

Pioneer and Mentor: Jo Mauskopf Recognized for Her Long-Time Leadership in ISPOR and in the Field of HEOR

If it wasn't for lab animals, **Josephine** Mauskopf, PhD, MHA, ISPOR's 2019 Marilyn Dix Smith Leadership Award winner, may never have found her way into health economics research, where she stands as an extremely soft-spoken giant in the field.

After achieving her master's in pharmacology and physiology at Duke University, Mauskopf took some time off to have her children, and then went back to work as a lab technician. "But basically, I didn't like killing the animals. I decided I couldn't be a theoretical physiologist and went back to school."

While at Duke getting her master's in health administration, "they decided they needed someone to help teach health economics, so they said they'd pay for me to go to school and get a PhD in economics." After working for a couple of years at Duke, where she remains, Mauskopf came to RTI-HS, where she is vice president of health economics. "With one or two breaks, I've been at RTI ever since."

A Pioneer in the Field

When Mauskopf started working at RTI, it was 1983, and Ronald Reagan was president. Under his administration, the rule was put into place that every regulation had to have a cost-benefit analysis performed. "It opened up a lot of research opportunities and RTI had people who could do the cost side of it, but they were looking for someone to estimate the health benefits for environmental and food safety regulations," Mauskopf says. "This was a perfect job for me because it was doing economic analyses, but using my health background as well."

At first, she was doing work for the Environmental Protection Agency and the Occupational Safety and Health Administration, looking at asbestos and hazardous waste regulations. "And then they set up a new group in FDA, the Center for Food Safety and Applied Nutrition, and I won a contract to do some work for them estimating the benefits of food safety and food labeling regulations," she says. "That was quite exciting because they wanted something fairly simple, and that's when I started getting into the literature that I use for the pharmaceutical work." For US Food and Drug Administration (FDA), Mauskopf created a cost-effectiveness model measuring the value of avoiding any food-borne illness, in terms of quality-adjusted life years, a model she believes FDA continued to use for many years after she stopped doing this type of work.

Around the same time Burroughs Wellcome (which later became GlaxoSmithKline) was developing AZT (azidothymidine) for HIV infection, and she received some work from the company doing economic analyses for that drug and others. This led to a job as department head of Economics Research at Burroughs Wellcome and later, director of Pharmacoeconomics Research for Anti-Virals and Anti-Infectives at Glaxo Wellcome Inc. She stayed at the company for 4 and a half years.

According to Mauskopf, being on the industry side "was really helpful, because doing studies while not really understanding the drug development process was a bit tricky." Not long after Wellcome was taken over by Glaxo, RTI asked Mauskopf to return and set up a group that would focus on pharmaceutical industry studies.

Getting Involved with ISPOR and Budget Impact Analysis

It was while Mauskopf was at Burroughs Wellcome that ISPOR formed. "Actually, I was not invited to be a founding member of it; I was a bit upset by that," she says. "But my boss, Hugh Tilson, was invited to be a founding member and paid for me to go to the first meeting. And that's when I started to get involved. I went to an organizational meeting about Value in



Josephine Mauskopf pictured with Federico Augustovski at ISPOR 2019.

Health at the first or second conference, and I became a co-editor of Value in Health with Joel Hay; and when he resigned, I became editor-in-chief." She was editor-in-chief of the journal from 2002 to 2010.

In the early days of ISPOR, National Institute for Health and Care Excellence was being set up in the United Kingdom, and Mauskopf became interested in measuring the budget impact of medical interventions. "I wrote a paper that was published in Value in Health, figuring out how you could use the same Markov model for cost-effectiveness and budgetimpact analyses, for a new intervention by a simple change in the programming of the Markov model." She emphasizes that she developed that on her own time, not for any client. The Academy of Managed Care Pharmacy was also developing its own guidelines at the time, which called for budget impact analyses for formulary submissions.

Mauskopf says around 2001, she was asked to start teaching budget impact analysis courses before the yearly ISPOR meetings. "It did seem like there was a need for that, so I sort of stepped into that breach, working at first with Daniel Mullins and later also with Stephanie Earnshaw."

