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Organization	Project Abstract
Management Sciences for Health	Study of Quality of Care Indicators for Maternal and Newborn Health in the Democratic Republic of Congo For my practicum project I worked with Management Sciences for Health (MSH) to develop a research study to assess to availability, quality and usefulness of maternal and newborn health quality of care data in health facilities in the Democratic Republic of Congo. My contribution to this project was to lead the research design, development of study protocol and survey tools, and analysis following data collection.
Partners Healthcare	Medicaid Potentially Preventable Readmissions Analysis The objective of my practicum was to assist Partners Healthcare in responding to Medicaid payment policy changes. In 2011, MassHealth instituted the Potentially Preventable Readmissions program which links payment to readmissions, penalizing hospitals up to 4.4% for excess readmissions. I used MassHealth and Partners data to conduct exploratory analysis that examined the relationship between readmissions and diagnoses. More specifically, I explored whether behavioral health co-morbidities impacted readmissions, if certain diagnose or clinical specialties were responsible for a high volume/rate of readmissions, and how readmissions patterns varied between hospitals. My results suggest that behavioral health co-morbidities are a likely driver of readmissions. I also found substantive variation between hospitals in terms of which diagnoses drove admissions. This variation may present an opportunity for hospitals to improve quality through sharing best practices. Within hospitals, there were few clear patterns concerning which diagnoses or specialties drove readmissions. My analysis will ultimately be presented to clinical leadership at the hospital level and will be used to further explore quality improvement opportunities.
Harvard Medical School	Lessons in Building an Interdisciplinary Team My project focused on applying leadership theories that I have learned during my coursework at Harvard Chan as the Co-Leader of the Innovations Subcommittee of the Center for Primary Care Student Leadership Committee.
CHLPI	Center for Health Law & Policy Innovation I worked at the Center for Health Law & Policy Innovation at HLS. There, I worked on two major projects: 1) building a case for and drafting an OCR complaint on adverse tiering by insurance companies in PA; 2) developing a policy and legal roadmap for two organizations seeking to implement new programs.
Cambridge Police Department	Safeguarding Dependents after the Removal of a Caregiver - Improving Trauma-Informed Practices This project included working with the Cambridge Police Department (CPD) to develop a caregiver removal policy, procedure, and training. The goal of this project was to minimize the effects of trauma and state-created danger after the removal of a caregiver as well as to provide care dependents with the appropriate services if needed in order to promote emotional, psychological and physical wellbeing.

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South End Community Health Center	Value-Based Payment and Population Health at a Boston Community Health Center For my ARP, I worked with the South End Community Health Center (SECHC) on a variety of projects related to payment reform and population health, as well as general clinic operations. Specifically, my work included an analysis of all value-based contracts to detail clinical quality measures financial performance incentives; analysis of SECHC's colorectal cancer screening rates and the development of a plan to implement new procedures to improve performance; development of a strategy for engaging patients to improve Blue Cross Blue Shield ACO quality measures; refining and updating a tool to track productivity at the clinical department and individual provider level; and completing reports on the clinic's performance on Health Resources Service Administration (HRSA) quality measures. While not a single, continuous project, the ARP experience offered a good opportunity to observe a safety net provider's efforts to adjust to a rapidly changing payment environment, as well as to observe general issues involved in the day-to-day management of a community health center.
The Bill and Melinda Gates Foundation	Developing base case for well-known communicable disease The project comprised of three components; framing and methodology for a large scale cost effectiveness analysis, building the structure in a new software tool, and collecting/ undertaking a gap analysis for data. The base case will be used to undertake portfolio analysis of a communicable disease by the Bill and Melinda Gates Foundation.
