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Evidence-Based Practice in Mission: A Method for Establishing Best Practices and Achieving Desired Goals

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Abstract
Decision making and strategy in missions can be elusive tasks. The presence of experts and careful planning may not assure the establishment of best practices. The purpose of this article is to introduce evidence-based practice (EBP) as a proven method for establishing best practices in the mission enterprise. I will provide (1) a definition of EBP, (2) the process for establishing an EBP, (3) the value of EBP and its contribution to the mission enterprise and the fulfillment of mission goals, and (4) the problem of bias and barriers, which challenges the implementation of EBP.

Keywords
evidence-based practice, best practices, mission strategy, contextual ministry

A group of mission leaders met in Chicago to discuss several pressing issues as they were planning for the future of their mission organization. The topic of missionary recruitment came to the forefront in a preliminary discussion. The question that was being discussed was how to recruit more short-term missionaries. A lively discussion ensued, with many opinions and suggestions expressed. Several minutes into the session a participant asked, "Why do we want to recruit more short-term

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missionaries?" The room fell silent, and several stared at the questioner in disbelief. The event organizer responded, "Because short-term missions is the path to career." The reply came, "Short-term doesn't lead primarily to career, but to more short-term."

What is the basis for these two opposing claims, and which one of them is true? The answer to this question will determine strategy and the assignment of resources. This vignette provides an example of the need for a decision-making process that provides evidence to establish best practices that lead to desired goals.

When evidence-based medicine (EBM) was introduced at McMaster University Medical School in 1992, it presented a new paradigm for the practice of clinical medicine. EBM proposed replacing anecdotal and theoretical reasoning from the basic sciences with external research, expert opinion, and the needs and wishes of patients.[1] Today it is in the curriculum of all US and Canadian medical schools and is a requirement for accreditation.[2]

EBM has moved across health care disciplines and beyond to architecture,[3] education,[4] public works,[5] athletic training,[6] and psychology,[7] to name a few.[8] It is now more popularly referred to as evidence-based practice (EBP), representing a multidisciplinary application. Despite the popularity of EBP as a strategic planning tool in other disciplines, it appears that mission organizations have not yet discovered it.

What is evidence-based practice?

EBP is an approach to decision making that uses evidence to determine what would be the best practices for achieving the desired outcomes. Various definitions of EBP have emerged in the literature, but they all incorporate the concept that EBP is "the conscientious, explicit, and judicious use of the current best evidence in making decisions."[9] It is a problem-solving approach to clinical practice that integrates external evidence, clinical expertise, and patient preferences and values.[10]

This model combines a trilogy of evidence that offers the best interventions for patient care. The three components of EBM are represented in relation to one another as in figure 1. External scientific evidence, expert opinion, and patient needs provide the evidence needed for diagnosis, decision making, and intervention. These three are displayed in an equilateral triangle, which signifies that each component has equal value. Practitioners should "use both individual clinical expertise and the best available external evidence, and neither alone is enough. Without clinical expertise, practice risks becoming tyrannized by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient."[11] Each component makes an equal contribution to establishing evidence in the EBP model. These three components provide a model for discovering different types of evidence.

The same components could be applied to the mission enterprise, which could benefit significantly by employing this method in strategy and decision making. The evidence-based practice model (EBP) applied to missions is displayed in figure 2. The process of discovering evidence for the purpose of intervention to achieve a desired goal is very similar to the process in medicine. There are nomenclature and procedural differences, but the structure of the model is the same.

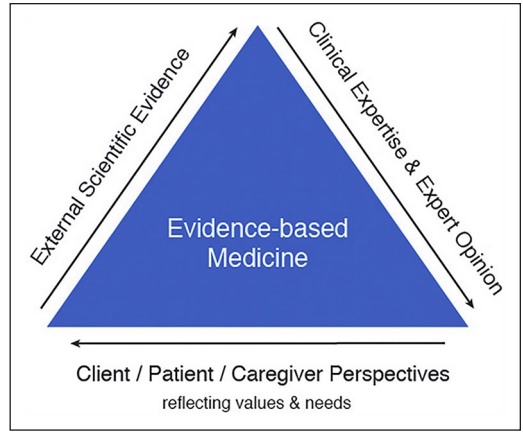

Figure 1. Evidence-based medicine: equilateral triangle of evidence.

The goal of EBP in missions is to use the best available knowledge for decisions impacting missional strategy. This entails:

1. valid research evidence as the basis for ministry decisions;
2. ministry expertise that contextualizes the research to the needs of a target audience and ministry situations;
3. partner values and input that reflect field-specific concerns and needs.

