

High performance in surgery

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The concept of performance excellence in surgery has been difficult to fully articulate. Similarly, the precise definition of a hyperperformer can be debated, but commonly involves elements of excellent problem solving abilities, effective communication, self-direction, adaptability, flexibility, and sustained inner drive. Such people also typically maintain a positive outlook, are goal oriented, display deep consistency in delivering strong efforts, accept constructive criticism from reliable and trusted sources, possess a talented skill set in a specific domain, commonly pursue professional growth opportunities, and are perpetual finishers of the projects they start. Although a formal list of hyperperformers within our surgical departments and specialties is rarely available, most surgeons know who these incredibly productive and driven people are. Furthermore, hyperperformers are almost always known for objective accomplishments and talents not only locally, but also nationally and internationally.

Individual performance within a larger group does not generally follow a normal distribution (i.e., bell curve). The “power-law” or “long tail” distribution is a much more

accurate performance framework for most organizations (Figure 1). In other words, only a small number of people are actually hyperperformers. This compares with the broad majority of people who are good performers and the smaller number of people who are low performers. It is also evident that the arrival or departure of just a few hyperperformers can completely alter an organizational culture.

In successful businesses, significant focus often targets a small number of hyperperformers because they account for a very high percentage of the total business output and, therefore, the overall value of the group or company. Interestingly, this approach is also accurate and pursued in fields outside of business, including engineering, sales, and athletics. In other words, because human performance does not follow a normal distribution, most savvy business managers realize that hyperperformers are the people you want to attract, retain, and empower.

In surgery, this concept has been best exemplified in focused, national assessments describing orthopedic and general surgeons.^{1,2} More specifically, in a broad survey of orthopedic surgeons who contributed great influence on

