# Optimizing a Business Case for Safe Health Care

## An Integrated Approach to Safety and Finance

*A resource toolkit from the IHI/NPSF Patient Safety Coalition to guide collaboration among safety and financial leaders to demonstrate the value and return on investment for safer, quality care.*

## Acknowledgements

# Contents

# Executive Summary

Preventable harm in health care has been recognized as a public health issue.[1] Organizations are acknowledging that safety and freedom from harm constitute a core value in the goals and mission of every health care delivery organization and that investments in patient and workforce safety must be balanced among other priorities. Hence, safety and financial leaders are facing the undisputed need to collaborate closely in order to evaluate, prioritize, and fund initiatives that are sound investments for patient and workforce safety.

The Institute for Healthcare Improvement / National Patient Safety Foundation (IHI/NPSF) called upon the IHI/NPSF Patient Safety Coalition, a diverse group of stakeholders from across the continuum of care, to develop this toolkit, *Optimizing a Business Case for Safe Health Care: An Integrated Approach to Safety and Finance*, for helping patient safety leaders create a business case for safe care. This toolkit specifically emphasizes the need for collaboration among safety and financial leaders to demonstrate the value and return on investment for safer, quality care, and it provides recommendations and resources for preparing and presenting successful business cases.

Just as interprofessional team-based care is evolving to become standard practice for improving safety, so too is team-based collaboration of safety and financial leaders necessary in order to successfully create and present business cases to advance safety initiatives. This toolkit includes specific recommendations and practices for a Safety–Finance Team and provides a framework for understanding, framing, and advancing patient and workforce safety. IHI/NPSF invites you to review and apply the resources and approaches for advancing your business case for safety set forth in this document and its accompanying tools. We welcome your feedback on how to enrich this resource. Additional information and resources related to the business case for patient safety can be found on IHI's website: http://www.ihi.org/resources/Pages/Tools/Business-Case-for-Safe-Health-Care.aspx.

# Introduction

## Why Safety Matters

Patient safety is an important public health issue that has been shown to impact cost, reputation and, ultimately, lives.[1,2] But most importantly, a commitment to patient safety is morally and ethically the right thing to do. Implementing programs to create an organization that is free from harm has proven to be difficult, and recent reports have indicated that "the overall toll exacted by safety problems remains high."[1,p.1]

One of the reasons progress has been challenging is that patient safety initiatives compete for increasingly scarce financial resources within health care organizations. The purpose of this toolkit is to equip patient safety leaders with tools and approaches that will enable them to make a compelling business case for organizational investments in patient and workforce safety.

Shifting an organization's culture toward a safety-minded approach is not a new way of thinking. A recent report issued by the National Patient Safety Foundation positions the imperative to look beyond the traditional approach of tackling one-off safety interventions and move toward a total systems approach.[1] This approach can impact not only patients' lives but also the overall performance of the health care system.

Using the framework of a total systems approach to safety, everyone becomes a stakeholder in the success of the system, and safety and financial leaders share a level playing field, with organizational longevity, growth, and safety as the combined common goal. Every decision that is made — from staffing to technologies to organizational infrastructure — considers the short- and long-term benefits of an investment, as well as any risks and unintended consequences; and members from the safety and finance areas are equal partners, along with other key constituents on teams. A commitment to a culture of safety is considered as important as a focus on the organization's revenue, financial stability, system integration, and productivity;[3] yet, instead of an "either-or approach," safety must be at the core of operations as a strategic imperative for every decision that is made in the organization.

Uncovering the cost of unsafe care provides an opportunity to expand motivation for excellence around safety for all stakeholders within the system and ultimately impacts the overall "business" of the organization. Likewise, understanding the potential savings of proactively and systemically developing and investing in safety initiatives results in additional savings through patient and workforce safety and satisfaction. Once an organization has demonstrated the value of safety across the system, organizations are able to demonstrate authentic commitment to freedom from harm.

