Dear Friends and Colleagues,

There’s no way around it: this has been a challenging year on many fronts, complicating the ability to focus on topics that would otherwise be top of mind. Nonetheless, the turn toward a new academic year also creates a unique opportunity to reflect on the prior one. We’ve tried to do that in this year-in-review report.

For those interested in learning more about VSSL (pronounced “vessel”), we invite you to visit the lab webpage here. In short, the Lab is designed to drive change that improve health by (a) combining expertise in health policy, payment and care delivery redesign, and decision sciences with leadership in value-based payment, care delivery, and population health; and (b) leveraging collaboration with other groups within and beyond the UW community.

We’ve organized the content below by our Lab focus areas: policy analysis; program evaluation; implementation strategy; and training & education. In each section, we provide a sampling of the work done in each area and refer those interested in learning more to our website.

We would like to thank the leadership and staff of the UW Medicine Center for Scholarship in Patient Care Quality and Safety, the Division of General Internal Medicine, and the Department of Medicine for their guidance and sponsorship. It’s not hyperbole to say that whatever the Lab has accomplished this year was possible because of their support. As we noted last year, there’s always more work to be done in the areas of value and systems science. We welcome anyone interested in learning more about the Lab and/or joining in its work to reach out.

The VSSL team
Members of the VSSL team has been at the vanguard of writing about important topics related to the ongoing Covid-19 pandemic.

For instance, Joshua Liao published a series of articles in Forbes arguing that thought science and policy are key elements to recovery, it is the psychology behind our behaviors that will ultimately dictate how we will respond to Covid-19. As Dr. Liao writes in the first article: “Recovery requires reliable data and strong public health data surveillance. But human behavior is rarely dictated purely by data. Ultimately it will be the psychology behind Americans’ behaviors that dictates how the country rebounds.”

He goes on to provide a description of mental heuristics – biases that help humans make decisions under pressure, but can sometimes lead them astray. Dr. Liao closes his first article this way: “It is no secret that humans can make poor decisions. But it is important to pay attention to the prevalent heuristics that cause us to do so – often in highly predictable ways. As states move to reopen, this recognition could mean the difference between a strategy that focuses on data (hoping that appropriate behavior follows), and one that anticipates and intervenes on faulty behavioral responses alongside data surveillance. What happens in the coming months and years may very well depend on which prevails.”

Dr. Liao’s second article for Forbes explores the role of framing as a particular mental heuristic. Staying with this theme, Dr. Liao was also the lead author on an editorial published in the Philadelphia Inquirer about how saving the economy involves changing the minds of the public.

Along with Dr. Liao, Leah Marcotte wrote a piece for JAMA Health Forum arguing that despite widespread focus on testing capacity in the earliest phase of the pandemic, “missing from this intense focus on testing appears to be a discussion of test characteristics including sensitivity, specificity, and diagnostic yield.” The authors
argue that information “should be prioritized in research and made widely available by all groups performing and interpreting tests as quickly as possible”; that measures (e.g., serial testing, multiple tests from different sites) be used to address poor characteristics of available tests; and that policymakers prioritize balancing the benefits of diagnosing cases with maintaining clinician safety.

Dr. Liao also led or supervised the writing of several other Covid-related pieces, including ones about how beating the pandemic will involve addressing primary care payment; how the pandemic has caused racism to rear its head alongside respiratory disease; and how the math behind the pandemic is critical to frame correctly.

Dr. Liao was the lead author on an article published in the *New England Journal of Medicine Catalyst*, in which he argued that “as leaders begin to reopen the doors of health care, they must address patients’ fears surrounding Covid-19 to ensure that fear doesn’t prevent them from seeking needed services”. Dr. Liao proposed that health care organizations could use several behavioral principles – framing, social comparisons, and defaults – to achieve that goal.