Codman2	Self-Reported Health Experiences Among High School Students Results from a Youth Health Risk Survey Working with Chetna Naimi, the Partnerships Director at Codman2, we planned, designed, and administered a health risks survey to all Codman Academy high school students in February 2016. This was the first attempt at conducting a health needs assessment at Codman, and the goal was to gain a broad understanding of the various health needs of the student population. Based off the CDC's Youth Risk Behavior Survey and Harvard's Boston Youth Survey, the Codman survey included 66 questions covering a range of health-related topics. I analyzed and summarized the results of the survey in a report to be shared with Codman Academy and Codman Square Health Center leadership. The report includes recommendations for next steps. These suggestions include continuing to emphasize trauma-informed teaching, consider mental health needs particular to girls, and prioritize health behaviors related to safety and sleep. Looking forward, we are planning to present our findings at a school meeting and receive feedback from staff as to how students' health needs could be effectively addressed by the school and the health center.
YBank	YBank Data Management I worked with YBank to conduct an assessment of the data capacity at partner organizations and developed a plan for data collection and management to be used in a trial of a financial incentive program for adolescents with HIV.

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Harvard T.H. Chan School of Public Health	Use of a Price Transparency Tool for Childbirth I conducted a quantitative analysis of women's use of an online price transparency tool before childbirth. My preceptor was Anna Sinaiko, PhD in the HPM Department and she had the data that I needed for this project. I was responsible for cleaning the data and conducting the analysis. Our research is ongoing and will ultimately result in a publication this fall.
Injury Control Research Center	Gun Violence Among Elderly The project was to quantify and define shifting trends in gun suicides among the elderly, identify particularly vulnerable sub-populations, and design targeted policy interventions.
Sifa University Hospital Bornova	Quality and Process Improvement in the ER at Sifa University Hospital Bornova The practicum project at Şifa focused on quality improvement and patient safety within the ER. A team of three Harvard health management master's students spent three weeks at the facility assessing the patient journey and re-engineering processes. Utilizing methodologies such as root cause analysis and rapid cycle testing, the students interviewed hospital administration, clinicians, patients, and university faculty to surmise hospital flow pain points. These discoveries prompted immediate and sustainable changes in the emergency room and in the preceding reception check-in process by redirecting patients to more appropriate care settings. The Harvard student team critically evaluated where feasible improvements could be made, identified bottlenecks and acted to introduce both immediate changes and develop long-term operational strategies. Finally, we offer recommendations and discuss the implications for future improvement efforts.
Harvard Chan School	Characteristics of Nursing Homes that Care for People with Multiple Sclerosis Up to one-tenth of patients with multiple sclerosis (MS) live in nursing homes, though the health needs of these patients vary widely from the non-MS patients who live in these facilities. This study evaluates the resources of nursing homes by the proportion of MS patients living there, through linking two federally mandated surveys related to capabilities and census data of these homes. Our results found that 32.1% of nursing homes have at least one MS patient. Overall, nursing homes with a higher proportion of MS patients were more likely to offer services related to the health care complications of MS. With the exception of rehabilitation staff, the homes with higher proportions of MS patients also had more staff per 1,000 beds for the services relevant to MS. These differences in capacity, or lack thereof, have both provider and policy-level implications.
