

# THE IMPACT AND ROI OF JOINT COMMISSION ACCREDITATION FOR NURSING CARE CENTERS

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## Introduction

Founded in 1951, The Joint Commission is the nation's leader in accreditation, with more than 65 years of experience across the full spectrum of health organizations. The Joint Commission is a non-governmental, not-for-profit organization accrediting or certifying over 21,000 health care organizations or programs. Beginning in 1966, The Joint Commission established the Nursing Care Center Accreditation Program to encourage safe, high-quality care, treatment, or services. Joint Commission accreditation is a widely recognized standard for quality services. Today, The Joint Commission accredits more than 1,100 nursing care centers.

Since its beginning, The Joint Commission has received many comments and anecdotal data about the value of accreditation. But, to date, there has been no comprehensive study showing the value of accreditation. Additionally, there have been questions asked about return on investment (ROI), recognizing the significant investments that organizations have to make to earn and maintain accreditation. As a result, in 2022, The Joint Commission contracted with ROI Institute to conduct an evaluation of a sample of approximately 200 nursing care centers. This evaluation would collect several types of data, including impact and ROI.

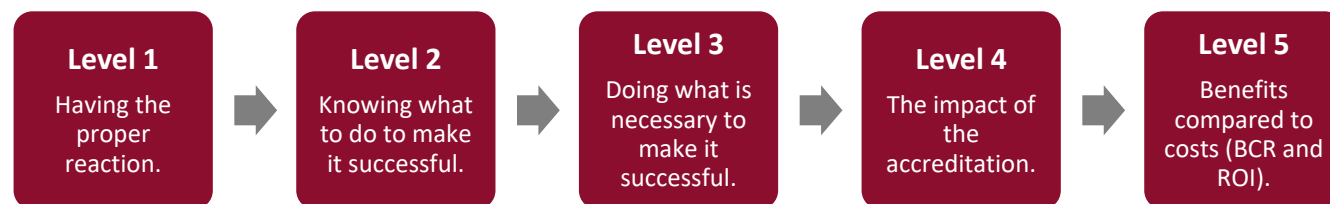
## Key Findings

After an analysis of the results from 87 nursing care centers, the ROI for the Joint Commission nursing care center accreditation was found to be 423%, which also calculated to a benefit-cost ratio of 5.23. In short, for every dollar invested, that dollar is returned along with an additional \$4.23. Key impact areas that produced this return included the implementation of improvement efforts, improved competencies of staff and supervisors, and increased revenue. Additionally, several intangible benefits were identified in this process, including regulatory compliance, third party recognition, and improved brand/image/reputation. These impressive results were delivered because the accreditation team saw the value of accreditation (reaction), developed the capability to make it work (learning), and implemented it properly (application).

In summation, the Nursing Care Center Accreditation Program offered by The Joint Commission offers a very high ROI, positively impacting both financial and non-financial aspects of the care delivery process.

## The ROI Methodology

The ROI Methodology was selected because of its history of use, particularly in the healthcare area.<sup>1</sup> This methodology has been adopted by more than 300 healthcare organizations and enjoys widespread adoption by governments in 26 countries. It is also the preferred evaluation method for the United Nations. This methodology captures five levels of outcome in a value chain as accreditation is implemented in an organization:



More detail on this methodology is contained in Appendix A.

<sup>1</sup> Buzachero, V., Phillips, J., Phillips, P. P., & Phillips, Z. L. (2013). *Measuring ROI in Healthcare: Tools and Techniques to Measure the Impact and ROI in Healthcare Improvement Projects and Programs*. McGraw-Hill.

## Data Collection and Analysis

The success of any study depends on how well the planning has been completed. This study involved a careful consideration of the sampling, data collection, and data analysis with appropriate planning for those areas.

### Sample Selection

With a target sample size of 200, the total contacted population was 862 organizations. These organizations were randomly selected. In advance, those 862 organizations were provided with a list of data needed to complete the survey focusing specifically on impact measures. It was important to provide this list ahead of the survey launch to ensure that potential respondents were aware of the data they would be required to provide and some tips on where it may be located. If it was not possible to provide the data at that time, they could opt-out. With this early introduction, participants were given two opportunities to “opt-out” of this research: first by simply not interacting with the survey, and second by choosing the option, “No, I cannot provide the data needed for this questionnaire for reasons beyond my control” at the beginning of this survey.

In total, 764 potential respondents opted out by not interacting with the survey at all. An additional 11 potential respondents opted out by answering the first question in the survey about their ability to provide the needed information.

Eighty-seven respondents opted-in through the survey – this is our sample. Of those, 29 respondents from that group provided complete data sets. This means that 58 respondents did not provide complete datasets for either accreditation benefits, costs, or both. In those cases, no benefits were assumed and, to be conservative, the accreditation costs for the full sample of 87 organizations were included.

### Collecting the Data

For this evaluation, the data collection involved interviews which helped to understand the issues that needed to be addressed and some input on the types of data needed. This provided a basis for the agenda for focus groups. The focus groups helped solidify the agenda for the detailed questionnaire that would be administered. Because data are needed for five levels of outcomes, spanning several years of history, a comprehensive questionnaire was developed and administered.

Appendix B shows the data collection plan in terms of instruments, timing, and audiences. The key challenge was to improve the response rate of the detailed questionnaire. Twenty-one techniques were used to improve the response rate for the questionnaire, and the full list can be found in Appendix B. However, four techniques in particular made a big difference. First, a top executive of The Joint Commission provided the initial study introduction to the accreditation contact and to the CEO of the accredited nursing care center. This placed an emphasis on the importance of this study. Second, having the CEO involved provided additional support. The CEO was not only made aware of the study, but was asked to provide support, encouragement, and assistance to the accreditation manager as they provided the data. Third, the organizations were promised an ROI calculation for their facility if they provided complete data. In this way, organizations could see a payoff for them for their years of accreditation. Lastly, The Joint Commission provided excellent follow up and offered resources as incentives for those who completed the survey.

### Data Analysis

To be credible for the ROI calculation, much attention had to be placed on the data analysis. This included recognizing that key issues of attribution (sorting out the effects of accreditation from other influences), converting data to money in a conservative way, including all of the costs (direct and indirect), connecting the intangibles to the study, and using the most common calculations for ROI were all important issues. Appendix B contains more information on the planning for this process.

## Results

The results are presented at five different levels ranging from reaction (Level 1) to ROI (Level 5) and are presented here in a summary form.

### Reaction Results

Level 1, reaction, measures participant reaction to the accreditation, which can often provide predictive data regarding Levels 2 and 3 (learning and application). As shown in Figure 1, the vast majority of respondents either agreed or strongly agreed with all seven reaction statements: they view the accreditation as something that makes their organization better, that is important to maintaining compliance, something they will leverage to make their organization successful, important to delivering quality care, something they would recommend to others, is a good investment, and is important to the organization's staff.

