

Case Report IHI

# Saving 100,000 Lives

Lessons from the Institute of Health Care Improvement

Jorrit de Jong  
Sanderijn Cels

lectoraat innovatie •  
*publieke sector*

“Some Is Not a Number. Soon Is Not a Time. The number is 100,000. The time is NOW. The goal is achievable, but we need your help. Please be part of the 100,000 Lives Campaign.”

- *Opening text on website IHI*

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## **Saving 100,000 Lives**

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Jorrit de Jong

Sanderijn Cels

Lectoraat Innovatie, Hogeschool Arnhem-Nijmegen

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## Executive Summary

### IHI and the Campaign

This case-study examines the success and challenges of the 'Saving 100,000 Lives Campaign'. The Institute for Health Care Improvement, an independent not-for-profit organization in Massachusetts (USA), led by Don Berwick, launched this campaign in 2006. IHI was dedicated to save lives by helping hospitals to implement six proven interventions that could prevent unnecessary deaths, such as the deployment of rapid response teams at the first sign of patient decline. The results of IHI's campaign were remarkable. Over 3,100 hospitals enrolled and an estimated 122,300 lives were saved during the period of the campaign (18 months). The campaign was a voluntary initiative; no one was forced to cooperate. This case-study examines how IHI became successful and attempts to draw more general lessons about how this high impact effort changed a large system.

### Results

The IHI had set four goals at the beginning: preventing unnecessary deaths of patients, enrolment of participants, building a network and raising awareness. In all four areas, the campaign was successful, although there was controversy about the exact number of saved lives that could be contributed to the campaign. The ultimate aim of IHI was the execution of all six interventions by the participants. However, this happened in pockets; results varied among hospitals. IHI primarily worked through other organizations. It set up local field offices, called 'nodes', that coordinated all local activities. IHI linked the participants to each other – those who wanted to teach on basis of their expertise and experience and those who wanted to learn. IHI provided information, training, tools and other kinds of support to enable participants to work together.

### Success Factors

Scholars and IHI-interviewees distinguish many factors that contributed to the success. The general factors that they mention include: a pre-existing consensus on the problem and a trend towards improvement of quality in health care; IHI was flexible and quick in responding to participants' needs; the organization used peer pressure and support fruitfully; IHI was seen as a neutral third party organization; interim results were used as encouragement; IHI could tap into existing energy and functioned as a catalyst.

Additional factors that explain IHI's ability to overcome (potential) obstacles were: IHI made it easy to innovate (focus) and simple to enroll; participants were given a sense of ownership; enrolment was voluntary and the positive spirit of volunteerism made the whole operation vital; there was no painful exposure of death rates in individual hospitals; the campaign message was framed in a neutral way (deaths were the result of system failures, not of individual flaws); IHI could convince doctors with evidence based interventions.

### Conclusion

Much of what constituted IHI's success seems dependent on particular circumstances and conditions: timing, the right people, and coincidental connections between fields of expertise. However, most of the factors did not fall into play, but were brought into play. One can safely assert that the true power of IHI was its ability to recognize the difficulties of change, as well as its assets as a credible player.

On top of that, IHI's allegiance to genuine organizational learning made them more prone to unusual ideas, more amenable to adjusting strategies and more effective at gaining ground. The particular approach of the campaign may or may not be replicable in other contexts, but the underlying philosophy and strategy of change bears relevance to any organization committed to system-wide changes in health care and beyond.

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# Chapter 1 Innovation Saves Lives

## The innovation challenge

Everyone who has worked in or on health care systems knows that change is hard. The medical sector is a complex and high risk environment, with busy people working hard to do the best with the resources that they have. The stakes are high, both in medical and financial terms. The business itself is complex, both in professional and managerial terms. All of this presents difficulties to change the system. But when the system fails to produce the results that medical professionals intend to deliver and that patients and their families expect, change is no longer a difficulty – it becomes a necessity.

The innovation challenge in the medical sector lies in part in communicating the necessity of change and unleashing the process of improvement and involvement. This case-study describes how an American non-profit organization succeeded in unleashing that process on a large scale. The case-study attempts to examine some of the critical success factors that both insiders and outsiders have identified. It does not in any way make claims about generalizability of the lessons learnt. The primary objective of this case-study is to describe the campaign to save 100,000 lives as an innovative practice that may inspire both practitioners and scholars to make progress in the challenge to improve health care.

## Campaigning for change

In 2004, circa 98,000 patients were dying in US hospitals per year.<sup>1</sup> Not because they were fatally ill, but because of the poor quality of the treatment they received. The deaths were not only the direct result of fatal mistakes by specific professionals; causes were diverse, such as the emergence of infections after surgery because medication was administered too late, or the lack of authority of nurses to call in rapid response teams when a patient showed sudden signs of major decline.<sup>2</sup> IHI, the Institute for Healthcare Improvement, an independent not-for-profit organization from the state of Massachusetts, decided to start a voluntary campaign to address this problem. Its 'Saving 100,000 Lives Campaign' was a

nationwide initiative to significantly reduce morbidity and mortality in American health care (2004-2006).

The IHI campaign was a remarkable initiative in comparison to other efforts to improve the quality of healthcare. Quality improvement is often pursued by other means, such as financial regulations for hospitals or setting standards for care. The US government, for example, pursues improvement in the quality of health care by altering the financial regime of the government run, nation wide health insurance program 'Medicare' through which the elderly are covered. In 2009, the year in which this case study was conducted, the federal government announced plans to impose penalties on hospitals with patients who had to return within 30 days after discharge. This should work as a stimulus to hospitals to reduce the number of complications due to too early discharge.<sup>3</sup> Compared to such initiatives to improve hospital care, the IHI campaign stands out as an unusual attempt to achieve just the same.

## A note on method

This case-study is part of a larger research project, aimed at the identification of successful innovations in health care. We have chosen this particular case because it met three main criteria: 1) it is a novel approach towards improvement of health care systems, 2) there is plenty of evidence of actual success, 3) we had access to sources that could help us understand what factors have contributed to the success of the innovation. We have conducted this single case-study through literature study and personal interviews. We have made use of the open archive of IHI, as well as scholarly and newspaper articles that have reported and analyzed the 'Saving 100,000 lives Campaign' extensively. We are particularly indebted to work of David Hoyt and prof. Hayagreeva Rao of Stanford University. We are grateful to Mr. Don Berwick, Mr. Joe McCannon and Mrs. Christina Gunther-Murphy of IHI for their time and their candid responses to our questions.

## Chapter 2 The Start of the Campaign

When IHI started the campaign in January 2005, essential stepping stones were already in place. The organization itself was up and running and a number of key players in the campaign had committed to the cause. The instruments of change that IHI wanted to promote – six interventions on the work floor that medical professionals had to implement – had already proven to save lives. Furthermore, IHI had developed insights in the spread of innovations that it could build upon to promote change throughout the campaign. Finally, IHI had the right people in place: the organization had an experienced leader - an individual highly capable of leading the troops forward. In this chapter, we will discuss each stepping stone individually by offering a brief outlook on their history.