Zirve University	Assessing the Responsiveness and Resilience of the Turkish Health System to the Syrian Refugee Crisis The practicum was a joint research project with Zirve University that focused on analyzing systemic health issues affecting the Syrian refugee population in southeastern Turkey. The study aimed to investigate the responsiveness and resilience of the Turkish health system to the refugee crisis in southeastern Turkey, an

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	<p>assessment that had never been done before. Unfortunately, the collection of field data could not commence as planned due to unforeseen challenges and barriers. Nevertheless, there are a number of key observations that may be valuable for future studies.</p>
Aravind Eye Care System	<p>Aravind Eye Care System: Scaling the Vision Centre Model Our team spent three weeks at AECS in order to observe the system, conduct external and internal interviews, shadow departments, and make recommendations to expand Vision Centres. Our team explored the following questions: - How can Aravind engage most effectively with external partners to scale VCs nationally and globally and spark a worldwide movement of universal eye coverage? - How should Aravind's leadership strategically position the organization internally to gain buy-in, prepare for, and successfully execute VC expansion? To answer their questions, our team developed two deliverables: one internal and one external. The external deliverable is a manual designed to guide an External Partner through the steps of opening VCs in their area. The internal deliverable aims to help Aravind anticipate challenges, proactively develop solutions, navigate working relationships, and identify opportunities when spreading VCs.</p>
Harvard Chan School of Public Health	<p>Impact of State Medicaid Expansion on Equity in Surgical Care Delivery Lack of insurance coverage is associated with worse access to and receipt of optimal surgical care. The Affordable Care Act aimed to increase insurance coverage to over 50-million uninsured Americans, largely through state expansion of Medicaid eligibility. For my practicum project, we analyzed the impact of this expansion on surgical care delivery at academic medical centers across the country. Data were obtained through Vizient, a collaboration of over 450 academic medical centers throughout the United States. We evaluated utilization of select surgical procedures, comparing Medicaid expansion states with states that have not adopted expansion.</p>
BWH	<p>Cost-effectiveness of Palbociclib in the advanced breast cancer Palbociclib, a new pharmacological agent for the treatment of advanced breast cancer, has demonstrated remarkable efficacy in prolonging progression-free survival compared with existing therapies. However, it is associated with high financial cost. This project aims to evaluate the cost-effectiveness of palbociclib compared to usual care in the U.S.</p>
Pacify	<p>Designing Telemedicine Interventions for Low-Income Mothers to Increase Access to Care I worked for Pacify, a telemedicine startup focused on improving access to care for new mothers. Pacify does this by providing a smartphone app that connects mothers with a concierge network of lactation consultants, pediatric nutritionists, and nurses. The service is available 24 hours per day, and mothers are connected in three minutes or less. My study aimed to help Pacify understand how their product should be designed and deployed to reduce barriers to adoption for low-income mothers specifically. To answer this question, 15 interviews were</p>

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	<p>conducted in WIC offices in the greater Boston area (Cambridge, Quincy, South Boston). Pacify will be utilizing the results of this study to drive adoption of the product in their WIC and Medicaid contracts.</p>
Massachusetts General Hospital	<p>Strategy Implementation and Evaluation at Massachusetts General Hospital Academic medical centers are an ideal site to explore the development and implementation of strategy operations in a large hospital setting. Between late October 2015 and May 2016, I spent around 12 hours per week working at Massachusetts General Hospital conducting a practicum that gave me exposure to a variety of hospital operations and management-related issues. This report highlights the two main projects I was involved in. Through the projects, I was able to research and prepare reports on hospital-wide strategy implementation and departmental-specific affiliation models.</p>
Aravind Eye Care System	<p>Aravind The Aravind Eye Care System is a world-renowned nongovernmental organization that provides high quality and affordable ophthalmic care in Southern India. Aravind's Vision Center model promotes primary eye care for rural populations by building permanent eye care facilities in areas that often lack substantive access to quality vision care. Through this model, a Vision Center has been shown to reach up to 70% of the population it seeks to serve. Aravind aims to spread their Vision Center model nationally and globally. We worked with Aravind to explore how they could engage most effectively with external partners to scale their Vision Center mode. We developed a manual to standardize the process in which Aravind engages with external partners. We also developed an internal set of recommendations to help Aravind's leadership strategically position the organization internally to gain buy-in, prepare for, and successfully execute Vision Center expansion.</p>