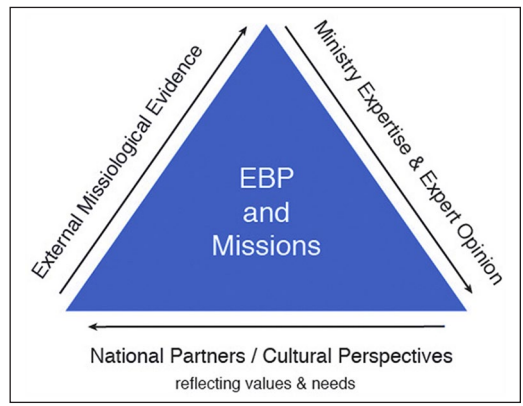

Figure 2. Evidence-based practice and missions: equilateral triangle of evidence.

These three components of EBP are not hierarchical, nor do they occur in any particular sequence. They share equal value in the discovery and contribution of evidence.[12]

The process of evidence-based practice

Finding the right question

We are often better at giving answers than at asking questions. Effective practice presupposes beginning with a question before offering an answer. EBP is dependent upon asking questions, but simply being inquisitive is not sufficient. We must ask the *right* questions. The EBP process begins by discovering the right question that will provide

the information to reach a desired goal. Let's return to the example in the introduction. The question being asked by the mission leaders was, How can we recruit more short-term missionaries? The stated goal was to increase the number of career missionaries, and the assumption was that short-term is the pathway to career. Is this a good question? If not, how do we find the right one?

Distinguishing background and foreground questions

There are two types of questions: background and foreground. Background questions are those that need to be answered as a foundation for asking the searchable, answerable foreground question.[13] A background question begins with an interrogative (who, what, when, why, where, how) and the desired outcome.[14]

A good background question from our example above would be, "How can we increase the number of career missionaries in our organization?" There is a strong belief among those who have ministry expertise that short-term missions are a means to increasing the career missionary force. However, we need to formulate a good foreground question before we draw this conclusion. "Focused foreground questions are essential to judiciously finding the right evidence to answer them."[15]

A background question is a general, broad inquiry, whereas a foreground question is focused on specific information. A good foreground question to follow the background question above is, "What is the correlation between short-term missions and career missions?" The foreground question is developed from a good background question. Once this has been established, the process can begin to answer the specific foreground question. This sequence is necessary to determine that the right questions are being asked.

Foreground questions are those that can be answered by the evidence provided by the three components in the EBP model (see fig. 2).

1. Ministry expertise and expert opinion
2. National partner cultural perspectives
3. External missiological evidence (research and literature review)

The acrostic PICOT provides five steps in discovering searchable, answerable foreground questions. These five steps are population of interest, intervention, comparison, outcomes, and time.[16] We can apply these five steps to our example regarding missionary recruitment as in table 1. These steps will lead to a researchable foreground question such as: Does the short-term mission enterprise result in the growth of career missions?

The right question must be determined before seeking an answer. It is a mistake to assume that we know what the question is. It is also a mistake to believe that we have the answer to the question without sufficient evidence. Too often we start with answers to questions that don't need to be asked, or we don't ask questions that need to be answered. A little preliminary work in formulating a good question related to a mission

objective can save a great deal of time and money. Once again, the case above serves as an example. The mission leadership began with the wrong question by assuming that short-term leads to career. The question was formed without sufficient evidence establishing the relationship between short-term and career missions. Resources and finances could be misdirected if short-term missions are not primarily a path to career missions.[17]

Table 1. Using PICOT to formulate a question.

Topic	Question	Sample answer
Population of interest	What group do you want info on?	New missionary recruits
Intervention (or exposure)	What event do you want to study the effect of?	Short-term missions (STM)
Comparison	Compared to what? Better or worse than no intervention at all or than another intervention?	Career missions
Outcomes	What is the effect of the intervention? What is the outcome?	Identify the relationship between STM and career.
Time	Time involved to demonstrate an outcome?*	3 months

*This step may be more relevant in the development of some questions than others, particularly if a timeframe is significant to the desired outcome.

Once a good question has been established, it needs to be answered. The question is answered by gathering evidence from the three EBP components: (1) expert opinion, (2), national partner input based on values and needs, and (3) external evidence: research and literature review.[18]

Triangulating the evidence

There can be a tendency to value one side of the EBP triangle over another. The struggle is to keep these three sources of evidence in balance.[19] Prioritizing one component over another can result in skewed or false evidence.[20]

EBP is represented by an equilateral triangle in which each component contributes equally to the discovery of evidence by answering a valid question (fig. 2). The example of the mission leadership discussion in the introduction suggests that the question under discussion was not triangulated. The primary evidence presented was expert opinion.

