UNIVERSITY OF CALIFORNIA HEALTH

Delivering Value

Driven by Values

UC Population Health
Inaugural Report
September 2023

Population health refers to the process of improving health and health outcomes for a defined group of individuals. This includes ensuring enhanced care management and coordination for all patients, supported by appropriate financial and clinical care models[1]. Ultimately, this work leads to better care and more value delivered for every dollar spent on health care.

Table of Contents

UC Population Health was formed by UC Health as a systemwide resource and launched as a strategic priority. The function's goals and initiatives are aligned with and strongly support the University's mission, vision and values. We thank Patty Maysent, chief executive officer at UC San Diego Health, for her ongoing sponsorship. We also thank Anne Foster, chief clinical and strategy officer at UC Health, for her leadership and advocacy. Population Health continues to be recognized as a top UC Health priority in the system's plans for its importance in advancing our objectives of being a "learning health system."

Letter from Chief Population Health Officer

Organizations that pay for care, such as employers, commercial insurers and the government, are increasingly pursuing agreements with health care clinicians and organizations that de-couple reimbursements from the volume of services provided, and instead use population-based payments based upon fixed budgets or growth targets. These population-based payments commonly are adjusted based upon clinical outcomes, patient experience and quality metrics. Less well known is the fact that adjustments for outcomes are also becoming important in the fee-for-service model that has been the standard for many decades. Thus, across all payment types, payers are demanding more accountability from clinicians and facilities that provide health care services.

These circumstances have lent urgency to University of California Health's vision for a population health management function that serves diverse patient needs while preparing UC's health care system for the growth of population-based, value-based contracts and alternative payment models. UC Population Health (UCPH) has grown into that role since it was chartered in 2019. UCPH now provides leadership, expertise and project management to our academic health centers, with a focus on systemwide initiatives that advance value-based care delivery, improve patient outcomes and optimize resource use and costs. UCPH work aligns with UC's public service mission and the clear need to improve health equity that became even more evident in recent years due to the uneven impact of the COVID-19 pandemic.

To create value, UCPH looks at care and outcomes in new ways. Our data-driven population health program is designed to discover issues and drivers systemwide and at the local or community level.

I'm pleased to share with you this inaugural report describing UCPH's accomplishments. UCPH has set a foundational framework that enables ongoing identification of population-specific health care challenges and development of evidence-based solutions. Although work was slowed by

the pandemic, UCPH has identified numerous opportunities to optimize care and has delivered many new protocols that are being used today with patients in clinics across the UC Health system.

To create value, UCPH looks at care and outcomes in new ways. Our data-driven population health program is designed to discover drivers systemwide and at the local or community level. UC's academic health centers then can apply the new understandings at scale, for better outcomes and quality.

The UCPH framework creates a sustainable process that is generally applicable to clinical environments.

- We look for meaningful patterns and trends in systemwide patient data.
- We discern patterns in outcomes for defined populations, to help prioritize where time, effort and resources are best spent.
- We collaborate and integrate our work with experts from across the UC system to identify clinical interventions and provide leadership and structure necessary for implementation.
- We measure interventions for impact and potential to transform common practice into best practice.

By the nature of our work, UCPH also identifies health disparity and opportunities to create health equity. UCPH is partnering with UC academic health centers to ensure UC's world-class health care, knowledge and insights are available to people in all of California's communities.

Finally, the strategies and framework that direct our efforts toward improved population health—including participation in programs and contracts with state and federal health care programs and entities—are important for future financial success. This is just the beginning of our work to optimize UC's health delivery model for success in a future with more value-based payment contracts as well as increased accountability in the current fee-for-service model.

With UC values as our guiding principle, we continue to build capabilities to propel UC's health system even further in the service of promoting health across California, including for its most vulnerable communities.

Samuel A. Skootsky, M.D.
UC Health Chief Population

Executive Summary

The Health Care Payment Learning & Action Network, launched by the U.S. Department of Health and Human Services in 2015, reports that nearly 60 percent of payments to health care organizations were tied in some degree to quality and outcome performance metrics in 2021.[2] As value-based health care and alternative payment models become more prevalent within UC academic health centers, we are challenged to understand where and what action can be taken that will measurably demonstrate improvement in outcomes for patients and payers.

Since UC Health chartered the UC Population Health program in 2019, UCPH has built the infrastructure for UC's six academic health centers to understand and optimize care for their patients by defined population groups, and measure and take action to elevate quality and outcomes—and address health disparities.

Value for patients and advancing equity

The work of UCPH has produced benefits for patients while helping further orient our system's model of care for a financial paradigm of value-based care delivery. Impacts include improvements in clinical quality, patient experience, efficacy of care, cost savings and value for dollars spent on care. Specific advances include:

- Implementation of evidence-based strategies such as those for diabetes and hypertension care at all UC academic health centers, for a 227 percent improvement across 14 clinical quality metrics for CY 2019–2022
- Identification of specific factors associated with disparities to inform UC health centers' interventions, which helped drive a 29 percent improvement across six health equity-related measures for CY 2019–2022
- Development of a cancer population registry in collaboration with UC Health's Center for Data-driven Insights and Innovation (CDI2) and the

227%
IMPROVEMENT ACROSS
14
CLINICAL QUALITY METRICS

29%
IMPROVEMENT ACROSS
6
HEALTH EQUITY-RELATED MEASURES FOR CY 2019–2022

UC Cancer Consortium, which serves as the foundation for the UC Way Oncology Medical Home initiative to enhance cancer patients' health outcomes and coordination of patient care

- Participation in alternative payment models—including capitation contracts with state, federal and commercial health plan payers—such as Primary Care First and Kidney Care First, which are Centers for Medicare & Medicaid Services (CMS) Innovation Center models
- Transition of retail prescriptions from higher- to lower-cost, clinically equivalent alternatives for UC Health self-funded plans, producing annual cost savings of $1 million
- Improvement work in diabetes and hypertension care contributing to $50 million in Medi-Cal supplemental payments in CY 2022

A sustainable process

UCPH currently collaborates with other UC partners and academic health centers on eight systemwide initiatives. Through these initiatives, UCPH and its partners focus their efforts on more than 900,000 UC Health patients, or 23 percent of the total UC patient population. We have the potential to make a greater impact and find opportunities to introduce new, best practices that replace common and variable—but less effective—clinical practices throughout the UC network.

> *We have the potential to make a greater impact and find opportunities to introduce new, best practices that replace common and variable—but less effective—clinical practices throughout the UC network.*

The operating model we use has three main components.

1. A framework for collaboration: With the objectives of population health and financial sustainability directing our work, UCPH has established an engagement model that brings together the right expertise from across the UC network, plus local leadership and dedicated project management to speed up innovation and improvement. This framework creates an environment for goal-setting and disseminating best practices in real time. Ongoing collaboration provides a continuous feedback loop that informs shared resources and creates impact that no single entity can achieve on its own.
2. A common data approach for transparency in metrics and outcomes: UCPH has partnered with CDI2 to develop 50 population-based dashboards for describing, identifying and monitoring quality improvement strategies

$1M

ANNUAL COST SAVINGS FROM TRANSITIONING TO LOWER-COST PRESCRIPTIONS

23%

OF THE PATIENT POPULATION IS THE FOCUS OF UCPH SYSTEMWIDE INITIATIVES

and opportunities across UC health centers. The approach leverages analytic software and benchmarks to help target high-cost areas and high-need populations.

3. A systemwide population health analytics platform: UCPH has developed the means to provide actionable data. We use this platform to identify variations in care, leading to specific strategies and guiding our approach to best practice improvement.

> *UCPH collaborates with UC health equity experts to create tools to identify and address disparity in meaningful ways.*

Our operating model also reveals health inequities that often remain hidden. UCPH collaborates with UC health equity experts to create tools to identify and address disparity in meaningful ways. To this end, UCPH has:

- Set universal goals for all patients
- Identified strategies for tailored interventions targeting blood pressure and glucose control in specific sub-populations
- Convened experts focused on practices that impede or promote health and health equity, and shared best practices in screening for social needs
- Contracted with a social care referral platform (FindHelp) to link UC academic health centers to a network of community-based organizations and services
- Facilitated discovery of interventions to elevate health outcomes in advance care planning, with analysis and preparations underway for sharing key learnings and best practices with all six UC academic health centers

Looking ahead

As we pursue our objectives of the best possible health for defined populations and financial stability, UCPH continues to execute against our three-year roadmap. This roadmap includes evolving the data platform that underpins all of our work with our partners and academic health centers.

The roadmap also highlights important population health metrics in areas such as preventive care and behavioral and maternal health, as well as metrics to measure our impact on closing health equity gaps and delivering value to patients, employers and insurers in years to come.

50

POPULATION-BASED DASHBOARDS DEVELOPED IN PARTNERSHIP WITH CDI2

Delivering Patient Value and Advancing Equity

All Californians must have a fair and just opportunity to be as healthy as possible. Health equity will be achieved when care is optimal for everyone and does not vary in quality because of a patient's personal characteristics such as gender, ethnicity, geographic location or socio-economic status.[3] Nevertheless, common clinical practices do not deliver the same value to all communities of patients.