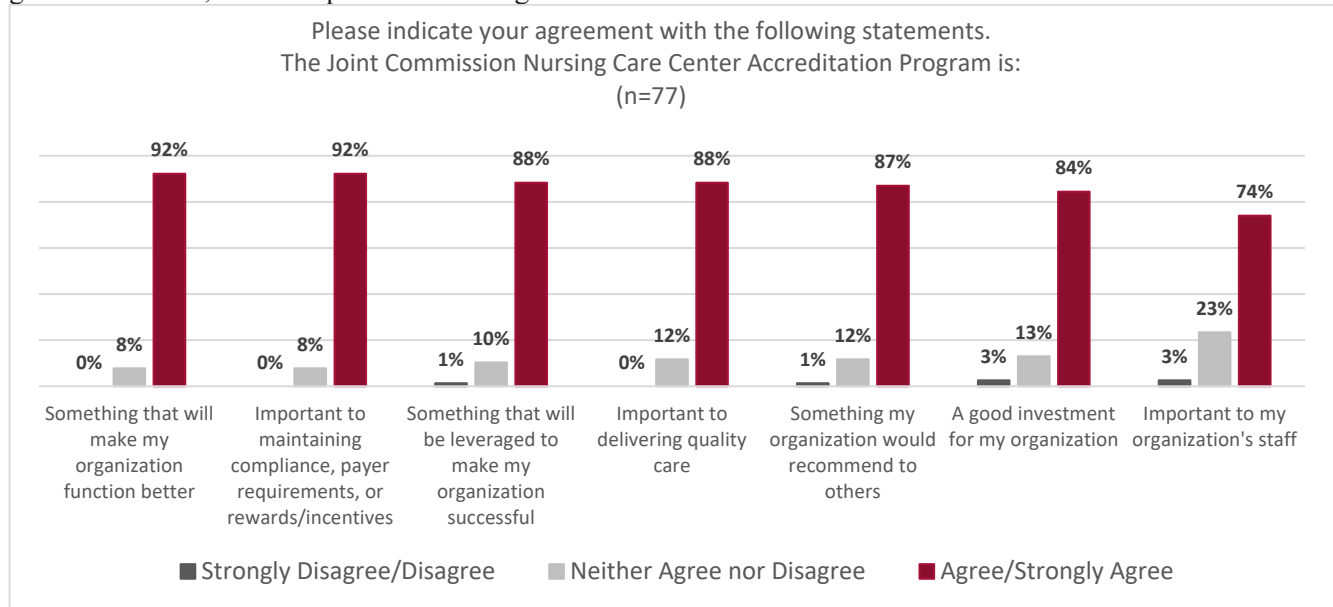


Figure 1. Reaction Data

### Learning Results

Level 2, learning, measures the extent to which what was learned through the accreditation process can be applied. The accreditation team must learn new ways, new processes, and new procedures. Learning is critical, and learning measurements ensure that the knowledge, skills, and competencies exist, with the confidence to make accreditation successful.

#### Learning the Concepts

Three specific concepts were learned through the accreditation process. As shown in Figure 2, most respondents learned the main concepts of what accreditation means to the organization, what is necessary to become accredited, and why it is necessary to become accredited.

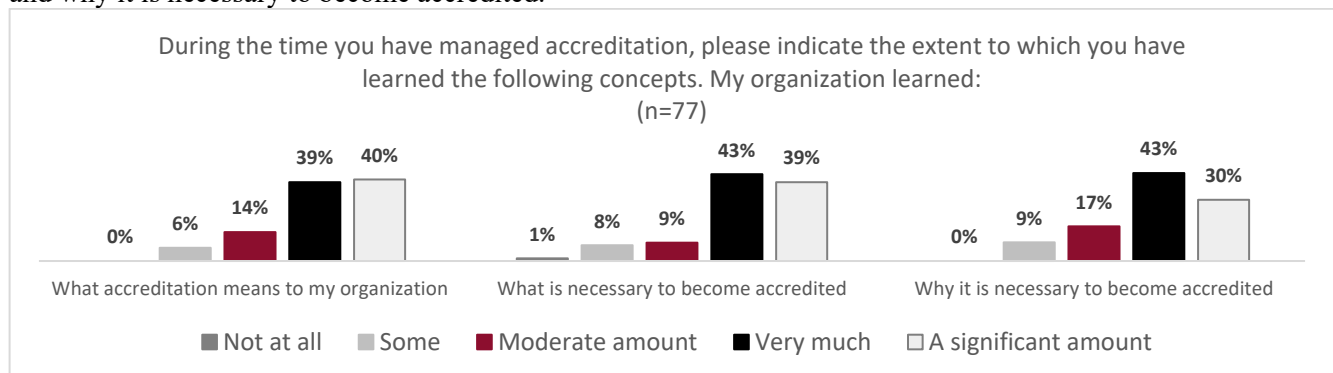


Figure 2. Learning Concepts Data

### Learning the Skills

Similarly, most of the respondents learned the primary skills related to accreditation. As shown in Figure 3, the learning was highest for three particular skills: implementing leading practices, creating impactful policies, and becoming accredited.

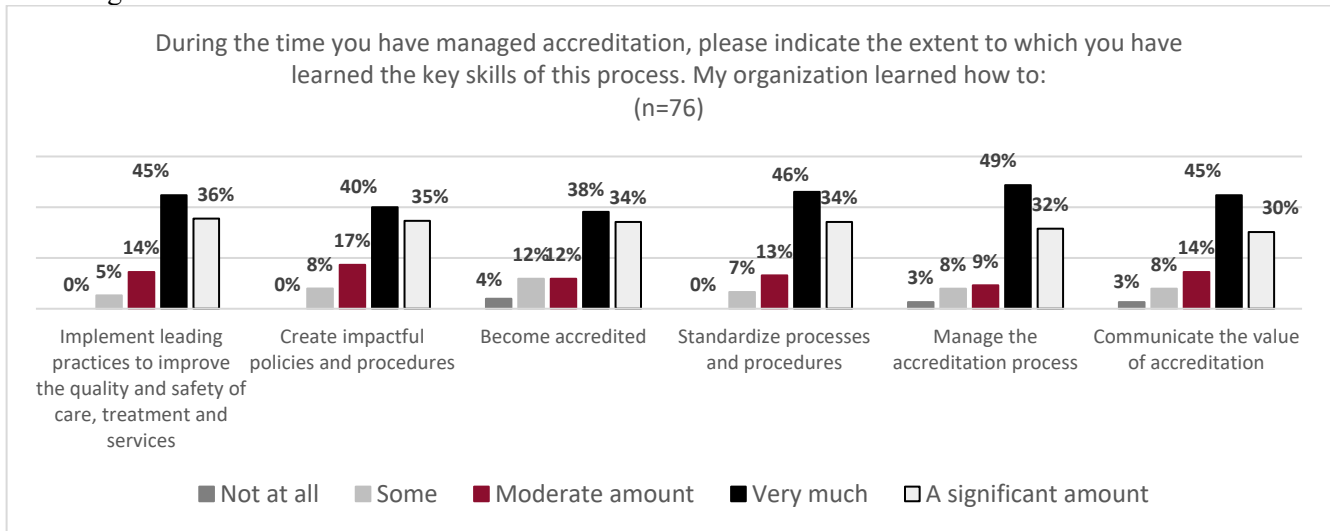


Figure 3. Learning Skills Data

## Application Results

Level 3, application, measures the extent to which knowledge, skills, and information are applied. The challenge of accreditation success is at this level. The team is taking action, following procedures and completing tasks. Application and implementation include all processes and procedures necessary to make the accreditation successful; building on what the team has learned.

