

What Makes Good Teams Work Better: Research-Based Strategies That Distinguish Top-Performing Cross-Functional Drug Development Teams

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Abstract

To identify the behaviors that distinguish the highest performing drug development teams in a Fortune 100 pharmaceutical company, a comprehensive, multi-method study was conducted to determine the behaviors that most strongly differentiate the performance level of such teams. The results of the study describe the *specific* behaviors and strategies used more times and in more situations by the top performing teams. These findings suggest a preliminary road map of actions for team members, leaders, and managers in pharmaceutical settings, and perhaps in other industries as well. This paper provides an overview of the business context that necessitated this research, the research methodology, and most importantly the findings and interpretation of the study results. The reader is invited to consider how the outcome of this research might provide benefit for cross-functional teams in other organizations.

The Business Need for High Performance Drug Development Teams

Pharmaceutical development is a highly regulated, lengthy, and complex endeavor taking place against a tough competitive and regulatory environment. While most teams are extremely skilled technically and scientifically, only the top performing teams are able to navigate the compressed deadlines, unforeseen changes of clinical, commercial, and regulatory direction, and inevitable cross-functional conflict. Less effective teams struggle and become stuck in a loop of conflict, rework and fire fighting. This unproductive behavior results in lost time (a particularly precious commodity in this environment), decreased levels of engagement and, ultimately, lost resources and business opportunities.

Our business leaders are quite cognizant of the benefits of higher performing teams, and are regularly looking for improvement opportunities. However, although in principle they are interested in becoming more productive, the scientists, physicians, strategic marketers, and engineers who are key members on these teams are frequently skeptical of team performance models and tools that do not seem to fit their work context. With little discretionary time to devote to reflection on their "process", and with little interest in suggestions that were not practical and relevant to their business context, these cross-functional teams looked to us as internal O.D. practitioners to identify what they could do to improve their efficiency.

We began our work with a review of the empirical research. Despite over 50 years of research on teamwork there is no single unifying theory that integrates the diverse literature on the subject (McGrath, 1991; Salas & Fiore, 2004). Moreover, none of the tools and models that we examined focused on teamwork and collaboration in pharmaceutical settings. Further, off-the-shelf team diagnostic instruments are costly, and with hundreds of teams to support we were not willing to incur the expense. Additionally, without the ability to merge results from one instrument to the next, we could not analyze trends in team effectiveness. Therefore, it made sense for us to conduct a research study within our own context and create our own diagnostic instrument and team tools.

The Research Study

We formed a research team of internal and external O.D. experts and initiated a study designed to answer the following question: What team behaviors, practices and external "situational factors" differentiate the

highest-performing cross-functional pharmaceutical teams from average-performing teams? Our focus was to identify the specific *behaviors* and *strategies* (i.e., methods for achieving success) that could potentially transform average teams into top performers. If we could identify those behaviors and strategies then we could provide clear, meaningful recommendations to our colleagues that would foster higher levels of team performance.

From our initial literature review that included the work of Hackman (1990); Katzenbach & Smith, (1993); Larson & LaFasto (1989); Luft (1984); Bennis & Shepard (1956); Drexler, Sibbet & Forrester, (1988); Hogg & Tindale, (2001), and Druskat & Wolff (2003) combined with our extensive experience of working with drug development teams, we developed a model of team development based on six themes that we hypothesized as most likely to impact team performance in our environment:

- Goals and Planning (including alignment and managing change)
- Roles and Responsibilities (including defining roles, responsibilities and expectations)
- Processes and Procedures (including performance measurement and evaluation, decision-making, meeting management and productivity, problem resolution and escalation)
- Leadership (including direction setting, coaching, and stakeholder management)
- Relationships (including competency & development, communications, managing diversity, team synergy, rewards, recognition, and motivation)
- External Environment (including goals and planning, senior management sponsorship and engagement, performance measurement and evaluation, decision-making)

We anticipated that all six themes would be predictors of team performance and that high-performing teams would be stronger in each of these areas than average performing teams.

Our sample consisted of 51 cross-functional teams (527 individuals) engaged in pharmaceutical new product development. Average team size was 10 and although primarily based in the US, approximately ten percent of team members were globally dispersed. Data were collected in two phases over a 12-month period. In phase one, a web-based survey consisting of a 63-item survey developed from the six hypothesized themes, was administered to all teams in our sample. To ensure reliability and validity of the responses for each team, a minimum team member response rate of 80 percent was required for a team to be included in the study.

