



PAUL B. BATALDEN, M.D.
In First Person: An Oral History

American Hospital Association
Center for Hospital and Healthcare Administration History
and
Health Research & Educational Trust

2014

HOSPITAL ADMINISTRATION ORAL HISTORY COLLECTION

PAUL B. BATALDEN, M.D.

In First Person: An Oral History

**Interviewed by Duncan Neuhauser, Ph.D.
On March 4, 2014**

Edited by Kim M. Garber

Sponsored by
American Hospital Association
Center for Hospital and Healthcare Administration History
and
Health Research & Educational Trust
Chicago, Illinois

2014

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Coordinated by
Center for Hospital and Healthcare Administration History
AHA Resource Center
American Hospital Association
155 North Wacker Drive
Chicago, Illinois 60606

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Technical assistance by George R. Tafelski
Photos courtesy of Paul Batalden

EDITED TRANSCRIPT
Interviewed in St. Paul, Minnesota

DUNCAN NEUHAUSER, Ph.D.: Good morning. I'm Duncan Neuhauser,¹ and we're here to talk with Dr. Paul Batalden about his work in transforming the world's thinking about health care quality and to find out how this change happened. In the course of our discussion there will be four themes. The first will be chronological—we'll go through the timeline of Paul's career. The second theme will be organizations which have changed as a result of his work. The third theme will be individuals who helped with this transformation. Finally, we'll discuss the development of ideas.

The world has been changed because terminology has changed—there are words used now which were not used 20 years ago. Terms like quality improvement, improvement knowledge, plan-do-study-act, special or common cause variation, storyboards; and names like Shewhart and Deming and Juran and Ishikawa—those terms or names would not have appeared beforehand. That's how the world in the future will see that a change really did occur.

Paul, how did you get interested in quality?

PAUL BATALDEN, M.D.: I had the privilege, at a very early point in my career, to serve in the U.S. Public Health Service where I had the job of director of the Bureau of Community Health Services, which had several primary care programs.

NEUHAUSER: Was that the Neighborhood Health Center program?

BATALDEN: Neighborhood Health Centers, Maternal and Child Health, Family Planning—all those programs were part of the Bureau. As the director, I couldn't run each of those programs, but I could pick themes that would cut across programs that I could be interested in as the director and potentially add value to each of those programs. One of those themes that I chose was the quality of the service.

That introduced me to the world of quality. At the time—this was in the early '70s—there were new Medicare rules about quality for hospitals, but ambulatory care was a free-form, innovative hatchery of different ways of thinking about quality. I got interested in ambulatory and systems-based quality at that time, but parked that interest until after I was done with that set of duties.

I had moved to Minnesota. Paul Ellwood was then the leader of InterStudy, a public policy outfit.² He had expressed interest in my interest in quality, so I developed a relationship with InterStudy while I was a practicing pediatrician at the St. Louis Park Medical Center—and had responsibility for the quality activities there. We received a Kellogg grant to help develop an

¹ Duncan V. Neuhauser, Ph.D., is the Charles Elton Blanchard, M.D., Professor of Health Management at the School of Medicine at Case Western Reserve University. [Source: Case Western Reserve. <http://epbiwww.cwru.edu/index.php/people/emeritus-faculty/63-neuhauser>]

² Paul M. Ellwood, Jr., M.D., sometimes referred to as “the father of managed care,” became executive director of InterStudy in 1972. His oral history: Garber, K.M, editor. *Paul M. Ellwood, Jr., M.D., in First Person: An Oral History*. Chicago: American Hospital Association and Health Research & Educational Trust, 2011, can be found here: <http://www.aha.org/research/rc/chhah/oral-histories.shtml>.

approach to ambulatory quality assurance, as we called it at the time.³

NEUHAUSER: You got an award from the National Medical Association. Was that for your work with the health centers?

BATALDEN: Yes, that was to recognize the contribution that the Neighborhood Health Centers made to the minority populations that the National Medical Association was very concerned about. I was pleased to receive that.

NEUHAUSER: You were practicing at Park Nicollet from 1975 to 1986?

BATALDEN: Right. It was a wonderful time for me to be a practicing doctor. I enjoyed being a part of a thousand families' lives in my practice. The other part of my time was spent as leader of the Health Services Research Center and the Quality Assurance Program that we put together. We organized the quality program around three questions. The first question was, "What do we all agree we could do better?" That question led doctors and nurses to come together—sometimes for the first time. They weren't in the habit of meeting with one another. We worked through the process of coming to a decision about what they all agreed could be done better. To prompt that, we had done a series of telephone interviews with patients, seeking detailed input. We put this in front of the doctors and nurses, so that together they would come to the decision about the answer to that question, "What do we all agree we could do better?"

The second question that we began to work on after we got the process set for dealing with the answer to the first question was, "What is it that we usually or unusually do?" The intent of this question was to identify exceptions to usual practice and/or dominant patterns of practice in the department. That allowed us to use the database, although it wasn't much of a database at that time. There was, I think, a total memory of 75k in the Clinic, so there wasn't much electronic data. We had data from medical record reviews that we could put together by hand.

The third question was, "What is it that our patients expect of us?" We purposefully put that question third because that was new territory. People were in the habit of asking about satisfaction, but people weren't in the habit of asking about expectations. It was our belief that if we could understand the expectations of patients, we could better design and respond to those expectations. Those three questions: "What do we all agree we could do better? What is it that we usually or unusually do? What is it that our patients expect of us?" framed our efforts at St. Louis Park, and then at Park Nicollet, after the merger.

NEUHAUSER: You have been influenced by individual patients and their families. Earlier you told me a story about being up all night caring for a terminally ill child.

BATALDEN: Just prior to my acceptance of the administrative duties for the Bureau of

³ St. Louis Park Medical Center, a group practice established in 1950 in a suburb just west of Minneapolis, merged in 1983 with another physician group, the Nicollet Clinic, to form the Park Nicollet Medical Center. In the '70s, St. Louis Park Medical Center explored an ambulatory care review system and then, a few years later, a Quality Assurance Program, which received partial funding from the W.K. Kellogg Foundation. [Sources: St. Louis Park Historical Society. *Park Nicollet Medical Center/St. Louis Park Medical Center*. <http://www.slphistory.org/history/parknicollet.asp> ; and, Batalden, P.B., McClain, M.P., and others. Quality assurance in the ambulatory setting: an operating program. *The Journal of Ambulatory Care Management*;1(4):1-13, Nov. 1978.]

Community Health Services, I had the privilege of working at the National Institutes of Health on the acute leukemia service for children. This was in 1969, just after I had finished my residency in pediatrics. I learned a lot about being a doctor through that experience.

Kathy, a girl of about eleven, was a new patient there with acute myelogenous leukemia. She was quite sick. I didn't have hundreds of patients, I had a few patients, and she was one of them. I was intent on putting myself between Kathy and her death from this disease. Finally, my efforts were both noticed and commented upon by her parents, who said to me, "You know, Doctor, you have to go home and get some rest." It was through caring for these children that I had the opportunity to understand how doctors don't heal people as much as they remove barriers to healing. The healing goes on inside the patient—if that's going to happen.

At the NIH, among the physicians who were caring for these children, they had had a couple of doctors commit suicide and another who had had a nervous breakdown, so they started a therapy group for the doctors led by Ken Artiss,⁴ who was head of psychiatry for Walter Reed, and a wonderful guy. He focused the group on small group leadership. It was a marvelous experience in thinking about what was the legitimate role of the leader—the doctor—in the small group of family and patient. I learned a lot.

NEUHAUSER: Those ideas about connecting with the patient, the cooperative healing process of patients and family, and leadership are themes that have not disappeared from your life.

BATALDEN: They've been very central. The idea is that whatever we do that contributes to health is co-produced by the professional and the patient. This process of co-production is one that we haven't paid as much attention to in the preparation of doctors as we might. There are capabilities and dispositions that professionals can acquire that enable this co-production process to work better.

NEUHAUSER: That brings up another theme that's run through your life—the need to educate health professionals in different ways. That's been a constant theme in what you're doing.

BATALDEN: Yes.

NEUHAUSER: It sounds like you had a mind prepared to come across Edwards Deming.⁵

BATALDEN: Yes. While practicing as a pediatrician here in Minneapolis, I noticed that good doctors were becoming dispirited. They were leaving their practices early. They were talking about how they didn't want their children to follow them into medicine. It seemed that there was a big shift that was at work. Walsh McDermott⁶ had said earlier that there were the two traditions of

⁴ Kenneth L. Artiss, M.D. (1913-2001) served in the Army Medical Corps for 21 years, retiring with the rank of Lieutenant Colonel. He was chief of the department of psychiatry at the Walter Reed Army Medical Center's Institute of Research. [Source: Arlington National Cemetery. <http://www.arlingtoncemetery.net/klartiss.htm>]

⁵ W. Edwards Deming, Ph.D. (1900-1993) was a consultant, thought leader, teacher, and prolific author on topics related to statistical approaches to quality control. [Source: The W. Edwards Deming Institute. <https://www.deming.org/>]

⁶ Walsh McDermott, M.D. (1909-1971) was a researcher, clinician, and professor of public health and medicine at Cornell. He wrote, "Medicine itself is deeply rooted in a number of sciences, but it is also deeply rooted in the Samaritan tradition. The science and the Samaritanism are both directed toward the same goal of tempering the

Samaritanism and science that underpinned medical practice. It seemed to me that there was a third tradition that was emerging in the '70s, and that was the tradition of social accountability. There was Samaritanism, science, and social accountability. This was a paradigm shift, and when a shift like that occurs, there are reactions.

I went back to take a look at the history of the introduction of science to medicine in an effort to understand how the profession might respond now to a new tradition being added. There were outrageous things that had happened historically. For example, professors of medicine were suggesting that the femur in the human was actually naturally curved like the femur of the great apes, but that tight britches had made the human femur straight. It was certainly not the fact that anything like science would ever come to an equal position with Samaritanism in the art and work of medicine.

If there was a third tradition—social accountability—emerging, it would not be a happy time for the folks in the dominant positions who were in the habit of moving Samaritanism and science forward, but not in the habit of moving social accountability forward along with that. It seemed to me that this period of unrest was manifested in early departures, early retirements, and in the, “I don’t know what my son is going to do, but I sure hope he doesn’t go into medicine,” kind of talk. What was happening was that doctors were losing their sense that they could influence the settings in which they worked, and yet were being held accountable for the care received in those settings. I was struggling to find some pathway to understand how to take action.

Then, in the Sunday, May 10, 1981, issue of *The New York Times*, Steve Lohr wrote about W. Edwards Deming. That article introduced me to Deming. Steve Lohr said in the article that Deming believed that people who received the benefit of a product or a service ought to have some say in what quality meant. Lohr said that Deming also believed that people wanted to do their best, but that the settings in which they worked often prevented them from doing that.⁷

I believed both of those things, but I had never heard of this man. I called him, and he invited me to a four-day seminar in Atlanta. My colleague, pediatrician Larry Vorlicky and I went, and it was an amazing experience. There were maybe 400 engineers in the room.

NEUHAUSER: Four hundred engineers and two physicians.

BATALDEN: Yes, and two physicians. People were smoking. The audio-visual was a disaster. Deming was hard of hearing, so the loudspeakers were aimed both at him and at us, and there was feedback from the speakers. He was up there on stage reading from his book.

I have the book right here that he was reading from. I kept the workbook from the session. It was put on by the George Washington University Continuing Engineering Education, and the title was, “Japanese Methods for Productivity and Quality,” Course #617. It was December 7-10, 1981.

harshness of illness and disease.” [Sources: McDermott, W. *Medicine: the public good and one’s own*. *World Health Forum*;1(1,2):123-132, 1980. [http://whqlibdoc.who.int/whf/1980/vol1-no1-2/WHF_1980_1\(1-2\)_p123-141.pdf](http://whqlibdoc.who.int/whf/1980/vol1-no1-2/WHF_1980_1(1-2)_p123-141.pdf); and, Beeson, P.B. *Walsh McDermott 1909-1981, A Biographical Memoir*. Washington, DC: National Academy of Sciences, 1990, p. 298. <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/mcdermott-walsh.pdf>]

⁷ [Source: Lohr, S. He taught the Japanese. *The New York Times*, May 10, 1981. <http://www.nytimes.com/1981/05/10/business/he-taught-the-japanese.html>]

He was up there reading from this book, talking about ball bearings and manufacturing processes. I wondered what in the world we were doing there. This was a bizarre kind of thing.

We decided to take him to dinner. Larry and I invited him so that we might understand a little bit more about him. It was at that dinner that Dr. Deming talked about his wife, who had Alzheimer's disease, and his interaction with the health care system. Suddenly, I began to realize that he wasn't talking just about ball bearings. He was talking about a theory of work and a theory of the workplace and a theory of the worker and a theory of the role of the beneficiary in the ongoing system that produced goods and services.

I went back into the session—it was a four-day session—with an entirely different idea about what this man was trying to say. I realized that we couldn't use that language and move directly into health care. We would have to work hard on trying to understand what he was saying and then re-language what he was saying in a way that would make it possible for doctors and nurses to learn.

NEUHAUSER: You went back and rewrote it.

BATALDEN: We did. That dinner was on the night of the first day of the seminar, December 7, 1981.

NEUHAUSER: We should footnote that. That should be an historical landmark in the history of quality improvement. We'll come to another one in your career, and I would like to add to it Codman's display of his cartoon about a century ago.⁸

BATALDEN: There is no question about that. In response to the four-day workshop, I tried writing out what I thought Deming's 14 points would be for medical service, and I sent them to him. I didn't hear anything from him until I was paged for a call in the Madison, Wisconsin, airport. It was my secretary, who had Deming on the line. He wanted to ask my permission to incorporate my words into his new book, *Out of the Crisis*,⁹ which was the book that grew out of the workshop. He was asking if I would let him publish my version of those 14 points in this book, which came out in 1982.

I said, "Well, of course! By the way, did I get it right? I would like some feedback about whether I did." He made a few suggestions. That was the first formal effort.

NEUHAUSER: That could be the landmark of the first published statement about applying these ideas to health care.

BATALDEN: It was certainly one of the early pieces that existed. It may be the first one.

⁸ Ernest Amory Codman, M.D., commissioned a cartoon in 1915 on the topic of how Massachusetts General Hospital approached quality and patient safety. Dr. Codman founded his own hospital in Boston in 1911 to enable him to pursue his quest for better quality care and ultimately resigned from Massachusetts General Hospital. Dr. Codman's work led in later years to the creation of the Joint Commission, a hospital accreditation organization [Source: Outcomes research: embracing Ernest. *Massachusetts General Hospital News*, Oct. 28, 2011. <http://www.massgeneral.org/about/newsarticle.aspx?id=3059>]

⁹ [Source: Deming, W.E. *Out of the Crisis*. Cambridge, MA: Massachusetts Institute of Technology, Center for Advanced Educational Services, 1982.]

NEUHAUSER: I know of no earlier one.

BATALDEN: You may be right. It was a transformative kind of encounter because it convinced me that this was a frame that health professionals could understand and use. It was not just the standard business logic. This was a scientifically curious and empirically-driven way of building a different kind of system for practice that health professionals could understand and join. I was very curious about that.

I spent a couple of years thinking about how we would take this forward. Finally, I couldn't stand it anymore. I had to see if I could find somebody who would pay me to do this full time and see if I could do this work on an ongoing basis.

NEUHAUSER: Before we talk about that, you were telling a wonderful story about you and Deming, as a reflection on Deming and who he was.

BATALDEN: He was kind to me. He lived 13 years after this workshop. He was born in 1900 and was in his 90's when he died.

NEUHAUSER: He outlived his wife.

BATALDEN: Yes, he did. Midway in our relationship, he invited me to participate in a series of video tapes in the Deming Library. The taping was going to be in the afternoon on Sunday. I went to church with him on Sunday morning. He attended an Episcopal church in Washington, D.C. He loved to sing, and he composed music.



Paul Batalden (left) with W. Edwards Deming as they work on the videotaping series.

After the service, I followed him as he pulled himself up the stairs. We turned the corner into a place where people were standing and having coffee after the service. Everybody was standing, but there was one chair at the end of the table with a cup that had about two-thirds full of coffee, with a little dash of cream, and half a doughnut. There was an older woman who had been attending to Ed Deming's coffee needs for quite a few years in this particular church. It was touching that he was especially cared for as a widower in that community.

Later, when I attended his memorial service in that same church, there were many people there from Japan, the heads of General Motors, and so on. At that service, sitting by herself in a pew near the front, was this same woman who had been looking after this man. It was very touching.

NEUHAUSER: You did find a few people to talk to about these ideas.

BATALDEN: Yes. I was in a meeting with Don Berwick¹⁰ and suggested that he go to one of these four-day workshops. He did, but had a lot of trouble with the workshop. He signed up and then cancelled and then finally went. After the first day, he took a plane home rather than stay through the whole thing and then decided to go back the next morning. He was obviously wrestling with what Deming was trying to say. Later, Brent James¹¹ and I were working on a commission, and I suggested to Brent that he also go to attend one of the workshops.

Both of these people found those workshops to be similarly transformative in their own thinking and understanding. They were such capable leaders that they were able to take these insights forward. There were others, but those two come to mind because of the subsequent leadership role that they played.

NEUHAUSER: That's what led you into thinking about the Hospital Corporation of America.

BATALDEN: Right. I got back to Minnesota after that workshop and resolved that if there was a way for me to find work that would allow me to take these insights forward, I really wanted to try and do that. Leigh Cluff¹² at the Robert Wood Johnson Foundation had been very encouraging. However, he said that although these ideas were really quite interesting, they seemed pretty far out. The Robert Wood Johnson Foundation wanted to fund things that were more proximal—things that were closer to reality and were more likely to find their way into practice.

NEUHAUSER: He probably wasn't alone on this.

BATALDEN: Oh, I'm sure he wasn't! Then I went to a large association of not-for-profit hospitals, and they thought they knew exactly what I wanted to do. They said, "We have this job in utilization review, and that would be exactly what you want to do." I said, "No, that's not exactly what I want to do." I was discouraged about trying to find a spot. One university said they would help out. They even would offer me a parking place. I thought to myself, "I have two daughters needing to go to college. A parking place is good, but it's really not the same as college tuition." I was despondent about finding a place.