## The Business Case for Safe Care

Two decades of focus on patient safety has improved awareness and understanding of the importance of attention to issues of safety culture, error detection and prevention, and high-reliability performance. However, the reality is that health care, and the organizations that provide it, are fundamentally businesses, and there are numerous competing priorities to ensure business and financial stability and sustainability. Viewed through the lens that safety is just one of several competing priorities, there is risk that the health care industry will continue to view spending of time and human resources on patient and workforce safety as solely a cost center.

Traditionally, it has been the senior financial leader's job to ensure the success and longevity of an organization through thoughtful, informed decision making, particularly as it relates to ensuring sound investment and return on investment. Safety leaders are entrusted with establishing and executing programs and initiatives to advance safety. Yet the financial implications of safety are often not clearly identifiable, and may not demonstrate immediate return on investment. This is true especially for multi-layered financial operations and in organizations that do not engage safety and financial leaders as a team. It can be difficult then, for safety leaders to illustrate the value of their programs and initiatives, and frustrating to financial leaders who may not recognize the value of safety as an investment in the organization. The disconnect between safety and financial leaders not only hinders the safety of patients and the health care workforce, it may also foster a range of unintended consequences, as well as missed opportunities to actually improve business performance.

As our current health care system is shifting from volume-based reimbursement and fee for service to value-based reimbursement, now more than ever health care leaders must acknowledge that safety is critical to providing value. Safety and financial leaders must work collaboratively and transparently, not as an exception but as a rule, to uncover the correlations between safety, quality, and value through a more comprehensive understanding of the relationship between investments in safety and by optimizing organizational performance.[4] Today, this remains difficult due to a lack of common language and situational awareness across disciplines, which may result in the perception that safety and financial colleagues have two different goals in mind.

This toolkit is intended to provide health care safety leaders with a meaningful resource to support the development and successful communication of the business case for safety as an investment, and to better enable teams of safety and financial leaders to succeed in their collaborative efforts to champion programs and resources that enable health care to be free from harm. Further, we wish to emphasize that a safe health care environment requires safety not only for patients but for the workforce as well.

# A New Approach

## Unpacking the Value of Safety

As the move to value-based reimbursement has occurred, value has often been defined as the relationship between outcomes and cost. Outcomes include safety, quality, service, and access, to name some of the most common.

$$\text{Value} = \text{Outcomes} / \text{Cost}$$

In preparing a business case for a patient safety initiative, calculating the dollar cost can be straightforward. Calculating the outcomes is often not so clear cut. Some outcomes from safety programs or initiatives will have clearly defined financial outcomes (sometimes referred to as "hard dollars" or "dark green dollars") that can be easily included in the business case, such as a reduction in redundant testing. Other outcomes (sometimes called "soft dollars" or "light green dollars") may be harder to quantify in financial terms, such as improved cultures of safety that result in staff retention and engagement (see Figure 1).[5]

**Figure 1. Two Types of Outcomes That Should Be Addressed in a Business Case for Safety**

| Type of Outcome | Examples |
|---|---|
| **Financial Calculations**<br><br>("hard" or "dark green" dollars) | • Resource utilization (e.g., reduced testing)<br>• Length of stay<br>• Reduction in staff<br>• Elimination of excess inventory<br>• Switch to lower cost product or service<br>• Standardization of health care technology<br>• Cost of employee turnover and injuries (disability, lost work days)<br>• Financial penalties (e.g., for hospital-acquired conditions, readmissions, patient experience results)<br>• Commercial pay-for-performance contracts, ACOs, bundled payments<br>• Costs of malpractice |
| **Impact to the Organization**<br><br>("soft" or "light green" dollars) | • Reputation<br>• Patient outcomes<br>• Patient loyalty<br>• Patient satisfaction and engagement<br>• Workplace safety<br>• Workforce satisfaction<br>• Presenteeism |

Each organization will have guidelines on which variables can or should be included in financial calculations within a business case. The organization will also establish the timeline for measuring those financial outcomes based on the scope and timeline of the business case. However, other outcomes, as described in Figure 1, may not be easily monetized but should also be addressed in the business case; their impact to the organization may be described with examples, focus group findings, literature, or other supporting data. It is critical to consider both financial calculations and additional impact outcomes in a business case.

