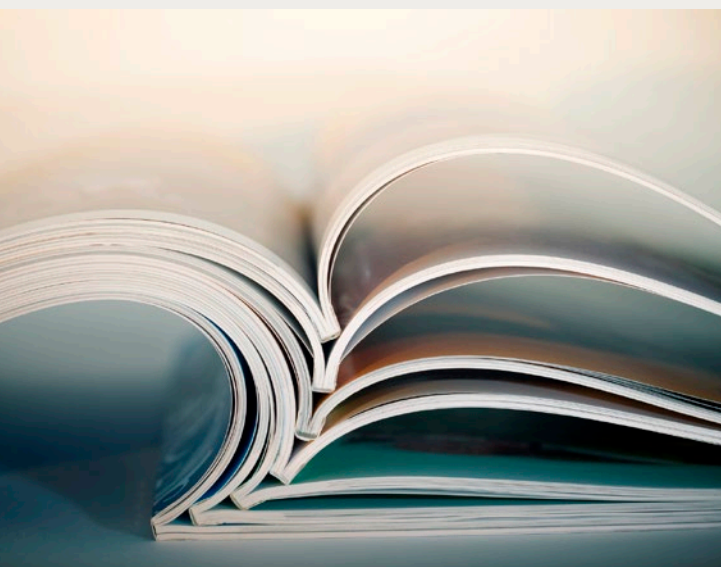


Making Comparative Effectiveness Research a Stronger, More Relevant Tool for Employers



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Introduction

Over the years, scientific and clinical research has focused mainly on the clinical impact and safety of treatments associated with pharmaceutical, procedural and surgical interventions. This research has supported the clinical and research community in continuously improving patient-centered outcomes. However, much of this research has not typically been designed for, or used by, employers and other healthcare stakeholders. Employers, who provide coverage for more than 180 million Americans, play a major role in influencing patient-centered outcomes through the programs, levels of coverage, and access they provide, and they can have a direct influence on payers and providers. In addition, most adults in the US spend more than half of their lives working or providing care to elderly parents and children and are greatly affected by their work environment and culture. Employers are eager for research, and a research agenda, that takes into account the structures, processes and outcomes designed by and relevant to their organizations and workforces. We outline below approaches that could facilitate a more comprehensive, balance, and high-impact patient-centered and stakeholder-aligned research agenda. Because employers provide a substantial part of Patient-Centered Outcomes Research Institute (PCORI) funding through the IRS health plan fees, it makes sense for them to assess and suggest additional areas of study for PCORI's research agenda.

PCORI's reauthorization in late 2019 mandated that future PCORI-funded research consider a fuller range of patient-centered outcomes relevant to healthcare stakeholders, beyond their initial focus on clinicians and patients. These additional stakeholders include employers and other purchasers, health plans, and policymakers. As PCORI's focus on promoting high-integrity, evidence-based research moves forward, this new, broader healthcare community could support measures and metrics to improve shared decision-making, healthcare delivery, and outcomes. There are [four main principles](#) highlighted under this new mandate:

- ▶ **Principle #1:** PCORI-funded research may consider the full range of outcomes *important to patients and caregivers*, including burdens and economic impacts.
- ▶ **Principle #2:** PCORI-funded research may consider the full range of outcomes *relevant to other stakeholders*,

when these outcomes have near-term or longer-term impact on patients.

- ▶ **Principle #3:** The collection of data on burdens and economic impacts of treatment options must be appropriate and relevant to the clinical aims of the study.
- ▶ **Principle #4:** Beyond the collection of burden and economic impact data, PCORI may support the conduct of certain types of economic analyses as part of a funded research study, to enhance the relevance and value of this information to healthcare decision-makers.

An Opportunity for Expansion of the Scope of Future Research

As healthcare costs have risen exponentially over the past several decades, employers have largely focused their health, wellbeing and benefits efforts on reducing costs in ways that have resulted in inconsistent outcomes and health improvements in the workforce. This healthcare spending has created a “zero-sum game:” the more employers spent, the less value they received, leaving employers and their employees and families to make financial trade-offs. The unfortunate consequence of this was that coverage became increasingly unaffordable—**not only at open enrollment, but at the point of care.**

In the past year, the pandemic brought an unprecedented number of challenges and unimaginable shifts. Employers made changes to the programs they offered, sometimes overnight, so people could maintain access to healthcare and program support, often in a virtual environment. The pandemic also revealed, reinforced and exacerbated long-standing healthcare challenges that were often interconnected—health disparities and inequities, a lack of commitment to prevention, the interplay between mental health and physical health, and the multiplier effect of multiple co-morbidities. The understanding of these interrelationships will be studied for years to come but, in essence, how people live, work and play all have an impact on the health of



an individual, which in turn has a direct impact on the healthcare burden on an organization and the capacity of its people to perform and grow over time.

