



Boston Strategic Partners, Inc.

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# Health economics and outcomes research (HEOR) and medical communications

Critical insights to support evolving clinical and business needs

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## Growing emphasis on economic evidence

As healthcare in the US evolves, providers face the challenge of delivering effective and safe care while meaningfully controlling costs. The formulary adoption process, which involves key clinical and non-clinical decision-makers, focuses on assessing both the clinical and economic benefits of a given product. As a result, there is a growing incentive for manufacturers of pharmaceuticals and medical devices to effectively demonstrate the advantages of adoption from these two perspectives. Through its health economics and outcomes research (HEOR) practice, Boston Strategic Partners (BSP) develops and executes comparative effectiveness analyses and economic models that help to establish the clinical and economic rationale for use of novel or established drugs and technologies. Leveraging analytical rigor and real-world clinical and cost data from sources including US electronic health record (EHR) databases (Table 1), comparative effectiveness studies and economic models provide tangible insight into the expected impacts of product adoption, and can be used as evidence-based decision-making tools for providers and payers.

## Publishing HEOR data: disseminating findings to key stakeholders

Effective communication of HEOR findings is critical to the long-term success of a product. In addition to supporting the development of healthcare provider- and payer-focused materials, such as customizable economic models and formulary kits, HEOR is increasingly an area of focus in the published medical literature. Publishing study findings in peer-reviewed journals supports dissemination of impactful health economic findings to the broader healthcare community, and BSP's Medical Communications practice leverages the outputs from HEOR engagements to develop communications materials to support market success.

In addition to reporting relevant data, communications must be directed to the right audience at the right time. BSP has an extensive Medical Communications practice focused on both publication planning and publication development, and expertise in the creation of a wide range of materials, including peer-reviewed manuscripts, abstracts and presentations for national and international conferences, industry white papers, formulary dossiers, and educational speaker decks, all of which can be leveraged to effectively communicate HEOR findings (Table 2).

**Table 1. BSP has access to a de-identified US EHR database covering >482 million patient encounters (January 2000-Oct 2017) that can be leveraged to support HEOR engagements**

Unique Patients	63M	Health Systems	90+
Visits	482M	Facilities	620+
Inpatient	21M	<100 beds	400+
Emergency / Urgent	64M	100-299 beds	135+
Short Stay / Observation	5M	300-499 beds	40+
Outpatient	235M	>500 beds	25+
Other	154M	Census Regions	
Diagnoses	963M	Northeast	120+
Clinical Events (ie. temp, weight, BP)	7B	Midwest	130+
Laboratory Results	4.44B	South	190+
Microbiology Results	173M	West	163+
Microbiology Susceptibility Results	120M		
Procedures	130M		
Medication Orders	475M		
<i>Specific Diseases of interest</i>			
Diseases Of The Circulatory System	13M	Infectious And Parasitic Diseases	8M
Diseases Of The Digestive System	11M	Diseases Of The Nervous System / Sense Organs	11M
Diseases Of The Respiratory Systems	12M	Mental Illness	9M

In addition to the clinical and scientific knowledge required to develop meaningful publications, the BSP team has interdisciplinary expertise that has enabled the development of publications resulting from its HEOR engagements. Thus, BSP can support client team needs by providing a seamless process, from conceptualization of an HEOR analysis, through its execution and dissemination of results to target audiences via a range of impactful publication types.

### **Publication development**

BSP brings a rigorous approach to the development of all medical communications (Figure 1). With its detailed clinical and health economic knowledge base and extensive publication experience, BSP works with client and author teams to develop impactful publications. The BSP team leads all aspects of the publication process, from supporting identification of relevant audiences and publication venues and facilitating alignment on key data and messages to execution of secondary research, development of written and graphical content, and finalizing for publication.

