients simply want to get better, and when complaints arise it is because of an imbalance between explanation and understanding.

No one likes to be the subject of a patient complaint, and naturally we may become defensive when we are called upon to explain our actions. All clinicians receive occasional complaints. In my own practice, I often wondered how patients could have so misinterpreted my advice and subsequently distorted my messages. I never meant to upset anyone! Once my ego had recovered from “pancake-like” flattening, I appreciated that my professional challenge was to assume nothing and to attempt to reach in, out, up, down and around to the necessary levels of patient understanding. My messages and instructions were important, and if I really wanted my patients to be safe and to achieve the best outcomes it was my responsibility to exceed anyone’s expectations and to assure they understood what I had to say.

Unfortunately, some clinicians do not do enough to communicate effectively by using language appropriate to their patients’ cognitive levels and literacy and by taking into account the social and cultural milieus in which patients live. We may be patronizing. We may not understand the belief systems that our patients incorporate into their thinking. In the worst case we may let our own biases interfere with communication. In circumstances where the stage is set for miscommunication, most of us can get a sense of this before the conversation actually begins, it may be useful to have a professional patient advocate participate in the conversation to to smooth the edges of communication.

Some clinicians receive often well-deserved complaints because their communication skills are limited and they are perceived as insensitive. You may be familiar with the popular television series Doc Martin, where Martin is portrayed comically by Martin Clunes. Everyone who watches this show is amazed by two things. First, the array of eccentric and comical characters that live in the picture-postcard village of Portwenn, Cornwall; and secondly, the impatience, arrogance and condescending way that Martin treats his patients, with the result that often they do not follow his orders even though he has conveyed them with military precision. Martin doesn’t get it, and even though he is a soft-hearted soul beneath his stuffy veneer, he has no close friends he can confide in, excepting his partner Louisa; and that is only on occasion!

When clinicians really overstep their bounds they need to be dealt with appropriately and there should be a stepwise process for this. Miscommunication is a flaw in professionalism affecting not only our relationships with patients but also with other staff. It is our job to communicate effectively. The occasional offender can be counseled over a cup of coffee, often by a colleague. However, the repeat or more recalcitrant offender should be held accountable in an increasing stepwise fashion. Mandated training in communication and professionalism may seem punitive to some but may be necessary. In fact this is often lacking in clinical education. The assumption that clinicians naturally have these skills is a flawed and dangerous assumption. Finally, those who are even more defiant should be subject to official disciplinary action that can affect professional responsibilities, advancement and ultimately even employment.

Medicine is complicated enough without miscommunication serving as an independent variable affecting safety and quality outcomes; and that is why it matters!
In our increasingly technically complex world of modern medicine, communication is essential for safe and effective care. However, it is sometimes the case that personal “stuff” gets in the way of communication and this may result in someone getting harmed. I recently attended a lecture given by Professor Lucian Leape where he hypothesized that “disrespectful behavior is the root cause of the dysfunctional culture in medicine” and has interfered with our ability to make as much progress as we would like and to create a beneficial experience for our patients.

Communication that interferes with patient care strikes me as the antithesis of patient-centeredness. What we, as healthcare professionals, do every day is so hugely important that we must carefully examine communication challenges when these arise. We all deserve to experience joy and meaning in the workplace, to be treated respectfully and thanked for our efforts.

Years back, I was responsible for caring for a desperately ill child with acute epiglottitis who had arrived in A&E late at night. After intubation, respiratory and fluid resuscitation, labs drawn and antibiotics given, the little girl was stabilized and we began taking her up to the intensive care setting. As we were moving the gurney and the associated resuscitative equipment toward the elevators, one of the custodial staff came running toward us and advised me that the flooring immediately in front of the elevator doors on the intensive care level had just been waxed and would not be dry for 30 minutes or so. He then said “hold on doc” and ran up five flights, covered the flooring with rubber matting, and then ran back down to tell us we could now safely proceed.

When we arrived on the floor the matting was being held taut by nursing and other custodial staff, and we successfully transported this little child without anyone being hurt on the slick surface. I thanked this man immediately and profusely for his help and did so in front of the professional staff (“always compliment in public”).

The next day when making rounds I noticed this man standing near the nurses’ station. I thanked him again and then took him into the child’s room and introduced him to her parents. I explained how his attentiveness in the middle of the night had contributed to their daughter’s safe transport and her care. They thanked him profusely, as I had done.

OK, he was a little embarrassed, but I could see the satisfaction in his smile. He felt joy and meaning, and he deserved to do so. Medicine is a team effort,.... soup to nuts; and we all have an important role to play.

There are many causes of disrespectful behavior. The fact is, that as we learned in primary school, treating others with respect is the best way to receive respect in return. This “golden rule” is found in the teachings of both religious and secular philosophy. We all have a responsibility to treat others respectfully and to recognize that everyone has value and brings value to the bedside, regardless of our personal “stuff.”

