

Thinking outside the box to fix some disastrous complications in cardiac surgery.

Out of the box thinking refers to the ability to think creatively and innovatively, coming up with unconventional and original ideas that challenge the traditional norm and ways of thinking .

It involves breaking free from established patterns, and finding new and imaginative solutions to problems on hand.

Out-of-box thinking can be especially valuable in situations where the traditional approach is anticipated to fail. It requires an open mind, a willingness to take calculated risks and the capacity to embrace uncertainty.

The author will present 4 cases where this approach not only saved a patient's life but in two of them has changed surgical practice.

The first case was the insertion of a valve into a mitral prosthesis as a way to replace the tissue valve previously inserted. That was the very first valve-in-valve procedure ever undertaken in the world.

The second case was to perform for the first time a mitral prosthetic replacement through a right thoracotomy on a beating heart without clamping the aorta, challenging the taboo in cardiac surgery of always working with a clamped aorta. This innovative approach dropped the mortality for mitral valve prosthetic replacements from 6.5% to 2.5%.

The third case was an explanation, repair and reimplantation of the heart for posterior ventricular rupture. (First case ever) .

The fourth case was the use of an endotracheal tube to temporarily control an aortic rupture in a 12 year old child after a double valve replacement .

Cardiac surgery can still challenge the surgeon with an unplanned unexpected complication, where the ability to think of innovative and unconventional solutions can save a patient's life.