Because all Californians deserve to achieve their best health, we need to design approaches that improve health care and outcomes for all. Care designed for health equity begins with the following steps:

1. Establishing an overall goal for a patient population
2. Assessing the health status of a patient population relative to the overall goal
3. Identifying health differences within that patient population
4. Identifying if, how and when these differences are due to specific barriers or factors, and assessing and understanding physical and societal contributors that support or prevent a patient population from reaching the overall goal of its best health
5. Designing and implementing evidence-based, tailored strategies leading to better health outcomes for each group, taking into account that many differences in outcomes are due to social and economic factors that traditional health care alone cannot address

UCPH has developed a sustainable, systemwide process to identify and understand health inequities in our patient populations. In particular, we incorporate demographic, geographic and social indices to gain a deeper understanding into quality care. We partner with UC experts in health equity to understand the contributors and take action to advance equity.

Building equity into population-specific care and general clinical practice

UC President Michael V. Drake has identified improving access for chronic disease management in vulnerable communities as one of the University of California's foremost priorities. Hypertension and diabetes are the most prevalent chronic conditions in California[4] and with their complications, among the costliest. Even though these diseases have been studied and measured for many years, clues to interventions for better results and value for patient populations remain to be discovered.

Importantly, social determinants or drivers of health (SDOH)—including health behaviors, clinical care access, socio-economic conditions and physical environment—account for the majority of health outcomes.[5] Yet, when designing treatment and care plans, clinicians typically do not have visibility

UCPH has developed a sustainable, systemwide process to identify and understand health inequities in our patient populations. In particular, we incorporate demographic, geographic and social indices to gain deeper understanding into quality care.

Evidence-based action for hypertension management

Research partner Kimberly Narain, M.D., Ph.D., M.P.H., UCLA, investigates the implications of social, economic and health policies for health equity among women, individuals with low socioeconomic status and racial and ethnic minorities. UCPH engaged Dr. Narain to explore racial and ethnic disparities in hypertension and diabetes control outcomes across UC health centers. Dr. Narain used the systemwide analytics platform developed by UCPH for a more precise view of variances in patient data.

"California is the home to the nation's most diverse population, so it's all the more important to understand why particular groups of patients might not respond to standard clinical practices as well as other populations do," says Dr. Narain. "Fortunately, UC serves communities that reflect the state's diversity, and UCPH has established a process and analytics to give a view into patient data from multiple campuses, so we can find evidence of what drives those health outcomes."

From Dr. Narain's findings, UC academic health centers have designed interventions tailored to the communities they serve. These improvements in clinical practice are helping to make measurable improvements in all patients' conditions and specifically, reduce disparities for hypertensive and diabetic patients.

into each of these contributors and are challenged to gauge their patients' risk factors and tailor their plans to the greatest benefit and value.

UCPH initiatives such as screening for SDOH aim to reveal previously unrecognized contributors to inequity, with the goal of elevating the care delivery model for all UC patients and ensuring that all communities receive the benefits of academic health center care. This work includes a focus on access and patient affordability, so that world-class care is available to people in all of California's communities.

That's where UCPH's sustainable systemwide process and platform for data-driven, actionable insight plays a key role in supporting clinical practice, from the earliest stages of analysis to the replacement of common or standard clinical practices with best clinical practice—that is, practice that improves outcomes not only for specific populations, but for patients overall.

Framework for Impact

UCPH enables a cross-location and cross-disciplinary approach to leverage the scale and scope of UC's expertise, making a difference at the local level and bringing the UC Way to health equity and patient value.

Collaborating on Impact

Kathryn Gold, M.D., UC San Diego is a thoracic/head and neck medical oncologist and Medical Director of Cancer Quality and Value at UC San Diego's Moores Cancer Center. In partnership with UCPH, Dr. Gold is chairing a systemwide working group focused on accountable care and affordability in oncology services, for the UC Oncology Medical Home Initiative.

"Only through teamwork across disciplines and academic health centers can we begin to assess inequities in cancer care, improve advance care planning and documentation, increase care utilization and manage costs for our clinics and our patients," says Dr. Gold. "UCPH provides the capabilities that connect the work and expertise of other UC functions and academic health centers, namely the analytics to derive insights from a vast patient data set, and the framework for experts to work together toward the specific purpose of eliminating disparities in care and outcomes."

UCPH provides the capabilities that connect the work and expertise of other UC functions and academic health centers, namely the analytics to derive insights [...] and the framework for experts to work together toward the specific purpose of eliminating disparities in care and outcomes.

– Kathryn Gold

Putting insights into action

In our work, UCPH incorporates both state-of-the-art knowledge from our academic health centers and data-driven insights. UCPH supports and facilitates this knowledge and insight to inform our clinical teams' discussions and local decisions focused on priorities and opportunities for improvement.

As part of our model to support UC's health locations in their work, UCPH has built tools for data-driven discovery. These tools include a shared data platform and robust data visualization for overall and specific views of meaningful population health metrics. Our data-driven discovery also includes the necessary analytics to investigate the drivers of health inequity.

UCPH aims to encourage equitable and high-performance, value-based care delivery across UC Health, to accelerate the spread of ideas for improvement and more rapidly change clinical practice at the health centers. This involves development of best practices in clinical care models, coordination of patient care to optimize outcomes and utilization, consideration of total cost of care, and a focus on having meaningful KPIs.

Collaboration for impact

Through partnerships across the UC system and with our individual academic health centers, UCPH provides a catalyst for innovation and sharing knowledge and best practices in population health management. The cross-disciplinary, systemwide workgroups that we establish are led by subject matter experts in fields such as medicine, nursing, pharmacy, social work and population health. These experts determine the strategy and goals and drive execution with local executive leadership, clinical informaticists, IT experts and administrative-clinical operations champions.

Each workgroup establishes key performance metrics and sets goals for improvement efforts at the UC academic health centers. Subject matter experts provide structure for monitoring and feedback to ensure the sustained success of clinical actions that are introduced for better patient value and outcomes. These experts also help close the gap between common and best practices, and through UCPH, share what's working with other academic health centers and UC Health partners to extend care delivery excellence to every location.

Driving value

An important aspect of the UCPH framework is ensuring that all communities have access to the benefits of academic health care. Doing so requires adapting UC's health delivery model for a future state that's driven by value-based payment contracts, while improving the efficiency for the current fee-for-service model. Rather than rewarding the volume of care, value-based care requires

better outcomes, higher quality and lower costs. Over time, assessing care for value-based impact will result in enhanced access across all populations, as well as a more financially sound health care organization.

UCPH's work starts with identifying areas of opportunity and then finding interventions that deliver better results for patients. The UCPH framework includes cost analysis, as well. More care for patients is not always better: Unnecessary or ineffective health care, including procedures, tests, scans and medications can cause harm to patients and are considered low-value care. The shift toward value-based payment adds urgency to the need to reduce low-value care and provide better stewardship of limited societal resources, as recommended by the American Medical Association.[6]

Investigating value associated with care

Patient value is determined not only by the benefit of care given, but also the benefit of avoiding low-value services: treatments and procedures that may be unnecessary, ineffective or even potentially harmful to patients. These low-value services can also be costly, wasting patients' time or money and taking up a clinician's energy and time, especially if test results are ambiguous. In collaboration with the UCLA Value-Based Care Research Consortium and CDI2, UCPH conducted an analysis to identify and measure low-value services, led by Carlos Oronce, M.D., M.P.H., UCLA.

With a primary focus on how health systems can improve population health and health equity, Dr. Oronce is specifically interested in understanding how we measure what good care is for diverse populations, and the impact of value-based care on outcomes. Dr. Oronce also seeks to identify solutions that address inequities in health care and what large hospital systems can do to improve the health of their communities.

Dr. Oronce's findings showed that pre-operative services was one of the costliest areas of service without corresponding value to patients. "Using the UCPH shared data platform, it was possible to see where UC academic health centers can deliver more value by finding more effective ways to help patients prepare for procedures." He is in the process of completing a follow up project that examines racial and ethnic differences in patients who receive low-value care within UC Health.

UCPH works with individual academic health centers in a way that connects efforts, ensures alignment with strategic goals and enables solutions to be used at scale. Through these partnerships across the UC system and with our individual academic health centers, UCPH provides a catalyst for innovation and sharing knowledge and best practices in population health management.

Recent Initiatives

UCPH has undertaken the following initiatives since inception in 2019. Eight of these initiatives are currently active and focus on specific chronic conditions as well as improvements in clinical practice to benefit all patients. All incorporate the concept of a medical neighborhood as advised by the Agency for Healthcare Research and Quality, that is, specialists and primary care physicians working together to improve the care of their patients.[7]

Diabetes

UCPH has worked with endocrinologists and primary care experts across the UC academic health centers to identify, recommend and implement ways to improve diabetes care. This workgroup developed goals for diabetes management and a UC Way algorithm for a standardized approach to prescribing diabetes medication. These efforts resulted in an 8 percent improvement in glucose control among patients with diabetes, and a 127 percent improvement in the prescription of newer cardioprotective medications among high-risk patients in CY 2019-2022.

The workgroup is targeting improvements in optimal diabetes care, patient-centered ways to increase glucose testing, retinal eye exams in the office setting and eliminating disparities in blood glucose control identified among Hispanic patients. Initial investigations found that Hispanic patients with poor glucose control are less likely to have English as a primary language, have lower levels of medication adherence, are more likely to have diabetes-related complications, and have higher levels of neighborhood disadvantage.