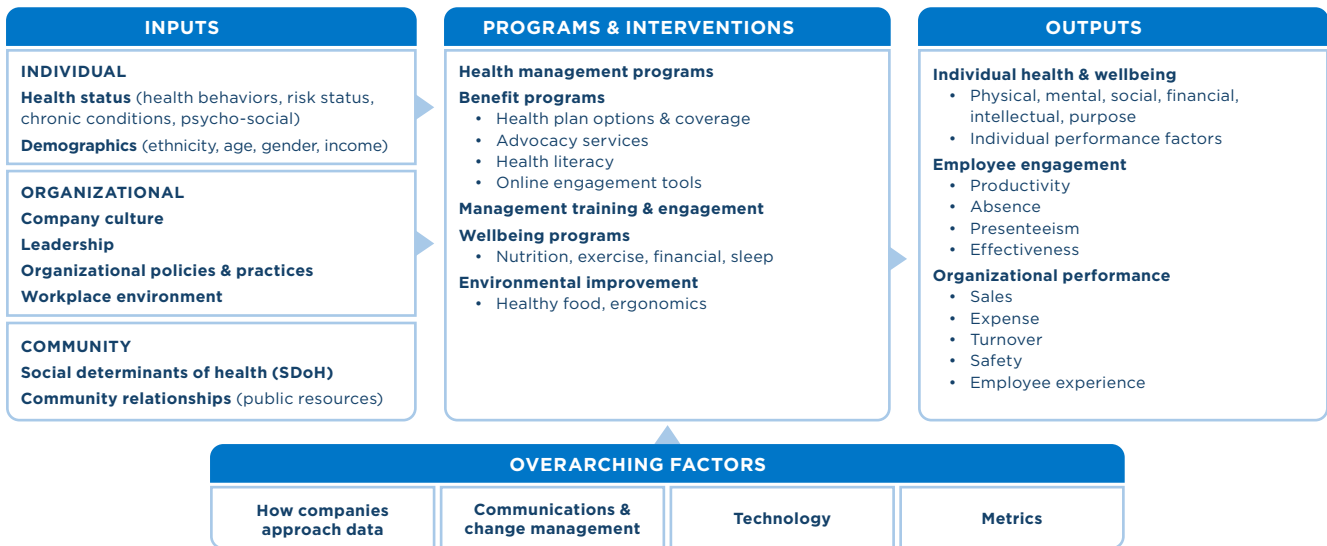
This broader focus reinforces the realization that the effectiveness of employer efforts must go beyond the measurement of cost savings or participation rates, in order to better understand the impact of healthcare efforts in how employees and their families seek and receive the right care at the right time, if employers are to improve health, prevention and high-quality patient-centered outcomes. Employers need to understand the various nuances that impact their healthcare planning, especially due to the interconnected nature of many of the metrics used to make strategic decisions. Examples include the potential burdens and economic impacts that the use of medical treatments, devices and services has on different stakeholders and decision-makers. Others include:

- ▶ Medical out-of-pocket costs, including health plan benefit and formulary design.
- ▶ Non-medical costs to the patient and family, including caregiving.
- ▶ Effects on future costs of care.
- ▶ Workplace productivity and absenteeism.
- ▶ Worker performance/productivity.
- ▶ Patient healthcare utilization and its effect on different stakeholders and decision-makers.

The chart on the next page summarizes the strategic framework that employers are deploying in health and wellbeing strategies.

Health & Wellbeing Strategic Framework

Areas that Drive People-centered Outcomes and Organizational Performance



Employers need a more comprehensive, strategic and evidenced-based approach to support the health and wellbeing of the workforce, one that is responsive to the diversity of its employees and their diverse circumstances and work environments. This includes using metrics that interconnect and can be examined for subsets of the population to understand variation/heterogeneity of outcomes across their workforce and the general population.

Creating a Balanced Perspective on Outcomes

While healthcare costs in the US are the highest per capita in the world, accounting for over 18% of GDP, the US ranks 22nd in terms of health outcomes. There are many who say the US healthcare system has failed to adequately manage chronic disease and to effectively address healthcare quality, economic and non-economic health disparities, and adequate access to care. An earlier paper from the National Alliance, *Rethinking Health & Wellbeing Strategies to Drive Organizational Performance and People-centered Outcomes*, described gaps in the knowledge employers need to design benefits. The report suggested that a critical mind shift would be necessary to transform employers' view of the workforce from a cost center (i.e., payroll and benefits) to a strategic,

people-focused investment. This would yield a potential opportunity to reframe all workforce management programs and processes as business investments.

In the last 20 years, there has been an increasing recognition of the broader business significance of improved workforce health and wellbeing. This has encouraged some progressive employers to look beyond “return on investment” (ROI)—recognizing healthcare cost offsets—to more of a “value on investment” (VOI) perspective—recognizing both healthcare cost offsets and also other improvements to business performance—so that the value of health benefits programs also takes into account their impact on associated business metrics. A focus on VOI provides employers a bigger umbrella—a larger, more holistic set of metrics to draw upon when measuring outcomes and considering health and healthcare investment value. This allows companies to go beyond just measuring healthcare cost trends and enables them to consider impacts on work productivity, preventive health services and screenings, wellness exams, absenteeism, disability time, time away from work, and, increasingly, the disparities and inequities in how services are accessed, implemented and utilized.

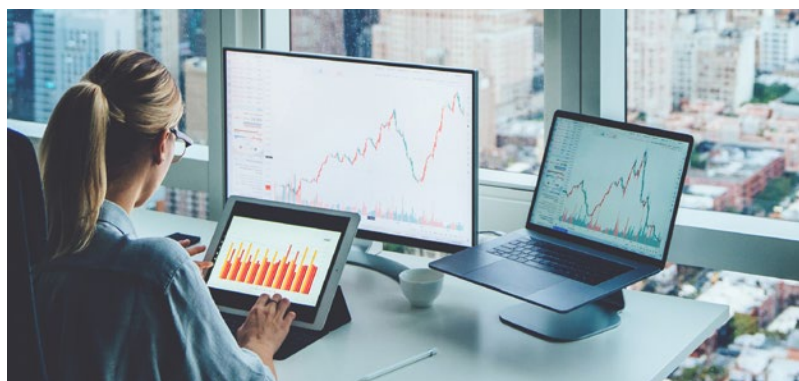
A growing area of concern is the responsiveness of health benefits and programs to low-wage employees.

While most employers provide health benefits as a universal proposition, focusing on the “typical employee” can misinform their strategies. Low-wage workers — who often have the greatest prevalence of unhealthy lifestyle conditions, chronic conditions, and other social factors affecting health and outcomes, generally pay a greater proportion of their earnings — both through premium contributions and out-of-pocket costs — for the same health benefits that higher-earning counterparts receive. This can have serious unintended consequence on both clinical and financial outcomes. A similar concern arises when addressing the unique perspectives and cultural biases of diverse populations, including people of color. Therefore, it is very important to have a comprehensive understanding of the business value of specific healthcare services in order to more fully understand the associated value proposition; this will help organizations make more informed coverage decisions, with better impact on the quality of life for their workforce.

The Interplay of Employer-relevant Metrics in Clinical Research

The movement toward employer-relevant research will require researchers to explore additional outcomes beyond improved patient care or strictly clinical comparisons of interventions. For example, studying measures that impact an employer’s decision-making when designing their overall healthcare strategy—which includes benefits, disease management and wellbeing programs—can support a better approach to patient care.

