

MIXED METHODS RESEARCH



AN IMPORTANT TOOL TO DRIVE EVIDENCE-BASED PUBLIC POLICY-MAKING

Pressure to deliver more for less, and to develop public policy that is evidence-based, has greatly spurred the interest in research and evaluation in the United States, United Kingdom and Europe. Alongside randomized controlled trials (RCTs), mixed methods research has become an increasingly popular approach in the discipline fields of sociology, psychology, education and health sciences. Mixed methods research involves integrating quantitative (e.g., experiments, surveys) and qualitative (e.g., focus groups, interviews, observations) data collection and analysis in a single study or program of inquiry. By combining quantitative and qualitative research and data, the researcher gains in breadth and depth of understanding and corroboration, while offsetting the weaknesses inherent to using each approach by itself. Mixed methods research allows the investigator to gain a better understanding of research problems and complex phenomena that often involve multiple interacting systems, are replete with social and institutional uncertainties, and for which only imperfect knowledge about their nature and solutions exist (e.g., social inequalities, healthcare, educational access). While mixed methods research has been extensively discussed in literature, there is little information about how commonly it is used, why and how it is used in practice, and its value versus stand-alone quantitative and qualitative studies. Here, we highlight the value of mixed method research and illustrate how powerful it can be when used right.

THE VALUE OF MIXED METHODS RESEARCH

Mixed methods research allows us (i.e., the investigators) to address practice and policy issues from the point of view of both numbers and narratives and has the power to generate new insights on complex problems or phenomena. Qualitative analysis, when used with quantitative data, can help us understand the “why” behind the data. This “black box” of learnings provides critical insight into individual feelings and beliefs that help substantiate or disprove quantitative data findings. We commonly use mixed methods research to answer the question, “What works, for whom, in what respects, to what extent, in what contexts, and how?” This is achieved through:

- Improved triangulation of results, in that very different sorts of technique are being used to gain a view of the same phenomena (or different aspects of the same phenomena), thus providing better insights into the complex situation. Successful triangulation requires careful analysis of the type of information provided by each method, including its strengths and weaknesses.
- Improving measurement and indicators (for example, by using focus groups to identify possible questions for a survey, or to comment on drafts of such questions).
- Identifying points where the evaluation framework may need to be extended—topics that need to be covered, inconsistencies in results that need to be addressed, and the like.
- Combining in-depth insight and process understanding with a sense of the broad landscape and the extent to which individual cases can be generalized.
- Generating different types of account in such a way that different audiences can be addressed.
- Gaining understanding of thoughts behind quantitative data—what underlying social or cultural influences drive the selection of ‘A’ over ‘B’.

While we recognize the benefits of mixed methods, we have found that in order to apply these methods appropriately, multiple factors should be considered.

- Important consideration prior to designing and conducting a mixed methods study is whether mixed methods, as compared to single method designs, best address the research problem and the research question(s).
- Developing a strong mixed methods research project often requires collaboration of different researchers with different types of expertise. This requires more time and attention to project design and management than may be necessary in a single method project. Researchers with different methodological commitments may also have different research philosophies that make collaboration all the more challenging. Devoting time in advance to figuring out a management structure and team member responsibilities as well as to developing appreciation for different perspectives can help to overcome this challenge.

- The “triangulation” relies on using different measures of the same concept to provide a more robust overall measure. We may be confronted with situations where the measures do not yield consistent results. This can be attributed to the inadequacy of one/more of the measures, or to another influence that prevents convergence of the alternative measures. While qualitative methods can provide information that helps us answer this question, there are situations where qualitative assessment can reveal the problem and other data is needed to determine why the issue occurred.
- A major advantage for using mixed methods is to uncover unexpected patterns and generate new research questions. In that sense, the real challenge is to obtain/continue the research that allows us to refine our knowledge of the process in question.

In our experience, we have found that evaluations of innovative interventions and programs should identify the extent to which there has been any attempt to learn from both failures and successes as well as to identify implications for the future. We believe that great evaluation is about learning and as such, we found it equally important to identify the extent to which action has been taken based upon what has been learned. This approach allowed our clients, including government agencies, to generate value from the evaluation. Our clients use the learnings from the evaluation to:

- Revise the design of the intervention or program.
- Create a cycle of improvement—more efficient use of resources, improved effectiveness of the program or intervention.
- Report on the achievements of the intervention and determine the potential for application elsewhere.