8%

IMPROVEMENT IN GLUCOSE CONTROL AMONG PATIENTS WITH DIABETES

127%

IMPROVEMENT IN THE PRESCRIPTION OF NEWER CARDIOPROTECTIVE MEDICATIONS

Hypertension

UCPH has worked with subject matter experts in primary care, cardiology and pharmacy to provide leadership, expertise and data to improve blood pressure control. The workgroup identified that blood pressure control was lower in Non-Hispanic Black/African American patients compared to others, and this is now a focus of improvement work. In 2021, this collaborative effort established specific goals in blood pressure control. Each health center site designed specific interventions that resulted in a 40 percent improvement across important hypertension measures. More recently, a UC Way medication algorithm was developed for a standardized approach to hypertension treatment for all patients.

Another insight that emerged was that blood pressure readings in the office setting were not always obtained using established best practices. Best-practice techniques for accurate blood pressure measurements in the clinic have been identified and disseminated, and performance has improved. Home blood pressure readings are useful especially with telehealth integration of blood pressure measurement devices.

Cardiac Surgery

The Cardiac Surgery Division chairs and the database nurse coordinators from across UC Health comprise the UC Cardiac Surgery Consortium (UCCSC). UC academic health centers perform about 2,000 routine and complex cardiothoracic operations annually.

Advanced analytics and integration of clinical and cost data into comprehensive reports have provided significant insights into local and systemwide performance. UCCSC is using these insights to identify opportunities for improvement, monitor performance and health outcomes, and share ideas and best practices for implementing needed changes in practice.

UCCSC has reduced the cost of coronary artery bypass graft (CABG) surgery and has studied complications including new atrial fibrillation after an operation, re-operation, hours in the intensive care unit, blood transfusions and time on assisted ventilation. A systemwide focus also has resulted in improvements in CABG patients' time spent in hospital, as well as reduction in readmission to the hospital within 30 days of discharge.

40%

IMPROVEMENT ACROSS IMPORTANT HYPERTENSION MEASURES

2K

ROUTINE AND COMPLEX CARDIOTHORACIC OPERATIONS PERFORMED ANNUALLY BY UC

Medication Cost Management

UCPH is engaged with a highly dedicated group of UC clinical ambulatory pharmacists who have developed methods for the identification and targeting of opportunities to manage medication costs for both payers and patients, while maintaining access and quality. These pharmacists have created cost avoidance opportunities which have been implemented with significant impact. On a recurring annual basis, these efforts have resulted in $1 million in systemwide savings from transitioning retail prescriptions to lower-cost alternatives for self-funded plans.

UCPH is actively engaged in new medication initiatives to identify opportunities for team-based care strategies that integrate pharmacist expertise with usual clinical care in hypertension, diabetes, and expanded use of biosimilar drugs. UCPH also supports ongoing efforts targeted to other important quality metrics, such as medication adherence.

Advance Care Planning

UCPH has facilitated the work of the UC Health Care Planning Study, a five-year pragmatic research trial at UCLA, UCSF and UC Irvine with real-world implications for our UC health center care models. This work is supported by a grant from the Patient-Centered Outcomes Research Institute (PCORI). The study has enlisted leaders in advance care planning (ACP) and palliative care as well as clinicians, care teams and patients from each site to test scalable ACP interventions in primary care clinics and measure health outcomes, including ACP engagement and goal-concordant care.

Fifty UC primary care clinics have implemented these ACP interventions, which include physician education and electronic health record enhancements. Analysis of the health outcome measures is now underway, and key learnings and infrastructure developed throughout the study will be disseminated to all six UC academic health centers as a new best practice for ACP developed at UC.

Social Factors In Health Outcomes

Social determinants or drivers of health (SDOH) comprise socioeconomic factors that contribute to 50 percent or more of health outcomes.[8] UCPH has convened UC experts to identify best practices in social needs screening and in implementing a core set of domain and screening questions at all academic health centers, with the goal of collaborating on a common social care referral system.

In 2021, this SDOH workgroup selected food insecurity as the first domain for routine screening now underway at every UC health center. Recommendations for additional domains such as social isolation, financial strain, housing and

$1M

ANNUAL COST SAVINGS FROM TRANSITIONING TO LOWER-COST PRESCRIPTIONS

50

UC PRIMARY CARE CLINICS HAVE IMPLEMENTED ACP INTERVENTIONS

SDOH COMPRISE SOCIOECONOMIC FACTORS THAT CONTRIBUTE TO OVER

50%

OF HEALTH OUTCOMES

transportation are under development. Screening referrals are facilitated by FindHelp, selected by the workgroup as the preferred platform (and one that can be integrated into UC's electronic health records) to expedite connections with community-based organizations.

> *UCPH has convened UC experts to identify best practices in social needs screening and in implementing a core set of domain and screening questions at all academic health centers, with the goal of collaborating on a common social care referral system.*

Cancer Care

To understand the extent of cancer care in patients across all UC health centers, UCPH developed a UC systemwide cancer registry and related dashboards that are crucial to the work of the UC Cancer Consortium (UCCC). The UCCC comprises UC's five National Cancer Institute-designated Comprehensive Cancer Centers, collaborating to fight cancer and optimize care. The registry and dashboards have served as the foundation for the UCCC Quality Council and academic health centers' efforts to identify interventions to reduce post-chemotherapy hospital admissions, and to secure funding for national quality training provided by the American Society of Clinical Oncology.

UCPH currently is working with the UC Cancer Consortium on development of best practices that improve advance care planning and support accountable care and affordability in the UC Oncology Medical Home Initiative. These efforts also are designed to yield insights into variations in care utilization and disparities in cancer care.

Preventive Services

UCPH convenes the leaders of the six UC ambulatory influenza vaccine programs each year to assess variation in implementation strategies and vaccination rate performance across UC Health, and plan for the upcoming flu season. UCPH facilitates sharing best practices and challenges as well as planned strategies for outreach, employees, specialty care and hospitals. Similar efforts to improve performance of Pneumococcal, Zoster and Tdap vaccinations were recently added. Additional preventive services such as colorectal cancer screening will be added over time.

UC Epic Electronic Health Record (EHR) Integration Task Force

With the significant increase in use of remote monitoring, particularly for home blood pressure readings, UCPH convened a group of clinical and technical subject matter experts to provide recommendations for implementing remote blood pressure monitoring for hypertension management. Fifteen subject matter experts from across the UC system presented, discussed and agreed on best-practice recommendations to support a remote blood pressure monitoring program to be launched systemwide. Today, five UC academic health centers have initiated or completed those recommendations. Members of the task force are prepared to serve as subject matter experts for other remote monitoring initiatives.

UC Self-Funded Health Plans

UCPH has partnered with the UC Self-Funded Health Plans team to identify data-driven insights to improve the clinical and financial performance in these plans offered to UC employees. This UC Care Workgroup collectively gained a greater understanding of how UC academic health centers handle patients enrolled in the UC self-funded health plans, including inpatient management, ambulatory care coordination and emergency department use.

This group's efforts enabled tracking of nearly 50 strategies and identification of best practices for improving employee health outcomes while avoiding unnecessary services and associated costs. These efforts now have been combined with the Coordination of Patient Care initiative.

Coordination of Patient Care

This UCPH initiative aims to develop a systemwide infrastructure to discover best practices and models to improve coordination of care across all payers. Focus areas include common care coordination and care management models, common reporting (such as organizational structure, empanelment, staffing and adoption of specific care programs), and common process metrics as well as strategies to improve those metrics. This collaboration also serves to identify disparities and advance health equity in care coordination.

50

STRATEGIES AND IDENTIFICATION OF BEST PRACTICES DEVELOPED THROUGH THE UC CARE WORKGROUP

Data-driven Action

Effective population health management requires ongoing monitoring of KPIs. UCPH partners with CDI2 to develop robust comparative dashboards that provide actionable population health data and insight such as understanding utilization, clinical quality and costs. UCPH has defined cohorts in primary care, hypertension, diabetes, cancer, employee health plans and advanced illness. Cohort data can be further disaggregated by social vulnerability index, race/ethnicity, age, language, gender and predicted high risk.