### Accreditation Aspects

As presented in Figure 4, the majority of respondents had success with all aspects of accreditation. The most success was associated with survey events and reviewing the accreditation requirements. Two areas that could be improved were sustaining personal contact with The Joint Commission and comparing current performance to Joint Commission requirements.

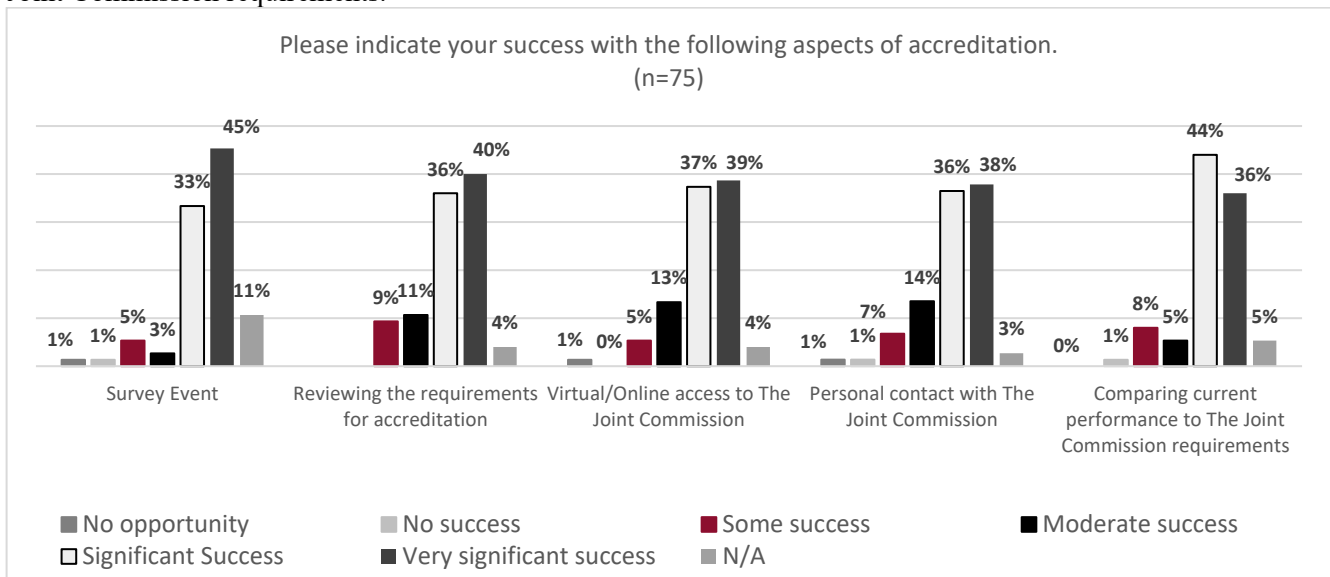


Figure 4. Application of Accreditation Aspects Data

## Communicating the Value

As shown in Figure 5, there was a degree of variation in answers to the second piece of the application data, where respondents reported on their communication of the value of the accreditation. The entities they reported communicating the value to the most were hospital and health system partners. Communicating the value of this accreditation to other groups, specifically associations and existing patients/residents, is an area that could be improved.

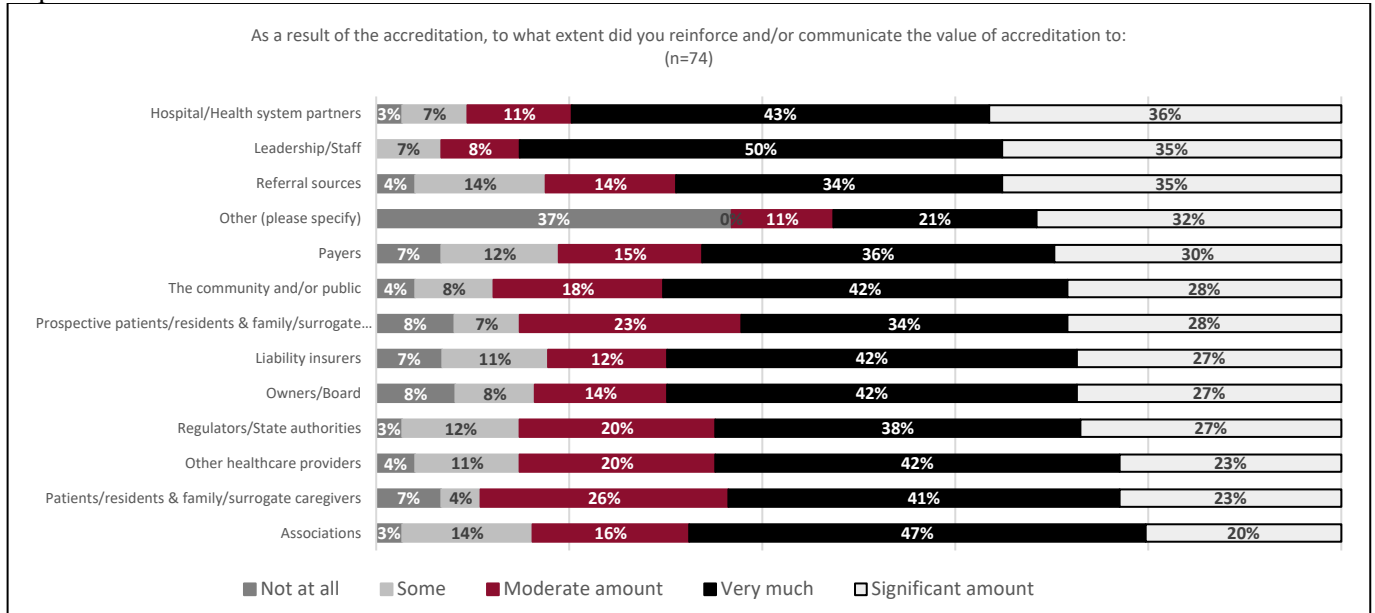


Figure 5. Application of Communicating the Value Data

## Impact Results

Level 4, impact, demonstrates the improvement in measures as a result of the application of knowledge, skills, and information. Critical to owners and investors, impact is the consequence of actions and includes increased client revenue (adjusted for margin), improved reimbursement rates, reduced liability costs, improved retention, and other measures.

There are two types of benefits: tangible and intangible. Tangible benefits are the impacts that are converted to money and become the monetary benefits for the ROI calculation. The intangible benefits are those not converted to money. Every attempt is made to convert all data to monetary values during data analysis. However, if the process for conversion appears too subjective or inaccurate, and the resulting values lose credibility in the process, then the data are listed as intangible benefits.

