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Closing the last-mile gaps in preventive care access

Considerations for designing effective healthcare solutions

Introduction

The U.S. Centers for Medicare & Medicaid Services defines preventive care as routine screening for conditions that can shorten life. These screenings could include assessments for the risk of diabetes, hypertension, heart disease, sexually transmitted infections (STIs), mental health conditions, or cancers. Preventive care can also encompass prophylactic interventions such as medications and treatment (e.g., statins for high cholesterol, PrEP for HIV, or antivirals for COVID-19). Historically the efficacy of preventive care has relied on a consistent relationship between a patient and their healthcare provider and the ability to act on findings to disrupt the progression of a disease. In the modern era of health care, many have questioned whether the traditional preventive medicine model works well for the patients who need care the most.

Early treatment can save lives, which makes early detection of disease critical. Preventive care goes beyond the "general health check." Recent research shows little statistical association between a "check-up" and longer life expectancy. However, the research does support the contention that increased access to screening and testing does contribute to longer life expectancy[1]. This study disaggregated the data by income quartile and found that the association between preventive care and increased longevity was most protective among the highest-income individuals. Men in the lowest income quartile were the least likely to interact with the preventive care system. They experienced the most significant decline in life expectancy as a function of this disparity[2].

Screening and early cancer detection is an especially critical component of preventive care. For example, the latest research from the American Cancer Society estimates that the 5-year survival rate for breast cancer (non-triple negative and non-inflammatory types) is 99% when detected while the malignancy is still localized. Early detection correlates with a 92% and 98% 5-year survival rate for cervical and prostate cancers, respectively. Among all these cancers, the survival rate plummets to 50% or lower when the malignancy spreads to other areas of the body.

- **Despite the overwhelming amount of evidence supporting the efficacy of early detection and intervention, preventive care in the United States is woefully underutilized.**

The United States Preventive Services Task Force (USPSTF) establishes goals for preventive care uptake. Unfortunately, as of the publication of this white paper, Americans have fallen short on every measure of success. In 2015, research indicated that only 8.5% of a representative survey of adults over 35 received all recommended, high-priority preventive care screenings[3].

Three years later, the data was worse. In 2018, 6.2% of those surveyed received appropriate care[4]. Even with a relatively modest Healthy People 2030 goal of 11.5% compliance, the United States is failing to show progress.

The 2015 study also examined the uptake of each recommended screening. The range of compliance was quite wide. While 87.3% of respondents had a recommended blood pressure screening in the previous year, only 50.1% of men had a screening for prostate cancer. In addition, only 41% of those surveyed were screened by their primary care physicians for alcohol use disorder or depression.

Studies focused on the relationship between mental and physical health screenings support the variance in utilization by type of screening. A 2020 paper focusing on patients with multiple morbidities found that patients managing more than two chronic physical conditions were less likely to receive screening for mental health conditions[5]. Conversely, patients managing a mental health diagnosis such as depression or anxiety were less likely to receive the recommended physical health screenings.

While the benefits of early detection for an individual are apparent, the societal benefits of preventive care are also compelling. Preventive care is often no-cost or low-cost in standard health insurance plans to incentivize uptake. Conservative calculations of potential healthcare savings from clinical preventive services, such as screenings and testing, hover around seven billion dollars nationally[6]. The return on investment in prevention is highest for low-cost screenings such as those for substance use disorders and depression, as well as secondary preventive measures such as immunizations and prophylactic interventions[7]. In the United States, employers and labor unions are uniquely positioned to benefit from preventive care savings through improved health outcomes due to the proportion of healthcare costs employers shoulder. As of 2021, the Kaiser Family Foundation estimates that 49% of Americans get health insurance through their employers[8]. Their latest research estimates that US employers with over 100 insured employees cover roughly 80% of employee health insurance costs, averaging around $10,000 per employee. Researchers at Deloitte US found that 80% of healthcare dollars are spent on only 20% of the population. The 20% are primarily those with advanced chronic diseases that become more expensive to treat over time[9]. Therefore, it is in the best interest of employee benefits leaders to invest in preventative care programs that decrease the likelihood of disease progression.