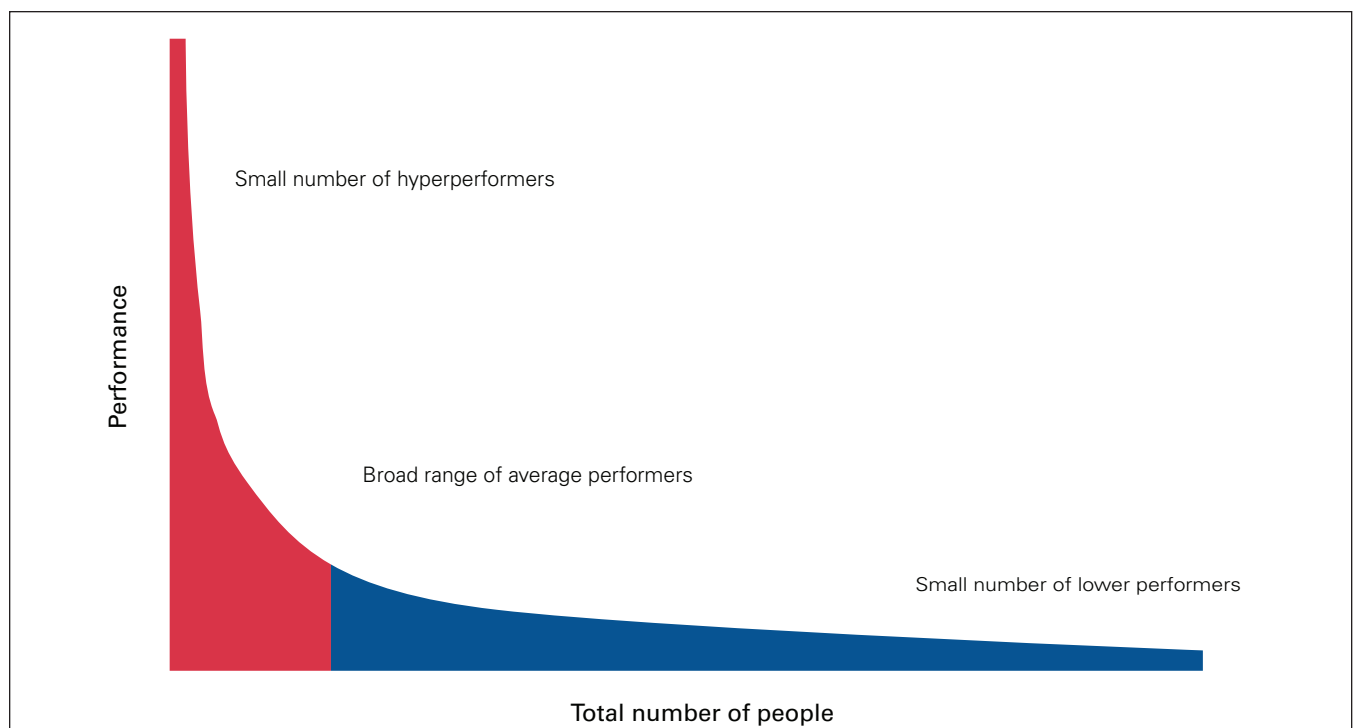


Fig. 1. The “power-law” or “long tail” distribution.

the orthopedic field, academic productivity (i.e., prolific publication of peer-reviewed research, book chapters, and textbook/journal editing) was consistent among surgeons who exemplified a deep desire for personal development and new opportunities.¹ Despite incredible time and environmental pressures, these surgeons also showed a high level of health, happiness, and job satisfaction; interestingly, financial gain was rarely reported as a significant driver.¹ Within the general surgery cohort, 36 of 357 general surgeons were responsible for approximately 50% of all national academic publications and citations.² Notably, a scattering of general surgeons captured in the study's data set were excluded from the formal analysis because they were extreme hyperperformers within the larger hyperperformer cohort and therefore would have skewed the data.² While much of this impressive academic performance is a direct result of self drive and seizing or creating opportunities, there is no doubt that employment contracts (i.e., defined expectations at the time of hiring), department and institutional research mandates, financial support, time commitment, and the presence of a graduate degree (master's degree or doctorate) also contribute to the career arcs of successful academic hyperperformers.² Interestingly, and likely as a direct result of these observations, graduate degrees are becoming much more common requirements for departments across the country who wish to deliver elite academic performance and overall excellence.² However, traditional institutional academic support at the university or department level frequently misaligns with actual, long-term academic productivity (e.g., early investigator grants without binding delivery commitments, geographically full time surgical faculty with large continuing salary packages).

While it is important to study and reflect upon the characteristics of surgeons who are academic hyperperformers at both individual and organizational levels, the same is true of clinical excellence. If the goal is high academic achievement, however, these concepts require honest self-reflection regarding performance over time at all levels. In general surgery, for example, it is clear that the overall academic performance of surgeons hired after 2013 is worse than that among those hired previously.² This deteriorating pattern of productivity has also been confirmed in some subspecialties, such as trauma surgery.³ While we can debate the underlying cultural rationale for these realities, the larger question surrounds how we can re-establish environments that support and encourage academic surgical excellence across Canada. Creating an ecosystem where high performances are standard, not a rarity, is the goal. This also requires surgical leaders to actively find a way for their trainees and faculty to shine. More precisely, departments, sections, and individual surgeons should understand, define, and measure high performance in all of its diversity with the goal of creating an environment in which every surgeon embraces growth and routinely contributes high performances to support the vision of the group and the

profession. Similar to other fields, the path to mastery as either an academic high performer or a surgical leader should be uncomfortable.

In a perfect world, we would prefer that all surgeons eventually become hyperperformers. This can only occur, however, if surgeons can find their own optimized role within an environment where we don't limit the number of people at the top of the curve (i.e., hyperperformer quotas). It also requires real work to align our skills, interests, and purpose. The process of broadly encouraging prospective hyperperformance in surgeons requires humility as well as the understanding that many surgeons have the potential to become hyperperformers in a variety of domains and may differ from one another. The challenge, as always, is lighting the continuous fire of self motivation and persistence in trainees and faculty alike to achieve academic output. Embracing the grind of thinking, writing, editing, learning, and resilience in the context of genuine curiosity and creativity should describe the mission of both supporting our current hyperperformer colleagues and encouraging others to begin down the hyperperformer pathway.⁴ While many successful and innovative businesses have already figured this out, in surgery and medicine we have opportunities for growth.

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