Finally, with input from Ashok Reddy, Dr. Liao led a collaboration with the Washington Health Care Authority to evaluate early work done in the Washington Medicaid program to scale up telehealth to meet patient health needs in response to Covid-19. The report – “Paying for and Delivering Telehealth in the Covid Era: Early Groundwork in WA Medicaid” – also outlines future directions for analysis that can support the creation of a payment and care delivery policy agenda for the Medicaid program.
Over the last year, VSSL members have engaged in rigorous analysis of payment and care delivery policies.

For instance, Ashok Reddy and Joshua Liao have used their care delivery and payment expertise to serve on the Washington Health Care Authority’s Primary Care Payment workgroup tasked with evaluating strategies for reforming primary care payment. Dr. Liao has also advised Medicaid programs in other states on other delivery and payment policies.

As another example, Leah Marcotte and Joshua Liao have analyzed payment arrangements such as Accountable Care Organizations (ACOs) to identify how strategies may differ by several ACO features; Drs. Marcotte and Liao have also analyzed payment models such as Medicare’s fee-for-service Primary Care First program, and how over reliance on an acute hospitalization metric may undercut the program’s effectiveness. Dr. Liao has also applied his experience in policy analysis to other aspects of ACOs and other payment programs such as bundled payments.

Dr. Liao and Dr. Reddy have also used their policy analysis expertise to create a report in collaboration with the Health Care Authority about telehealth services in the era of Covid-19. The report is titled: “Paying for and Delivering Telehealth in the Covid Era: Early Groundwork for Policy in WA Medicaid.”

VSSL team members are building on these experiences and engaging with stakeholders on additional policy analysis questions in the new year.
Program Evaluation

Rigorous evaluation of small- and large-scale programs is a core focus on VSSL. In turn, Lab members have led or participated in a series of evaluations of payment and care delivery programs.

Joshua Liao continued to expand his work evaluating value-based payment models, leading several analyses of bundled payments and ACOs. For more information on Dr. Liao’s work in this area, visit his page on the VSSL site here. As an example, Dr. Liao led the first evaluation about payment model “co-participation”, situations in which organizations simultaneously participate in multiple value-based payment models. The results of this analysis were published in JAMA Network Open and showed that “hospitals coparticipating in accountable care organizations and joint replacement bundled payments may adopt different care redesign strategies from hospitals in bundled payments alone without differences in episode spending.”

Ashok Reddy led a large-scale evaluation of the patient-centered medical home. The study published in JAMA Network Open, captured changes in the medical home implementation over 4 years and found no consistent association with high-cost utilization (ED visits and hospitalizations).

In another study led by Leah Marcotte, VSSL members studied the use of Transitional Care Management (TCM) codes meant to encourage clinicians and practices to coordinate care for patients after hospital discharge. In a study published in JAMA
Network Open, Dr. Marcotte and colleagues—including Dr. Reddy, Dr. Liao, and several VSSL trainees—demonstrated increase in TCM use over time. As the authors noted: “Together with the potential scope of TCM—with 5.8 million of 33.7 million Medicare beneficiaries experiencing TCM-covered hospitalizations annually—these results reflect Medicare’s focus on TCM amid efforts to increase reimbursement for care coordination services.” Dr. Marcotte and colleagues concluded that their findings “highlight the need for more research evaluating TCM amid value-based payment and delivery reform.”

Linnaea Schuttner, Ashok Reddy, and Joshua Liao led an analysis of statistical reliability for quality measures used within a large academic medical center participating in value-based payment models. In a study published in the American Journal of Medical Quality, They found that clinic-level performance measurement may be more appropriate than individual clinician-level measurement, particularly in low-volume contexts.

In other work, Dr. Schuttner is evaluating the rates of, and predictors for, low value or inappropriate cancer screenings among Veterans, nationwide; and evaluating how primary care physicians determine approaches for addressing multiple care needs during encounters among complex patients.
Implementation Strategy

Strategic approaches are needed to effectively implement programs that improve the quality, cost-efficiency, and value of care. Our team members have advanced knowledge in these areas by articulating frameworks and principles that help stakeholders understand how to strategically implement solutions that improve quality or address spending.

