

Commentary

Leadership in healthcare epidemiology, antimicrobial stewardship, and medicine: A soccer enthusiast's perspective

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Soccer is the world's most popular game, enjoyed by billions. In the book *How Soccer Explains the World*, by Franklin Foerr, the greater cultural meaning and resonance of the sport is neatly explored.¹ Although soccer is neither Bach nor Buddhism, it is often more deeply felt than religion and just as much a part of a community's fabric as a repository of traditions.¹

I was born in Argentina, where soccer is an institution, as deeply revered as Catholicism and Eva Peron. Although I neither played professionally nor coached, I played competitively in my youth and as an NCAA Division I collegiate athlete. I continue to compete as an adult and watch as many matches as feasible. As an academic infectious disease specialist, healthcare epidemiologist, and division chair, many of the lessons learned from a lifetime of watching and playing soccer parallel my experiences and challenges on the job. Herein, I highlight leadership insights learned as a soccer enthusiast.

Successful individuals are gritty and resilient yet underpinned by a supportive organization

"I start early and I stay late, day after day, year after year. It took me 17 years and 114 days to become an overnight success." —Lionel Messi, FIFA World Footballer of the Year 2009–2012, 2015, Argentina

"To excel you have to learn to be comfortable being uncomfortable and be willing to respond to adversity" —Rose Lavelle, 2019 FIFA World Cup Champion, USA

"It is hard to beat somebody that never gives up" —Megan Rapinoe, 2019 FIFA World Cup Champion, USA

It is impossible to perform flawlessly. Even the most successful players and teams lose matches and fail to achieve goals. The success of a career is largely driven by grit, resilience, and organizational culture. In *Grit*, Angela Duckworth defines the single most important predictor of success and achievement: a steadfast passion and perseverance for long-term goals.² Grit is about having an "ultimate concern"—a goal you care about so much that it organizes and gives meaning to almost everything you do, even when progress toward that goal is halting or slow.² Resilience, or the ability to recover quickly from difficulties, stems from grit and from positive, deliberate coping mechanisms cultivating compassion, compartmentalizing work, serial monotasking, taking on

site detachment breaks, exercising mindfulness for emotional stability, cognitive flexibility, and mental agility.³

Grit and resilience mitigate burnout. Burnout is a threat in athletics and other high-intensity professions. In the field of infectious diseases, only 45% of respondents to a recent survey were happy and fulfilled in their profession,⁴ and overall physician burnout is nearly 50%.⁵ Studies to understand the prevalence and drivers of burnout in healthcare epidemiology and antimicrobial stewardship are urgently needed.

Successful organizations promote both individual- and system-level strategies to mitigate burnout. These include individual and organization interventions such as mindfulness training, stress management guidance, and small group discussions. Duty-hour reductions and workload reductions in combination reduced physician burnout by 10%.⁶ Shanafelt et al⁵ highlighted the key organizational strategies that significantly decreased burnout to two-thirds the national rate. These included acknowledging the issue, harnessing the power of leadership, implementing targeted work-unit interventions, cultivating community at work, using rewards and incentives, aligning values, strengthening culture, promoting flexibility and work-life integration, providing resources to promote resilience and self-care, and funding organizational science on mitigating burnout.⁵

Highly accomplished soccer players, such as Rose Lavelle, Megan Rapinoe, and Lionel Messi, are individually gritty and resilient yet are supported by high-quality national teams and professional clubs with top-tier coaches, athletic trainers, management, and a relentless culture of excellence.⁷ Healthcare is no different; individual factors such as grit and resilience should be nurtured by leaders while they relentlessly demand a supportive organizational culture with a sustained commitment to wellness that will minimize burnout and maximize career development, mastery, and purpose in work.

Sometimes agendas are discordant, even in the same organization

"Part of the manager's job is to act as a scapegoat, shielding the club owners from blame." —Simon Kuper in *Soccernomics*

Professional soccer is a business with the aim of making money through ticket sales, player transfer fees, merchandising, advertising, and television contracts. Although not always discordant, the role of the professional soccer coach is team preparation and winning games, whereas management prioritizes profitability. However, the pursuit of profit does not guarantee victories on the field, yet successful sporting performance rarely has a negative impact on club profitability and organizational health.⁸

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The healthcare industry is driven by revenue-generating pressures, profit margins, and budgetary constraints. As argued by Simon Sinek, all leadership actions should start with “Why”?⁹ In *Betrayal of Trust* by Laurie Garrett, public health is an essential trust between government and its people, in a pursuit of healthcare for all.¹⁰ This includes a healthcare system that follows the primary maxim of medicine—do no harm. Thus, healthcare systems must relentlessly pursue patient safety to fulfill the public’s trust.