With potential cost savings on the table, it is not surprising that US employers and labor unions have increased access to workplace health and wellness opportunities. According to the RAND Workplace Wellness Programs study of 2013, about half of surveyed US employers offered some variation of a supplementary workplace health benefit[10]. The programs often combined Health Risk Assessment (HRA) screenings and incentives for positive health behaviors such as smoking cessation or primary care visits. The evidence on the efficacy

of these current workplace wellness programs is mixed since better health at baseline may predict these benefits' uptake, and randomized studies are rare. However, a randomized trial in Indiana of 5,000 University employees found significant selection bias among employees who enrolled in a workplace wellness program[11]. Healthier individuals were much more likely to join the program than their less healthy counterparts. Once in the program, this selection bias persisted across the life of the intervention. Healthier employees were twice as likely to complete the HRA and three times as likely to attend a "wellness activity" such as a cooking class, yoga session, or financial counseling appointment. For 40 of the 42 health behavior and outcome measures, there was no significant difference between program participants and non-participants. However, there was a slight increase in participant likelihood of a primary care visit and a short-term increase in employee satisfaction.

Returning to the 2013 RAND research, which is national in scope, this more extensive study disaggregated components of workplace wellness programs to identify better which levers were most likely to improve access to preventive care services. Workplace programs can take many forms, with the majority of them incorporating screenings such as blood pressure (95%), cholesterol and blood glucose (80%), and BMI/obesity (69%). Very few (14%) incorporated any clinical screening for Cancer, and even fewer screened for depression. Most workplace programs analyzed in the study focused on "healthy lifestyle" interventions such as nutrition and exercise. Few employers collected accurate cost and outcome data to assess a return on investment adequately.

Participation in preventive care is distributed unequally. For example, employees working in labor-intensive jobs such as delivery or factory work, hourly workers, and those working night shifts were much less likely to receive preventive care than those working in other settings or traditional day shifts[12]. Furthermore, night shift workers are already at a heightened risk of chronic disease; this risk increases as the worker ages[13].

Investigating Low Uptake of Preventive Care

A singular challenge does not explain the low uptake of preventive care. Seeking preventive care may seem a rational medical choice on its face, but it is a complex set of decisions nested in a socio-ecological model of health[14]. Some motivating factors are deeply personal, while others are systemic; determinants of preventive care participation live at the individual, family, environmental, and policy levels. The challenges along the patient journey are friction points, leading to inefficiencies in the system.

1 Individual-Level Awareness and Acceptability of Preventive Care

The preventive care journey begins with an individual knowing which tests guidelines recommend, why they are essential, how the test will work, and what happens immediately following. A 2016 survey of US adults found that only 7.7% of respondents had ever heard of the USPSTF, and only one in three trusted a Government task force to make unbiased recommendations on screening guidelines. Nearly 40% of those same survey respondents believed the motivation behind clinical preventive guidelines was to ration care.

The COVID-19 pandemic exposed underlying mistrust of government interventions, such as vaccines. A recent global meta-analysis of vaccine hesitancy studies found a wide range of vaccine acceptability among adults. Studies found that the highest amount of resistance to vaccines exists among parents questioned about the Human Papillomavirus (HPV) vaccine for their children and among rural populations surveyed about COVID-19 vaccines[15].

Patients are not the only group of individual actors in the healthcare journey. Physician awareness and acceptability of preventive care guidelines are also crucial components of a functioning system. However, research on guidelines related to breast cancer screening, mental health screening, and sexual health all find significant variations in the proportion of physicians who know the clinical guidelines and choose to follow them[16]. The proportion of physicians who understand current guidelines related to marginalized communities--such as LGBTQ+ patients--is low. The proportion of patients receiving recommended screenings for their particular patient profile decreased when they did not feel comfortable disclosing their sexual orientation. For many patients, stigma and mistrust impede progress in preventive care uptake.

2 Individual-Level Accessibility and Affordability of Preventive Care

Once an individual decides to seek preventive care, accessibility challenges can impede uptake. Data shows that **a third of patients with a primary care provider have foregone care because of long wait times or confusing appointment booking systems**[17]. Increasingly, Americans are seeking medical care outside of doctor's offices. Over 50% of respondents aged 18-29 in a recent survey said they sought care at urgent care centers, retail clinics, concierge care practices, or virtual visit platforms instead of a traditional primary care office[18]. In this same study, 55% of respondents of all ages said they recently opted for a non-traditional method of care — rather than a primary care provider — because it was closer to home and more convenient.

Although preventive care for individuals with health insurance is often low-cost or no-cost to the patient, it is not entirely "free." Long wait times for appointments, transportation challenges, and missed work are all costs born by the individual[19]. These costs factor into the mental calculation of seeking care. In addition, it is not always the preventive care that stifles uptake--it is the possible costs to patients personally. In a 2018 national survey conducted by NORC, most people (44% vs. 38%) said they were more scared of the medical bills associated with the disease than the actual disease itself[20]. Even among respondents with insurance, 40% of adults reported avoiding medical care because of the cost of other basic needs, such as food and housing[21].