We have successfully completed multiple evaluations of innovation and technology across various sectors (e.g., health and social care, crime and justice, education) and we have found mixed methods valuable in achieving the following:

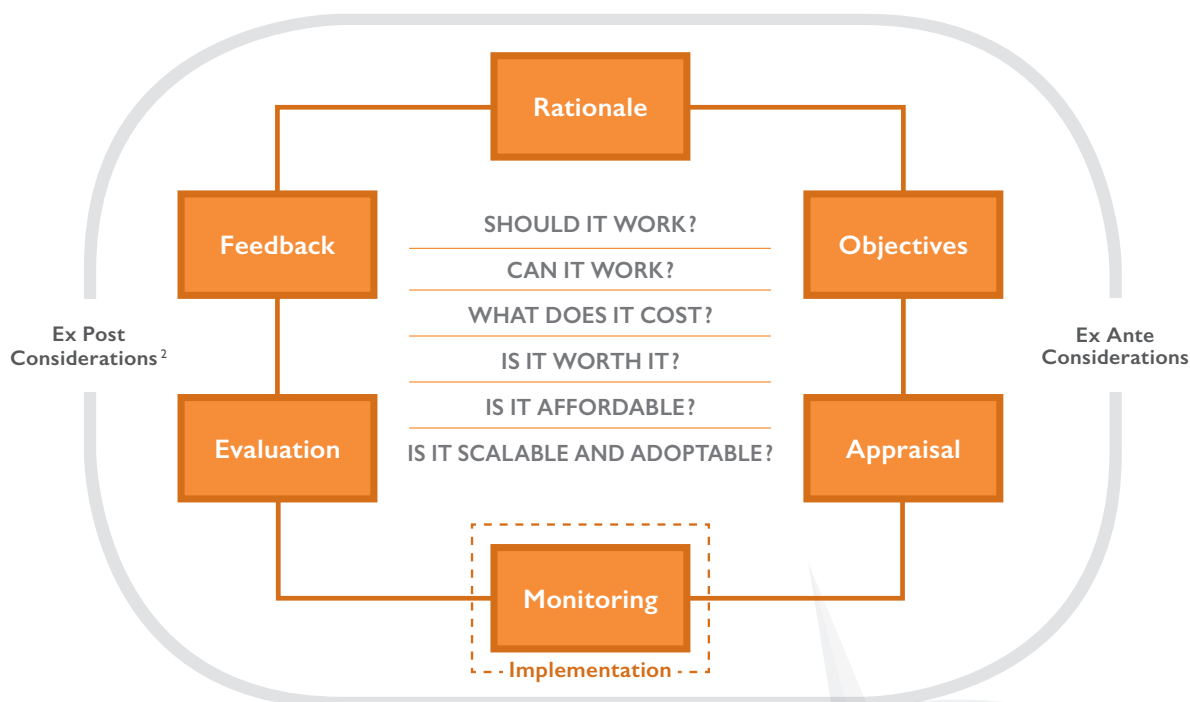
- Explore exceptions, including unintended consequences, where quantitative data do not support a specific outcome or hypothesis.
- Provide for understanding of the complex processes involved as well as for identification of learning and implications, both from successes as well as from failures.
- Be flexible enough so that it is open to serendipity and unexpected findings, which particularly with innovations can represent the key outcomes.

Recommendations on innovative and pragmatic ways to evaluate innovation, more specifically in integrated care are addressed in detail in a blog authored by our colleague Christina Theodore, health and social care research expert, entitled, “Purely Scientific Versus Innovation and Pragmatism: The Way Forward for Evaluating Innovations in Integrated Care.”¹

1. Blog, Optimty Advisors. <http://optimtyadvisors.com/insights/blog/purely-scientific-versus-innovation-and-pragmatism-way-forward-evaluating-innovations>.

SUCCESSFUL APPLICATION OF MIXED METHODS RESEARCH

Optimity Advisors has over 25 years' of global experience delivering high-quality research and evaluation work in public policy, which enables our clients to make informed decisions, using the best available evidence. We routinely use established research methods such as systematic evidence synthesis, primary and secondary research, stakeholder engagement, economic reviews and appraisal techniques, cost-effectiveness analysis, impact assessments, and evaluation. Over the years, it appeared clear to us that only when combined in innovative ways, these techniques help assess and demonstrate value throughout the policy cycle: from the recognition of a problem, through the implementation of an intervention, to the evaluation of a policy. Mixed methods research represents one way to combine those research techniques.



