Preparing for our risk-based future: Using change management to drive RBQM adoption

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A tidal wave of change is poised to sweep the drug development process as ICH regulations mandate the comprehensive practice of risk-based quality management. Requirements for risk-based quality management (RBQM) are outlined in the good clinical practice guideline ICH E8 (R1), to be published in late 2021 ; further revisions will align risk-based practices across the full suite of ICH efficacy guidelines. RBQM is a transformative approach that will touch every aspect of drug development. Adoption will require end-to-end organizational change—in operations, technologies, staff roles, and capabilities—as well as collaborative change to facilitate external RBQM approaches in partnerships with CROs, clinical sites, and patients. In this paper, change management expert Kristin Murphy discusses the pervasive changes posed by RBQM and shares principles of a formal change management program Parexel is using to speed the adoption of risk-based thinking and practice.

The first question: Why?

What justifies the Herculean task of adopting a new risk-based approach to drug development? Our industry knows all too well the escalating pressures of time and costs in therapeutic innovation. And we know the long timelines involved for our risk-averse industry to implement advances like EDC, adaptive trial design, and, currently, decentralized clinical trials (DCT) and mobile health technologies. The COVID-19 pandemic underscored the necessity for speed and flexibility in clinical evaluation and approval processes. Further, the COVID emergency catalyzed industry and regulatory efforts to build a new operational system that facilitates the rapid adoption of new technologies and research methods to meet ongoing threats to global health. Risk-based quality management is the foundation of this new approach.

Regulatory compliance is the immediate reason for industry adoption of RBQM—the application of data and analytics to assess risks to patients and study results, and to implement strategies that mitigate those risks. As set out in the core guidances ICH E8 (R1) and ICH GCP E6 (R3), its overarching principles are: patient protection; scientific-based trial design, conduct and analysis (including Quality by Design and identification of Critical to Quality factors); and patient input into study design.[1, 2]

Risk assessment and mitigation will underpin the entire development spectrum, from trial design through data analysis. It has eight key components: initial and ongoing risk assessment; Quality Tolerance Limits (QTLs); Key Risk Indicators (KRIs); central and remote

monitoring; reduced Source Document Verification (SDV) and reduced Source Document Review (SDR). (See Parexel White Paper, Preparing for Our Risk-Based Future: What ICH Revisions Mean for Clinical Trial Design and Conduct)

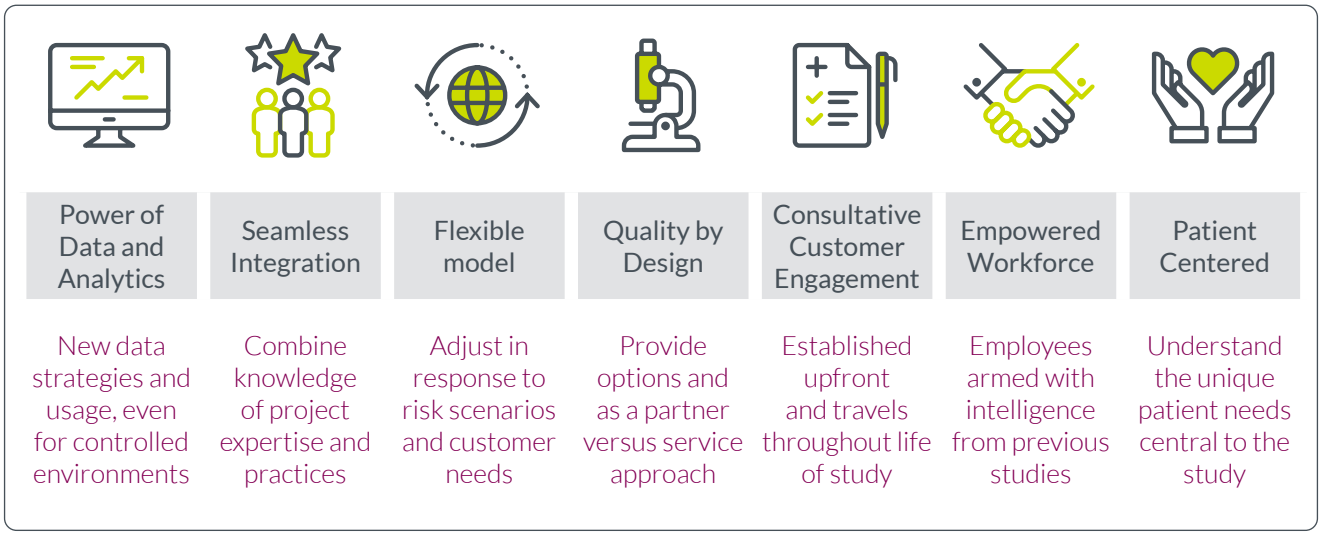
In the long term, the reasons to adopt RBQM are to achieve greater efficiency and patient safety amid rapidly advancing data sources and technologies. It will be foundational to achieving our mission of delivering innovative therapies, and we must become change masters implement it.