What started out as one course became two courses with consistently

high enrollments, and since then, "My colleagues and I have taught multiple generations of health outcomes researchers the fundamentals of budget impact analysis. Our costing approach is population-based and includes estimation of the clinical outcomes at a population level within the analysis time period."

Despite the years of teaching, Mauskopf does not claim to be a great teacher. "Teaching is not my greatest skill, actually," she says, which is why she recruited C. Daniel Mullins, PhD, chair of the Pharmaceutical Health Services Research Department at the University of Maryland School of Pharmacy, to teach the courses with her. "I felt that I needed a real teacher, and he is better at it than I am."

In addition to teaching, Mauskopf has helped write the definitive textbook on budget-impact analysis, Budget-Impact Analysis of Healthcare Interventions: A Practical Guide. The book, published in 2017, is the first of its kind for budgetimpact analysis. Mauskopf is coauthor, along with RTI's Stephanie R. Earnshaw, Anita Brogan, Thor-Henrik Brotkorb, and Sorrel Wolowacz.

For ISPOR, she has been a member of the 2013 CHEERS task force, cochair of 3 task forces: (1) Budget Impact Analysis 1 in 2007, the results of which were used as a reference for the Canadian budget-impact guidelines; (2) Budget Impact Analysis 2 in 2014, used as a reference for the French guidelines; and (3) Economic Evaluation of Vaccination Programs in 2018, the results of which have just been published in Value in Health. The latter "is innovative in that it provides guidelines for three different methods of economic evaluations (ie, cost-effectiveness analysis, constrained optimization, and fiscal health modeling) and proposes that the different methods can be useful in different decision contexts, extending our ideas about economic evaluation beyond costeffectiveness analysis," Mauskopf says.

Besides the premeeting courses, she has taught issues panels and workshops on

a variety of topics, including competitive bidding, league tables, and multi-criteria decision analysis. And since the founding of ISPOR, she has presented papers and podiums at almost every meeting since 1998, including economic evaluations in multiple therapeutic areas (infectious disease, cardiovascular disease, neurological disease) and methodological literature reviews (adherence to HTA guidance and methods for cost-of-illness studies).

When it comes to taking advantage of the opportunities ISPOR provides, her best advice to new professionals and long-time members is simply, "Don't wait to be asked. Just get involved."

From 2014 to 2016, Mauskopf has served on the Board of Directors and the Publications Management Advisory Board, where she helped move ISPOR forward as it transitioned from Marilyn Dix Smith's leadership to Nancy Berg's leadership. And from 2013 to the present, she has been on the ISPOR Health Sciences Policy Council and a member of the Avedis Donabedian Award selection committee.

A Mentor to Others

According to Daniel Mullins, the 2017 winner of the Marilyn Dix Smith Award, Dr Mauskopf "is always interested in helping others."

"Jo has a wonderful balance between an outstanding researcher and a committed mentor," Mullins says. "She exemplifies the spirit of leadership, so it is a great testimony to her to receive the prestigious Marilyn Dix Smith Award. On a personal note, I also appreciate the opportunity to learn from her, having served as an associate editor under her leadership of Value in Health and as a coinstructor in various ISPOR programs."

Diana Brixner, PhD, RPh, professor in the Department of Pharmacotherapy and executive director of the Outcomes Research Center at the University of Utah College of Pharmacy, wrote the nomination letter for Dr Mauskopf and submitted it to the Marilyn Dix Smith Award committee.

"Dr Jo has been a foundation for ISPOR over the many years she has served the organization," Brixner says. "Her contributions to the high-quality task forces, deliberations during various ISPOR venues at our international meetings, and her contributions to communication worldwide through Value in Health have promoted the science of health economics and outcomes research and provided tremendous mentoring opportunities to the many that will follow her lead."

When it comes to mentoring and teaching, Maukopf says, "I try to encourage people to think." When working with her younger colleagues in doing overall guideline reviews, she has noticed they tend to present spreadsheets with a lot of information, but little in the way of conclusions that synthesize their findings. "When I am working with younger people at RTI, I encourage them to pull out of the weeds, the learning from it, and not just present huge tables that don't help very much," she says.