LOGIC
MODELS



ECONOMIC
EVALUATION



RAPID CYCLE
EVALUATION FEEDBACK



REALIST
FRAMEWORK



QUANTITATIVE RESEARCH METHODS

- Data collection and coding
- Literature reviews
- Random sampling techniques
- Quantitative survey design, implementation, and analysis
- Descriptive and inferential statistical analysis
- Economic modelling
- Meta-analysis
- Development of databases



QUALITATIVE RESEARCH METHODS

- Study design
- Literature reviews
- Interview design and implementation
- Qualitative survey design, implementation, and analysis
- Desk research
- Stakeholder engagement (e.g., focus groups, workshops)
- Evidence synthesis techniques (e.g., literature review, evidence assessments)
- Case study research and development

**FOLLOWING ARE TWO CASE STUDIES
DEMONSTRATING THE APPLICATION OF
MIXED METHODS RESEARCH AND OUTCOMES.**

**Case Study #1: Evaluating Advanced
Payment Models**

THE CHALLENGE

The Centers for Medicare & Medicaid Services' (CMS) Bundled Payment for Care Improvement (BPCI) Model I initiative in April 2013. BPCI Model I focuses on care received at participating hospitals during an acute-care inpatient hospitalization ("episode") for all Medicare Severity Diagnosis Related Groups (MS-DRG), unless excluded from the study. Through care redesigns and other process redesign activities, hospitals attempted to achieve efficiency gains in healthcare delivery, primarily in the form of reduced healthcare redundancies, improved care processes, and internal hospital cost-savings. The goal of this Model is to test whether these efficiency gains may translate to reduced Medicare costs while maintaining or improving quality of care for Medicare beneficiaries. Optimity Advisors and Econometrica conducted a qualitative and quantitative evaluation of BPCI Model I.

OUR SOLUTION

In collaboration with our partner, Optimity Advisors leveraged its expertise in mixed methods research and evaluation to:

- Design an evaluation plan and develop analytical methods
- Develop a logic model and associated output and outcome metrics
- Perform quality assurance for analytical outputs
- Collect primary data collection via site visits and phone interviews
- Synthesize, analyze, and report evaluation findings

THE RESULTS

Based on the collaborative work of Optimity Advisors and Econometrica, CMS published the first Annual Report for 2014 summarizing the findings, areas for improvement, and lessons learned from this innovative new payment model.³

- Telephone interviews and focus groups conducted at the participating hospitals revealed the following:
 - A combination of strong and effective leadership, communication, and engagement are critical factors for successful participation in Model I.
 - There is no definitive link between incentive payments and practice or behavior change. Some evidence suggests that practice improvements were driven by payment, but other evidence indicates there is a drive to 'do what's best for patients.'
 - The impact of performance monitoring and the provision of accurate and timely performance data should not be underestimated due to its ability to engage physicians in the cycle of performance improvement and the ability to measure progress or improvement.
 - Participating hospitals could not directly attribute the cost-savings, gains in efficiency, and improvements in quality to Model I, in part due to other quality improvement initiatives running in parallel.
- The quantitative analysis revealed the following:
 - Compared to baseline spending, BPCI episode had lower spending growth than non-BPCI episodes during the initial hospital stay.
 - BPCI Model I did not have a significant impact on mortality or readmission rates.

3. https://downloads.cms.gov/files/cmml/BPCIMI_ARY1_Report.pdf

Case Study #2: Evaluation of Models and Approaches to Supporting Young Adults with Kidney Disease

THE CHALLENGE

NHS Kidney Care launched the 'Supporting Young Adults with Kidney Disease' project in 2010. The project aimed to assist six project groups to develop and implement new models of care, which would allow them to better support young adults with kidney disease. Optimity was commissioned to conduct a 2-year national evaluation of the project that aimed to:

1. (a) Explore the different models of care/approaches adopted by each of the project groups, (b) in terms of how they have impacted young adults and staff, and how they have brought about improvements in service delivery.
2. Explore the influence of the models of care on outcomes such as quality of life.
3. Reflect on the feasibility of delivering different models and approaches.
4. Identify both drivers and barriers to achieving a smooth transition process for young adults and improved support in adult services.

