

Summary: The Checklist Manifesto – How to Get Things Right Summary

The Checklist Manifesto – How to Get Things Right

by Atul Gawande

- Introduction
- 1. The Problem of Extreme Complexity
- 2. The Checklist
- 3. The End of the Master Builder
- 4. The Idea
- 5. The First Try
- 6. The Checklist Factory
- 7. The Test
- 8. The Hero in the Age of Checklists
- 9. The Save

Book Summary

The book offers a lot of great anecdotes about the efficacy of checklists, especially in their use as memory management devices and in building communication and team work. Gawande investigates the management of complexity in medicine, finance, construction, restaurant management, and aviation. In doing so, he finds that the checklist is the tool of choice. Checklists offer a means of limiting mistakes regarding the known. There's an old saying about the devil you know being better than the devil you don't. Checklists are charms against the devils we know. Gawande goes on to talk about implementing a patient care checklist for the World Health Organization (WHO) and some of the obstacles he overcame in developing and delivering it. His team measured the effects of implementing the checklist in several different venues. The results were largely positive, with minor modifications needed here and there, and difficulties with regards to cultural differences. Finally, he discusses some of resistance to using checklists. Part of it is the machismo of being a hero in a "master builder" profession such as surgery. Surgeons are expected to be virtuosos who will earn the win by their own ability. Checklists limit this mythos. Gawande was not a firm believer until he had his own life-and-death situation in which checklists saved his patient's life. It goes to show that sometimes it takes a personal calamity and emotional distress to create true buy-in.

Summary: The Checklist Manifesto – Introduction

Gawande's friend tells him about a patient that came in with a stab wound. The doctors treat it like a normal wound, but it actually came from a bayonet, causing deep damage. No one had remembered to ask what the type of weapon was. He then asks Gawande to diagnose a patient who goes asystole during surgery. Gawande is unable to diagnose the problem correctly, which winds up being a potassium overdose, which is one of the most common causes of asystole.

Summary: The Checklist Manifesto – Chapter 1 The Problem of Extreme Complexity

A Swiss rural hospital in Klagenfurt manages to save a girl who drowned in icy water via a complex series of coordinated actions involving the dispatchers, EMTs, nurses, and doctors. Medicine has been getting increasingly complicated with many different specialties, and specialties within specialties. In addition, doctors see patients having many different maladies, prescribing many different drugs, tests, and procedures. The computer systems which manage the patient history cannot even keep up. When attempting to specify the patient diagnosis, the most common response is "Other," for there is no option for that particular diagnosis. There are lots of different actions that must be performed with each patient. Missing any one of these may cause the patient discomfort or something worse.

Gawande brings up the case of a patient with a failed liver whose condition was improving when his vitals became unstable. The lines connecting him to life-saving machines were all infected. The patient had been endangered not by his condition but by preventable environmental factors. Gawande ends by posing the question, "What do you do when expertise isn't enough?"

Summary: The Checklist Manifesto – Chapter 2 The Checklist

The B-17 was the most sophisticated, but complicated, airplane of its time. Boeing lost a government contract to Douglas due to its complexity. To make it flyable, they created a pilot's checklist. Pilots had never needed them before, but they helped to fly increasingly complex machines.

In every hospital, four vital signs are checked constantly: temperature, pulse, blood pressure, and respiratory rate. This is a kind of patient checklist that helps to catch problems early. Checklists guard against two human foibles: faulty memory and skipping protocol. Nurses first implemented this checklist in hospitals in the 1960s to help manage their duties.

In 2001, Peter Pronovost tried a doctor's checklist to prevent central line infections at Johns Hopkins. After implementing the checklist, which included granting nurses authority over procedure, the rate of line-infections plummeted. They experimented with other checklists and found that, at the very least, they helped to improve consistency in patient care.

Adoption of the checklists was low. Pride and doubt about evidence limited interest. Then, Pronovost tried the checklists at Sinai-Grace in Detroit. Sinai went from having one of the worst line infection rates to one of the best. One important part of this was the buy-in from management. Management helped to make sure that the tools were available, but did not force the checklist down throats.

