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Care Pathways: Customising Care to Meet the Changing Demands of Today's Patients

The healthcare sector is undergoing major reform. Many shifts in practice and organisation are happening simultaneously. The role of patients is changing, moving from a more passive position into active consumers of care. Patients want to be informed and involved and there is growing attention to quality and safety.

The main driver for these changes comes from the « to Err is human » report from the Institute of Medicine (IOM) in 1999. The report was the result of a particular accident in which a young woman was given a lethal dose of chemotherapy. The report indicated that as many as "44,000 to 98,000 people die in hospitals each year as the result of medical errors". Discussed publicly in the US Senate, the report was the catalyst for an overall hospital reform across the United States. The main problem is the variable quality in healthcare organisations. McGlynn et al. (2003) documented the care for 30 different conditions using 439 indicators and found that the compliance to evidence-based practice was just 54 percent. Importantly, the cause of this poor performance is not the fault of the health professionals themselves but rather the system.

Healthcare systems have indeed become very complex. The individual patient-doctor relationship has been replaced by a team-patient approach. This is caused by the increasing specialisation of health professionals, technological developments and a wider range of patient expectations. These interdisciplinary and inter-professional teams can be very large indeed.

When Dr. Glenn Steele, CEO of the Geisinger Healthcare System was admitted for open heart surgery in his own hospital, many people were concerned about the confidentiality of his health information. As a standard procedure, all access to his patient record was logged during his stay. They were very surprised to see that about 120 health professionals had been involved in the care for Mr. Steele. And this is probably only half of what it really is. Next to these front-office workers that meet with patients, there are as many people in the back-office such as those in administration, in lab, in pharmacy, etc.

The complexity of working in teams requires a strong protocol and evidence-based approach with clear communication on goals, roles and procedures. Interdisciplinary teamwork and communication are the buzzwords of the new healthcare systems. The WHO - World Alliance for Patient Safety identified the lack of communication and coordination as the first priority for patient safety (Bates et al. 2009). As these teams are being formed around patients and patients' problems, we see that these teams go well beyond the boundaries of organisations. It is what we expect of good patient care. When Mr. Steele goes home after his open heart surgery, we expect that he will recover at home, that he is monitored by his family doctor. There might be a community nurse visiting him or physiotherapists for exercising the injured thorax muscles, dieticians to adjust his diet and eating patterns. What we have come to expect is that these new teams are taking over with seamless communication and coordination. This is leading to a new type of healthcare in which these kinds of new rules will emerge (Rogers et al. 2009).

Care Pathways

It is in that context that care pathways have their rationale. Care pathways were developed mid eighties with a major focus on reducing length-of-stay, guaranteeing quality of care. The first systematic use was found in the New England Medical Center in Boston (USA) in 1985 as a response to the introduction of Diagnosis Related

Groups (DRGs) in 1983.

Care pathways are defined by the European Pathway Association as "a complex intervention for the mutual decision making and organisation of predictable care for a well-defined group of patients during a well defined period." (Vanhaecht et al., 2007).

Defining characteristics of care pathways include:

1. An explicit statement of the goals and key elements of care based on evidence, best practice, and patient expectations;
2. The facilitation of the communication, coordination of roles, and sequencing the activities of the multidisciplinary care team, patients and their relatives;
3. The documentation, monitoring, and evaluation of variances and outcomes; and
4. The identification of the appropriate resources.

Although the use of care pathways in healthcare is still limited due to the slow but firm paradigm shift that is changing the nature of healthcare, I want to describe three examples to show how different healthcare can be with care pathways.

Example One: Surgery with a Warranty

For the first example we go back to the Geisinger Healthcare system and the care pathway they developed for coronary bypass surgery (CABG) (Berry et al. 2009). It started with the conclusion that Geisinger had no method to translate the results from new research and guidelines into daily practice. This resulted in 2004, in the development of ProvenCare programme as a means to create a replicable process of incorporating multiple EBM practices into acute episodic surgical interventions.