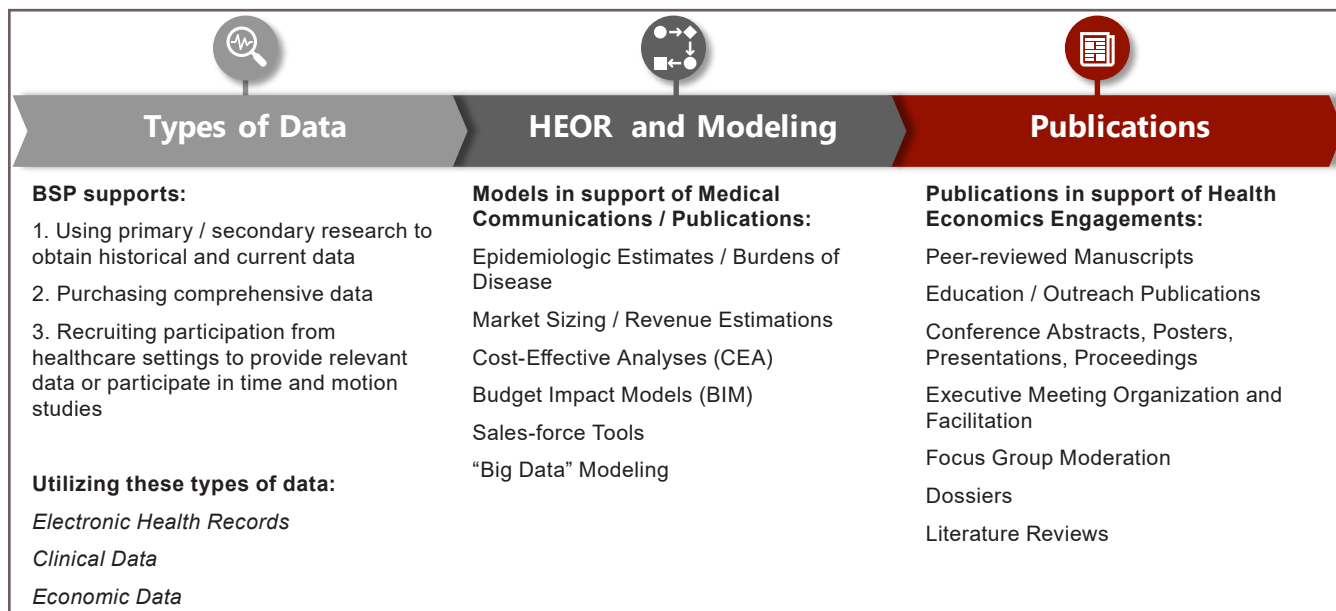
While supporting content development, BSP also manages all aspects of the process, liaising with journal or conference representatives to ensure a smooth process.

Client involvement is a key element of all phases of the publication process, and our publication methodology is adapted to meet all client needs while fulfilling the requirements of specific publication formats. Publications are developed in a manner consistent with industry guidelines, including the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) principles of good practice,<sup>1</sup> resulting in high-quality, scientifically sound publications that resonate with key stakeholders and decision-makers.

### **Identifying opportunities for your organization**

Given the ever-growing importance of HEOR to the healthcare and life science industry, business leaders should seek to identify contexts in which these analyses can support key business objectives.

**Figure 1. Workflow from data to publications**



**Table 2. Key benefits of various publication types**

Type of Communication	Key benefits
<b>Peer-reviewed manuscripts</b>	<ul style="list-style-type: none"> <li>Reach relevant scientific, clinical, and healthcare decision-maker audiences</li> <li>Convey economic/clinical findings in an academic format</li> <li>Provide a comprehensive, focused document that provides coherent and convincing modeling data</li> <li>High-impact, far-reaching source for key findings</li> </ul>
<b>Conference abstracts and presentations</b>	<ul style="list-style-type: none"> <li>Reach relevant scientific, clinical, and healthcare decision-maker audiences</li> <li>Increase presence at recognized national and international meetings</li> <li>Provide opportunities to engage with relevant audiences/key decision-makers</li> </ul>
<b>White papers</b>	<ul style="list-style-type: none"> <li>Industry-focused documents</li> <li>Can be created rapidly and used as effective marketing tools</li> </ul>
<b>Reviews</b>	<ul style="list-style-type: none"> <li>Reach relevant scientific, clinical, and healthcare decision-maker audiences</li> <li>Fill knowledge and data gaps within a targeted field</li> </ul>

HEOR analyses allow client teams to leverage real-world data to examine current practices and fill critical knowledge gaps, examine the potential impacts of new or established products in light of existing clinical practices, and support key initiatives for high priority products and therapeutic areas in an efficient and cost-effective manner.

**For more information about how BSP’s HEOR and Medical Communications capabilities can support your organization’s needs, contact Dr. Fabian D’Souza, MD, MBA ([fabian.dsouza@bostonsp.com](mailto:fabian.dsouza@bostonsp.com)) or Dr. Fred Peyerl, PhD, MBA ([fred.peyerl@bostonsp.com](mailto:fred.peyerl@bostonsp.com)) at Boston Strategic Partners, Inc.**

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1. Sullivan SD, Mauskopf JA, Augustovski F, et al. Budget impact analysis - principles of good practice: report of the ISPOR 2012 budget impact analysis good practice II task force. *Val Health*. 2014;17(5-14).