The survey data was analyzed by correlating aggregations of team-member response ratings to team-performance

ratings. These latter ratings were obtained from two to four governing body members (i.e., senior management) familiar with each team. They rated each team on eight items including both “hard” (e.g., the achievement of clinical timelines) and “soft” (e.g., the ability to sustain motivation over the long-term) measures. Approximately 25 percent of the teams in our study were rated as high-performing. Since team performance was rated in the form of a binary variable i.e., either high- or not high-performing, a Kendall’s tau correlation was performed.

In phase two, qualitative data were collected by means of a Behavioral Event Interview (McClelland, 1998) in which team members and leaders from a sub-sample of 19 teams were asked to recall both high and low moments in the team, and to talk in great detail about critical events that had shaped the team. Fifty-seven interviews lasting 90–120 minutes were conducted by six trained members of the research team using a standard protocol. The categorization (high- or average-performing team) was kept blinded from the interviewers.

In our analysis of the interview data, we looked for two strategic markers: (1) corroboration of the survey results as well as new information on specific behaviors and (2) actions that drove performance not identified in our six original themes. A codebook was created containing over 60 codes, which included behaviors in the six themes that formed the basis of the survey and those that emerged inductively from repeated readings of the interview transcripts by study team members. The transcripts were then coded using NVivo v2.0 qualitative software by two expert coders, who were blind to the “high” and “average” status of the teams. Coders trained until they reached a .70 percent inter-coder level of reliability (calculated for each code as the percent agreement across transcripts between coders). For each code, an independent samples t-test was performed to determine if there was a significant difference in the mean frequency with which it was coded in the high- versus average performing teams

Study Results: Behaviors and Strategies Utilized Most Frequently in High-Performing Cross-Functional Teams

The quantitative and qualitative data were clear and consistent in identifying strategies and behaviors that when used accelerate team performance and when not used impede it. We labeled these strategies “drivers” since in our study they consistently correlated to team effectiveness. Our study findings strongly suggest that high-performance requires a strong partnership among the team, its leader, and senior management. All three play critical roles in the team’s likelihood of success. The high-performing teams we studied were very clear about how each partner contributed to their success, providing vivid

examples in the interviews of both effective and not-so-effective behaviors and methods practiced by team members, leaders, and senior management.

We also found evidence that teams must create a balance between attention to the task (what needs to be done) and attention to the people (team members and how they work together) (Druskat & Wolff, 2001). Successful teams must excel in addressing the tasks with which they are charged, and must also excel in managing all of the personal and interpersonal issues that work teams present. Our research also supported the suggestion that the predominant reason for team performance problems is a lack of attention to people issues (Thompson, 2004). We anticipated we would find this lack of focus on people issues in the lower performing teams- and we did. The best performing teams in our study demonstrated the ability to balance this focus between task and people. Table 1 summarizes the drivers identified by the study and categorizes them by the different roles and the task versus people focus we identified.

Drivers for Team Leaders When Focused on “Task”

The drivers in this first category reveal two key facets of the role of team leader: Providing clear direction and taking a proactive approach to problem-solving. Based on prevailing models of leadership in the organization, we expected to find that leaders of the high-performing teams would empower their team members as fully as possible, and then assume a facilitative role. While this was true, what actually differentiated these high-performing leaders was their ability to know when a directive style of leadership was needed to clarify expectations and re-focus the team. In the interviews, members of high-performing teams described leaders who were not

afraid to “call the shots” and tell them exactly what they wanted done and how priorities needed to be aligned. Leaders in the average performing teams were more tentative in their directives. Consequently, their teams often became stuck in a “cycle of consensus” at a time when they needed their leaders to take proactive measures to steer the team to a decision.

Leaders of the high-performing teams also worked hard to anticipate where problems might occur. They asked their teams to think ahead to identify problems and questions that might arise. They were also tenacious in their preparation for reviews, ensuring the team gathered potential questions, criticisms, and “deal-breakers” and proactively thought through their best responses. Average team leaders were less proactive in their preparation for reviews, and were often caught off guard when being challenged at their review meetings.

Drivers for Team Leaders When Focused on “People”

Based upon our experience of the prevailing organizational focus on teamwork and collaboration we expected leaders of the high-performing teams to be team-oriented. We did not anticipate the passion we would find in this orientation both in terms of building the team and in developing individual members. One team member of a high-performing team said that time and time again her team leader would emphasize that “they’d succeed as a team or go down as a team”. Another team leader told us he made sure his team members developed into an “extremely well-functioning, well-oiled team” because it was amazing what the team could achieve when it pulled together. These leaders clearly understand the relationship of team camaraderie to the team’s level of effectiveness, particularly during challenging periods.

