



## The Blueprint: Paradigm Project Updates

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### At a Glance...

- The Paradigm Project convened the Learning Community and Steering Council in January to continue to move forward our human centered design process, consider the lessons of 2020, and look to the future of both Paradigm and HSR. In the coming months, the Project is also hosting three expert meetings on topics at the forefront of “science innovation.”
- In other news:
  - “Can healthcare providers... tell a more comprehensive narrative for patients as opposed to simply providing a meaningless statistic?”
  - “Barber shops, churches, libraries — that’s where researchers must go to tackle inequity,” says Lisa Cooper in *Nature*.
  - Coming up: The University of Michigan RacismLab, in collaboration with IAPHS and supported by University of Michigan Survey Research Center at the Institute for Social Research, is hosting their sixth annual Symposium on the Study of Racism on February 24, 2021.



### Latest Paradigm Project Updates

The Paradigm Project is bustling with convening activity in the first half of 2021. On January 28-29, the Learning Community and Steering Council engaged in two afternoons of discussion. Participants had a chance to reengage with one another, get caught up on progress to-date, experience current prototypes being tested by the five active Design Teams, contribute to the work of these teams, hear stakeholder perspectives on the project, and articulate how this group and AcademyHealth can transform its work and enthusiasm into an ongoing movement for change.

In the coming months, the Paradigm Project will also host expert meetings to explore the relevance of three timely “science innovation” topics for the field of health services research. The first meeting on February 24-25 will convene a small group of experts to consider the use of complex, unstructured data and AI techniques in health services research. Over the course of two afternoons, a group of health services researchers and others with expertise in the evolving data landscape will address four issues: (1) how new sources of data and methods can be used alongside researchers’ traditional approaches to causal inference; (2) the implications of these data for research infrastructure; (3) how new sources of data can provide new insights into heterogeneous populations; and (4) how policymakers and other research users can apply research results to different real world settings. Look for an issue brief this spring summarizing this meeting.

The second and third meetings in this series will take place in April 2021 and examine the application of “open science” principles to HSR and innovations in incentives and rewards for academic research.



### In Other News...

Below are a few articles relevant to the challenges facing HSR that caught our attention. We hope you find these useful as you work to make a difference in your own communities and institutions.

**NOTE:** In keeping with the Paradigm Project’s work to foster creative thinking by engaging with uncommon and new perspectives, articles may include provocative or non-traditional points of view. Inclusion of these articles doesn’t imply endorsement, and all opinions are the authors’ own.



### On Scientific Methods...

Here are a few articles from the archives that focus on the issues this month’s expert meeting on complex, unstructured data will explore.

“Machine-learning prediction methods have been extremely productive in applications ranging from medicine to allocating fire and health inspectors in cities. However, there are a number of gaps between making a prediction and making a decision, and underlying assumptions need to be understood in order to optimize data-driven decision-making.” Susan Athey describes limitations and considerations of supervised machine learning (SML) in *Science* [here](#).

“Health systems rely on commercial prediction algorithms to identify and help patients with complex health needs. [The authors] show that a widely used algorithm, typical of this industry-wide approach and affecting millions of patients, exhibits significant racial bias... The bias arises because the algorithm predicts health care costs rather than illness, but unequal access to care means that we spend less money caring for Black patients than for White patients.” Click [here](#) to understand bias in algorithms that reflect structural inequities.

“Can healthcare providers break informational influence enough to tell a more comprehensive narrative for patients as opposed to simply providing a meaningless statistic?” For example, “‘Averages’ as a form of communication, both internally and to patients, seem to be incredibly important.” However, “In truth, averages simply mask more helpful information.” Damien Mingle poses a hypothetical to illustrate his point: imagine a business analyst is analyzing patient data in which pneumonia is present at four different hospitals. Find out [why](#) health care must move beyond the average.

This [paper](#) “...presents a state-of-the-art review that presents a holistic view of the Big Data (BD) challenges and Big Data Analytics (BDA) methods theorized/proposed/employed by organizations to help others understand this landscape with the objective of making robust investment decisions... More specifically, the authors seek to answer the following two principal questions: Q1 – What are the different types of BD challenges theorized/proposed/confronted by organizations? and Q2 – What are the different types of BDA methods theorized/proposed/employed to overcome BD challenges?”

Check out this [blog series](#) on the Interdisciplinary Association for Population Health Science (IAPHS) blog about the “use of race and ethnicity in population health research. Subsequent posts cover “specific guiding questions on conceptualizing, measuring, and interpreting race.”



### From Research to Application...

In June 2020, Hanney and colleagues explored lessons from the “enormous global effort to develop a vaccine for the 2019 novel coronavirus SARS-CoV-2” for reducing the often-cited 17-year lag between scientific discovery and clinical application. They note that this [rapid progress](#) has resulted from a combination of “large-scale funding, work being conducted in parallel (between different teams globally and through working in overlapping tracks), working at greater (but proportionate) risk to safety than usual, and adopting various new processes.”



### On Diversity, Equity, and Inclusion in HSR...

“Minority and women researchers [have] more novel ideas, but these ideas were less likely to be adopted by the scientific mainstream, dominated by a white male majority. This reduced the impact of these ideas, resulting in fewer sought-after academic positions for nonwhites and women.” This older article in the *Stanford Social Innovation Review* describes [science’s diversity problem](#).

Coming up: The University of Michigan RacismLab, in collaboration with IAPHS and supported by University of Michigan Survey Research Center at the Institute for Social Research, is hosting their sixth annual Symposium on the Study of Racism. This year’s symposium, titled “Toxic Equilibrium: Structural Racism and Population Health Inequities,” is taking place on February 24, 2021 at 10:00am – 6:30pm ET. A pioneer in the

study of structural racism, Dr. Eduardo Bonilla Silva, will serve as the keynote speaker. See the agenda and register [here](#).



## On Community Engagement in Research...

“Barber shops, churches, libraries — that’s where researchers must go to tackle inequity,” says Lisa Cooper, who urges researchers to work as closely as possible with communities to build trust and affect real change in *Nature*. Doing so must actively involve people who have the “appropriate language skills and cultural knowledge.”

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