Then Paul Ellwood suggested that I go talk to Tommy Frist¹³ in Nashville at the Hospital Corporation of America (HCA). I didn't know anything about the Hospital Corporation of America, but Paul facilitated the connection. I went down to visit with Dr. Frist, who was the CEO

¹⁰ Donald M. Berwick, M.D., a pediatrician who founded the Institute for Healthcare Improvement, served as head of the Centers for Medicare and Medicaid Services, and is running for governor of Massachusetts in 2014. [Source: *Don Berwick Democrat for Governor* <http://www.berwickforgovernor.com/>]

¹¹ Brent C. James, M.D., a quality improvement expert, serves as vice president at the Institute for Healthcare Delivery Research at Intermountain Healthcare in Salt Lake City. [Source: Intermountain Healthcare. <https://intermountainphysician.org/UrologySeminar/Pages/2014James.aspx>]

¹² Leighton E. Cluff, M.D. (1924-2004), an expert in infectious diseases, was a medical school professor at Johns Hopkins and later at the University of Florida. He served as president of the Robert Wood Johnson Foundation. [Source: Obituaries. *ACP Internist*, Nov. 2004. <http://www.acpinternist.org/archives/2004/11/obituaries.htm>]

¹³ Thomas F. Frist, Jr., M.D. one of the founders of the Hospital Corporation of America, also known as HCA. His oral history: Garber, K.M, editor. *Thomas F. Frist, Jr., M.D., in First Person: An Oral History*. Chicago: American Hospital Association and Health Research & Educational Trust, 2013, can be found here: <http://www.aha.org/research/rc/chhah/oral-histories.shtml>.

of HCA. As it happened, two weeks earlier Tommy Frist had been at the Business Roundtable and had been bicycling with the heads of General Motors and Ford Motor Company. These two CEOs were kibitzing about what effect Ed Deming was having in their organizations—how he had revolutionized the idea about quality and about how to go about doing their work differently. Tommy said to me, “I thought that was interesting, but it probably would never come to health care.”

Just two weeks later, there I was in his office saying that what I wanted to do was to take Deming’s thoughts and create a model that would allow hospitals and health care to take advantage of these insights. I said that I would need five people for ten years. Tommy looked at me and said, “Paul, this is a public equity company. I have to report quarterly to the shareholders about how we’re doing.” I said, “You know, Tommy, you didn’t ask me what you had to do. You asked me what I needed to do what I was going to do.”

He said, “This is the strangest kind of arrangement to be thinking about—a small group of people for ten years.” I said, “Furthermore, whatever we develop has to be put in the public domain, because this business about quality and health care quality is not a private, proprietary deal. It’s a public deal.” He said, “But Paul, this is a private company!” I said, “You have to meet the standards of the Joint Commission and the public standards of quality.” He said, “What do we get?” I said, “You get it first.” He said, “Okay. There’s logic in that.” He was so generous and willing to take on this proposition. That led to us being actively involved in adult education, because we would put on workshops for the top leadership in hospitals and health care systems.

NEUHAUSER: At this time, HCA had a couple hundred hospitals in its system, so you had quite an audience.

BATALDEN: Yes, they had 460 hospitals, mainly in the United States, but some were international. They had a number of hospitals that they managed for communities as well, so there were owned, managed, and international hospitals. We developed a set of courses—a set of ways of introducing health professionals and health leaders to these ideas in their hospitals—and developed feedback systems from patients and employees and doctors to complement that.

NEUHAUSER: There were a couple of hospitals that went charging ahead with it, like Twin Falls, Idaho.

BATALDEN: Yes. Twin Falls, Idaho, is an example of an HCA-managed hospital. John Bingham was the CEO. Paul Miles was the medical director.¹⁴ They took these insights and made a very different kind of organization out of it. People in Wichita, Kansas, at Wesley Hospital, and people in Atlanta at West Paces Ferry—these were places where the CEOs clearly got it. Another

¹⁴ John Bingham was administrator at the Magic Valley Regional Medical Center (Twin Falls, Idaho) in the ‘90s. Pediatrician Paul V. Miles, M.D., served as director of clinical quality improvement and co-director of the Center of Excellence in Rural Healthcare at the hospital. [Sources: Flower, J. Catalyzing the community: building consensus, talking with people, solving problems together, forming partnerships. *Healthier Communities Action Kit*, Module 2, 1993. <http://www.well.com/~bbear/catalyze.html>; and, *Multi-Specialty MOC Portfolio Approval Program*. <http://mocportfolioprogam.org/program-staff/>]

was in Braintree, Massachusetts, where there is a small chronic disease hospital.¹⁵

NEUHAUSER: I was on the board of another rehabilitation hospital in Braintree and I had never heard of this HCA hospital.

BATALDEN: The hospital had an enterprising young nurse-turned-administrator by the name of Maureen Bisognano, who was the CEO.¹⁶ She was so clever and was in the first group—we had a special course in HCA for the CEOs, then we had a course for senior leaders, and then we had a course for department managers, conducted onsite. The CEOs had to go through the course first, then the leadership team. They had to work in these new ways themselves first because, as a practicing physician, I had been a participant in a trail of broken treaties between leaders who sort of wanted to invite the medical staff to do this or that, but they themselves couldn't do it. I wanted to start with the leaders being able to work in these new ways themselves first.

Maureen was an attentive CEO. One time she was walking out through the laundry past a man working there, and noticed that he had a little piece of paper on the wall with notations on it. She asked, "What's this?" He said, "It's nothing. I'm just keeping track of stuff." She said, "What are you keeping track of?" He replied, "I'm keeping track of the quality of my work." She said, "Where did you get this idea?" He said, "Well, I heard that people were doing it. I decided I could do it myself." What Maureen Bisognano had created was an environment for learning inside this little hospital that encapsulated her sense of what organizations could be capable of.

NEUHAUSER: Her experience captivated the group of hospitals that came together in Boston to report on the initial pilot.

BATALDEN: Yes, exactly.

NEUHAUSER: At that meeting, she was with many other high-powered hospitals—real big league players. I remember that the representative of the Brigham and Women's Hospital had to stand up and apologize, saying, "I couldn't get any change whatsoever. I was told that we are perfect. We don't need to change. We are just right. I have to apologize to the group." Yet here was this CEO from a little hospital in Braintree who said, "We've changed nursing staffing, and it's much better now."

BATALDEN: Yes. That time at HCA was a wonderful, active time for me to learn about adult learning. I was also working with CEOs and medical staff leaders and nursing leaders and division heads in hospitals. I worked to learn how adults learn as we were integrating these messages about different ways of thinking about a system or an organization.

NEUHAUSER: You also had a good team of people with the five positions for ten years.

BATALDEN: It was a wonderful group of people. Gene Nelson, Dave Buchanan, Tom

¹⁵ The hospitals referred to were known at the time being discussed as: HCA Wesley Medical Center (Wichita), HCA West Paces Ferry Hospital (Atlanta), and Massachusetts Respiratory Hospital. [Source: American Hospital Association. *Guide to the Health Care Field*, 1991 ed. Chicago: AHA, 1991.]

¹⁶ Maureen A. Bisognano, an authority on health systems improvement, went on to an executive position at the Juran Institute and then became president and CEO of the Institute for Healthcare Improvement. [Source: Bisognano to succeed Berwick as IHI CEO. *HealthLeaders*, July 9, 2010.]

Gillem, Dave Hardison, and Marge Morris¹⁷—those people were wonderful, very capable, very talented, and each from a different background. Gene, for example, was an accomplished health services researcher.¹⁸ Dave Buchanan had experience with the peer review organizations as the executive director for peer review organizations.¹⁹ Tom Gillem worked as a reporter-editor with the Associated Press, and Dave Hardison was a Ph.D. statistician.²⁰

NEUHAUSER: I heard that one of the reasons that HCA was interested in doing this was criticism, particularly by Arnold Relman,²¹ challenging the for-profit enterprise as a bad thing. HCA wanted to return to a place where they could demonstrate that they were doing good quality things.

BATALDEN: My sense is that there were a lot of pressures circling HCA that I didn't know very much about. I was not consciously part of a reactive strategy. I was more part of a proactive strategy. There may well have been other things circling, both in the public domain about HCA, or even in the investor community, about HCA. The side of HCA that I saw was in communities that had previously had as hospitals the back rooms of a doctor's house, which were replaced by the 220-bed prototypical HCA hospital. HCA worked extensively with contractors so that these hospitals could be built well and maintained well. Tom Frist, Sr., was a cardiologist in Nashville who loved visiting these hospitals.²² Whenever he visited, he would go to the boiler room of the hospital. The man in charge of the furnace would know that Dr. Frist was coming. You could eat your lunch on the floor of the boiler rooms.

I saw a place whose stated mission was, “a commitment to the care and improvement of human life,” and that they wanted to strive to deliver high-quality, cost-effective care. I put the HCA mission statement on the back of my business card as a reminder, as I tried to take Deming's idea and fold it into the mission and purpose of HCA. The process of incorporating Deming's insight into the identity policy of the organization, whether the organization was for-profit or not-for-profit, was a critical lesson for me because I saw that it enabled me to claim that this new way of work was perfectly consistent with the overall aim of the enterprise or the company or the hospital.

I used this same logic at the Henry Ford Health System and at Community Hospitals in Indianapolis and elsewhere, as we worked outside of HCA. People who have done analytic work comparing the patterns of for-profit hospitals and not-for-profit hospitals have had different

¹⁷ Marge Morris, a dietitian, served with the HCA Quality Resource Group from 1986 to 1994. [Source: LinkedIn <https://www.linkedin.com/pub/marge-morris/18/69b/580>]

¹⁸ Eugene C. Nelson, D.Sc., is currently a professor at the Geisel School of Medicine at Dartmouth. [Source: Dartmouth College. <https://geiselmed.dartmouth.edu/faculty/facultydb/view.php?uid=67>]

¹⁹ E. David Buchanan was executive director of the Utah Peer Review Organization from 1974 to 1987. [Source: HealthInsight board names a new president and CEO. *Deseret News*, July 13, 1999. <http://www.deseretnews.com/article/707134/Business-briefs.html?pg=all>]

²⁰ C. David Hardison, Ph.D., went on to become a senior executive at Recombinant Data Corporation. [Source: CDISC announces new board members and chief technology officer. *Press Release*, Jan. 18, 2012. http://www.redorbit.com/news/science/1112458184/cdisc_announces_new_board_members_and_chief_technology_officer/]

²¹ Arnold S. Relman, M.D. (1923-2014) became editor of the influential *New England Journal of Medicine* in 1977. [Source: Marquard, B. Dr. Arnold Relman, 91; ex-N.E. Journal of Medicine editor. *The Boston Globe*, June 17, 2014. <http://www.bostonglobe.com/metro/2014/06/17/arnold-relman-former-new-england-journal-medicine-editor-was-forceful-voice-health-care-debate/k4Flrz8z2xgWyilyMB555I/story.html>]

²² Thomas F. Frist, Sr., M.D. (1910-1998), along with his son and Jack C. Massey were the founders of HCA. His oral history: Weeks, L.E., editor. *Thomas F. Frist, Sr., in First Person: An Oral History*. Chicago: American Hospital Association, 1986, can be found in the collection of the American Hospital Association Resource Center.

insights and different agendas that they were working on—perfectly legitimate in many ways. Yet my window on this was to take Deming’s work and to figure out a way to make it possible for people to understand that. I received support and encouragement for what I was doing. I really appreciated that.

NEUHAUSER: I’m thinking again of Ernest Amory Codman. Codman had to leave a well-known hospital and start his own proprietary hospital in order to achieve his quality goals because he couldn’t get them done anywhere else.

BATALDEN: Right.

NEUHAUSER: I think you have more skill at surviving in organizations than Codman did—an important difference.

BATALDEN: Shortly after I got to HCA, Gail Warden, the CEO of the Henry Ford Health System, approached me to see if I wanted to leave HCA.²³ I began to have conversations with him. We were making good progress at HCA around the hospital as an organization with the administrators and the staff, but we weren’t yet ready to take the clinical work into the centerpiece of what we were doing with the hospitals.

It occurred to me that Henry Ford would be a good place to work on the clinical and medical staff-related issues. I asked Gail Warden if he would be interested in a shared relationship with me and the Quality Resource Group at HCA, creating a sister organization at Henry Ford. Then I asked Tommy if he was up for this possible shared arrangement—an unorthodox arrangement because Henry Ford was one of the largest not-for-profit health care systems, and HCA was one of the largest for-profit systems. That they would share a resource group around quality was unusual, but it seemed to me that both would benefit. They both agreed.

We entered into a multi-year arrangement where I would go to Detroit for about a week each month, and there was a small staff there. Trish Stoltz led that group.²⁴ She was a wonderful partner and colleague. Vin Sahney²⁵ was the senior vice-president who was the sponsor for the activity. It was there that I received my first endowed chair of quality improvement education and research. Gail Warden offered me the Ernest Breech Chair of Quality Improvement.²⁶ That might have been the first endowed chair of quality improvement education and research in the world.

NEUHAUSER: When Gail Warden first came from Group Health in Seattle, he said that there would be a weekend with the senior leadership. Everybody was to read the Mary Walton book

²³ Gail L. Warden was president and CEO of the Henry Ford Health System (Detroit) from 1988 to 2003. His oral history: Garber, K.M., editor. *Gail L. Warden in First Person: An Oral History*. Chicago: American Hospital Association, 2010, can be found here: <http://www.aha.org/research/rc/chhah/oral-histories.shtml>

²⁴ Patricia K. Stoltz served for 15 years as a quality improvement leaders at Henry Ford Health System. [Source: Goonan Performance Strategies. <http://www.goonangps.com/trish-stoltz/>]

²⁵ Vinod K. Sahney, Ph.D., was in leadership at Henry Ford Health System for 25 years. He later became a senior fellow with the Institute for Healthcare Improvement. [Source: Institute for Healthcare Improvement. *Profiles in Improvement*.

<http://www.ihl.org/resources/Pages/ImprovementStories/ProfilesinImprovementVinodSahneyIHSeniorFellow.aspx>]

²⁶ Ernest R. Breech, a renowned problem-solver and member of the Automotive Hall of Fame, was in leadership at General Motors and, later, Ford Motor Company. The Ernest Breech Chair is at the Henry Ford Health Sciences Center. [Source: *Automotive Hall of Fame*. <http://www.automotivehalloffame.org/inductee/ernest-breech/11/>]

about Deming. He personally inscribed a book for each of his senior managers, saying, “Joe, I want you to read this. This is important.” By that weekend, everyone had read it. That was said to be one of the fastest organizational changes ever.

BATALDEN: Gail worked hard on changes at the Henry Ford Health System. The system had an interesting relationship to the Ford Motor Company and to Henry Ford himself. Henry Ford had this relationship with the “Cheaper by the Dozen” individual...

NEUHAUSER: Gilbreth.²⁷

BATALDEN: Yes, Gilbreth, and Frederick Taylor,²⁸ with his ideas about scientific management. I don’t know whether Henry Ford was in Boston at the meeting earlier where Codman was introduced.

NEUHAUSER: He was, yes.

BATALDEN: I think Gilbreth was at that meeting.

NEUHAUSER: He was the speaker, along with James Michael Curley, a great Boston mayor.

BATALDEN: Yes, the mayor, right. There are interesting connections between Ford Motor Company, Henry Ford, and the idea of changing the way organizations are set up in order to produce a better quality product. Ernest Breech was a quality and organizational advisor to Henry Ford II. That it was named the Breech Chair was significant.

NEUHAUSER: Do you feel you had an impact at Henry Ford?

BATALDEN: Yes, as evidenced by the fact that they eventually became winners of the Malcolm Baldrige award.²⁹ We set up the early awareness that was necessary to build that capacity for quality and improvement into the organization over time. It was there that we began to recognize that at the front lines of care, it wasn’t just a doctor and a patient, but it was a small group of people that came together. It was the nurses and physicians and patients and information that were all part of the same small front-line system.

This big change of social accountability that was being introduced into medicine was being manifested by the fact that it was now a small microsystem as the basic building block for health

²⁷ Frank Bunker Gilbreth, Sr. (1868-1924), his wife Lillian, and their 12 children were the subject of the memoir and movie, *Cheaper by the Dozen*. Gilbreth was a mechanical engineer who has been called the Father of Management Engineering. [Source: American Society of Mechanical Engineers. *Frank Bunker Gilbreth: Biography*, May 2012. <https://www.asme.org/engineering-topics/articles/construction-and-building/frank-bunker-gilbreth>]

²⁸ Frederick Winslow Taylor (1856-1915) studied ways of improving worker productivity in turn-of-the-century steel mills and other industries. His influential work, *The Principles of Scientific Management* was published in 1909. [Source: Public Broadcasting Service. *Who Made America?* http://www.pbs.org/wgbh/theymadeamerica/whomade/taylor_hi.html]

²⁹ The Malcolm Baldrige award was established by Congress in 1987 as a way to challenge American companies to focus on quality improvement. The Baldrige program was later expanded to education and health care organizations (1999) and to not-for-profit and governmental organizations (2005). [Source: Baldrige Performance Excellence Program. *History*. <http://www.nist.gov/baldrige/about/history.cfm>]

care instead of the individual health professional. At Henry Ford, we came to that insight about those front-line systems. At Henry Ford, we began to work more directly on clinical processes and outcomes. We complemented Gail's focus on trying to create a true system rather than just an assembly of hospitals and clinics.

NEUHAUSER: You and Patricia Stoltz wrote a very well-known article at the time.³⁰

BATALDEN: That article was the first where we talked about a knowledge framework about all of this. To look back earlier in my life, it was during my freshman year in medical school that John Kennedy died. The pedagogy in medical school was awful. I had been interested since college days in intellectual history and the different ways of knowing. I was just a whisker's distance from jumping out of medical school and going to graduate school in history and intellectual history, because I was so fascinated with the history of ideas and the way the different knowledge systems work. Eventually, medical school got interesting, so I stayed. I realized recently that I didn't ever leave the history of ideas. I never left my curiosity about epistemology. At any rate, that article with Trish was an invitation to think about the multiple knowledge systems that went into this work.

NEUHAUSER: These also would be examples of your mid-level theorizing about an important way to look at the world.

BATALDEN: Yes. Robert Merton³¹ helped me understand that on one end of the continuum there is grand theory, like Marx and Weber and others, and on the other end there is direct observation of experiments. However, there's also something in between that Merton called "mid-range theory." It's an enabling set of ideas, or frames of thinking. It's a way of inviting people into the territory. Those frames of reference, or those ways of putting ideas together, usually have been my own efforts intended to make sense of things for myself, not intended for others. But, others have found them helpful as time has gone on.

NEUHAUSER: Using the airplane analogy, I would see at the lower levels the case examples and the descriptions and the power of those. For me, Deming would be at the higher level because he is speaking to all organizations everywhere. Deming could be dealing with ball bearings and it would be appropriate. I think you have been saying, "I really am talking about health care. If it works elsewhere, that's not really exciting me, but I wouldn't complain." I agree, there is a huge value with that mid-level. That's your summary. It's not at 40,000 feet and not on the tarmac.

BATALDEN: Right, not on the tarmac, but it's taking off and landing.

NEUHAUSER: In 2010, you won the Deming Medal from the American Society for Quality.

³⁰ [Source: Batalden, P.B., and Stoltz, P.K. A framework for the continual improvement of health care: building and applying professional and improvement knowledge to test changes in daily work. *Joint Commission Journal on Quality Improvement*;19(10):424-447, Oct. 1993.]