There are excellent examples how PCORI-funded research has benefited employees and employers. For example, finding that self-monitoring of blood glucose (SMG) is not necessary for the vast majority of those with type 2 diabetes could potentially save the patient and healthcare purchaser money and the employee unnecessary discomfort from finger sticks. Though employers won’t change their benefits based on just one study, this research is exploring areas of interest for the employer. Another area almost never measured or



even mentioned is the potential impairment effect on employees in safety-sensitive jobs, as described below.

Safety & Substance Use Disorder Treatment: A substance use disorder treatment paired with a certain pharmaceutical intervention may have better outcomes in patients who are working in non-safety-sensitive jobs. However, it may disqualify another employee from a safety-sensitive job, due to the risk of neurocognitive depression or impairment. This means that patient will not be fit for duty and will not be able to work. The likelihood of relapsing is higher in that patient, who could accrue additional medical costs. Employer-relevant, patient-centered comparative clinical effectiveness research could help identify appropriate interventions to help the employee as a person, while also benefiting workplace safety and health.

It is important for researchers to distinguish between different populations when studying treatment options, as this will provide more value for providers, employees and employers. The same goes for other pharmaceutical interventions for pain management, behavioral and mental illness, and other diseases. A more focused and customized approach for different patient populations is needed to improve outcomes over time. Researchers also need to consider new technologies, including new medical devices.

Understanding Differences

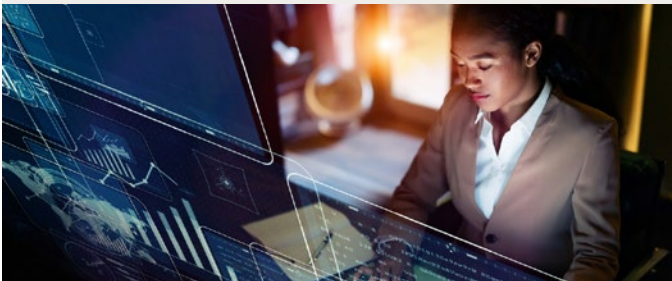
Health disparities have come into sharper focus in recent years, but studies have shown disparities and inequities have a long history among racial/

Examples of Clinical Research Integrating Productivity Impact

The following are two examples of clinical research that supported employers and health plan administrators (there are other examples in the published medical literature).

One study conducted by a group of clinicians led by a physician in the gastroenterologist department at the Mayo Clinic used work productivity and activity impairment (WPAI) as one of the measured outcomes when examining a certain pharmaceutical intervention versus another modality for management of Crohn's Disease. Loftus EV, Reinisch W, Panaccione R, et al. Adalimumab Effectiveness Up to Six Years in Adalimumab-naïve Patients with Crohn's Disease: Results of the PYRAMID Registry. *Inflamm Bowel Dis.* 2019;25(9):1522-1531. doi:10.1093/ibd/izz008.

In another study, conducted by The Center for Health Evaluation and Outcome Sciences at St Paul's Hospital in Vancouver, researchers were also able to incorporate the WPAI with a number of other health outcomes, including the Multidimensional Health Assessment Questionnaire, fatigue, and patient assessment of disease activity in patients with rheumatoid arthritis. The construct validity of the WPAI was tested by the correlations between the WPAI and both health outcomes and other measures of productivity. Zhang W, Bansback N, Boonen A, Young A, Singh A, & Anis AH. Validity of the work productivity and activity impairment questionnaire--general health version in patients with rheumatoid arthritis. *Arthritis Res Ther.* 2010;12(5):R177. doi:10.1186/ar3141



The Fallacy of Averages

The following excerpt from the 2016 article *Lost in Translation: Healthcare Utilization by Low-Income Workers Receiving Employer-Sponsored Health Insurance* highlights increasing research focused on the impact of health on the low wage worker:

“Disparities in healthcare access and utilization have long been a focus for health policy researchers seeking to identify and address demographic or environment-related factors contributing to poor health status. The relative merits and limitations of specific indicators of socioeconomic status (SES), including income, wealth, education, occupation, and residence ZIP code, have been previously reviewed. What has emerged is a common understanding that health literacy and care compliance gaps exist across all income groups, but appear most pronounced among individuals with low SES. ... *To our knowledge, detailed evaluation of healthcare disparities among low-income earners in commercially insured populations has not been reported.* However, in broad-based epidemiologic studies including uninsured, and government- and privately insured individuals, those with low SES exhibit substantial disparities in care.”

(FULL ARTICLE)

ethnic groups and LGBTQ. However, according to the whitepaper [Reduction in Health Risks and Disparities with Participation in an Employer-sponsored Health Promotion Program](#), there are relatively few employer-based health programs that have measured the impact of health disparities among employees. Although the Agency for Healthcare Research and Quality (AHRQ) reports annually on the differences in health factors associated with ethnicity in the US, employers rarely have access to data specifically related to health disparities for their specific employee population. Similarly, to our knowledge, few published studies have evaluated how employee health promotion programs may or may not have impacted the program participation and health risk of diverse workforces.

Most employers focus on the overall impact of benefits and programs for employees, but these averaged results commonly hide significant disparities and inequities beneath the surface. We have known for years that higher cost sharing will reduce the use of both high-value and low-value care. What has been examined less is how that cost sharing disproportionately impacts the affordability and access to care for lower income individuals. These cost barriers may also affect adherence to treatment plans and potentially lock out an entire segment of the population from highly innovative but expensive medications or treatment options. While it is not the intent of most employers to create two tiers of access to care, it can be the unintended consequence of the programs they offer. As noted above, consideration of the full range of outcomes in CER/PCOR can better inform value-based designs that better align cost sharing with affordability, discretion and value.

Differences are not limited to income. We know that race, ethnicity and culture can also play a major role in differences in utilization and outcomes. This can come from language barriers, cultural biases, and a basic lack of trust in medical institutions based on past mistreatment. Programs and interventions intended to support and improve health and adherence to evidence-based practices need to examine their effectiveness with diverse populations. Health disparities can only be

closed if we are intentional in effectively and efficiently addressing and communicating health information relevant to the concerns of those with the greatest needs.