Gawande goes back to the story of the drowned girl in Klagenfurt. She was saved due to careful review of procedure with all stakeholders and a checklist.

Summary: The Checklist Manifesto – Chapter 3 The End of the Master Builder

Complicated problems can be broken down into simple ones, with simple steps to follow but there are always unexpected issues that can arise. How are buildings constructed? There are many specialized individuals performing discrete tasks, yet you rarely hear of a building falling down. Gawande visits Joe Salvia, part of the construction firm McNamara/Salvia. Salvia has constructed skyscrapers and medical facilities. Turned off by a career in medicine requiring rote memorization, he became an engineer instead. Salvia runs through his first design job, for the roof of a building. School teaches you theoretical principles of load and stability but doesn't teach you about cost, aesthetics, and working with other professionals. He had to keep plumbing, electrical, and mechanical engineers in the loop when designing.

Building construction used to be overseen by a Master Builder who would oversee all aspects of construction. Construction became more specialized and complex, with labor splitting into design and construction, and still further. Doctors still persist with the anachronistic paradigm of the Master Physician, which is untenable with the extreme level of specialization.

How do builders get their work done? Lots of checklists. There are delineated, daily listings of building tasks, with order of required completion, and deadline. Color coding marked critical items. The schedule was managed by computer. The lists are developed for each new building by a group representing each of the trades.

Still, there are unexpected problems, like uneven settling causing a large dimple in the floor. For these, there are "submittal schedules" specifying communication tasks, tasks that list person W will talk with person X on date Y about Z. This forces communication and quick decision making.

Salvia uses two programs to help in planning: Clash Detective and ProjectCenter. Clash Detective provides an easy view of design points where objects would collide, such as a pipe and a light fixture. This encourages communication between the plumbing and lighting specialists to work out a resolution. ProjectCenter allows anyone working on the project to notify stakeholders and update the schedule.

Finn O'Sullivan, one of Salvia's project executives, lists communication as the biggest cause of serious error. He describes the case of the Citicorp building. The design was changed last minute to use bolted joints instead of welded ones, without informing the designer. This would have led to serious structural problems had not the designer found out and had the joints welded.

Summary: The Checklist Manifesto – Chapter 4: The Idea

The building industry delegates power to resolve complex situations. This is important when there are problems that are difficult to plan for. Gawande says, “In response to risk, most authorities tend to centralize power and decision making.” This typical response was disastrous for New Orleans when Katrina hit. State and Federal officials refused to cede power to local officials. Supplies were even turned away due to lack of communication. Still, private groups such as Walmart were able to continue operations by delegating decision-making power to their local representatives. In one case, a manager gave away water, diapers, and other essentials. In another, facing complete loss of product due to flood, the store manager gave away everything, and even risked life and limb to save medicines. The lesson is not that private is better than public, but that complexity requires delegation of power and responsibility.

David Lee Roth of Van Halen explained a clause in his contract that required a bowl of M&Ms without any brown pieces. He used it as a way to break a contract if he found the equipment and stage setup to be dangerous. The idea was that lack of attention to detail could be signaled by the presence of a brown M&M, and that would lead the band to run through their own checklist of items to guarantee safety.

Jody Adams, chef and owner of Rialto, uses checklists in her kitchens. Aside from the recipes, which are themselves checklists, she also had “Kitchen Notes,” her observations about food from previous nights. They also use checklists for each customer, listing table and seat, preferences, and allergies. The sous chef asks for confirmation of each ticket item as she shouts it out to the kitchen. Finally, either Adams or the sous chef performs a final review before each dish leaves the kitchen.

Summary: The Checklist Manifesto – Chapter 5: The First Try

Gawande is enlisted by the WHO to participate in a committee to improve patient outcomes in developing countries. Part of the problem is that the volume of surgery has increased. A group of specialists met at Geneva in 2007 to discuss possible options. The problem was how to make an impact in disparate environments and working conditions. They decided they should publish some standards of care but former attempts had mixed success. The key point was to keep things simple.