### History of IHI

At the start of the campaign, IHI was already in its 13th year of existence. The non profit organization was founded in 1991 by Berwick, the CEO of IHI, and a group of friends – a group of dedicated professionals who had studied quality systems and healthcare defects together. They all wanted to improve the quality of healthcare and shared their insights and methods with each other. The group met for many years, having regular meetings and organizing events, such as demonstration projects and training courses for medical professionals. They held their first conference in 1989 with 287 participants.<sup>4</sup> Not all of the initial group members were doctors; Berwick also worked together with experts on quality from industry and academia.

After IHI was founded, the organization continued the line of work that Berwick and friends already did: improving the quality in health care, studying problems (R&D) and detecting and spreading solutions. Its goal: to improve health care through careful and conscious teamwork in an effort to solve problems together with professionals, systems and organizations. “We’re a social change organization”, explains Don Berwick in 2009. “The

mission is to change a very, very large social sector here and abroad; a massive effort chartering in 1991.” To achieve this aim, IHI offered mainly educational programs in its early years. “We had several thousands of people who would come and study with us.” The early activities were expanded with collaborative projects and research projects, all aimed to improve quality in health care. But despite the grand ambition and the expanding number of projects and participants, the reach of IHI remained limited. The projects were aimed at circa 10% of the total of US hospitals.<sup>5</sup>

### IHI Statement

“We aim to improve the lives of patients, the health of communities, and the joy of the health care workforce by focusing on an ambitious set of goals adapted from the Institute of Medicine's six improvement aims for the health care system: Safety, Effectiveness, Patient-Centeredness, Timeliness, Efficiency, and Equity. We call this the ‘No Needless List’:

- No needless deaths
- No needless pain or suffering
- No helplessness in those served or serving
- No unwanted waiting
- No waste
- No one left out

### **Participants in place**

At the launch of the campaign, IHI could build upon a substantial network. In 2004, for example, the number of attendees of IHI's annual conferences had grown to approximately 4000.<sup>6</sup> So at the start of the campaign, not only Berwick's early friends and colleagues were eager to be involved, many other members of the network were close by as well. Joe McCannon, the campaign manager, remembers: "IHI looked for influence at the start. It targeted organizations that we knew had skill, had local influence, such as a large academic centers. At the national level, we enlisted partners such as Medicare, CBC and the Medical Association. Imaging the day that you launch your initiative, imagine who you would want to stand on stage with you: the optimal group of influential people. So when we launched, we already had 500 or so organizations involved."

IHI approached local hospitals, systems, and other health care providers to serve as a beacon for communication and for all kinds of support to newcomers. IHI was working through other organizations that had their own existing constituencies. "We knew from the start that we needed partners," explains Don Berwick. "We needed the American Hospital Association, we needed the American Medical Society, we needed the Federal agencies, we needed the Joint Commission<sup>7</sup> to at least not stop it – either stand aside or help, but please, don't stop it. We needed to kind of make friends with these partners."

### **Proven methods**

Another step stone at the start of the campaign were the methods that IHI aspired to push. After years of studying, working together with many top medical professionals around the world, IHI knew what to promote. IHI focused on proven best practices – nothing brand new and fancy, but rather old solutions that had shown to have major impacts on reducing mortality. These practices had made their way through intense peer review, before they ended up as campaign material. So the interventions that were central

to the campaign were all evidence based. Many of them were in fact well known, but were not yet, or just partially, implemented.

Some of the interventions were very simple, such as frequent hand washing by surgeons to prevent the spread of infections or adjusting the angle of a ventilator near a patient by marking the right degree on the bed. Some of them consisted of a series of practices, such as steps to prevent bloodstream infections, or the design and use of a checklist – a practice already used in many other sectors, but not common in health care.<sup>8</sup> "All ideas of the campaign already existed in the literature," says campaign manager McCannon. "We get people take what we know what works better and introduce it reliably."

### **Spread of improvements**

IHI had already years of study and experience in the spread of innovations in health care. It's staff members were, for instance, well experienced in collaborative practices. They had run concrete programs in the nineties and they had studied literature about the spread of innovations from different angles and scholarly fields – from Everett Rogers' theory on diffusion of innovation to Granovetter's ideas on the strength of weak ties.<sup>9</sup>

IHI had developed its own methods, such as the 'Breakthrough Series': a model for collaborative learning to help healthcare organizations adopt good practices in quality in a timely way while reducing costs.<sup>10</sup> IHI believed in the power of collaboratives – bringing people together, encouraging them, feeding them with reliable knowledge and practical tools to improve quality in healthcare.<sup>11</sup> Its motto was: 'All Teach, All Learn'. Therefore, the campaign could be based on the wealth of insights that IHI had gathered throughout the years.

## Interventions

These 6 interventions were central to the 100,000 Lives Campaign:

- Deploy rapid response teams at the first sign of patient decline.
- Deliver reliable, evidence-based care for acute myocardial infarction to prevent deaths from heart attack.
- Prevent adverse drug events (ADEs) by implementing medication reconciliation.
- Prevent central line infections by implementing a series of interdependent, scientifically grounded steps.
- Prevent surgical site infections by reliably delivering the correct perioperative antibiotics at the proper time.
- Prevent ventilator-associated pneumonia by implementing a series of interdependent, scientifically grounded steps.

## People

The last stepping stone at the start of the campaign consisted of the people who had to do the actual work. Don Berwick, the driving force, was especially lauded for his achievements. Berwick was a Harvard educated paediatrician with a degree in public policy. He had worked at a health maintenance organization, where he had studied and measured quality.<sup>12</sup> After IHI was founded, he served as the CEO of the organization. By the end of 2004 when the campaign was announced, Berwick was already quite famous in the medical world. He had received awards, such as the 2002 American Hospital Association's Award of Honor, and he had advised President Clinton. In articles and conversations, he is described as a

positive, highly likable and intelligent person. Berwick was also viewed as an "extremely gifted public speaker", who "knows how to simultaneously play on the emotional and logical sides of his listeners' brains", according to comments in one of his many profiles in the media.<sup>13</sup>

## Kick off

To conclude, at the start of the campaign, an experienced organization and leader, a valuable list of contacts, a list of tested interventions and many key participants were already in place. However, IHI remained uncertain about the major transition that the campaign would require. It had operated at a level relatively smaller scale involvement and now the organization had to move to full scale. "The campaign represented a piece of involvement from boutique, targeted, very small reach, to trying to reach everyone," explains Berwick. But despite these and many other uncertainties, IHI was positive and full of energy to start a new episode in the organization's existence.