The culture of an institution can be judged by how much joy and meaning there is in the workplace, and mutual respect plays an important role. It is the responsibility of leadership to establish and enforce parameters to sustain this, but the responsibility to create joy and meaning resides with all of us.

Remember what Aretha taught us: “R-E-S-P-E-C-T……Find out what it means to me…R-E-S-P-E-C-T….Take care, DLC…….Sock it to me, sock it to me, sock it to me, sock it to me…….”
Patient-Centeredness: What does this mean in Patient Safety?

In 2001 the Institute of Medicine, in its seminal publication Crossing the Quality Chasm, provided a practical definition of patient-centeredness; that being, “providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.” Recently, Maureen Bisognano, President and CEO of the Institute for Healthcare Improvement expanded on this theme during a presentation at the International Forum for Quality and Safety in Healthcare. To paraphrase her comments: real patient-centeredness may only be accomplished when we shift our medical paradigm from the traditional “What’s the matter?” query to a “What matters most to you?” query and this got me thinking.

When patients come to us with their concerns and health challenges, clinicians naturally and appropriately focus on identifying the causes of particular symptoms and signs, identification of clinical problems, arriving at appropriate diagnoses and then prescribing effective interventions; all within a context of safe diagnostic and therapeutic principles. This makes great sense, but in fact this approach may not align with unique elements of “patient-centeredness” because it does not specifically focus of what matters most to the patients. Patient engagement is crucial to best clinical outcomes and to patient safety because how patients implement therapeutic plans outside of hospital or clinic settings is actually where the safety and effectiveness of our care may be best measured. This is where cost-effectiveness can be truly assessed and extreme attention to patient engagement is warranted.

Patients are often overwhelmed when they are ill, and some may not have the inherent communication skills to really put their concerns on the table. Clinicians may have particular views regarding what patients need but this often lacks the context of how patients get on with their daily lives, once home from the hospital or clinic. The National Patient Safety Foundation has developed a patient educational program – Ask Me 3TM; - designed to promote communication, enhance compliance with therapeutic plans and avoid errors and harm.

The three questions are:
1. What is my main problem?
2. What do I need to do?
3. Why is this important to me?

The last question is the one that resonates most for me because what patients really want is to be well again, or to achieve the best functional state compatible with their clinical circumstances, and to get back to the goals of happiness, family life and security. Although clinicians have the same goals for patients, partnering with patients for best outcomes really involves engagement, not just with sympathy for the challenges they face, but with empathy and real understanding. We need to transcend space and time, to put ourselves in our patients’ shoes and homes and really understand the day to day challenges of coping with illness and infirmity. We need to really pay attention to what our patients tell us. We need to anticipate what life will be like for our patients when they go home and how we can can partner to make things better and safer.

Patients are often helped by having concrete daily, weekly and longer-term goals and strategies with which to achieve those goals. They are helped by having most of their expectations met. Expectations will include both their medical and lifestyle “needs” (i.e. appropriate clinical requirements) and “wants” (desires that may or may not be achievable). Patients will benefit from receiving explanations regarding their “needs” and why their “wants” may not always be achievable. Candid, compassionate conversations between patients and professionals should carefully explore what matters most to patients in order to move beyond a disease-focused approach to healthcare toward a wellness-focused approach to health and happiness and error prevention. A useful resource for patients, that may help prevent medical errors, has been developed by the Agency for Healthcare Improvement.

The calculus of real partnering between healthcare professionals and patients, as equal members of a succinct health sustainment and healthcare team, is very powerful indeed and is the best approach to achieving safe and effective outcomes in the most cost-effective fashion.
Patients need to be intimately involved in medical decision making and, particularly in the case of chronic illnesses this involvement is essential to highest quality outcomes. Many sophisticated and/or more assertive patients will fully engage in medical dialogue while others, perhaps less sophisticated and/or less assertive, may assume a more passive stature when it comes to communication. The viewpoint of some, that the “Doctor always knows best” still often confounds appropriate medical dialogue and a comprehensive understanding of risks and benefits and options for healthcare.

Complex aspects of medical decision making arise when recommendations for invasive procedures or participation in clinical research projects are being proposed. Obtaining truly informed consent is the quintessential element in communication that must take place before any intervention or experiment. Unfortunately, not all clinicians are good communicators, and not all patients are good listeners and inquirers, or have the intellectual capabilities and language fluency to really understand what is being proposed. The fact is that open communication may be the most important element in litigation risk avoidance, yet this is where the informed consent process often falls down; miserably so!