External missiological evidence wasn't considered, and there were no national partners present. Rather than triangulating the evidence equilaterally, the decision-making process emphasized one component over the other two. This imbalance results in a scalene triangle, in which the majority of the evidence is drawn from a single component (see fig. 3). This approach compromises the validity of the evidence and creates the danger that intervention will be harmful or at least less than optimal.[21]

Participants in the decision-making process of EBP may tend to emphasize their area of expertise. The researcher says, "The literature demonstrates . . .," the practitioner responds, "My experience in multiple cultures shows . . .," and the national partner states, "Our needs clearly reveal. . . ." The equilateral triangle will be restored when all three perspectives are at the table with an equal voice. This triangulation is the only way to ensure that an evidence base has been established to answer critical ministry questions and make the appropriate allocation of resources. The potential for finding the right evidence to answer critical missional questions is impeded when the voices at the table represent only one or two of the three evidential components.

Figure 3. Skewed evidence base: one component overemphasized.

Another way in which the necessity of triangulation is presented is the three-legged stool (fig. 4).[22] When one or more legs of EBP is missing, it results in insufficient evidence to support the best intervention. The mission leaders in Chicago did not triangulate the evidence and made a decision that had insufficient support. They were functioning with a one-legged stool (fig. 4).

The value of evidence-based practice in missions

The establishment of best practices

What is the efficacy of our ministry initiatives? We should be employing those practices that have been empirically demonstrated to be effective. How do we establish what is effective? It is accomplished through a rigorous review of evidence. We can't have a conversation about best practices until we've established the best evidence. References may be made to "best practices" in conversations and in strategic planning sessions without establishing how they were derived. It is too easy to understand best practices as what we have done most frequently that seems to work. EBP serves "as a foundation or anchor for clarifying and defining the concept of best practice."[23] Best

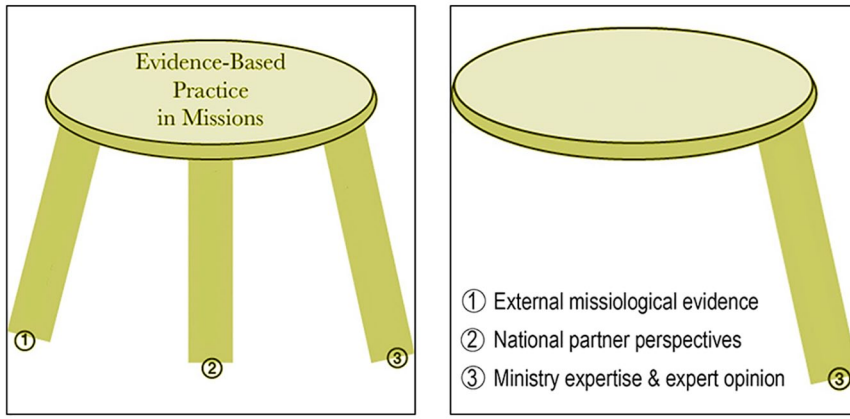

Figure 4. *Left*: EBP balanced—all three components present; *right*: unbalanced approach—only one component present.

practices are a result before they become a method. The best evidence produces a best practice. "Best practice requires a level of agreement about evidence to be integrated into practice. . . . The struggle needing to be faced is how to devise strategies to operationalize best practice."[24] When evidence is not submitted to rigorous review, we are left with opinions and assumptions to guide our practice.

Attaining desired outcomes and avoiding unintended consequences

While faith-based organizations often measure their success "in terms of program outputs (e.g., number of individuals served), it is unclear whether these outputs correspond to achieving the desired program outcomes. . . . Relationships between outputs and outcomes are not as clear because they are not directly observed or easily understood."[25] Recognizing the connection between outputs and outcomes is one of the biggest challenges for mission organizations. Basing ministry assessments upon quantitative data alone reveals only a portion of the evidence needed. This information is often the easiest to retrieve, but it does not answer questions about the meaning behind the numbers. An example of this problem can be seen in a mission hospital in West Africa that has reported annual conversions to Christ of between 2,400 and 2,600 people over a thirty-year period. Qualitative research at this hospital in 2012 demonstrated that patients made professions of faith for multiple reasons, including protection from ancestral curses as a cure from illness, coercion, and the belief that conversion was part of medical treatment.[26] Ministry outcomes may result in unintended or harmful consequences unless there are careful assessments. In addition, these unintended outcomes may remain hidden from view.[27] EBP can enhance the effectiveness of mission endeavors by providing the evidence needed for decision making and the establishment of best practices.[28]