Role	Focus	Driver
Team Leader	Task	1. Provides Clear Direction 2. Leads Team to Proactively Solve Problems
	People	3. Builds the Team 4. Coaches Team Members 5. Manages Stakeholder Relationships
Team Members	Task	6. Ongoing Attention to Goals and Planning 7. Diligently Document Team’s Work 8. Commit to Improving Team’s Effectiveness
	People	9. Seek to Understand and Value Each Other 10. Meet Challenges Optimistically and Decisively 11. Proactively Seek Feedback and Information from Stakeholders
Management	Task	12. Communicates Clear Direction
	People	13. Recognizes and Values Team Contributions

Table 1. Summary of drivers of team performance.

Survey and interview data also revealed that higher-performing leaders were readily available to members and provided feedback and coaching. These interactions prepared them to better understand individuals and anticipate their reactions to specific directives. For example, a team leader described a coaching session with a team member whose anger was disrupting the team. Because he was so familiar with the individual's style and personality, he was better equipped to coach. The leader knew that high stress triggered anger in this individual, so their discussion about disruptive behavior focused on ways to reduce stress for the benefit of the individual and the team as a whole. Leaders of the average-performing teams discussed their role in team development less often and with far less enthusiasm or commitment. When coaching did occur, it was clear that the leader was not as familiar with or even aware of member positions and needs.

One of the most performance-enhancing roles played by a team leader is the management of stakeholder relationships to ensure team interests are effectively represented (Druskat & Wheeler, 2003). The leaders of our high-performing teams were active, assertive, and effective liaisons between upper management and the team. They developed good relationships and were thus able to obtain timely information, buffer the team from unrealistic expectations, and challenge senior management without negative consequences. Leaders of the average-performing teams seemed less aware of the importance of this liaison role. Their team members also rated them as not very effective at representing their interests to stakeholders.

Drivers for Team Members When Focused on "Task"

These drivers reflect team members' relentless concern with, and disciplined approach to, the management of team processes and procedures in the areas of goal alignment and planning and documentation, coupled with a strong desire to continually improve the team and its processes.

Interview data and survey results indicate that high performing teams spend considerably more time reviewing and updating goals as a normal part of their work, had greater clarity about team goals, and rated themselves as more supportive of those goals. The qualitative data also revealed a strong concern for clearly documented communication before and after meetings. Members of the high-performing teams told us that they create histories, communication tools, and "team minutes that are concrete and very, very accurate." Members of average-performing teams also documented their work; however, they stressed this less often and systematic documentation was not used as a strategy to aid performance. In the complex, dynamic world of drug development, superior

performance can be linked to the amount of discipline applied in these areas.

The high-performing teams in our study also recognize that learning and reflection are necessary for success. Both qualitative and quantitative data showed that these teams periodically stopped their action to reflect on their progress and team process and routinely conducted meaningful "lessons learned" discussions at critical junctures in their work. Members of high-performing teams described robust debrief sessions after a review with a governing body or a meeting with the FDA. These teams acted in a way that reflected their commitment to their own performance improvement.

Drivers for Team Members When Focused on "People"

The research also found that the most effective teams seek to understand and value their team members. This driver illustrates a strong value for understanding others' views, attitudes, cultural differences, strengths, and limitations. Qualitative and quantitative results suggest that participation in team activities and the integration of knowledge and ideas occur more easily when team members actively seek to understand and value one another. Members of the high-performing teams consistently and frequently told us that they know each other quite well and use this knowledge to improve team discussions and processes. For example, one team member discussed knowing "what can and can't be said" and "how close you need to get and how far away you need to stay" from specific team members in order to improve team discussions and processes. In contrast, average-performing team members spoke significantly less often about understanding each other. One member indicated members were too spread out to know each other well (yet, several of the high-performing teams were equally dispersed). Members of these teams more often viewed "get-to-know-you" activities as a waste of time, failing to recognize the link between familiarity and the ability to grasp and appreciate a teammate's point of view.