Patients deserve to be provided information they can understand regarding proposed interventions, the risks and benefits of the interventions, and some information regarding the skills, whereas those of us who are medical professionals understand all of this, and may be more comfortable knowing that a supervising senior nurse or surgeon will be standing by and assisting the learner, not all patients know this or may feel as comfortable questioning the circumstances. However, it behoves us to be candid; and in my experience patients are quite willing to consent as long as they understand the necessity and risks involved, and are assured that supervision is always available.

The terrain of informed consent for experimental therapy is even more slippery, particularly when somewhat effective therapy already exists. Take for example the case of a child with newly diagnosed acute lymphoblastic leukaemia, where five-year survival rates approach 80% (or higher for some geno/phenotypes). In meeting with a family to propose enrollment in a clinical trial there are complex emotional and intellectual variables at work. The trial may involve particularly aggressive strategies that, while potentially increasing leukaemia free survival, may also increase the likelihood of therapy related morbidity and even mortality; a very sobering prospect.

The process of obtaining truly informed consent in this circumstance can become very challenging. Many families are so overwhelmed by their child’s diagnosis that selective listening, hearing and understanding confound the process substantially. Parents expect that physicians will only make recommendations for therapy that they feel will be helpful, and that understandable undercurrent complicates the efforts to navigate upstream toward fully informed consent.

Improving the informed consent process must include efforts to assist professional staff and patients. Regarding staff, formal training including the use of simulated patients and mock situations is proving helpful. For patients, the inclusion of trained patient advocates during informed consent discussions facilitates more open communication and understanding. We owe this to our patients, to our institutions, and to our respective guilds; and we can do a much better job!
Causal Contributing Factors

While there may be a single causal factor, more often multiple factors align to result in incidents and harm, and there are processes and barriers along this journey that should serve to prevent incidents. Professor James Reason’s Swiss Cheese model alludes to the multi-factor, systems-nature of accident causality and the barriers to incident prevention. This analytical framework has contributed to the methodologies of searching for causal factors by asking why...why...why until one or more initiatory or “seminal” causal factors are identified. This process, though intellectually succinct, is cumbersome and in healthcare there is large variability in the success of such approaches.

Datix is engaged in developing a causal factors classification system, and one particular challenge is in providing users with sufficient granularity of detail so that categories of causation are identified, while at the same time not overwhelming users and thus contributing to classification fatigue.

Consider a theoretical incident where a patient is not sufficiently monitored because the transition in care between nurses (or doctors) at shift change did not include sufficient details to alert oncoming staff of particular concerns. The patient deteriorates and an avoidable incident occurs. The following causal or contributing factors come to light after systematic analysis:

1. **Communication** – Insufficient “hand-off” details were provided by day time staff to night time staff, but why...?
2. **Staff Performance Factors** – Nurses were task-saturated by workload and several urgent admissions so that staff communication between shifts was rushed and incomplete, but why...?
3. **Work Centre Management Issues** – The ward manager did not assign sufficient staff to provide for the range of patient care needs and did not implement contingency plans to deal with unexpected urgent admissions, but why...?
4. **Training and Education** – The ward manager did not have sufficient management training to recognize and plan accordingly for both routine and urgent scheduling needs, but why...?
5. **Operational Management Issues** – Shortages in hospital staff resulted in early promotion of the ward manager to this position of responsibility before completion of management training.
6. **Team Performance Factors** – The staff nurse did not feel empowered to speak up, to point out to the manager that chronic ward staffing issues were degrading performance and that on this particular day he/she was overloaded and exhausted, but why...?
7. **Staff Performance Factors** – The staff nurse has serious family problems and has been distracted at work with numerous instances of inattention to detail noted recently, but the manager is unaware of the family stress and nothing has been done about the nurse’s inattention to detail, but why...? and...
8. **Institutional Operational Leadership Factors** – Chronic staffing shortages have not been addressed by operational leadership, but why...?
9. **Governance Leadership** – Leadership has adjusted budget priorities to favour a new research institute, while short-changing day to day operations, but why...?
10. **Health Authority Institutional Funding** – The hospital budget has been recently cut by 5% resulting in redundancies of staff and closure of acute care wards with the research agenda of the institution taking priority, but why...?
11. **Governance Leadership** – The governing board has not considered patient safety the number one priority of the institution, but why...?
12. **Staff Performance Factors** – Two members of the governing board have domineering personalities, come from strong research backgrounds, and carry undue influence with board decisions…………………etc, etc.

Obviously one could carry the logic of this analysis backward even further, but I think you get my point. Causal factors reside in various domains and these domains abut and interact with each other in ways that may be difficult to predict, yet may exponentially contribute to hazardous conditions and preventable incidents.

