

"THE CHECKLIST MANIFESTO- HOW TO GET THINGS RIGHT"
By Dr. Atul Gawande – (Profile Books, London, 2010)

A Summary

INTRODUCTION

In the 1970's, the philosophers Samuel Gorovitz and Alasdain MacIntyre wrote on human failings. They reasoned one cause was necessary fallibility – things which are beyond our capacity. Other twin causes of failure are ignorance and ineptitude (failure to apply available knowledge).

Medical studies have found that in a majority of cases, patients of critical ailments fail to receive complete or appropriate treatment despite availability of cure. So are failures in other professional fields.

We have accumulated stupendous know-how. Still avoidable failures are common. The reason is the volume and complexity of what we know have exceeded our ability to deliver its benefits correctly, safely and reliably. That means we need a different strategy for overcoming failure – one that builds on experience and knowledge. It also makes up for our inevitable human inadequacies. Such a strategy may look ridiculous in its simplicity but has positive results.

It is a check list.

01. THE PROBLEM OF EXTREME COMPLEXITY

There was this astounding case of drowning in a icy pond in the Alps of a three-year-old girl in an ice pond in the Alps who was later rescued and taken to hospital. Real treatment started after two hours. Thanks to the highly co-ordinated efforts by a team of specialists made in time, she gained back life after near death. After 2 years, her recovery from innumerable problems was full. The World Health Organization has, as on today, classified thirteen thousand diseases. Conditions for each disease differ again. Six thousand drugs and four thousand surgical / medical procedures exist for the same. Given varied requirements, risks and considerations, it is a lot to get right. Despite several super specializations, there is complexity upon complexity.

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In order to save a desperately sick patient, you have to ensure 178 daily tasks are done correctly. Research shows 1,50,000 deaths occur following surgery in USA every year. At least half the deaths and major complications are avoidable. The knowledge and super experts exist. Steps are still missed. Mistakes are still made. The answer for such failures comes from an unexpected source – that has little to do with medicine as such.

02. [THE CHCK LIST](#)

When the Boeing's four-engine model 299 test plane failed tests initially in 1935, the US Air Force crew created a pilot's check-list for mastering it better. It was an index card size, simple, brief step-by-step checklist for take off, flight landing and taxiing. It was a huge success. In a complex process, the fallibility of human memory / attention and skipping steps are two real difficulties.

Check lists provide protection against such failures. They instill better discipline and compliance with essential aspects of performance. In a 3 month research study, it was found checklists reduced infections rate by 66% in Michigan's ICU's, Central line infections, in particular came down drastically.

The life of the 3 year old girl who drowned (mentioned earlier) was also saved because of accurate implementation of check list by the hospital staff.

03. [THE END OF THE MASTER BUILDER](#)

Checklists defend any one against failure in several tasks. They catch mental flaws inherent in all of us – flaws of memory and attention and thoroughness. The annual avoidable failure rate of 0.00002 percent in building industry in US (5 million commercial buildings, 100 million low-rise homes and 8 million high-rise homes) has been attributed to check list process being adhered to scrupulously by construction engineers. A succession of day-by-day checks and schedules guide how a building is constructed and knowledge of multiple specialists is put to use in the right place, at the right time and in the right manner. Man is fallible but men are less so. They also made communication a vital part of checklist verification so that no steps are missed or skipped or unexpected problems remain unaddressed.

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04. [THE IDEA](#)

Under conditions of complexity, people need room to act and adapt. They require a seemingly contradictory mix of freedom and expectations – expectations to co-ordinate and measure progress towards common goals.

People in sky-scraper building industry learned to codify that understanding into simple check lists. They have made the reliable management of complexity a routine. That routine requires balancing of several virtues freedom and discipline, craft and protocol, specialized ability and group collaborations. And for checklists to help that balance, they have to take two almost opposing forms. They supply a set of checks to ensure stupid but critical stuff is not overlooked, and another set of checks to ensure people talk and accept responsibility even while being left the power to manage the nuances and unpredictability they know how.