Figure 1: Population Health Patient Explorer

943,758 PATIENTS AS OF JUNE 30, 2023

Patients per Location

Total Patients	943,758

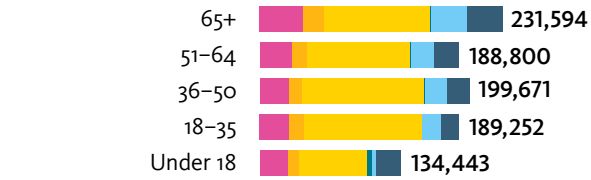
Patient Category

Primary Care	837,479
Hypertension	100,140
Diabetes	51,740
Oncology Medical Home	110,270
Advanced Illness	27,957
Blue & Gold HMO	62,561
UC Care PPO	15,324

Language

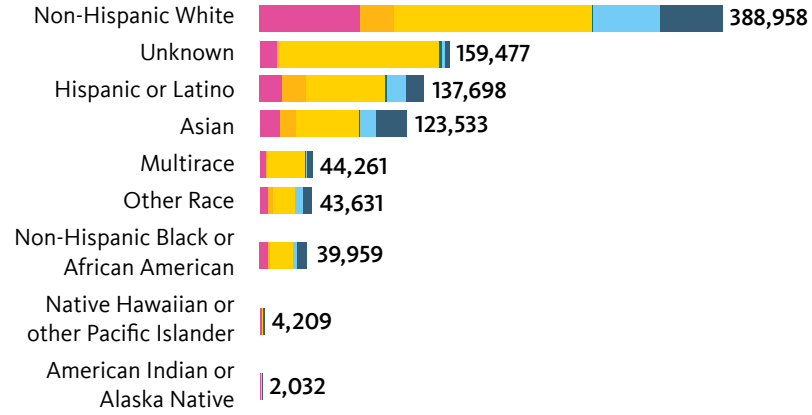
English	897,676
Spanish	21,351
Other Languages	20,688
Unknown	4,043

Age Group

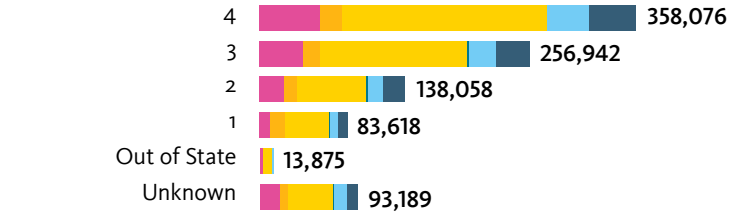


Gender

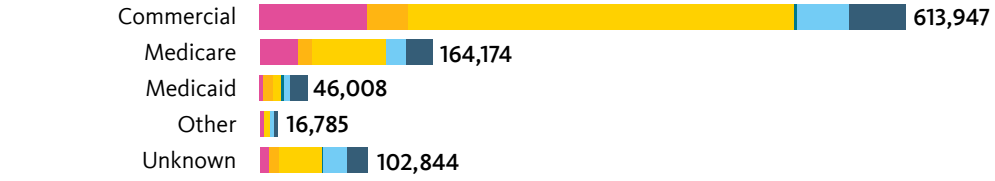
Race/Ethnicity

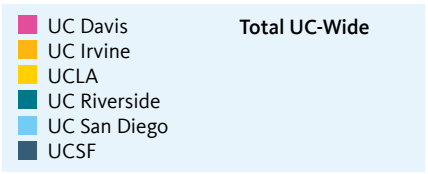


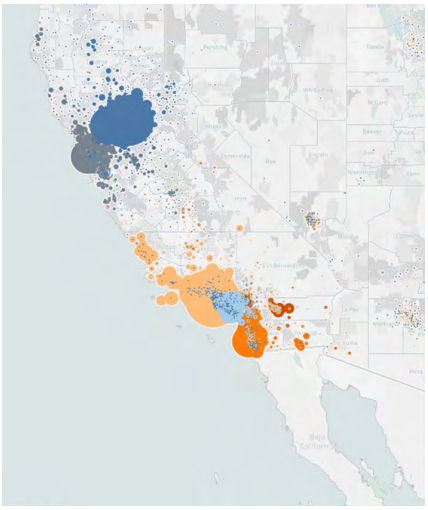
Social Vulnerability Index (4 indicates least vulnerable)



Financial Class







Location of the UC Primary Care patient population by home zip code

Figure 2: Diabetes Cohort – Newer Cardioprotective Medications Scorecard

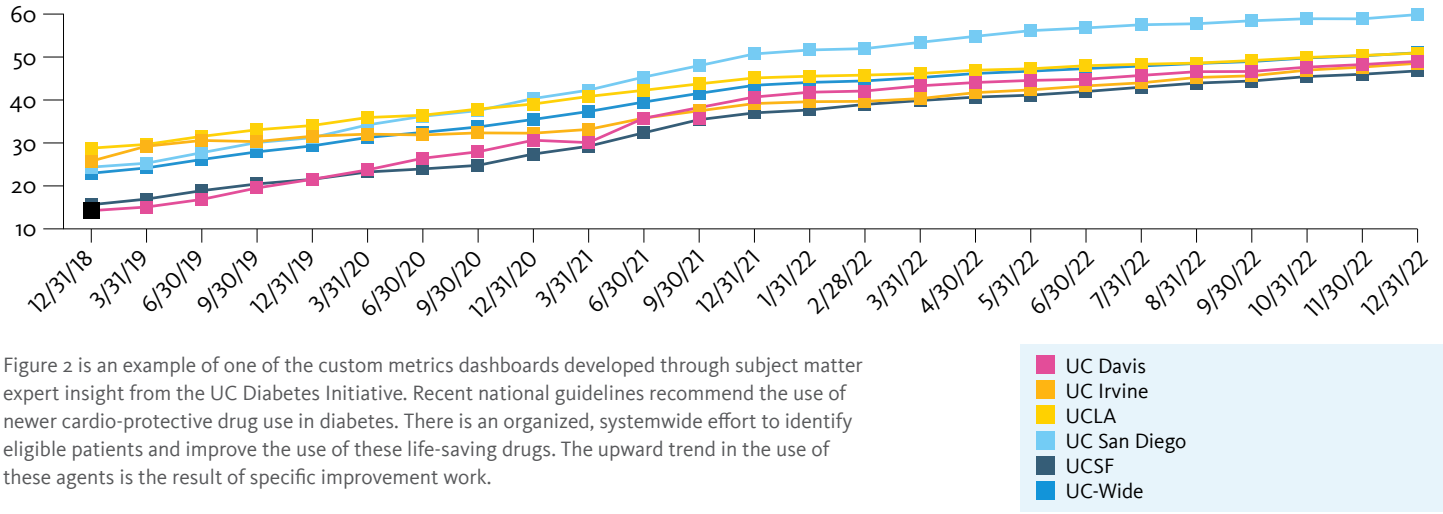


Figure 2 is an example of one of the custom metrics dashboards developed through subject matter expert insight from the UC Diabetes Initiative. Recent national guidelines recommend the use of newer cardio-protective drug use in diabetes. There is an organized, systemwide effort to identify eligible patients and improve the use of these life-saving drugs. The upward trend in the use of these agents is the result of specific improvement work.

These dashboards provide a holistic view of population health so we can identify patients in need of care management or health care interventions. The Patient Explorer dashboard (Fig. 1) provides patient counts and allows segmentation by demographics, social indexes and risk prediction across our defined populations. The analytics platform includes the integration of commercial benchmarks to target high-cost areas and high-need populations and identify lower-cost drug alternatives. UCPH sponsors more than 50 analytic dashboards to support systemwide initiatives, identify variation and monitor improvement over time.

Watching for change

A change in a performance metric does not always indicate that a meaningful improvement (or decline) has taken place. It may simply be ordinary day-to-day variation (also known as common cause variation).

UCPH has adopted an approach that includes the use of statistical process control (SPC) charts and engages UC experts in the use of SPC charts (Fig. 3) to better understand, manage and prioritize variations for investigation. By using SPC charts in our work, common cause and special cause variations are easily seen. Common cause variation suggests that improvement work should focus on the entire system of care, not the day-to-day changes in the data. A special cause variation suggests an opportunity to drill down and learn what was "special" about that data, and adopt a best practice or eliminate poor practices. UCPH has collaborated with CDI2 to routinely incorporate these SPC chart visualization techniques into UCPH dashboards.

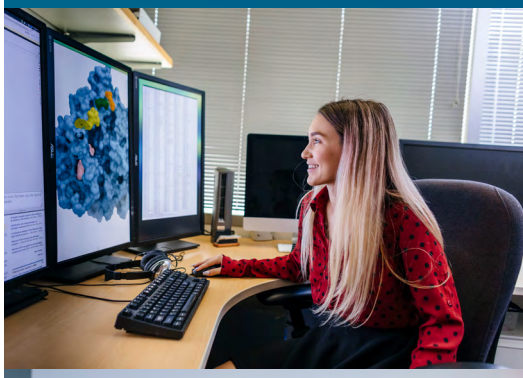
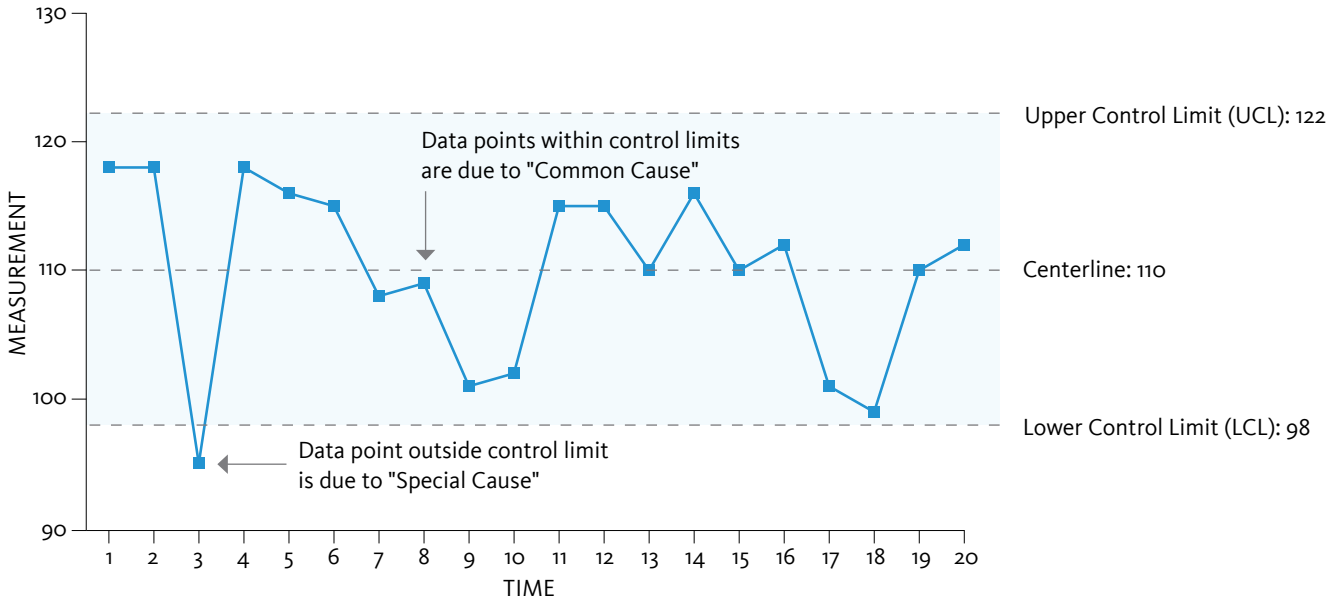