In healthcare, competing agendas are barriers to meeting safety goals. Saint et al¹¹ explored the impact of active resistors and organizational “constipators” on healthcare-associated infection prevention efforts. In a qualitative survey across 14 hospitals, these researchers identified the pervasiveness of “active resistors,” personnel who vigorously and openly oppose changes in infection prevention practice, along with organizational “constipators,” mid- to high-level executives who act as insidious barriers to change.¹¹ These factors result in significant barriers to improvements in patient safety, commonly requiring multilevel strategies and workaround approaches to institutionalize changes in safety platforms.¹² Hospital infection prevention programs are neither staffed nor empowered for broad administrative, system-level implementation and accountability—this falls on senior leadership.¹³

Despite meticulous preparation and planning, the outcome is never guaranteed

The Spaniard Josep “Pep” Guardiola is regarded as one of the most successful soccer managers of the modern era. The Guardiola method is characterized by meticulous preparation for all matches such that every player is clear on his exact role.¹⁴ The aim is to leave as little to chance as possible while still being nimble with tactics and formations during the run of play. This method is underpinned by an awareness and communication that outcomes are never guaranteed given factors such as the opponent, the field and weather conditions, the officials, luck, and human error.

An estimated 3.2% of all hospitalized patients will experience a healthcare-associated infection.¹⁵ Some colleagues envision the end of healthcare-associated infections, a “getting to zero” program. However, with the existing knowledge of the microbiome, the emergence of drug-resistant bacteria and the fragile immune system of patients, this is currently impossible. Further challenges include infection prevention as an inexact science, inconsistent implementation of proven prevention strategies, controversies over best practices, lack of individual and system accountability, and the ongoing challenge of keeping hospital leaders focused on safety goals.¹⁶ Thus, despite best efforts to minimize risk, zero healthcare-associated infections are neither guaranteed nor expected.

The most effective soccer managers manage expectations and do not oversell outcomes. However, if game preparation processes are meticulous and implemented with reliability, wins generally follow.¹⁴ The legendary Dutch soccer player and coach Johan Cruyff argued that faithfully following processes and tactics results in a 75% chance of winning the game.¹⁷

The only way to guarantee that a hospital-acquired infection will not occur is to not admit patients to the hospital.¹⁸ The extent to which healthcare-associated infections are preventable remains debatable. The primary mitigation strategy is to implement risk-reduction processes with the highest reliability. Under this framework, ~75% of all healthcare-associated infections are preventable with current infection prevention science when processes are

reliably implemented.^{16,19} For every healthcare-associated infection, missed opportunities for risk reduction should be identified for process improvement. The desired outcome is never guaranteed, especially for an apparently unpreventable healthcare-associated infection, when an infection occurs despite every agreed upon measure for infection prevention being followed.¹⁸

The Table of Positions is an accurate predictor of performance, a reflection on public reporting of patient safety outcomes

The Table of Positions (TOP) summarizes the season and defines the winner of a competition. In the English Premier League, during a 38-game season with a home-and-away format, each team plays each other twice. A team earns 3 points for a win, 1 point for a draw, and none for a loss. At the conclusion of the season, the team with the most points wins the tournament. More than just a comparative summary of wins and losses, the table of positions is a reflection of overall organizational performance. High-performance clubs most commonly succeed on the field, in the boardroom, and on the financial balance sheet.⁸

The public reporting of healthcare-associated infections and quality outcomes reflects organizational culture. Although no public reporting mechanism is perfect, effective mandatory public reporting of healthcare-associated infections requires highly accurate data collection, rigorous standardization of methodology with risk adjustment for the acuity of patients, minimal excess cost, and a product that is useful to patients and fair to healthcare systems.²⁰ Public reporting mechanisms force healthcare systems to prioritize and implement best practices for safety.