Historically, population health strategies have focused on moving the averages. However, quality improvement strategies such as Six Sigma demand that we examine the variation in achieving the desired outcomes, and specifically where clusters of individuals are left behind. Comparative Effectiveness Research (CER) should support such efforts by identifying practices that better address the needs and concerns of diverse subpopulations. This can lead to more personalized and optimized support.

A Need to Reexamine Current Research Agendas Over the Next Few Years

In early 2021, the National Alliance assessed current employer perspectives on the COVID-19 environment, including vaccination, workforce policies, health benefits, and a special look at health equity. Employers reported the below areas, including those in [Addendum A](#), are key areas of focus within the next three years. The National Alliance focus on in overall healthcare planning over the next two to three years. The National Alliance strongly suggests expanded research in these and other complementary areas. For more information on how researchers can focus efforts in employer relevant research, review [Addendum A](#).

Other opportunities for further research include comparisons of interventions addressing:

- ▶ Advancing health equity through wellbeing programs.
- ▶ Antidepressant adherence and reduced short-term disability absences.
- ▶ Non-sedating antihistamines and workplace accidents.
- ▶ Impact of A1C and diabetes control on related healthcare costs and productivity.
- ▶ Asthma control and productivity.

- ▶ Metabolic syndrome control and productivity.
- ▶ Migraine management and reduced opioid use and productivity.
- ▶ Customer service and employee health.
- ▶ Depression management and productivity/performance.

Connecting Research to Broader Employer Strategies

In the National Alliance whitepaper “[Rethinking Health & Wellbeing Strategies to Drive Organizational Performance and People-Centered Outcomes](#),” the following critical organizing principles were identified to support better management of workforce health and wellbeing. We strongly suggest that future research consider these practices:

- ▶ **Consider health and wellbeing in all policies and practices:** Virtually every organizational policy and practice has the potential to affect employee health and wellbeing. The impact may be subtle (access to healthy foods) or profound (no paid sick leave). The health and wellbeing impact may only be experienced by a subgroup of employees. For example, variable work hours and scheduling of retail front-line workers will impact their stress and their ability to earn a reasonable living. Research could assess the impact of different organizational practices that inadvertently have a negative impact on individuals’ health and wellbeing and, consequently, on business performance over time.
- ▶ **Focus on value, not just cost:** Organizations that adopt a broader perspective of value that goes beyond cost will be better able to evaluate changes in benefits. For example, instead of just focusing on the cost of a new medication for treatment of a chronic condition, employers should consider and measure the impact of that drug on an employee’s quality of life, ability to work, likelihood of disability, or return to work more quickly. Future research should support employer decision making through such evaluation.
- ▶ **Measure both employer-relevant and employee-centered inputs and outputs:** Most of these measures can be seen as either inputs

2020–2023 Employer-Focused Metrics for Current & Future Research	
FOCUS	METRIC
Health Disparities & Inequities in Care	Appropriate and timely healthcare access, salary, ethnicity, race, sexual orientation, transportation
Social Determinants of Health (that impact an organization’s workforce)	Commute; educational opportunities; workplace safety; gender inequity; access to housing and utility services; social support and community inclusivity; access to safe drinking water and toxin-free environments
Mental Health & Wellbeing	<ul style="list-style-type: none"> • Elements of wellbeing — social, sleep, financial stress, etc. • Direct and indirect impact of social isolation — readiness and coping skills • Growing impact of substance use disorder, access, and delivery of appropriate care challenges
COVID-focused metrics	Impact of vaccine readiness; mental health and stress
Chronic condition management	Including co-morbidities (e.g., heart disease, diabetes, cancer, rheumatoid arthritis)
High-risk populations	Age, minorities, maternity, social determinants
Virtual care — telehealth	Impact on subpopulations without technology; access to consistent primary care
Business impact of various interventions — also business performance	Turnover; technology
Total cost of care	Patient out-of-pocket costs; patient premium costs; employer premium costs; cost of treatment vs. appropriateness; site of care, etc.

See [Addendum A](#) for additional areas of study along with relevant research questions to address

or outputs and can be reasonably and readily quantifiable. Individual employers likely have other specific measures that have direct organizational relevance. Importantly, for many employers, this data often already exists and can be found in an array of different organizational silos, such as workers compensation costs associated with workplace injuries and illness, and short-term disability claims for absences from work. Future research should help employers bring these sources of data together into a research-ready infrastructure to obtain new insights on the impact of programs and policies.

- ▶ **Evaluate and focus on health equity and inclusion:** Organizations are increasingly seeking to be responsive to the diversity of their populations, the circumstances of employees, and the broader needs of their communities by being thoughtful in their overall health strategy, including health plan interventions and engagement. As in any quality process, understanding the variation in impact can provide insights that will “raise all boats.” It is not enough to understand how population-level averages are affected. Future research can lead to a better understanding of how subsets of the workforce are affected differently by the intersection of individual-, family-, population-, and employer-level decisions.
- ▶ **Manage strategically as a business process:** Employers want to manage workforce investments the same way they manage other business activities. However, to do so requires evaluation beyond the cost of services and must incorporate the appropriate use of output measures that recognize the broader business impact of strategic workforce health and wellness planning efforts. To support these efforts, researchers will need ways to locate and aggregate data, access validated business measures already in widespread organizational use, and bring in additional data and measures to complement clinical and patient-centered outcomes to create a more comprehensive, holistic picture. These may include key performance indicators (KPIs) or other

data elements included in ongoing reporting to organizational leadership. Inclusion of KPIs or other business-relevant measures will attract employer leadership interest and facilitate greater impact of the research through uptake/implementation in future workforce management activities.

Conclusions

This paper has focused on the importance of expanding PCORI’s future research agenda to include metrics that impact a broader health-focused stakeholder group, one that includes employers. Throughout this paper, key areas are highlighted for consideration, as there is a major need to expand research related to the programs and services offered by employers and other plan sponsors that impact employees and their families. Below are some general conclusions that support this research and will affect the employer community over the next several years:

- ▶ Employer-sponsored coverage, together with related programs and services, can have a major impact on the access to, and quality of, healthcare services provided to most Americans.
- ▶ Employer health and wellbeing programs need to be more responsive to diverse populations and demographics if health disparities are to be reduced.
- ▶ The research infrastructure for health and healthcare services should be expanded to include employer-relevant metrics in order to build a fuller understanding of the impact that new treatments/diagnostics have on both costs and productivity.
- ▶ Researchers should be encouraged to adopt a formal measure set that addresses wellbeing, work absence, and other key performance indicators for organizations. An example of a formal measured set that addresses wellbeing is the [Gallup Wellbeing Index](#).
- ▶ All stakeholders should leverage PCORI’s expanded mandate to use relevant comparative effectiveness research to inform value-based designs and influence future directions of employer-sponsored coverage and program interventions.