For instance, Leah Marcotte and Joshua Liao published a framework for understanding care management interventions in the American Journal of Managed Care, arguing that a framework categorizing programs as either utilization management, disease management, and/or health. Care navigation can help providers and payers invest in, implement, and reap benefits from care management initiatives.

In other work, Drs. Marcotte and Liao worked with Ashok Reddy to articulate the potential limitations in pairing hot spotting methods with intensive primary care interventions. In a paper published in the Journal of General Internal Medicine, The VSSL team used insight from Geoffrey Rose’s preventive medicine strategy to highlight how the narrow scope of these initiatives (targeted interventions for small groups of high-cost patients) may inherently prevent providers from achieving overall cost reductions across entire patient populations; and that providers should also consider broader interventions that impact patients across cost levels, including average- or low-cost patients.
Training & Education

The Lab continued to enroll participants in year 2 of the VSSL Policy and Care Delivery Immersive (PCDI). The immersive was created out of the belief that education is a core element of the lab mission and purpose, and to ensure that learners are able to engage in health systems delivery work through dedicated mentorship and project work.

The PCDI experience is designed for learners who are interested in value and systems science as concepts and would benefit from more exposure and clarification about how to integrate these interests into their careers. In particular, given the many ways to engage in these areas, learners are able to select between several specific tracks that are designed to make the PCDI as salient to their career interests as possible. Two tracks tested in Year 2 were:

**Policy.** The Policy Track emphasizes public policymaking processes as well as landmark policies within the areas of value and systems science in order to provide participants with understanding about the “upstream” legislation and rules that ultimately determine organizational care delivery approaches.

**Operations.** The Operations Track emphasizes operational strategies for achieving value-based care and performance under value-based payment models. As such, this track focuses on the implementation of approaches with demonstrated potential to bring about such changes at provider organizations or payers.

Beyond the PCDI, The Lab has also been fortunate to engage learners through more longitudinally as VSSL Fellows. Each has demonstrated a commitment to, and focus on, a longitudinal body of work on in area of interest. Kate Morgan, MD, MPP ( Resident in Internal Medicine at UW) has focused her work on define quality in value-based payment models, and improving patients’ access to healthcare services. Jonathan Staloff, MD, MSc ( Resident in Family Medicine at UW) has focused his work on payment reform, in the primary care and ambulatory space, and how it can support population health. Catherine Hwang, MD, MSPH ( Resident in Internal Medicine at Virginia Mason Medical Center) has focused her work on understanding how services
strategies at the interface of payment and care delivery policy can optimize the quality of value of care.

2019 was also an important year for educational efforts led by VSSL team members. In particular, Anders Chen developed and led the successful introduction of a health systems curriculum for the UW Internal Medicine Residency Program. The seminar series utilizes a mixed didactic and small group format to teach concepts to final year residents, including historical and international perspectives on health care systems; payment models and incentive structures; regulation and oversight; and the policy making process. The health systems pathway continues to expand, welcoming 9 new residents (the largest cohort to date) for the 2019-2020 year: Paul Bourdillon, Matt Cataldo, Brian Connor, Derek Eppright, Anisha Ganguly, Anna Morenz, Andrew Pattock, Caleb Schlauderaff, and Andrew Wilmington.

Dr. Chen also led a seminar series focused on primary care delivery systems, delivered jointly to final year primary care internal medicine and family medicine residents at UW, with topics including primary care specific payment and delivery models; primary care spend; primary care Graduate Medical Education policy; and state-level advocacy, focusing on telehealth payment parity and increased Medicaid reimbursement for primary care. For 2020, the health systems seminars continue to expand, with additional focus on structural inequities within payment models and delivery systems.