Another approach to defining value shifts the perspective away from the institution and toward that of the purchaser (patient, employers and/or state and federal programs and health plans). The Value Project of the Healthcare Financial Management Association (HFMA) encourages the health care community to focus on two important factors: quality and payment.[6]



While quality is still considered difficult to define in and of itself, this approach may consider including outcomes, safety, and experience as described above. Just as many other industries that recognize value in terms of the relative worth to the buyer, such as the food and clothing industries, health care should consider the relative worth of the care they are providing to those who are paying for the care (which includes the patient, employers and/or state and federal programs, and perhaps a health plan).[6] This approach shifts from a supply-driven model to one that considers the cost to the purchaser and the delivery of care that was provided to the patient. It includes factors taken into account when selecting a provider or organization (e.g., referral from a trusted source, reputation), the overall experience (there may have been a good "outcome" from the organization's perspective, but the patient may not feel positive about the quality and safety that was provided), and finally, the overall quality that was delivered.

A discussion of the impact on the organization of not investing in a proposed safety project or initiative is also an important aspect of considering outcomes. Not investing in or executing on a requested safety initiative may allow dollars to be allocated to another important project or initiative, but may also have consequences in other areas, such as not meeting expected clinical standards or accreditation requirements, or being unprepared for the next phase of value-based purchasing, or losing competitive advantage within the marketplace. These are important to articulate.

Regardless of how your organization defines value or what variables are included in financial calculations, a successful business case for patient safety begins with safety and financial leaders having a shared understanding of terminology and concepts used to determine value in their own organization.[7] In addition, the terminology and concepts used should be consistent with those of the health professions and the evidence basis of quality and safety strategies, as well as accepted financial practices. Next, there must be a clear understanding surrounding value within the context of their goals before taking a hard look at data. With improved understanding of the language and priorities of safety and finance teams, more meaningful progress may be made in advancing safety.

# Three Drivers for Optimizing Your Business Case



## Collaboration

Collaboration is a key driver for improved patient safety and increased value. It is imperative that safety and financial leaders work together from the beginning of any planning process. In a 2016 survey conducted by NPSF, 89 percent of respondents either slightly or strongly agreed that it is important to make a business case for supporting patient safety investments; yet 56 percent rarely or never involved their chief financial officer (CFO) or financial colleagues in crafting the business case for patient safety initiatives, and 25 percent only sometimes involved their financial colleagues.[8]

Consider instead an integrated approach in which safety and financial leaders embark together on the journey of determining the value of safety proposals for their organization. The work begins prior to the start of any safety project and continues through the life cycle of the project, with ongoing measurement, monitoring, and evaluation, and with a shared understanding of goals, data points, value, and safety. This might take the form of a newly created Safety–Finance Team, or bringing a finance person onto a safety improvement committee, or simply having two leaders (safety and finance) sitting down at the table together. For the purposes of this document, we will refer to the collaboration as the "Safety–Finance Team."

Whatever form this interaction takes, the individuals should be ready to learn and collaborate with each other and use their shared knowledge to generate sustainable improvements in safety across their organizations. Ultimately, the linkage between safety and finance is key, and collaboration begins with seeking to understand each other's perspectives, priorities, and goals.

**Safety leaders need to understand the language of finance and the basics of the organization's financial structure and processes.** They need to understand the differences between operating and capital budgets, the annual or multiyear cycles that apply to each, and the processes for asking for funding from the different types of budgets.

Perhaps the most direct path to getting the green light for a patient safety investment is by demonstrating its connection to reimbursement policies and programs. The Safety–Finance Team must have a shared understanding of the various reimbursement programs that contribute to your organization's bottom line.