In ProvenCare 40 process elements were defined. The programme went live in February 2006 and resulted in compliance of just 59 percent to the 40 standards, although it was preceded by nine months of intensive discussions and preparations. After three months, the team already achieved a compliance rate of 100 percent. When the ProvenCare group was compared to a control group, there was a reduction in the number of postoperative adverse events, length-of-stay fell from 6.3 days to 5.3 days and charges were reduced by five percent. The most striking result was that Geisinger was advertising its approach to CABG with a 90-day warranty. The fact that for the first time in healthcare, an effort-commitment was replaced by a result-commitment, made the headlines of the New York Times, May 17, 2007, "In a Bid for Better Care, Surgery with a Warranty". In December 2007, the Harvard Health Newsletter listed it as one of the Top 10 health news stories of 2007.

Example Two:

From the OR to the Putting Green

The second example is the introduction of Jointcare, a concept introduced by Biomet, an international biomedical company specialised in orthopedic devices and technology. About 10 years ago, they introduced the organisational concept of Jointcare in the Netherlands to their clients as a byproduct of their sales of devices. The concept was based on the ideas of James Heskett, professor at Harvard University in the US. James Heskett studied the Shouldice Hospital near Toronto which is specialised in hernia repair. The idea at Shouldice was not only to standardise the care process and deliver almost perfect care, but also to design a well-defined service concept using a surgical technique that allows early mobilisation. This permits the treatment of these patients not as sick, but rather as healthy, people who just need their hernias fixed. A programme was designed with many group sessions in which patients were instructed for self-care and to become active participants in their recovery. It resulted in a highly satisfactory stay which is more like a club med style of holiday than hospitalisation. Starting from day two, patients start to play golf on the nice putting green of the hospital. Moreover, patients were able to return to work much more quickly.

The success of this programme was transferred to Jointcare in which patients are invited on Friday for a first information session for the surgery the next week. Patients operated on that week share their experiences and stories; patients are carefully instructed and prepared for surgery in the weeks before. After surgery, patients do not simply stay in their rooms but exercise with the help of nurses and physiotherapists in group sessions. In 2011, around 45 Dutch hospitals offer the Jointcare programme. Length-of-stay is about 30 percent shorter than

in traditional programmes, with better functional results. Health insurers in the Netherlands have decided not to contract any hospitals for hip or knee arthroplasty if they do not offer a Jointcare programme as one of the alternatives.

Example Three:

Care Pathways Reducing In-Hospital Mortality

A third example is the development of a care pathway for heart failure (Panella et al., 2009). Forty hospitals located in four Italian regions were invited to participate. 14 of them were selected and randomised in an experimental group which agreed to implement a pathway for heart failure and a control group. Data were collected from March 2003 to October 2004. The final number of patients was 429 patients (214 in the care pathway group and 215 in the usual care group). The main result was that in-hospital mortality in the control group was 15.4 percent compared to 5.6 percent in the group receiving the care pathway, which is almost one third of expected mortality. The main explanation for this huge difference is probably the difference in compliance to evidence-based practice and the state-of-the-art in medicine. The use of diagnostic procedures, echocardiography, oximetry and diuresis monitoring was much more frequent in the care pathway group. Similarly, all medications were administered more frequently, with the exception of diuretics and anti-platelet agents. The proportion of patients receiving left ventricular function assessment, advice/counselling on smoking cessation and written discharge instructions was also higher in the care pathway group. The conclusion is obvious. Care delivered using care pathways based on current guidelines, as compared to usual care, is highly effective in reducing in-hospital mortality in heart failure patients.

Conclusion

The three examples show how healthcare may look very different in the years to come. The role of the patient is changing from less passive to more active. Health professionals will be working in interdisciplinary teams transcending the boundaries of organisations, based on care pathways defined by the best evidence available. There will be therapeutic freedom to deviate from the protocols to meet specific needs of patients or as a way of customising care, but not because lack of knowledge or underperforming organisations. This care might lead to more predictable results. Patient-centered healthcare is making the patient the top priority at all times. It surely will affect the way health professionals are working and how hospitals are managed but we all will benefit from it.

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