3 Community Availability of Preventive Care

A thriving preventive care system relies on a steady supply of primary care clinicians and non-clinician staff to ensure access. However, the American Medical Association estimates that in the next 12 years, demand for primary care will outpace the supply of primary care physicians[22]. Another study estimates a shortage of between 17,000 and 48,000 physicians--the projected increase in the number of other advanced clinicians, such as nurse practitioners or physician assistants, is likely unable to close the gap[23].

Preventive screenings do not always require advanced practitioners; qualified allied health professionals perform many tests. However, the supply of necessary support staff--such as laboratory and radiology technicians --is dwindling.

In an October 2022 survey, eighty-five percent of healthcare facilities reported experiencing at least moderate shortages of allied health professionals[24]. These shortages lead to longer wait times for appointments. Longer wait times are consistently associated in the literature with higher no-show rates for preventive care[25]. Staffing shortages also lead to more extended stays in the waiting room, which is predictive of poorer patient experience and reduced likelihood of future visits. **A full 30% of patients surveyed in 2018 reported leaving a waiting room before a medical appointment because they could not afford to wait any longer**[26]. Longer waiting room times are also strongly associated with poor patient perceptions of the care ultimately received.

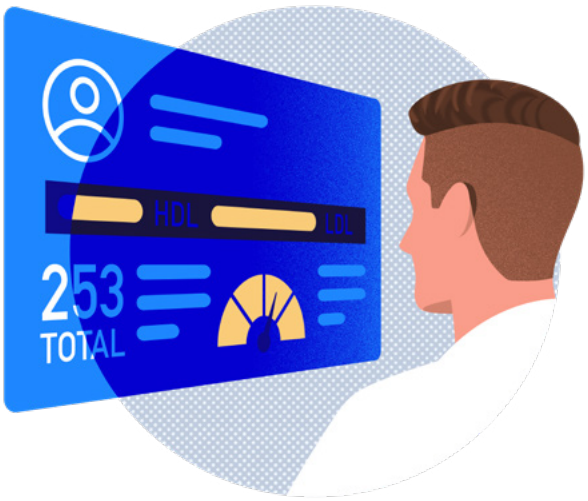
4 Systemic Support Systems for Follow-Through

Follow-up after preventive care screenings is a final potential friction point in the patient journey. The web of communication necessary to get test results in a patient's hand is complex, especially for tests that require laboratory infrastructure or radiologic interpretation. Unfortunately, the fractured nature of the process can result in a breakdown of this system; a 2012 meta-analysis supports this claim and compiled multiple studies showing follow-up failure rates for laboratory tests ranging from 1% to 63% of patients[27]. Adding to the friction is the compartmentalized approach to preventive care that most patients experience. Because the US system tends to practice medicine by disease category (oncology and endocrinology are two examples), preventive care that follows this approach introduces more opportunities for communication breakdowns.

Assuming test results make it back to the physician's office once the tests are complete, the next step is a conversation with the patient about the results and creating a care plan to manage conditions. The success of this step relies on a robust method to contact the patient, which becomes more complicated when patients experience housing instability, job loss, or insurance changes. For example, a large-scale study in New York City linking Medicaid and Eviction records found that eviction was associated with a 63% higher chance of insurance disenrollment and a significantly lower likelihood of fulfilling prescriptions or participating in future healthcare spending[28]. Patients needing a strong care plan may be the most likely to fall through the system's cracks.

Online patient portals present new challenges as well. Uploading lab results and patient records immediately to a patient portal may seem logical to ensure a closed communication loop, but this requires patient access to a computer and the internet. The COVID-19 pandemic exposed the severity of the digital divide in the US -- internet access is correlated with income. Data from 2020 estimates that 18% of households under 100% of the Federal Poverty Limit lack access to any form of internet access. In addition, 20% of lowest-income families can only access the internet via smartphones, which may provide additional barriers to accessing secure patient portals[29].

Further, lab results from preventive screenings are often presented in patient portals with little context, in language that is difficult for the average patient to understand. The National Institutes of Health (NIH) recommends that health professionals relay health-related information at a 6th or 7th-grade reading level[30]. However, recent analyses of online health information--which many patients may use when trying to self-interpret test results--showed that the vast majority of health information provided by credible sources is written at the average reading level of a High School Junior to a College Freshman[31].



Solving the Last-Mile Problem

The phrase "last-mile" problem has roots in telecommunications and transportation logistics. It referred historically to the challenge of getting an individual connected to a hub, be it a communications center where the last mile of wire was prohibitively expensive or a hub like a bus stop where the last mile to a rider's home could be challenging to navigate.

The last-mile problem of healthcare is similar. The challenges laid out in the previous section are all barriers to connecting an individual to the healthcare system and require all participants in the system (patient, provider, and payer) to make efficient and effective decisions.