## Chapter 3: The Network Approach

"I'm losing my patience.", said Berwick at his famous plenary address at the annual IHI conference in December 2004. "So, here is what I think we should do. I think we should save 100,000 lives. And I think we should do that by June 14, 2006—18 months from today. Some is not a number; soon is not a time. Here's the number: 100,000. Here's the time: June 14, 2006, 9 a.m.... I think the time for discipline has arrived—the time for getting the job done.... We're going to do it with a campaign—a world class campaign." By uttering these words, the '100 000 Lives Campaign' was a fact.

How did IHI organize their 'world class campaign'? What did IHI want to achieve and how did they go after their goal? IHI choose for a network approach: it worked through other, mostly local organizations that were the centers of activities and the spread of knowledge throughout the whole country. IHI functioned as the supporting organization and provided them with all kinds of help, for example, by offering a wealth of materials on the campaign website. In this chapter, we will explore this network approach by briefly discussing the key components and the central philosophy of the campaign.

### Problem

The problem that IHI wanted the campaign to address was the "disturbing statistics" about "unnecessary deaths". IHI referred to numbers that were already known among many health care professionals. IHI communicated the problem as follows: "The IOM estimates that as many as 98,000 people die each year in US hospitals due to medical injuries. The Centers for Disease Control and Prevention estimate that two million patients suffer hospital-acquired infections each year. The US spends the most money on health care of all (advanced) industrialized nations, but it performs more poorly than most on many measures of health care quality."<sup>14</sup>

### Goal

IHI wanted to enroll as many participants as possible, with a minimum of 2000 hospitals. (There were circa 5000 hospitals in the US.<sup>15</sup>) It wanted to raise awareness about the problem and the solutions. Furthermore, it wanted to encourage the participants to adopt the six interventions. However, this was not required. Hospitals that wanted to participate, were not obliged to do anything, only to let IHI know that they wanted to enroll (a fax by the CEO was sufficient) and to provide certain data about their death rates, which were discreetly used by IHI only to estimate the outcomes of the campaign. Participating hospitals were required to submit to IHI their monthly mortality data for every month in the campaign and for the 12 months prior. IHI added other, national data and on the basis of a transparent measurement method, it estimated the general outcome of the campaign. (See appendix 1)

### Will – Ideas – Execution

IHI strongly believed in a framework of three components: will, ideas and execution. These were central to the overall design of the campaign. The will to change was about motivation. People had to be aware of the current problems, they had to reject the status quo and be willing to make changes for the better.<sup>16</sup> IHI especially focused on the will of top management "to make a new way of working attractive and the status quo uncomfortable", but also involved all other professionals in health care organizations. No one was excluded; there were materials available to support everyone at their own level.<sup>17</sup>

Christina Gunther-Murphy, the product manager of the campaign, says: "There are plenty of organizations telling people they must do things. There's the Joint Commission which accredits hospitals, there's CMS<sup>18</sup> which has the payment structure, and is able to say: "If you don't do this, we're not going to pay you." That wasn't what we wanted the campaign to be; we wanted to create a sense of urgency, but we wanted it to come from a willingness and an energy."

Practical ideas for actual change mattered equally as the motivational part. These ideas were, for instance “about how work gets done, how relationships are built, and how patients participate in their care”.<sup>19</sup> But not all good ideas were simply good enough for IHI: they had to be tested to prove their value. If they were not sufficiently tested, IHI would take responsibility to take care of that through its own R&D projects, until ideas were solid enough that they could be implemented without major risks. In the campaign, this came down to the six interventions that had already proven to save lives.

Then came the most difficult part: execution. Actual results were only booked when new methods were introduced in a reliable way by hospitals. Execution was not about the implementation of just one single idea, but about a whole set of methods or steps – only then quality could really be improved for the long term and on a notable scale. “No single initiative or set of unaligned projects will likely be enough to produce system-level results,” according to an IHI-statement on change. “Therefore, the development of a system for execution of a portfolio of projects aligned with strategy that produces and sustains results is a vital component.”<sup>20</sup>

### **Website**

From day one IHI was involved in ongoing effort raise awareness among doctors, nurses, other medical professionals and all other people who wanted to join the campaign: even patients and families were welcomed. Every aware person was valuable to IHI. Everyone could play his or her part. Families, for example, could contact their care provider and ask them to join the campaign, providing the contact data of the field office. Besides that, IHI was busy to keep all participants informed and motivated. It organized weekly conference calls, sent mass emails and helped with the coordination of dozens of activities on the ground. The organization wanted to keep the dynamics going and to keep people motivated during the whole campaign.

To encourage participants to implement the interventions, IHI launched a website that provided in a wealth of ‘how to’-information. You could find practical guides for the step-by step implementation of the six interventions, academic articles that supported the interventions, the contact data of the campaign centers and much more resources for medical professionals (and patients and their families). “We trust the local work force to learn as they go,” Berwick explains. “You know, they’re not stupid they’re smart. So if we say: “Here’s a way to prevent infections”, they’ll learn, they’ll find out if that works where they are – or not.”

### **Network approach**

The organization worked within an extensive network; it did not run the campaign with a large central organization, but with a staff of maximum 10 people.<sup>21</sup> A larger team would have been too costly and, according to IHI interviewees, not effective as well. IHI connected people and hospitals with each other to learn and help each other, providing all means necessary to make the interaction fruitful. IHI linked people with expertise who were able to teach others about the six interventions to others who wanted to learn.

“If an organization in Oregon that is doing very well on providing reliable care for heart attacks, it is our job to connect them to the whole world,” says campaign manager Joe McCannon. “The flip side is, that when a organization in Oregon is interested how an organization in Massachusetts does well in reducing an infection, we have to clear the pathways and provide channels, so that others know that they can reach out to them. We lean heavily on the participants to teach us and others. All the learning in IHI is done through other organizations; we work through others.”

Christina Gunther-Murphy explains that the campaign staff had to adjust to the needs of participants all the time. “It was really a quick development process and learning process. For an organization that wants to be agile and responsive, one of the things that you have to do is learn and change

very quickly. So when you're getting feedback of what people need or what's helpful, you have to be able to translate that into actionable support immediately."

Two features stood out in the network approach of IHI. First, the collaborative character of the effort. It was not IHI against the others; it was IHI with the others on a base of equality and partnership. IHI did not pretend to have all wisdom, it was constantly open and adaptive to input from all of its participants. The second notable feature was the decentralized way of working through field offices: activities of the campaign were managed and executed locally by others than IHI-staff members.

### **Collaborative effort**

IHI did not want to solve the problems by itself; the core idea of the campaign was that the problem had to be solved together. McCannon says: "The framing for us was: people are trapped into these system and we are going to do something about that. Most of the media is focused about the problem: someone is harmed and there is very little discussion is about the solution. It apparently does not sell any papers. We said: "We have a problem, it is a shared problem." We were not the outside organization that said: "Improve, or else..." Our message was: "Let's acknowledge it and solve it together."