Understanding the intricacies of value-based payment in relation to safety is critical. The NPSF survey revealed that there is a knowledge gap in this area, noting that penalties and non-repayment incidents are unclear to many, and patient safety business cases are being made without this data.

One of the best ways to gain this understanding is to sit down with the people on your finance team who work directly with payers (non-patient purchasers of care, as defined above). Just as any interprofessional collaboration can be an effective means to achieving mutual success, your finance team's understanding of payers and their environment ensures organizational alignment with respect to their expectations and requirements. Ideally, safety leaders should participate in contract negotiations with payers to determine key performance metrics tied to payment. HFMA leaders advocate that providers not only perform to reimbursement-related quality drivers and metrics, but also that they emphasize collaboration with payers in order to reduce the administrative burden around reporting wherever possible.[9] Understanding what payers value will ensure your focus remains targeted on the investment the payers are looking at.

**Likewise, financial leaders need to understand the basics of patient safety,** including aspects such as the importance of a systems approach, safety culture, human factors, and transparency with patients, families, and within the organization, as well as the need for process improvement, standardization, and automation to minimize human error, to name a few. Additional areas of understanding include physical and psychological safety of the workforce.

A regular review and sharing of safety trends and harm events both within and external to the organization will sensitize financial leaders to the gaps in systems that need to be addressed in future safety programs or initiatives.

**Engage a network of collaborators.** An aligned Safety–Finance Team may benefit from including other champions within your organization who have the potential to leverage safety initiatives (see Figure 2).

**Figure 2. Network of Collaborators**

A broad range of potential collaborators may be able to provide the Safety–Finance Team with input, support, and, perhaps most important, influence. For example, connecting early on in the development of a project or proposal with executive and clinical champions may ensure the tie-in to professional values and goals. Collaboration with patients offers insight into what they want, need, and prefer in order to feel that their care is optimized. In their combined role as both consumer and purchaser, their experience and insight is a critical piece to the value equation.

Regardless of where your organization is along the road to establishing a Safety–Finance Team, it is imperative that all leaders in the organization be ready and willing to don their safety hats, given that all decisions require an understanding and recognition of safety. Establishing a regular rhythm of communication and collaboration is a critical first step to not only a single successful business case, but also to a common way of working that ensures that freedom from harm to patients and the workforce remains a compelling vision for all.

Once you have put together your Safety–Finance Team, consider completion of an Organizational Readiness Checklist (see the accompanying online tools) to determine, first off, if your Safety–Finance Team is aligned and prepared for the task at hand; but, also to determine where your organization is along the path to collaborating on a proposal. Don't be discouraged if you find you have a long way to go. Create attainable action plans for areas that need more work. Completing the Organizational Readiness Checklist may provide opportunities for communication among team members, and that in turn may lead to a stronger business case.

## Strategic Goals

Once a Safety–Finance Team has been established, it is essential that all team members clearly understand and agree upon the organization's strategic goals and mission before embarking on the development of the business case for either large-scale or smaller safety investments. Consider the core values embedded in the organization and work together to make the connections between safety and these values. You will begin to see how safety is truly the footing for much of what your organization strives to accomplish — whether that is providing world-class care, improving the health and well-being of the community, or providing high-quality, safe, and effective care. Patient and workforce safety is the foundation of population health at every level of the care continuum and throughout the entirety of the system.

The team needs to consistently make the connection between the goals and mission and the safety initiative. Look closely at the organization's financial goals, and at how they may vary from year to year. Here are some relevant questions for the team to consider:

- Is the focus this year on growing revenue or on controlling costs?

- Is there more opportunity in capital budgets or in operating budgets? How many initiatives or projects are competing for the same funding sources?

- How is the organization performing financially in relation to the financial plan for this year?

- Are there key safety issues that are contributing to underperformance, and are there key safety investments that may improve financial performance of the organization?