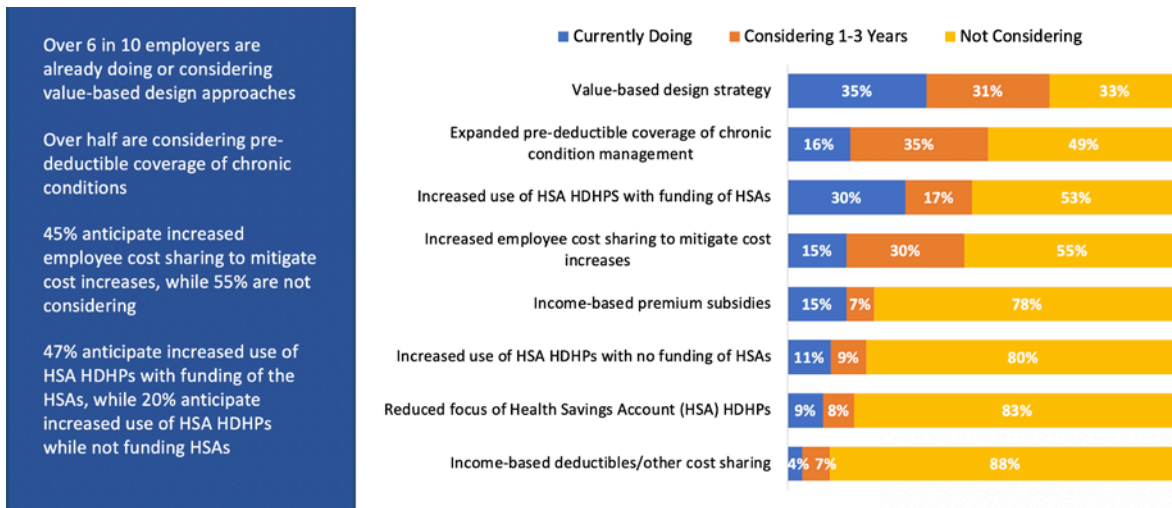
Addendum A

March 2021 Pulse of the Purchaser, National Employer Survey, Highlighted Findings

The following are highlights from a national employer survey conducted by National Alliance in March 2021. The focus of the survey was to discern employer workforce directions with regard to benefit design strategies, workforce policies, and engagement with health equity. The questions

listed below each panel of survey results highlight representative research focus areas that warrant thoughtful investigation—the results of which could provide meaningful and actionable insights to employers and related stakeholders.

Benefit Design Strategy: Cost Sharing



Over 6 in 10 employers are already doing or considering value-based design approaches

Over half are considering pre-deductible coverage of chronic conditions

45% anticipate increased employee cost sharing to mitigate cost increases, while 55% are not considering

47% anticipate increased use of HSA HDHPS with funding of the HSAs, while 20% anticipate increased use of HSA HDHPS while not funding HSAs

Representative Research Questions:

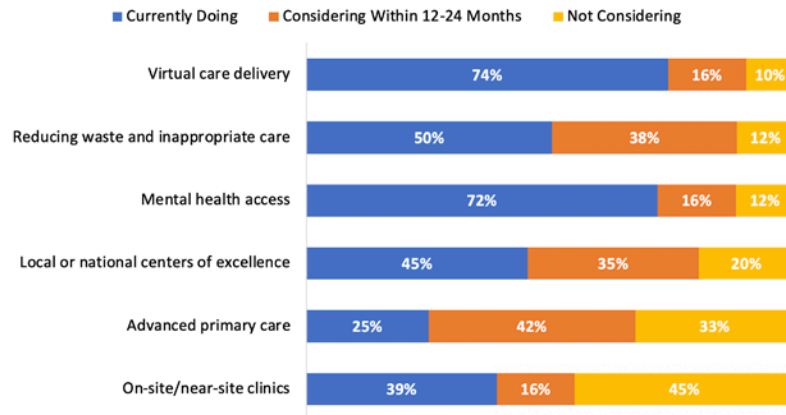
1. Does expanded pre-deductible coverage for chronic condition management in HSA result in increased use of those services—and ultimately lead to improved treatment compliance and reduced complications?
2. Do income-based premium subsidies or income-based deductibles change healthcare utilization and cost patterns among low-wage earners?
3. What is the impact of increasing HSA funding on healthcare utilization patterns, particularly high- and low-value services?
4. How do value-based benefit design offerings impact healthcare utilization behaviors among different socio-economic subpopulations?

Delivery Reform Strategies

About 9 in 10 are implementing delivery reform-based strategies

The most common strategies are virtual care delivery and improving mental health access

The fastest growing strategies are advanced primary care and centers of excellence and focusing on reducing waste and inappropriate care



Representative Research Questions:

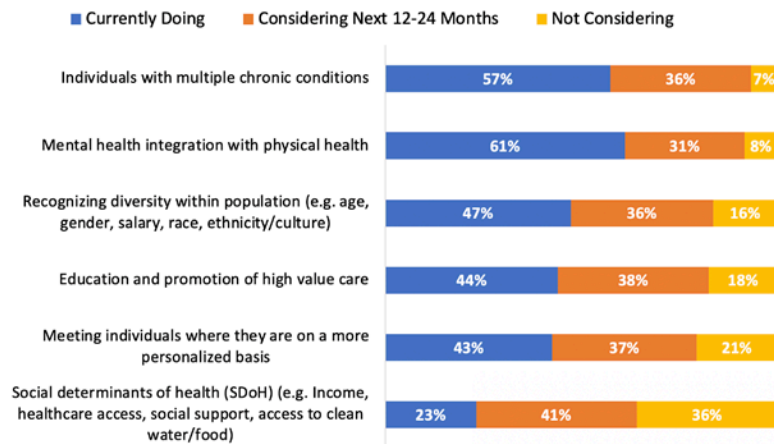
1. Which socio-economic, race, ethnicity subpopulations are using or not using virtual care with a particular focus on mental health, chronic condition management and/or acute care?
2. How is virtual care use impacting utilization of other healthcare services?
3. How does virtual care compare to in-person care in improving compliance with evidence-based care?
4. How are advanced primary care and/or on-site clinics impacting workforce health and wellbeing outcomes and employee performance?