This angle was carefully chosen, since IHI was concerned that exposing the problem around unnecessary deaths would scare off medical professionals. They could feel frightened by the campaign and could refuse to open up and to act.<sup>22</sup> "Our first participants were hesitant to share information," according to an IHI staff member, "but that disappeared when people realized they were all focusing on the same thing: caring for patients. They realized they could accomplish more together than they ever could alone."<sup>23</sup> The campaign was therefore designed as a collaborative effort in which participants joined each other, exploring solutions and implementing interventions side by side.

### **Node**

A node was a local field office, consisting of a hospital association, medical society or academic hospital. IHI described them as the local drivers for change. Each node offered support to participants, grouped by geography, system, membership, or affinity. More than 50 organizations agreed to work as nodes, when IHI approached them. The nodes did not work according to a fixed procedure, not did they have templates for communication.

### **Decentralized fieldwork**

The collaborative effort was translated into practice in a decentralized organization. IHI coordinated and initiated, but the whole campaign relied on local efforts. McCannon: "We worked through field offices, called nodes. IHI empowered them, trained them, provides tools and support, to enable them to reach to a broader audience." The nodes helped to introduce the interventions, they coordinated technical assistance, provided peer-to-peer learning opportunities, such as conference calls and emails, and hosted local campaign events.<sup>24</sup>

Many nodes were in fact 'mentor hospitals': institutions that offered others professional support and other help with implementing the interventions in their organizations. The mentor hospitals were often leading facilities in their region (or in their field of specialty) that therefore could serve as learning and coaching facilities for others.

The nodes were essential for two-way communication. "First, we rely on them for communication, both disseminating information to their network and getting information back to us," explained the campaign field

operations manager on the IHI-website. "Second, we look to them to help with education and collaboration. We ask them to provide opportunities for their network hospitals to learn and work together." So not only were the nodes crucial in providing support for participants; they provided IHI with information as well. The 'All Teach, All Learn'-motto of IHI was put to practice if, for instance, a participant with specific expertise came up with a promising innovation or with experience based interventions that might be helpful for others as well. If it was indeed a good idea, it could be disseminated through the rest of the network. It could find its way up through the node to IHI, which subsequently could spread it through the network to all participants.

### **Conclusion**

IHI's network approach turned out to be fruitful for the accomplishments of the 'Saving 100,00 Lives Campaign'. After 18 months, the goals that IHI had set at the beginning were met or surpassed. On June 14, 2006, at a special occasion in conjunction with the IHI Annual International Hospital Summit in Atlanta, Don Berwick called an end to the campaign.<sup>25</sup> He was able to announce that the participants through the whole country together saved more lives than expected – they had surpassed the number of 100,000.

## Chapter 4 Results

IHI had formulated four goals at the start.<sup>26</sup> In three of the four assets, IHI was without doubt very successful; one goal caused some controversy. In this chapter, we will discuss the initial goals of the campaign, as well as the ultimate aim of IHI as an organization: the structural improvement of the quality in health care, that required the implementation of the six interventions in the long term that surpassed the period of the campaign.

### # 1 Raising public awareness

IHI was able to get over 200 media impressions.<sup>27</sup> Among them were major media, such as 'The New York Times', 'Newsweek' and others.<sup>28</sup> The more people became aware, the better, was IHI's opinion, even if the audience did not consist of the health care professionals that had to work with the actual interventions, but consisted of, for instance, patients or their families. The widespread attention can be contributed to the bold and ambitious aim of 100,000 Lives, according to campaign manager McCannon. That message evoked a strong response.

### # 2 Enrolment

This second goal was about "taking people on board and involved", according to McCannon. Over 3100 hospital enrolled, representing an estimated 75% of U.S. hospital beds. This number surpassed the initial goal of 2,000 hospitals.<sup>29</sup> More than 90 national partners, such as the American Medical Association, the American Nurses Association, and the Centers for Medicare and Medicaid Services were involved.<sup>30</sup> McCannon: "We were very successful, because we were very strategic about enrolling influential organizations first, which then influenced others, building a good distributive field network – others helping us to do work on the local level."

### # 3 Building a network

A related goal was to build a solid network for the cause of the campaign

and for future undertakings. The nature of all IHI's work was leverage: it was (and still is) a network organization that works through other organizations to reach common goals. IHI managed to identify (more than 50) field offices in every state of the country; 200 mentor officials acted as teachers to others.<sup>31</sup> IHI did not just wanted to enroll and leave it there. "We wanted to build support for hospitals at local level, not just a link with IHI," explains product manager Gunther-Murphy. "It is important for hospitals to have different types of support."

### # 4 Reducing death rates

The central goal of the campaign was avoiding necessary mortality by saving 100,000 lives in a specific period. In the course of the campaign, that number was surpassed, according to IHI. The organization estimated "that participating hospitals avoided 122,300 needless deaths, with a methodologically conservative lower bound of 115,400 and a methodologically optimistic upper bound of 148,800".<sup>32</sup> The definition of a life saved of IHI was "a patient who survived a hospital stay during the campaign period (January 2005 – June 2006) who would have died had he or she received that hospital's pre-campaign year (2004) level of care."<sup>33</sup>

### Controversy

The count of the number of 'lives saved' caused controversy.<sup>34</sup> The calculations made it difficult to interpret the campaign's true accomplishments. IHI was honest about this issue: the number of lives saved, as calculated, represents "the number of lives saved by hospitals participating in the Campaign", not "the number of lives saved by the Campaign", the organization stated.<sup>35</sup> McCannon: "We were publishing about how it was measured and critics did even not refer to our articles." One of the critics that he referred to, wrote: "Secular trends could account for many of the 'lives saved,' which IHI acknowledges (and could have adjusted for, resulting in a markedly lower 'lives saved' estimate)."<sup>36</sup>

Another target of criticism was the overall set of data that IHI had used for its measurement. IHI's estimate of lives saved was dependent on actual mortality data that were supplied without audit by the more than 3,000 participating hospitals. But 14% of the hospitals submitted no data at all.<sup>37</sup> Berwick: "We had no authority, we couldn't require anybody to report anything. Every single number we got was voluntarily given to us. Maybe if we had had the advantage of law and regulation [as governments do], we could have gotten better measurement. But in that case we probably would have given up some of the spiritual side of the campaign."

IHI published about its methods, explaining that the organization made a promise that the number of lives saved would be measured accurate. It stated that "the amount of work associated with data collection and submission required of participating hospital staff needed to be kept to a minimum", given the voluntary nature of the campaign.<sup>38</sup> Besides that, IHI explained that it did not want to take full responsibility for every life saved, since that would be unfair. "We could not attribute a certain number to the campaign," says McCannon. "We could only say: "This was the change in the period." We could not – and did not – want to say: "The IHI alone was responsible for this exact drop in figures.""