Gawande tells of Stephen Luby who enlisted Proctor & Gamble to help change washing behavior in Karachi, to teach appropriate use of soap, using a washing checklist. One hospital used a checklist of prevent surgical infections. Surgery has four major risk factors: infection, bleeding, anesthesia, and unexpected complications. The best way to resolve the unexpected is through team communication.

Psychologist Brian Sexton warns about “silent disengagement” resulting in a lack of accountability among surgical team members. Gawande had a difficult situation with a patient with a bad clot. The surgery had unexplicated complications but the team was able to work cohesively to bring the patient through. Sometimes teams just work like that.

Some checklists have a step where team members talk with each other. This step may increase overall team communication and individual accountability.

The WHO committee decided to work on a checklist. They organized a pilot study to test the efficacy of the checklist. When Gawande returned to his hospital, he found that the checklist was all wrong.

Summary: The Checklist Manifesto – Chapter 6: The Checklist Factory

After the failure of the initial checklist, Gawande researches flight checklists and how they are made. He contacts Daniel Boorman, a checklist developer for Boeing. Daniel explains how flight checklists are divided into normal and non-normal lists, and runs through one of the non-normal checklists with Gawande in a flight simulator. This “DOOR FWD CARGO” checklist was developed an accident with a cargo door blowout, before the cause was even known. Luckily, the next time the DOOR FWD CARGO light came on, there was a checklist handy for the problem.

There are several important checklist considerations:

- Pause points (below 90 seconds)
- 5-9 items (depending on context)
- Simple, precise wording
- Use professional jargon
- Limit to 1 page
- DO-CONFIRM v READ-DO
 - DO-CONFIRM – jobs performed, then stopped
 - READ-DO – tasks marked as completed

Summary: The Checklist Manifesto – Chapter 7: The Test

With tips from the flight checklist experts, Gawande attempts to revise the WHO checklist. Going through a test run of the checklist helped to weed out problems such as who was supposed to run through the checklist. The biggest issue was that there was too many items. They tried to reconcile items important in one area but not another, ones that were important but rarely relevant, and other issues. There were also communication checks. These attempted to ensure unexpected complications could be handled smoothly with teamwork.

The final list had 19 checks, and went out to 8 sites for a test run. The sites were diverse medical centers with different equipment and clientele. Data was collected before and after institution of the checklists. The verdict was that the checklists had improved care at every site. There were some issues with cultural differences and implementation details, but each hospital was able to customize the list to work for their unique circumstances.

At the end of the testing, although at least 20% of staff said that the list was difficult to use, 93% wanted a checklist used in their own care.

Summary: The Checklist Manifesto – Chapter 8: The Hero in the Age of Checklists

Even though checklists seem like a simple, effective solution to the problem of mistakes in procedure, there are behavioral problems to surmount in adoption. Institutions seem more willing to pay for multimillion dollar surgical robots with limited cost-benefit than try to implement checklists. Doctors are reluctant to accept them, and see the true spirit of these tools, which are to encourage teamwork and strive for discipline. The medical field is still a little like the test pilot culture of the 50s. There is a cultural legacy that seems threatened by checklists. In finance, there is also hesitation to adopt the checklist as a tool. Psychologist Geoff Smart found the same hesitation in venture capital. Those investors dubbed “Airline Captains” take a methodical approach but most are “Art Critics” or “Sponges.”

Gawande talks about US Airways Flight 1549 and its emergency landing in the Hudson, which was a triumph of the pilot checklist, rather than a single heroic victory of the captain.

All professional occupations have three elements in common:

- selflessness
- skill
- trustworthiness
- pilots also have: discipline

Maybe we should all strive for more discipline? Systems are an integral part of the complex system of health. The way the health system is designed now is piecemeal. There needs to be more integration. Checklists can be the tool to improve this integration.

Summary: The Checklist Manifesto – Chapter 9: The Save

Even after all this research Gawande still doesn't instill all his faith into the checklist as a tool for surgeons. Then, in the spring of 2007, he has a close call with a patient, who experiences complications. Thanks to the checklist, they have a supply of blood ready that is able to keep the patient alive to complete the surgery. Gawande becomes a true believer.

Source for this summary:

<http://www.angelforge.org/wordpress/?s=The+Checklist+Manifesto>