This assessment will determine the most opportune manner and time for presenting your business case. The ability to articulate and link any given year's emphasis on initiatives and projects and their relationship to continued quality and safety is paramount.

Consider the organization's professional educational structure, goals around patient centeredness, and other values that are central to the organization. In the end, the organizational goals and mission form the basis for alignment and collaboration. They should inform and guide all that you do.

## Data

The data that you include in your business case is a critical piece of your proposal and will carry significant weight among decision makers. You will need data to define the problem, the costs, and the implications of a proposed solution (and possibly some alternatives), and the expected results. Data and stories about events of harm within your organization are powerful additions to your case.

Gathering and interpreting data may be challenging and initially unclear. Establish an action plan early on for gathering data. Work closely with your financial partner(s) and engage an executive champion in this process before you start. Begin by using an Informational Readiness Checklist (see the accompanying online tools). This tool will help you determine what information you will be seeking from within your organization, and what outside information you will be collecting (e.g., state and national data).

Since much of this data will be financial, your finance partner(s) plays a critical role in retrieving, analyzing, and clarifying its relevance to your proposal. However, much of it may be non-financial in nature, and you will need to work with your network of collaborators to collect and incorporate meaningful data into the business case. Consider also engaging colleagues in discussions around the data they are providing. By looking at the data through the eyes of those working in the departments from which it comes, you may uncover new interpretations and meaning to the information.

# Developing the Business Case

Now that you have the framework for an integrated approach to safety projects, you and your team are ready to begin developing a business case that demonstrates the value of safety for the organization. It is important to remember that not every business case will include all of the components listed here, and some may require attention to different components or expansion of certain areas. Because there is no one-size-fits-all business case template, the committed collaboration between safety and financial leaders becomes a stronger imperative. The tools listed below are provided online to assist you in developing your business case [available at http://www.ihi.org/resources/Pages/Tools/Business-Case-for-Safe-Health-Care.aspx].

Tools:

- Organizational Readiness Checklist
- Informational Readiness Checklist
- Business Case Template
- Business Case Sample
- PowerPoint Template (for presenting to approval body)
- PowerPoint Sample
- Glossary of Terms
- Additional Resources and Literature

## Step 1: Assess Organizational Readiness

Determine if the organization is ready for the process you plan to initiate. What are the challenges and opportunities that you are facing? What is your current state, what do you want to accomplish, and why? Does your organization have the right infrastructure to begin the intended change process? Looking beyond infrastructure, does your organization have the right culture to embrace the work? Ensuring readiness prior to beginning the development of the business case eliminates potential time wasted and identifies gaps in the culture and organizational structure that need to be addressed. Transparency and collaboration among leadership teams and across stakeholders will be the driving force behind this assessment.

Use the accompanying Organizational Readiness Checklist to begin this process. If you answer "No" to any of the items on the list, or if the team determines that the organization is not yet ready to begin developing a business case around the safety initiative, should you keep going? This may depend on the organization and on what areas are deemed not ready. Determine as a team which areas are most important for success and which elements will hinder progress.

Clarify your organization's pathways for business cases and ensure that you follow the approved processes. There may be several steps that your team must take in presenting your case. Depending on the nature and the dollar amount of your request, you may need to present to more than one committee, including, for example, a value analysis committee. In some cases, there may be several steps for obtaining approval prior to reaching the highest level of decision makers, such as your board of directors, or the quality and safety committee of your board.

## Step 2: Gather Information and Data

This step includes a combination of determining what components are relevant to your business case, including hard and soft dollars, and gathering all of the data, metrics, evidence, and financials

needed. Safety and financial colleagues can work together to brainstorm and think creatively about what metrics will be most persuasive, particularly when it comes to soft dollars. It is important to remember that the data you include in your business case should be meaningful and compelling. Use the accompanying Informational Readiness Checklist tool to begin accounting for the various levels of data required for your plan. Ensure that any proof points that will substantiate your request are available and are at the highest level of evidence possible. Gather any relevant stories that may help influence your audience.