### **Execution in pockets**

The ultimate aim of the 'Saving 100,000 Lives Campaign' was of course the implementation of the six interventions in a reliable way that surpassed the end date of the campaign. These were long term accomplishments. Organizations had to incorporate the interventions in their daily routine in the long term. IHI aimed for sustainable success, but the last difficult part of the operation was out of their scope of influence: the structural execution could not be monitored, nor measured.

### **Implementation of interventions**

According to IHI, the following percentages of hospitals that were enrolled in the campaign implemented the interventions:

Rapid Response Teams: 60%  
 AMI Care Reliability: 77%  
 Medication Reconciliation: 73%  
 Surgical Site Infection Bundles: 72%  
 Ventilator Bundles: 67%  
 Central Venous Line Bundles: 65%  
 All six: 42%

McCannon: "Change is hard work. The learning process takes time and effort and practice – and that is what organizations had to do themselves. We did not have full control over the ultimate goal of the campaign. In some places the campaign was only about raising awareness. In other places people introduced them and executed them, but that takes a lot of work. Change happened in pockets: in some places it did, in some places it didn't. In the State of Washington they invested a lot in teaching, and execution did happen in, for instance, some private systems, such as Kaiser Permanente<sup>39</sup>. In other places, people just got excited about the idea, they made a lot of initial efforts, but not all ideas were implemented."<sup>40</sup>

## **Conclusion**

Despite the structural monitoring system, IHI estimates that a good deal of the participants had taken up the execution of the intervention seriously. At the end of the campaign, many hospitals that participated had walked the path of change and gave positive feedback about their accomplishments. (See text box above) "When we decided to launch the campaign, we didn't know if hospitals could take on another challenge," said Don Berwick in June 2006 at a plenary address to celebrate the end of the campaign. "But the campaign has exceeded our highest expectations. (...) I have never before witnessed such widespread collaboration and commitment on the part of health care leaders and front line staff to move the system giant steps forward."<sup>41</sup>

## Chapter 6 Success Factors

Which factors contributed to the successes of the 'Saving 100,000 Lives Campaign'? How did IHI overcome (potential) barriers and difficulties? Much has already been said about the network approach of IHI and how it contributed to the spread of change throughout the country. In this last chapter, we list the other factors that IHI-interviewees have mentioned, together with factors that have been discussed in academic literature, or that authors from IHI have mentioned in publications. All together, it concerns a variety of issues. The list is tentative and its elements are organized at random.

### General factors

The following factors contributed to the overall success of the campaign, according to scholars and members of IHI:

#### ***Consensus on the problem***

The campaign could build upon the work of Institute of Medicine, that had published a well known land mark report called 'To Err is Human: Building a Safer Health System'. The authors of the report estimated that 98,000 people die in any given year from medical errors in US hospitals. The authors drew a similar conclusions as IHI did: "The problem is not bad people in health care – it is that good people are working in bad systems that need to be made safer."<sup>42</sup>

"It was clear that there was not much progress [since 'To Err is Human']," says McCannon. "Most of the media and most of the health care establishment said: "Let's give this a try." So it was not hard to argue with the idea that this was in fact a problem. People agreed and decided that we had to solve it together. (...) It had to do with the timing and the moment: people knew that health care was seriously troubled and ready to look for solutions." To conclude, IHI did not have to start from scratch and was able

to build upon awareness of a problem that already existed.

#### ***Existing trend***

IHI signalled at the start of the campaign that hospitals were already improving their methods. In other words: there was already a national trend toward quality improvement that IHI could build upon. The organization assumed that, even if there were no campaign at all, this latent trend would have caused an upward trend in the numbers of lives saved. IHI stated: "These lives which 'would have been saved anyway' are included in the Campaign's lives saved total. "<sup>43</sup>

#### ***Peer pressure***

According to IHI-interviewees, using the early momentum of the campaign to create positive peer pressure to involve people was important.<sup>44</sup> Don Berwick for example, had surrounded himself with important leaders from the health care sector, some of them were friends for more than years. They were passionate messengers for quality improvement.<sup>45</sup> Leaders in the health care joined Berwick on stage when he started the campaign, so that everybody could see that it was a collaborative effort.

Peer support proved to be crucial in the campaign. Without the mentor hospitals, IHI would never have been capable to reach such a large scale. People were helping each other and IHI was helping them to help each other. "Peer work is so important," explains Don Berwick, "because you can't just order someone to do something. I can't order you to ride a bicycle. You have to learn, and I have to support you in the learning process. That was to me one of the most exciting elements of the campaign: the intelligence and the learning process at the local level – and how we could help that."

#### ***Institutional identity***

IHI had already established a positive reputation as an objective organization, not out there to accuse others of malpractices. McCannon:

“The organization is generally perceived as objective, third party organization, it is seen as friend with a certain degree of credibility. Berwick is seen as benevolent, supportive and smart, non threatening friend. That is crucial. IHI is a source of resources, ideas, energy and positive feelings. IHI has a reputation of being innovative and that draws people to it as well.”

**Results as encouragement**

IHI constantly used the success of the campaign to encourage others to join or intensify their efforts. Berwick: “The message was like this: “Oh, isn’t that great: look at what New Jersey’s doing, look at what Northern California is doing!” We celebrated the diversity of the approach and learned from it.” IHI communicated good news directly; it did not wait with the celebration of achievements until the end of the campaign. “We were not just telling the negative story, but also the pro-active story of hospitals that are out there trying to change things, and that it was possible,” says Christina Gunther-Murphy. These were used as stimuli throughout the whole period. McCannon adds: “As soon we were able to communicate: “Fifty organizations in the country have gone over a year without [a specific fatality]”, it becomes very hard for people to resist change and say: “We cannot make that improvement.””

**Existing energy**

After the start, IHI found out that there was passion for their cause. It struck a chord. Doctors and patients were open to the campaign message. Berwick, who recalled that passion, stated that he went on a campaign bus tour for some of the parts and that when they drove into cities and visit campaign hospitals, it felt like an exciting political campaign to him. There were rallies and outpourings of interest. Berwick felt that they tapped into this energy that no one knew was there.<sup>46</sup>

**Factors for removing (potential) obstacles:**

There were several potential dangers that could have prevented IHI from succeeding. There were however also factors that contributed to overcome

these. Scholars and IHI-members have randomly distinguished the following issues:

Potential Barrier	Answer
Participants were already busy; substantial requirements for enrolment could have scared them away	Simple to enroll
Participants could feel that change was forced upon them, therefore they could be reluctant to join	Ownership
Participants could feel that change was forced upon them, therefore they could be reluctant to act	Ownership
Participants were already busy, not able to provide for the extra time innovating in their perception would require	Easy to innovate
Participants could feel reluctant to join, because the death rates of their organizations could be exposed, causing negative media coverage, even outrage	No painful exposure
Participants could feel accused of wrongdoing, therefore they could be not motivated to join	Neutral framing
Participants were not easily convinced of innovations, therefore they could be reluctant to participate in ‘experiments’	Evidence based interventions

### ***Simple to enroll***

IHI made it simple to enroll. "IHI reduced the burden on participating organizations by imposing very few rules and requirements," concluded Hackbarth and Rao from Stanford Business school.<sup>47</sup> It was, for instance, simple to participate. All that was required was a fax from the hospital CEO. Hospitals would have to provide some mortality data, but they did not have to promise that they would fully implement all six interventions. There were no costs.