Marsteller et al²¹ evaluated the impact of a national patient safety collaborative on central-line-associated bloodstream infections (CLABSIs). They concluded that states with mandatory public reporting expectations trended toward greater reductions in CLABSIs. More recently, Campanella et al²² assessed the impact of public reporting on clinical outcomes using a systematic review with meta-analysis. Public reporting on clinical outcomes was associated with a clinically significant mortality risk reduction (relative risk, 0.85; 95% confidence interval, 0.79–0.92), likely stimulating providers and hospital systems to improve healthcare quality.²² Much like the TOP, mandatory public reporting of infection prevention and safety outcomes, if the comparison is risk adjusted and utilizes validated methodology, is a reflection of overall performance.

The best players and most respected healthcare providers do not always make effective leaders

Playing is not coaching, and many ex-players struggle as managers. Playing contributes to coaching skills such as the technical and tactical aspects of the game. Experience as a player only gives a partial view of coaching, what’s missing is what happens off the field. This includes the aspects of planning and preparation, the complex commitments across the business, and the challenging reflections and decisions that high-quality coaches make throughout their careers.²³

In 1999, Joseph Simone published “Simone’s maxims: Understanding academic medical centers,”²⁴ wherein he explored personal rules of thumb, “maxims,” to “discern some meaningful patterns in seemingly chaotic events and baffling human behavior.” Simone concluded that leaders are frequently chosen for characteristics that have little or no correlation with successful leadership. Examples include a long bibliography, scientific

eminence, institutional longevity, ready availability, a willingness not to rock the boat or to accept inadequate resources. “Choosing leaders is not a science, but it is surprising how often management skills, interpersonal skills, and experience are undervalued.”²⁴ For both soccer coaches and leaders in healthcare, street credibility is desirable yet not sufficient for success. Other important qualities include vision, communication, organizational and execution skills, emotional intelligence, and an ability to work for and with a team.

Team players are critically important on the field and in healthcare

“I want to be to be known as a great soccer player, and even a better teammate.” —Crystal Dunn, 2019 FIFA World Cup Champion, USA

In 2010, during the FIFA Men’s World Cup, French soccer star Nicolas Anelka was expelled from the team mid-tournament following a foul-mouth event during half-time of a match.²⁵ This action fueled the already mounting tensions in the French team, further precipitating their early exit from the tournament. Not being a team player has consequences for both the individual and the team.

Personal attitude and team compatibility is undervalued in the healthcare team recruitment process.²⁴ The goal of always recruiting the best athlete or the best scientist is an oversimplification. A healthcare team member may be productive personally but may create an atmosphere that reduces the productivity of everyone else, or this individual may not collaborate with others in academic or clinical endeavors, putting personal gain first. In my experience, both on the soccer field and in healthcare leadership, rifts and rancor appear when an individual is not perceived as a team player.

Teams are assembled for the individual characteristics of the players, seek unique talents, and honor the 20% rule

The soccer manager chooses the 11-person team formation and style of play based not on an ideal but rather on the unique talents of the available players. Individual player attributes include speed, strength, fitness, right- versus left-footed, dribbling, defensive qualities, ability to head the ball, field vision and awareness, passing ability, leadership, shot stopping (cf, goalkeeper), and goal scoring. The aim is to maximize the collective output by harnessing the right mix of unique player skills.

In economics, the Pareto Principle states that, for many outcomes, ~80% of the outputs come from 20% of the efforts.²⁹ The key is to focus on the few things that are most important to achieve the desired result. Similarly, in medicine, current evidence suggests that physicians who spend at least 20% of their effort on work that is truly meaningful to them are at significantly lower risk for career burnout.⁵ This is likely true for other healthcare team members as well. The leadership goal is to assemble and cultivate a diverse healthcare epidemiology team, division, or department to meet the needs of the institution and the unique career goals of each healthcare team member. This pursuit includes relentless advocacy for at least 20% protected effort for what is most meaningful for the individual.

Effective leaders care personally while seeking the best for the team, and group dynamics matter

From conversations with soccer coaches a common theme emerges: the best coaches manage talented individuals on a personal level while maintaining a functional team dynamic.^{26,27}

Not every soccer player has equal impact or presence on the field. The manager must be aware of these inequalities and actively minimize negativity. Spanish coaching legend Vicente Del Bosque, winner of the FIFA World Cup, strategically focused on select groups of players following matches. Per Del Bosque, the day after a game, it is the job of the head coach to spend that session with those who did not play, to engage them, motivate them, and maintain a functional group dynamic.