Adopting and maintaining contextually relevant ministries

EBP is an approach that enables mission practitioners to provide the most contextually relevant ministry interventions in a rapidly changing global environment. "Without current best evidence, practice is rapidly outdated."[29] Best practices have a shelf-life because knowledge is always changing. Protocol for CPR is an example. "Every five years, the American Heart Association (AHA) releases new guidelines regarding CPR. . . . The guidelines of today are in stark contrast to the guidelines issued decades ago."[30] The need for new evidence in response to contextual changes in mission is also evident. Globalizing trends in the twenty-first century have impacted the task of the mission enterprise.[31] These changes can be seen in several monumental shifts. The shift in the statistical center of Christianity in terms of growth and vitality from Europe and North America to the Global South is one example.[32] Another is a methodological change in the Western church from pioneering to partnering, along with a growing emphasis upon short-term missions.[33] These globalizing shifts have resulted in paradigmatic changes in the task of missions. Understanding the significance and impact of these changes requires new knowledge. EBP is a method that enables mission strategy and practice to remain current and contextual within the changing landscape of world missions.

EBP has crossed not only disciplines but cultures, which is particularly relevant for those considering the application of EBP in the mission enterprise. Recognizing the importance of EBP in a singular domestic context is one thing, but in cross-cultural situations is quite another. This methodology of applying evidence to practice is gaining ground among management in European countries,[34] public health services in Ghana,[35] and intensive care nursing in Jordan.[36] Establishing a new methodology can be a struggle domestically and internationally for reasons we will introduce below. However, the potential benefits for improved decision making are worth the effort to put it into practice.

Problems, objections, and barriers to evidence-based practice

There are problems in every mission endeavor. It is often assumed that these problems are self-evident, but they may be unintended and outside the awareness of those responsible for outcomes. EBP enables participants to identify problems and provide intervention to alleviate consequences. Melnyk and Fineout-Overholt describe the advances that EBP has made in developing multiple sources of knowledge to inform the strategic decision-making process: "In the past, most clinical actions were based solely on logic, tradition, or conclusions drawn from keen observation (i.e. expertise). Although effective practices have developed from these knowledge sources, the resulting practice may be successful less often than hoped for in producing intended patient outcomes. Additionally, conclusions that are drawn solely from practitioner observations can be biased because such observations usually are not systematic."[37]

The authors here are referring to patient outcomes in a medical context in which localized decisions may be useful but may not represent or contribute to a plan or method of treatment that is broad-based and applicable in other contexts. These observations are not unique to medicine, but they represent the process of acquiring evidence that applies to praxis across disciplines. The following are examples of deterrents to the implementation of EBP in mission practice.

Problem #1: The fear of losing a preferred strategy

Churches, mission organizations, and field teams invest a great deal of time and resources in the development of mission strategy. The idea of reformulating an existing strategy is not a welcome suggestion, particularly if the existing strategy seems to be working well. The implementation of EBP in mission doesn't require a new mission, strategy, or goals. EBP fits with existing strategies as a process to accomplish stated objectives. It serves as a means to achieve existing ideals by assessing what is already in place and providing corrective guidance toward achieving desired outcomes.

Problem #2: Lack of assessment

It is possible to have an elaborate, well-defined strategy that is misguided because of a lack of assessment. Quantitative assessments such as new missionary recruitment numbers, reaching a fund-raising goal, and the number of conversions and baptisms are legitimate means of reaching desired goals, but they represent a partial assessment. What are the meanings behind the numbers? A good assessment looks for evidence of desired results. It is a thorough analysis of what has been accomplished in relation to stated goals.[38] "Evaluation must permeate everything the team does. It is not simply something to be done after a task or project has been completed or the vision has been achieved. It is a means to monitor the progress and focus of the team according to its purpose and vision."[39]

Assessment is a task that is often based upon assumptions, opinions, or counting numbers. The above-mentioned mission hospital in Africa based the attainment of its goals on a numerical head count. This assessment was derived from two components—expert opinion and national-partner perspectives. The absence of the third component resulted in an assessment that inflated the number of conversions. Assessments based upon inadequate evidence, such as visualized by the scalene triangle above or by a one- or two-legged stool, inevitably produce results that are skewed.