Figure 3: Statistical Process Control Chart



Finding new insights in statistics

Moira Inkelas, Ph.D., M.P.H., is professor of health policy and management in the UCLA School of Public Health and co-lead of the population health program in the UCLA Clinical and Translational Science Institute. She studies improvement in health and human service organizations and has led national and regional learning networks to improve care.

With guidance from Dr. Inkelas, UCPH has applied the use of statistical process control charts to study variation in UC academic health centers' data. Dr. Inkelas explains, "By taking systemwide data and disaggregating it, we're able to see patterns in the behavior of clinical processes and systems and begin to understand them. This is the first step toward identifying actions that can be taken in clinical practice to increase equity in care, drive better patient outcomes and deliver value."

Supported by Dr. Inkelas and national expert Lloyd Provost, this approach to data-driven insights is now being developed into a best practice that will support UC population health initiatives and become integrated into UC academic health centers' curricula.

UCPH has adopted an approach that includes the use of statistical process control (SPC) charts and engages UC experts in the use of SPC charts to better understand, manage and prioritize variations for investigation.

A Roadmap to the Future

UCPH's experiences, accomplishments to date and partnerships across UC Health lay the foundation for expansion of our improvement work.

A key priority will be growing our set of systemwide population health metrics with a focus on those needed for value-based contracts, including metrics related to utilization of resources, chronic disease, preventive care, behavioral and maternal health and the patient experience. Alignment between local and systemwide priorities, goals and initiatives will be essential for maximum impact.

UCPH will continue working toward the goal of enabling all populations to experience the highest standard of health, and we will continue to engage health services researchers and health equity leaders in our work to advance health equity across UC.

UCPH also will support UC Health in preparation for the future of health care that will require increased attention to accountability, financial management and action to improve health outcomes. Anchored in our strategic objectives and priorities, this support includes encouraging participation in alternative payment models and risk-based contracts.

In our unwavering spirit of collaboration and innovation, we will further partnerships with our UC academic health centers' leadership and clinical experts to advance discovery and dissemination of world-class care that is driven by value and includes all people in our communities.

Population & Contract-Based Performance Measures: Systemwide Metrics Roadmap

2020–2023

CHRONIC DISEASE
Blood pressure control in all patients
Optimal diabetes care
Cardioprotective drug use in patients with diabetes
Eye Exams in patients with Diabetes

HEALTH EQUITY
Blood pressure control in NHB patients
Glucose control in Hispanic patients

COST UTILIZATION/LOW VALUE CARE
Emergency visits
Hospital admissions

PREVENTION/SCREENING
Vaccinations: Flu, Pneumococcal, Zoster, Tdap

PATIENT EXPERIENCE/CLINICAL OPERATIONS
Advance care planning

Future Foci

CHRONIC DISEASE*

HEALTH EQUITY*

COST UTILIZATION/LOW VALUE CARE*
Avoidance of antibiotics for acute bronchitis/bronchiolitis

PREVENTION/SCREENING*

PATIENT EXPERIENCE/CLINICAL OPERATIONS
MD-patient communication, office staff, access & overall ratings

MATERNAL HEALTH
Post partum follow-up: depression and blood pressure

BEHAVIORAL HEALTH*

EXPAND THE POPULATIONS WE SERVE*

*Focus TBD

Appendix

UC Population Health: People and Organization

UC Population Health Steering Committee

Samuel A. Skootsky
Chief Population Health Officer, UC Health & Chief Medical Officer UCLA Faculty Practice Group and Medical Group, UCLA

Gina Shuler
Vice President and Chief Population Health Officer, UCSF

Reshma Gupta
Chief of Population Health and Accountable Care, UC Davis

Lisa Gibbs
Medical Director, Population Health, Interim Chair, Family Medicine, UC Irvine

Parag Agnihotri
Chief Medical Officer, Population Health Services, UC San Diego

Timothy J. Collins
(Interim)
Chief Executive Officer, UC Riverside

Rachael Sak
(Ex-Officio)
Director, Population Health, UC Health

Laura Tauber
(Ex-Officio)
Executive Director UC Self-funded Health Plans

UC Population Health Team

Maricel Cabrera
Program Analyst
UC Health

Nicole Friedberg
Population Health Specialist
UC Health

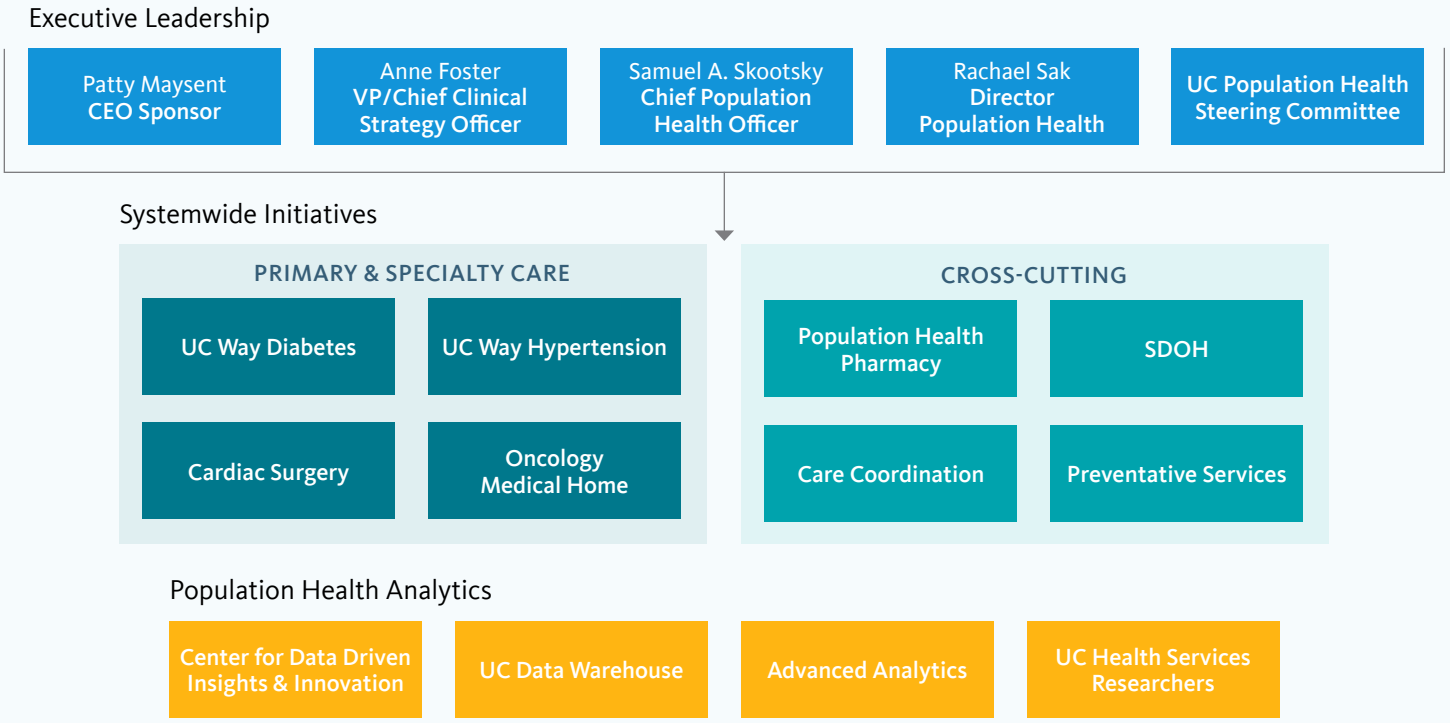
Ellen Lenzi
Executive Assistant
UC Health