The Datix classification scheme, currently under development, will address causal factors in 10-12 domains utilizing a three-tiered approach (Grandparents—Parents—Children). Most users will find this sufficient while others will want even more detail; perhaps grandchildren and great-grandchildren!
When most of us think about patient safety incidents we tend to focus on harm related to specific acts of omission or system inefficiencies that result in harm to individual patients. We generally focus on hospital care because we think that is where most harm is likely to occur. Patients come into our hospitals for diagnosis and treatment, and they may encounter harm as they travel through our processes of care. If they do encounter harm, we hope to identify the causal factors and learn from these. But frankly speaking, when it comes to the greatest sources of safety incidents, we are incorrect in our thinking; and we are missing the most important trees because the forest is in the way!

The vast majority of healthcare is provided in outpatient settings, and incidents that may contribute to harm are deeply entrenched in these areas. Yet, even if we stood and looked around we might rarely recognize these incidents as such. Sir (Dr.) Arthur Conan Doyle, as Sherlock Holmes, would recognize them, but most of us would not; because, though we may see ………, we may not observe!

Let’s take a look at the treatment of common upper respiratory tract infections (URTIs).

The overwhelming majority of URTIs are caused by viruses (upwards of 90%). The epidemiology of these infections is very well-established. Yet there are good studies that show that approximately 75% of adults presenting with symptoms of URTIs will receive inappropriate, ineffective, and often expensive broad-spectrum antibiotics that contribute nothing to improving symptoms or shortening their illnesses, absolutely nothing! Patients, and even many physicians, seem to feel that symptoms or signs of facial pressure, the colour of nasal mucous and the nature of a cough are hallmarks of illnesses that require antibiotics, but the evidence to support this is insufficient at best; and here’s where the harm comes in.

Antibiotics are associated with an array of common side-effects including nausea, vomiting, diarrhoea, skin rashes, headaches; and more serious, though less frequent reactions, such as anaphylaxis, hepatitis, neurological symptoms, tendon damage, cardiac dysfunction, thrombocytopenia, etc. Is anyone reporting all this stuff as harmful incidents? Probably not, because these are largely anticipated side-effects of therapy. However, if the antibiotic prescriptions are inappropriate in the first place, then the side effects that result are harmful, preventable incidents. In addition to toxic or allergic side-effects, antibiotics contribute to changes in intestinal flora and milieu that may result in C. difficile colitis in susceptible hosts; and oh, by the way……, the stuff may cross the placenta and also into breast milk!

Finally, when we think of harmful incidents we tend to look for short-term or even immediate cause and effect relationships on individuals and rarely, if ever, consider effects on the broader community of patients beyond the individual. These concerns may be even more important; in fact they may be catastrophically important! The over-utilization of antibiotics contributes to emergence of bacterial resistance which then complicates management of legitimate bacterial infections, with potential resultant morbidity and mortality. So, not only are individual patients harmed, but the broader impact of inappropriate antibiotic usage is felt on the population as a whole, and the morbidity, financial costs and public health challenges to society are enormous, simply enormous!

Similar arguments regarding less-than-apparent harm can be made when considering the tremendous over-utilization of CT-scanning with resultant risks of teratogenicity and malignancy and the identification of incidental findings of dubious significance that may lead to further expensive and hazardous imaging studies and even surgical interventions. Of course, there are numerous other examples of medical therapies and interventions that are over-prescribed and over-utilized and that are potentially harmful; this harm is thus largely avoidable.

Primum non nocere, or “first do no harm”, is a foundation of medical ethics; yet many will fail to recognize that overutilization of medications or technologies are sources of harm. Holmes, the quintessential observer, would not miss this point of course. It may be better and much safer to do nothing, than to do something!
Supported by the underpinnings of the logic presented above, a patient safety incident (or event) is an insufficient or failed process that results in, or has the potential to result in, an adverse outcome. It is not the outcome per se, rather the insufficient or failed process that results in the outcome. The terms patient safety “incident” and “event” are commonly used interchangeably. Trying to force utilization of one term versus the other would be like jumping into the Thames and flapping one’s arms to change the direction of the current. In this blog I will use the term “incident” exclusively.

A healthcare associated infection (HAI) is an outcome of insufficient or failed processes that might arise in the domains of environmental cleaning and disinfection, hand-hygiene, sterilization, perioperative antibiotic prophylaxis, performance of clinical procedures, adherence to protocols, bundles, guidelines; sharps disposal, isolation procedures for patients, handling of body fluids or tissues; and contamination of medications, fluids, blood products, etc. There are a myriad of causes for process insufficiencies or failures within these domains, but the singular outcome in every instance is a HAI, the outcome of the incident.

The same logic applies when considering incidents resulting in wrong site surgery injuries or harm associated with missed or erroneous diagnoses, patient falls, medication errors, etc. You may think that these examples are the actual incidents, but more precisely these are outcomes resulting from incidents. Identifying wrong-site surgery as an incident does not lead to learning and improvement, but identifying “failure to utilize the WHO Safe Surgery Checklist” is the incident because the reasons for non-compliance can be identified and rectified.