High stakes: Changing operations *and* corporate culture

Change is about moving from a current state of limitations to an enhanced future state. To design our ideal future state for RBQM, we are using the following design criteria (Figure 1):

- Power of data and analytics
- Seamless integration
- Flexible model for clinical trials
- Quality by design
- Consultative customer engagement
- Empowered workforce
- Patient-centered approach

Figure 1. Design criteria for the future state of RBQM

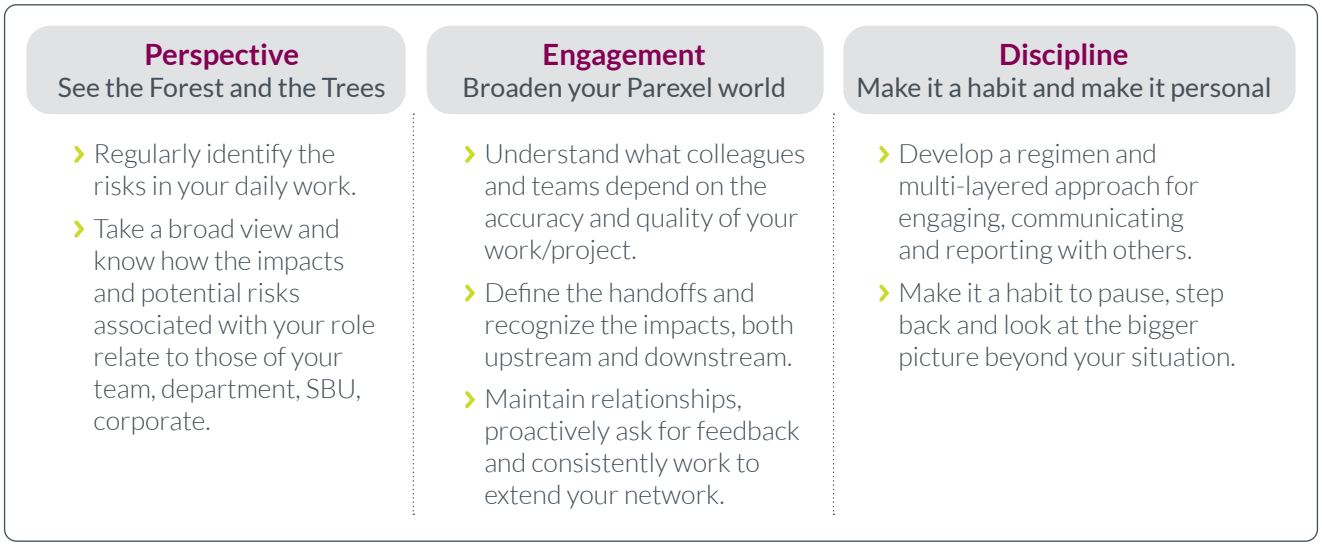


RBQM will demand change at both an operational and a cultural level. It will not only change what we do but how we think about doing it. Data-driven, cross-functional operations will be the hallmark of risk-based drug development as end-to-end RBQM is applied to anticipate risk, evaluate possible impact and conduct remediation. Clinical operations will align across functions and shape a more analytical workforce. Research staff must assume new roles, master new skills, and learn to think in terms of what data mean and how their actions impact operations upstream and downstream from their specific tasks.