³¹ Robert K. Merton (1910-2003) was a sociologist who pioneered concepts such as the focus group and the theories of the middle range. [Source: Robert K. Merton, versatile sociologist and father of the focus group dies at 92. *The New York Times*, Feb. 24, 2003. <http://www.nytimes.com/2003/02/24/nyregion/robert-k-merton-versatile-sociologist-and-father-of-the-focus-group-dies-at-92.html>]

BATALDEN: That was a real treat. I've spent quite a bit of time trying to understand what it was that Deming was following. There is a Chinese proverb that suggests that if you want to honor someone, you should not follow them, but try to follow what they were following.

In trying to understand the things that formed Deming's thinking and ideas, one must come to grips with Walter Shewhart's³² contributions about the democratization of science in daily work. Walter Shewhart's idea of a control chart had to do with allowing people at the front lines of work to understand when they were dealing with variation that was the result of a chance occurrence, or variation that was the result of a special cause or an assignable cause.

Shewhart picked up a lot of his insight from the work of Clarence Lewis.³³ C.I. Lewis was an epistemologist who worked both at Stanford and at Harvard, and taught about the importance of observation and empirical study of daily work. He picked that up from some combination of John Dewey and James Peirce.³⁴ The intellectual pathway for Deming was an interesting and, in some ways, uniquely American kind of frame—this Dewey and Peirce pragmatism and learning and education, and then Shewhart's way of understanding how front-line people can be enabled to use statistical thinking and scientific thinking in their daily work. It was on those shoulders that Deming stood as he took his message forward.

NEUHAUSER: It was an American story, yet it seemed to work in Japan.

BATALDEN: Yes, it did. What was interesting was when MacArthur³⁵ invited Deming to come to Japan as part of the post-World War II reconstruction effort, Deming's invitation came from the Japanese Union of Scientists and Engineers (JUSE), which was led by a variety of academics, including Kaoru Ishikawa.³⁶ Ishikawa's connection with Deming over the years was substantial. It's not an accident that Deming moved his honorarium from the JUSE talks into a fund which became the corpus for the Japanese Deming Prize.

This seemed straightforward to me. When I was in Japan, I asked people about Deming's 14 points, and they said, "What?" I said, "Dr. Deming's 14 points." Then I looked it up, and in

³² Walter A. Shewhart (1891-1967) was a statistician who is best known for the Shewhart control charts.

[Source: Walter A. Shewhart, 1891-1967. *AMSTAT News*:19-21, Sept. 2009.

<http://www.amstat.org/about/statisticiansinhistory/bios/ShewhartWalter.pdf>]

³³ Clarence Irving (C.I.) Lewis, Ph.D. (1883-1964) was a philosopher working primarily in the areas of epistemology, logic, and ethics. He retired as the Edgar Peirce Professor of Philosophy at Harvard. [Source: Clarence Irving Lewis. In: *Stanford Encyclopedia of Philosophy*, 2012. <http://plato.stanford.edu/entries/lewis-ci/>]

³⁴ John Dewey, Ph.D. (1859-1952) was a philosopher who studied educational theory, metaphysics, and the theory of knowledge. [Source: John Dewey. In: *Internet Encyclopedia of Philosophy*. <http://www.iep.utm.edu/dewey/>]

James Sanders Peirce (1839-1914) was part of the American philosophical tradition known as pragmatism. [Source: *Stanford Encyclopedia of Philosophy*. <http://plato.stanford.edu/entries/pragmatism/>]

³⁵ Douglas A. MacArthur (1880-1964) served as Supreme Commander of the Allied Powers in Japan, helping rebuild and establish a democratic government. [Source: Public Broadcasting Service. *People & Events: General Douglas MacArthur (1880-1964)*. <http://www.pbs.org/wgbh/amex/macarthur/peopleevents/pandeAMEX96.html>]

³⁶ Kaoru Ishikawa, Ph.D. (1915-1989) was instrumental in the development of a Japanese quality philosophy, particularly the concept of the quality circle, based on American principles of statistical quality control. He is particularly known for the fishbone, or cause and effect diagram. [Source: American Society for Quality. *Kaoru Ishikawa*. http://asq.org/about-asq/who-we-are/bio_ishikawa.html]

Deming's book, the 14 points are referred to as "14 Points for Western Management."³⁷ I realized that that was not what he went to Japan to talk about. He was talking about the experimental PDSA³⁸ Cycle of conducting tests of change at work. That was grounded in Shewhart's work. Deming always said that he went there to talk about the Shewhart Cycle, not about the Deming Cycle. The Japanese called it the Deming Cycle—whatever you call it, that's what it is.

NEUHAUSER: There is a story about Deming and a coat hanger.

BATALDEN: Yes, Deming came to understand the hospital as a peculiar challenge for improvement. During one of his hospital stays, he was in a hospital where they had those coat hangers that have a T-like metal piece instead of a hook. He was furious about this because he had enough trouble just standing and getting around and seeing at some distance. He was enraged at having to fit that little metal piece into the hanger bar. After he got well enough to leave, he sent the hospital CEO an unsolicited \$25,000 check for the purpose of buying coat hangers—the old-school coat hangers that people could use without having to fuss with this crazy system.

NEUHAUSER: He had a better time with medical stockings.

BATALDEN: Yes, at Henry Ford Health System. Because he spent a lot of time on airplanes and sitting and standing lecturing, he had a problem with swelling in his legs. One doctor suggested the benefits of elastic stockings. Deming was so grateful for that that he sent an unrequested donation of \$100,000, or something like that, to this doctor because the elastic stockings made such a difference in his life.

There's one other story about Deming and Henry Ford that comes to mind. Deming was scheduled to be at Ford Motor Company when a last-minute cancellation occurred. A hurried call was made to the Henry Ford Health System to let them know that Deming would be available if there was anything that it would make sense to have him participate in. Vin Sahney got this message. Vin hurried around and managed to rustle up several members of the board of trustees and several department chairs. A distinguished group gathered. Deming had lung disease at the end of his life, so it was easier for him to move around in a wheelchair, and he often needed oxygen. He was wheeled into this room full of people. It was an awkward moment. Vin Sahney, always the facilitator, said, "Dr. Deming, we're very glad to have you here. We've been wrestling with this problem of how to take costs out of health care. Do you have any advice for us?"

Deming had just been wheeled in, on oxygen, and he was fiddling with a partial dental plate that didn't fit quite as well as it used to, and he said slowly in his deep voice, "Well...I suppose you could begin...by stopping care...for people like me!" What in the world do you do with a comment like that in a setting like that? There was a certain penetrating truth about what he was saying—that he was benefiting by costly care.

NEUHAUSER: One more Deming-in-the-hospital comment—there was a letter he wrote

³⁷ Deming's 14 principles were first published in the book *Quality, Productivity, and Competitive Position*. Cambridge, MA: Massachusetts Institute of Technology, 1982. [Source: Stratton, B. Gone but never forgotten. *Quality Progress*, Mar. 1994. <https://www.deming.org/content/gone-not-forgotten>]

³⁸ The PDSA Cycle, also known as the Deming Cycle or the Deming Wheel, consists of the steps Plan-Do-Study-Act. It is used to obtain information that can be used to continuously improve products or processes. [Source: The W. Edwards Deming Institute. *The PDSA Cycle*, 2014. <https://www.deming.org/theman/theories/pdsacycle>]

saying, “The nurses couldn’t work any harder.”

BATALDEN: He had a soft spot in his heart for the worker, and he had a special place for nurses who cared for him. In later years, he had a nurse who was interested in quality accompany him on his travels to help him. I think his granddaughter became a nurse, and several others—such as Doris Quinn³⁹—became very special resource people for Deming and also became good interpreters of what he was reading and saying. I had a close working relationship with Doris Quinn, who arranged to loan me Deming’s personal copy of C.I. Lewis’ book, *Mind and the World Order*. I was able to go through and see where Deming had made marginal notes. I took advantage of reviewing that copy, which he had found particularly helpful in studying this epistemologist Lewis, in studying the different ways of building knowledge.

NEUHAUSER: Epistemology is the study of meaning.

BATALDEN: Yes.

NEUHAUSER: That’s a good transition to go on to the next stage in your career. How did you get to Dartmouth?

BATALDEN: After about a decade at HCA and Henry Ford, it became clear to me that we could continue to offer learning for health professionals who were themselves already graduates and in mid-career. We would never really get ahead of the game, though, if we didn’t begin to work earlier in the formation and development of health professionals.

In order to do that, we needed to have a way to be involved at the undergraduate and graduate levels in the education of health professionals. It became clear to me that if there was an opportunity to work with these ideas in an educational environment, I could work to dig the intellectual foundations—the epistemologies and ways of knowing that underpin this work—deeper. At the same time, we could offer models of how academic faculty could begin to work in this world. I reasoned that if we didn’t have faculty deeply connected to this work and this body of knowledge, we wouldn’t really sustain this effort. It would be a passing fancy that would come and go.

It was to that end that we developed the Summer Camp. It was to that end that I decided to take Jack Wennberg and Steve Plume’s offer to come to Dartmouth.⁴⁰ The efforts at health professional education at the Institute for Healthcare Improvement (IHI), and then later at the Association of American Medical Colleges (AAMC) and the Accreditation Council for Graduate Medical Education (ACGME), all began to fit into this next chapter in my life—which focused on health professional formation and development.

NEUHAUSER: Tell more about Summer Camp.

³⁹ Doris Quinn, Ph.D., went on to become the director of process improvement and quality education at the University of Texas M.D. Anderson Cancer Center (Houston). [Source: Graban, M. MD Anderson presentation: W. Edwards Deming: the man and the message. *Lean Blog*, July 27, 2012. <http://www.leanblog.org/2012/07/md-anderson-presentation-w-edwards-deming-the-man-and-the-message/>]

⁴⁰ John E. Wennberg, M.D. is founder of the Dartmouth Institute for Health Policy & Clinical Practice. [Source: Dartmouth College. <http://tdi.dartmouth.edu/faculty/john-e-wennberg-md-mph>]. Stephen K. Plume, M.D. is professor of surgery at Dartmouth. [Source: Dartmouth College. <http://tdi.dartmouth.edu/faculty/stephen-plume-md>]

BATALDEN: Summer Camp started in about 1993. There were a few teachers of physicians and nurses and health administrators who were getting interested in what this was all about and wanted to network. New England has a lovely summer, and summer camps in New England have a special place in the culture of New England. Gene Nelson suggested, “Why don’t you create a summer camp for health professional educators?”

We began with the creation of a weeklong experience for teachers of physicians, nurses, and health administrators. Our hunch was that if they would come and learn together, they could come to trust and respect one another, and work together to foster this field of the improvement of health care as a formal discipline. That group has grown. It’s now under the wonderful leadership of Linda Headrick,⁴¹ a physician/educator from the University of Missouri. This group of people has gotten to know one another and to enjoy that week enough so that many actually plan their summers around it.

Out of that informal environment of friendship and respect many things have happened. It was out of that environment that there was encouragement for the general competencies in graduate medical education. It was in that environment that the nursing deans came together to focus on the initiative to build the Quality and Safety Education for Nurses. That informal environment made it possible for people to discover new ways of teaching and new insights about the relationship of professional education and development to the ongoing improvement of care.

NEUHAUSER: It was probably *the* place where educators interested in quality improvement in health care came together.

BATALDEN: Yes, exactly.

NEUHAUSER: I expect over the years there were several hundred people that passed through that, many coming back over and over again.

BATALDEN: Yes, but there was the desire every year to have 20 percent of the group be people who had never been there before. There was a conscious effort to build it as a community of practice, allowing people to oscillate between central teaching roles in the Summer Camp week and more peripheral roles as participant.

NEUHAUSER: I expect a large number of people who came to Summer Camp went back to their institutions and influenced multiples of hundreds of health profession students and became the catalyst in many health centers.

BATALDEN: Exactly. They started Summer Camp as assistant professors and they eventually became deans. We had this problem of too many deans! We needed this stratification, though, ranging all the way from the most junior faculty person to senior faculty people in that group. It’s a good group—including some students.

NEUHAUSER: Summer Camp involves about 65 people at a time in a resort on a very nice lake in Vermont, with a mixture of work and a pleasant environment.

⁴¹ Linda Headrick, M.D., is professor of medicine at the University of Missouri School of Medicine. [Source: University of Missouri. <http://medicine.missouri.edu/imed/headrick-l.html>]

BATALDEN: We focused on the cognitive learning that occurred in the long mornings; the kinesthetic learning that occurred in exercise in the afternoons; and the gustatory learning that occurred in the evenings as we had dinner together.

One of the keys to keeping the vitality of the week in focus was adding a “wizard” to the week. We invited someone to think orthogonally to the drift of the meeting. We wanted that person to work on the theme, but to work at it from a different angle. Maybe Emily Dickinson was right—that we can tell the whole truth, but tell it slant.⁴² We wanted a wizard to “tell it slant,” and we wanted to have a way to provoke good discussion. We’ve had some wonderful people serve in that role—Tom Inouye and a man by the name of Duncan Neuhauser! David Leach⁴³ was another.

NEUHAUSER: Did you connect with undergraduate medical students? You certainly connected with residents and a variety of advanced students in courses there.

BATALDEN: Yes. At Dartmouth, the center of our work was in what Jack Wennberg had formed originally as the Center for the Evaluative Clinical Sciences (CECS), which is now the Dartmouth Institute for Health Policy and Clinical Practice. That was a graduate studies program that was in the medical school and in the college, offering both a master’s level and Ph.D. education. We had medical students from Dartmouth in the course, but the centerpiece of our activity was in the CECS, or today’s Dartmouth Institute.

We offered a family of courses with about 120 classroom contact hours in a year around this intellectual field of the improvement of health care. That core of learning and course work informed the work that we did as part of a study group for the Association of American Medical Colleges. The AAMC had a program to think about medical student outcomes. Paul Griner⁴⁴ was the person who led that program from the AAMC.

The focus on that recommendation for medical student education was around a handful of priorities. The first priority was that medical students should be able to know what good practice is. Secondly, that medical students should know the gaps, if any, between the best practices and the local practices. Thirdly, that medical students should know something about what it takes to close those gaps. That Medical School Objectives Project—MSOP #5—was the subject of a report that specifically focused on medical student education.⁴⁵

A lot of our effort was directed at the post-medical student/post-nursing student level—at the graduate professional education level. Because we had both resident physicians and graduate nurses in that master’s program at Dartmouth, we were able to formalize the academic course work and that formal study of the improvement in a way that contributed to the building of the field.

⁴² Emily Dickinson, “Tell All the Truth But Tell It Slant.” [Source: *The Poems of Emily Dickinson: Reading Edition*. <http://www.poetryfoundation.org/poem/247292>]

⁴³ David C. Leach, M.D. was executive director of the Accreditation Council for Graduate Medical Education from 1997 to 2007. [Source: ACGME. <https://www.acgme.org/acgmeweb/tabid/403/Awards/DavidC.LeachAward.aspx>]

⁴⁴ Paul Griner, M.D. was with the Center for the Assessment and Management of Change in Academic Medicine at the Association for American Medical Colleges. [Source: Center for Studying Health System Change http://hschange.org/CONTENT/270/ar00_10.html?PRINT=1]

⁴⁵ [Source: *Report V: Contemporary Issues in Medicine, Quality of Care*. Washington, DC: Association of American Medical Colleges, Aug. 2001. <https://members.aamc.org/eweb/upload/Contemporary%20Issues%20in%20Med%20Quality%20of%20Care%20Report%20V%20.pdf>]

NEUHAUSER: Were the advanced nursing students and residents in the same classroom?

BATALDEN: Yes, and that was a joy to see people working together from different disciplines—in Summer Camp, where we had faculty from different disciplines, and in the classroom in Dartmouth’s CECS. We saw the benefit from the different perspectives as we approached the common themes of the classroom. Our experience over the years—whether it was at HCA, teaching nurses and doctors together; or in Summer Camp, educating health professional educators from different disciplines; or in the classroom at CECS—this multi-professional education has always been key to making progress in the improvement of health care.

NEUHAUSER: Certainly that link to teamwork has been a running theme for your activities. Could you talk about Julie Mohr’s career as an example of what you were trying to do?

BATALDEN: Julie Johnson Mohr⁴⁶ came to my attention as a graduate of the program at North Carolina. Arnie Kaluzny⁴⁷ had suggested that she would be the best candidate to be my research assistant at HCA. I recruited her to join me in Nashville. When we moved to Dartmouth, I invited her to continue in this role as a research assistant. She became interested in developing her own portfolio and enrolled in a Ph.D. program, which then allowed her to study what led to good performance in these small front-line systems of care—the microsystems. That work was taken up by the Institute of Medicine as part of their quality chasm work, and was attached as an appendix to their report.⁴⁸ Julie is a creative researcher and teacher. She was part of the Summer Camp program, and there demonstrated her pedagogical creativity. She’s been active in her research career. David Stevens,⁴⁹ when he was at the Association of American Medical Colleges, was particularly interested in medical student and academic medical center uptake of these ways of working. Julie studied the ways in which those centers did that work. Julie has continued to work at the interface of qualitative research and safety, and these front-line microsystems. Over maybe 15 or 20 years, I’ve been able to watch her grow from a student into an active, thoughtful, contributing faculty member.

NEUHAUSER: How many students pass through the master’s program at a time?

BATALDEN: There were about 120 a year. I’ve personally taught 3,000 or 4,000 students at Dartmouth, at HCA, and elsewhere.

NEUHAUSER: Let’s talk about the Quality Scholars and the VA. That needs some stepping back, I think. How did this program come about?

BATALDEN: David Stevens, a very able medical educator, was at Case Western Reserve University. He worked on the joint Case Western/Henry Ford educational activities. David Leach

⁴⁶ Julie K. Johnson (Mohr), Ph.D. is an associate professor at the University of New South Wales in Sydney, Australia and will be taking an academic appointment at Northwestern University medical school in Chicago. [Source: Paul Batalden.]

⁴⁷ Arnold D. Kaluzny, Ph.D. is professor emeritus in the School of Public Health at the University of North Carolina at Chapel Hill. [Source: The University of North Carolina. <http://sph.unc.edu/files/2013/07/kaluzny.pdf>]

⁴⁸ [Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press, 2001. <http://www.iom.edu/Reports/2001/Crossing-the-Quality-Chasm-A-New-Health-System-for-the-21st-Century.aspx>]

⁴⁹ David Stevens, M.D., is an adjunct professor at The Dartmouth Institute. [Source: Dartmouth College. <http://geiselmed.dartmouth.edu/faculty/facultydb/view.php?uid=3379>]

was the Henry Ford side of those conversations. David Stevens was the Case Western side of those conversations.

David then took a Robert Wood Johnson Foundation fellowship with Congress, and then moved from that into the Veterans Administration (VA), where he headed the Office of Academic Affiliation. David was a keen supporter of these ways of trying to understand and work and develop health professionals. He invited David Leach and me to meet with the Senior Medical Advisory Group (SMAG) of the VA.

When we had finished our presentation, one of the vice-chancellors raised his hand and said, “But isn’t what you guys are saying going to require entirely different students?” I said, “I think the students are capable. It may require some different faculty.” He said, “That’s exactly what I didn’t want to hear.” David Leach and David Stevens and I went for lunch, and we began to sketch out on a napkin the possibility of a hub-and-spokes kind of distance learning activity. The VA has had a history of offering special fellowships around areas that they perceive would be necessary for the future development of health care, to wit, the field of geriatrics owes much of its origins to the special fellowship programs of the VA.