For the tangible data, shown in Figure 6, respondents were asked if any of these impacts in their organization were related to the nursing care center accreditation using an agreement scale. The particular impact measures that were most connected to this accreditation were: the implementation of improvement efforts, improvements in staff competency, having a competitive advantage, and improvements in operational efficiencies.

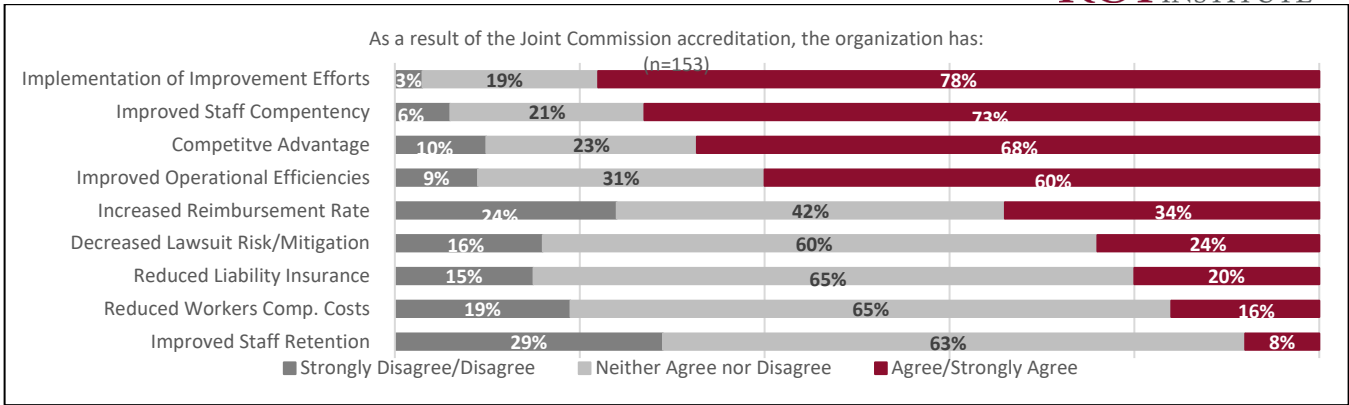


Figure 6. Tangible Impact Data

If respondents positively answered (either “Agree” or “Strongly Agree”) that a measure was related to holding this accreditation, they saw a series of follow-up questions that moved along the process model. If they selected the neutral option (“Neither Agree nor Disagree”) or negative options (either “Disagree” or “Strongly Disagree”), no follow-up questions were presented. The assumption was made that there was no impact for that measure, but the accreditation costs were still included. After that impact influence was confirmed, the actual monetary value associated with the measure was established.

### Intangibles

For some programs, intangible, nonmonetary benefits are extremely valuable and often carry as much influence as the tangible data items. As shown in Figure 7, eleven intangibles were reported by 60% or more of respondents as either significantly or very significantly influenced by accreditation as. Four particular intangibles were reportedly influenced the most by accreditation:

1. Regulatory compliance
2. Third party recognition
3. Brand, image, and reputation
4. Professionalism

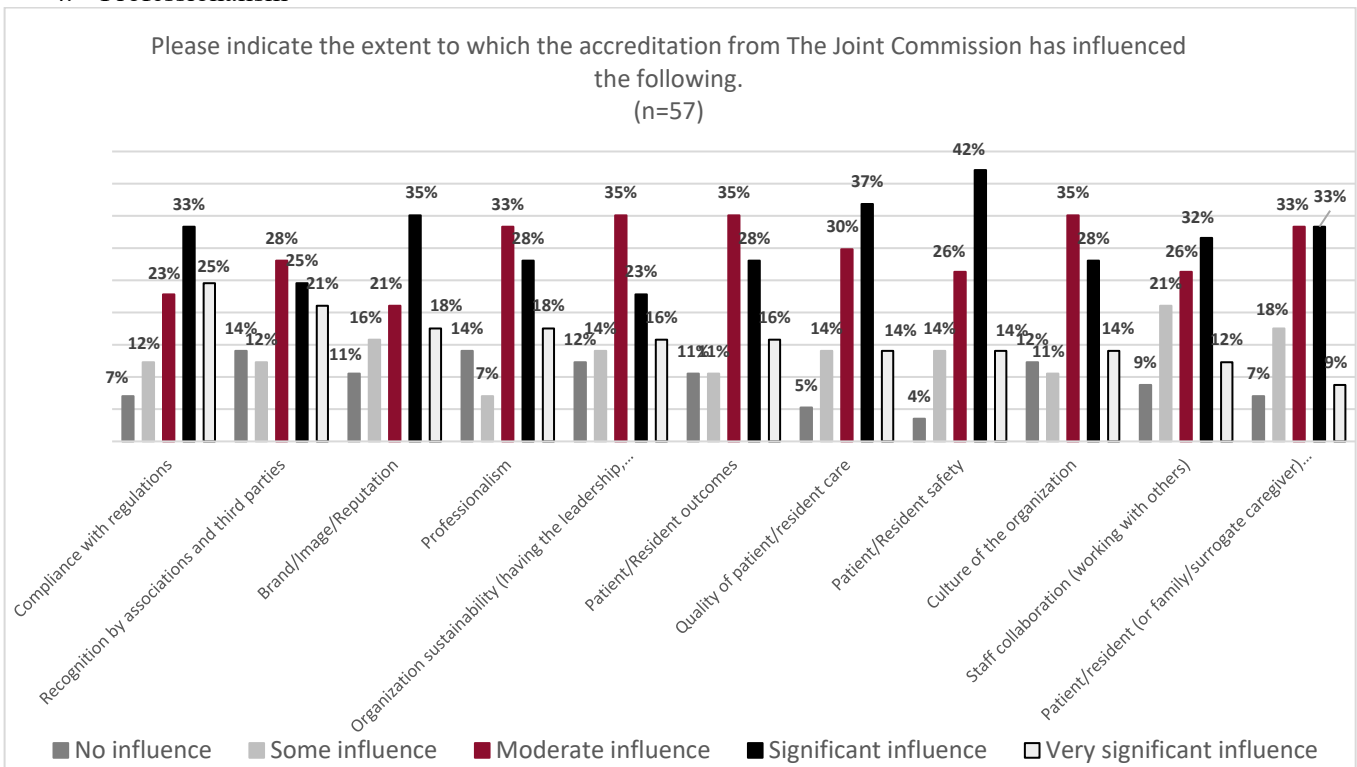


Figure 7. Intangible Impact Data



## ROI Analysis

Level 5, ROI, is the final level and shows the financial return on investment for the accreditation. The ROI formula is derived from the finance and accounting field. The ROI measure keeps the CFO and the CEO informed and satisfied, and it's the ultimate accountability. For most executives, it shows the efficient use of funds. As outlined in the ROI Methodology process model in the appendix, the path to calculating ROI includes four main steps:

1. Isolating the effects of accreditation
2. Converting data to monetary value
3. Capturing accreditation costs
4. Calculating ROI

### *Isolating the Effects of Accreditation*

For each factor, respondents were asked to share the amount of impact caused by this accreditation on various factors using a 0% to 100% scale. One of the standards of this methodology is to adjust for (remove) the error in the estimate, which is their confidence in the estimation. The error in the respondents' estimates was adjusted also using a 0 to 100% scale. Essentially, 100% confidence means certainty with no error while 90% confidence indicates that there is 10% error. For example, if a respondent attributed 30% of the impact to accreditation and was 80% confident in the allocation (20% error), the two numbers were multiplied and the new allocation was established (24%).