What the Marilyn Dix Smith Award and ISPOR Mean to Her

This is not the first time Maukopf has been honored by the organization. She received the ISPOR Award for Excellence in Application of Pharmacoeconomics and Outcomes Research in 2006, and the ISPOR Avedis Donabedian Lifetime Achievement Award in 2013.

But Mauskopf was also close to Marilyn Dix Smith, who passed away in 2018, so receiving this award has additional meaning for her. "I'm just honored to get it, because I think she was a wonderful person," Mauskopf says. "She was someone who not only had the broad vision of setting up something, but she also took care of the nitty gritty. She



was just an inspirational person. Her openness to new ideas made ISPOR an amazingly flourishing organization and her attention to detail made it financially very solvent as well."

ISPOR has been the only professional society she has ever joined. "I feel very grateful to ISPOR for giving me the opportunities that it's given me—to be a journal editor, to teach courses, and to interact with all of the other amazing people—so I think ISPOR has made a huge difference for me in allowing me to do what I've done."

For those new in the health economics field, she says, "the way to advance your career is take something that's of interest—that you have some experience in—of importance and build around it. Sell yourself as having this experience

and this expertise. Once you have some projects doing that, you have more experience and you will eventually become an expert in it. It's a way of saying, 'What other sort of ideas or prior experience do I have that I can see is going to be of value?"

ISPOR provides many opportunities for young health economists to build upon their experience, with multiple task forces that are more open to junior people joining and contributing. "At ISPOR, when I've been in groups, we've talked quite a bit about how you don't want the same people all the time, even though you know they're experts," Mauskopf says.

It was ISPOR's openness to new people and ideas that got her involved in Value in Health, she says. "They were having an

organizational meeting, it was brand new and it was open, so I went."

When it comes to taking advantage of the opportunities ISPOR provides, her best advice to new professionals and long-time members is simply, "Don't wait to be asked. Just get involved."

ISPOR Scientific Achievement Awards: Call for Nominations

The ISPOR Awards Program is designed to foster and recognize excellence and outstanding technical achievement in pharmacoeconomics and outcomes research. These awards will be presented at ISPOR 2020, May 16-20, 2020, Orlando, FL, USA.

The ISPOR Avedis Donabedian Outcomes Research Lifetime Achievement Award

Established in honor of the late Avedis Donabedian MD, MPH to acknowledge those individuals who have made a major contribution to the improvement of health outcomes. For complete details, see www.ispor.org/avedisaward.

ISPOR Marilyn Dix Smith Leadership Award

This award is international in scope and stature, recognizing one individual each year who has provided extraordinary leadership to the Society. For complete details, see www.ispor.org/mdsaward.

ISPOR Bernie O'Brien New Investigator Award

Established in 2004 to honor the long-standing commitment of Bernie J. O'Brien, PhD to training and mentoring new scientists in the fields of outcomes research and pharmacoeconomics. For complete details, see www.ispor.org/ obrienaward.

ISPOR Health Economics and Outcomes Research Excellence Award-Methodology ISPOR Health Economics and Outcomes Research Excellence Award-Application

Established in 1997 to recognize outstanding research in the field of health economics and outcomes research methodology and outstanding practical application of health economics and outcomes research in healthcare decision making. For complete details, go to www.ispor.org/awards.

All Nominations Due by February 7, 2020

Nominations can be submitted at www.ispor.org/awards.



What Does it Take to Be an Outstanding ISPOR Regional Chapter?

An Interview With the ISPOR 2019 Outstanding Chapter Award Winners: Colombia, Russia St. Petersburg, and West China Chapters

The ISPOR Outstanding **Chapter Award program** recognizes ISPOR regional chapters' outstanding contribution and leadership in advancing ISPOR's mission in global regions: Asia, Latin America, and Europe, Middle East, and Africa. The ISPOR Colombia and St. Petersburg chapters have been recognized for the second time for their exemplary achievements in advancing health economics and outcomes research (HEOR) in their region. The award is based on a thorough review of chapters' compliance with ISPOR governance, input to ISPOR publications, and contribution to ISPOR activities throughout the year as described in their annual reports.