Total Person Health: Area of Focus

There is a significant focus on *Total Person Health* as it relates to mental health integration, individuals with multiple chronic conditions, recognizing diversity with the population and more personalization

3 in 4 employers are putting more emphasis on the education and promotion of high value care

About half of employers are considering strategies to deal with social needs and social determinants of health



Representative Research Questions:

1. What is the comparative effectiveness of different approaches to managing the health of individuals with multiple chronic conditions?
2. What is the comparative effectiveness of employer interventions to address the health and wellbeing outcomes of diverse subpopulations (race/ethnicity, income, age, etc.)?
3. What is the impact on health and wellbeing outcomes for employer activities to address employee social needs and what's the business value of doing so?
4. How does an integrated mental/physical health approach impact health and wellbeing outcomes and if so, what are the business consequences?

Activities Organizations are Considering to Address Race, Health & Equity

In general, most companies have not yet implemented a broad health equity strategy

The leading strategies today are:

- Engaging various departments across the company
- Assessing health plans and vendors programs and services
- Integrating equity concepts/strategies into workforce health education
- Establishing equity metrics for health and wellbeing programs



Representative Research Questions:

1. What is the most efficient/effective approach for employers to identify and address health inequity concerns?
2. What measurement approaches should organizations take to quantify health inequities?
3. What are effective approaches to gathering the perspectives of under-represented subpopulations to identify and address health inequity issues?
4. What metrics should be included on an employer scorecard to reflect ongoing management of health inequity concerns?

Addendum B

Table 1: Representative Employer-relevant, Healthcare Delivery System-derived Population Health Metrics for Inclusion in Research Efforts

METRICS	SIGNIFICANCE	REPRESENTATIVE METRIC	SPECIFIC DATA SOURCE
Leading (Early) indicators (6–9 month timeframe)			
Health-related voluntary program participation rates—initial and ongoing (health assessment, lifestyle coaching, chronic condition management, EAP)	Indication of effectiveness of engagement strategies, including incentives and outreach	Unique number of individuals engaging in calls with a lifestyle, condition management, or well-being coach on a cumulative basis, by month	Program-specific data
Health-related internet portal and web-based tools utilization—initial and ongoing	Indication of perceived value of resources to enrolled population	Unique number of individuals accessing resources on a cumulative basis, by month	Vendor platform utilization data
Healthcare utilization patterns following abnormal biometric screening values	Measure of ability of communications associated with biometrics reporting to impact individual behaviors	Ambulatory care visits with a primary or secondary diagnosis directly related to the abnormal biometric value (e.g., hypertension for elevated blood pressure) within three months of abnormal test results	Medical claims (integrated with biometric screening participation)
Intermediate indicators (12 month timeframe)			
Well-being score	Indication of overall enrolled population well-being	Mean of aggregate well-being survey results	Well-being (or similar) survey
Healthcare consumerism score (if available)	Indication of healthcare consumerism knowledge and engagement	Mean of aggregate consumerism survey results	Consumer health engagement survey
Biometric data (as a measure of effectiveness of chronic condition management)	Point-in-time measure of population health related to specific measurable conditions	Mean and distribution of biometric values in comparison to normal range	Biometric data (as part of annual health assessment)
Compliance with recommended preventive care	Assessment of use of recommended services among eligible population	Proportion of eligible individuals receiving recommended preventive care services	Medical claims data
Chronic condition gaps in care	Measure of compliance with evidence-based care for specific chronic conditions	Proportion of individuals receiving evidence-based care (“gaps in care”) for chronic conditions	Medical claims data
Chronic condition treatment to target goals	Measure of effectiveness of chronic condition management	Proportion of individuals with chronic conditions at established treatment goals	Biometric and/or laboratory data
Chronic medication adherence	Measure of compliance with prescribed medications for chronic conditions	Proportion of days that an individual taking a chronic-condition medication has medication available	Pharmacy claims data
Ambulatory care-sensitive emergency department (ED) utilization rate	ED visits that could have been avoided as a result of effective primary care use	Ambulatory care-sensitive ED rate/1000 employees	Medical claims data
Ambulatory care-sensitive hospitalization rate	Hospitalizations that could have been avoided as a result of effective primary care use	Ambulatory care-sensitive hospitalization rate/1000 employees	Medical claims data
Lagging indicators (multi-year timeframe)			
Healthcare cost trends (annual)	Effectiveness in controlling healthcare cost trends	Year-over-year changes in total healthcare costs, adjusted for benefit design changes and medical inflation	Medical/pharmacy claims costs

Table 2: Representative Workforce-related (Employer-derived) Metrics for Inclusion in Research Efforts

METRICS	SIGNIFICANCE	REPRESENTATIVE METRIC	SPECIFIC DATA SOURCE
Leading (Early) indicators (6-9 month timeline)			
Employee satisfaction with benefits enrollment	Measure of ease of use and value perceived by employees	Annual mean benefits enrollment satisfaction score, standard deviation and range	Employee survey data
Enrollee satisfaction with benefits offerings	Measure of alignment of employee benefits needs and employer benefits offerings	Annual mean benefits survey satisfaction score, standard deviation and range	Employee survey data
Intermediate indicators (12 month timeline)			
Illness-related absence rate	Measure of health management program effectiveness	Annual illness-related absence days as a proportion of total employee workdays	Employer absence management data
Employee engagement score	Quantitative measure of employer’s ability to engage employees	Annual mean employee engagement score, standard deviation and range	Engagement survey
Employee performance score	Quantitative measure of employer’s ability to optimize employee performance	Annual mean employee performance score, standard deviation and range	Workforce performance reporting
Employee retention rate	Quantitative measure of employer’s ability to attract and retain employees	Annual employee turnover percentage in established work positions	HR administrative management program
Lagging indicators (multi-year timeline)			
Illness-related absence trend (annual)	Quantitative measure of health management effectiveness	Year-over-year changes in illness-related absence rates	Employer absence management data
Employee engagement trend (annual)	Demonstrates level of workforce commitment to employer	Year-over-year changes in employee engagement scores	Engagement survey
Employee performance trend (annual)	Operational evidence of impact of worker health on job performance	Year-over-year changes in employee performance scores	Workforce performance reporting
Employee retention trend (annual)	Operational measure of employee engagement with employer	Year-over-year changes in employee retention rates	HR administrative management program