## Step 3: Draft the Business Case

When you have determined that you have the information needed and are prepared to develop a persuasive business case, you can begin to put the pieces together in a meaningful proposal. Some organizations expect a proposal to be presented as a document to be read thoroughly by decision-making and leadership committees, which may include a safety and quality committee or governing board.

Clear metrics that will be used to evaluate success of your proposed plan are critical to the business case. A strong case has clearly measurable goals and a plan in place for reporting meaningful results over time. This can be key to discovering opportunities around sustaining or building on success.

Some boards and executive committees begin their meetings with stories that address situations of error and harm, as well as success stories, such as "good catches," when error or harm has been averted. In many cases, including a brief story as part of your business case may make your proposal more compelling. It puts a human face and experience on something that has occurred within your organization. In some cases, executives or medical directors who are responsible for the clinical area may tell the story, and some organizations use a patient and family advocate or a patient or family member to tell the story. Consider whether a brief overview of a root cause analysis (RCA) of an event may be suitable, and ensure that your recommended investments are presented in the context of the RCA action hierarchy. Aim for solutions, or a set of solutions, that will be most effective in mitigating future occurrences of error and harm.

Use the blank Business Case Template and the Business Case Sample provided with this toolkit to prepare the appropriate proposal for your organization. It may be helpful to use the text-based Word document to prepare your thoughts and gather your information, and then use the PowerPoint template for your presentation. Your organization may already have a template or standard process for presenting a proposal, so you may wish to begin with that and use the tools provided with this resource to enhance that template.

## Step 4: Present the Business Case to Leadership

Once the business case has been constructed, it will need to be presented to organizational leadership. The first step in orchestrating this process will be to determine who will be your audience. Depending on the structure of your organization this might include board members, CFO, COO, and other members of the C-suite, and value analysis committees, as well as purchasing departments and capital committees, to name a few. Understanding your audience, the terminology that is meaningful to them, and what drives their decision making is a critical basis for success of your proposal.

The Safety–Finance Team will need to determine which stakeholders should be in the room to provide the most impact for making your case. Are there influencers from elsewhere in the organization that you want to engage before the presentation?

Members of the combined Safety–Finance Team are optimally positioned and prepared to lead the presentation of proposals. When appropriate, your clinical and executive champions may contribute valuable perspectives. Including a patient or family advocate who can share a compelling story can also have a meaningful impact. Be sure that all those you select to be part of your presentation team are relevant and will help to make the case.

A strong business case presentation is clear and easy to understand for non-experts. The presenters are confident and enthusiastic about the project, and this is reflected in the quality and detail of the analysis that is in the document and the thoughtful way they respond to questions.

## Step 5: Once the Business Case Is Approved — Or Not: Next Steps

**Congratulations if you have received the thumbs up for your proposal to proceed**. Now the work begins. In addition to executing the project, you have responsibilities to account for your stewardship of funding support. Once again, your financial partner(s) will be critically important in this phase to help you establish transparency and integrity in your financial management of the organizational funds that have been entrusted to you.

Some critical elements for you to establish early in the administration of the project are:

- Guidelines for expenses that can be charged to the project budget;

- Regular financial reporting;

- Auditing of the financial records for the project; and

- Measuring and reporting on the relevant metrics that will indicate success as the project moves forward.

Agree on the nature and timing of regular reports and status updates of your project. The nature of the report will change based on the unique needs and phases of the project. Include metrics of project health, financial tracking related to the budget, and discussion of any problems. Integrity in managing the project and the funds associated with the project is critical to building the reputation of the Safety–Finance Team and to being entrusted with funding for the next business case.

The final report should include an executive summary of your initiative. Address each assumption in your business case that was approved, for both quantifiable metrics as well as non-calculated financial or other metrics. Are you seeing an impact on staff retention, safety culture, or rate of healthcare-acquired conditions (HACs)? Can you include, for example, a fall reduction run chart to show improvement? Do you anticipate these changes will have impacts on recruiting costs, marketing spend, or HAC penalties next year?