Editor's Note:

Value & Outcomes Spotlight talked to the presidents of ISPOR regional chapters that were recognized with this year's Outstanding Chapter Award and asked them to reflect on their overall performance, the impact of digital health on healthcare delivery, and the top 10 HEOR trends in their regions.



Congratulations on being recognized with the 2019 ISPOR Outstanding Chapter Award. This award demonstrates continuous active engagement and contribution of your chapter to advancing HEOR and informing relevant health decision-making processes. What do you believe are the essential factors to your chapter's outstanding performance, and what advice would you offer to other regional chapters in your category who are seeking to deliver value and keep their members engaged?

Camilo Castañeda-Cardona, MD, president, ISPOR Colombia Chapter, NeuroEconomix and IdeaXplore, Bogotá, Colombia

After 10 years of hard work, we have reached an important leadership position in the region and currently have more than 100 members. This makes us very proud. The essential factors of our performance rely on 2 key aspects: (1) Efficient leadership. Our chapter has had presidents and boards of directors committed to giving our members the greatest possible value, which is translated into events, training, and discussion opportunities with all actors in the health system. The board of directors has understood the evolution and challenges of our health system and how, through ISPOR, we can contribute and create. (2) Activities and educational value. The ISPOR Colombia Chapter is committed to the dissemination of knowledge in pharmacoeconomics and outcomes research. That is why we have been developing face-to-face and online courses, workshops, webinars, congresses, and other valuable meetings for our affiliates. This is key to maintain our audience and keep attracting more members to the chapter.

Alexey Kolbin, MD, PhD, president, ISPOR Russia St. Petersburg Chapter, Department of Clinical Pharmacology and Evidence-Based Medicine, First St. Petersburg State Medical University n.a. academician I.P. Pavlov, St. Petersburg, Russia.

It is a big honor for us that our activities are recognized by ISPOR. Our chapter is recognized with the award for the second time and this is a clear message for us that we are on the right path in developing not only the chapter but following the ISPOR philosophy in healthcare decision making, which is based on the balance of clinical effectiveness and economic expedience. In my mind, the key factor of our success is the cooperation of several academic bodies: First Saint-Petersburg Sate Medical University n.a. acad. I.P. Pavlov, North-West State Medical University, Saint-Petersburg State University and RUDN University. I think our key advantage is the multimodality team including not only clinical pharmacologists but also statisticians, mathematics, and healthcare managers. I would advise all regional chapters to think big and seek cooperation with colleagues from different regions. Furthermore, just like in boxing, we are planning to move in to the next weight, by that I mean the medium-size chapter award category, and become champions in it.

Xin Sun, PhD, president, ISPOR West China Chapter, Chinese Evidence-Based Medicine Center and Cochrane China Center, West China Hospital, Sichuan University, Chengdu, China. We are very honored and excited to receive this prestigious award from ISPOR. The success of our chapter is firstly attributable to a strong leadership team. In our governance structure, each director is responsible for 1 of the 4 research areas, including real-world data and evidence, pharmacoeconomics, drug policy on special populations, and rational drug use. The directors are delegated to develop special interest groups around their areas. Secondly, we are striving to develop academic leadership. In developing the real-world evidence initiative, we have taken the lead in establishing China Real-World Data and Studies Alliance (ChinaREAL) through largely engaging chapter members, developing groundbreaking technical guidance documents for realworld evidence studies, convening national data partners, and organizing serial national congresses on real-world evidence—all of which help shape our leadership in China's real-world evidence developments. Thirdly, we have a strong mission by translating evidence into clinical and health policies. In our continuing efforts, we have developed strong collaborations with governmental authorities, such as the National Medical Products Administration, the National Health Commission, and the National Healthcare Security Administration.



We know that digital health is high on the agenda of improving healthcare delivery and improving patient outcomes. What impact do digital health technologies have in your country in improving patient outcomes? From a global perspective, what are the major challenges in digital transformation of healthcare?