RBQM operations. Operationally, new applications of data and analytics will inform processes ranging from trial design to clinical monitoring as research functions adopt the use of Critical to Quality factors, Quality Tolerance Limits, and Key Risk Factors. Staff will need greater skills in analytics and deeper therapeutic and regulatory knowledge to understand potential risks, data signals, and their impact on patient safety and study results. Today's siloed deliverables will expand, and operational roles will merge. Amy Kissam-Sands, Senior Vice President, Clinical Operations, points to the impact on CRAs and data specialists as prime examples: "CRAs will need deeper understanding of data, regulations, and research goals. Data specialists will assume blended responsibilities as statisticians and data managers focus less on siloed tasks like coding and cleaning, and more on the meaning of data across the research continuum."

RBQM culture. In this new environment, anticipating risk and appreciating its potential impact requires a new mindset. Risk management must be comprehensive. It should address risks at all levels in the organization to allow for reliable and consolidated reporting—a mindset that demands perspective, engagement, and discipline. (Figure 2).

Figure 2. Comprehensive management must be comprehensive, covering risks at all levels in the organization to allow for reliable and consolidated reporting.



In a risk-based culture, employees take a project-level focus to risk within the context of RBQM, while understanding that risk management must be comprehensive to cover different types of risk and at all levels in the organization. Both enterprise-level risk and clinical trial project-level risk require changing the mindset and behaviors of all employees.

Traditionally, clinical trial efficiencies have depended on speed and accurate completion of specialized tasks, together with a smooth hand-off of deliverables to the next operation. Action takes priority. But in the RBQM environment, staff must think first about risk and quality factors that will impact operations. They need an understanding of trial design, research goals and patient perspectives in order to assess their actions in terms of the impact on research processes downstream.

In other words, staff must learn to see both the forest and the trees and communicate what they see. Traditional communication patterns must be reshaped to encourage and capture staff views on potential risks and possible impacts at all points in the development process.

RBQM stewardship. RBQM will drive operational and cultural change across clinical sites, as well as within sponsor organizations and partnering CROs. As risk-based monitoring is already changing operations and skillsets at the site level, sites need training and guidance to further align their operations with comprehensive RBQM operations, especially in regard to communication. An immediate challenge—accelerated by the COVID pandemic—is the deployment of new data sources and mobile health technologies. RBQM regulatory guidance aims to speed the adoption of technology advances—currently, electronic medical records (EMRs), wearable sensors, and enabling smart devices to support DCT trials. Sponsors will become the stewards of risk-based practice, facilitating, and supporting change undertaken by site personnel.

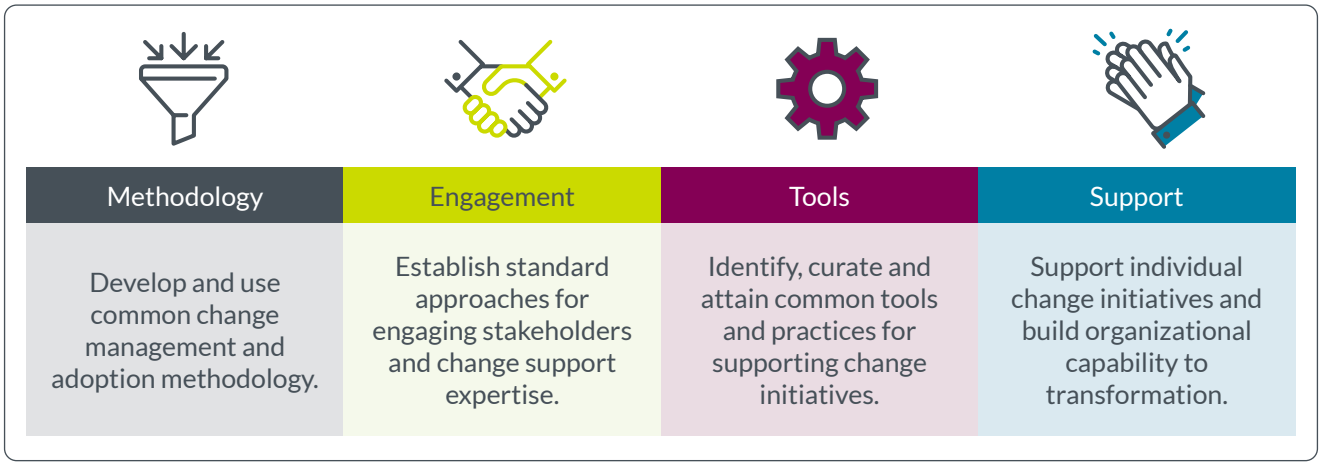
How does your organization undertake significant change?