Unintended consequences can be the result of a lack of adequate assessment. These unintended consequences can often be undetected. A careful analysis of the conversions at the African hospital revealed that hospital evangelists were mixing animistic ideas in their gospel presentations.[40] Some patients understood that conversion to Christ was a prerequisite for healing. This was not the purpose or desired outcome of the hospital employees and administrators, but without an adequate assessment, these consequences were invisible. "While the services of Faith-based organizations (FBO) can be measured in terms of program outputs (e.g., number of individuals served), it is

often unclear whether these outputs correspond to achieving the desired program outcomes. . . . Relationships between outputs and outcomes are not as clear because they are not directly observed or easily understood."[41]

EBP offers a solution to the insidious problem of unintended consequences. However, there may not be an interest in the contribution of EBP if these consequences aren't recognized. These unintended consequences can derail desired purposes and goals. Assessment is the key both to recognizing undetected and undesirable elements and to applying the appropriate interventions. The appraisal of evidence is one of the greatest contributions that EBP offers to any existing strategic plan.

The following three assessment questions provide a guideline for evaluating strategies and their outcomes.[42]

1. Are the results true? (validity)
2. What are the results? (reliability)
3. Are the results producing the desired outcomes? (applicability)[43]

The answers to these questions may not be obvious; they may require some reflection and research. The evidence provided from the three components of the EBP triangle will assist in discovering the answers to these three questions and in offering modifications to existing strategy. This is what is needed for both of our examples discussed previously. In the case of the mission leadership conference in Chicago, does the evidence support the conclusion that focusing on short-term missions leads to recruitment for more career missions? In the case of the African hospital, are current evangelistic methodologies resulting in an accurate number of true conversions, and are these methodologies producing any unintended consequences?

Problem #3: Bias

Evidence bias. We noted above that there may be a tendency to rely heavily, if not exclusively, on one component of the EBP triangle when considering evidence. This tendency toward a bias for expert opinion has been well documented. Research conducted among twenty-five clinical psychologists revealed that "diagnostic impressions were generally formulated through unstructured assessment rather than validated instruments, and that treatment selection was based on therapists' perceptions of a treatment's match with client characteristics."[44] Likewise, numerous studies have demonstrated that there may be an industry-wide preference for clinical expertise among clinicians when making treatment choices and discounting the contribution of other sources of evidence.[45] The same can be true in the process of making ministry decisions. There may be a tendency to base decisions on the most readily available and easily accessible evidence. The reliance upon expert opinion and the ease of its access can create bias against the other two sources of evidence—consulting with national partners and pursuing external research. These other two sources of evidence may not be as familiar or as accessible. It will be difficult to adopt evidence-based methodology if dependency on a singular form of evidence for decision making has been

institutionalized. This exclusive preference for a single type of evidence creates a significant barrier to adopting evidence-based protocols.[46]

EBP is lost, regardless of which component gains ascendency over the other two. There is a concern that evidence-based medicine has degraded clinical judgment as a reliable source of evidence and placed a greater value on published research.[47] This imbalance may have created a reluctance to engage in EBP by clinicians if it appears that their personal expertise is being devalued. I would like to suggest that representation of EBP that places the three components in a hierarchy is something other than EBP. The Venn diagram in figure 5 represents the EBP model. All three components have equal value and overlap in the search and discovery of evidence. EBP is found when all three components have equal value and equal representation.

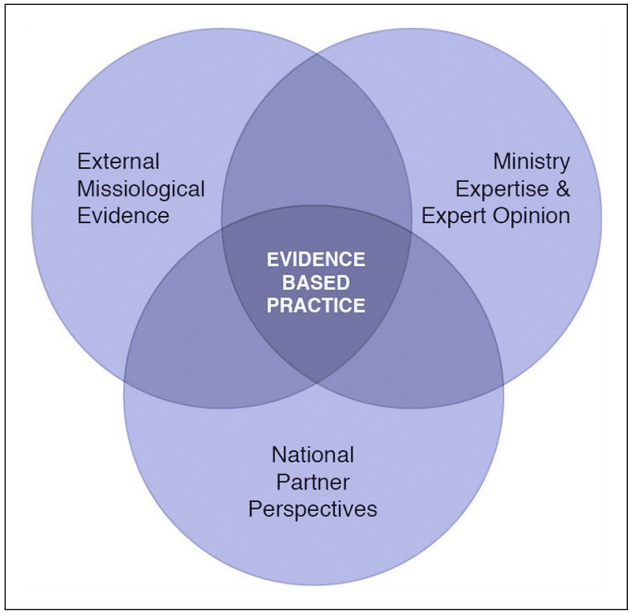

Figure 5. Missions EBP: all three components overlapping and contributing equally.