About this Capacity Building Engagement Award

The National Alliance and the Integrated Benefits Institute (IBI) received a PCORI Capacity Building Engagement Award in 2018 titled *National Alliance & IBI Build Capacity on Patient-Centered Benefit Program Strategies*. The engagement award brought together a multidisciplinary advisory group to guide the work and provide input into key activities. Efforts supported by this engagement award have been focused on development of a structured approach to incorporating patient-centered outcomes into strategic employer health benefits planning. This approach includes a framework focused on health and wellbeing and is intended to be used for benefits decision-making. This framework will give employers a clearer understanding of the link between their benefits planning activities and the associated business consequences. Importantly, researchers—including those receiving PCORI funding—can incorporate these measures into their research to enhance the relevance and value their studies have for employers.

About the Project Team

Margaret Rehayem is the project lead for this PCORI Engagement Award. She is also the vice president of the National Alliance and provides leadership for national initiatives that support member collaboration, helping coalitions leverage their regional efforts at the national level to drive health, equity and value across the country. Her focus has been in health and wellbeing, continuous improvement frameworks, multi-stakeholder collaboratives, and the development of strategies that support system and delivery reform. She has over 20 years of experience working with employers in various areas, from understanding data to supporting overall healthcare strategic planning. Ms. Rehayem is a national speaker on a number of healthcare topics including business performance & leadership, health benefits, medical & pharmacy drugs, biosimilars, employee engagement, organizational culture, and the impact of health and wellbeing in organizations.

Before joining the National Alliance, she was on the leadership team at the Midwest Business Group on Health, a leading business coalition in Chicago. She has been involved with various Advisory Boards including with the National Health Council and the Innovative Value Institute. She has been an adjunct faculty professor since 2008 and most recently taught corporate health and entrepreneurship at the University of Illinois at Chicago.

Bruce Sherman, MD is the administrative official of this PCORI Engagement Grant. He is an active researcher in workforce health strategy and has worked with business coalitions and both mid-size and large employers across the country. He previously served as the medical director of the National Alliance and has also served as the consulting corporate medical director for Whirlpool Corporation and The Goodyear Tire & Rubber Company. A frequent speaker, Dr. Sherman presents to diverse audiences on a broad array of topics related to workforce health, productivity, and human resources, on which he has published numerous peer-reviewed articles. He received his MD from NYU School of Medicine, his MA from Harvard University, and his ScB from Brown University.

Michael Thompson is the advisory committee chair for this PCORI Engagement Award. Michael Thompson is the President and CEO of the National Alliance of Healthcare Purchaser Coalitions (National Alliance). The National Alliance is the only nonprofit, purchaser-led organization with a national and regional structure dedicated to driving health, equity and healthcare value across the country. Collectively, it represents over 45 million Americans, spending over \$300 billion annually on healthcare including a broad cross-section of private sector and public sector employers as well as union organizations. Mr. Thompson is a nationally recognized thought leader for business health strategies and health system reform.

Prior to joining the National Alliance, Mike was a Principal at PricewaterhouseCoopers (PwC) for 20

years where he worked as an advisor to employers, health plans, providers, and other healthcare stakeholders. Prior to PwC, Mike served as an executive with diverse roles with Prudential Healthcare for over 17 years. Mike is a Fellow of the Society of Actuaries, serving on the Health Practice Council, and chairs the Medicare Sub-Committee of the American Academy of Actuaries (AAA). He is also widely recognized as a leading national advocate for mental health and wellbeing and is a Past President of the New York City chapter of the National Alliance for Mental Illness (NAMI).

The PCORI Capacity Building Advisory Committee

Dr. Wayne Burton

Dr. Wayne Burton is a strategic advisor and healthcare consultant. Previously he was the Corporate Medical Director for American Express (2009–2017) and the Corporate Medical Director for JPMorgan Chase and its legacy banks (1982–2009).

He has been the recipient of several awards including the Inaugural Corporate Health and Productivity Award from IHPM, Global Leadership in Corporate Health Award, American College of Occupational and Environmental Medicine/ National Business Group on Health, Mark Dundon Research Award, Health Enhancement Research Organization (HERO), Adolph G. Kammer Merit in Authorship Award, ACOEM, Health Achievement Award from the American College of Occupational and Environmental Medicine (ACOEM), the Jonas Salk Health Leadership Award from the March of Dimes, the Innovation Award from Mental Health America and the Innovation in Health and Productivity Award from National Business Group on Health (NBGH).

Dr. Burton is Board Certified in Internal Medicine and is Associate Professor of Clinical Medicine, Feinberg School of Medicine, Northwestern University and Adjunct Professor of Environmental & Occupational Sciences at the University of Illinois at Chicago. He is a Fellow of the American College of Physicians and a

Fellow of the American College of Occupational and Environmental Medicine. Dr. Burton was previously Chairman of the Board of the Midwest Business Group on Health and was a member of the Board of Directors of the National Business Group of Health.

He has co-authored over 100 medical journal articles on employee health and productivity and disease management.

Patricia Montoya

Patricia Montoya is a proven leader in the public, private and non-profit sectors. She began her career as a registered nurse at the bedside and then had a very diverse career for 44 years in the arena of health and human services. She served in administrator and leadership positions throughout her career, spending many years working in the area of health policy. Patricia served as a Presidential Appointee at the US Department of Health and Human Services, under President Bill Clinton's Administration, as well as Secretary of Health for the State of New Mexico under Governor Bill Richardson. After her governmental positions she focused on being more of an entrepreneur and trailblazer focusing on healthcare transformation by improving health care quality, cost and transparency.