UMass Memorial Medical Center	<p>Identifying Opportunities to Improve the Patient Discharge Process through Analysis of Patient Satisfaction Comments Higher patient satisfaction during the discharge process is associated with lower 30-day hospital readmission rates. To better understand patient satisfaction during discharge and identify potential gaps in the current care transition process, UMass Memorial Medical Center (UMMMC) asked the project team to analyze patient-level clinical data and comments from the Press Ganey Patient Experience Survey. Qualitative analysis of free-text patient comments demonstrated that the hospital system could improve care transitions by more clearly communicating discharge instructions, working with patients to communicate and understand their readiness for discharge, and improving the speed of the discharge process. The project team recommends increasing communication during handoffs between care teams, measuring and clearly communicating uncertainties and delays in the discharge process, and partnering with community-based organizations, navigators, and electronic services to provide additional support to patients post-discharge. By implementing a more patient-centered discharge process, UMMMC may be able to improve patient satisfaction and reduce 30-day readmission rates.</p>

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Sifa University Hospital	<p>Process and Quality Improvement in the Şifa University Emergency Room</p> <p>The practicum project at Şifa focused on quality improvement and patient safety within the ER. A team of three Harvard health management master's students spent three weeks at the facility assessing the patient journey and re-engineering processes. Utilizing methodologies such as root cause analysis and rapid cycle testing, the students interviewed hospital administration, clinicians, patients, and university faculty to surmise hospital flow pain points. These discoveries prompted immediate and sustainable changes in the emergency room and in the preceding reception check-in process by redirecting patients to more appropriate care settings. The Harvard student team critically evaluated where feasible improvements could be made, identified bottlenecks and acted to introduce both immediate changes and develop long-term operational strategies. Finally, we offer recommendations and discuss the implications for future improvement efforts.</p>
Atrius Health	<p>Optimizing Transitions of Care at Atrius Health</p> <p>The purpose of this project was to streamline transitions of care at Atrius Health, an outpatient multi-specialty provider organization in eastern Massachusetts. // Reasons for action included: rising readmission rates and use of non-preferred facilities were resulting in poorer patient outcomes and higher costs; and a 2015 merger and new leadership prompted a push for standardization across the now larger organization. Project objectives included: improved patient health, reduced readmissions and rework, improved experience of care, and reduced costs. Approaches and tactics used to implement the project plan were: adherence to a project charter, regular steering committee check-in meetings, analysis of claims and internal data, identification of best practices via environmental analysis, current state transitions of care process mapping, a three-day planning meeting, and task delegation via the formation of three project committees. Implications: Internally, this work resulted in a successful launch of the transitions of care project; externally, it helped Atrius Health to position itself as a leader in development and analysis of innovative transitions of care processes. Personal learnings included: the difficulties of balancing innovation and evidence-based practice, the importance of obtaining front-line clinician buy-in, and the extent of overuse (not just underuse) that results from poor care transitions.</p>
Boston Children's Hospital	<p>Patient Financial Complaints Project: Reducing Process Variation and Improving Family Satisfaction</p> <p>The goal of the Patient Financial Complaints project at the Boston Children's Hospital was/is to identify and eliminate sources of waste and variation related to the billing process that results in patient dissatisfaction. The project began in the fall of 2015, and is expected to at least run through the summer of 2016. Lean/Six Sigma methodology was used to guide this initiative. This methodology includes multiple rounds of: system mapping, interviews, data collection and analysis, and design sessions to identify problems and possible solutions. Ultimately, the system mapping activities revealed multiple entry-points into the system, interviews revealed myriad variation in operational definitions and processes, and data analysis revealed that cost and charge disputes were among the top complaints from families. Furthermore, it was determined these problems demand two distinct work streams: Workstream 1 focuses on implementing standard procedures and operational</p>

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	definitions; Workstream 2 focuses on improving price transparency and opportunities to education families with respect to the billing process. Concrete recommendations are forthcoming, but general findings and future directions are discussed in detail below. Limitations include a lack of access to quality data among others.
Sifa	Process and Quality Improvement in the Sifa University Emergency Room The following stand as the primary objectives for process and quality improvement within the Sifa ER. <ul style="list-style-type: none">- Define and evaluate quality and safety metrics- Evaluate care efficiency and patient experience- Provide sustainable and feasible recommendations for improvement