### *Converting Data to Monetary Value*

To calculate the ROI, impact data had to be converted to monetary values and compared with program costs. This was done using standard values, internal experts, actual direct cost savings, internal records, and external databases. Below is an example showing the follow-up questions for one measure addressing decreased or mitigated risk of lawsuits:

1. Since you have been accredited, please estimate the average annual cost savings through risk reduction and mitigation of lawsuits (if any; please leave this box blank if there are no cost savings).
2. What percentage of this cost avoidance was caused by earning the accreditation?
3. What is your confidence in that percentage on a scale from 0% to 100%?

As shown in Table 1, three measures in particular were associated with large benefits: competency improvements for both direct care staff and their supervisors and reduced turnover. The annual benefits were then multiplied by the number of years the organization had been accredited to provide the final values. The average number of years of accreditation for those providing data is 11 years. The benefits in Table 1 are divided by this number to arrive at an average annual amount of benefit for this sample. The average amount per organization is also included.

Fourteen respondents provided explanations of the "Other" benefits that have been realized at their organizations. These explanations included improvements in team building, increased staff knowledge, clinical improvements, and better medication safety. Appendix E provides more detail on how competencies and turnover data were collected and converted to money.

<b>Benefit</b>	<b>Total Amount for Sample</b>	<b>Average Annual Amount for Sample</b>	<b>Average Annual Amount Per Organization</b>
<b>Competency Improvement (Direct Care Staff)</b>	\$582,602,364	\$52,963,851	\$2,648,193
<b>Competency Improvement (Supervisors)</b>	\$35,673,505	\$3,243,046	\$162,152
<b>Reduction in Turnover</b>	\$7,857,138	\$714,285	\$357,143
<b>Improvement Efforts</b>	\$4,313,970	\$392,179	\$78,436
<b>Other</b>	\$3,564,085	\$324,008	\$81,002
<b>Increase in Reimbursement Rate</b>	\$2,150,440	\$195,495	\$27,928
<b>Improved Operational Efficiencies</b>	\$562,139	\$51,104	\$12,776
<b>Reduction in Liability Costs</b>	\$103,200	\$9,382	\$4,691

Benefit	Total Amount for Sample	Average Annual Amount for Sample	Average Annual Amount Per Organization
Increase in Total Client Revenue	\$93,305	\$8,482	\$1,414
Costs Saved (Risk Reduction/Mitigation, Lawsuits)	\$8,580	\$780	\$780
<b>Total</b>	<b>\$636,928,728</b>	\$57,902,612	\$3,374,514

Table 1. Conversion to Monetary Values

### Capturing Accreditation Costs

An important part of the ROI equation is the calculation of program costs. These costs included annual fees, the triennial survey fees, dedicated staff, materials, supplies, facilities modifications, etc. As shown in Table 2, the largest costs were associated with dedicated accreditation staffing and facilities modification. The annual costs were multiplied by the number of years the organization had been accredited to arrive at the final costs. Of the total sample, 29 did not provide costs. In those cases, the average cost of the other responses were included.

Cost	Total Amount for Sample	Average Annual Amount for Sample	Average Annual Amount Per Organization
Accreditation Team	\$72,554,676	\$6,595,880	\$75,815
Facilities Modification	\$24,555,900	\$2,232,355	\$25,659
Dedicated Accreditation Person	\$15,780,276	\$1,434,571	\$16,489
External Consulting	\$2,861,904	\$260,173	\$2,990
Annual Fees	\$2,636,433	\$239,676	\$2,755
External Education and Training	\$1,656,000	\$150,545	\$1,730
Program Materials and Supplies	\$1,578,675	\$143,516	\$1,650
Survey Fees	\$1,358,667	\$123,515	\$1,420
Purchase, Maintenance and Support of IT Equipment and Software	\$759,750	\$69,068	\$794
Other	\$369,000	\$33,545	\$386
Internal Employee Travel, Lodging, Meals	\$63,075	\$5,734	\$66
<b>Total</b>	<b>\$121,885,923</b>	\$11,080,538	\$127,363

Table 2. Accreditation Costs

### Calculating ROI

As mentioned earlier, the return on investment is needed, and this can be measured in two very common ways. One is the benefit-cost ratio, which is the monetary benefits from the program divided by the program's cost.

$$BCR = \frac{\text{Benefits}}{\text{Costs}} = \frac{\$636,928,728}{\$121,885,923} = 5.23$$

For every dollar invested, \$5.23 in benefits were returned.

Next, there's the ROI, expressed as a percentage, which is the net benefits divided by the cost times 100. The net benefits are the monetary benefits minus the project costs. Getting to the impact is one thing but seeing how this could be achieved with less cost is another: the higher the ROI, the more efficient the use of the funds.

$$ROI = \frac{\text{Benefits} - \text{Cost}}{\text{Cost}} \times 100 = \frac{\$636,928,728 - \$121,885,923}{\$121,885,923} \times 100 = 423\%$$

**In simple terms, for every dollar invested, that dollar is returned along with an additional \$4.23.**

## Credibility of the Analysis

The credibility of the data rests on 11 major issues:

1. The information for the analysis was provided directly by the organizations. They had no reason to be biased in their input.
2. Some of the impact data were taken directly from the records. Other data were estimated.
3. When estimates are taken from a large group, some may overstate and others may understate data. There is “wisdom in the crowds.”<sup>2,3</sup>
4. The data collection process was conservative, with the assumption that an unresponsive individual had realized no improvement. This concept—no data, no improvement—is ultraconservative in regard to data collection.
5. If respondents were not sure that accreditation influenced a particular impact measure, no impact was assumed.
6. The respondents did not assign complete credit to this accreditation. They isolated only a portion of the data that should be credited directly to this accreditation.
7. The data was adjusted for the potential error of the above estimate.
8. The costs of the accreditation were fully loaded. All direct and indirect costs were included, including the time away from other work to focus on the accreditation. All costs for the sample of 180 were included.
9. The data revealed a balanced profile of success. Very favorable reaction, learning, and application data were presented along with business impact, ROI, and intangibles.
10. The organizations involved were randomly selected, reducing the possibility of selection bias.
11. The intangibles have much value but are not included in the ROI calculation.

Collectively, these rules and standards make a convincing case for the value of this accreditation. It is actually an understatement of the results.