Why this connection of “incident” versus “outcome” has been so difficult to overcome pragmatically is the real question, and the answer resides in understanding just who the stakeholders are in the complex healthcare calculus and their varying data requirements. Those of us working in hospitals focus on improving processes, so we want to know what the “incidents” are. We want to know why medication errors occur. We want to know how often hand-washing protocols are not followed. We also want to know the discrete outcomes of course, but this is secondary as regards learning practices.

Hospital executive leaders, governance boards and regional healthcare authorities are primarily interested in discrete “outcomes”, though they may confuse these with patient safety “incidents”. They want to know the frequency of HAIs, patient falls, pressure ulcers, wrong-site surgical procedures and what steps are being taken to prevent these. The fact that within each of these outcome categories a myriad of different process insufficiencies or failures may come into play, with many associated causal factors, is not as important an issue for presentation at meetings or alerting medico-legal authorities. Absence of hand-washing protocols or insufficient training on hand-washing procedures may not show up on the executive or governance graphic presentations, but the incidence and prevalence of HAIs most certainly will, and appropriately so!

Clarity in definitions is certainly very important. Appreciating the basis for the tensions that exist in the definitions is the obligation of those involved in patient safety incidents and outcomes analysis.

Datix is presently working on enhancements to its current proprietary CCS classification system, and the definitions discussed above have been incorporated into the planning strategy. Our intention is to engage current users in this enhancement process. Learning from safety incidents and exceeding the needs of all stakeholders is the quintessential goal.
“Never Leave Your Wingman” – Mentoring for Safety

Healthcare education is about mentoring and generally this means that more experienced clinicians provide top-down mentoring necessary to mould young men and women into the professionals our patients deserve. This mentoring model has been sustained for generations in healthcare, but the fact is that it may not be sufficient at least not in the realm of patient safety.

Once again we look to the aviation industry, this time the military arm, for examples that should serve us well. In the movie Top Gun, Tom Cruise, aka “Maverick” is reprimanded and advised to “never leave your wingman”. A simple statement but much lies below the surface. To leave your wingman, to become disengaged from other members of the team, is a crucial mistake in combat and is also a crucial mistake in medicine. Fighter pilots generally fly in two-ship formations where each aircraft serves as the protector for the other – the wingman. Healthcare teams should function like airborne formations with each member looking out for the mistakes of the others. Each person is in a sense a wingman and more importantly, extending the metaphor towards engagement with patients in partnership, each team member is the patient’s wingman!

We should encourage a collaborative culture as our patients are depending on us to work together to produce the best outcomes. They care less about who is the senior ranking person in the room and much more about who is the most current, the most “recently experienced”.

The traditional model of top-down mentoring works well in professional schools and training programs but not necessarily in the world of fully qualified physicians, surgeons, nurses and other healthcare professionals. Just who are the mentors for those who have passed all the exams and completed all the training? More importantly, who are the mentors of the very senior staff who, although esteemed and accomplished in their careers, may be too tied up with administrative duties and management challenges to spend sufficient time practicing their clinical skills and therefore may be losing some skills.

For example, practicing medicine, surgery or nursing (note the term “practicing”) is not like riding a bike. Just because you have done it in the past doesn’t mean you are just as proficient when not doing it every day or every week. Top-down mentoring doesn’t fit very well when those higher-up are less “recently experienced” than those lower down the hierarchy.

In military aviation when a senior officer, who flies less frequently, accompanies a junior officer on a mission the junior officer is often considered the flight commander because he is the more “recently experienced” pilot and he flies more frequently. After the flight there is a debriefing where the junior officer discusses the positive and less positive aspects of the mission and mentors the senior officer – top-up mentoring! The senior officer accepts this mentoring in a cordial fashion because this has been the culture of aircraft safety for many, many decades where the goal is aircraft safety and egos are put aside. “Recent experience” is what matters, and seniority outside the cockpit has nothing to do with this relationship. Safety and mission success are the issues, full-stop!

The clinical environment is like a flight deck or cockpit in many respects and opportunistic mentoring should be the rule, not the exception. Likewise, refresher mentoring for healthcare professionals, especially after involvement in adverse patient safety incidents, should be the rule and not the exception.

In healthcare we must use both models of mentoring as circumstances direct and at every opportunity. The barriers artificially created by professional titles and hierarchies have no place in this process and are subservient to the needs of patient safety. Collaboration means looking out for each other and never, ever leaving your wingman!
For the sake of discussion I will lump the major elements of performance and safety in these three industries into an engineering model. To a large extent the processes and procedures requisite within these industries are confined within closed systems. By this I mean the processes are designed by engineers, quantified, measurable and quality-controlled to a high degree. Planes have redundant systems so that failure of one (even human failure to correctly operate a system) is often counterbalanced by the redundant fail-safes that have been engineered into the processes.