Sponsors need to prepare now for a successful transition to the RBQM environment. Despite expectations published in 2016 in ICH E6 (R2), which called for risk management activities at the system and clinical trial levels, industry shows little progress in comprehensive risk-based practice. A 2021 ACRO survey found that only a small percentage of clinical trials have implemented more than three of the eight RBQM components.[3]

One barrier is likely to be lack of a more specific guidance—an issue that the 2021 and 2022 ICH revisions are expected to correct. Another, and perhaps greater barrier, is the overwhelming task of organization-wide change. A formal change management program can be a valuable approach as sponsors face myriad RBQM challenges.

A well-established discipline, change management programs provide a structured process and toolset to engage employees and guide an organization through a series of defined steps toward a desired outcome. They enable organizations to establish standard approaches to engage stakeholders, develop and use common methods for change management and adoption, and identify common tools and practices to support change initiatives at both organizational and individual levels (Figure 3).

Figure 3. Common foundation and consistent approach for change management and adoption.



Industry pressures to adopt more agile clinical research models also create a greater need for organizational change management programs. In addition, auditors are increasingly interested in how CROs manage different types of change that can impact the clinical trial process, including new systems, facilities changes, project scope changes, and organizational changes like mergers and acquisitions.

Recognizing the value of structured change management programs to drive RBQM adoption and other strategic initiatives, Parexel established a Center of Excellence for Change Management and Adoption and hired experts to drive organizational transformation.

"To accelerate organizational transformation and innovation here at Parexel, we are focused on building the capabilities of all employees to manage change, at an organizational, leadership and individual level," says Kissam-Sands. By learning to be agile and manage change well, Parexel can support RBQM adoption among sponsors and clinical sites, and help foster risk management practice among care providers and patients.

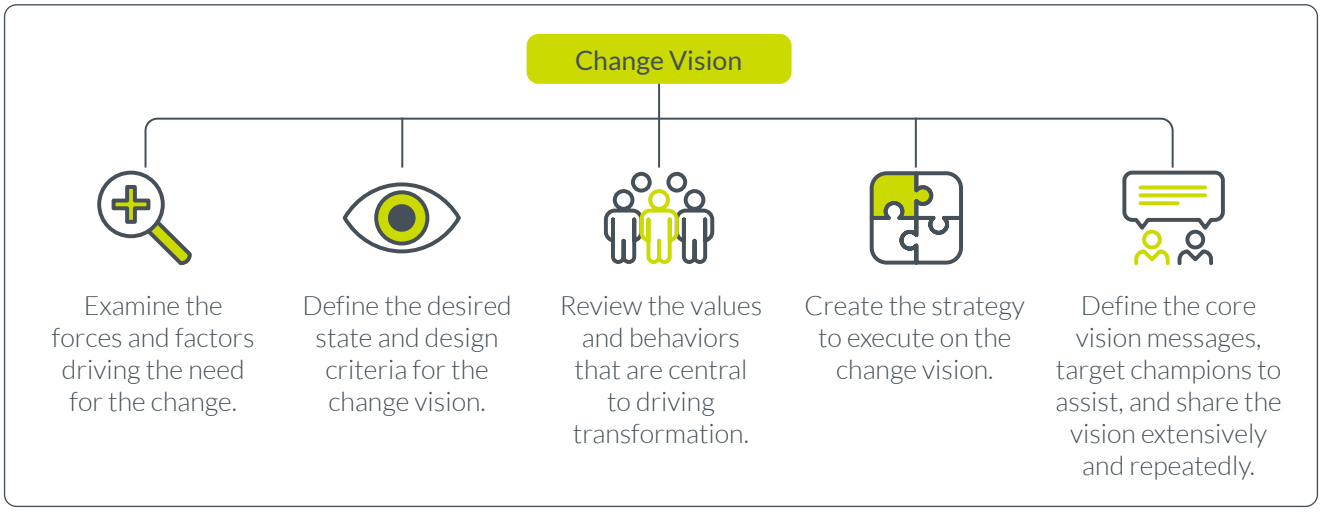
The change management initiative currently underway at Parexel offers an example of the process and its benefits.