Natalie Nguyen
Population Health Specialist
UC Health

Rachael Sak
Director
UC Health

Samuel A. Skootsky
Chief Population Health Officer
UC Health

UC Population Health Organizational Structure



UC Academic Health Center Partners

UC CARE

Parag Agnihotri, UC San Diego Health
Michael Alvarado, UC San Francisco Health
Katya Avakian, UC Los Angeles Health
Jeff Berg, UC Davis Health
Victoria Eberle, UC Davis Health
Reshma Gupta, UC Davis Health
Eileen Haley, UC San Diego Health
Michael Helle, UC San Francisco Health
Natalie Maton, UC Irvine Health
Georgia Mcglynn, UC Davis Health
Sarah Meshkat, UC Los Angeles Health
Danny Raices, UC San Francisco Health
Naveen Raja, UC Los Angeles Health
Matthew Steinwert, UC Davis Health
Henrietta Tran, UC San Francisco Health

UC WAY DIABETES INITIATIVE

Justin Bouw (Past Lead), UC San Diego Health
Matthew Freeby (Lead), UC Los Angeles Health
Maria Han (Lead), UC Los Angeles Health
Sarah Kim (Lead), UC San Francisco Health
Teja Kompala (Past Lead), UC San Francisco Health
Katie Medders (Lead), UC San Diego Health
Robert Mowers (Past Lead), UC Davis Health
Christine Thorne (Lead), UC San Diego Health
Nicole Appelle, UC San Francisco Health
Katya Avakian, UC Los Angeles Health
Susan Baer, UC Irvine Health
Sarah Bajorek, UC Davis Health
Sally Baxter, UC San Diego Health
Jennifer Chen, UC Davis Health
Mackenzie Clark, UC San Francisco Health
Cathy Deimke, UC Davis Health
Allison Elder, UC Davis Health
Lisa Gibbs, UC Irvine Health
Reshma Gupta, UC Davis Health
Corinne Hajjar, UC San Diego Health
Panteha (Pawny) Kelly, UC San Diego Health
Alex Kokaly, UC Los Angeles Health
Lisa Kroon, UC San Francisco Health
Kristen Kulusa UC San Diego Health
Sylvia Lambrechts, UC Los Angeles Health
Heather Leisy, UC Davis Health
Rebecca Leon, UC San Francisco Health
Heather Martin, UC Davis Health
Sarah Meshkat, UC Los Angeles Health
Charlene Miranda-Wood, UC Irvine Health
Cassandra Morn, UC San Diego Health
Aaron Neinstein, UC San Francisco Health
Michael Nies, UC San Diego Health
Terrye Peterson, UC Irvine Health
Naveen Raja MD, UC Los Angeles Health
Ayelet Ruppin, UC San Diego Health
Gabrielle Salter, UC Davis Health
Jonathan Schouest, UC San Diego Health
Joann Seibles UC Davis Health
Rupal Shah, UC Los Angeles Health
Russell Shimada, UC San Diego Health
Prasanth Surampudi UC Davis Health
Tiffany Vo, UC Irvine Health
Shirley Wong, UC San Francisco Health
Glenn Yiu, UC Davis Health

UC POPULATION HEALTH PHARMACY GROUP

Katie Medders (Lead), UC San Diego Health
Jason Bailly, UC San Diego Health
Justin Bouw, UC San Diego Health
Julianna Burton, UC Health
Mackenzie Clark, UC San Francisco Health
Chuck Daniels, UC San Diego Health
Brian Davis, UC Health
Lisa M. Gibbs, UC Irvine Health
John Grubbs, UC Health
Tatyana Gurvich, UC Irvine Health
Gary Hagney, UC San Diego Health
Natalie Halanski, UC San Diego Health
Eileen Haley, UC San Diego Health
Fon Hokanson, UC San Diego Health
Rebecca Leon, UC San Francisco Health
Robert Mowers, UC Davis Health
Naveen Raja, UC Los Angeles Health
Rupal Shah, UC Los Angeles Health
Candy Tsourounis, UC San Francisco Health
Jeff Wajda, UC Davis Health

UC POPULATION HEALTH PHARMACY: RTPB TASK FORCE

Ash Khan Ara, UC Los Angeles Health
Sarah Bajorek, UC Davis Health
Kristina Borja, UC Irvine Health
Surafiel Eric Bush, UC Davis Health
Melissa Chen, UC San Francisco Health
Eric Cheng, UC Los Angeles Health
Mackenzie Clark, UC San Francisco Health
Noe Gutierrez, UC Davis Health
Trina Huynh, UC San Diego Health
Clayton Kelly LaValley, UC Davis Health
Nicole Ling, UC San Francisco Health
Ryan Lund, UC San Francisco Health
Katie Medders, UC San Diego Health
Marlene Millen, UC San Diego Health
Mark Moubarek, UC Davis Health
Deepti Pandita, UC Irvine Health
Danielle Perret, UC Irvine Health
Naveen Raja, UC Los Angeles Health
Rupal Shah, UC Los Angeles Health
Emil Treige, UC Los Angeles Health
Quynh Trinh, UC San Diego Health
RoShawnda Willingham, UC Los Angeles Health

UC WAY HYPERTENSION INITIATIVE

Samuel Skootsky (Lead), UC Los Angeles Health
Parag Agnihotri, UC San Diego Health
Quanna Batiste-Brown, UC Los Angeles Health
Clare Connors, UC San Francisco Health
Ally Elder, UC Davis Health
Lisa Gibbs, UC Irvine Health
Mark Grossman, UC Los Angeles Health
Kevin Grumbach, UC San Francisco Health
Reshma Gupta, UC Davis Health
Allen D. Hall, UC Los Angeles Health
Maria Han, UC Los Angeles Health
Anthony Jerant, UC Davis Health
Andrew Jones, UC Davis Health
Sandeep Kishore, UC San Francisco Health
Chris Kroner, UC Irvine Health
Hannah J. Kwak, UC Los Angeles Health
Bj Lagunday, UC Davis Health
Sylvia Lambrechts, UC Los Angeles Health
Helen Lau, UC Riverside Health
Heather Leisy, UC Davis Health
Ottar Lunde, UC San Diego Health
Mary Martin UC San Francisco Health
Heather Martin, UC Davis Health
Mary Martin, UC San Francisco Health
Chidinma Chima-Melton, UC Los Angeles Health
Sarah Meshkat, UC Los Angeles Health
Cassandra Morn, UC San Diego Health
Maryam Rahimi, UC Irvine Health
Ajit Raisinghani, UC San Diego Health
Ben Gregory Rasmussen, UC Davis Health
Gabrielle Salter, UC Davis Health
Matthew Satre, UC San Diego Health
Kaumaka Shimatsu, UC Davis Health
Padmini Varadarajan, UC Riverside Health
Nghe Yang, UC San Francisco Health

UC WAY HTN: MEDICATION USE SUBGROUP

Sunny Kishore (Lead), UC San Francisco Health
Heather Martin (Lead), UC Davis Health
Connie Abdo, UC Irvine Health
Surabhi Atreja, UC Davis Health
Peter Barakat, UC Los Angeles Health
Nana Entsuah, UC Irvine Health
Natalie Halanski, UC San Diego Health
Hannah Kwak, UC Los Angeles Health
Rebecca Leon, UC San Francisco Health
Ottar Lunde, UC San Diego Health
Mina M. Malaak, UC Los Angeles Health
Katie Medders, UC San Diego Health
Chidinma Chima-Melton, UC Los Angeles Health
Neeki Mirkhani, UC Los Angeles Health
Cassandra Morn, UC San Diego Health
Maryam Rahimi, UC Irvine Health
Ben Rasmussen, UC Davis Health
Shirley Wong, UC San Francisco Health

ADVANCE CARE PLANNING

Neil Wenger (Lead), UC Los Angeles Health
Alpesh Amin, UC Irvine Health
Jamie Anand, UC Irvine Health
Doug Bell, UC Los Angeles Health
Anna Chirra, UC Los Angeles Health
Elizabeth Cray, UC Los Angeles Health
Mary Ezzat, UC Irvine Health
Lisa Gibbs, UC Irvine Health
Victor Gonzalez, UC Los Angeles Health
Karen Grimley, UC Los Angeles Health
Maria Han, UC Los Angeles Health
Ron Hays, UC Los Angeles Health
Sylvia Lambrechts, UC Los Angeles Health

Brookelle Li, UC San Francisco Health
G. Rick Marshall, UC Irvine Health
Lindsay Paguyo, UC Irvine Health
Kanan Patel, UC San Francisco Health
Christopher Pietras, UC Los Angeles Health
Maryam Rahimi, UC Irvine Health
Andrew Robinson, UC San Francisco Health
Christopher Saigel, UC Los Angeles Health
Katherine Santos, UC Los Angeles Health
Javier Sanz, UC Los Angeles Health
Mike Sloyan, UC Los Angeles Health
Rebecca Sudore, UC San Francisco Health
Chi-Hong Tseng, UC Los Angeles Health
Aiesha Volow, UC San Francisco Health
Anne Walling, UC Los Angeles Health

CARDIAC SURGERY CONSORTIUM

Richard Shemin (Lead), UC Los Angeles Health
Peyman Benharash, UC Los Angeles Health
Carolyn Clary, UC San Francisco Health
Jill Higgins, UC San Diego Health
Lori-Anne Jasmund, UC San Diego Health
Bob Kiaii, UC Davis Health
Michael Madani, UC San Diego Health
Grace Montejo, UC Irvine Health
Tom Nguyen, UC San Francisco Health
Nancy Satou, UC Los Angeles Health
Ritu Karki Sitaula, UC Davis Health
Alyssa Shannon, UC Davis Health
Jack Sun, UC Irvine Health,