Outcome bias. Outcome bias occurs when leadership believes that the evidence may deter the accomplishment of a desired goal. For example, a study of 101 athletic trainers in the NCAA football division reported that 52 percent of the athletic trainers were pressured by a coach to return a player to the field prior to the completion of the prescribed medical protocol. This study included those who had suffered concussions. More than a dozen Division 1 athletic trainers were fired or demoted over conflict with head coaches regarding an athlete's return to play.[48] Significant strides have been made to address the problem of concussions in college football since this 2013 study, as a result of class action lawsuits by players and better understanding of head trauma. However, this example demonstrates that sometimes a desired outcome may result in the exclusion or negation of other sources of evidence, particularly when it may appear to impede the attainment of a desired goal.

Sacrosanct strategies, lack of assessment, and evidence bias are a few examples of the impediments to adopting EBP as a strategy for achieving desired outcomes and establishing best practices. The historical track record of evidence-based medicine provides a potential pathway for missions. EBP in medicine has revolutionized the

practice of medicine through several innovative contributions. EBP has been established as the basis for deciding the future of medicine. It has increased the awareness of overdiagnosis, and it has contributed to reform in the practice of medicine by emphasizing the centrality of best evidence in decision making.[49] The innovative contributions that EBP has made in medicine should serve as a motivation for mission practitioners to implement this methodology in their planning.

EBP has the potential to make similar contributions to mission strategy and practice by providing a systematic process for establishing best practices, by discovering untapped knowledge and resources through the triangulation of evidence, by eradicating unintended consequences from current ministries, and by providing a strategic basis for mission in the twenty-first century.

Asking several questions may help to determine the contributions that EBP offers to a particular ministry.

1. Validation: How do we know that our present practices are the best ones? This question challenges the assumption that our preferred practices are the best ones.
2. Verification: What evidence are we using to make decisions? This question reveals whether we have sufficient sources to make critical decisions.
3. Clarification: Are the results producing the desired outcomes? This question determines whether desired goals are being achieved.
4. Evaluation: Are there any unintended consequences from our current practices? This question assesses whether there is a need for a change in current practices.
5. Application: How can EBP methodology enable us to attain our stated goals? This question focuses on aligning methodology (the three sources of evidence) with stated goals by employing best practices.

Conclusion

EBP isn't a strategic panacea for the mission enterprise. Strategy and praxis require continual evaluation and revision to remain relevant for changing environments, knowledge, and needs. EBP has been demonstrated to be an effective strategic method for discovering evidence and for applying best practices across disciplines and cultures. These same principles and methods are transferable to the task of missions. Crossing cultures with the message of the gospel is a monumental undertaking. Differing perspectives on finances, partnerships, faith, gender relations, family, language, marriage, illness, wellness, and a host of cultural values must all be navigated with wisdom. EBP offers a strategic method to map a course to discover best practices and realize desired goals while minimizing unintended consequences. EBP can be threatening because it challenges assumptions and traditional means of decision making. It is also promising because it provides guardrails to assure that a strategic plan doesn't derail onto other tracks that may lead in an unintended direction.

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Notes

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8. The argument being made in this article is that evidence-based practice leads to the establishment of best practices to achieve desired goals. I'm arguing for the implementation of this tool in the mission enterprise. However, these principles apply to local churches, as well as mission agencies. EBP is applicable in any context where strategic and interventional decisions are being made. One example is evident in US megachurch engagements in missions. Megachurches wield tremendous influence in global missions. They are involved in construction, education, evangelism, medicine, and a multiplicity of other ministries. Tremendous amounts of money are funneled through these ministries. Although there are many positive results from these endeavors, they could be enhanced by applying EBP as part of the strategic plan for implementing local church mission engagement. See Robert J. Priest, Douglas Wilson, and Adelle Johnson, "U.S. Megachurches and New Patterns of Global Mission," *International Bulletin of Missionary Research* 34 (2007): 97–104.
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14. Melnyk and Fineout-Overholt, *Evidence-Based Practice in Nursing and Healthcare*, 26.
15. Ibid. See also D. Schardt, M. B. Adams, T. Owens, S. Keitz, and P. Fontelo, "Utilization of the PICO Framework to Improve Searching PubMed for Clinical Questions," *BMC Medical Informatics and Decision Making* 7, no. 16 (2007): 1–6.