Medicine has learned a great deal from this approach and many of our technologies are now approaching similar levels of reliability. Furthermore, we have learned much about human factors and the challenges these pose by studying models of performance inherent in these industries and the innovative human-error-reduction strategies engineered into their systems. However, there is far more variability associated with clinical assessment and diagnostic skills than with flying a plane or building a car and this is where the comparisons fall apart.

Obtaining a history, performing a physical examination, ordering and then interpreting a wide variety of laboratory and imaging investigations, prescribing therapeutics, performing interventions and providing hands-on care to humans is really, really complex and the doctors and nurses who do all this are not robots – they are humans with variable strengths and weaknesses. Of course all professionals have to meet some prescribed standards of performance, but these are not as discrete as industry standards for machines and humans are not engineered like machines. The human brain is far more complicated than any machine developed by humans, ever!

In addition, the patients we are privileged to care for are also not as uniform as the raw materials or machines so effectively utilized for building a car or making a plane fly. They are inherently highly variable in terms of their physical characteristics, nutritional status, genetics, psychological constitution, abusive/addictive behaviors, socio-economic background, fears, belief systems and responses to medications. The healthcare “industry” is only just beginning to come to grips with some of these challenging aspects. I am not saying that we do not have a lot to learn from the engineering industries because we certainly do, especially in the realm of development and sustainment of a patient safety culture that embodies professional collaboration as the hallmark of patient-centered care; but we are not the same as them.

In other industries humans operate machines that are fail-safe designed. Doctors and nurses and other healthcare professionals do not simply operate machines – they are themselves highly designed, yet imperfect machines that embody the soul and spirit of compassion and with all these imperfections hope to improve the plight of other vulnerable humans, also machines of a sort, who are suffering and frightened. We shouldn’t beat ourselves up for not being planes or even pilots because we are much more than that; we are healthcare professionals.
Talking to Patients about Adverse Events

Caring for patients is fraught with danger. Every time we stand at the bedside we bring benefits but also risks. Problems with our systems of care and personal lapses from a range of human factors often result in harm, preventable harm. Healthcare is all about partnership, patients and healthcare professionals partnering to achieve desired outcomes. It is all about trust and obligation.

When patients are harmed we need to focus on those aspects of trust and obligation and discuss adverse events, the damaging outcomes, the remedies to treat these outcomes and the steps to prevent further adverse events. This is part of our fiduciary relationship with those we serve. We need to be open and honest and to build and sustain bridges of communication, yet we are often not adequately prepared to do so! Of course, individual circumstances should dictate seeking guidance from hospital administration resources and hospital attorneys beforehand, but that should not trump the ethics of honesty and trustful behavior.

Unfortunately, most physicians and nurses are not specifically trained to deliver bad news as a result of mistakes or system errors. Nonetheless, it is the right thing to do and there is some evidence emerging that open disclosure actually decreases medical malpractice suits. Physicians and nurses need mentoring in how to talk with patients about adverse events, and institutions should have formal plans in place that address disclosure. The Institute for Healthcare Improvement in the USA has published guidance on preparing for disclosure and the management of serious adverse events. I was trained as a paediatric oncologist and therefore have had a lot of experience in sharing very bad news. To start with I was not very good at this and frankly was highly intimidated by such discussions. Fortunately, I had good mentors who coached me through the process so a few months into my training I was much better. I have always been a compassionate guy who just needed some help sharing facts and compassion when the facts were very frightening.

Years ago I was involved in an incident where a patient under my care was administered 10 times the appropriate dose of a chemotherapeutic agent for cancer. A situation had called me away from the bedside and someone else administered the medication on my behalf. An incorrect dose had been prepared by the pharmacy and had I not been reluctant to call for oncology staff back up, I would have been present to give the medication and would have recognized the mistake. When I realized what had happened I was certain that the overdose would kill the patient, a young child with Wilms tumor. Knees rattling (and other organs shimmering) I called my consultant immediately and he advised that we meet with the family to discuss what had happened. He also mentioned to me that although the child had received a very high dose of medication we actually did not know that he would die, but only that he would likely become severely myelosuppressed.

The meeting was hugely challenging for all parties but with honesty and compassion I explained what had happened, how it had happened and what steps we would take to care for the child going forward. The family was upset and very frightened but interestingly remained grateful and confident in our care. To cut a long story short the child, despite 10 days of severe myelosuppression recovered nicely. The child was ultimately cured of his illness and my relationship with the family was strengthened and sustained.