What an RBQM change management program looks like

Formulating a change vision. The change management process helps an organization answer two essential questions: where do we want to go, and how do we get there? With clear goals established, change management creates a meaningful path to reach them: What does the change mean to employees, to leaders, to sponsors, and ultimately to patients?

At Parexel, we began with discussions to identify RBQM impacts across the organization. In the course of these discussions, we engaged key staff members to develop a change vision and create a sense of urgency to move the organization toward implementation of the RBQM components defined by ICH regulation (Figure 4).

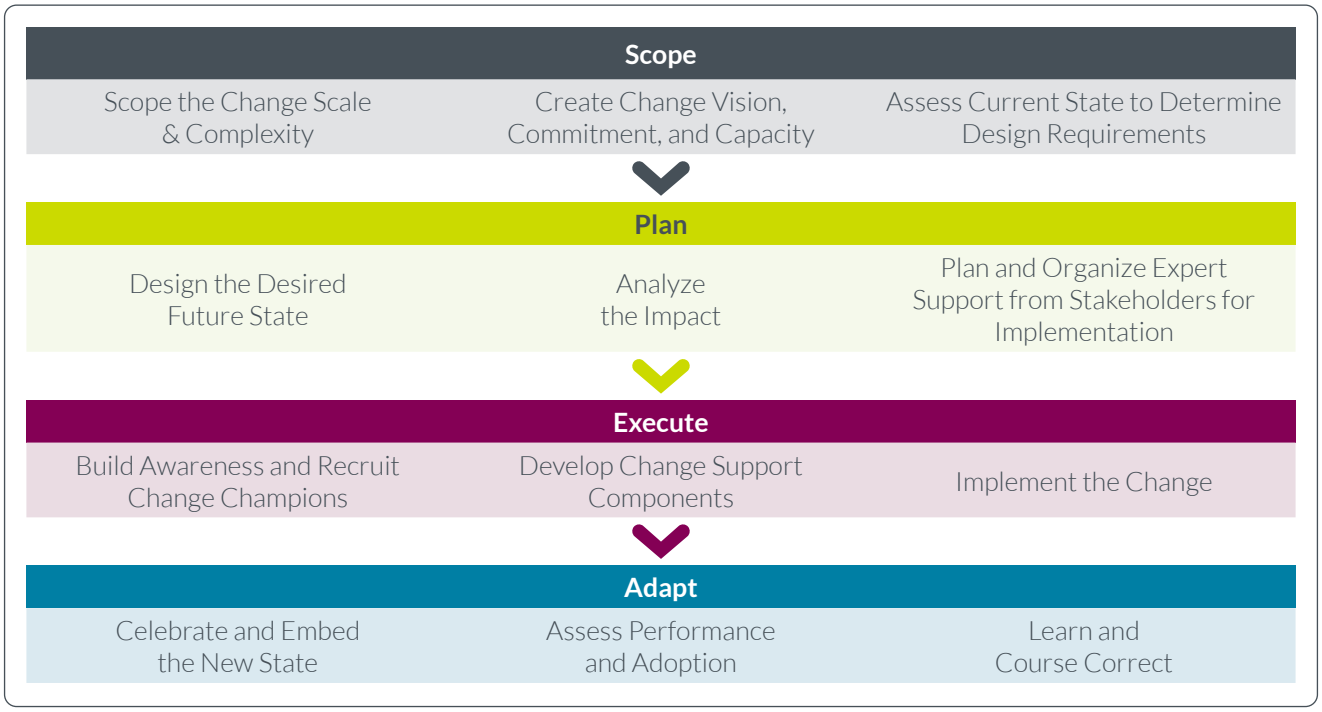
Figure 4. A change vision defines the mindset and behaviors that reinforce the desired future culture and answers "why change" in a meaningful and compelling way.



Guided by the regulatory requirements to define our future state, we began the effort to determine the criteria and capabilities necessary to reach it, both operationally and culturally.