David Stevens’ idea was that we should create Quality Scholars—a special fellowship program—but that we should do that a little differently than the VA had historically done it. He suggested that there be a hub site that would manage two-way interactive video instruction, and satellite centers where there would be a senior VA quality scholar and a small group of fellows at each satellite.⁵⁰

We took the core set of curricular courses at Dartmouth—the 120 classroom contact hours—and turned that into a revolving two-year, two-way interactive video segment. Mark Splaine⁵¹ did a wonderful job in making that transition, with the help of these senior Quality Scholars who were located at a handful of sites.

NEUHAUSER: One was in San Francisco, one in Iowa, with Gary Rosenthal⁵² One was at Case Western Reserve. Dartmouth was at the center.

BATALDEN: Right, and one was in Nashville, and another was in Birmingham, Alabama. These places would gather via two-way interactive video—this began 15 years ago or so. They would meet face-to-face in their own Summer Camp. We had such a good experience with the faculty Summer Camp that we created a Summer Camp for the VA Quality Scholars. They would meet as well at the Health Services Research meetings of the VA. That network of Senior Quality Scholars and Quality Scholar Fellows has been enormously productive, writing an enormous body of literature about the field of quality improvement. Many of the graduates of that VA Quality

⁵⁰ The VA program is described more fully here: Splaine, M.E., Ogrinc, G., and others. The Department of Veterans Affairs National Quality Scholars Fellowship Program: experience from 10 years of training quality scholars. *Academic Medicine*;84(12):1741-1748, Dec. 2009.

[http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3800745/#_articleid1160886aff-info]

⁵¹ Mark E. Splaine, M.D. was an assistant professor at The Dartmouth Institute. [Source: Dartmouth College. <http://tdi.dartmouth.edu/faculty/mark-splaine-md-ms>]

⁵² Gary E. Rosenthal, M.D. is a professor at the Carver College of Medicine at the University of Iowa. [Source: The University of Iowa.

http://www.medicine.uiowa.edu/dept_primary_apr.aspx?appointment=Internal%20Medicine&id=rosenthalg]

Scholars program have taken faculty positions in the VA and in academic medical centers throughout the United States.

NEUHAUSER: Like Greg Ogrinc.⁵³

BATALDEN: Like Greg Ogrinc, who came into the first VA Quality Scholars program after finishing his internal medicine residency. Greg is now an associate professor and director of the Office of Research and Innovation in Medical Education at Dartmouth.

NEUHAUSER: This started off as a program just for physicians.

BATALDEN: Yes, and then the experience in Summer Camp led a group of nursing educators to have a good and productive interaction with a group of medical educators. It seemed like a natural opportunity, when it became possible, to add some Ph.D.-prepared nurses to the mix of local fellows. Building on the strength of the relationships that were developed in Summer Camp, we were able to take the interest of the nursing education community and build in Ph.D.-level nurse fellows as part of the local program, with senior nurse scholars as well as senior medical scholars in each of these places.

NEUHAUSER: They can talk to each other.

BATALDEN: They have been able to have good conversations about the improvement of care.

NEUHAUSER: Let me pick out another name, because I think there are a few other names that you connected with at Dartmouth—Margie Godfrey.

BATALDEN: Margie Godfrey⁵⁴ was a master's student in our first class. She was fascinated by the idea of microsystems. Margie was manager of the post-anesthesia care unit at Dartmouth while she was taking this master's program. Margie saw microsystems as what she was in close working relationship with in the nursing field. Microsystems made all the sense in the world to her as the unit of focus. She began to get curious about how one could coach microsystems into better functional performance. That led her to teaching and consulting and encouragement of the job of coaching microsystems into better performance. Eventually, she decided to take a doctoral studies program at Jönköping in Sweden in the field of coaching. She has completed her doctoral studies on coaching in clinical microsystems and is a faculty member in the Microsystem Academy, which is part of The Dartmouth Institute.

NEUHAUSER: Did Gene Nelson follow you, too?

BATALDEN: Gene Nelson and I first met when we were both grantees of the Kellogg Foundation. You recall that the Kellogg Foundation gave us a grant at Park Nicollet to develop an ambulatory quality program. Gene and I were invited by the Kellogg Foundation to engage in one

⁵³ Gregory S. Ogrinc, M.D., is an associate professor of medicine at Geisel Medical School at Dartmouth and in the Dartmouth Institute of Health Policy and Clinical Practice. [Source: Dartmouth College.

<http://tdi.dartmouth.edu/faculty/greg-ogrinc-md-ms>]

⁵⁴ Marjorie M. Godfrey, Ph.D., is an instructor at The Dartmouth Institute. [Source: Dartmouth College.

<http://tdi.dartmouth.edu/faculty/marjorie-godfrey-ms-rn>]

of the “investigators share your work with one another” meetings that the Kellogg Foundation put on. Gene and I continued to have an ongoing interaction for a few years. When it became clear that I could engage in this work in a full-time way with a dedicated staff of people, Gene was at the top of my list for potential colleagues to join me at HCA. He did join me at HCA as part of the Quality Resource Group.

After we’d worked together for a number of years in Nashville, Gene’s wife decided to go for her law degree back in New England. (Gene had been at Dartmouth at the time when I recruited him to HCA.) They returned to New England for Sandy to get her law degree and for Gene to resume his work at the Dartmouth-Hitchcock Medical Center. Gene later participated in my decision to come to Dartmouth. He joined me at Dartmouth as a fellow faculty member in this core faculty at the CECS.

Gene is a great colleague. He loves to write and loves to apply social science. He has this gift of thoughtful design and good evaluation. Gene is eager to share that through networking and formal publication. He has been a perfect match for me. Over the years, Gene and I have co-authored dozens and dozens of publications.

Gene has been active and creative with suggestions about ways to develop this community. Gene was the one who suggested the idea of Summer Camp. Gene suggested the idea of getting a group of us together who were beginning to build this knowledge. It was a group of friends—people we could trust and people we respected. This group included Don Berwick, Jim Roberts, John Ware, Allyson Davies, Gene Nelson, Jim Schlosser, Dave Gustafson,⁵⁵ me, and eventually, Vin Sahney.⁵⁶ We didn’t know what to call the group. We met quarterly or three times a year in airports because we were coming from a variety of different places.

It was somebody’s birthday. We decided to write the name of this thing in our calendars as “The Birthday Club,” because we thought that no self-respecting adult would want to join a birthday club. That Birthday Club eventually became the Board of Trustees of the Institute for Healthcare Improvement. What started out as a value of The Birthday Club—friends who trusted and respected each other—became part of the value set of the formation of the Institute for Healthcare Improvement.

Gene’s role in all of this has been as a long-term fellow traveler, fellow student, fellow faculty member, fellow author—a true colleague.

⁵⁵ David H. Gustafson, Ph.D., is director of the Center for Health Enhancement Studies at the University of Wisconsin-Madison. [Source: The University of Wisconsin. <http://www.c4tbh.org/the-center/who-we-are/center-affiliates/david-gustafson.html>]

⁵⁶ James S. Roberts, M.D., was senior vice president at the Joint Commission on Accreditation of Healthcare Organizations and later at VHA, Inc. [Source: *Telemedicine: A Guide to Assessing Telecommunications in Health Care*. Washington, DC: National Academy Press, 1996. <http://www.ncbi.nlm.nih.gov/books/NBK45452/>]. John E. Ware, Jr., Ph.D., went on to found the John Ware Research Group. [Source: JWRG. <http://www.jwrginc.com/about/>]. Allyson Davies-Avery was a researcher with The Rand Corporation. [Source: *Medical Care*;17(7, Suppl.):iii, July 1979.] James Schlosser, M.D., was staff director of the National Demonstration Project on Quality Improvement in Health Care (NDP). [Source: Kenney, C. *The Best Practice*. New York: Public Affairs, 2008, p. 48.]

NEUHAUSER: We should touch on a few other names here. Tina Foster.⁵⁷

BATALDEN: Tina was another of the VA Quality Scholars. She came to the VA hospital that is affiliated with Dartmouth in White River Junction, Vermont. When I came to Dartmouth, Gary De Gasta⁵⁸ was the CEO of White River Junction. He was particularly interested in understanding about Deming. We worked on Deming's view of organization as a system.

For many years, I had passed over Deming's Figure 1, "Production Viewed as a System," in his book.⁵⁹ I thought that it just applied to manufactured goods. One day, it occurred to me that I could just change a few of the words in Figure 1 and it would be possible to think of health care in terms of a system. We created an exercise around this. White River Junction became one of the places where we built out that understanding. With that understanding, that small hospital won several internal quality awards of the Veterans Administration. It was in that environment that we had the local VA Quality Scholars program. Greg Ogrinc and Tina Foster were part of that.

Tina came to the VA trained as an obstetrician. She also had finished her master's in public health from the Harvard School of Public Health. She was particularly interested in the focus on taking action and linking knowledge to action that was a part of the VA Quality Scholars program. She took that program and excelled at that. Her love of knowledge building and epistemology, dating back to her undergraduate days at Berkeley, made her a natural in all of this. She's a wonderful teacher and a wonderful academic leader. She is particularly gifted in the field of residency education. She became a part of the formative group creating the combined residency, which we called the Leadership Preventive Medicine Residency, at Dartmouth. Tina was also involved in graduate medical education nationally with the Accreditation Council for Graduate Medical Education.

NEUHAUSER: Organizations, people, ideas—this theme runs through this. We should touch on Linda Cronenwett.⁶⁰

BATALDEN: Linda Cronenwett was a nurse researcher/nurse educator at Dartmouth when I first met her. She became curious about the ways in which these ideas about improvement of health care fit with nursing and nursing research. Linda went from Dartmouth to take a position as professor at the University of North Carolina, where she became the director of nursing research in the School of Nursing. She was soon recognized as a person who should become the next dean of the School of Nursing there at Chapel Hill.

In that role, she actively participated in Summer Camp. She led the nursing deans from Summer Camp into the creation of the Quality and Safety Education for Nurses (QSEN) program.⁶¹ That program was supported initially by the Robert Wood Johnson Foundation, but has been taken

⁵⁷ Tina C. Foster, M.D., is an associate professor at Geisel School of Medicine at Dartmouth. [Source: Dartmouth College. http://gme.dartmouth-hitchcock.org/leadership/teamprofile/14194/Tina_C_Foster_MD MPH MS]

⁵⁸ Gary M. De Gasta was director of the VA Medical Center in White River Junction, VT. He describes the changes made to improve quality in this video interview. [Source: *Gary De Gasta (VA Medical Center, White River Junction, Vermont): QBD Interview*, 2008. <http://vimeo.com/14191723>]

⁵⁹ Deming, W.E. *The New Economics for Industry, Government, Education*. Cambridge, MA: MIT Press, 1993.

⁶⁰ Linda R. Cronenwett, Ph.D., is the dean emeritus of the School of Nursing at the University of North Carolina. [Source: The University of North Carolina. <http://nursing.unc.edu/people/linda-cronenwett/>]

⁶¹ More information on the QSEN program can be found here. [Source: QSEN Institute. www.qsen.org]

up now by the National Council of State Boards of Nursing. The requirements for qualified nursing education now include the content of the QSEN program for nursing education that Linda and her colleagues developed. This is a perfect example of how the friendship community of Summer Camp gave rise to a national public policy change that was of great significant to the field of nursing.

NEUHAUSER: Jack Wennberg.

BATALDEN: Jack was the son of a Norwegian immigrant. He went to New England and began to work on the wide variations that existed in health care practice and outcome in Vermont, initially, and later worked on Boston and New Haven. Trained as an epidemiologist and a nephrologist, Jack realized that there were patterns of this variation that existed. He came to believe that “geography was destiny”—that if the pattern that was prevalent in the community where you lived was, for example, that people die in a hospital—that would become your destiny for having chosen to live in that geography.

Jack and I were sitting together on a transcontinental flight to California. We began to explore the synergy between his thinking about geography as destiny and my thinking of geography as context. Jack had an elegant way of describing the patterns in the data and the situation in health care, but he didn’t have a path for taking action on that. I was interested in linking that knowledge and other knowledge for the purpose of taking action. There was a natural synergy between his academic interests and mine. At one time, we occupied the same floor in an old dormitory at Dartmouth called Strassenburgh Hall. At one end of the hallway was “Geography as Destiny,” and at the other end was “Geography as Context.”

NEUHAUSER: Did you help him with the atlas?

BATALDEN: Yes. The atlas had been put together, and Jack was wondering where and how that should be published. I said, “Why don’t you have the American Hospital Association publish the atlas?” Jack looked at me and said, “What? This is talking about patterns of hospital practice that are variable.” I said, “Gail Warden is going to be the chair of the American Hospital Association. Jack Lord⁶² is active on the staff of the American Hospital Association. I think those guys would be quite interested in promoting the publication of the Dartmouth Atlas.”⁶³ It worked. The American Hospital Association published the first editions of the Dartmouth Atlas. It called attention to these patterns of variations across states and across the regions that Jack had identified.

NEUHAUSER: It received a huge amount of publicity within and outside the field.

BATALDEN: Yes.

NEUHAUSER: I think it displayed long-term wisdom on their part.

BATALDEN: I think so, too.

⁶² Jonathan “Jack” Lord, M.D., served as chief operating officer of the American Hospital Association and later became COO of the Miller School of Medicine at the University of Miami. [Source: University of Miami. <http://med.miami.edu/news/jack-lord-m.d.-named-miller-school-and-uhealth-chief-operating-officer>]

⁶³ *The Dartmouth Atlas*, originally published as a series of print books, is now available in an online version. [Source: *The Dartmouth Atlas of Health Care*. Lebanon, NH: Dartmouth College, 2014. <http://www.dartmouthatlas.org/>]

NEUHAUSER: Another name. Gerry O'Connor.⁶⁴

BATALDEN: Gerry was the first person in his family to go to college. Gerry then decided that college was such a good deal that he went on and got a Ph.D., and he thought that was such a good deal that he got a second doctorate. Gerry is one of the few people in the world with two doctorates. Gerry became the head of the educational activities in the CECS. Gerry was also the consulting statistician and epidemiologist for the Northern New England Cardiovascular Study Group and subsequently for the National Cystic Fibrosis effort.

Gerry believed that these ideas of improvement and of taking action based on knowledge of the system and the variation that was present could be made real and concrete. In the Northern New England Cardiovascular Study Group, Gerry would set those meetings up in such a way that people would travel to each other's place of work and observe the patterns of practice for cardiovascular surgery in northern New England. With that pattern of system exploration and actions taken to reduce unwanted variation, the Study Group drove the mortality rates in cardiovascular surgery to the lowest in the country over the years that Gerry facilitated their work.

Subsequently, he managed to convince the leadership of the Cystic Fibrosis Foundation that as a complement to their drug discovery work—they were screening perhaps 10,000 chemical compounds a day in their active program of drug discovery—years could be added to the lives of people with cystic fibrosis right now if the performance of all cystic fibrosis centers could be raised to the level of the best performing centers.

This was not an easy proposition because the Cystic Fibrosis Foundation leadership thought that they wanted to preserve the confidentiality of the identity of the particular center as a quid pro quo in getting the center to continue to submit data. Gerry managed to convince CFF that it would actually be better if they were to open up the identities and allow people to learn from each other. There are some interesting stories about this.

Dr. Atul Gawande wrote this marvelous article in *The New Yorker* called “The Bell Curve.” In it, he talks about this variation in practice across cystic fibrosis centers.⁶⁵ In Cincinnati, Tom Boat⁶⁶ was the medical director of the Cincinnati Children's Hospital. He was a pulmonologist and cystic fibrosis specialist. Tom had made it clear to the parents of the children with cystic fibrosis that the hospital wanted to offer the children the best care that they possibly could and that they had this data that they were using. This is what Gerry was involved in, sort of organizing for the National Cystic Fibrosis group.

Tom was showing this data in Cincinnati and commenting about where the Cincinnati Children's Hospital's performance ranked among the various national centers. It wasn't at the top in everything. The parents noted that cystic fibrosis care at Cincinnati Children's wasn't at the top. They made note of that, and they were having a conversation about that.

⁶⁴ Gerald T. O'Connor, Ph.D., Sc.D., is a professor at the Geisel School of Medicine at Dartmouth. [Source: Dartmouth College. <https://geiselmed.dartmouth.edu/faculty/facultydb/view.php?uid=218>]

⁶⁵ [Source: Gawande, A. The bell curve: should patients settle for an average doctor? *The New Yorker*: 82-91, Dec. 6, 2004. http://www.newyorker.com/archive/2004/12/06/041206fa_fact?currentPage=all]

⁶⁶ Thomas F. Boat, M.D., is dean of the College of Medicine at the University of Cincinnati. [Source: The University of Cincinnati. <http://www.med.uc.edu/about/deanscorner/boatbiography>]

Then the medical director of the Cystic Fibrosis Foundation came for a visit. The subject of the experience of variation across the centers came up with the parents, with Tom Boat, and the others who were caring for these children. The medical director said, “Part of why the centers provide us with their data is that we agree to preserve their confidentiality.” The mother of one young girl with cystic fibrosis stood up and said to this national medical director, “What moral right do you think you have to withhold information that could benefit my daughter?” That was not a comfortable question for that medical director to receive. What happened as a result was this commitment on the part of the leadership of the Cystic Fibrosis Foundation to work toward transparency across these centers.

Gerry O’Connor was masterful at provoking change. At the national meeting of the cystic fibrosis centers, he said, “We have a proposal to begin to show up together at the nude beach.” He was offering a light-hearted way of describing what was for many a “nude beach.” It was a challenge to think about putting your data out in public amongst other cystic fibrosis centers in an identified way. Gerry helped lead the opening use of information in a very special way for that community, making enormous changes in the process.

NEUHAUSER: Before we move on to changing graduate medical education, I want you to touch on Steve Plume.

BATALDEN: Steve Plume⁶⁷ is a cardiovascular surgeon who was president and CEO of the Hitchcock Clinic. When I came to Dartmouth, Steve was very interested in working closely with us and having me involved with Gene Nelson and himself in the workings of the Dartmouth-Hitchcock Clinic. Steve was a leader who was deeply curious. He would marvel at the differences in primary care settings and surgical settings. We were talking one day about his observation. I said, “Steve, why don’t you go watch the way that primary care practice actually goes on?”

He put on a short white coat and went to observe in the primary care practice setting as a student. He came back and he said, “Paul, those guys work in glue!” I said, “Steve, who owns the glue?”

He was a deeply curious fellow who, during his time as the CEO, fostered an enormous interest in getting better. He was an active member, with Gerry O’Connor, of the Cardiovascular Study Group, and he was an active promoter of the improvement of the Hitchcock Clinic and the Hitchcock Medical Center.