CANCER QUALITY COUNCIL

Kathryn Gold (Lead), UC San Diego Health
Debra Burgess, UC Davis Health
Laura Crocitto, UC San Francisico Health
Emad Elquza, UC Irvine Health
Barbara Jagels, UC Los Angeles Health
Emi Kamiya, UC Los Angeles Health
Jennifer Valerin, UC Irvine Health
Brinda Venkatesh, UC San Francisico Health
Maki Yamamoto, UC Irvine Health

SDOH

Matt Pantell (Lead), UC San Francisico Health
Naveen Raja (Lead), UC Los Angeles Health
Jamie Anand, UC Irvine Health
Nancy Calderon, UC Los Angeles Health
Marcos Garcilazo Figueroa, UC Davis Health
Lisa Gibbs, UC Irvine Health
Alicia Gonzales, UC Davis Health
Reshma Gupta, UC Davis Health
Victoria Harris, UC San Diego Health
Michael Helle, UC San Francisico Health
Gene Kallenberg, UC San Diego Health
Kussy Mackenzie, UC San Diego Health
Vanessa McElroy, UC Davis Health
Georgia McGlynn, UC Davis Health
Niki Miller, UC Los Angeles Health
Ryan Peck, UC Davis Health
Kathleen Rice, UC San Diego Health
Sujatha Sankaran, UC San Francisico Health
Amy Sitapati, UC San Diego Health

UC SYSTEMWIDE EPIC TASK FORCE

Lindsay Brooker, UC Los Angeles Health
Kimberly Chen, UC Los Angeles Health
Eric Cheng, UC San Francisico Health
Matthew Eichinger, UC Irvine Health
Lisa Gibbs, UC Irvine Health
Natalie Hashizaki, UC Irvine Health
Heather Hitson, UC Los Angeles Health
Tim Judson, UC Davis Health
Deidre Keeves, UC Los Angeles Health
Jonathan Lee, UC San Francisico Health
Clara Lin, UC Los Angeles Health
Ottar Lunde, UC San Diego Health
Ryan Peck, UC Davis Health
Rose Rivera, UC Irvine Health
Julie Roussea, UC Irvine Health
Kaumaka Shimatsu, UC Davis Health
Steven Tam, UC Irvine Health
Jeff Wajda, UC Davis Health
Ben Waterman, UC Los Angeles Health
Jeffrey Pan, UC San Diego Health

CARE COORDINATION

Michael Helle (Lead), UC San Francisico Health
Elizabeth Jaureguy (Lead), UC Los Angeles Health
Melissa Day, UC Davis Health
Ally Elder, UC Davis Health
Mary Ezzat, UC Irvine Health
Lisa Gibbs, UC Irvine Health
Reshma Gupta, UC Davis Health
Eileen Haley, UC San Diego Health
Bj Lagunday, UC Davis Health
Natalie Maton, UC Irvine Health
Vanessa Mcelroy, UC Davis Health
Andrea Quinonez, UC Davis Health

REMOTE BLOOD PRESSURE MONITORING PROJECT

Catherine Sarkisian (Lead), UC Los Angeles Health
Linda Branagan, UC San Francisco Health
Jeff Borenstein, UC Los Angeles Health
Therese Chan Tack, UC San Francisco Health
Matt Chenoweth, UC Los Angeles Health
Chidinma Chima-Melton, UC Los Angeles Health
Linh Chuong, UC Los Angeles Health
Miguel Cuevas, UC Los Angeles Health
Reshma Gupta, UC Davis Health
Maria Han, UC Los Angeles Health
Hannah Kwak, UC Los Angeles Health
David Lee, UC Los Angeles Health
Heather Martin, UC Davis Health
Linda Phan, UC Davis Health
Kaumakaokalani Shimatsu, UC Davis Health
Sitaram Vangala , UC Los Angeles Health
Chad Villaflores, UC Los Angeles Health

UC Population Health Charter

OUR STRATEGIC GOAL

To advance value-based care delivery, improve patient outcomes, reduce health disparities, and reduce per capita cost of care by providing leadership and support in the development and implementation of data-driven, systemwide improvement efforts in population health management.

DESCRIPTION

The UC Population Health Steering Committee provides guidance and oversight for the development of accountable care and value-based models that improve the patient experience and health outcomes at UC.

RESPONSIBILITIES

- Drive the systemwide strategy for population health, accountable care and value-based models that improve patient experience and health outcomes.
- Promote UC Health as exemplar for implementation, education and research in population health management and accountable care programs.
- Provide internal and external visibility to UC Health's strategic commitment to the implementation and advancement of population health management and advanced delivery models.
- Support population health efforts for commercial health plans and government payers that address external and regulatory deliverables.
- Inform and support contracting strategy related to population-based contracts.
- Partner with UC Self-Funded Health Plans to design and implement data-driven strategies to improve value-based care for our employees.
- Bridge efforts across campuses, specialties and networks to deliver efficient care to market.
- Support UC academic health centers transformation to succeed in accountable care and value-based models.
- Provide strategic oversight and support for systemwide working groups and work streams.
- Review project portfolios, status updates, timelines and accomplishments from Executive and Business Sponsors.
- Maintain necessary analytic, program management and other resource capabilities to understand performance, derive insights from data, provide feedback to stakeholders, and support improvement work to drive change.
- Assure resources are directed toward projects that meet the strategic goals of UC Health.

Meeting Schedule & Committee Expectations

- The Population Health Steering Committee shall meet monthly via videoconference for one hour and in-person three times a year. The meeting frequency and duration may increase based on need.
- Attendees will engage in active decision-making to advance strategic goals and collaborate with existing UCH governance structures and functions to remain aligned with business drivers.

Administrative & Reporting Requirements

The Population Health Steering Committee shall report to the CEO Sponsor and VC/CEOs of the UC academic health centers on its activities and recommendations.

Composition

The Population Health Steering Committee shall include, but is not limited to:

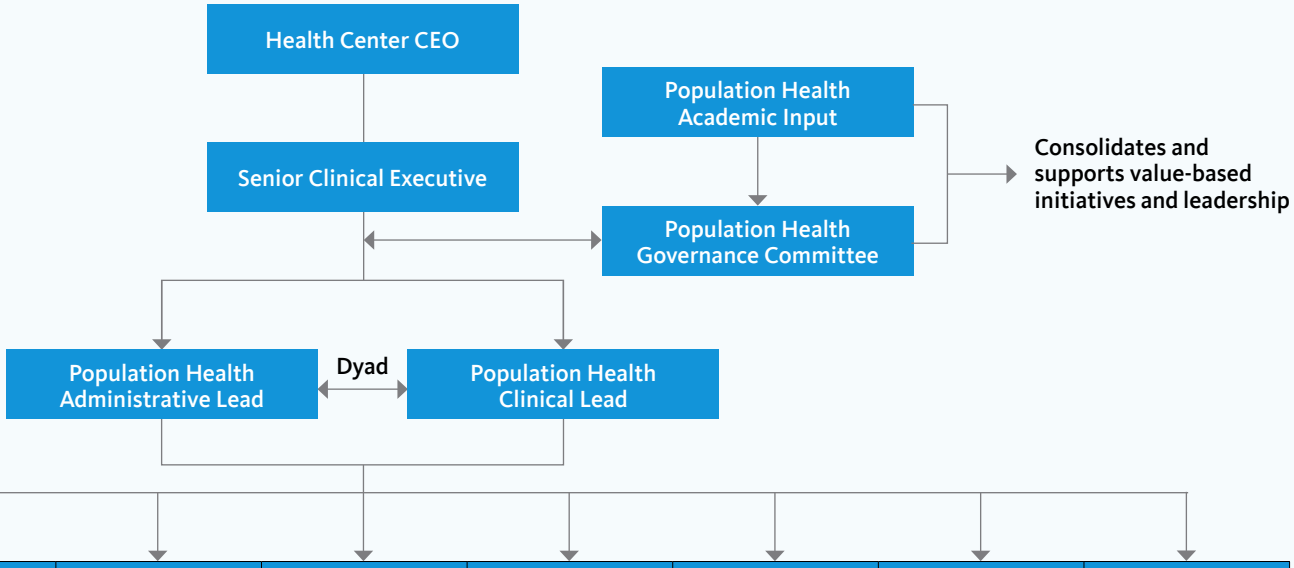
- CEO-appointed clinical population health lead from each location
- Lead population health administrator from each location

Charter Review & Modification

The Population Health Steering Committee shall review the charter on an annual basis and recommend changes to leadership.

Organizational Model for Population Health Capabilities

UCPH has developed a recommended template for organizing population health capabilities at UC academic health centers. This has been helpful at a local level to inform development.