### For More Information

For questions about the study, the data, the methodology, and the results, contact Kylie McLeod at [kylie@roiinstitute.net](mailto:kylie@roiinstitute.net). Additionally, please see:

- Appendix A for more information on The ROI Methodology.
- Appendix B for details on the planning of the evaluation.
- Appendix C for more information on the purpose of this type of evaluation.
- Appendix D for an explanation of the challenges associated with this type of study.
- Appendix E for examples of how the monetary value of two benefits – retention and staff competencies – were calculated.

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<sup>2</sup> Surowiecki, J. (2005). *The Wisdom of Crowds*. Anchor Books.

<sup>3</sup> Here is a link to a four-minute video on the concept of the wisdom of crowds, an example of the power of estimates: <https://www.youtube.com/watch?v=iOucwX7Z1HU>.

## Appendix A: ROI Methodology

The methodology used in this study has been used consistently and routinely by thousands of organizations worldwide over the past 30 years. In some fields and organizations, it is more prominent than others. Much has been learned about the success of this methodology and the benefits it can bring to organizations.

The ROI Methodology is the most recognized approach to ROI evaluation. This methodology has been implemented in private and government organizations throughout the United States and more than 70 countries. At least 26 federal governments around the globe have adopted this methodology. Many nonprofits and NGOs have implemented this methodology, including the United Nations, which adopted this evaluation system with a UN General Assembly Resolution in 2008. Over 300 healthcare organizations and 150 universities use this methodology. The ROI Methodology provides organizations a process that can cross organizational boundaries, linking programs, processes, and initiatives to bottom-line measures.

The ROI Methodology has sustained its position as the leading approach to program evaluation because it:

1. Reports a balanced set of measures.
2. Follows a logical, step-by-step process.
3. Adheres to standards and a philosophy of maintaining a conservative approach and credible outcomes.
4. Places focus on process improvement.

Three components help ensure data captured through the process are credible, reliable, and valuable to those who apply it. Those components are the framework, process model, and standards.

### Framework

The framework is fundamental to the research methodology. It represents a method that allows organizations to logically categorize data so that a theory of change is evident as participants engage in programs, courses, and processes.

Table 1 presents the ROI Methodology framework of data. Level 0 represents the investment in programs, courses, and other activities. Level 1, Reaction, represents outcomes from the participant perspective. Measures in this level indicate that the content presented is relevant and essential and that participants are committed to applying it. They may also indicate satisfaction with the delivery of that content and how improvements can be made in the delivery. Level 2, Learning, categorizes learning outcomes and can be measured by test scores, demonstrations, simulations, observations, case studies, and other less formal processes.

Level	Measurement Focus
<b>1. Reaction and Planned Activities</b>	Measures participant satisfaction with the program and captures planned action.
<b>2. Learning</b>	Measures changes in knowledge and skills needed to make the program successful.
<b>3. Application and Implementation</b>	Measures changes in behavior and specific actions to make the program successful.
<b>4. Business Impact</b>	Measures changes in business impact measures.
<b>5. Return on Investment (ROI)</b>	Compares the monetary benefits to the costs.

*Table 1. Five-Level Evaluation Framework*

Level 3, Application, data represent actual use of knowledge, skill, and information gained through a program. Level 4, Impact, data represent the consequence of that application. These measures may indicate improvement in output, quality, cost, or time as well as improvement in stakeholder satisfaction, innovation, or work habits.

Level 5, Return on Investment (ROI), compares the monetary benefits of improving Level 4 measures to the cost of the program, course, or process in question. The ROI formula is a standard financial equation developed through

finance and economics, as shown in Figure 1. The most fundamental indicators of return on investment are the benefit-cost ratio (BCR) and the ROI percentage. These metrics help evaluate any program.

$$BCR = \frac{\text{Benefits}}{\text{Costs}}$$

$$ROI = \frac{\text{Benefits} - \text{Cost}}{\text{Cost}} \times 100$$

Figure 1. ROI Formulas

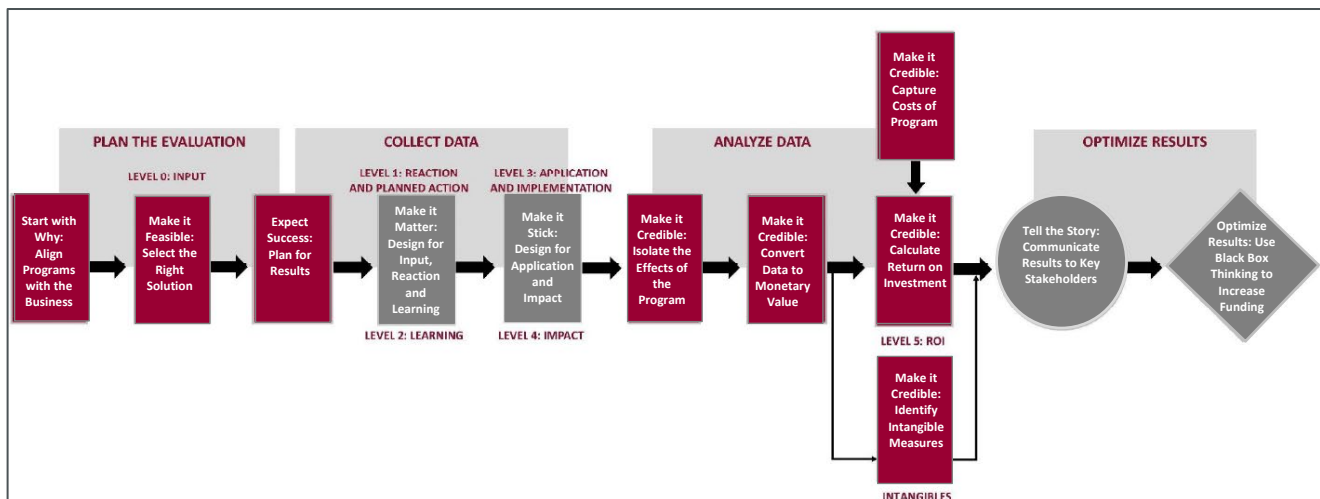
The concepts of cost-benefit analysis and ROI have been used to show the value of programs, processes, and initiatives for centuries. Cost-benefit analysis is grounded in welfare economics and public finance; ROI in business accounting and finance. Together the two are the ultimate measures of the contributions of programs, processes, and initiatives. But alone, they are insufficient. While cost-benefit analysis and ROI report the financial success of programs, they omit critical evidence as to why the financial impact is as it is. A complete story of program success can be presented by balancing financial impact with measures that address individual perspectives and the systems and processes that support the transfer of learning.

## Process Model

The ROI process integrates design thinking principles into four process stages to ensure the appropriate data are collected from the proper sources at the right time. As shown in Figure 2, the process consists of sequential, logical steps that lead to data categorized by the five levels of outcome data, using design thinking principles to deliver business results. Evaluating a program begins with asking why, then aligning programs to business needs, and concluding with optimizing the results.

