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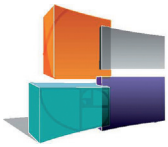

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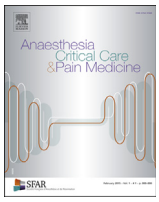

Special article

The perioperative surgical home: An innovative, patient-centred and cost-effective perioperative care model

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ABSTRACT

Contrary to the intraoperative period, the current perioperative environment is known to be fragmented and expensive. One of the potential solutions to this problem is the newly proposed perioperative surgical home (PSH) model of care. The PSH is a patient-centred micro healthcare system, which begins at the time the decision for surgery is made, is continuous through the perioperative period and concludes 30 days after discharge from the hospital. The model is based on multidisciplinary involvement: coordination of care, consistent application of best evidence/best practice protocols, full transparency with continuous monitoring and reporting of safety, quality, and cost data to optimize and decrease variation in care practices. To reduce said variation in care, the entire continuum of the perioperative process must evolve into a unique care environment handled by one perioperative team and coordinated by a leader. Anaesthesiologists are ideally positioned to lead this new model and thus significantly contribute to the highest standards in transitional medicine. The unique characteristics that place Anaesthesiologists in this framework include their systematic role in hospitals (as coordinators between patients/medical staff and institutions), the culture of safety and health care metrics innate to the specialty, and a significant role in the preoperative evaluation and counselling process, making them ideal leaders in perioperative medicine.

1. Introduction

Increasing costs together with non-optimal health care outcomes is leading the US health care federal agency [Centers for Medicare & Medicaid Services (CMS)] to move progressively from separate payments to providers for individual services towards a single payment reimbursement to hospitals, physicians, and other providers involved in the overall care surrounding each surgical episode [1]. This so called "bundled payments for care improvement" initiative is forcing caregivers to change their practice model and may lead to higher quality and more coordinated care at a lower cost for medicare. In the current system (pay for volume), hospitals and providers are paid for each service provided to their patients, which may lead to increased healthcare expenditures. In the "bundled payment" system (pay for value), hospitals and providers will have to optimize the expenses to outcome ratio in order to increase the revenue generated for each care episode. Indeed, the shift from 'volume' to 'value' is not limited to the bundle payment initiative but includes the fee-for-service model as well. On January 16th 2015, the Secretary of Health and Human Services indicated that by 2018, her intention is that 80% of all payments CMS will make will be dependent on value parameters [2]. One of the goals associated with these changes is to force hospitals, groups, and providers to decrease their expenses as well as to improve the patient experience and clinical outcomes (decreased incidence of

Abbreviations: ASA, American Society of Anesthesiologists; CMS, centers for medicare & medicaid services; ERAS, enhance recovery after surgery; GDP, gross domestic product; LOS, length of stay; N-SQIP, National Surgical Quality Improvement Program; OR, operating room; PSH, perioperative surgical home.

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complications, decreased length of stay...) in order to maintain their revenue.

In this context, a new delivery care model referred to as the perioperative surgical home (PSH) has emerged from the American Society of Anesthesiologists (ASA) to optimize perioperative care [3]. The PSH is a patient-centred micro health care system that begins at the time of the decision for surgery and continues until physical and social recovery as an outpatient. The PSH model of care is designed to help achieve the triple aim proposed by the Institute for Healthcare Improvement [4]:

- improving health;
- improving the patient care experience (quality and satisfaction);
- reducing health care costs.

While the PSH incorporates certain components of enhanced recovery after surgery (ERAS), it is a broader concept that uses social engineering methods and performance management techniques (such as Lean and Six Sigma) to optimize care. The PSH model of care stresses that the role of anaesthesiologists is branching out from operating rooms (OR) and becoming a natural source of leadership for coordinated, perioperative care teamwork. The aim of this manuscript is to explain the rational and the overall concept of the PSH and to discuss the practical aspects of its implementation at individual facilities.