Another driver revealed that higher performing teams have a strong bias toward optimism and decisiveness. The qualitative data showed high-performing teams remained optimistic and decisive even during their most challenging times. When challenges were presented, the high-performing teams "quickly moved past non-productive discussions" to focus on ways of overcoming them. Average-performing teams reported significantly less optimism, were significantly less able to move past non-productive discussions, and were significantly less decisive during difficult times. These findings are supported by neuroscientific research which has found that stress reduces the brain's ability to process information and make effective decisions (Goleman, Boyatzis,

&McKee, 2002). In contrast, positive emotions such as optimism increase the ability to be expansive, creative, and to take in and process new ideas (Fredrickson, 1998).

Finally, another measure of team effectiveness is the extent to which team members proactively seek feedback and information from stakeholders. Based upon our experience in large corporations, we had anticipated that sponsorship (namely, endorsement and support from senior management) would be important for team success. We also anticipated that the extent to which teams managed all of their stakeholders would make a difference in team effectiveness. However, a clear finding that emerged from the interview data was that higher-performing teams were proactive about sponsorship- they were not content to simply wait for input, rather they proactively went and obtained it. They took charge by seeking out stakeholders, asking them questions, and then attending to their priorities. In our interviews, members of the high-performing teams told us they refused to feel powerless when it came to gathering information and feedback from their stakeholders. They worked to gain sponsor commitment through a thorough understanding of sponsor needs and concerns.

Management Actions

Members of the high-performing teams frequently discussed two management actions that impacted team performance. The average performing teams did not mention these supports. Since this study did not explore the perspectives of management, and this data is based on team-member perceptions, it should be considered preliminary and in need of further investigation.

From a task focus, the communication of a clear direction by management was seen as critical. Members of both high- and average-performing teams, while acknowledging the challenges presented by the changing environment, noted the difficulties they experienced when sponsors changed directives in mid-stream. Interviewees told us that when management “leaves them in the dark”; they set the stage for teams to struggle and lose focus. In addition, the high-performing teams rated themselves as interacting more frequently with governing bodies that knew their role, communicated that role, and lived by it. Survey findings clearly link superior team performance to management preparedness for review meetings and the timely communication of direction and decisions. As noted earlier, the higher-performing teams and their leaders were more proactive in getting what they needed from sponsors; however, the degree to which management communicates decisions facilitates this process.

From a people perspective, the team members and leaders we spoke to wanted nothing more than acknowledgment and recognition from senior management for their hard work. Employees withstand greater amounts of change

and stress and better sustain their motivation if they know that the organization values them and their work (Pierce, Kostova, & Dirks, 2001). Management recognition and quick feedback to teams had a positive impact on the teams we studied. High-performing teams frequently discussed receiving timely feedback and formal recognition from the organization. Average-performing teams and their leaders often felt invisible to senior management.

Breaking through the Misperceptions

Our research identified specific strategies to help our teams accelerate their performance. It also helped “debunk” some of the prevailing misperceptions about teamwork in the organization, such as the myth that “The best teams have the best people on them.” This common, but flawed, assumption presumes that team troubles are the fault of specific team members (Thompson, 2004). Although undoubtedly experienced, successful team members contribute greatly to team effectiveness, research reveals that success is more common for teams that engage in productive team strategies than for teams composed of the most talented members (Campion, Papper, & Medsker, 1996). Our findings lend support to the importance of group level processes that are an essential but often neglected perspective on team performance.

Our study also served to discredit a second myth that, “Teamwork is the ‘soft stuff’...we don’t have time to pay attention to all of that”. The perception that there is “no time for teamwork” can occur when team members feel pressured to jump-in and work only on tasks directly related to the goal. As a result, they often find themselves using untested assumptions, working toward unclear goals, and repairing problems. Ignoring the “soft-stuff” also keeps them from understanding individual team members and underutilizing the talent and skills in the team. In actuality, the “soft stuff” is often harder than the “hard”, technical work. We suspect that few business leaders would assert that effectively managing critical people issues is easy. For example, facilitating communication between professionals with strong, experience-based opinions, coaching for development, managing relationships with stakeholders, and remaining optimistic in the face of tough business challenges are all substantial challenges for today’s work teams. Perhaps it would be better not to use the term “soft” but rather “non-technical” to characterize these essential issues.

Conclusions

This research sheds light on the specific strategies that can increase teamwork and collaboration for cross-functional teams in pharmaceutical settings. Our findings provide a preliminary road map for the actions that can be taken by team leaders, team members, and management to develop a high-performance team culture.