The ROI Methodology process model, shown in Figure 2, provides step-by-step guidance for the researcher. This process simplifies what is otherwise a complex process by moving sequentially from evaluation planning to data collection, to data analysis, and, lastly, reporting and data optimization. The ROI Methodology begins with the foundational blocks of clarifying the organization, community, and / or individual needs that align with the data framework. Further analysis helps determine the best solution for those needs. Program objectives are developed, which, ideally, serve as the blueprint for program or project design and evaluation.

The evaluation plan can be developed and approved when the foundation has been laid. After the planning is complete, the data collection for the evaluation begins. Data collection occurs at various points in the program’s lifecycle (e.g., before, during, and after). With data in hand, the evaluation proceeds to data analysis. The data analysis steps are essential because they allow the researcher to determine whether the changes in key business metrics are attributable to the program or project under investigation. The process concludes with data reporting and optimization. The last step in the process, optimization, is one of the most critical in that it comprises the execution of strategies to improve programs and projects based on results.



## Standards and Guiding Principles

Guiding Principles, or standards, are used throughout the evaluation lifecycle and provide an additional level of standardization leading to credible, reliable output. The ROI Methodology 12 Guiding Principles were used to guide the evaluation process. Table 2 presents the Guiding Principles that support the ROI Methodology.

1.	When conducting a higher-level evaluation, collect data at lower levels.
2.	When planning a higher-level evaluation, the previous level of evaluation is not required to be comprehensive.
3.	When collecting and analyzing data, use only the most credible sources.
4.	When analyzing data, select the most conservative alternative for calculations.
5.	Use at least one method to isolate the effects of a project.
6.	If no improvement data are available for a population or from a specific source, assume that little or no improvement has occurred.
7.	Adjust estimates of improvement for potential errors of estimation.
8.	Avoid use of extreme data items and unsupported claims when calculating ROI.
9.	Use only the first year of annual benefits in ROI analysis of short-term solutions.
10.	Fully load all costs of a solution, project, or program when analyzing ROI.
11.	Intangible measures are defined as measures that are purposely not converted to monetary values.
12.	Communicate the results of ROI Methodology to all key stakeholders.

Table 2. ROI Methodology Guiding Principles



## Appendix B: Evaluation Planning

This phase involves several procedures, including understanding the purpose of the evaluation, confirming the feasibility of the planned approach, planning data collection and analysis, and outlining the project schedule. The evaluation objectives should be considered before developing the planning document because the purposes will often determine the scope of the evaluation, the types of instruments used, and the type of data collected. As with any project, understanding the purpose of the evaluation will give it focus and help gain support from others.

Three simple planning documents are developed next: the Data Collection Plan, the ROI Analysis Plan, and the Project Plan. These documents should be completed during evaluation planning and before the evaluation phase is implemented. Appropriate upfront attention will save time later when data are collected.

### Data Collection Plan

The Data Collection Plan provides a tool to capture the principal elements and issues regarding data collection. Broad objectives are appropriate for planning. Specific, detailed objectives are developed later before the program is designed. Entries in the Measures column define the particular measure for each objective; entries in the Method/Instruments column describe the technique used to collect the data; in the Sources column, the source of the data is identified; the Timing column indicates when the data are collected; and the Responsibilities column identifies who will collect the data.

Data collection is central to the ROI Methodology. Two steps are involved in verifying success at various levels: measures success at Levels 1 (reaction) and 2 (learning); and then measure success at Levels 3 (application) and 4 (impact). Both hard data (representing output, quality, cost, and time) and soft data (including satisfaction, engagement, and image) are collected.

The critical challenge in data collection is to select the method or methods appropriate for the setting and the specific program within the time and budget constraints of the organization. Due to the nature of the Nursing Care Center Accreditation Program, a three-pronged approach was applied that involved interviews, focus groups, and a detailed questionnaire.

Seventeen individuals participated in a series of interviews and focus groups in the summer of 2022. These interviews and focus groups framed the survey questions and provided helpful information regarding the barriers and enablers associated with earning and maintaining this accreditation. ROI Institute hosted the interviews and focus groups independently. The interviews focused primarily on gathering participant reactions to the accreditation overall and learning how it has positively impacted their organizations. The focus groups drilled down into the specific measures that participants felt could be impacted by the accreditation.

Lastly, a detailed questionnaire was distributed by ROI Institute using the Qualtrics survey tool. The questionnaire content was based on information learned from the interviews and focus groups. It formally addressed participant reaction to the accreditation, what was learned through the accreditation process, how learning was applied to earning and maintaining accreditation, and the impact associated with those achievements. The Data Collection Plan is available upon request.

### Techniques to Improve Response Rate

1. Design for simplicity.
2. Make it look professional and attractive.
3. Consider the appropriate medium for easy response (Qualtrics).
4. Personalize the process.
5. Have a Joint Commission officer sign an advanced introductory letter.
6. To secure support for completing the survey, send an introductory letter to the CEO of the organization being surveyed.
7. Estimate the time to complete the questionnaire.
8. Communicate the purpose and importance of the study.
9. Identify who will see the results.
10. Let the target audience know that they are part of a sample.
11. Recognize the expertise of participants.
12. Show the timing of the planned steps.

13. Use the local support (contact at The Joint Commission and / or organizational executive).
14. Collect data confidentially (one person will have access to identifying information).
15. Use two follow-up reminders.
16. Provide an update to create incentive to respond.
17. Send a copy of the results to the participants.
18. Provide an incentive (or chance of an incentive).
19. Have third party collect and analyze the data.
20. Communicate the time limit for submitting responses.
21. Provide each organization with an individual ROI analysis, if desired.

## ROI Analysis Plan

The ROI Analysis Plan captures information on critical items that are necessary to develop the actual ROI calculation. In the first column, significant data items are listed. However, these are usually Level 4 impact data from the data collection plan. These items are used in the ROI analysis and calculation.

The method employed to isolate the project's effects is listed next to each data item in the second column. The method of converting data to monetary values is included in the third column for those impact measures that will be converted to money. The cost categories that will be captured for the project are outlined in the next column. Typically, the cost categories will be consistent from one project to another. The intangible benefits expected from the program are outlined in the fifth column. This list is generated from discussions about the program with sponsors and subject-matter experts. Communication targets are outlined in the sixth column. Finally, other issues or events that might influence program implementation and its outputs are highlighted in the last column. Typical items include the capability of participants, the degree of access to data sources, and unique data analysis issues.

When combined with the Data Collection Plan, the ROI Analysis Plan provides detailed information for calculating the ROI while explaining how the evaluation will develop from beginning to end. The ROI Analysis Plan is available upon request.



## Appendix C: Purpose of the Evaluation

Four main goals form the basis and rationale for engaging a comprehensive evaluation study:

### Know the Impact of Accreditation

Impact data are powerful and include increased patient revenue, improved reimbursement rates, reduction in the cost of insurance, improved staff retention, and enhanced staff competencies, among others. Impacts are the key outcomes desired by individuals who support and sponsor accreditation. Leaders in healthcare organizations want to know what impact accreditation is having on their business, patients, staff, and enterprise sustainability.