## **Selected BSP HEOR publications:**

### **Articles**

Urman RD, Böing EA, Khangulov V, Fain R, Nathanson BH, Wan GJ, Lovelace B, Pham AT, Cirillo J. Analysis of predictors of opioid-free analgesia for management of acute post-surgical pain in the United States. *Curr Med Res Opin.* 2019 Feb;35(2)

Urman RD, Boing EA, Pham AT, Khangulov V, Fain R, Nathanson BH, Zhang X, Wan GJ, Lovelace B, Cirillo J. Improved outcomes associated with the use of intravenous acetaminophen for management of acute post-surgical pain in cesarean sections and hysterectomies. *J Clin Med Res.* 2018 Jun;10(6):499-507

Shaw AD, Mythen MG, Shook D, Hayashida DK, Zhang X, Skaar JR, Lyengar SS, Munson SH. Pulmonary artery catheter use in adult patients undergoing cardiac surgery: a retrospective, cohort study. *Perioper Med (Lond).* 2018; 7: 24

Kaushik N, Khangulov VS, O'Hara M, Arnaout R. Reduction in laboratory turnaround time decreases emergency room length of stay. *Open access Emerg Med* 2018;(February):1–9.

Maheshwari K, Nathanson B, Munson SH, Khangulov V, Stevens M, Badani H, Khanna AK, Sessler DI. The relationship between ICU hypotension and in-hospital mortality and morbidity in septic patients. *Intensive Care Med.* 2018 Jun;44(6):857-867

Laplante S, Makhija DU, Munson SH, Khangulov VS, Peyerl FW, Paluszkiwicz SM, Ravindranath AJ, Schermer CR. Impact of fluid choice in Systemic Inflammatory Response Syndrome Patients on Hospital Cost Savings. *PharmacoEconomics* 2018, Volume 2, Issue 3. 325-335

Kingeter AJ, Raghunathan K, Munson SH, Hayashida DK, Zhang X, Lyengar S, Bunke M, Shaw AD. Association between albumin administration and survival in cardiac surgery: a retrospective cohort study. *Can J Anaesth.* 2018

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Strzelczyk A, Ansoorge S, Hapfelmeier J, Bonthapally V, Erder MH, Rosenow F. Costs, length of stay, and mortality of super-refractory status epilepticus: A population-based study from Germany. *Epilepsia.* 2017 Sep;58(9):1533-1541

Shaw AD, Schermer CR, Lobo DN, Munson SH, Khangulov V, Hayashida D, Kellum JA. Impact of intravenous fluid composition on outcomes in patients with the systemic inflammatory response syndrome. *Crit Care* 2015;19(1):334.

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### **Abstracts**

Morosyuk S, O'Hara M, Khangulov V, Kazmierczak S, Ahuja AJ. Evaluation of point of care process efficiency in an emergency department using Abbott i-STAT®. 70th AACC Annual Scientific Meeting and Clinical Lab Expo, 24th of August - 2nd of July, 2018, Chicago, IL.

Khangulov V, Zhang X, Munson SH, Peyerl, FW, Rey F. Opioid and cortisone injection utilization before and after initial hylan G-F 20 treatment. AMCP Managed Care & Specialty Pharmacy Annual Meeting, April 23-26, 2018, Boston, MA.

Hayashi DH, Kill T, Fitzpatrick M, Gutzwiller L, Dzioba D, Peyerl FW. Budget impact analysis of a novel alternating pressure support surface in the acute care setting. ISPOR Annual International Meeting, May 19-23, 2018, Baltimore, MD.

Maheshwari K, Khangulov VS, Stevens MK, Munson SH, Nathanson B, Hwang S, Khanna AK. Relationship between Intensive Care Unit hypotension and morbidity in patients diagnosed with sepsis. International Society of Critical Care and Emergency Medicine, March 20-23, 2018, Brussels, Belgium.

Kelley SD, Hayashi DE, Gricar BL, Riley DD, Peyerl FW. Cost effectiveness analysis of intra-articular triamcinolone acetonide extended-release injectable suspension (TA-ER) versus triamcinolone acetonide crystalline suspension for symptomatic knee osteoarthritis. ISPOR Annual International Meeting, May 20-24, 2017, Boston, MA.

Pham A, Khangulov V, Urman R, Böing E, Fain R, Nathanson B, Zhang X, Lovelace B, Cirillo J. Clinical and economic outcomes associated with the use of intravenous versus oral acetaminophen for management of acute postoperative pain in obstetrics and gynecology patients. 16th Annual Pain Medicine Meeting, November 16-18, 2017, Florida, FL.

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