In his retirement, Steve decided that he would become Dartmouth’s oldest teaching assistant. He joined our classes as a teaching assistant. We would always give Steve the last word in the class. Steve had a chance to summarize what we had been talking about in the class in a way that made sense to him. It was such a gift, and the students really appreciated Steve’s synthesis of what had gone on during the class. He was a dear friend and close colleague. He’s an artist as well. He continues to be very active as a teacher and as an artist in his retirement.

NEUHAUSER: Your work at Dartmouth certainly is a major part of your life and well worth touching on. But there’s another part we should move to, and that’s the transformation of graduate medical residency training in medicine, and then undergraduate education.

⁶⁷ Steven K. Plume, M.D., was president of the Dartmouth-Hitchcock Clinic from 1990 to 2000. [Source: Dartmouth College. http://www.dartmouth.edu/~cecs/hcild/downloads/Plume_CV.pdf]

BATALDEN: At Henry Ford, I had the capacity to offer a class around quality improvement. The class occurred at night, starting at 4:30 or 5 p.m., and it went until 9. One of the students in that class was a particularly eager guy named David Leach. David was the director of graduate medical education at Henry Ford. David said to me, “I came to those classes tired and left awake! Those were wonderful sessions for me.” David and I got to know each other in those classes.

One day, David called me into his office and said, “Paul, I need your advice. They want me to consider becoming the director of the Accreditation Council for Graduate Medical Education (ACGME) in Chicago. Do you think I ought to take that job?” I said, “I’ve had several different jobs. Every time I’ve re-potted myself, there has been new growth in me, and it might be the same for you.” He said, “Will you help me?” I said, “I will, if you agree to add a couple of words to the requirements for graduate medical education—something to the effect of ‘and to be able to improve care.’” He said, “I believe that. That’s what I want to do.” I said, “Fine. Sign me up.” He said, “I didn’t say I was taking the job yet. I just want to know if you’d be willing.”

He went to Chicago from Detroit and took on this job. He invited me to come and visit him. We talked about various kinds of roles. I actually said, “I think I prefer to just be your friend.” I’d be a “Friend of David’s,” which is this unorthodox kind of role at the ACGME. I was simply the Friend of David’s. I wasn’t in any named position. I was just a volunteer. David said, “I’m glad to have you come, but I have no salary for you.” I said, “That’s not really important. The issue is to work on something that’s worth working on.”

I would come to visit as David’s friend once a month and did so for ten years. I got to play a number of different roles. One was as head of the advisory committee on outcomes for graduate medical education. That was the committee that oversaw the development of the general competencies. When David was recruited to the ACGME, the board had been particularly interested in turning the focus of the ACGME from process to outcome. One of David’s first tasks was to define what the outcomes should be in graduate medical education. The Robert Wood Johnson Foundation gave the ACGME a small grant to facilitate this exploration of what the desirable outcomes might be. The staff undertook an enormous research effort to explore the literature and interview hundreds of people about this. They came up with more than 100 competencies for graduate medical education. They knew that you couldn’t have more than 100 competencies. They worked at reducing those to 12 or 13.

At a meeting of our advisory committee, they were listing off what these items might be. When they got to “continuous quality improvement,” one of the surgeons visibly started to retch, and I knew we would have to change the title of that particular competency if we were going to have him with us. I suggested, “Maybe we could call it practice-based learning and improvement.” He said, “Absolutely! That would be just great!” I said, “Fine, that’s exactly what that one should be then.” After working on it, the staff said, “We can’t get this number of competencies under eleven.” I said, “Let me try.” I worked at this overnight and got them down to six. Those six, with some modification, became the general competencies for graduate medical education.⁶⁸

⁶⁸ The general competencies are now referred to as the six core competencies. [Source: Accreditation Council for Graduate Medical Education. *The Next Accreditation System: A Resident Perspective*, 2013. <http://www.acgme.org/acgmeweb/Portals/0/PDFs/Resident-Services/9NASResidentsMay2014.pdf>]

David Leach was a resourceful, creative communicator about these competencies that allowed them to move forward in the educational community. There was enormous skepticism about the concept of systems-based practice. For example, one pulmonology fellow was particularly upset about this because she suspected that this was “coded speech” for some kind of administrative plot.

David said, “Have you ever had a patient in the emergency room having trouble breathing?” She said, “All the time.” He said, “Did you make a decision to admit the patient then to pulmonary intensive care?” “Yes.” “Then did you go to the intensive care unit to wait for the patient?” “Yes.” “Was there ever a delay in the patient coming from the emergency room to the pulmonary intensive care unit?” She slammed the table and said, “Absolutely! It drives me crazy!” David said, “That’s exactly what systems-based practice addresses.” It was such a beautiful example of David’s skill as a communicator.

Another time it was a pathologist who suspected that this was a plot of some kind. David said, “Do you know about anatomy?” The pathologist said, “Of course I do. I’m a pathologist.” David said, “Do you know about physiology?” The pathologist said, “Of course I do. I’m a pathologist. I understand both anatomy and physiology.” David said, “Systems-based practice is like the physiology of medicine and health care.” The pathologist got it.

David’s skill was this ability to help people connect their basic knowledge and values with these competencies. He had a way of inviting the whole person to the job. David could invite the head, the hands, and the hearts of the professionals. People from diverse backgrounds would respond to David’s invitations in a way that was unusual. It was my privilege during this decade to be active with David in a variety of different initiatives that had to do with moving these competencies forward.

NEUHAUSER: This was a new set of competencies that wasn’t there before.

BATALDEN: The competencies were: patient care, medical knowledge, practice-based learning and improvement, interpersonal skill and communication, professionalism, and systems-based practice. These competencies were generally accepted. The ACGME said, “Okay, we agree. These are basically okay.”

NEUHAUSER: It would be hard to disagree that we like professional people with high ethical standards who are concerned and thinking about making things better.

BATALDEN: Right. There were two things that are worthy of comment. First of all, with respect to the progression of these things, it was 18 months from the time the Accreditation Council for Graduate Medical Education adopted these six competencies until all 24 specialty organizations embraced them. Never before had this happened.

NEUHAUSER: This was a vote by each of the individual specialties?

BATALDEN: It was a big deal to make this change happen, but also illustrative of how David managed that change. One of the specialties came to David and said, “What do you think this means for us?” David’s response was, “How would I know?” They said, “What do you mean? You’re the director of the ACGME, and you’re just about to push this on us.” David said, “I’m not trying to push anything on anybody. You have to tell us what this means for your specialty.” “You

mean, we can do this?” They went right to work. They developed exactly what those meant for that particular specialty. That happened over and over and over again, and it led to this rapid uptake of this work.

At any rate, it was a great privilege to be working with David on this. The recognition that the educators couldn’t stand alone on this was very clear because the educational community can decide what it’s going to require of its students, but it’s not going to be real if it’s not tied to what it takes to become a certified specialist of this or that.

It was February 9, 1999, when the ACGME passed these six competencies. On February 19, 1999, David set a dinner meeting with David Nahrwold,⁶⁹ Marvin Dunn,⁷⁰ and me, at Gordon’s Restaurant, which doesn’t exist anymore. Marvin Dunn was the kind of guy who knew everything there was to know about making change happen in medical education. He had been dean at several different schools and had been around the AMA in leadership roles. Marvin said to me, “David Leach and I are just going to talk so that you, Paul, and David Nahrwold can have the real conversation.”

Now the “real conversation” was related to this notion of competency because the American Board of Medical Specialties (ABMS), the certifying bodies, had been ambivalent about whether they should take up the notion of competency. It was a trial lawyer’s dream to have competency put on the table in some professional organization. So, ABMS had been a little nervous about taking it up officially. Dave Nahrwold was the incoming president of the American Board of Medical Specialties and was at the same time on the Executive Committee of the ACGME in their strategic planning activity. He knew about what we had been working on in these six competencies.

Dave Nahrwold and I had conversation over dinner that night about the benefits of ABMS (the certifying body) and the ACGME (the accrediting body for education) coming to exact agreement on the same competencies. What was clear was that if these two bodies could agree on the wording of the competencies and the same number of competencies, there would be a much greater likelihood that these six competencies would actually see some service in the field of professional development formation in medicine. Dave Nahrwold agreed with that. He thought that was a splendid approach, and he was personally committed to leading that change inside the ABMS. At the conclusion of that dinner on February 19, 1999, there was agreement between the ACGME and the ABMS to pursue these general competencies. That changed American graduate medical education.

NEUHAUSER: That dinner—February 19, 1999.

BATALDEN: At least it opened up an agreement that paved the way for major change. Now the change, of course, didn’t happen overnight and didn’t happen without a lot of further conversation.

NEUHAUSER: I think faculty are still trying to figure out how to do this.

⁶⁹ David L. Nahrwold, M.D., is professor emeritus at the Feinberg School of Medicine at Northwestern University. [Source: Northwestern University. <http://fsmweb.northwestern.edu/faculty/FacultyProfile.cfm?xid=12375>]

⁷⁰ Marvin R. Dunn, M.D. (1931-2003) joined the Accreditation Council for Graduate Medical Education in 1998. [Source: Institute for International Medical Education. <http://www.iime.org/committee/dunn.htm>]

BATALDEN: Of course that's true, but we're seeing enormous creativity in the community of people who are directly related to the development of junior doctors and their initial certification and now also in the maintenance of certification activity. A couple things are instructive. When David Leach started at the ACGME, there was a huge turnover among residency directors because these people were perceived as being in academic "parking lots" waiting for a real job to show up. They were in many ways thought of as being interim.

David said, "No, no, your job is really important. Your job is valuable. Your job is at the heart of what's needed to make tomorrow's doctors real doctors for the future." During David's time, the turnover decreased amongst residency program directors.

As part of that effort, David focused on the work of Parker Palmer,⁷¹ an educator. Parker focused on inviting the whole person who was the teacher to show up. Out of the blue, David called Parker one day and said, "We'd like to start. We'd like to use your name. We'd like to create a Parker J. Palmer Courage to Teach Award of the ACGME and identify outstanding residency program directors who have led the field by inviting the whole person—head, hands, and heart—to show up in the education and development of specialist physicians." Parker was delighted and said, "Absolutely! My name is yours to use." Out of that came the award. David and I had the joy of working with Parker to teach these people and offer a seminar over the years.

NEUHAUSER: While this was going on in graduate training, what was happening in undergraduate medical education?

BATALDEN: I mentioned earlier the work that Paul Griner had been doing with the Medical School Objectives Project. Following that, David Stevens took the job as head of the Liaison Committee on Medical Education (LCME). This is an arrangement between the American Medical Association and the Association of American Medical Colleges to jointly accredit medical schools and medical education. David Stevens became the head of the Accreditation Program for the LCME activity of the AAMC and the AMA. David, of course, was a friend of the improvement of health care. David Stevens had been active at Case Western, and then he had been active in the VA starting the VA Quality Scholars program. While at the AAMC, he launched programs of chronic disease improvement which was unusual work for the AAMC to be undertaking. His conviction was that we had to create real live examples of this work for medical students to see what was involved in functioning this way as a doctor.

David Stevens and David Leach were both very active in Summer Camp, so they had been carrying these informal associations, both with younger physicians and their peer colleagues in this work. It was a great gift to have David Stevens.

NEUHAUSER: The medical colleges came around to these competencies.

BATALDEN: What these people did was open the legitimacy of the topic. You can't exactly make anybody do anything. These are a bunch of smart people who are involved in teaching and giving care. What you have to do is attract them, but you can't attract faculty to something that is shaky or illegitimate or in any way unworthy of their attention. What David Leach and David Stevens were able to do by their work at the graduate and the undergraduate levels of medical

⁷¹ Parker J. Palmer, Ph.D., is the founder of the Center for Courage & Renewal. [Source: The Center for Courage & Renewal. <http://www.couragerenewal.org/parker/>]

education was to invite legitimate consideration of these notions and encourage participation in these programs. They really helped.

NEUHAUSER: It was an extraordinary confluence of ideas. The next stage, then, would be for practicing physicians to do this in their practice.

BATALDEN: Right. What happened was that at the same time that this change was happening in the general competencies identification for graduate medical education, there was a growing recognition that the specialty certification of physicians should not be a lifetime award. It should be a time-limited certification.

Jim Stockman,⁷² who was at the American Board of Pediatrics, championed this. Jim Stockman has told this story—he was giving a talk about time-limited certification. It had been a particularly contentious meeting. At the end, the A/V operator came to give his slides back and said, “Doc, I usually don’t listen to what’s going on, but were you talking about how you needed to be reexamined for what you knew as a specialist?” Jim Stockman said, “I was sure trying, but you saw the way the audience took it. It was not by any means 100 percent agreement.” He said, “Doc, it’s none of my business, but every three months I have to be recertified in order to run the A/V equipment in this room. I can’t believe that you got the reception you got from those people about being a doctor.”

Jim Stockman carried the ball on time-based certification of specialty status. He recruited a pediatrician by the name of Paul Miles to come to the American Board of Pediatrics. Paul Miles had been the medical director of the HCA-managed hospital in Twin Falls, Idaho. Paul Miles came to the American Board of Pediatrics in North Carolina and took over the staff leadership of the maintenance of certification program, which he still does today. This is now a coordinated effort across all specialties around the maintenance of certification of specialty status, based upon the competencies that were defined initially by the ACGME and the ABMS.

NEUHAUSER: If one wanted change, then this change counts—change in the medical school, change in the residency program, and change in recertification and practice. You can’t complain, “This change isn’t big enough!”

BATALDEN: It’s a huge change. Now the rest of the world is beginning to take note of this. The same effort is going on in Europe. There is more and more recognition that they need to understand these activities and integrate them into their formal professional preparations.

NEUHAUSER: Another place that has received your attention is the Joint Commission.

BATALDEN: Back when I was in the Public Health Service and the leader of the Bureau of Community Health Services, my friend Jim Roberts was working with Paul Sanazaro⁷³ at the National Center for Health Services Research and Development. They had a program called Experimental Medical Care Review Organizations (EMCROs), which were the first form of what

⁷² James A. Stockman III, M.D., is professor in the Duke University School of Medicine. [Source: Duke University. <http://pediatrics.duke.edu/faculty/details/0098940>]

⁷³ Paul J. Sanazaro, M.D. (1922-2006) was the first director of the National Center for Health Services Research and Development. [Source: *Paul Sanazaro, MD*. <http://www.covenantfuneralservice.com/obituaries/paul-sanazaro-md/>]

has had a number of transformations since—becoming Professional Standards Review Organizations (PSROs), then Peer Review Organizations (PROs), and now today, Quality Improvement Organizations (QIOs). Jim Roberts was the project officer for the Experimental Medical Care Review Organizations. He left to become John Porterfield’s assistant when John was the director of the Joint Commission.⁷⁴

John Porterfield retired and Dennis O’Leary⁷⁵ took over. Jim Roberts functioned as Dennis O’Leary’s chief lieutenant or vice director. Jim and Dennis O’Leary began to work on the development of performance measurement systems which could be used by the Joint Commission to focus not just on process, but on outcome as well. They started with two or three diseases and spent three years working on developing measures that would work. They decided that they also needed performance measures for the performance of the whole hospital and convened a group to advise them. The group consisted of you—Duncan—Arnie Kaluzny from North Carolina, Bill Dowling, and me, among others. Bill Dowling⁷⁶ had the dubious honor of leading the group.

At a meeting at the Joint Commission headquarters, Bill Dowling started by saying, “How would we recognize a good quality hospital?” There was silence around the table. This was embarrassing. Bill was increasingly uncomfortable with the silence and added, “I suppose we could say that it was a good quality hospital if they were Joint Commission accredited.” There was laughter around the table. This was a little more embarrassing. We were sitting at the Joint Commission’s headquarters, and there had been laughter around this response to the question about how would we would recognize a good quality hospital.

That effort by the Joint Commission resulted in incorporation of the idea of quality improvement into the standards of the Joint Commission. This was an important driver of the change because, once again, it was more than just a change in language. There was a substance change that the Joint Commission was signaling about the work of the hospitals. It was a privilege for me to carry this work forward later when I become a hospital commissioner of the Joint Commission. This whole hospital performance measurement development became the catalyst in some ways for the change.

NEUHAUSER: I agree. That was another moment when that change occurred. The Joint Commission found a lot of value in this kind of thinking. It broke a log jam in their thinking that they couldn’t get beyond. Now if they could say, “Show us you’re getting better”—and invite you to figure it out—it moves away from specific measures of diabetes, or what have you.

BATALDEN: Yes. It was the leadership of Jim Roberts and Dennis O’Leary that made that happen. It was fun to be a part of it and fun to encourage it and fun to help in a variety of ways, but it was a joy to see them take this work forward.

⁷⁴ John D. Porterfield III, M.D. served as director of the Joint Commission on Accreditation of Hospitals from 1965 to 1986. [Source: The Joint Commission. *The Joint Commission History*. http://www.jointcommission.org/assets/1/6/Joint_Commission_History.pdf]

⁷⁵ Dennis S. O’Leary, M.D. served as president of the Joint Commission from 1986 to 2007. [Source: The Joint Commission. *The Joint Commission History*. http://www.jointcommission.org/assets/1/6/Joint_Commission_History.pdf]

⁷⁶ William L. Dowling, Ph.D., is professor in the School of Public Health at the University of Washington. [Source: The University of Washington. http://depts.washington.edu/hserv/faculty/Dowling_William]

NEUHAUSER: I think another part of this was that, eventually, the Joint Commission and IHI began a running conversation.

BATALDEN: Yes, exactly. The IHI is a whole important chapter that we haven't talked about yet.

NEUHAUSER: Yes, the IHI seems to me a unique organization.

BATALDEN: The Institute for Healthcare Improvement is an organization that grew up on the basis of its purpose and its values. The IHI began with a group of individuals who came together to learn from and with each other, and that group of people met for a few years before we decided as the Birthday Club to form an organization.

There were a number of things that were important in IHI's formation. The first was a circumstance relating to a grant. Dick Sharp⁷⁷ was the project manager for a Hartford Foundation grant that Don Berwick had received to make some of this new quality information available in the form of courses for the general public. Because those courses were run on a fee basis and bringing in revenue, towards the end of the grant period almost no grant money had been spent. Foundations are generally not happy to get the news that the funds that they've allocated have not been spent. They're usually not set up to receive them back.

Dick Sharp was cleverer than that. The quality field at that time was dominated by a few leaders—Ed Deming, Joe Juran,⁷⁸ Phil Crosby,⁷⁹ and a few others. Outside of health care, the quality community had divided itself into camps around these individual leaders. There was the Deming camp, the Juran camp, and so on.

What Dick Sharp said to Don Berwick was, "Why don't you and Paul Batalden agree to work together instead of forming a Berwick camp and a Batalden camp." I had come into this from a Deming perspective and Don had come into it from a Juran perspective. The pathways of getting to where we were as the Birthday Club were slightly different.

Don and I met in his hotel room in Chicago. We agreed to cooperate. It was very simple. We just agreed to cooperate instead of parsing out and individuating our respective insights into some kind of a way of pitching one against another. Don was at a situation in his life where it made sense for him to leave the organization that he was in.