As soon as someone displayed interest in the campaign or signalled that he or she wanted to join, IHI had everything ready to encourage further steps. Berwick: "It's all by attraction and invitation, and then immediate response and help. Our staff were immediately helpful: we had stuff on the web, we hosted meetings, and so on." The organization was able to act swiftly; the staff was very flexible. IHI could promptly respond to new demands or questions that came up. "We provided a lot of support", says product manager Gunther-Murphy. "What we tried to do is really lower the barriers to entry, so that anyone could sign up. There were not a lot of requirements. Also, once you were in, the barriers to getting ideas and help on execution were low. For example, you could join a conference call, ask questions and others would offer help right away."

### ***Ownership***

IHI made the participants owners of the problem and the solution. McCannon: "The idea is to say: "We can improve together and design a program together." So it is asking people to take responsibility for their own problem." IHI firmly believes in the success of this approach. "It's the idea that everyone is a leader," says Don Berwick, "and creating an environment in which people really can feel that everyone can feel 'I can lead too'. You get so much energy from that; it's completely different from a requirement."

IHI invited people to join, instead of forcing them to. That worked well, according to Don Berwick. "I've always had the feeling that the secret sauce, the magic part of the campaign, was volunteerism. We have no authority, there was nothing I could require anyone to do ever – zero. We could just say: "Would you like to join us?" So I think the experience in the field was 'It's our choice, no one's forcing us.' It was very positive energy. We were always kind of thanking people, welcoming them, and this positive energy, of volunteerism, invitation and welcome, to do that from a non-profit, private, civil platform, was very, very powerful."

### ***Easy to innovate (focus)***

IHI made it easy for hospitals to innovate. This aspect contributed to the success of the campaign, according to Hackbarth and Rao from Stanford University.<sup>48</sup> IHI provided a wealth of tools, teaching, coaching and advice to help participants to implement the interventions. The interventions included some very simple actions, such as telling nurses, doctors, as well as janitors and visitors to check that the head of a patient does not sink below a certain point. The simple ones were added on purpose by IHI to make part of the work of change bearable and almost instantly successful; other actions, however, would require much more from the participants.

The focus on just six interventions made the burden of innovation bearable, wrote Hackbarth and Rao. IHI lifted the burden of medical professionals to keep track of numerous articles and other sources on information about improving healthcare. "For example, peer review journals provide hospitals with thousands of practices they might use to reduce the number of preventable deaths. Yet asking each hospital to review the medical literature and then select its own practices would have been a huge burden..."<sup>49</sup> The focus on six actions was welcomed, tells Berwick: "We had a goal of one hundred thousand lives and we had these six changes. We didn't negotiate that. So if you were working on the campaign, it was to do this. Actually to my surprise, we heard back from people thanking us, saying: "We love the focus, we think it's great to have a goal.'"

### ***No painful exposure***

IHI did not believe in “naming and shaming”, since it could have prevented hospitals to participate. No one wanted any exposure about fatal errors; the submitting of the data about death rates was only for a general estimation by IHI. Individual performances were not made public. The organization explained in a statement that “due to the voluntary nature of the project, and the existing burden of data collection and submission currently shouldered by hospitals, we believed that data submission requirements needed to be kept to a minimum in order to keep the barriers to participation as low as possible.”<sup>50</sup>

### ***Neutral framing***

IHI did not accuse doctors of doing a poor job. That was important, because the doctors themselves had to be motivated to make a change. It was not them, it was not personal – it was the system that was imperfect, was IHI’s core approach. On the basis of all campaign messages was the statement that health care formed a highly complex system with many broken parts.<sup>51</sup> That was not the fault of the people in the workforce, that work as hard as they can. McCannon: “The framing was very important. The message was that people are trapped in unreliable systems. The systems generate chaos and confusion and frustration and that leads to bad outcomes in care. We were always quick to tell that.”

### ***Evidence based interventions***

Doctors are not easily convinced of innovations and not willing to take risks: in health care, you cannot gamble with patients’ lives.<sup>52</sup> IHI worked with evidence-based interventions – interventions that had proven to be successful and did not raise discussion on their merits. IHI was aware of the fact that it had to promote “safe” innovations.<sup>53</sup> The organization had developed a trajectory for testing interventions in the course of its existence, and it would only campaign for the ones that were tested over and over again to avoid any risks. Furthermore, IHI would provide for journal articles and other materials for medical professionals to show that

the interventions were indeed safe to implement.

All of these factors contributed to the positive results of the IHI campaign. They made the campaign a success among the many initiatives to improve quality in health care. Although execution happened in pockets, IHI managed to enroll more participants than expected. It was able to build a network that is still functioning up to today, and according to IHI’s measurement methods, the number of deaths that were prevented through the campaign was substantial. Indeed, lives had been saved.

## Conclusion

Much of what constituted for IHI's success seems dependent on many particular circumstances and conditions. For example, the timing was right: IHI tapped into existing energy and could build upon consensus about the problem. The right people were there, especially an experienced, skilful and charismatic leader and his old comrades and colleagues. The interventions to improve quality in care were developed, well researched and ready to go. However, most of the factors did not fall into play, but were brought into play. One can safely assert that the true power of IHI was its ability to recognize the difficulties of change, as well as its assets as a credible player. As an organization, IHI had built up expertise from first hand about change management in complex organizations. Even in the years before its existence, key players in the network of Don Berwick that were involved in the campaign had developed and fostered this knowledge.

In short, IHI knew all about change and was able to translate that knowledge into a successful campaign strategy. The particular campaign approach of IHI, combined with its knowledge about and experience with change may or may not be replicable in other contexts, but the underlying philosophy and strategy of change bears relevance to any organization committed to system-wide changes in health care and beyond. The strategy of ownership, the flexible staff and other success factors mentioned before, are all to be considered by others in undertakings, similar to the 'Saving 100,000 Lives Campaign'.