Driving change in four structured steps. A cultural and organizational change such as RBQM does not happen overnight. It is rather an incremental shift to new operational approaches and behaviors. Parexel is currently working through four sequential stages designed to drive RBQM adoption. Figure 5 summarizes the stages of our change management process: Scope, Plan, Execute and Adapt.

Figure 5. Key activities within a multi-stage approach to drive organizational change.



Scope and plan. The scale of RBQM-driven change makes the early stages of change management--assessing scope, and planning for implementation—extremely complex. In our assessment of scope, we outlined the RBQM requirements for a unified systems approach to capture risks across the lifecycle of a clinical trial, together with the alignment of processes and employee capabilities. An important aspect of this phase was putting in place a cross-functional leadership commitment for system-wide RBQM applications.

Parexel's early efforts involved studying the overall need to balance data- and technology-driven analysis with human interventions and solutions for risk assessment and mitigation. Our scope and planning efforts point to the importance of a flexible model that enable us to adjust our responses to risk scenarios and customer needs. Successful industry adoption of RBQM requires key employees to embrace a systems perspective and develop the competencies needed to support the cross-functional operations model.

Execute and adapt. Essential to this phase is the recruitment of "change champions." We rely on the expertise and energies of key personnel in strategic locations to assess needs, build staff awareness, and lead the technical and procedural changes in their functional areas. Champions are instrumental during the last, ongoing change management phase as the organization adapts to the new working environment. Adapting means integrating RBQM into the corporate culture, making risk-based thinking and practice part of the way we view success, reward performance, learn and improve our clinical research.

Change depends on engaging hearts and minds. The cultural changes required by RBQM will be equally, if not more, challenging than implementing risk-based tools and procedures. The new paradigm asks individuals to think and behave differently. Our change management initiative heavily emphasizes identifying the behaviors that will drive RBQM success and designing change communications that will engage employees in the change process.

Core change communications explain why and how risk-based thinking is critical to RBQM. Rather than immerse themselves in the tactics of their particular function, employees are being asked to take a big-picture view of clinical research operations—to see the whole research process and the impacts they have on functions that precede and follow their work. Rather than act routinely to complete a deliverable, employees are asked to pause and think about possible risks in terms of research goals and patient safety.

"Clinical research staff value patient safety and pride themselves on adherence to regulations and to functional detail. These values are important to us!" Kissam-Sands says. "But RBQM will shift their focus away from many traditionally required checks they are used to performing. For example, risk-based approaches enable central visibility into data signals that can be perceived well ahead of monitoring visits, and we can act on those signals. Transcription checks can be reduced or eliminated in favor of source data review sampling based on risk. These are just two illustrations of how behaviors will need to change in a risk-based approach."

Communication will change as well. It is important to empower employees to raise issues and to encourage and educate colleagues in risk management. Organizations that specialize in clinical research need to encourage staff to speak up and communicate risks they anticipate, both within and outside their functional areas. It will take time to establish this analytical mindset and the new habits of information sharing. Our change messaging promotes the watchwords "Think, Plan, Act" to keep risk-based practice front of mind.

Some lessons learned: Benefits of a broader perspective

Parexel's change management program is bearing fruit for RBQM. We see the benefits of risk-based practice, in terms of both operational improvements and staff engagement. We've learned that it's important to celebrate the victories, and we routinely share successful risk-based performance with employees to help reinforce the right behaviors. We see improvements in decision-making for study design and clinical monitoring based on greater reliance on data and risk assessment. Employees want to feel connected—to be part of the whole rather than just a part. Our employees are engaged by opportunities for broader knowledge and an increased sense of ownership in clinical projects. Another RBQM benefit will be closer partnering with stakeholders as we share efforts to understand and communicate clinical study risks with sponsors, sites and patients.

The most meaningful impact of RBQM is the development of a broader perspective that strengthens the concept of patients as our "center of gravity." Growing focus on the end-to-end research process expands the dedication of employees beyond their individual functions to a deeper responsibility to the patients who make new medicines possible.

Read the first whitepaper in our RBQM series

Preparing for a risk-based future: What ICH revisions mean for clinical trials design and conduct

References

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