NEUHAUSER: That would have been the Harvard Community Health Plan?

BATALDEN: Yes, he was in charge of the quality measurement unit at the Harvard Community Health Plan. There was an expectation on the part of the senior leadership there that

⁷⁷ Richard S. Sharp was program director at the John A. Hartford Foundation from 1985 to 1995. [Source: The Hartford Foundation. http://www.jhartfound.org/ar2012/JAHF_2012AR.pdf]

⁷⁸ Joseph M. Juran (1904-2008) was a pioneer in the field of quality management whose work led to the development of Six Sigma and lean manufacturing methodologies. [Source: Joseph Juran, 103, pioneer in quality control, dies. *The New York Times*, Mar. 3, 2008. http://www.nytimes.com/2008/03/03/business/03juran.html?_r=0]

⁷⁹ Philip B. Crosby (1926-2001) was a quality assurance expert credited with introducing the concept of zero defects. [Source: Philip Crosby, developer of zero-defects concept, is dead at 75. *The New York Times*, Aug. 22, 2001. <http://www.nytimes.com/2001/08/22/obituaries/22CROS.html>]

somehow by Don's efforts at good measurement, it would be possible to predict all the potential harm that might occur to anybody in the Harvard Community Health Plan. That was an increasingly intolerable situation for Don to find himself in. I think he was ready for a change, a broader horizon.

I was at HCA and we had just begun an aggressive ramp-up on clinical improvement with Henry Ford and HCA working together. I was not ready to leave where I was, but I was willing to devote myself to the formation of a new organization. We agreed that Don would become the CEO of the new organization, and I would be the chair of the founding board. The Birthday Club would largely populate the board. We added a few more—Jim Bakken⁸⁰ from Ford Motor Company, who had worked with Deming, and a couple others.

Our first meeting was in the board room of the Nashville Airport. We went around the table to see, "How long should we be thinking about?" The first person said, "We should certainly plan to stay in existence long enough to spend out the grant." Another said, "Maybe three full years—not just spending out the grant." Another said, "I think maybe five." It got to be my turn. I said, "We have to plan on at least 25 years." People reacted, "What! Twenty-five years?" I said, "Yes, at a minimum. Actually, I think this job is even bigger than that."

We began. As a board, we had some experienced, senior people like Jim Bakken, who had been on the board of Ford Motor Company and was a senior vice-president at Ford. As the chair of this board, I wanted to get some sense about how the board would work as a board, because some of the members of the Birthday Club hadn't been on boards before. We were dealing with a quite a range of governance experience. We set aside one hour at each board meeting to read a chapter from one of John Carver's books on governance. For that, I incurred the everlasting enmity of my colleagues who hated the "book club." We had good conversations, though, and came to a common understand about how we would work as a board.

One of the important things that happened in the early days of the IHI was the conversation we had around the mission of the IHI. Jim Bakken gave the IHI an important gift. He came to a board meeting and he said, "I've been looking at the words that we talked about last time about our mission. We said that we would be an integrating force for health care improvement, but I want to know if we're going to be *an* integrating force or *the* integrating force." We then tried to help Jim come to some understanding of what was there.

After maybe a couple hours of that discussion, we would get on to the business. At the next meeting, Jim said, "I was looking at our minutes, at this piece in the wording of the mission statement, and I'm just not clear about..." He did this to us for three years! We couldn't get beyond the conversation of the mission of this organization for three years. Jim Bakken kept asking for clarification. It was such a gift, because we did get it clear about what we meant to do—what our purpose was.

We had a legacy of respect and trust for each other as part of the value set of the organization. It was an unusual board, though. We had board consultants come in from time to time, and they told us, "You have to separate out the executive functions from the governing

⁸⁰ James K. Bakken spent his entire career at Ford Motor Company, becoming vice president of Body and Assembly Operations. [Source: University of Wisconsin-Madison. <https://www.engr.wisc.edu/eday/eday1978.html>]

functions. It's just fundamental to any board." I said, "We think of ourselves as a learning board." The board consultant would say, "No, that doesn't compute. You have to be either governance or management." I said, "No, we're a learning group of people. We come together to learn about the improvement of health care."

We would tee up issues and together explore ways in which the IHI might go about its work. Business people on the board, like Jim Bakken and Heinz Galli, the COO of Swiss Air Hotel would push us about what they called the USP. None of the rest of us really knew what the USP meant. We learned that the USP meant the "unique selling proposition," which referred to a recognizable something in the market that could be discerned by someone who had the purchasing authority and could make a decision to buy.

The discipline in the early days of the IHI was to "get your act together." Don't just go talking about being better by and by. If you want to put this offering in front of someone, then make it clear and make the offering such that people can take a decision to make an investment. We grew as a group because of that pushed discipline by these early business partners.

Along the way, Don and I grew much more real about what it meant to cooperate rather than to compete. There were times, I'm sure, that I wasn't all that he expected, and there were times when he wasn't all that I expected. The reality, though, was that we worked hard to cooperate because the stakes were so great. We were not on anybody's list when we started. We were just a group of well-meaning and curious people. We were pretty well connected, though. We were about one or two phone calls away from anyone that we felt we needed. We used those connections, too. We had a deep desire to learn more about these new ways of measuring, changing, improving, and leading the improvement of quality and safety and value.

In the early days, when people used the term "improving quality," they didn't differentiate between improving safety and improving quality, or between improving value and improving quality. Improving quality meant improving quality, safety, and value. Today, with our desire to speciate these things, I've found it helpful to revert to the term "improving health care."

NEUHAUSER: Just as you said, there could have been a Deming faction and a Juran faction. There could have been a quality faction and a safety faction. It's extraordinary that those divisions did not come about.

BATALDEN: Yes, we're facing an interesting challenge today as we think about value. There are some who believe that you can make changes in the cost of care separate from the design of the service or the care. That's a challenge that the current improvement community must step up to, because nothing lasting will happen if we separate and parse out cost from quality and safety. Part of the challenge is to see how these things can be addressed and approached synergistically.

NEUHAUSER: It seems that it would have been an easy transition from the Hartford grant that brought this group of initial enthusiasts together to the thinking that, "This is so good! Let's have an annual meeting."

BATALDEN: Our first national meeting was in Boston, which you mentioned earlier, where we had those hospital CEOs report on their progress. There were perhaps 100 people in the room. The idea of an annual forum grew. The next meeting was the first annual forum, with

perhaps 300 people. That was a learning experience for all of us, because there was a lot involved in putting on a meeting smoothly. Out of that grew this obsession within the IHI for a smoothly orchestrated meeting that's actually fun to attend and with many different possible directions it could go in. The idea of having classes to learn about various data, tools, and flowcharting—the things that had worked so well in manufacturing settings—that was another thing that was pretty automatic. When we started to work on clinical areas, though, we struggled to figure out the right focus.

One time, we were at Henry Ford at a meeting of the Group Practice Improvement Network. Don and I were sitting together, listening to a report. What struck me was that we were struggling with two bodies of knowledge. One body of knowledge we could refer to as the generalizable science that is available related to this or that clinical problem. The other body of knowledge has to do with the moxie that comes from making the local adaptation happen so that the generalizable knowledge becomes a property of the local context.

I remember the first time we put all this together was around pressure ulcers. There was a body of scientific knowledge, but there was also this nurse at Intermountain who was spectacular in her ability to apply that knowledge and have a wonderful outcome for patients. On a napkin, I sketched this idea of a way to couple these two different streams of knowledge with a generator group of folks. We would invite people who had a shared interest to sign up to learn about this, but to come only if they had support from their home team about this. The first time they met as a big group, we would focus on a few of the most frequent and obvious kinds of things. The second meeting in which the large group came together, there would be a chance for the folks who had come to the first meeting to show off what they had been able to go back and accomplish. Then, there would be a third meeting where we would invite, in addition to those who had been to the first two meetings, outside folks who were just curious. That process was called, “The Breakthrough Series.” What happened was that the IHI now had a way of enabling action at the local level. For many years, that accelerated the change process in places that were interested in doing that.⁸¹

NEUHAUSER: This engaged a lot more people with interests that were in the IHI context.

BATALDEN: Yes, exactly. Two of Don's sons got very active in political campaigns, which gave Don the chance to learn about the details of running a political campaign. It dawned on him that you had to be clear about the aim and the accountability for results, and then the time that you were going to hold people accountable for if you were going to run a political campaign. It dawned on him that a similar kind of campaign might be mounted around unnecessary loss of life. The “100,000 Lives Campaign”⁸² was hatched on the basis of that insight. The planks for that platform were developed on the basis of knowledge of the literature and Don's grasp of where the

⁸¹ [The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. Boston: Institute for Healthcare Improvement, 2013.

<http://www.ihl.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHICollaborativeModelforAchievingBreakthroughImprovement.aspx>]

⁸² The 100,000 Lives Campaign was a nationwide initiative intended to reduce mortality, saving as many as 100,000 lives in the U.S. between January 2005 and June 2006, for the initial timeframe. [Source: Institute for Healthcare Improvement. *Overview of the 100,000 Lives Campaign*.

<http://www.ihl.org/Engage/Initiatives/Completed/5MillionLivesCampaign/Documents/Overview%20of%20the%20100K%20Campaign.pdf>]

potential was for making the gains.

That opened up tension because now the IHI was getting much more visible. A lot of the folks in the established community of interpretation of data were a little nervous about this relatively rapid or accelerating kind of action-taking. It focused around the particular concern about patients who were deteriorating in the hospital and who might benefit from a rapid reassessment. There was interest in Australia, where this anesthesiologist had gone from the UK. Don picked that up, and that became part of the 100,000 Lives Campaign.

What got launched at that same time was this question about the science of improvement, and whether action was being invited in advance of the science or in response to the science, and how much evidence was needed in order to make the response, and so on.

It was against that backdrop that the international meeting was going to occur in Bergen in 2003. I was invited to give the opening remarks because I had been a visiting guest professor at Bergen for a number of years. I decided to focus on this challenge of whether improvement was “science-lite.” As I was reflecting on what we actually did to make improvement occur, I realized that we had to bring together the generalizable science and a knowledge of a particular context. We did that with an expectation that we could measure performance improvement. It was a logic formula: generalizable science plus a particular context “arrow” measurable performance improvement. I realized that I had been using that same logic formula thousands of times before in the clinical care of a patient. It wasn’t a particular context, but it was a particular patient.

As I reflected on that simple description of the logic, it was not a matter of “science-lite,” but more a matter of “knowledge-rich.” What recurred was this theme of the multiple epistemologies and the history of ideas—because you build knowledge of the generalizable science by controlling context out as a variable, and you don’t leave context out when you’re seeking knowledge of the particular context—you obsess about the context. You want to understand everything you can about the context so that you can use those clues in designing a connection between the generalizable science, and so on.

I began to realize that it was the different ways of building this knowledge in this work of improvement that was fundamental to my understanding of what we were trying to do. Over time, the IHI recognized that it needed to broaden its scientific review process and established its Science Advisory Committee to work with Don and the leaders of the IHI. It was also the case that they needed to publish their work in peer-reviewed places. They couldn’t just promote their work in some glossy flyers. Frank Davidoff⁸³ joined the IHI at that time after his retirement as the editor at the *Annals of Internal Medicine*. He had a wonderful effect on the IHI’s staff and on the disciplines of the IHI.

One day, he called me and said, “Paul, you aren’t writing very much. You need to write more.” I said, “Frank, what’s your theory of the written record?” He said, “What?” I said, “Just help me understand how you understand the intention of the written record.” He said, “Nobody has ever asked me what my theory of the written record is. Let me think a little bit about that.”

He thought about it and we exchanged ideas. I said, “Maybe what we need to do is to take

⁸³ Frank F. Davidoff, M.D. was editor of the *Annals of Internal Medicine* from 1995-2001. [Source: *Landmark Papers in Internal Medicine*. American College of Physicians, 2009.]

these ideas and create guidance for people wanting to write about improving care.” That’s the birth of the SQUIRE publication guidelines as they came to be known.⁸⁴

What also happened as an outgrowth of that knowledge-rich multiple epistemology stuff was that the following year in Paris, there was the same international meeting. Vin McLoughlin⁸⁵ of the Health Foundation was intrigued about this controversy and wanted to have a debate. Don was not particularly keen about having a debate about this, but wanted to have a panel discussion about it. Vin McLoughlin invited Paul Bate⁸⁶ and Don invited me to join this group. We assumed it would attract 20 or 30 people. There were about 350 that came to the conversation .

Vin McLoughlin realized that this was quite an interesting conversation because there were multiple ways of knowing that had to come together, and that were being discussed, but not always with a perspective about, and which respected, each of the knowledge traditions.

After that session, she turned to me and said, “Maybe we should develop this a little further.” I said, “I’ll write you a little thing about that.” I wrote her a two-page description of how we might invite a group of people to come to some further consideration of this “multiple ways of knowing” topic. She liked that idea and said, “Paul, the way the Health Foundation usually works is that somebody applies for one of our grants, then we give them the grant, and then they administer the grant.” I said, “You just pay the grantee’s overhead in doing that. Why don’t we save the Health Foundation some money? You just pay for whatever costs are involved in bringing this group of people together directly from the Foundation. The Foundation would really run the thing. You and I can co-lead it.” She said, “That’s a little unusual, but okay.”

We created an advisory group, a wonderful group of people, to advise us about the people we wanted to have. We wanted people prepared in different disciplines, but who knew something about improvement and could engage in a good conversation. The Health Foundation in the UK agreed to find a venue to do this. I had no idea where we would end up.

NEUHAUSER: Did they pick a venue!

BATALDEN: They picked this venue in an English manor house called Cliveden, which is on the banks of the Thames and which was the site of the Profumo affair many years ago. At any rate, it was an elaborate, wonderful place to have a meeting. The people were wonderful. You were there, Duncan, so you know these people. We had people from foundations, clinical trialists, statisticians, sociologists, political scientists, and editors. It was a rich exploration of this territory of these multiple knowledge systems.

The meeting was going smoothly. On Thursday night, people were beginning to contemplate their return home, but their preparations were interrupted by the eruption of

⁸⁴ [Source: Ogrinc, G., Mooney, S.E., and others. The SQUIRE (Standards for Quality Improvement Reporting Excellence) guidelines for quality improvement reporting: explanation and elaboration. *Quality & Safety in Health Care*;17(Suppl. 1):i13-i32, Oct. 2008. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2602740/pdf/QHE-17-S1-0013.pdf>]

⁸⁵ Vin McLoughlin, Ph.D. (1954-2009) was director of quality and performance analysis at the Health Foundation. [Source: Vin McLoughlin obituary. *The Guardian*, Dec. 31, 2009. <http://www.theguardian.com/society/2009/dec/31/vin-mcloughlin-obituary>]

⁸⁶ Paul Bate, Ph.D., professor emeritus at University College London where he worked as a social scientist. [Source: Paul Batalden.]

Eyjafjallajökull, the Icelandic volcano. The air space over the UK was shut down. Instead of an early departure, people were going to be stuck there. We had a chance to replay the meeting in some series of informal interactions, which actually built another community of friends out of that experience.⁸⁷

One of the themes that I see here with the Birthday Club, the IHI, the Summer Camp, and the Cliveden group is this theme of people who respect each other and who make things happen because they can trust one another. That never seems to be understood in the real world of policy change. I've come to appreciate that about the IHI and about the work. Underneath this for me has been this persistent curiosity about the multiple ways of knowing that are really important as we go forward in the improvement of care.

NEUHAUSER: You're hovering on the middle to high level of theory in doing that. It strikes me as like a good Russian novel. The characters keep coming back in different appearances and doing different things. Many people reappear in another context.

BATALDEN: Yes.

NEUHAUSER: "Dance to the music of time" is a good description of this—with like-minded people.

BATALDEN: Yes, that's really true.

NEUHAUSER: We should talk about one of the things that came out of IHI. It started as an American enterprise, and then it began to go farther afield as other people picked it up.

BATALDEN: Right. One was done in partnership with the *British Medical Journal*. The so-called European Forum attracted people from many other countries as well. It lost its identity as the European Forum and became known as the International Forum, but continues to be done largely in partnership with the *British Medical Journal* and the IHI. The Health Foundation has stepped in and played an active role in sponsoring the science.

The challenge of that meeting has been to continue to reach out to the developing countries as well as to other more financially well off countries as the work goes on in each country with its own signature. The work in France is very different from the work in Germany, which is very different from the work in Norway, which is very different from the work in Sweden, and so on. We can learn from that set of differences.

NEUHAUSER: Anthony Staines⁸⁸ found two places in the world that he thought were extraordinary as measured by their real efforts as systemic improvement—one is in Salt Lake City and the one is in Jönköping, Sweden.

⁸⁷ The Vin McLoughlin Colloquium on the Epistemology of Improving Quality was held April 12 to 16, 2010. [Source: Batalden, P.B., Bate, P., and others. Planning and leading a multidisciplinary colloquium to explore the epistemology of improvement. *BMJ Quality & Safety*. 20(Suppl. 1):i1-i4, Apr. 2011. http://qualitysafety.bmj.com/content/20/Suppl_1#Commentary-1]

⁸⁸ Anthony Staines, Ph.D., is patient safety programme director at Fédération des Hôpitaux Vaudois, Switzerland. [Source: The International Society for Quality in Health Care. <http://www.isqua.org/docs/edinburgh/anthony-staines-ph-d.pdf?sfvrsn=2>]

BATALDEN: Yes. Brent James has done a wonderful job in energizing and leading the Intermountain efforts in the Salt Lake City area. It's been fun to be connected with that work. I had the chance to visit with his alumni group recently, and it's a wonderful example of how a creative and curious leader like Brent and a whole team of others from Intermountain have brought about this system-wide change.

I've been much more closely connected to the Jönköping, Sweden, experience, which began in 1994. It started in Norway with Egil Haugland from Haukeland University Hospital in Bergen.⁸⁹ Egil was curious about this work of quality. He had worked in the oil industry in Norway before becoming the CEO of this hospital and had had some of the training staff from the oil company come and work with him in the hospital—which was not universally accepted by the medical staff. He was looking for ways to bring health professional educators into that work and was going to take an opportunity to visit with the IHI when they held a meeting in California. He had heard about this fellow named Batalden and knew about a little island called Batalden, located north of Bergen and outside of Florø, out in the North Sea. He wondered if there was any connection. I explained that my grandfather had come to Minnesota from that area in Norway.

He took a flyer and said, “Maybe you'd come and give a series of lectures in Bergen.” That led to other interactions in Norway. It also connected me to the Norwegian Medical Association and the work of Hans Asbjørn Holm.⁹⁰ Margareta Palmberg⁹¹ in Sweden was a part of the Landstingsförbundet, the association of counties of Sweden. She was working on leadership development in those counties for the improvement of care. When I came to Bergen, she wanted me to come to Stockholm.

