

HPSS Newsletter

Winter 2018

Greetings from HPSS Chair

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I am honored and excited to be assuming the position of chair of the Health Policy Statistics Section of the American Statistical Association. I am so grateful to the section for becoming my home in the ASA and my community in the world of statistics research. When I was a new graduate, the ASA seemed huge and overwhelming, and it took a while for me to figure out that where I belonged was right here, in HPSS.

What gives HPSS its appeal? First, HPSS is a huge tent. Whether you are working on major population health issues, or focusing on personalized medical decisions; whether you are doing applied outcomes analysis or methods research; whether you are making sense of real-world evidence or making inferences from controlled trials – you have a home in HPSS. Second, HPSS has its own conference, the International Conference on Health Policy Statistics (ICHPS). ICHPS is a really unique conference, bringing statisticians from across the health policy research spectrum together to share ideas, to learn from one another, and to really connect. Excitement is building for ICHPS 2020 next January in San Diego; you can find much more information in the rest of this newsletter. Third, HPSS has a truly amazing executive committee, stacked with highly accomplished members who are dedicated to making our section the best it can be. Thank you all for the work you do and special thanks to Kelly Zou, our immediate past chair, for her fabulous leadership in 2018. I hope that this year will be one in which both old and new members feel a sense of belonging and investment in our section. Here's to 2019!

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ICHPS 2020 Website Open

The <u>website</u> for the 2020 International Conference on Health Policy Statistics (ICHPS) is officially open!

The conference will be held January 6-8, 2020 at the Wyndam San Diego Bayside in San Diego, California.

See the full listing on the next page for detailed information on submissions and registration!

ICHPS 2020 Submissions Open

The International Conference on Health Policy Statistics (ICHPS), sponsored by HPSS, is held every two years with the goal of connecting statisticians, methodologists, researchers, economists, and others so they can exchange and build on ideas they will disseminate to the broader health policy community.

ICHPS 2020 will be held in San Diego, California on January 6-8, 2020. We're planning ahead, and now is actually your first opportunity to be part of this important forum. Invited session and workshop proposal submission is open until March 4!

Since HPSS members are an important portion of what makes ICHPS so special, we would like to ask members that plan to submit proposals to submit early for planning purposes. Members who submit before January 23 will have special consideration for the program. Having an early look at the potential conference content can be critical in securing external funding from sources and help keep general conference registration rates reasonable.

If you'd like to organize a session or workshop for 2020, try to engage these diverse stakeholders in creating a constructive platform for debate. Also, keep in mind the conference's theme, "Leveraging Data to Shape the Future."

ICHPS is a unique and intimate forum for discussing research needs and solutions to the methodological challenges in the design of studies and analysis of data for health policy research. We hope to see you in San Diego!

Other Important Dates

Invited Session and Workshop Proposal Submission: January 3, 2019 - March 4, 2019 Invited Abstract Submission: April 12, 2019 - April 26, 2019

HPSS at JSM 2019 - Invited Sessions

The full JSM 2019 invited program can be found online <u>here</u>. We are grateful to all those that submitted invited sessions for consideration.

This year we have 4 invited sessions that are sponsored by HPSS. These sessions span a diverse range of topics that are especially relevant to statistical methods for health policy.

1. A session on the challenges of pragmatic randomized and their impact on clinical trials on clinical practice and health policies.

(Session # 217884)

- 2. An invited panel that provide vignette on the impact of statistical analysis on health policy. (Session # 217959)
- 3. A session that describes recent advances for estimating causal effects from observational studies with multiple treatments.

(Session # 218106)

4. A session on issues that arise in estimation of global morbidity and mortality.

(Session # 218141)

Stay tune for our topic contributed and contributed sessions in the next letter.

2019 HPSS Executive Committee

Chair – Ruth Etzioni Chair-Elect 2020 – Laura Hatfield Past Chair 2018 – Kelly Zou

Secretary – Claude Setodji Treasurer – Jason Brinkley Publications – Miguel Marino Council of Sections Rep – Don Hedeker

JSM Program Chair 2019 – Roee Gutman JSM Program Chair Elect 2020 – Lisa Lix

Op Ed: Environmental Policy is Health Policy

Dr. Corwin Zigler

You don't have to look very far in the news these days to see that there is a lot of action in the realm of environmental health policy, mostly due to the sharp change in perspective that came with EPA appointees by the Trump administration. Lurking in the details is a debate surrounding "causal inference" and its specific relation to setting policies that I think would be of interest to members of HPSS.

The importance of air pollution policy and the role of causality has been a topic of increased discussion for the past 10 years or so. A useful summary of the importance of the problem here. A focus on causal inference in this context has motivated quite a few papers – some by members of HPSS – designed to follow the trend of other fields by incorporating rigorous causal inference methods into studies of air pollution policy. In fact, the profile of causal inference methods has rapidly increased in air pollution epidemiology over the past several years, with more researchers adopting more formal perspectives and many more discussions about causal inference at conferences and workshops.