In 2012, Google embarked on an initiative named Project Aristotle to study hundreds of Google teams and discern why some faltered while others succeeded.²⁸ Across 180 Google teams, the “who” of the team was not impactful. Rather, team behavioral norms (ie, dynamics) were most meaningful. Psychologically safe environments, as normative settings, led to heightened team bonding, which was most critical for high-functioning teams. Under this framework, leaders encouraged and promoted honest and compassionate conversations about ideas, challenges, frictions, and everyday annoyances to best address the needs of both the individuals and the group. Teams were most effective when work was purposeful and personally integrated and not just focused on efficiency. Similarly, leaders of healthcare teams must regularly check in with individuals and the group to address needs, encourage dialogue, minimize friction and negativity, and promote a functional team dynamic.

Leaders sometimes need to make very difficult, uncomfortable decisions

The history of world soccer is replete with famous players cut from the roster on the cusp of a major tournament. For various reasons, including playing inexperience despite great talent, tactical disagreements, or a simple lack of team fit, managers made difficult, uncomfortable, and unpopular choices to maximize group performance. In 1978, 18-year-old Diego Maradona was cut from the Argentine national team 1 month prior to the World Cup. In 1992, Danish soccer star Michael Laudrup was dropped from the national team weeks prior to the European Championship. And in 2018, highly regarded French midfielder Adrien Rabiot was left out of the national team preceding the World Cup. Despite these unpopular decisions Argentina and France won the World Cup in 1978 and 2018 and Denmark won the European Championship in 1992.

Making tough decisions can be unpleasant and is ultimately unavoidable. Difficult choices and conversations include hiring, firing, and redirecting team members. Prioritizing program needs at the expense of competing interests is challenging. Although making difficult decisions can be distressing to even the best leaders, the task is assuaged by a careful and thoughtful process. It is important to listen to a diversity of perspectives, solicit feedback, promote inclusivity, and foster collaboration for tough decision making. Although not all will be excited about the final choice, individuals will often accept tough decisions if opinions were heard; the process was inclusive, diverse, and transparent; and trust was maintained.

Reconnect with what inspired you to pursue your given career

“Somewhere behind the athlete you’ve become and the hours of practice and the coaches who have pushed you is a little girl who fell in love with the game and never looked back . . . play for her.” —Mia Hamm, US Women’s National Team, World Cup Champion

Like much of life, a career is an experience with highs and lows. Professional growth and career advancement are rarely linear with an upward trajectory. Setbacks, roadblocks, career redirection, professional blind spots, and unforeseen challenges are inevitable. Whether the pressure is to win games and championships or to maximize clinical revenues, to achieve promotion, receive grants or publish papers, to improve organizational hand hygiene and reduce healthcare-associated infections and antibiotic overuse, not all goals are achievable despite best efforts. When disappointment and disillusion set in, pause and reflection are potent recalibrators. These are times for deliberate mindfulness, to reconnect with what drove you to become a healthcare professional and to relentlessly strive to recapture the energy and motivation that inspired a career in medicine.

In conclusion, soccer imitates life with lessons applicable to leadership in healthcare. These include resilience, grit, and the effective management of groups despite competing organizational agendas. Like on the soccer field, wins and losses are inevitable and success in healthcare is never guaranteed. Yet with a relentless focus on processes, the desired outcomes generally follow. The success of a team, much like the public reporting of safety outcomes, reflects overall organizational performance.

Most importantly, the best soccer players and the most respected healthcare personnel do not necessarily make effective coaches and leaders. Management and interpersonal skills are at least as important as credibility. Like in sport, non-team players are potentially the most threatening force to a successful team dynamic. The best healthcare leaders, like effective soccer coaches, care personally and develop the unique talents of individuals while seeking the best for the collective. This function mitigates burnout, preserves team dynamics, and maximize success. Like coaches, healthcare leaders must commonly make tough decisions. These decisions are generally respected when a diversity of perspectives are solicited and when the process is transparent. Setbacks are inevitable; in times of disillusion, be mindful and relentlessly strive to reconnect with what inspired you to a career in healthcare.

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