So, I would go to Bergen and then to Stockholm. In those early years, the leadership of Jönköping County Council emerged. Sven-Olof Karlsson was the CEO, and Göran Hendricks was the in-service education director in a unit that he called “Qulturum.” Mats Bojestig, an internist from the Highland Hospital, and Boel Andersson Gare⁹² from the pediatrics department and public health departments came together to invite learning by the members of the county council. They fostered within the county hospital system a strong culture of improvement through courses and learning opportunities and meetings.⁹³

In 2005, Göran Hendricks, Peter Wilcox, and some colleagues from the U.K. were making a presentation at an international meeting. They were talking about how common it is for the first invitation that people receive to participate in an improvement effort to be accepted eagerly. The next invitation to get involved in a different improvement effort is met with a little bit of a pause.

⁸⁹ Egil Haugland was CEO of Haukeland Universitetssjukehus, Bergen, Norway. [Source: Health Care Improvement Leadership Development. http://www.dartmouth.edu/~cecs/hcild/our_work.html]

⁹⁰ Hans Asbjørn Holm, M.D., Ph.D. was director of the Norwegian Medical Association. [Source: ResearchGate. http://www.researchgate.net/profile/Hans_Holm]

⁹¹ Margareta Palmberg is the founder of Mementor Leadership in Sweden. [Source: Mementor. <http://www.mementor.se/in-english/>]

⁹² Boel Andersson Gare, M.D., Ph.D. is a pediatrician and a professor with Jönköping University. [Source: Jönköping Academy. <http://center.hj.se/jonkoping-academy/en/about-jonkoping-academy/colleagues/boel-andersson-gare.html>]

⁹³ [Source: Institute for Healthcare Improvement. *Charting the Way to Greater Success: Pursuing Perfection in Sweden*. <http://www.ihl.org/resources/Pages/ImprovementStories/ChartingtheWaytoGreaterSuccessPursuingPerfectioninSweden.aspx>]

By the third invitation to get involved in improving something, people find they have other things to do. There is an “improvement exhaustion” going on because it is perceived as inviting people to add things to their workload. They have their usual jobs, but then this improvement thing comes along as an add-on.

What dawned on me was that we would never make the improvement of health care part of the daily work if we kept the professional development and formation of the doctor, or of the nurse, separate from this work of improvement. Many things were coming together at that time. The ACGME’s competencies were coming together, as was the work at Dartmouth around the education of the young doctors, and the work on and understanding of these multiple epistemologies. It became clear to me that the thing that would help stabilize a generative, vital kind of improvement effort would be the creation of a link among the efforts at system improvement and system performance with our measure and attention on outcomes and better professional development. That gave rise to this inextricable triangle of better outcomes, better system performance, and better professional development. We could demonstrate that at Dartmouth, but I was curious about whether we could do it in Sweden.

We met with Mats Hammar, the dean of the Linköping Medical School, and Sven-Olof, the CEO of the Jönköping County Council. I was opening this idea about this triangle. I said to Mats Hammar, “Here is what I think the possibility is here. There aren’t competing medical schools. There is only one medical school for this area. With the care system what it is, we don’t have to worry about lots of different players. You are the player. It occurs to me that there is a relationship between the professional development, the system performance, and better outcomes.”

He said, “Yes, but Paul, I’m the dean. I’m an educator and I live in the professional development corner of the triangle.” I said, “That’s where your feet are, Mats. You stand in that corner of the triangle. That leaves your eyes, your hands, your head, free to pay attention to the other two corners of the triangle, which are better outcomes for the individual population and better system performance.” Sven-Olof, the CEO of the care system, said, “I am like Mats, only I live down here, Paul, in the better system performance corner.” I said, “The same thing is true for you, Sven-Olof. You have your feet there, but your eyes and hands and attention can be on the other parts of the triangle.”

We began to have conversations about the creation of a Jönköping Academy. This would be a place where the municipality, the county, and the university would come together for the purpose of making this triangle a reality. The academy will celebrate its fifth year, working on better outcomes, better system performance in quality and safety and value, and better professional development.

NEUHAUSER: This is with Johan Thor, isn’t it?⁹⁴

BATALDEN: Johan Thor is working together with Boel Andersson-Gare as the leadership of that activity.

NEUHAUSER: Julie Johnson was there last week.

⁹⁴ Johan Thor, M.D., Ph.D. was the founding director of Jönköping Academy from 2009 to 2013. [Source: The Jönköping Academy. <http://center.hj.se/jonkoping-academy/en/about-jonkoping-academy/colleagues/johan-thor.html>]

BATALDEN: Julie Johnson was there.

NEUHAUSER: Margie Godfrey got her degree there. It sounds like more than just you building that bridge.

BATALDEN: Absolutely. Tina Foster is involved in the coach education for the Practicum Project, and the Practicum Project is based on the residency program in the Leadership Preventive Medicine Residency.

NEUHAUSER: You're invited to think about the future. It would be interesting with all of which you have observed. Give us some thoughts about what you think is going to happen.

BATALDEN: Along the way I had the chance to get to know an Englishman by the name of Reg Revans. He had written a monograph for the Nuffield Trust called "Standards for Morale."⁹⁵ He was talking about the wastage of nurse cadets. He was particularly interested in the creation of a learning environment for work, and is the father of action learning in the UK. He described to me what the Cavendish Laboratory was like when he was a young physics student at Cambridge University.

NEUHAUSER: He was at that famous place!

BATALDEN: Yes, he was there when Rutherford was the leader of the Cavendish Laboratories at Cambridge.⁹⁶ He said that Rutherford had a habit of focusing a session on what people were trying to figure out. He wouldn't let people talk about what they thought they already knew. He wanted people to talk about what they were trying to figure out. Rutherford understood the importance of questions. It's really our current perceived ignorance that drives science. The important questions for the improvement of health care will drive the improvement of quality. Getting clear in our mind what the important questions are will be very important.

One of the challenges we face is that we've created work that is perceived itself to generate burden for the worker—there is workplace-generated worker burden in health care. What will it take for us to turn that around? There are lots of questions that might come to play there. How might we think in flexible ways about value creation? I don't know what the important questions are, but I know that us having conversation about what the important questions are will actually drive the future of the development of quality.

A second driver of the future of quality will be the various ways in which we model the creation of value. It's popular today to talk about a value chain, and value chains work very well in the manufacturing world, when the product is a good, not a service. The challenge for us is developing models of value creation which reflect the work itself. There will need to be multiple models of value creation that will allow us to pursue better value in health care.

⁹⁵ Reginald W. Revans was a professor of operations research at the University of Manchester. The work referred to is: Revans, R.W. *Standards for Morale: Cause and Effect in Hospitals*. London, England: Nuffield Provincial Hospitals Trust : Oxford University Press, 1964. [Source: White, K.L. Hospitals and health services enterprises as social systems. *Bulletin of the New York Academy of Medicine*;73(2):430-432, Winter 1996. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2359301/pdf/bullnyacadmed01032-0219.pdf>]

⁹⁶ Ernest Rutherford (1871-1937), who was awarded the Nobel prize in chemistry for the discovery of artificial nuclear fission, was Cavendish Professor of Physics at Oxford from 1919 to 1937. [Source: Cavendish Laboratory. *The History of the Cavendish*. <http://www.phy.cam.ac.uk/history>]

The third driver has to do with the way we use information technology. Currently, we don't use information technology very much to remove work from the work of health care. Other industries have moved well beyond health care in our ability to use information technology to take work out of the work. We have yet to do very much of that. We have that ahead of us.

The fourth driver has to do with our recognition of the co-production of health care. This goes back to my experiences as a beginning doctor, where I learned that I didn't really produce health in another person. I did things that helped that person get better or be in better health. We are likely to see real benefit from these insights that actually go back to Victor Fuchs⁹⁷ and Elinor Ostrom⁹⁸ and others, as they explored this idea of the meaningful co-production of services. It's not just a matter of co-production for the sake of co-production, but it's co-production of good care that we have to really work on.

The last point has to do with this perception that somehow improving work is an alien construct with respect to what it means to be a professional. Fundamentally, being a professional involves being able to do your work and improve your work. Every professional has two jobs: to do their job and to improve their job.

NEUHAUSER: That's probably a very good place to stop.

BATALDEN: Yes. Thank you very much. I hope that this will be of value to someone who wants to understand this time that we've had. It's been a wonderful time to work and learn.

CHRONOLOGY

1941	Born December 4 in Minneapolis, Minnesota
1963	Married June 22 to LaVonne Olson of Cumberland, Wisconsin
1963	Augsburg College (Minneapolis) Bachelor's degree, cum laude
1967	University of Minnesota Medical School (Minneapolis) Bachelors of science MD
1967-1969	University of Minnesota Department of Pediatrics (Minneapolis) Internship and Residency
1969-1970	National Cancer Institute (Bethesda, Maryland) Clinical Associates, Acute Leukemia Service for Children

⁹⁷ Victor R. Fuchs, Ph.D. is a professor emeritus at Stanford. He wrote *The Service Economy* in 1968 in which he opened this idea of "services as being co-created, produced." [Sources: Paul Batalden; and also Stanford University. http://healthpolicy.stanford.edu/people/Victor_R_Fuchs/]

⁹⁸ Elinor Ostrom (1933-2012), who was awarded the Nobel prize in economics, was a professor at Indiana University. [Source: Indiana University. <http://elinorostrom.indiana.edu/>]

1970-1972 U.S. Department of Labor (Washington, DC)
Medical Director, Job Corps

1970-1975 U.S. Department of Health, Education and Welfare
1970-1972 Special Assistant, Office of the Administrator, Health Services and
Mental Health Administration (Washington, DC)
1972-1973 Assistant Surgeon General and Director, Community Health Service,
U.S. Public Health Service (Rockville, Maryland)
1973-1975 Assistant Surgeon General and Director, Bureau of Community
Health Services, U.S. Public Health Service

1975-1976 InterStudy (Minneapolis)
Quality Assurance Project Director

1975-1986 Park Nicollet Medical Center (Minneapolis)
Practicing Pediatrician
Chair, Department of Pediatrics
Executive Vice President for Professional Management
Chief Operating Officer

1976-present American Board of Pediatrics
Board certified

1977-1986 University of Minnesota School of Pharmacy (Minneapolis)
Associate Professor
Co-Founder and Director, Kellogg Pharmaceutical Clinical Scientist Fellows
Program

1986-1994 Hospital Corporation of America (Nashville)
Vice President for Medical Care
Head, Quality Resource Group

1990-2000 Henry Ford Health Sciences Center (Detroit)
Ernest Breech Chairman, Department of Health Care Quality Improvement
Education & Research

1994-present Dartmouth College, Geisel School of Medicine (Hanover, New Hampshire)
1994-2009 Founding Director, Center for Leadership and Improvement, The
Dartmouth Institute for Health Policy and Clinical Practice
1994-2012 Professor of Pediatrics and Community and Family Medicine
2012-present Professor Emeritus, The Dartmouth Institute for Health Policy and
Clinical Practice

1996-present Institute for Healthcare Improvement (Boston)
1996-2009 Senior Vice President for Health Professional Development
2009-present Senior Fellow and Governing Board Advisor

- 1998-2005 U.S. Department of Veterans Affairs
 Founder and Director, National Quality Scholars Fellowship Program
- 2002-2012 Dartmouth-Hitchcock Medical Center and Dartmouth College, Geisel School of
 Medicine, Leadership Preventive Medicine Residency Program (Hanover, New
 Hampshire)
 2002-2009 Founder and Program Director
 2009-2012 Associate Director
- 2009-present Jönköping University (Sweden)
 Adjunct Professor, Quality Improvement and Health and Welfare Leadership

MEMBERSHIPS AND AFFILIATIONS

Allina Health Systems (Minneapolis)
 Chair, Quality Committee
 Member, board

American Academy of Pediatrics
 Fellow

American College of Preventive Medicine
 Fellow

Association of American Medical Colleges
 Chair, Quality of Care Education Medical School Objective Project Expert Panel

Cincinnati Children's Hospital and Medical Center
 Advisor, External Advisory Council, Anderson Center

Dartmouth-Hitchcock Alliance
 Member, board

Health Foundation (London)
 Chair, Improvement Science Development Group

Institute for Healthcare Improvement (Boston)
 Charter member
 Founding chair, Health Professions Education Collaborative
 Member, board

Institute of Medicine
 Panel member, Forum on Science of Health Care Quality Improvement and Implementation

Johns Hopkins Medicine (Baltimore)
 Member, Board of Advisors, Armstrong Institute for Patient Safety and Quality

Nashville General Hospital
Chair, Quality and Academics Committee
Founding chair, board
Member, board

University of Wisconsin (Madison)
Member, National Advisory Board, Active Aging Research Center

SELECTED PUBLICATIONS

[Dr. Batalden is a prolific author. The following bibliography lists published work related to quality.]

Batalden, P.B. A quality assurance program in action. *Group Practice*. 26(5):18-20, 24, Sept.-Oct. 1977.

Batalden, P.B. Group practice: an operational program to change behavior of ambulatory care providers. *Quality Review Bulletin*. 3(10):12-14, Oct. 1977.

McClain, M.P., Batalden, P.B., and O'Connor, J.P. Assessing and assuring quality: a look at the St. Louis Park Medical Center's experience. *The Bulletin* [St. Louis Park Medical Center Research Foundation]. 22(3): 109-115, 1978.

Batalden, P.B., McClain, M.P., and O'Connor, J.P. Quality assurance in the ambulatory setting: an operating program. *Journal of Ambulatory Care Management*. 1(4):1-13, Nov. 1978.

Zimney, L., McClain, M.P., Batalden, P.B., and others. Patient telephone interviews: a valuable technique for finding problems and assessing quality in ambulatory medical care. *Journal of Community Health*. 6(1):35-42, Fall 1980.

Avery, M., Batalden, P.B., and O'Connor, J.P. Medical records redesign: the impact of ambulatory care quality assurance. *Topics in Health Record Management*;1(2):25-35, Dec. 1980.

Batalden, P.B., and O'Connor, J.P. *Quality Assurance in Ambulatory Care*. Rockville, MD: Aspen Publishers, 1980.

Batalden, P.B., Smith, S.D., and others. Quality improvement: the role and application of research methods. *Journal of Health Administration Education*. 7(3):577-583, Summer 1989.

Nelson, E.C., Rose, R., and Batalden, P.B. Physician judgments of quality: how do they fit into organization-wide quality improvement? *Quality Letter for Health Care Leaders*. 2(2):6-11, Mar. 1990.

Batalden, P.B., and Nelson, E.C. Hospital quality: patient, physician and employee judgments. *International Journal of Health Care Quality Assurance*. 3(4):7-17, Nov. 1990.

Batalden, P.B., Organization-wide quality improvement in health care. *Topics in Health Record Management*. 11(3):1-12, Mar. 1991.

- Nelson, E.C., Larson, C.O., Hays, R.D., Nelson, S.A., Ward, D., and Batalden, P.B. The physician and employee judgment system: reliability and validity of a hospital quality measurement method. *Quality Review Bulletin*. 18(9):284-292, Sept. 1992.
- Nelson, E.C., Rust, R.T., Zahorik, A., Rose, R.L., Batalden, P.B., and Siemanski, B.A. Do patient perceptions of quality relate to hospital financial performance?" *Journal of Health Care Marketing*. 12(4):6-13, Dec. 1992.
- Ferguson, S.G., Howell, W.T., and Batalden, P.B. Knowledge and skills needed for collaborative work. *Quality Management in Health Care*. 1(2):1-11, Winter 1993.
- Batalden, P.B. QMHC Interview: Paul B. Batalden, M.D., *Quality Management in Health Care*. 1(4): 73-79, Summer 1993.
- Batalden, P.B. The continual improvement of health care. *American Journal of Medical Quality*. 8(2): 29-31, Summer 1993.
- Nelson, E.C., Batalden, P.B. Patient-based quality measurement systems. *Quality Management in Health Care*. 2(1):18-30, Fall 1993.
- Batalden, P.B., and Stoltz, P.K. A framework for the continual improvement of health care. *Journal on Quality Improvement*. 19(10):424-452, Oct. 1993.
- Hays, R.D., Nelson, E.C., Larson, C.O., and Batalden, P.B. Short-form measures of physician and employee judgments about hospital quality. *Joint Commission Journal on Quality Improvement*. 20(2):66-77, Feb. 1994.
- Redelheim, P.S., Pomeroy, L.H., and Batalden, P.B. A framework for the continual improvement of behavioral health care. *Behavioral Healthcare Tomorrow*. 2(6), Nov.-Dec. 1993; and, 3(2):49-55, Mar.-Apr. 1994.
- Batalden, P.B., Nelson, E.C., and Roberts, J.S. Linking outcomes measurement to continual improvement: the Serial "V" way of thinking about improving clinical care. *Joint Commission Journal on Quality Improvement*. 20(4):167-180, Apr. 1994.
- Batalden, P.B., and Stoltz, P.K. PA-C, QL perspective: fostering the leadership of a continually improving healthcare organization. *Quality Letter for Health Care Leaders*. 6(6):9-15, July-Aug. 1994.
- Nelson, E.C., Greenfield, S., Hays, R.D., Larson, C., Leopold, B., and Batalden, P.B. Comparing outcomes and charges for patients with acute myocardial infarction in three community hospitals: an approach for assessing 'value.' *International Journal for Quality in Health Care*. 7(2):95-108, Feb. 1995. [1996 winner of the Peter Reizenstein Prize awarded by the International Society for Quality in Health Care.]
- Gustafson, D.H., Hung, C.F., Nelson, E.C., and Batalden, P.B. The total costs of illness: a metric for health care reform. *Hospital & Health Services Administration*. 40(1):154-168, Spring 1995.

Nelson, E.C., Batalden, P.B., and others. Report cards or instrument panels: who needs what? *Joint Commission Journal on Quality Improvement*. 21(4):155-166, April 1995.

Batalden, P.B., and Stoltz, P.K. Quality management and continual improvement of health care: a framework. *Journal of Continuing Education in the Health Professions*. 15(3):146-164, Sept. 1995.

Batalden, P.B., Mohr, J.J., and others. A conceptual framework for learning continual improvement in health administration education programs. *Journal of Health Administration Education*. 13(1):67-90, Winter 1995.

Batalden, P.B. Stakeholders and reflections on improving health professions education: what's next? *Joint Commission Journal on Quality Improvement*. 22(3):229-232, Mar. 1996.

Nelson, E.C., Mohr, J.J., Batalden, P.B., and Plume, S.K. Improving health care, part 1: the clinical value compass. *Joint Commission Journal on Quality Improvement*. 22(4):243-258, Apr. 1996.

Nelson, E.C., Batalden, P.B., and others. Improving health care, part 2: a clinical improvement worksheet and users' manual. *Joint Commission Journal on Quality Improvement*. 22(8):531-548, Aug. 1996.

Mohr, J.J., Mahoney, C., Nelson, E.C., Batalden, P.B., and Plume, S.K. Improving health care, part 3: clinical benchmarking for best patient care. *Joint Commission Journal on Quality Improvement*. 22(9):599-616, Sept. 1996.

Nelson, E.C., Mohr, J.J., Batalden, P.B., and Plume, S.K. Improving health care, part 4: concepts for improving any clinical process. *Joint Commission Journal on Quality Improvement*. 22(10):651-659, Oct. 1996.