It should also come as no surprise that teamwork and collaboration occur in environments that measure and reward the results of teamwork and collaboration. Thus, building a culture that supports high-performance teamwork requires leadership committed to rewarding team-focused behavior and team outcomes. An important first step is the design and implementation of an individual – and team – performance measurement system: one that measures and recognizes team-focused behaviors and outcomes. Again, our study provides empirically supported information to begin that process.

Moreover, clear and consistent executive sponsorship for this type of effort is critical. In our organization, it was demonstrated. The compelling business need for improved team performance was communicated by both the words and actions of the executive board. “People, Collaboration and Teamwork” is one of the organization’s top five strategic objectives. The message is clear – individual success is a measure of technical and scientific excellence as well as the ability to master the behaviors, skills and strategies needed for teamwork and collaboration.

The research presented here was conducted with cross-functional teams in a drug development setting. While we believe that many of the findings are generalizable to cross-functional teams in other contexts, similar research with product development teams in other industries would aid the identification of those strategies that are transferable to other environments. An important ingredient missing from this study is research conducted directly with the senior managers of these teams. Our research suggests the actions these bodies can take to make a significant difference for team performance. Future research in this area would provide valuable information for organizations to take a step closer to building a high-performance team culture.

The findings of our research enabled us to provide our colleagues with specific suggestions for improving cross-functional team effectiveness. Our ideas have been well received because our research was relevant and validated in our own environment. We have shared the results with hundreds of our colleagues around our organization. We have been able to teach team leaders and members what are the most effective team behaviors and strategies, i.e., methods for achieving success. We have provided training to new and existing team members based upon the study data, as well as developed and provided a menu of tools to support teams in operating more effectively. Teams in our organization now have a better understanding of the importance of the often-challenging, “non-technical” success factors for teams, as well as how to achieve them.

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Authors' Reflection

The research team for this study was comprised of internal organization development practitioners, all from a highly decentralized health care organization. Two external research scientists were also recruited to participate. Of the internal OD groups, two were from R&D; one was from supply chain, all three of which reported to Human Resources, which in turn reported into the respective company President. Another internal OD group provided consulting support across the entire health care enterprise, which consists of a number of companies, and this group reported into Corporate HR and the Corporate Business Services Group.

The 2-year project presented the team with a unique research opportunity. All four OD groups sought relevant research-based tools to strengthen teamwork in their organizations, particularly as it related to new product development. The "build vs. buy" decision was made jointly, and we planned on using the data from the research study to build internal team assessments, tools and best practices, rather than continue to buy commercially available products. The challenges involved gaining and maintaining joint sponsorship for the research study, managing the cultural diversity between the operating companies and interestingly, navigating our own struggles with teamwork. Each team member's respective management wholeheartedly endorsed the research effort. However, each company had distinct needs and interests which needed to be considered during the partnership. Joint sponsorship across the companies (i.e., aligned expectations, resources, timelines and project priority) was more difficult to achieve.

Since this was a long-term undertaking, some of the original sponsors left the project, which required gaining the buy-in of new sponsors from time-to-time. While all of the teams studied were under the umbrella of the Medicines and Nutritionals sector, our individual organizational cultures were quite different, and some had more global involvement than others. Finally, our own research team encountered the same problems as the teams we studied; now and then we found ourselves off balance with respect to task and people, or we were misaligned with respect to roles or goals. As we were all

deeply immersed in the research data, we knew what to do to get back on course, and were able to apply best practices to quickly recover and regain traction.

While two of our team members were external, highly credentialed academic research scientists, the majority of our OD team was internal to the business. This balance of internal and external resources supported the success of our project. As internal consultants we had direct access to the teams we were studying. Our understanding of the business helped us build the initial hypotheses about what factors might be most salient in superior team performance in the pharmaceutical environment, and aided in the analysis and interpretation of the research findings. Just as important, our organizations were interested in hearing the results of the study because the data were about their teams and were gathered within the context of their work. Our internal connections across the four organizations also allowed us to successfully navigate the inevitable politics of a 2-year study. The importance of utilizing internal expertise is best summed by two of our team leaders:

...overall communication with internal consultants was easier for the busy team leaders. I did not worry about confidentiality. The internal group was familiar with our basic company structure, so no lengthy orientations were necessary. They also knew our corporate values intimately.

Team Leader

The trust level was there. We knew that the output would truly reflect the inner workings of the teams within our organization and not be a "force-fit" within a consultancy's pet framework. Also, the fact that the internal group enlisted an academic center increased the credibility and objectivity of the effort.

Team Leader

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