16. Melnyk and Fineout-Overholt, *Evidence-Based Practice in Nursing and Healthcare*, 28–29.
17. This question doesn't represent a value judgment on either short-term or career missions. The purpose of the foreground question is to determine whether there is a correlation between short-term and long-term and whether this leads to the growth of career missions. The answer to this foreground question will lead toward an answer to the background question by verifying or eliminating an expressed assumption.
18. This same process applies to the local church in the decision-making process. The questions may relate to a change in music genre in worship to increase attendance, adding staff to meet ministry demands, changing facilities (building, remodeling, moving) to better serve the community, or adopting a missions policy. The need may be obvious, but the right questions need to be discovered before implementing a new strategy.
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20. A comparison can be made with the three branches of the US government—executive, legislative, and judicial—which serve as a check and balance of laws.
21. Rudolph Moos details the outcomes of substance-abuse patients whose conditions worsened after treatment. He states that treatment can promote improvement, but it can also contribute to deterioration. See his article "Iatrogenic Effects of Psychosocial Interventions: Treatment, Life Context, and Personal Risk Factor," *Substance Use and Misuse* 47 (2012): 1592.
22. See Rebecca E. Stewart, Dianne L. Chambless, and Shannon Wiltsey Stirman, "Decision Making and the Use of Evidence-Based Practice: Is the Three-Legged Stool Balanced?," *American Psychological Association: Practice Innovations* 3, no. 1 (2018): 56–67; and Carol B. Peterson, Carolyn Black Becker, Janet Treasure, Roz Shafran, and Rachel Bryant-Waugh, "The Three-Legged Stool of Evidence-Based Practice in Eating Disorder Treatment: Research, Clinical, and Patient Perspectives," *BMC Medicine* 14, no. 69 (2016): 1–8.
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26. J. Rupert Morgan, "Conversion in the Context of Illness and Healthcare Delivery at Hôpital Baptiste Biblique de Kpelé-Tsiko, Togo, Africa" (PhD diss., Trinity Evangelical Divinity School, Deerfield, IL, 2013).
27. T. J. Dishion, J. McCord, and F. Poulin, "When Interventions Harm: Peer Groups and Problem Behavior," *American Psychologist* 54, no. 9 (1999): 755–64; A. Wandersman, "Four Keys to Success (Theory, Implementation, Evaluation, and Resource/System Support): High Hopes and Challenges in Participation," *American Journal of Community Psychology* 43, no. 1/2 (2009): 3–21.
28. Attaining desired outcomes and avoiding unintended consequences is relevant for the local church as well. Counting the number of participants present in a youth ministry can serve as a means of evaluating a desired outcome, but a dependence upon quantitative data alone is insufficient. Determining how this youth ministry is contributing to the growth and changes taking place in thought, character, and actions of these young people would also be

key to understanding the attainment of desired outcomes and identification of unintended consequences.

29. Melnyk and Fineout-Overholt, *Evidence-Based Practice in Nursing and Healthcare*, 7.
30. Mackenzie Thompson, *Historical AHA Guideline Updates, 1995–2020*, National Health Care Provider Solutions, https://nhcps.com/historical-archive-aha-guideline-updates-1995-2020.
31. J. Rupert Morgan, "Global Trends and the North American Church in Mission: Discovering the Church's Role in the Twenty-First Century," *International Bulletin of Mission Research* 40, no. 4 (2016): 325–38.
32. Robert J. Priest, "Peruvian Churches Acquire 'Linking Social Capital' through STM Partnerships," in *Christian Reflections from the Latino South* (=*Journal of Latin American Theology* 2, no. 2 [2007]), 187; Sun Young Chung and Todd M. Johnson. "Tracking Global Christianity's Statistical Centre of Gravity, AD 33–AD 2100," *International Review of Mission* 93, no. 369 (2004): 167.
33. Mary Lederleitner, *Cross-Cultural Partnerships: Navigating the Complexities of Money and Mission* (Downers Grove, IL: InterVarsity Press, 2010); Michael Jaffarian, "The Statistical State of the North American Protestant Missions Movement, from the *Mission Handbook*, 20th ed.," *International Bulletin of Missionary Research* 32, no. 1 (2008): 35–38.
34. Eric E. Barends, Josh Villanueva, Denise M. Rousseau, Rob B. Briner, Denise M. Jepsen, Edward Houghton, and Steven ten Have, "Managerial Attitudes and Perceived Barriers regarding Evidence-Based Practice: An International Survey," *PloS One* 12, no. 10 (2017): 1–15.
35. E. Owusu-Addoa, R. Cross, and P. Sarfo-Mensa, "Evidence-Based Practice in Local Public Health Service in Ghana," *Critical Public Health* 27, no. 1 (2017): 125–38.
36. Mahmoud Al Kalaldeh, Roger Watson, and Mark Hayter, "Jordanian Intensive Care Nurses' Perspectives on Evidence-Based Practice in Nutritional Care," *British Journal of Nursing* 23, no. 19 (2014): 1023–29.
37. Melnyk and Fineout-Overholt, *Evidence-Based Practice in Nursing and Healthcare*, 77.
38. Grant Wiggins and Jay McTighe, *Understanding by Design*, expanded 2nd ed. (Alexandria, VA: Association for Supervision and Curriculum Development, 2005), 337.
39. John Mark Terry and J. D. Payne, *Developing a Strategy for Missions: A Biblical, Historical, and Cultural Introduction* (Grand Rapids: Baker Academic, 2013), 256.
40. Patients were told that if they simply drank the water at the hospital, they would be healed, and that the reason they were sick was because their ancestors worshiped the devil.
41. Terry et al., "Incorporating Evidence-Based Practices into Faith-Based Organization Service Programs," 214. Evangelistic activity at this African hospital is pervasive and aggressive. An example surfaced in a research interview in which a former patient described his experience in the operating room. Prior to being anesthetized the patient was told that if he died during the procedure, he would go to hell. He was then asked if he would like to accept Jesus Christ as his Savior. These types of outputs (unethical evangelistic methodologies) result in undesirable outcomes (false conversions and inflated numbers in ministry).
42. There has been a movement in theological education to address the concerns that I raise here by establishing student learning outcomes (SLOs) and the assessment of those outcomes. SLOs are a requirement for accreditation with the Association of Theological Schools in the United States and Canada (ATS). The Educational Standard document for ATS states, "Assessment of student learning requires schools to be able to demonstrate the extent to which students have achieved the various goals of the degree programs they have completed as well as indicators of program effectiveness" (https://www.ats.edu/uploads