OK, I know not all stories will end like this, but the approach of honesty and compassion has served me well over the years. Institutions need to be prepared and formal disclosure planning and team training in disclosure should be part of the safety culture.
Taking care of patients is a unique honour and privilege and an enormous responsibility. Patients hold us accountable for our care and caring, and they have the right to expect that we will assure their safety as they move through the continuum of healthcare. Quality healthcare is all about safety and outcomes, and the human connection is the facilitator. When healthcare professionals really connect with patients, really empathize and really listen, then the foundation is firmly built for safe, high-quality outcomes.

I was recently at a conference where I heard Dr. Stephen Bergman, a Harvard psychiatrist and medical fiction author, talk about the human connection. I got to thinking about my experiences, the mentors I’ve had over the years, and how they affected my career. Since communication is such an important part of safe care, understanding patient perspectives and working with their belief systems becomes part of our shared strategy for success, and this has a lot to do with hand-washing, by the way!

One of my mentors was Professor Charles A. Janeway at the Children’s Hospital Boston, Massachusetts. Charlie was an internationally distinguished scientist and physician, revered and almost worshiped by many around the world. He was in his 70s when I knew him and still made teaching rounds with the registrars and medical students. What I learned most from him had less to do with immunology, his forte, and much more to do with humility and humanity, because he could really connect with patients.

I recall an afternoon when the distinguished Harvard professor was being introduced to a teenaged mother and her sick toddler, who was suffering from juvenile rheumatoid arthritis. A junior house officer had first presented the “case” out of earshot. Charlie introduced himself, took off his starched white coat, rolled up his sleeves, washed his hands for over a minute and sat down on a chair so that he could be at eye level with the mother, who was clutching her fearful and sick child. He extended his hand onto hers, asked her to explain her worries and to tell her story. Any tension in the room immediately evaporated as she cried and poured out her concerns and beliefs, and he really, really listened. He then calmly asked if he might examine her child, stood up, washed his hands again, sat down and began to examine the little girl, by first touching her toes before moving up to more threatening parts of the exam.

When he had finished, he briefly talked with the mother to explain the course of treatment and then asked her if she understood what he had said and if she had any questions. As he left the room, he again washed his hands, thanked the young mother for her help when examining her child and promised to return to see her and her child again. It was drama… pure, effective theatre… human connection… high-quality, safe care!

In the conference room down the hall our group stopped to discuss the child (not the “case”), and one of the medical students asked the professor why he had washed his hands three times. He replied, “Once to prevent infection and twice to emphasize to this young mother how much I cared about her child and respected her concerns and beliefs. I wanted her to know that I really cared, and… there is something about water, and washing, which sends that message. Hence, the link between the human connection and hand-washing.

The Human Connection – What’s hand-washing got to do with it?

I have always washed my hands in front of patients, always; and I’ll tell you why. Part of the reason is to prevent infection, but mostly it has to do with humility and the deeply human connection I want to convey to patients. I want to be safe, and I want them to know this. I always wash my hands in front of patients!
The breadth of communication challenges covers the sharing or transfer of information between healthcare professionals and support staff and more broadly the exchange of information between healthcare professionals and patients, family members or other care givers for example social services and other community resources. Communicating relevant information around the care of patients during transitions in healthcare is an area of particular vulnerability.

Communication hazard zones include:

- Hand-offs in patient care related to personnel shift changes
- Healthcare team dynamics within particular settings
- Patient transitions between clinical settings within institutions or more broadly across internal and external institutions

Each of these situations have their own communication challenges that are further complicated by individual personalities, the robustness of the patient safety culture, proximity of healthcare settings, processes of communication, urgency, patient preferences, etc.

The airline industry has developed, and sustained, a culture of safety over the past fifty years that includes assured communication techniques that prevent flight incidents, and healthcare professionals should learn from this experience. Aircrew coordination relies on standardized checklists that are utilized within a cultural environment where everyone is respected and encouraged to speak up if there are concerns regarding safety at any time. The strong and admired leader of the crew is that individual who encourages and welcomes relevant timely discourse.

Furthermore, the flight deck environment is viewed as a “special space” where distractions are not to be tolerated.

Communication in healthcare settings can easily be enhanced by the adoption of standardized checklists where discrete relevant information is shared effectively before the “baton” has been passed, and the “baton” is not passed until all participants in the transition agree that the checklist has been completed. Verbal or written acknowledgement that communication has been completed is a key component of this process as it closes the loop.

Communication should be accomplished in quiet zones that are free from distractions. The kinds of information to be communicated should be standardized, yet customized by professional staff to address unique requirements. Before beginning invasive procedures or when confronting evolving clinical challenges, especially emergent situations, healthcare teams should employ the techniques of “time out” and “huddling” to have frank shared discussions and to complete necessary checklists.

