The Checklist Manifesto by Atul Gawande

BOOK SUMMARY

Overview: A critical look at how checklists can be used to dramatically reduce errors and increase discipline in an organization. The author, also a surgeon, chronicles his ultimately successful attempt at introducing checklists to radically improve surgical outcomes globally through the World Health Organization and their application in other industries like construction, finance and aviation.

Review: Atul Gawande is a master storyteller. A highly entertaining and easy read. A must read for managers, students of systems, and public policy – or for those who just enjoy great stories.

The Problem

Human failure is from:
1. Ignorance: You don’t know what you don’t know.
2. Ineptitude: Where knowledge is applied inconsistently or incorrectly.

Traditional solution: experience and training.

In medicine, the response to extreme complexity has been super specialization. But as medical experience shows with 150,000 deaths in the US from surgery a year and with as many as half of those avoidable, expertise is not enough.

In a complex environment, common failure the result of:
1. Fallibility of human memory and attention - especially tasks which are considered mundane and routine
2. Skipping steps because they don’t always matter... until they do.

Solution to avoidable failures?

Why Checklists

Checklists can help with memory recall and clearly set out minimum steps necessary in a process. Good checklists are explicit. They offer possibility of verification but also instill discipline of higher performance. Implementing checklists can also be a behavior change vehicle.

Gawande discusses a study using a basic checklist to prevent central line infections – checklists, he notes, established higher standard of baseline performance. They didn’t force anyone to use the checklist but started by gathering data of infections, having insurers pay small bonuses for participation at first, through the “Keystone Initiative” also required senior hospital executive participation and involvement and gave responsibility for checklist to least powerful people in process (the nurses).

Ineffective Checklists
- vague and imprecise
- too long/hard to use
- impractical
- made by desk jockeys without functional knowledge of field

Effective Checklists
- efficient
- to the point
- can be used in the most difficult situations
- above all: practical

Checklist institutionalized introductions of people to each other. Knowing each others’ names resulted in greater job satisfaction and teamwork; like giving permission to speak.

Kinds of Problems

- Simple: Basic set of standard instructions that can be followed like a recipe bring high probability of success.
- Complicated: Problems that can be broken down but where there may be no standard set of instructions. Success requires multiple people, teams, expertise. Unanticipated difficulties are frequent. Timing and coordination are serious concerns.
- Complex: Expertise valuable but not sufficient, problems tend to be unique. Outcomes highly uncertain.
- Most critical work people do is not simple.
Complex Problems

In complex problems, specialists are given authority but this becomes a problem with multiple specialists.

In construction, "submittal schedule" is part of a checklist that is used to force discussion at specific times. Schedule assumes things do not go perfectly. Builders trust in power of communication; in wisdom of group that multiple eyes on problem allow issues to be resolved.

According to one construction industry executive, ‘the major advance in the science of construction over last few decades has been perfection of tracking and communication.’ Though buildings have increased in technical and regulatory complexity in past few decades they now take a third less time to build. Checklists work.

Complex Non Routine Problems

These problems include dealing with natural disasters like Katrina. Gawande compares the response of those like Walmart to the failure of FEMA seeing the lesson as being that power needs to be pushed as far outside the center as possible.

Management should work on setting goals, measuring progress, managing communication. These are situations where knowledge available is greater than any individual can handle and increased unpredictability. Thus, the expectation (and ability) of management is to coordinate, and measure progress towards common goals.

For complex problems, checklists are a prerequisite to success. Checklists can make reliable management of complexity a routine:

1. System of checks to ensure stupid but critical stuff not overlooked
2. Check to ensure people talk and coordinate/accept responsibility while being left with power to manage local nuances / unpredictabilities

Checklists in Aviation

Checklists are a core part of the aviation industry. Manuals are just a book of checklists. Checklists covering “normal” tasks take 3 pages while non-normal tasks, 200+ pages. Pilots turn to checklists for two reasons:

1. Training
2. They have proven they work

Embracing a Culture of Discipline

All professional occupations share at least 3 common ideas:

1. Expectation of selflessness: Placing needs of those who depend on them above their own.
2. Expectation of skill: Aim for excellence in knowledge/expertise.
3. Expectation of trustworthiness: that they will be responsible for their personal behavior toward their charges.