2. Rationale for implementing a new model of care

An interesting combination of forces is naturally driving the PSH model of care lead by anaesthesiologists. These forces are:

- the increasing cost and decreasing quality of healthcare: the American and French healthcare systems are not the best systems anymore. They are expensive and outcomes (clinical outcomes and patient satisfaction) are not improving. The portion of the Gross Domestic Product (GDP) invested in healthcare is not invested elsewhere, which is problematic in a stalling economy. One of the goals of the PSH is to improve perioperative outcomes, while decreasing costs;
- government incentives: in the US, the affordable care act aims at a universal health insurance coverage, which will mechanically increase healthcare expenditures. At the same time, by modifying the payment system, its goal is to contain costs for each care episode. In the perioperative environment (fragmented and expensive) [5], one of the goals of the PSH model of care is to make this care accessible in a highly protocolised environment;
- pressure on Anaesthesiology as a profession: the value of physician anaesthesiologists is decreasing. As concerns ASA I or II patients, if anaesthesiologists are confined to a purely intraoperative role, the latter is likely to become obsolete (too expensive for no difference in outcomes compared to midlevel providers). We (i.e. anaesthesiologists) need to change our value proposition and move from a purely intraoperative/critical care environment, to a perioperative medicine approach, where we can help improve the perioperative process of care.

Below is a detailed analysis of the driving forces leading the PSH model of care.

2.1. Increasing costs and decreasing healthcare quality

The US health care system presents growing health care expenditures, estimated at $8,508 per capita and representing 16.9% of the GDP [6]. Despite that the US is ranked first for healthcare expenditures, the Commonwealth Fund reported a corresponding low quality of care, ranking the US as 11th out of the evaluated countries [7]. The French health care system presents similar problems, with health care spending representing $4,118 per capita (11.6% of the GDP) associated with a deficit of 7.3 billion euros [8] for a quality of care ranked 9th [7]. The definition of quality of care is based on six dimensions:

- effectiveness;
- efficiency;
- accessibility;
- acceptability/patient-centeredness;
- equity;
- safety [9].

Several factors held in common between the USA and France have historically prevented improvement of the current delivery of perioperative care. First, the fee-for-service payment system (pay for volume) leads to an increased demand for care [10], which drives costs up and does not provide incentives for improving outcomes. Indeed, as each service leads to a payment, the fee-for-service system encourages the multiplicity/redundancy of lab tests and specialist consults prior to surgery. This approach also creates a fragmented model of care, where patients are spread across multiple care providers and institutions [5]. Second, perioperative care providers are likely to work alone, which contributes to increased individual management, lack of application of evidence-based protocols, human errors and therefore variation in delivery of care to patients [11]. The latter may be further explained by the fact that the concept of "quality of care" is pretty recent. For example, physician training and culture has been historically focused on pathologies rather than on patients and the overall concepts of "quality" and/or "system issues" have always been a secondary concern. We now realize that our practice needs to shift and become more quality and patient-centred. As Lienhard mentioned in a French survey on mortality related to anaesthesia in 2006, "Much remains to be done to improve compliance of physicians to standard practice and to improve the anaesthetic system process." [12].

2.2. Government incentives

In order to solve the contradiction posed by low health insurance coverage associated with high health care costs, the Affordable Care Act is a US law that made health insurance compulsory for all American citizens [13]. What is less known in France is that this American law introduced various tools to decrease health care costs, wherein four directly impact perioperative care:

- the pay-for-performance program provides a bonus to health care providers if they reach agreed-upon quality or performance measures;
- care givers are incentivized to join Accountable Care Organizations and the National Quality Strategy Program [14];
- hospital readmissions within 30 days after discharge from the hospital, new hospital-acquired conditions and poor patient experience scores lead to a significant decrease in payments made to hospitals;
- the National pilot program on payment bundling drives health insurers to pay for a set of services, not "per unit of care delivered" under the fee-for-service model.

Interestingly, similar changes have been observed in France. Since 2008 in France, the health facility payment method is based on case-based payments or diagnosis-related groups (DRGs)