A great example of standardization is the WHO Surgical Safety Checklist, the adoption of which has been shown to reduce surgical operative morbidity considerably and surgical mortality by nearly 50%. Yet despite the clear evidence of effectiveness there is still reluctance and resistance to universal adoption. Reasons for this are complex but essentially point to the failure of institutions, and some healthcare professionals, to embrace and sustain a culture of openness towards sharing of information, respect for the opinions of all team members and encouragement to speak up when safety concerns are detected. Healthcare professionals need to accept the fact that they can and may make mistakes, and that the adoption of standardized checklists and procedures is the most effective way to reduce variability and prevent incidents; particularly during hand-offs, transitions or when performing invasive procedures.

Sustainment of a culture of respect and enhanced information sharing will require all of us to work together. Our patients are depending on us to finally get this right; and the public is getting restless!

The Communication Conundrum and Patient Safety

Communication inefficiencies have been identified as common causes of patient safety incidents and harm. Simple solutions exist to address communication failure but are not consistently utilized in healthcare settings. Why this is may have more to do with culture than anything else.
Doctors and nurses do not go to work intending to harm patients, but processes are imperfect and often judgement can be clouded. Sometimes we make mistakes because we make assumptions, we perceive situations or circumstances in a fashion that blinds us to relevant data or we fail to communicate respectfully with colleagues or subordinates that might lead us to reach different conclusions.

When patients are harmed many professionals become distressed and emotionally troubled, yet often have nowhere, or no one, to turn to. This may be the case in particular for physicians and surgeons who have been trained or indoctrinated to be in charge, to be seen as the leaders of the team; and where admissions of errors may be perceived as weaknesses.

I recall the case of highly respected hand surgeon who performed a tendon release procedure on the wrong finger of the wrong hand (wrong site surgery) having refused to use the World Health Organization (WHO) surgical safety checklist because she “had never had this happen before.” Admittedly, her hospital had not adopted the checklist as standard operating procedure, but she had recently attended a teaching conference where the effectiveness of the checklist had been discussed.

She was rushed on the morning of the procedure, was complacent, she made assumptions and did not respectfully listen to a nurse who raised a question about the procedure. Such was the power of her presence and her reputation that she was not further challenged in the operating theatre. Sound familiar?

When the reality of the situation hit her she felt tremendous guilt and remorse yet her colleagues were less than truly understanding, reaching out to her with comments such as “these things just happen from time to time” or “even the best of us make these mistakes”; almost as if there were some justification for what had happened or that she was less than “one of the best”.

The fact is that wrong site surgery should never happen and is completely preventable. The hand surgeon had acted irresponsibly. This highly successful surgeon recognized that she was not infallible. She did not need patronizing comments from surgical colleagues.

In fact there are three very important steps to assisting this surgeon that may result in her becoming a better doctor in every sense, and these processes should have been embedded in hospital culture and policies. First, the surgeon needed to be the leader of the disclosure team that met with the patient, and she should have had mentoring in the processes of disclosure; of sharing honestly and openly with patients our regrets and remorse when thing go wrong and expressing the sentiment to work better to never let this happen again. Secondly, her institution had an obligation to require her to meet with professionals, often trained physicians and surgeons, to share her feelings and to receive revalidation of her value. Thirdly, she should have been given the opportunity to assume a mentorship role in teaching the tools of respectful communication.

Unfortunately only hospitals with robust patient safety cultures achieve these three objectives, and many hospitals have not yet moved this far along in their safety journeys.
**About Us**

Datix has been a pioneer in the field of patient safety since 1986 and is today a leading supplier of software for patient safety, risk management, incident and adverse event reporting. Datix aims to help healthcare organisations build a culture and practice that drives excellence in patient safety. We recruit and retain people committed to the healthcare sector and continually invest in our software and services to ensure that we integrate best practice and learning.

**Our clients**

Datix is focused on the health and social care sector. Our customers include public and private hospitals, primary care providers, GP surgeries, mental health and ambulance service providers. It also includes organisations delivering care home and domiciliary care services. Within the UK this includes more than 70% of the National Health Service. Internationally our client base is growing rapidly and includes large scale deployments in Canada and the USA as well as clients in Europe, Australia and the Middle East.

**Our products & services**

Datix is a web-based patient safety and risk management software application. The solution integrates the following safety, risk and governance elements:

- Incident, adverse event and near miss reporting
- Risk assessment
- Safety alerts
- Accreditation/Standards
- Patient experience and feedback
- Complaints, compliments, comments and concerns
- Claims handling

Datix is highly configurable, which means you can tailor it to your organisation’s structure and unique requirements. We provide comprehensive training, consultancy, installation and project management services to ensure that your Datix deployment delivers:

- Reduced risk
- Improved patient safety
- Increased operational efficiency