Aviators add a fourth expectation:

4. Discipline: Almost unique - where other professions like medicine prioritize autonomy.

Discipline is *hard*. We are not built for discipline. Aviation has required institutions to make discipline a norm.

Key Decisions for Checklists

1. Define clear pause point at which the checklist is supposed to be used (unless moment is obvious)
2. Define “DO-CONFIRM” vs “READ-DO”:
   DO-CONFIRM - Checks after tasks are done, often done separately by different team members
   READ-DO: Carry out tasks as they are checked off
3. Checklist cannot be lengthy. Rule of thumb: 5-9 items. Depends on context/situation. After 60-90 seconds checklist becomes a distraction, people begin short cutting. Focus on “killer items”, steps most dangerous to skip and sometimes overlooked. Most difficult part of checklists: managing tension between brevity and effectiveness.
4. Wording: simple and exact, familiar to profession
5. Look matters: ideally fits on one page, free from clutter, unnecessary colors, use upper and lower case for ease of reading, maybe sans serif like Helvetica.
6. Test in real world and simulate. Checklists should and can be modified to fit local procedures, processes and language.

The goal is not to check boxes. Goal is to embrace culture of teamwork and discipline.

The WHO “Safe Surgery Checklist”

The first attempt at checklist was too long, unclear, and a distraction. Checklist distilled down to 19 steps, 7 before anesthesia, 7 after anesthesia, and 5 after the procedure/operation. DO-CONFIRM chosen to give people greater flexibility in performing their tasks.

Checklist was then tested using limited WHO budget with baseline collected beforehand at 4 major developing world and 4 developed world hospitals. In implementation, they were careful not to force usage. Major complications for surgical patients fell by 36 percent after introduction, deaths fell by 47 percent.
Why We Don’t Use Checklists

Checklists are not fun. It’s painstaking and procedural. To need to use them feels like an embarrassment/crutch and the result of failure.

Checklists counter to culture/belief that in face of high risk/complexity what you want is expert audacity - "a hero". We need to reexamine what it means to be a hero. Gawande discusses how Captain Chelsey Sullenberger III was hailed a hero when he managed to crash land into the Hudson River after being hit by a flock of geese, saving all passengers on board, and the untold story of Sullenberger and his co-pilot’s reliance on their training to go through checklists.

Checklists in Markets & Venture Capital

Mohnish Pabrai, of Pabrai Investment Funds, is a value investor who once paid $650,000 for a lunch with Warren Buffet. Pabra uses checklist to force discipline in face of fear/greed mode. Another uses checklist to enumerate errors common at every point of investing process – crediting checklists for helping ensure he has the critical information he needs when he needs it also saying that it forces him and his colleagues to be systematic in their decision making.

Before implementing a checklist, the process was open ended and haphazard; people tended to get invested in companies researched. Checklists made process thorough and faster. Pabra attributes higher returns and fewer mistakes to checklists.

In a study tracking 51 venture capitalists over time, a PhD psychologist Geoff Smart studied how VCs made investment choices identifying different investor types:

- **Art Critics**: assessing entrepreneurs at a glance
- **Sponges**: gathering information about their targets, gathering as much information as possible then using their gut doing “due diligence by mucking around”
- **Prosecutors**: interrogating entrepreneurs aggressively and how they would handle random hypothetical situations
- **Suitors**: focused more on wooing people than evaluating
- **Terminators**: seeing the whole effort as doomed to failure and skipped evaluation
- **Airline Captains**: checklist driven approach, studying past mistakes and lessons from other fields, building formal checks into process. Disciplined approach irrespective of opportunity, not skipping steps.

Airline Captains had best returns, having taken a checklist driven approach, having only 10% chance of having to later fire senior management while others had at least 50% likelihood with median returns of 80% while others achieved 35% or less. Only 1 in 8 took airline captain approach.

A Final Note

Checklists can’t be allowed to become outdated which can hurt more than help. Even simple ones require frequent review and ongoing refinement. Airline manufacturers require publication dates on all their checklists, as they are anticipated to change with time. While technology helps to automate against failure, increasing capabilities of humans, checklists can still be used against the complexity of the world. Against the same mistakes, patterns we can recognize and costs we bear, checklists represent a solution. Try a checklist.