In addition, IHI's allegiance to genuine organizational learning made them more prone to unusual ideas, more amenable to adjusting strategies and more effective in gaining ground. Improvement was running in the veins of the organization. "If you walk around here in this office," tells product manager Christina Gunther-Murphy, "you will find only people that have an urge to improve. For people who do not share that attitude, working here must be really tiring. Because if you do something, there is always someone afterwards who says: "You know, I thought of a few things that we can do better next time."

## Endnotes

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<sup>2</sup> Information from IHI.

<sup>3</sup> Editorial, 'Back in the Hospital Again', in: *The New York Times*, April 15, 2009. "Medicare currently pays for all rehospitalizations, except those in which patients are rehospitalized within 24 hours after discharge for the same condition for which they had initially been hospitalized. Recent policy proposals would alter this approach and create payment incentives to reduce the rates of rehospitalization." Quote from: 'Rehospitalizations among Patients in the Medicare Fee-for-Service Program', in: *The New England Journal of medicine*, Vol 360, nr. 14, page 1418-1429.

<sup>4</sup> Hoyt, D. and Rao, H., *Institute for Healthcare Improvement: The Campaign to save 100,000 lives*, Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 3-4.

<sup>5</sup> Personal interview with Don Berwick, September 2009.

<sup>6</sup> Hoyt, D. and Rao, H., *Institute for Healthcare Improvement: The Campaign to save 100,000 lives*, Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 4.

<sup>7</sup> The Joint Commission is an independent, not-for-profit organization that accredits and certifies health care organizations and programs in the United States.

<sup>8</sup> Personal interview with Joe McCannon, September 2009.

<sup>9</sup> IHI-brochure: *20/20 Vision*, IHI, Cambridge 2009, page 8. Hoyt, D. and Rao, H., *Institute for Healthcare Improvement: The Campaign to save 100,000 lives*, Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 27.

<sup>10</sup> IHI-brochure: *The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement*, IHI, 2003.

<sup>11</sup> IHI-brochure: *20/20 Vision*, IHI, Cambridge 2009.

<sup>12</sup> A health maintenance organization is a form of managed care. It offers a plan for coverage in the US. An HMO sets out guidelines under which doctors and other professionals can operate. On average, health care coverage through an HMO is less expensive for consumers. More information can be found at: 'HMO's explained', *CBS News Online*, No Date. Accessed: September 3, 2009. Website CBS: <http://www.cbsnews.com/stories/2001/05/01/national/main288749.shtml>

<sup>13</sup> Swidey, N., 'The Revolutionary: Profile of Don Berwick', *The Boston Globe*, January 4, 2004.

<sup>14</sup> Website IHI: <http://www.ihl.org/IHI/Programs/Campaign/100kCampaignOverviewArchive.htm>

<sup>15</sup> Personal interview with Christina Gunther-Murphy, September 2009.

<sup>16</sup> Hoyt, D. and Rao, H., *Institute for Healthcare Improvement: The Campaign to save 100,000 lives*, Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 10.

<sup>17</sup> Website IHI: <http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/> Accessed: September 10, 2009.

<sup>18</sup> Centers for Medicare and Medicaid Services, two government programs to provide for healthcare for certain groups, such as the elderly and veterans.

<sup>19</sup> Website IHI: <http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/>

<sup>20</sup> Website IHI: <http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/>

<sup>21</sup> Interview with McCannon.

<sup>22</sup> Hoyt, D. and Rao, H., 'Institute for Healthcare Improvement: The Campaign to save 100,000 lives', Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 11.

<sup>23</sup> Joanne Healy, Senior Vice President, quoted in a IHI-brochure: *20-20 Vision*, IHI, Cambridge 2009.

<sup>24</sup> *IHI announces that hospitals participating in 100,000 Lives Campaign have saved an estimated 122,300 lives*, Press release from IHI, June 14, 2006, page 2. Website IHI: [http://apps.carescience.com/about\\_carescience/pdf/presskit/2006-06-14\\_InstituteForHealth.pdf](http://apps.carescience.com/about_carescience/pdf/presskit/2006-06-14_InstituteForHealth.pdf) Accessed: September 12, 2009.

<sup>25</sup> Robeznieks, A., '100K Lives Campaign ends; IHI looks to follow up with a piggyback initiative', in: *Modern Healthcare*, June 19, 2006.

<sup>26</sup> Personal interview with Joe McCannon, September 2009.

<sup>27</sup> Personal interview with Joe McCannon, September 2009. Comarow, A., 'Saving Lives: Hospitals have Signed on to a six-part plan to avoid a multitude of unnecessary deaths', in: *U.S. News & World Report*, July 18, 2005.

<sup>28</sup> Website IHI: <http://www.ihl.org/IHI/Programs/Campaign/100000LivesCampaign2006MediaCoverage.htm>  
<http://www.ihl.org/IHI/Programs/Campaign/100000LivesCampaign2005MediaCoverage.htm> Accessed: September 12, 2009.

<sup>29</sup> *IHI announces that hospitals participating in 100,000 Lives Campaign have saved an estimated 122,300 lives*, Press release from IHI, June 14, 2006, page 1. Website IHI: [http://apps.carescience.com/about\\_carescience/pdf/presskit/2006-06-14\\_InstituteForHealth.pdf](http://apps.carescience.com/about_carescience/pdf/presskit/2006-06-14_InstituteForHealth.pdf) Accessed: September 12, 2009.

<sup>30</sup> *IHI announces that hospitals participating in 100,000 Lives Campaign have saved an estimated 122,300 lives*, Press release from IHI, June 14, 2006, page 1. Website IHI: [http://apps.carescience.com/about\\_carescience/pdf/presskit/2006-06-14\\_InstituteForHealth.pdf](http://apps.carescience.com/about_carescience/pdf/presskit/2006-06-14_InstituteForHealth.pdf) Accessed: September 12, 2009.

<sup>31</sup> Personal interview with Joe McCannon, September 2009.

<sup>32</sup> Hackbarth, A.D., McCannon, J., Berwick, D.M., 'Interpreting the "Lives Saved" Result of IHI's 100,000 Lives Campaign', *Joint Commission Benchmark*, September/October 2006, Volume 8 (5), page 1.

<sup>33</sup> Hackbarth, A.D., McCannon, J., Martin, L., 'The Hard Count: Calculated Lives saved in the 100,00 Lives Campaign', in: *ACP Guide for Hospitalists*, April 2006, page 2.

<sup>34</sup> Critical articles were, for example: Mittman, S., 'Creating the Evidence Base for Quality Improvement Collaboratives', in: *Annals of Internal Medicine*, 2004, Vol. 140, Issue 11, pag. 897-901. Ross T.K., 'A second look at 100 000 lives campaign', in: *Quality Management in Health Care*, Vol. 18 (2), page 120-125. Wachter, R.M., Pronovost P.J., 'The 100,000 Lives Campaign: A scientific and policy review', In: *Joint Communication Journal Quality Patient Safety*, 2006 November, Volume 32 (11), page 628-30.

