

# Current Perspective

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## Of Black Swans, TP, and Health Care

**N**early 2,000 years ago Roman poets wrote of black swans as mythical beings. When later discovered to exist in the wild, they became a metaphor for unanticipated events that capsize current social and economic assumptions and cause fundamental and disruptive change.

“Black swan events,” as initially described by Taleb in his classic 2001 finance book *Foiled by Randomness*, have three primary attributes:

1. Each is rare and unexpected.
2. Each generates a massive impact that is broad in scope.
3. Each is rationalized in hindsight to have been predictable, if only certain observations and datasets had been appropriately valenced.

We are all experiencing a tragic global pandemic that some have described as a “once in a century event.” Many assume that it was unpredictable while a few allege it was highly predictable. Some believe we’ll see a similar event again before this century is up. Regardless, COVID-19 certainly fulfills the criteria for a black swan event.

While viral pandemics in general have certainly been prophesied both in scientific literature and in popular cinema (such as the 2011 movie “Contagion”), the specifics of our current viral pandemic scenario were unforeseen. It is a black swan.

This black swan resulted in an acute and bothersome shortage of toilet paper (TP). While there was nothing specific to a pulmonary pandemic that should engender an acute rise in toilet paper use, past quasi-apocalyptic events were accompanied by hoarding behavior. In this case, it was toilet paper—to the point where sales exploded by 845% in mid-March as states announced various forms of lockdowns. And store shelves have stayed bare.

Why couldn’t those shelves be quickly refilled and the TP Panic avoided? It comes down to basic TP economics. TP is a low margin product, and the tight supply chain is managed to be “just in time.” While the average American uses 141 rolls per year, the supply chain diverts excess supply where it is needed most acutely. However, when everyone everywhere is purchasing a bit more, the system breaks down, shortages occur, and hoarding ensues.

So what do TP economics have to do with health care? They are both emblematic of the same core problems—tight margins, lack of surge capacity at either institutional

or system levels, and globalized supply sourcing driven by economics and resulting in supply chain constraints. This is a version of the common aphorism “a chain is no stronger than its weakest link.” Without redundancy or flexibility, the system is highly vulnerable to link failure—whether it is a unique manufacturing step for toilet paper or an essential drug, device, person, or facility needed to manage a pulmonary pandemic.

It may be one thing to pursue an economic strategy of supply constraints with toilet paper, but it is another thing entirely to do so with an entity as life-critical, economically-critical, and literally civilization-critical as is our health care infrastructure. Is it an ideally architected system that squeezes out surge capacity in the name of profitability? Is our drug supply chain ideally designed if unique molecules are sourced only outside of our borders and outside of our control or from a sole source? Is it wise to forego a central health care command and control structure equipped with regularly updated scenario-specific contingency plans and necessary statutory authority? What risks do we run by pursuing a provider compensation system that commoditizes health care and drives so much patient throughput and efficiency to achieve positive economic performance that we retain little or no surge flexibility?

A specific black swan event is a rare beast indeed. But, as a class, black swan events are not rare. And if we don’t engineer our critical processes to account for them, we risk a recurrence of the cataclysmic disruption we now are enduring. Black swan events should and generally do force fundamental change. We need not only to recover effectively and rapidly from COVID-19 but also to thoughtfully consider what we can do at the strategic level to prepare for the next black swan—without treating health care like toilet paper and returning to squeezing out any excess capacity.



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