Communication is an integral part of a checklist for recognizing and dealing with unanticipated problems.

05. [THE FIRST TRY](#)

In 2007 a W.H.O. aided research project was undertaken for studying the effects of implementation of checklists in surgeries across the globe. The checklists helped reduce infections substantially. Similarly, the study of a slum area in Karachi in 2005 proved that diarrhea among children came down by 60% when they religiously followed the instructions of mandatory washing of hands with soap on six different occasions every day.

06. [THE CHECKLIST FACTORY](#)

Checklists reflect our philosophy of work. Time for execution of check list varies from profession to profession. Good check lists are precise and easy to use. They provide reminders of the most important and critical steps to follow. They are practical. Read-Do checklists expect you to read them and then do it. Do- Confirm checklist allow you to do a thing and confirm its correctness from the checklist. Customization of checklist can be done as per distinct requirements of each profession.

07. THE TEST

Checklists can have pause points. In surgery there are three such points-before anesthesia, before incision and before leaving the operation theatre. A check list has to strike balance between brevity and effectiveness. Using check list calls for a major cultural change at work place – a shift in authority, responsibility and expectations about care. It involves a learning curve. Checklist is not a waste of time. It helps point out flaws in the existing system of management. It prevents errors. It should form part of our routine.

Checklists do work when they are well practised. It makes a major difference to the quality of our work.

Team work improves Operational results are better. Once tried as an experiment, checklist is universally welcomed.

08. THE HERO

Just ticking the boxes in check list is not the ultimate goal. Embracing a new culture of team work and discipline is. Virtues of regimentation have to be accepted. The work of management is too intricate for giving room to expert audacity.

Efficiency is the chief advantage of a checklist. Speed is another. The benefit of fewer mistakes is obvious. Checklists may be pains taking. They are not much fun. We feel embarrassed in using a check list. It is as if the truly great are daring and can handle any complexity. They do not need protocols and check lists. But this is not the truth. Great success is the result of team work and adherence to strict discipline and procedure. Airline pilots, for example, invariably go through the checklists despite experience of running them over and over, practicing them in simulators and studying regular updates. The routine can seem pointless most of the time. The odds of going wrong may be low as compared to medicine or investment or legal practice. And yet, pilots run through checklists any way. Discipline is hard – harder than trustworthiness and skill. We cannot even keep snackin between meals. We are not built for discipline. We are built for novelty and excitement, not for careful attention to detail. Discipline is some thing we have to work at.

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Checklists must not become ossified mandates that hinder rather than help. Even the simplest requires frequent revisitations and ongoing refinement. Airline manufacturers put publication date on all their checklist. Checklist is only an aid. If it does not aid, it is not right. But if it does, we must embrace it.

One essential characteristic of modern life is that we all depend on systems – people and technologies – and among over most profound difficulties is making them work.

We are obsessed with having great components but pay little attention to how to make them fit together well. We have a \$ 30 bn National Institute of Health Systems but not Health Systems Innovations along side for studying how best to incorporate the new medical discoveries into daily practice. We do not study routine failures in different professions. We do not look for the pattern of our recurrent mistakes or devise and refine potential solutions for them.

We are all plagued by failures by missed subtleties, overlooked knowledge and outright errors. We are not in the habit of thinking the way the Army Pilots did as they looked upon their new model 299 – Bomber in 1930's – a machine so complex no one was sure human beings could fly it. They too could have decided just to try harder or dismiss a crash as the failings of a "weak" pilot. Instead, they chose to accept their fallibilities. They recognized the simplicity and power of using a checklist. They succeeded.

09. [THE SAVE](#)

Continuous use of a check list leads us to catch things which we would have missed. The Author says in one instance a grievous mistake made by him in an adrenal gland operation once led to the causing of a tear in the Vena Cava. That resulted in the patient almost bleeding to death. The same was quickly controlled by the group of doctors who coordinated their act well-thanks to the check list maintained by the chief surgeon.