<sup>35</sup> Hackbarth, A.D., McCannon, J., Martin, L., 'The Hard Count: Calculated Lives saved in the 100,00 Lives Campaign', in: *ACP Guide for Hospitalists*, April 2006, page 3.

<sup>36</sup> Wachter, R.M., Pronovost P.J., 'The 100,000 Lives Campaign: A scientific and policy review', in: *Joint Communication Journal Quality Patient Safety*, 2006 November, Volume 32 (11), page 628-30.

<sup>37</sup> Wachter, R.M., Pronovost P.J., 'The 100,000 Lives Campaign: A scientific and policy review', in: *Joint Communication Journal Quality Patient Safety*, 2006 November, Volume 32 (11), page 628-30. Quote from the abstract.

<sup>38</sup> Hackbarth, A.D., McCannon, J., Martin, L., 'The Hard Count: Calculated Lives saved in the 100,00 Lives Campaign', in: *ACP Guide for Hospitalists*, April 2006, page 1.

<sup>39</sup> Kaiser Permanente provides for health care insurance plans.

<sup>40</sup> After the 'Saving 100,000 Lives Campaign', IHI concluded that 'execution' was the weak link of its Will - Ideas - Execution-framework. Therefore, the organization conducted research (mainly through a series of interviews) to gather information on the approaches used by other, international initiators of initiatives to widespread change, such as businesses outside of health care. As a result, IHI refined its framework, but held on to the three components. The findings were published in one of the many white papers of IHI. Nolan, T.W., *Execution of Strategic Improvement Initiatives to Produce System-Level Results*, IHI Innovation Series White Paper, Cambridge, 2007.

<sup>41</sup> Don Berwick at IHI's 2nd Annual International Summit on Redesigning Hospital Care. Quote from: *IHI announces that hospitals participating in 100,000 Lives Campaign have saved an estimated 122,300 lives*, Press release from IHI, June 14, 2006, page 1. Website IHI: [http://apps.carescience.com/about\\_carescience/pdf/presskit/2006-06-14\\_InstituteForHealth.pdf](http://apps.carescience.com/about_carescience/pdf/presskit/2006-06-14_InstituteForHealth.pdf) Accessed: September 12, 2009.

<sup>42</sup> Kohn, L.T., Corrigan, J.M., Donaldson, M.S., (ed), *To Err is Human*, report of the Committee on Quality of Health Care in America, Institute of Medicine, The National Academic Press, 2000. Quote from abstract.

<sup>43</sup> Hackbarth, A.D., McCannon, J., Martin, L., 'The Hard Count: Calculated Lives saved in the 100,00 Lives Campaign', in: *ACP Guide for Hospitalists*, April 2006, page 3-4. Hackbarth, A.D., McCannon, J., Berwick, D.M., 'Interpreting the "Lives Saved" Result of IHI's 100,000 Lives Campaign', *Joint Commission Benchmark*, September/October 2006, Volume 8 (5).

<sup>44</sup> Personal interviews with McCannon and Gunther-Murphy, September 2009.

<sup>45</sup> The case study of Hoyt and Rao pays Attention to the development of the inner circle of Berwick. Hoyt, D. and Rao, H., *Institute for Healthcare Improvement: The Campaign to save 100,000 lives*, Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 3-5.

<sup>46</sup> Hoyt, D. and Rao, H., *Institute for Healthcare Improvement: The Campaign to save 100,000 lives*, Case-study Stanford Graduate School of Business, Case L-13, (01-21-08), page 15.

<sup>47</sup> Hackbarth, A.D., McCannon, J., Berwick, D.M., 'Interpreting the "Lives Saved" Result of IHI's 100,000 Lives Campaign', *Joint Commission Benchmark*, September/October 2006, Volume 8 (5), page 134.

<sup>48</sup> Rao, H. and Sutton, R., 'The Ergonomics of Innovation', in: *McKinsey Quarterly*, 2008 (4), page 131-141.

<sup>49</sup> Hackbarth, A.D., McCannon, J., Berwick, D.M., 'Interpreting the "Lives Saved" Result of IHI's 100,000 Lives Campaign', *Joint Commission Benchmark*, September/October 2006, Volume 8 (5), page 3.

<sup>50</sup> Hackbarth, A.D., McCannon, J., Berwick, D.M., 'Interpreting the "Lives Saved" Result of IHI's 100,000 Lives Campaign', *Joint Commission Benchmark*, September/October 2006, Volume 8 (5), page 3.

<sup>51</sup> Website IHI: <http://www.ihl.org/IHI/Programs/Campaign/Campaign.htm?TabId=1> Accessed: September 14, 2009.

<sup>52</sup> The authors have conducted research in Japan, Denmark and Canada about innovations in health care. In all countries, all interviewees (over 70 people) agreed with the proposition that especially physicians are reluctant to embrace innovations Because, they do not want to take risks with people's lives, they do no appreciate involvement of third parties with their work. Case study 'Unifying Threads', for Hogeschool Arnhem-Nijmegen, the Netherlands, Project Excellent Practices, 2009.

<sup>53</sup> All interviewees mentioned this.

## Appendices

## I: IHI's Measurement Strategies

In one of its publications IHI explained: "The Campaign decided on a calculation methodology based on changes in acute-care inpatient mortality within each hospital over time. For each hospital in the Campaign, for every Campaign period month (January 2005 to June 2006), an "expected" number of deaths is generated, representing the number of deaths that would be expected had Campaign period patients received the 2004 level of care. (Part of this process involves the application of a case-mix adjustment, derived from national data, to account for the average change in relative acuity in terms of expected likelihood of death of US patients between 2004 and the Campaign period.)

The difference between a given period's expected number of deaths and actual number of deaths is then calculated, representing that hospital's contribution of lives saved towards the national count for that Campaign month. This amount is summed over every participating hospital and over every month between January 2005 and June 2006 to get the Campaign total of lives saved."<sup>54</sup>

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<sup>54</sup> Hackbarth, A.D., McCannon, J., Martin, L., 'The Hard Count: Calculated Lives saved in the 100,00 Lives Campaign', in: *ACP Guide for Hospitalists*, April 2006, page 1.

## **II: List of Interviewees**

Mr. Donald Berwick  
President and Chief Executive Officer, Institute for Health Care  
Improvement

Mr. Joseph McCannon  
Vice-President IHI  
Campaign manager of the 'Saving 100,000 Lives Campaign'

Mrs. Christina Gunther-Murphy  
Product manager of the 'Saving 100,000 Lives Campaign'

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## Colophon

This article is part of the Excellent Examples series.

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IVF Poli, april 2010  
Kloppend Hart, april 2010  
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ParkinsonNet, april 2010  
Caring Home, april 2010  
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The series will be extended with national (Dutch) and international cases.

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