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STRESS AND PATIENT SAFETY

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Abstract

It is now realized that patient safety represents a health provider imperative that must be supported from every component of a health care facility, regardless of its size or medical specialty. Recent studies conducted by the Lucian Leape Institute at the National Patient Safety Foundation demonstrate that health care delivery remains unsafe despite improvement initiatives over the past decade. Accordingly, the institute has put forward the following five concepts that aim to 'meaningfully' improve the safety of the health care system: transparency, care integration, patient/consumer engagement, restoration of joy and meaning in work, and medical education reform. This paper proposes that anticipatory stress – both before and during health-related procedures – affects overall safety. Therefore, a reduction in the anticipatory stress response can heighten patient safety. It is argued that the notion of anticipatory stress in relation to typical health care patient experiences, including its effect on communication with health care providers, is a vital concern that needs to be addressed. In addition, it is suggested that health care providers can also be affected by anticipatory stress – a situation that may also endanger patient well-being. As a way forward, the need for a more comprehensive educational program that can reduce the negative impacts of anticipatory stress on patient safety with regard to both patients and health care providers is examined.

Key words: *stress – anticipatory stress – patient safety – proactive care*

REVIEW

INTRODUCTION

Recent studies conducted by the Lucian Leape Institute (hereafter LLI) at the National Patient Safety Foundation have brought to light the fact that health care delivery remains unsafe with respect to patient well-being and despite improvement initiatives over the past decade (Lucian Leape Institute 2010). Accordingly, LLI has put forward the following five concepts that aim to 'meaningfully' improve the safety of the health care system: transparency, care integration, patient/consumer engagement, restoration of joy and meaning in work, and medical education reform (Leape et al. 2009, Lucian Leape Institute 2010). While these five domains can be considered integral to enhancing the quality of the health care patient experience, this paper proposes that anticipatory stress – both before and during health-related procedures – affects overall safety (Stefano et al. 2008). Therefore, as discussed in the following sections, a reduction in the anticipatory stress response (hereafter ASR) can heighten patient safety, as well as allow for the five aforementioned concepts to be more thoroughly addressed. The following discussion examines the notion of ASR in relation to typical health care patient experiences, including its effect on communication with health care providers. From there, it is suggested that

health care providers can also be affected by ASR – a situation that may also endanger patient well-being. As a way forward, the final section investigates the need for a more comprehensive educational program that can reduce the negative impacts of ASR on patient safety with regard to both patients and health care providers.

The anticipatory stress response (ASR)

In general terms, stress can be viewed as a challenge that forces organisms to react in an effort to maintain health and, thus, survive (Esch et al. 2002a). It can also be considered to represent an event, or stimulus, that alters existing organismic homeostasis or "allostasis" (McEwen 1998). Through an extremely complicated allostatic process, all living organisms maintain their survival in the face of both externally and internally generated "stressors". This apparent harmonization is constantly challenged often to the point of threat (Chrousos and Gold 1992, Fricchione and Stefano 1994, Stefano et al. 2001, 2002, 2005, Esch and Stefano 2002, Esch et al. 2002a, b). Thus, the stress responses (physiological processes that occur in the face of stress, e.g., fight-or-flight response) can be viewed as protective mechanisms. The broad spectrum of stimuli capable of engaging the stress response is remarkable and reflects how well integrated our perceptions of the physical, psychological and social worlds are (Watson and Akil 1991). In addition, biochemical (neurotransmitter, peptides, steroids), physiological (heart rate, blood pressure) and behavioral (anxiety, depression, tension) concomitants of stress may co-mediate a disease response (Vogel and Bower 1991).

Another important element of stressful stimulation may be the duration or time component of the noxious stimulus (Stefano 1991, Fricchione and Stefano 1994). A brief physical, or mental, 'assault' may allow an organism, through various detailed allostatic compensatory mechanisms, to 'deal' with both an appraised or perceived stress. If the situation were to continue chronically, the organism might become susceptible to negative aspects of the stress response, such as in the case of prolonged immune down-regulation (Stefano and Scharrer 1994, Stefano et al. 1995, 1996a, b, 2000). In effect, our physiological and psychological stress response 'systems' are designed to function over short periods of time as opposed to those that are more prolonged.

ASR and health care

Within the context of health care delivery, it can be argued that a large component of the normal stress that a patient may undergo is derived from anticipation, and is based upon perceived events that may or may not occur. Indeed, at the core of anticipatory stress is a grappling with 'the unknown' – that is, although future events may be defined, or known, it is the details of such events, procedures and treatments that may remain shrouded in mystery until they are actually experienced. Similarly, it can also be suggested that this anticipatory stress is ongoing over a relatively long period of time: beginning before the health-related event and lasting until all post-treatment outcomes have been realized. For instance, nervousness felt on behalf of a patient facing medical treatment in a hospital can be identified as one source of ASR. Such nervousness can stem from the process of hospital admittance, which includes the physical detachment from more familiar places and routines; the probable, as well as unforeseen, medical procedures that can occur during the hospital stay; and, most importantly, the outcomes of the medical interventions that served as the purpose of the hospital stay in the first place.