Most importantly, you need to report on whether the project met its objectives in improving safety or reducing harm. These measures should have been set forth in your case. You should also include your plan for ensuring that the organization continues to realize the safety and/or financial gains achieved. This might include regular reports or audits, annual educational refreshers, on-boarding plans for new staff, or other plans for hardwiring new behaviors and processes.

Many safety initiatives are longitudinal, and can involve additional phases of investment. How do you plan to build on your success? What will you bring to the leadership team next to continue to advance patient safety for the organization? After all, you have just demonstrated you can deliver a meaningful, successful project on time and on budget!

**If your business case proposal is not approved for funding,** you have some important decisions to make. First, ask for and understand the reasons for not receiving funding. A post-action debrief with the team to review the feedback from the approval body is the first step in deciding what, if any, next steps to take. Some alternatives to discuss would be:

- Debrief with your team to evaluate and understand why your proposal may not have been funded;

- Seek alternative sources of funding;

- Engage champions more fully to strengthen your next attempt, and add new champions if helpful;

- Specifically address the feedback that you have received in your next presentation to demonstrate that you have heard and responded to suggestions for improvement;

- Propose a smaller scale project in just one department to demonstrate impact and improve chances for full funding in the next budget cycle;

- Look for an opportunity to incorporate this project in someone else's approved project (e.g., new construction or renovation, service line development); and

- Place your proposal on hold and continue to evaluate whether your request is critical, or a "nice to have" initiative. Reignite and revise your proposal as appropriate. Try again in the next budget cycle, when there may be more funds available or less competition.

# Conclusion

Safety of patients and of the workforce must be a core value of health care leaders. Collaboration between safety and financial leaders is paramount to ensuring that an organization's commitment to patient and workforce safety does not fall by the wayside but instead is at the forefront of the organization's understanding, providing a key driver of value and, most important, a commitment to freedom from harm. Through collaboration, direct linkage to organizational goals and mission, and a refined focus on data, patient safety leaders, in partnership with financial leaders, have the opportunity to advance safer, higher quality care within their organizations.

# References

1. National Patient Safety Foundation. *Free from Harm: Accelerating Patient Safety Improvement Fifteen Years after* To Err Is Human. Boston: National Patient Safety Foundation; 2015.

2. Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academies Press, Institute of Medicine; 2000.

3. The Joint Commission. The essential role of leadership in developing a safety culture. *Sentinel Event Alert*. 2017;57:1-8.

4. Corrigan JM, Wakeam E, Gandhi TK, Leape LL. Improved patient safety with value-based payment models. *HFM Magazine*. August 1, 2015. https://www.hfma.org/Content .aspx?id=32499

5. Martin LA, Neumann CW, Mountford J, Bisognano M, Nolan TW. *Increasing Efficiency and Enhancing Value in Health Care: Ways to Achieve Savings in Operating Costs per Year*. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2009. http://www.ihi.org/resources/Pages/IHIWhitePapers/ IncreasingEfficiencyEnhancingValueinHealthCareWhitePaper.aspx

6. *Value in Health Care: Current State and Future Directions*. Healthcare Financial Management Association. June 2011. http://www.hfma.org/Content.aspx?id=1126

7. American Association for Physician Leadership, Healthcare Financial Management Association. Designing the new health care system: the need for CMO and CFO collaboration. *Physician Leadership Journal*. 2015;2(4):8-17.

8. Return on Investment for Patient Safety Leader Survey. The survey was sent to NPSF and HFMA constituents to gather responses concerning the information, resources, and approaches that they believe are most useful for determining and evaluating investments related to advancing patient safety.

9. Healthcare Financial Management Association. Value-based payment readiness: HFMA research highlight. *HFMA Research Highlight*. June 2015. http://www.hfma.org/value- basedpaymentreadiness/##