CC: In Colombia, decision makers (especially insurers and service providers) have been progressively implementing digital tools to optimize processes, typify their patient populations, and measure their performance in the provision of services. This, in general, optimizes the use of resources and impact on clinical outcomes. However, the challenges are huge. The technological systems in Colombia are broken down. There is not a single platform of medical records, and the information that each actor collects is not analyzed in a deep and comprehensive way to make better decisions. We have certainly made progress, but we still have a long way to go. The need to produce real-world evidence with Colombian population is urgent.

AK: You are right, the role of digital healthcare is one of the main challenges for all healthcare systems around the world. In Russia, this topic is discussed by several experts groups. One of the most well-known players in this field is the Association of Developers and User of Artificial Intellect in Medicine's medical knowledge national database. This project is joining several companies with their digital products and independent experts. The main goal of the project is the creation of the system of medical competences transfer that is, an integrated system of the support of decision making in medicine and healthcare not only at the patient-bed level but at higher levels, too. Our chapter is involved in this work through the Association of Clinical Pharmacologists of Russia.

XS: Digital health has become a fascinating concept in the Chinese healthcare systems. Although its development is at the early stage, the impact of digital health technologies on healthcare has become extensive and substantial. In the use of routinely collected healthcare data, scientists and clinicians are interested in developing prediction models to assist the diagnosis and the management of cancer. Attempts also have been made to combine such tools or medical literature with an electronic medical records platform to develop integrated clinical support systems. Meanwhile, mobile devices are in wide use for monitoring blood pressure and glucose for the management of chronic diseases. In the population level, the real-world evidence initiative (through the use of healthcare big data) is redefining the evidence about healthcare interventions, including treatment patterns and compliance, safety, and comparative-effectiveness and cost-effectiveness, thus advancing healthcare policy decisions. Despite these merits, the quality and completeness of healthcare data continues to be the obstacle. The existing disparities, particularly socioeconomic imbalances across the regions and countries, will also challenge the successful digital transformation of healthcare.

When ISPOR released its "2019 Top 10 HEOR Trends," the issue of "spending and pricing" ranked the number 1 this year. The results were based on a survey of ISPOR members. How

do the global HEOR trends translate to the situation in your region? Is there much overlap?

CC: I believe that spending and pricing are key issues in our region and the country. Latin America has great challenges in financing and sustainability, and this is directly related to this issue. I believe that other key issues for us in the region are "value frameworks," "price transparency," and "real-world evidence." I consider that issues such as "equity" and "financing in high-cost therapies" such as cancer and rare diseases would be in a local ranking at the top of the list since they are currently considered as key concerns. This is not because the other items are not relevant, but because there are key aspects of our health systems such as sustainability, value-based pricing, and transparency that are not yet functioning efficiently and require more work and progress.

AK: In our region, the most important are real-world evidence and big data. In particular, I have to tell you that the Association of Clinical Pharmacologists of Russia is planning to build national real-world evidence concept (like the US Food and Drug Administration's Real-World Evidence Program) and we have already started this work. For us, it is very important to know the experience of other ISPOR members and chapters in this field. We are open to collaboration and cooperation.

XS: Healthcare reform in China has a strong interest in reducing healthcare expenditures. As such, the governmental authorities have taken measures to deal with excessive spending on medical products in order to improve accessibility and affordability. These efforts may include the removal of drug price top-up by hospitals, lowering the proportion of drug costs among medical expenditures, and extending health insurance coverage to special health problems, such as cancer and rare diseases. To achieve these goals, efforts have been made to negotiate drug prices in recent years. Along with the global trend, rigorous approaches have been widely used for policy decisions in China. For instance, health technology assessment framework and process are becoming a desirable approach in the selection of insured drugs. At the end of 2018, the National Health Commission and the National Healthcare Security Administration achieved a consensus that health technology assessment should be enforced in medical insurance access.

About ISPOR Regional Chapters

ISPOR is committed to supporting HEOR advancement and healthcare decision making for health globally. This mission is reflected in ISPOR's global HEOR community of more than 20,000 individual and chapter members from 120+ countries around the world. ISPOR regional chapters facilitate the global flow of information related to healthcare decision making. There are currently 86 ISPOR regional chapters in global regions. For more information, go to www.ispor.org/membergroups/ global-groups.