But the importance of inferring causality in these settings (and the inherent challenges) is now being reoriented by Trump appointees to undercut the importance of air pollution regulations. Industry-friendly appointees have replaced scientists on advisory boards. The Clean Air Scientific Advisory Committee in particular: it is charged with reviewing all available science about pollution and health and making a recommendation for policy. The debate of the moment is the review of the National Ambient Air Quality Standards for fine particulate matter (PM2.5). These NAAQS have to be reviewed on a regular schedule.

As an aside, the EPA recently created a rule that disqualified anyone who had received EPA research funding from serving on this committee, effectively disqualifying some of the most credible scientists working in the area.

These efforts are being conducted in parallel to some rules that are similarly disingenuous with regard to transparency in scientific research in that worthwhile virtues are being touted with the ultimate goal of disqualifying decades-old research. Here's a quote from that linked report that is about statistics, which should give a flavor:

"In addition, this proposed regulation is designed to increase transparency of the assumptions underlying dose response models. As a case in point, there is growing empirical evidence of non-linearity in the concentration-response function for specific pollutants and health effects. The use of default models, without consideration of alternatives or model uncertainty, can obscure the scientific justification for EPA actions. To be even more transparent about these complex relationships, EPA should give appropriate consideration to high quality studies that explore: A broad class of parametric concentration-response models with a robust set of potential confounding variables; nonparametric models that incorporate fewer assumptions; various threshold models across the exposure range; and spatial heterogeneity. EPA should also incorporate the concept of model uncertainty when needed as a default to optimize low dose risk estimation based on major competing models, including linear, threshold, and U-shaped, J-shaped, and bell-shaped models."

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This reads to me more like a laundry list of things that are hard about doing statistics, abusing the fact that sometimes some methods can be inappropriate to imply that all methods are frequently inappropriate. There's a disingenuousness that parallels the legislation on transparency; robust confounding adjustment, model uncertainty, flexible parametric specifications, nonparametric methods, spatial heterogeneity etc. are all worthwhile things in an abstract sense, but to imply that these are things that must always be done before a study can be considered high quality seems just an effort to prevent any study from being considered high quality. For example, it seems to suggest that a study must include both a robust set of parametric models *and* nonparametric methods, which is technically contradictory.

The causality-specific arguments here are being led in part by Tony Cox, a career consultant with close ties to polluting industries. He now chairs the Clean Air Scientific Advisory Committee. He makes claims to have developed new approaches to causal inference which prove that air pollution does not cause the level of harm that has been established over the past several <u>decades</u>. He <u>packages</u> existing R packages and deploys them to show that there are no causal associations between pollution and health. He essentially sidesteps the issues that members of HPSS would be familiar with when it comes to causal inference – carefully defining potential outcomes to clarify the question/estimand, detailed reasoning about measured and unmeasured confounding, sensitivity analysis, etc. – in favor of an (apparently) black-box approach that, as far as I can tell, would have very little resemblance to the type of causal inference analysis familiar to the bulk of the statistical and epidemiological community.

Dr. Cory Zigler is Associate Professor of Statistics and Data Sciences at the University of Texas at Austin and Dell Medical School. He specializes in methods for the analysis of complex observational studies, and has spent the past several years working to evaluate the health impacts of air pollution regulatory policies. (The opinions and views represented here are the author's own and do not reflect any group for which the author has an association.)

HPSS Member News

Tom Love was awarded the prestigious Diekhoff Award, established in 1978, recognizes outstanding contributions to the education of graduate students through advising and classroom teaching. The annual award is presented to two faculty members who epitomize what it means to teach graduate students, engage them academically in a forthright and collegial manner, and actively promote their professional development.

Kelly H. Zou was promoted to Vice President, Head of Medical Analytics & Insights Research (MAI), Development & Medical (RDM), Upjohn Division, Pfizer Inc. The Head MAI serves as a senior leader on the RDM leadership team, reporting directly to the RDM Global President. The role also collaborates closely with the Chief Medical Officers for Global, Emerging Markets, Developed Markets and China, Regulatory Affairs, and multiple senior commercial leaders.

Lisa Lix has been awarded a prestigious Canada Research Chair at the University of Manitoba by the Candian Ministry of Science and Sport. The seven-year award allows her to continued focused work in methods to measure and improve the quality of electronic health databases for studying chronic health conditions and predicting disease risk.

Do you have news about a section member? Send it along to HPSS Treasurer and Bulletin-Master Jason Brinkley at jason.scott.brinkley@gmail.com