/accrediting/documents/standards-of-accreditation.pdf, 14). The document provides four steps in the assessment of SLOs. Student learning outcomes serve as the basis of course design and are reflected in the syllabus. Course design should be focused primarily on learning, not teaching. SLOs are determined by answering the question, What will the students learn that will be of value several years in the future? The SLOs will seek to answer this question by addressing growth of the students in cognitive (thought), affective (character), and behavior (attitude) domains. See Perry Shaw, *Transforming Theological Education: A Practical Handbook for Integrative Learning* (Cumbria, CA: Langham Global Library, 2014), 143–45. For an excellent resource on outcomes and assessments in education, see Grant Wiggins and Jay McTighe, *Understanding by Design*, 2nd ed. (Alexandria, VA: Association for Supervision of Curriculum Development, 2005).

43. Melnyk and Fineout-Overholt, *Evidence-Based Practice in Nursing and Healthcare*, 93.
44. Stewart, Chambless, and Stirman, "Decision Making and the Use of Evidence-Based Practice," 56.
45. A. Gyani, R. Shafran, P. Myles, and S. Rose, "The Gap between Science and Practice: How Therapists Make Their Clinical Decisions," *Behavior Therapy* 45, no. 2 (2014): 199–211, http://dx.doi.org/10.1016/j.beth.2013.10.004; J. D. Safran, I. Abreu, J. Ogilvie, and A. DeMarial, "Does Psychotherapy Research Influence the Clinical Practice of Researcher-Clinicians?," *Clinical Psychology: Science and Practice* 18, no. 4 (2011): 357–71, http://dx.doi.org/10.1111/j.1468-2850.2011.01267.x; R. E. Stewart and D. L. Chambless, "Does Psychotherapy Research Inform Treatment Decisions in Private Practice?," *Journal of Clinical Psychology* 63, no. 3 (2007): 267–81, http://dx.doi.org/10.1002/jclp.20347; R. E. Stewart, S. W. Stirman, and D. L. Chambless, "A Qualitative Investigation of Practicing Psychologists' Attitudes toward Research-Informed Practice: Implications for Dissemination Strategies," *Professional Psychology: Research and Practice* 43 (2012): 100–109, http://dx.doi.org/10.1037/a0025694.
46. Stewart, Chambless, and Stirman, "Decision Making and the Use of Evidence-Based Practice," 61. It should be stated that the evidence bias is not unique to expert opinion alone. Both research and client testimony can be biased, when the desire for a particular outcome becomes an overriding priority.
47. Sheridan and Julian, "Achievements and Limitations of Evidence-Based Medicine," 206.
48. Brad Wolverton, "Coach Makes the Call: Athletic Trainers Who Butt Heads with Coaches over Concussion Treatment Take Career Hits," *Chronicle of Higher Education*. September 2, 2013, https://www.chronicle.com/article/Trainers-Butt-Heads-With/141333.
49. Sheridan and Julian, "Achievements and Limitations of Evidence-Based Medicine," 205–6.

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