Johnson, L.C., Batalden, P.B., and others. Clinical process cost analysis: a promising tool for clinical improvement. *Quality Management in Health Care*. 5(3):52-62, Spring 1997.

Plume, S.K., Nelson, E.C., Batalden, P.B., and Splaine, M.E. Choosing what to measure in healthcare. *New Medicine*. 1:1-4, 1997.

Batalden, P.B., and Mohr, J.J. Building knowledge of health care as a system. *Quality Management in Health Care*. 5(3):1-12, Spring 1997.

Batalden, P.B., Mohr, J.J., and others. Continually improving the health and value of health care for a population of patients: the panel management process. *Quality Management in Health Care*. 5(3):41-51, Spring 1997.

Cohn, K.H., Walsh, D.B., Farrell, T.M., Batalden, P.B., and others. The odyssey of residency education in surgery: experience with a total quality management approach. *Current Surgery*. 54(4):218-224, May 1997.

Batalden, P.B. Delivering care on the "front line": a conversation with Paul Batalden. *Hospitals & Health Networks: Futurefocus* [Suppl.], July 1997.

Batalden, P.B. If improvement of the quality and value of health and health care is the goal, why focus on health professional development? *Quality Management in Health Care*. 6(2):52-61, Winter 1998.

Nelson, E.C., Splaine, M.E., Batalden, P.B., and Plume, S.K. Building measurement and data collection into medical practice. *Annals of Internal Medicine*. 128(6):460-466, Mar. 1998.

Headrick, L.A., Wilcock, P.M., and Batalden, P.B. Interprofessional working and continuing medical education. *British Medical Journal*. 316(7133):771-774, Mar. 7, 1998.

Batalden, P.B., Splaine, M.E., and others. Looking at care from the inside out: a conceptual approach to geriatric care. *Journal of Ambulatory Care Management*. 21(3):1-9, July 1998.

Nelson, E.C., Batalden, P.B., and others. Building a quality future. *Frontiers of Health Services Management*. 15(1):3-32, Fall 1998.

Batalden, P.B., Cronenwett, L.R., and others. Collaboration in improving care for patients: how can we find out what we haven't been able to figure out yet? *Joint Commission Journal on Quality Improvement*. 24(10):609-618, Oct. 1998.

Nelson, E.C., Batalden, P.B., Ryer, J.C., editors. *Clinical Improvement Action Guide*. Oak Brook Terrace, IL: Joint Commission on Accreditation of Healthcare Organizations, 1998.

Nelson, E.C., Splaine, M.E., Godfrey, M.M., Kahn, V., Hess, A.R., Batalden, P.B., Plume, S.K. Using data to improve medical practice by measuring processes and outcomes of care. *Joint Commission Journal on Quality Improvement*. 26(12):667-685, Dec. 2000.

Weeks, W.B., Mills, P.D., Dittus, R.S., Aron, D.C., and Batalden, P.B. Using an improvement model to REDUCE adverse drug events in VA facilities. *Joint Commission Journal on Quality Improvement*. 27(5):243-254, May 2001.

Batalden, P.B. How shall we prepare the future healthcare professional? *Frontiers of Health Services Management*. 18(2):39-42, Winter 2001.

Mohr, J.J., and Batalden, P.B. Improving safety on the front lines: the role of clinical microsystems. *Quality & Safety in Health Care*. 11(1):45-50; Mar. 2002.

Batalden, P.B., Stevens, D.P., and Kizer, K.W. Knowledge for improvement: who will lead the learning? *Quality Management in Health Care*. 10(3):3-9; Spring 2002.

Splaine, M.E., Aron, D.C., Dittus, R.S., Kiefe, C.I., Landefeld, C.S., Rosenthal, G.E., Weeks, W.B., and Batalden, P.B. A curriculum for training quality scholars to improve the health and health care of veterans and the community at large. *Quality Management in Health Care*. 10(3):10-18, Spring 2002.

Batalden, P.B. "Quality improvement": noun or verb? *Quality & Safety in Health Care*. 11(2):152, June 2002.

- Batalden, P.B., Leach, D.L., Swing, S., Dreyfus, H., and Dreyfus, S. General competencies and accreditation in graduate medical education. *Health Affairs*. 21(5):103-111, Sept.-Oct. 2002.
- Nelson, E.C., Batalden, P.B., and others. Microsystems in health care: part 1, learning from high-performing front-line clinical units. *Joint Commission Journal on Quality Improvement*. 28(9):472-493, Sept. 2002.
- Batalden, P.B., Splaine, M. What will it take to lead the continual improvement and innovation of health care in the twenty-first century? *Quality Management in Health Care*. 11(1):45-54, Fall 2002.
- Nelson, E.C., Batalden, P.B., and others. Microsystems in healthcare part 2, creating a rich information environment. *Joint Commission Journal on Quality and Safety*. 29(1):5-15, Jan. 2003.
- Ogrinc, G., Splaine, M.E., Foster, T., Regan-Smith, M, and Batalden, P.B. Exploring and embracing complexity in a distance-learning curriculum for physicians. *Academic Medicine*. 78(3):280-285, Mar. 2003.
- Godfrey, M.M., Nelson, E.C., Wasson, J.H., Mohr, J.J., and Batalden, P.B. Microsystems in healthcare part 3, planning patient-centered services. *Joint Commission Journal on Quality and Safety*. 29(4):159-170, Apr. 2003.
- Wasson, J.H., Godfrey, M.M., Nelson, E.C., Mohr, J.J., and Batalden, P.B. Microsystems in healthcare part 4, planning patient-centered care. *Joint Commission Journal on Quality and Safety*. 29(5):227-237, May 2003.
- Batalden, P.B., Nelson, E.C., and others. Microsystems in health care: part 5, how leaders are leading. *Joint Commission Journal on Quality and Safety*. 29(6): 297-308, June 2003.
- Mohr, J.J., Barach, P., Cravero, J.P., Blike, G.T., Godfrey, M.M., Batalden, P.B., and Nelson, E.C. Microsystems in health care: part 6, designing patient safety into the microsystem. *Joint Commission Journal on Quality and Safety*. 29(8):401-408, Aug. 2003.
- Huber, T.P., Godfrey, M.M., Nelson, E.C., Mohr, J.J., Campbell, C., and Batalden, P.B. Microsystems in health care: part 8, developing people and improving work life: what front-line staff told us. *Joint Commission Journal on Quality and Safety*. 29(10):512-522, Oct. 2003.
- Batalden, P.B., Nelson, E.C., Edwards, W.H., Godfrey, M.M., and Mohr, J.J. Microsystems in health care part 9, developing small clinical units to attain peak performance. *Joint Commission Journal on Quality and Safety*. 29(11):575-585, Nov. 2003.
- Nelson, E.C., Splaine, M.D., Plume, S.K., and Batalden, P.B. Good measurement for good improvement work. *Quality Management in Health Care*. 13(1): 1-16, Jan.-Mar. 2004.
- Batalden, P.B., and Foster, T.F. When any change program will do: a report from the field. *ACGME Bulletin*. Spring 2004.
- Mohr, J.J., Batalden, P.B., and Barach, P. Integrating patient safety into the clinical microsystem. *Quality & Safety in Health Care*. 13(Suppl. II):ii34-ii38, Dec. 2004.

Ducatman, A.M., Vanderploeg, J.M., Johnson, M., Rubin, J., Harber, P., Sokas, R., Harmon, R.G., Rumm, P., Nilson, E., Batalden, P.B., and others. Residency training in preventive medicine: challenges and opportunities. *American Journal of Preventive Medicine*. 28(4):403-412, May 2005.

Godfrey, M.M., Nelson, E.C., and Batalden, P.B. *Clinical Microsystems: A Path to Healthcare Excellence*. Hanover, NH: Dartmouth College, 2005.

Nelson, E.C., Homa, K., Mastanduno, M., Fisher, E., Batalden, P.B., and others. Publicly reporting comprehensive quality and cost data: a health care system's transparency initiative. *Joint Commission Journal on Quality and Patient Safety*. 31(10):573-584, Oct. 2005.

Ayers, L.R., Beyea, S.C., Godfrey, M.M., Harper, D.C., Nelson, E.C., and Batalden, P.B. Quality improvement learning collaboratives. *Quality Management in Health Care*. 14(4):234-247, Oct. 2005.

Davidoff, F., and Batalden, P.B. Toward stronger evidence on quality improvement. Draft publication guidelines: the beginning of a consensus project. *Quality & Safety in Health Care*. 14(5):319-325, Oct. 2005.

Batalden, P.B. *Creating Something Special: Where Exemplary Care and Learning Come Together*. The Robert Wood Johnson Foundation Exemplary Learning Site Grant (ID #051410) White Paper. Center for the Evaluative Clinical Sciences, Dartmouth Medical School, June 2006.

Baily, M.A., Bottrell, M., Lynn, J., Jennings, B., Batalden, P.B., and others. The ethics of using QI methods to improve health care quality and safety. *Hastings Center Report*. July-August 2006.

Batalden, P.B., Ogrinc, G., and Batalden, M. From one to many. *Journal of Interprofessional Care*. 20(5):549-551, Oct. 2006.

Batalden, P.B., and Davidoff, F. What is "quality improvement" and how can it transform healthcare? *Quality & Safety in Health Care*. 16(1):2-3, February 2007.

Lynn, J., Baily, M.A., Bottrell, M., Jennings, B., Levine, R.J., Davidoff, F., Casarett, D., Corrigan, J., Fox, E., Wynia, M.K., Agich, G.J., O'Kane, M., Speroff, T., Schyve, P., Batalden, P.B., and others. The ethics of using quality improvement methods in health care. *Annals of Internal Medicine*. 46(9):666-673, May 2007.

Leach, D.C., and Batalden, P.B. Preparing the personal physician for practice (P4): redesigning family medicine residencies: new wine, new wineskins, learning, unlearning and a journey to authenticity. *Journal of the American Board of Family Medicine*. 20(4):342-347, July-Aug. 2007.

Batalden, P.B., and Davidoff, F. Teaching quality improvement: the devil is in the details. *JAMA*. 298(9):1059-1061, Sept. 5, 2007.

Foster, T.C., Johnson, J.K., Nelson, E.C., and Batalden, P.B. Using a Malcolm Baldrige framework to understand high-performing clinical microsystems. *Quality & Safety in Health Care*. 16(5):334-341, Oct. 2007.

- Nelson, E.C., Batalden, P.B., and Godfrey, M.M. *Quality By Design: A Clinical Microsystems Approach*. San Francisco: Jossey Bass, 2007.
- Nelson, E.C., Batalden, P.B., and Lazar, J. *Practice-Based Learning and Improvement: A Clinical Improvement Action Guide*. Oakbrook Terrace, IL: Joint Commission Resources, 2007.
- Foster, T.C., Regan-Smith, M., Murray, C., Dysinger, W., Homa, K., Johnson, L.M., and Batalden, P.B. Residency education, preventive medicine, and population health care improvement: the Dartmouth-Hitchcock Leadership Preventive Medicine approach. *Academic Medicine*. 83(4):390-398, Apr. 2008.
- Nelson, E.C., Godfrey, M.M., Batalden, P.B., and others. Clinical microsystems part 1: the building blocks of health systems. *Joint Commission Journal on Quality and Patient Safety*. 34(7):367-378, July 2008.
- Wasson, J.H., Anders, S.G., Moore, L.G., Ho, L., Nelson, E.C., Godfrey, M.M., and Batalden, P.B. Clinical microsystems part 2: learning from micro practices about providing patients the care they want and need. *Joint Commission Journal on Quality and Patient Safety*. 34(8):445-452, Aug. 2008.
- Godfrey, M.M., Melin, C.N., Muething, S.E., Batalden, P.B., and Nelson, E.C. Clinical microsystems part 3: transformation of two hospitals using microsystem, mesosystem, and macrosystem strategies. *Joint Commission Journal on Quality and Patient Safety*. 34(10):591-603, Oct. 2008.
- Homa, K., Regan-Smith, M., Foster, T., Nelson, E.C., Liu, S., Kirkland, K., Heimarck, J., and Batalden, P.B. Coaching physicians in training to lead improvement in clinical microsystems: a qualitative study on the role of the clinical coach. *International Journal of Clinical Leadership*. 16(1):37-48, Oct. 2008.
- Davidoff, F., Batalden, P.B., and others. Publication guidelines for quality improvement in health care: evolution of the SQUIRE project. *Quality & Safety in Health Care*. 17(Suppl 1):i3-i9, Oct. 2008.
- McKinley, K.E., Berry, S.A., Laam, L.A., Doll, M.C., Brin, K.P., Bothe, A., Jr., Godfrey, M.M., Nelson, E.C., and Batalden, P.B. Clinical microsystems part 4: building innovative population-specific mesosystems. *Joint Commission Journal on Quality and Patient Safety*. 34(11):655-663, Nov. 2008.
- Davidoff, F., Batalden, P.B., Stevens, D.P., Ogrinc, G.S., and Mooney, S.E. Development of the SQUIRE publication guidelines: evolution of the SQUIRE Project. *Joint Commission Journal on Quality and Patient Safety*. 34(11):681-687, Nov. 2008.
- Davidoff, F., Batalden, P.B., Stevens, D.P., Ogrinc, G.S., and Mooney, S.E. Publication guidelines for improvement studies in health care: evolution of the SQUIRE Project. *Annals of Internal Medicine*. 149(9):670-76, Nov. 2008.
- Davidoff, F., Batalden, P.B., Stevens, D.P., Ogrinc, G.S., and Mooney, S.E. Publication guidelines for improvement studies in health care: evolution of the SQUIRE Project. *Journal of General Internal Medicine*. 23(12):2125-30, Dec. 2008.

Davidoff, F., Batalden, P.B., and others. Publication guidelines for improvement studies in health care: evolution of the SQUIRE Project. *Canadian Journal of Diabetes*. 32(4):271-279, Dec. 2008.

Davidoff, F., Batalden, P.B., and others. Publication guidelines for improvement studies in health care: evolution of the SQUIRE Project. *British Medical Journal*. 338(a3152):402-404, Jan. 19, 2009.

Batalden, P., Leach, D., and Ogrinc, G. Knowing is not enough: executives and educators must act to address challenges and reshape healthcare. *Healthcare Executive*. 24(2):68-70, Mar.-Apr. 2009.

Liu, S.K., Homa, K., Butterly, J.R., Kirkland, K.B., and Batalden, P.B. Improving the simple, complicated and complex realities of community-acquired pneumonia. *Quality & Safety in Health Care*. 18:93-98, Apr. 2009.

Pastel, L.C., Liu, S.K., Homa, K., Bradley, E., and Batalden, P.B. Bridges to excellence: improving care for patients with diabetes at a rural primary care clinic by empowering licensed nursing assistants with a flow sheet tool. *Clinical Diabetes*. 27(3):115-118, Summer 2009.

Batalden, P.B., and Leach, D.C. Sharpening the focus on systems-based practice. *Journal of Graduate Medical Education*. 1(1):1-3, Sept. 2009.

Ogrinc, G., and Batalden, P.B. Realist evaluation as a framework for the assessment of teaching about the improvement of care. *Journal of Nursing Education*. 48(12):661-667, Dec. 2009.

Splaine, M.E., Ogrinc, G., Gilman, S.C., Aron, D.C., Estrada, C.A., Rosenthal, G.E., Lee, S., Dittus, R.S., and Batalden, P.B. The Department of Veterans Affairs National Quality Scholars Fellowship Program: experience from 10 years of training quality scholars. *Academic Medicine*. 84(12):1741-1748, Dec. 2009.

Philibert, I., Johnston, M.J., Hruska, L., Shapior, J.A., Friedmann, P., Gardent, P., Batalden, P.B., and Leach, D.C. Institutional attributes associated with innovation and improvement: results of a multisite study. *Journal of Graduate Medical Education*. 2(2):306-312, June 2010.

Batalden, P.B. The leader's work in the improvement of healthcare. *Quality & Safety in Health Care*. 19(5): 367-368, Oct. 2010.

Batalden, P.B., editor. *Lessons Learned in Changing Healthcare...and How We Learned Them*. Toronto : Longwoods Publishing, 2010.

Batalden, P.B., Bate, P., and others. Planning and leading a multidisciplinary colloquium to explore the epistemology of improvement. *BMJ Quality & Safety*. 20(Suppl. 1):i1-i4, April 2011.

Vincent, C., Batalden, P.B., and Davidoff, F. Multidisciplinary centres for safety and quality improvement: learning from climate change science. *BMJ Quality & Safety*. 20(Suppl. 1):i73-i78, Apr. 2011.

Batalden, P.B., Davidoff, F.L. and others. So what? Now what? Exploring, understanding and using the epistemologies that inform the improvement of healthcare. *BMJ Quality & Safety*. 20(Suppl. 1):i99-i105, Apr. 2011.

Ogrinc, G., Nierenberg, D.W., and Batalden, P.B. Building experiential learning about quality improvement into a medical school curriculum: the Dartmouth experience. *Health Affairs*. 30(4):716-722, Apr. 2011.

Nelson, E.C., Batalden, P.B., and others. *Value by Design: Developing Clinical Microsystems to Achieve Organizational Excellence*. San Francisco: Jossey-Bass, 2011.

Batalden, P.B., and Foster, T., editors. *Sustainably Improving Health Care: Creatively Linking Care Outcomes, System Performance and Professional Development*. London: Radcliffe, 2012.

AWARDS AND HONORS

- 1963 Guide of Honor, Augsburg College
- 1965 James E. Moore Student-Faculty Surgical Society
- 1966 Alpha Omega Alpha (medical school honor society)
- 1967 Ski-U-Mah Student Leadership Award, University of Minnesota
- 1972 Hall of Fame, Job Corps
- 1974 Service Award, National Medical Association
- 1984 Distinguished Alumnus, Augsburg College
- 1985 Member, Minnesota Academy of Medicine
- 1987 Examiner, Malcolm Baldrige National Quality Award
- 1988 Member, National Academy of Sciences, Institute of Medicine
- 1993 Chair, U.S. Conference Board, U.S. Quality Council
- 1995 Teaching Award, Graduating Class CECS, Dartmouth College
- 1997 Award of Honor, American Hospital Association
- 1998 Ernest Amory Codman Award, The Joint Commission
- 2002 Alfred I. DuPont Award for Excellence in Children's Healthcare
- 2003 Founders' Award, American College of Medical Quality

- 2007 John C. Gienapp Award, Accreditation Council for Graduate Medical Education
- 2009 Inaugural Leadership Award for Advancing the Scholarship of Health Care Improvement (to be known subsequently as the Paul Batalden Leadership Award), Academy for Healthcare Improvement Award
- 2010 Deming Medal, American Society of Quality
- 2013 Ron Davis Special Recognition Award for Outstanding Service to Preventive Medicine, American College of Preventive Medicine
- 2014 Doctor of Medicine, (*hon. caus.*) from Linköping University (Linköping, Sweden)

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