OUR SOLUTION

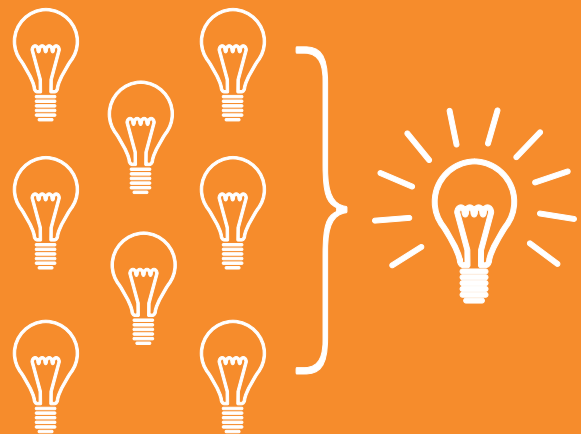
Our approach consisted of understanding how the project groups developed from initial implementation and operation. Optimity conducted:

- **A Theory Assessment** ("Should they work?") that involved literature review of research evidence, a review of project groups project initiation documents, initial site visits to conduct focus groups with project groups, telephone interviews with members of the project board and consultation on outcome measures (Aim 1a and Aim 3).
- **An Implementation Assessment** ("Can they work?") that involved quantitative data collection, focus groups with key workers, peer group telephone interviews with staff and a review of project group logic models to critically assess progress and implementation (Aim 3).
- **An Outcome Assessment** ("Do they work?") that involved quantitative data collection, peer group interviews with project group staff, young adult focus groups, face-to-face and telephone interviews and a review of project group logic models to critically assess whether planned outcomes have been achieved.

THE RESULTS

- Ongoing learning and challenges throughout the project were captured and fed back at learning events and working groups. At these events, formal presentations were delivered that highlighted the highest priority issues for resolution.
- Through facilitation, all networks worked together to problem-solve as some areas had similar issues that others may have already resolved.
- Short interim reports to each network were produced to indicate their individual performance. These were taken to their individual boards and groups were created to solve any issues before reporting back on progress.
- The introduction of improved models of care for young adults with kidney disease transitioning to adult services and those presenting to adult services directly has generated real benefits at a local level in terms of the support available to young adults. Despite challenges in appointing staff, firming up the models of care and collecting data good progress can be reported on aims 1, 2 and 3.

THROUGH FACILITATION



**ALL NETWORKS WORKED
TOGETHER TO PROBLEM-SOLVE**

ABOUT OPTIMITY ADVISORS

Optimality Advisors is a rapidly growing, multi-industry strategy, operations, and information technology advisory firm with multiple locations throughout the United States, United Kingdom and Europe.

We specialize in the critical set of services that sit between high-level strategy and delivery and execution. We provide a strategic outlook through proven methodology, knowledge, and instinct, helping to craft an actionable future vision that aligns with your long-term goals and objectives. We bring an end-to-end industry understanding to help you rise above the day-to-day, focus on the opportunities ahead, and align your organization for success.

ABOUT THE AUTHOR

KADIJA ABOUNIT, PH.D., MBA

Kadija is a senior associate at Optimality Advisors and provides advisory and research support to private and public sector clients. Kadija has over 10 years of experience working in and managing research and evaluation projects both in the U.S. and UK. Kadija has worked in research and evaluation projects related to the following areas: pharmacology and biomedicine, advanced payment models of care, population health management, and innovative models of care delivery (e.g., digital technology, monitoring devices). Her expertise includes evidence reviews, logic models, study design, mixed methods research, qualitative research (interviews, focus groups, workshops), data analysis and triangulation, and reporting. Kadija uses her clinical expertise to design innovative and value-based healthcare programs to manage the health of people with or at risk for long-term and/or complex conditions.

PARTNER CONTACT

JACQUE MALLENDER

Partner, Public Policy

Washington, DC | Brussels | Germany | London |
Los Angeles | New York | Zurich

1st Floor | Kemp House | 152-160 City Road |
London | EC1V 2NP

t: +44 (0) 20 7553 4800

d: +44 (0) 7811 405782

e: jacque.mallender@optimityadvisors.com

w: www.OptimalityAdvisors.com

www.twitter.com/optimityeurope

www.linkedin.com/company/optimityeurope