Furthermore, ASR can also be affecting the quality of care given by the health care providers as well. Understandably, one major source of ASR that affects health care providers at all levels is the fear of making errors even if, fortunately, they did not lead to any detrimental results. In a similar light, ASR can also stem from the sharing of difficult information with patients and their visitors. Such information can include the prospect of an extended stay to more distressing facts about unexpected outcomes of medical treatment. As discussed further in the following section, these two fears can be argued to be rooted within a larger perception of health care providers as confident, authoritative people – a perception that is held by both the general public and amongst health care providers, themselves. While confidence is certainly an important quality for instilling

a sense of security within patients, it may also be preventing a more fluid transparency that is needed when admitting that a mistake, or a lack of knowledge, is to blame for a negative outcome. In essence, health care providers are valorized within society as individuals who do not make mistakes and know – at every step of a patient's health care delivery – what exactly will happen. Thus, reconciling this societal image and the fact that health care providers are subject to ill-judgment can be identified as a major source of ASR.

Limited communication and transparency

As noted earlier, ASR is a normal process that can be experienced by both patients and health care providers. However, as this paper argues, it can have a negative impact on patient safety. The main reason for this concerns the limitations it causes with respect to communication and transparency in the relationship between both parties. On behalf of patients, ASR can lead to an overall acceptance of information without proper reflection or examination. For example, patients may feel too afraid when posing particular questions to their health care providers and, thus, discomfort about the future of their hospital stay and the procedures they may undergo is maintained. Most significantly, anticipation in relation to potential situations and outcomes is not reduced.

Noted in the previous section, this insecurity can be linked to the fact that health care providers are viewed as confident, all-knowing individuals who cannot make errors. On behalf of health care providers, this perception may also be affecting the ways in which they communicate with patients. In particular, health care providers may internalize the expectations patients may have of them as infallible; therefore, they too, become fearful of admitting to unforeseen outcomes or errors. In effect, communication between patients and health care providers becomes limited due to a lack of transparency: both parties are maintaining a false image of security and confidence.

According to Leape et al. (2009, Lucian Leape Institute 2010), transparency is the "free, uninhibited sharing of information" and is considered the "most important single attribute of a culture of safety". It is argued that health care providers have been "too timid" in becoming more transparent, which includes the disclosure of both potential and actual "hazards, errors and adverse events" to patients. Nonetheless, it is important to highlight that this timidity can be caused in large part by ASR, and it is not only experienced by health care providers, but patients as well. In this light, reducing ASR for both parties can be suggested to be one way forward for increasing transparency – that is, the actual feelings of anticipation, including their targets (the hospital stay, potential procedures, errors, hazards, future treatments and outcomes), should be discussed openly. Examined in the following section, an educational model can be used in order to reach a more profound level of confidence between health care provider and patient through sharing the components of ASR. Even though this stress response can be considered as a coping strategy, it can also be lessened or alleviated in order to enhance resilience and safety during the perceived experiences, or situations, for both parties.

A way forward

It is now realized that patient safety represents a health provider imperative that must be supported from every component of a health care facility, regardless of its size or medical specialty. In providing this critical function each institution must create an atmosphere within which the culture of patient safety is an integral part of the therapeutic treatment. Moreover, this approach should be taken from the staff, patient and economical perspectives (Leape et al. 2009, Lucian Leape Institute 2010). Of vital importance are the realizations that open lines of communication must exist between the patient and the care givers as well as within the supporting medical infrastructure from doctors, interns, nurses and allied health care professionals. The open lines of communication will foster great transparency and alleviate anticipatory stress as a patient progresses through the treatment prerogatives. In this regard, as noted by Leape et al., educational training programs for all medical professionals must include courses emphasizing and teaching patient safety issues as well as the significance of transparency and communication in this endeavor (Leape et al. 2009, Lucian Leape

Institute 2010). Indeed, if anticipatory stress – felt on behalf of both patients and health care providers – is not reduced, it can easily lead to chronic stress and its associated negative effects on health (Stefano et al. 2005). In closing, the profound influence of ASR on the experiences and outcomes of health care delivery must be addressed in order to achieve greater transparency, better care integration, a more fluid patient/consumer engagement, the restoration of joy and meaning in work, medical education reform, and, thus, safety for patients.

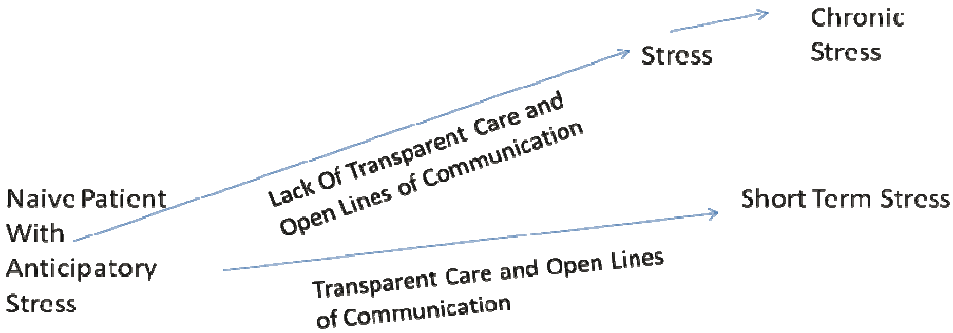

Fig. 1. Anticipatory stress and its significance in patient safety

Patients entering the medical setting exhibit anticipatory stress given the unknown that will emerge during their stay, creating a heightened sense of stress, which may become chronic, hindering their treatment. However, if patients are prepared via transparent communication, involving caring education and guidance it is surmised that their stress level will be much lower and in most cases not lead to chronic stress.

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