Employers and labor unions looking to improve employee and member health status should seek answers to the last-mile problem when they choose health benefits that promote preventive care. Solutions to last-mile problems should focus on creating an accessible healthcare ecosystem for their employees; increasing preventive care uptake among employees; and ensuring appropriate, consistent communication throughout the entire care journey.

Creating True Accessibility

Bringing healthcare to where individuals do everyday life improves accessibility. The COVID-19 pandemic highlighted gaps in access to healthcare services and the damaging impact this has, particularly for underserved and hard-to-reach populations. Before the pandemic[32], telehealth was restricted to patients located in predefined locations, such as a hospital or clinic, for Medicare patients. Eligible telehealth Medicare patients needed to live in a rural area or a health professional shortage area, required a video visit, and an established relationship with the healthcare provider. Before 2020, insurance reimbursement policies restricted many healthcare settings from offering telehealth services across state lines. During the pandemic, all fifty states and DC passed licensure waivers that allowed patients to participate in telehealth visits with out-of-state clinicians. However, many waivers were set to expire in the Summer of 2022.

Evidence shows that access to telehealth visits increases demand for preventive services, but more than access to telehealth is needed to solve a last-mile problem. Community-based care, offered where individuals live, work, and learn, is a crucial component of a holistic preventive care system. Evidence supports the efficacy of in-person, out-of-office care for cancer screenings, blood pressure testing, and vaccinations.

Researchers also find that bundling on-site preventive services increases uptake and follow-through, especially among the highest-risk populations. By coupling interventions such as vaccines with screenings for potentially serious conditions or by screening for multiple conditions during a single patient visit, the likelihood of meeting preventive care guidelines improves dramatically[33]. Last-mile solutions should implement hybrid approaches, combining the appropriate mix of digital and in-person services.

Increasing Uptake

Last-mile employee benefit solutions should focus on ensuring that preventive care is not only accessible but acceptable. Awareness and acceptability are improved when individuals are guided through the preventive care journey by experienced navigators and have access to information in their native language. Employers and labor unions seeking to improve the preventive care experience for their employees and members should deploy partnerships that include a care navigation component and complete interpretation services. Care navigation is especially critical for patients who often feel excluded from traditional care settings, such as low-income, limited English, or LGBTQ+ patients, as well as patients of color[34]. Last-mile solutions should strive to be culturally concordant for the individuals they serve.

Stigma and fear can impede the uptake of preventive care. Overcoming this barrier requires empathetic, culturally relevant care[35]. According to the Veterans Affairs Administration, roughly six in ten men and five in ten women experience at least one major trauma that could make them hesitant to seek medical care[36]. These traumas could include experiencing interpersonal violence, being a victim of sexual assault, or witnessing combat situations. Certain aspects of traditional preventive care screenings can trigger a negative response in people living with trauma. These aspects may include being touched by a stranger, being in close proximity to a person of authority, or even being asked to fill out countless forms or share personal information.

Non-invasive methods of screening can help improve rates of preventive care uptake. Innovations in the self-collection of blood, saliva, and urine samples have accelerated in recent years. Multiple studies confirm the reliability and validity of these methods, offering a more comfortable alternative for some individuals. Often, these self-collection methods can serve as a "first-pass" screener for risk before a patient undergoes a more invasive procedure, such as a pelvic exam or colonoscopy.

Ensuring Appropriate, Consistent Communication

Finally, last-mile solutions must include reliable communication of results and tested logistical infrastructure. Employers and labor unions should pay special attention to how members gain access to their test results and the ease of interpretation. Given the prevalence of mobile-only households, solutions must also be navigable on smartphones or on a platform that includes options for audio-only communication. A robust last-mile solution must also include comprehensive follow-up planning, including access to counselors or other trained personnel who assist in correctly interpreting results.

The Future of Preventive Care

The global pandemic dramatically altered how individuals interact with the healthcare system. Care teams administered vaccines in shopping malls, parking lots, and office buildings. Telehealth has become ubiquitous and normalized. Racial inequities in healthcare access were revealed in a way that could no longer be ignored, and national divisions over trust in the medical community and Government are still shaping the political landscape.

Employers, labor unions, and funds occupy a unique position in the healthcare landscape. Business leaders recognize that more than merely providing access to health insurance is needed to solve a last-mile problem. Organizations across the country are innovating healthcare access via partnerships with Color and modeling what a human-centered employee healthcare experience looks like for their peers.

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If you are interested in learning more about Color's unique approach to employee preventive care, infectious disease management, and behavioral health, reach out to our team at learnmore@color.com or click here to learn more.

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