Utilization Management/ Cost Infrastructure	Informatics Analytics	Care Management	Population Health Quality Metrics	Disease-Specific Clinical Programs	Correct Diagnosis Identification	Population Health Administration
CAPABILITIES						
• Site of care optimization • Network management (Professional, Post-acute, ASC, etc.) • Care at home • Durable medical equipment	• Data warehousing • Analytics • Predictive modeling • Reporting • Epic EMR optimization	• Medical home • Care coordination • Complex care management • Care transitions • Advance care planning/ Palliative care • Pharmacy management • Technology-enabled care	• Pay for Performance • State & federal quality programs (e.g., Prime, QIP, MIPS, STAR) • Metrics development	• Behavioral health • Cancer • Diabetes • CKD & ESRD • CHF • COPD	• Diagnosis code risk adjustment system (RAF) • Clinical documentation • Care management coding	• Health system strategy finance, policy & contracting • Contract management • Payer & community relationships • Clinician engagement

Endnotes

1 AHA Center for Health Innovation. (July 7, 2022) **Population Health Management.** https://www.aha.org/center/population-health-management Accessed 8 Jul. 2022.

2 Health Care Payment Learning & Action Network. (November 9, 2022) **Measuring Progress: Adoption of Alternative Payment Models in Commercial, Medicaid, Medicare Advantage, and Traditional Medicare Programs.** https://hcp-lan.org/apm-measurement-effort/2022-apm/ Accessed May 11, 2023.

3 Swain, G.R. (Fall/Winter 2016–17) **How does economic and social disadvantage affect health? Focus. Institute for Research on Poverty.** *Institute for Research on Poverty, University of Wisconsin-Madison, Vol. 33, No. 1, 1–6.* https://www.irp.wisc.edu/publications/focus/pdfs/foc331a.pdf Accessed July 8, 2022.

4 Health Promotion International, Oxford Academic. (June 1, 2014) **Health in All Policies (HiAP) framework for country action.** Volume 29, Issue suppl_1, June 2014, Pp. i19-i28. https://academic.oup.com/heapro/article/29/suppl_1/i19/646334. Accessed July 8, 2022.

5 Oxford Academic. (June 1, 2014) **Health in All Policies (HiAP) Framework for Country Action.** *Health Promotion International, Vol. 29, Issue suppl_1, Pp. i19–i28.* https://academic.oup.com/heapro/article/29/suppl_1/i19/646334. Accessed July 8, 2022.

6 American Medical Association. (2016) **AMA Code of Medical Ethics Opinion 11.1.2 Physician Stewardship of Health Care Resources.** https://code-medical-ethics.ama-assn.org/ethics-opinions/physician-stewardship-health-care-resources. Accessed July 3, 2023.

7 Agency for Healthcare Research and Quality. (June 2011) **Coordinating Care in the Medical Neighborhood: Critical Components and Available Mechanisms White Paper.** https://www.ahrq.gov/sites/default/files/wysiwyg/ncepcr/tools/PCMH/coordinating-care-in-the-medical-neighborhood-white-paper.pdf. Accessed July 3, 2023.

8 Health Promotion International, Oxford Academic. (June 1, 2014) **Health in All Policies (HiAP) framework for country action.** Volume 29, Issue suppl_1, June 2014, Pp. i19-i28. https://academic.oup.com/heapro/article/29/suppl_1/i19/646334. Accessed July 8, 2022.cit.

Grants/Awards

The UC Health Planning Study

Host Campus: UCLA Los Angeles

Collaborating Sites: UC Irvine, UCSF

Lead Investigator: Neil Wenger, M.D., M.P.H.

Award Program: Patient-Centered Outcomes Research Institute (PCORI)

Start Date: 2018

End Date: 2023

Amount: $8,400,000

The Collaborative UC Teleophthalmology Initiative (CUTI) for Diabetic Retinopathy Screening

Host Campus: UC Davis

Collaborating Sites: UCLA, UC San Diego, UCSF

Lead Investigator: Glenn Yiu, M.D. Ph.D.

Award Program: UC Multicampus Research Programs and Initiatives (MRPI)

Start Date: January 1, 2023

End Date: December 31, 2027

Amount: $2,000,000

Publications

1. Oronce, C., Mafi, J., Pablo, R., Sorensen, A., Patel, A., Dahm, L., Skootsky, S., Sak, R., Sarkisian, C. (2021) **Identifying Low-Value Care Across a Statewide Health System: Collaboration Between Quality, Population Health, Informatics, and Health Services Research.** *Journal of Clinical and Translational Science.* 5. 1-2. DOI: 10.1017/cts.2021.720.
2. Verma, A., Sanaiha, Y., Hadaya, J., Maltagliati, A.J., Tran, Z., Ramezani, R., Shemin, R.J., Benharash, P., and the University of California Cardiac Surgery Consortium. (2022) **Parsimonious machine learning models to predict resource use in cardiac surgery across a statewide collaborative.** *The Journal of Thoracic and Cardiovascular Surgery Open.* DOI: 11:214–228.
3. Baxter, S., Chen, J.S., Freeby, M., Han, M., Kulasa, K., Lin, M.C., Nudleman, E., Stewart, J., Thorne, C., Yiu, G. (2023) **Barriers to Implementation of Teleretinal Diabetic Retinopathy Screening Programs Across the University of California.** *Journal of Telemedicine and E-Health.* DOI: 10.1089/tmj.2022.0489.
4. Lee, D.R., Chenoweth, M., Chuong, L.H., Villaflores, C.W., Cuevas, M., Vangala, S., Borenstein, J., Kwak, H., Chima-Melton, C., Han, M., Skootsky, S.A., Chan Tack, T., Branagan, L., Martin, H., Gupta, R., Phan, L., Sanchez, M.A., Malaak, M., Dermenchyan, A., Pearson, K.N., Altunyam, M., Barakat, P.F., Pablo, R., Sarkisian, C. (2023) **Protocol for a multi-site electronic health record integrated remote monitoring intervention for hypertension improvement: a randomized pragmatic quality improvement study.** *Journal of Medical Internet Research.* This paper has been accepted and is currently in production. It will appear shortly on 10.2196/45915.
5. Narain K, Moreno G, Bell D, Chen L, Tseng C, Follett R, Skootsky, S, Mangione, M., **Evaluation of a Pharmacist-led Diabetes Control Intervention and Health Outcomes in Hispanic Patients with Diabetes.** JAMA Network Open. In Press.

Abstracts/Poster Presentations

1. Kompala, T., Cabrera, M., Christian, M.J., Lambrechts, S., Mowers, R.M., Sak, R. for the University of California Diabetes Initiative Group. University of California Diabetes Initiative: **A Multi-Institution Collaboration to Improve Diabetes Care** [abstract/poster presentation]. In: American Diabetes Association 80th Scientific Sessions; June 12–16, 2020; Virtual Meeting.
2. Oronce, C., Mafi, J., Pablo, R., Sorensen, A., Patel, A., Dahm, L., Skootsky, S., Sak, R., Sarkisian, C. **Identifying Low-Value Care Across A Statewide Health System: Collaboration Between Quality, Population Health, Informatics, and Health Services Research** [abstract/poster presentation]. In: Association for Clinical and Translational Science (ACTS) Conference; March 30–April 2, 2021; Virtual Meeting. In: Society of General Medicine (SGIM) Annual Meeting; April 20–23, 2021; Virtual Meeting. In: Academy Health Annual Research Meeting; June 14–17, 2021; Virtual Meeting.
3. Narain, K.D., Patel, A., Skootsky, S., Mangione, C.M. **Exploring the Relationship Between Neighborhood Disadvantage and Racial Disparities in Hypertension Control among Primary Care Patients in a Large Academic Health System** [abstract/poster presentation]. In: Academy Health Annual Research Meeting; June 24–27, 2023; Seattle, WA. In: Interdisciplinary Association for Population Health Science (IAPHS) conference; October 2–5, 2023; Baltimore, MD.

4. Narain, K.D., Patel, A., Skootsky, S., Mangione, C.M. **Exploring the Relationship Between Medication Adherence and Racial/Ethnic differences in HbA1c Control Among Primary Care Patients in a Large Academic Health System** [abstract/poster presentation]. In: Academy Health Annual Research Meeting; June 24–27, 2023; Seattle, WA. In: Interdisciplinary Association for Population Health Science (IAPHS) conference; October 2–5, 2023; Baltimore, MD.
5. Narain, K.D., Moreno, G., Bell, D., Chen, L., Tseng, CH., Follett, R., Skootsky, S., Mangione, C.M. **A Pragmatic Evaluation of a Primary Care-embedded Clinical Pharmacist-Led Intervention Among Hispanic Patients with Diabetes** [abstract/podium presentation]. In: Academy Health Annual Research Meeting; June 24–27, 2023; Seattle, WA. In: Interdisciplinary Association of Population Health Sciences (IAPHS) conference; October 2–5, 2023; Baltimore, MD. In: Network of Minority Health Research Investigators (NMRI) Annual Workshop; April 19–24, 2023; Bethesda, MD.
6. Sanaiha, Y., Shemin R.J., Benharash, P., and the University of California Cardiac Surgery Consortium. **Redefining Optimal Extubation Times in Cardiac Surgery: Are the Current Standards Supported by Evidence?** [abstract/podium presentation]. In: Western Thoracic Surgical Association (WTSA) 48th Annual Meeting; June 21–24, 2023; Coeur d'Alene, ID.

UNIVERSITY
OF
CALIFORNIA
HEALTH

University of California Health
1111 Franklin Street
Oakland, CA 94612

universityofcalifornia.health

Published September 2023