### Understand the ROI of Accreditation

The ultimate level of accountability is a comparison of costs to monetary benefits for a program, project, or regulation. Created by governments, benefit-cost analysis is measured by a benefit-cost ratio (BCR). ROI, expressed as a percentage, is a business term. These two measures are the most common measures to show that accreditation is worth it.

Organizations invest vast amounts of money, time, and effort – and people – into both earning accreditation and then maintaining their accreditation status. The heavy investment in accreditation warrants this type of evaluation. Knowing the ROI value of the accreditation reinforces the justification for that investment.

### Show How Success is Achieved

When success is achieved, it is helpful to understand what caused the success. If success is disappointing, it is helpful to understand why it did not achieve the desired level of success. This requires examining the accreditation process in a value chain. An acceptable ROI is possible only if the appropriate impact has occurred. The level of impact will not be there unless the accreditation is implemented properly. It will not be implemented properly unless the individuals involved in the process know what to do to make it successful. Lastly, the success will not occur unless the people involved see value in the accreditation. This study shows how this chain of value has unfolded with these organizations.

### Provide Information to Help Organizations Seeking an Accreditation Process

The information from this evaluation will help The Joint Commission genuinely understand the value of this accreditation. This understanding will allow The Joint Commission to assist current customers better and inform potential future customers of the many benefits and values associated with this accreditation. Potential customers will have a basis to compare with other certifications, using five levels of outcomes.

## Appendix D: Challenges for this Type of Study

As expected, there are many challenges to make this evaluation credible and acceptable. With the proper planning, a tremendous amount of teamwork, and with much persuasion, appropriate data can be collected. Here are some of the major challenges facing this task:

### Data Collection

The data need for this study had to be provided voluntarily from the organizations involved. Attempting to audit an organization to collect this information would be next to impossible. Some participating organizations in this study have been accredited for 40 years. Imagine the difficulty in capturing the benefits that have been generated over the 40-year period and the costs accumulated during this period of time. This challenge would necessitate using estimates and a willingness to provide them in an unbiased way.

### Credibility

When estimates are made, it is important for the data to be credible. This requires developing confidence, confidentiality, and an understanding with the participants. Additionally, the data should be provided by the most credible person. Still, adjustments have to be made to take out the error in estimates. Other additional adjustments must be made to make sure the data is credible.

### Conservative Assumptions

When decisions are made about how to analyze and process the data, conservative assumptions must be used. When there are competing options, the option taken is the one that lowers the value of the outcome, essentially lowering the ROI. When impact data are missing, no value is assumed. This is a requirement to have results accepted.

### Timing

The timing for data collection was not ideal as it was conducted on the heels of a global pandemic when most healthcare organizations were experiencing an extremely high turnover and highly stressed staff. Taking time to complete a detailed questionnaire was not something that they necessarily wanted to do. In some cases, they simply could not do it.

## Appendix E: Monetary Value of Retention and Competencies

### Monetary Value of Retention

The data was collected at a time when turnover was quite high in these organizations. For someone thinking about the extent to which the accreditation process influenced retention, it was sometimes difficult for them to see the connection when they were facing record-high employee turnover. However, the consensus among the evaluation team is that it does impact retention, and that became apparent in the interviews and focus groups.

To try to collect the value from those respondents who selected agree or strongly agree, a series of additional questions were provided. In the case of retention, 62% of respondents were neutral. While it is possible that some monetary value could have been gathered from those respondents, it was important to be conservative and credible. The assumption was made that there was no impact and no additional data related to that measure was collected. Of the 24 respondents who indicated that retention had been impacted by the accreditation, only seven actually provided data. They were subsequently asked:

1. What percentage of turnover reduction would you attribute to accreditation? For example, if your current turnover rate is 25% and you think that it would be 30% without accreditation, the amount attributed to the accreditation is 5%.
2. What is your confidence in that percentage on a scale from 0% to 100%?
3. What is the average annual salary for the staff in question?
4. What is the average annual number of employees in your organization since you have been accredited?

With these questions, knowing the number of employees (if that was not provided, an average from the entire sample was used), turnover could be calculated. To find a credible value for the cost of turnover, several resources were consulted and a range from 75% to 125% of annual pay for the cost of turnover was located.<sup>4</sup> To be conservative, only 75% of that pay was attributed. The average pay was provided by the respondents, and if that number was omitted, the average for the sample was used. This yielded a monetary value for the cost of turnover which was then multiplied by the number of years the organization had been accredited. While only two respondents provided data, it still resulted in \$7,857,138, primarily because turnover is so high and expensive, and some of the organizations have been accredited for long periods of time. This value is extremely conservative because it can be assumed that more than two nursing care centers benefited from less turnover because of accreditation.

### Monetary Value of Competencies

Staff competencies were identified by The Joint Commission staff and from the interviews and focus groups as a potential impact of accreditation. In short, the accreditation process made staff more competent. Respondents were asked a series of question if they indicated that the measure was impacted by accreditation:

1. Since you have been accredited, please estimate how much direct care staff and supervisor competencies improved on average annually (if at all).
2. What percentage of this improvement was caused by earning the accreditation?
3. What is your confidence in that percentage on a scale from 0% to 100%?
4. What is the average annual salary for direct Care Staff and direct care staff supervisors involved?

Given percent of improvement, a process called utility analysis was used. This is an accepted process in the program evaluation field that has its origin in the US Naval Ordinance.<sup>5, 6</sup> This suggests that value is delivered when

<sup>4</sup> Phillips, P. P., Phillips, J. J., Paone, G., & Gaudet, C. H. (2019). *Value for Money: How to Show the Value for Money for All Types of Projects and Programs in Governments, Nongovernmental Organizations, Nonprofits, and Businesses*. John Wiley & Sons, Inc.

<sup>5</sup> Schneider, H., and C.C. Wright (1990). *Return on Training Investment: Hard Measures for Soft Subjects*. *Performance & Instructions*, 29(2), 28-35.

<sup>6</sup> Wright C.C. (1990) *Research Report: Return on Investment and Learning Transfer*. Unpublished report prepared for U.S. Naval Ordnance Station, Indian Head, MD.

competencies are improved, but no increase in pay is provided when those competencies have improved. For example, if an organization indicates that its staff are 10% more competent, they have added that much more value to the organization. For a single employee with a salary of \$50,000, they have essentially added 10% (or \$5,000) more in value to the organization with no salary increase all because of the accreditation.

With the salaries and numbers of employees provided, the calculation was made and spread over the years of accreditation. Surprisingly, this became the largest monetary value. It underscores the importance of the accreditation for competency improvement. It also so shows that, over time, improvements can really add up to be tremendous value. Seventy-three percent of respondents reported that the accreditation improved staff competency (i.e., 49 organizations). Of the 49 respondents, only 20 actually provided value here. Even though this number is high, it is probably even larger overall. It was assumed that 38 (87 – 49) had no value.