Ms. Montoya led the Robert Wood Johnson Foundation's initiative Aligning Forces for Quality in New Mexico from 2009–2015. When the initiative ended, she established the first employer led multi-stakeholder business health coalition in the State of New Mexico. It was established as a non-profit, the New Mexico Coalition for Healthcare Value in 2015 and is a member organization of the National Alliance of Health Care Purchaser Coalitions.

Patricia has her BSN in Nursing and a Master's in Public Administration – Health Administration. She currently does consultant work and has served on numerous committees and boards over the years, currently serving as Chairwoman of the Presbyterian Healthcare Services - Central New Mexico Board of

Directors. She is the recipient of numerous awards and recognitions but most recently was named a Woman of Influence by Albuquerque Business First, as well as being named a New Mexico Nursing Legend by the Center of Nursing Excellence in 2020.

Dr. Mohannad Kusti

Dr. Mohannad Kusti is a global physician executive and healthcare consultant with unique expertise and experience related to corporate healthcare benefits serving a variety of employers as their consulting corporate medical director and chief medical officer through Optimal Workplace & Environmental Wellness Corporation.

Dr. Kusti recently joined Pivot Onsite-Innovations as their Regional Medical Director. Dr. Kusti completed a successful tenure as Corporate Medical Director & Chief Medical Officer at United States Steel Corporation. He also serves Teradata, Med Bar/Floss Bar Inc., & MyHouseCall as a consulting CMO and has joined the “Corporate Medical Advisors - International S.O.S.” consulting organization. Currently, Dr. Kusti is considered one of the industry experts on COVID-19 corporate management and is consulting for numerous employers and corporations nationally and globally.

Dr. Kusti was an Associate Service Fellow at the National Institute for Occupational Safety & Health

(NIOSH) at the CDC. He completed an occupational medicine residency and completed his master’s degree in Public Health at West Virginia University School of Medicine and the School of Public Health in Morgantown, WV. Dr. Kusti is Board certified as a specialist in Occupational Medicine.

Dr. Kusti is an Adjunct Assistant Professor in the Department of Occupational and Environmental Health Sciences at West Virginia University and serve as board member of the leadership council for WVU School of Public Health. He is furthermore a member of the Occupational Medicine Residency Advisory Committee for the Environmental & Occupational Health Science Institute at Rutgers School of Public Health in NJ. Dr. Kusti serves as the medical director for the Pittsburgh Business Group on Health.

Jon Rankin

Jon serves at the President & CEO of the North Carolina Business Group on Health. Previously he led total rewards at leading companies for over 25 years, following over 10 years in operational leadership roles including service as a US Army officer. He holds his B.B.A in International Business from Wichita State University and M.S. in Systems Management from the University of Southern California.

Resources

- ▶ Burton WN, Conti DJ, Chen CY, Schultz AB, & Edington DW. The impact of allergies and allergy treatment on worker productivity. *Journal of Occupational and Environmental Medicine*. 2001;43(1):64–71. Abstract: <https://pubmed.ncbi.nlm.nih.gov/11201771>
- ▶ Burton WN, Landy S, Downs K, & Runken MC. The impact of migraine and the effect of migraine treatment on workplace productivity in the United States and suggestions for future research. *Mayo Clinic Proceedings*. 2009;84(5):438–445. Abstract: <https://pubmed.ncbi.nlm.nih.gov/19411440/>
- ▶ Burton WN, Chen CY, Coati DJ, Pransky, G, Edington DW. Caregiving for ill dependents and its association with employee health risks and productivity. *Journal of Occupational and Environmental Medicine*, 2004; 46: 1048-1056.
- ▶ Burton WN, Chen CY, Li X, Schultz AB, & Edington DW. Reduction in health risks and disparities with participation in an employer-sponsored health promotion program. *J Occupational and Environmental Medicine*. 2013;55(8):873–878. Abstract: <https://pubmed.ncbi.nlm.nih.gov/23924828/>
- ▶ Burton WN, Chen CY, Li X, Schultz AB. Association between dental claims, health risks, workplace productivity, and preventive services compliance. *J Occupational and Environmental Medicine*. 2017;59(8):721–726. Abstract: <https://pubmed.ncbi.nlm.nih.gov/28609355/>
- ▶ Burton WN, Schultz AB, Quinn C. Demographics, Preventive Services Compliance and Healthcare Experiences of Lesbian, Gay, and Bisexual Employed Adults. *Journal of Occupational and Environmental Medicine*, 2021.
- ▶ Integrated Benefits Institute. *Data Strategies for Managing Health and Productivity: Lessons from Three Employers*. Oakland, CA: 2013.
- ▶ Metlife Mature Market Institute: The Metlife Caregiving Cost Study: Productivity Losses to U.S. Business. July 2006. <https://www.caregiving.org/wp-content/uploads/2020/05/Caregiver-Cost-Study.pdf>
- ▶ Parry T, & Jinnett K. *The Employer’s Role in using Research-based Healthcare Evidence, Part of the series Patient-Centered Outcomes Research (PCOR) Dissemination at Work: How Employers Use Evidence to Make Employee Health Investment Decisions*. PICORI: Washington, DC: 2018. Abstract: <https://www.liebertpub.com/doi/10.1089/pop.2011.0103>
- ▶ Parry T, & Sherman B. A Pragmatic Approach for Employers to Improve Measurement in Workforce Health and Productivity. *Population Health Management*. 2012;15(2).
- ▶ Sherman BW, & Lynch WD. Connecting the dots: Examining the link between workforce health with business performance. *Am J Manag Care*. 2014;20(2):115-120.
- ▶ Sherman B, Rehayem M, & Thompson M. *Rethinking Health & Wellbeing Strategies to Drive Organizational Performance and People-Centered Outcomes*. Washington, DC: National Alliance of Healthcare Purchaser Coalitions: 2020.
- ▶ Sherman B, & Parry T. Caveat Emptor: Employer Evaluation of Private Exchange Performance. *Population Health Management*. 2016;19(3).



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Driving Innovation, Health and Value