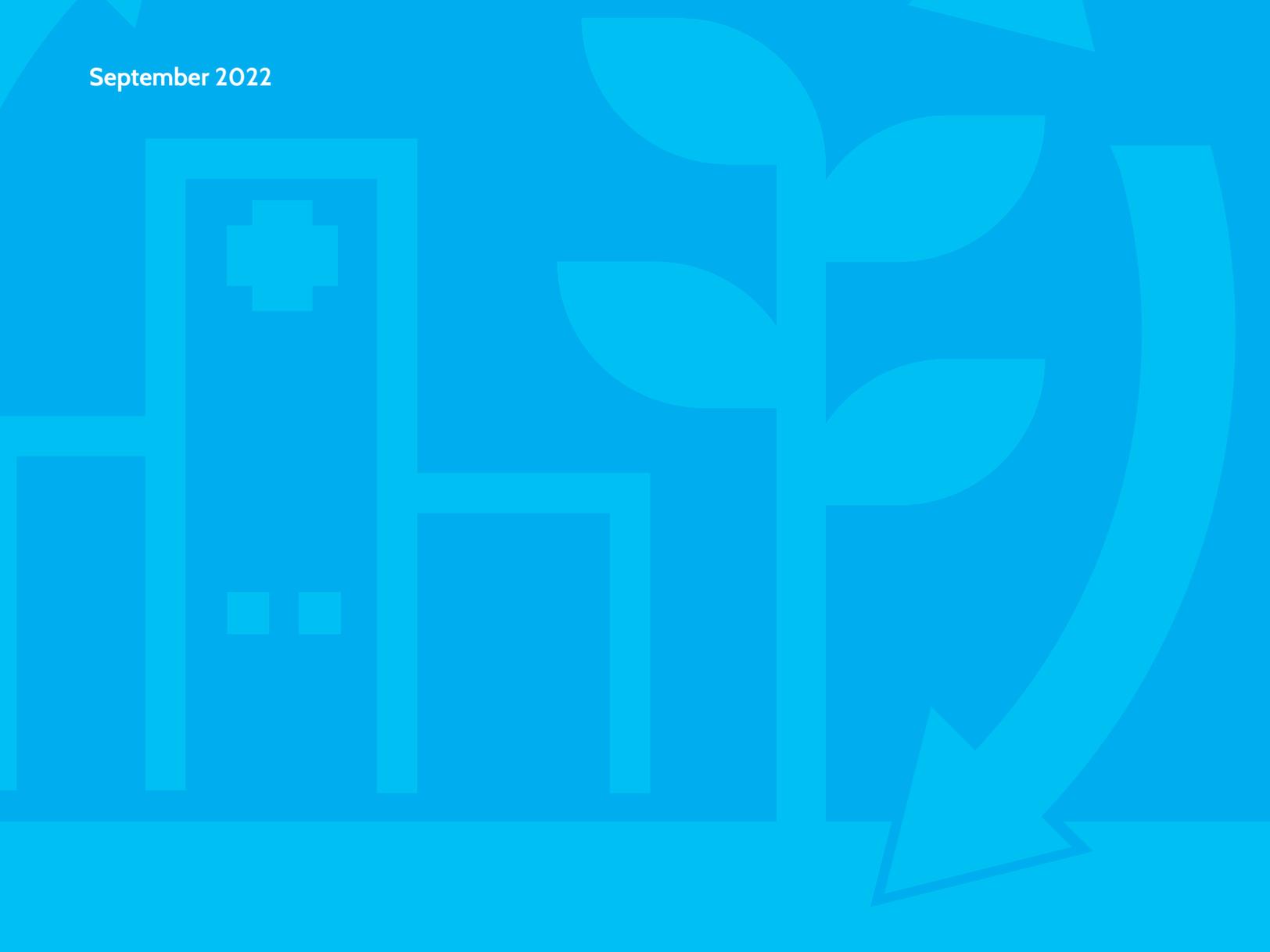




Advancing Climate Resilience and Mitigation at Essential Hospitals

September 2022







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We recognize and thank the Kresge Foundation for providing funding and technical assistance for this work. The foundation has been committed to this work for decades, focusing on “elevating the leadership, inclusion, and influence of people of color, people with low incomes, and equity-focused organizations in climate change decision-making at the local, state and federal levels.”

The views expressed here do not necessarily reflect the views of the Kresge Foundation.

ABOUT AMERICA’S ESSENTIAL HOSPITALS

America’s Essential Hospitals is the leading association and champion for hospitals dedicated to equitable, high-quality care for all, including those who face social and financial barriers to care. Since 1981, America’s Essential Hospitals has advanced policies and programs that promote health, health care access, and equity. We support our more than 300 members with advocacy, policy development, research, education, and leadership development. Communities depend on essential hospitals for care across the continuum, health care workforce training, research, public health and health equity, and other services. Essential hospitals innovate and adapt to lead all of health care toward better outcomes and value.

ABOUT THE ESSENTIAL HOSPITALS INSTITUTE

Essential Hospitals Institute is the research, education, dissemination, and leadership development arm of America’s Essential Hospitals. The Institute supports the nation’s essential hospitals as they provide high-quality, equitable, and affordable care to their communities. Working with members of America’s Essential Hospitals, we identify promising practices from the field, conduct research, disseminate innovative strategies, and help our members improve their organizational performance. We do all of this with an eye toward improving individual and population health, especially for vulnerable people.

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FOREWORD

America's Essential Hospitals is the nation's foremost champion for hospitals with a mission to care for underrepresented populations and to promote health equity. Our more than 300 members commit to excellence and advance solutions to serve their communities while operating with an average margin less than half that of other U.S. hospitals. Essential hospitals provide a disproportionate share of the nation's uncompensated care, and three-quarters of their patients are uninsured or covered by Medicaid or Medicare. These financial challenges, while significant, do not deter them—in fact, these limited resources drive essential hospitals to do more with less by creating innovative ways to improve the health of their communities.

Essential hospitals recognize that the health care sector plays a complicated role in the climate crisis: Health care systems negatively impact the environment because of high energy use, waste, and emissions, but they also provide vital care for people with climate-caused or -related conditions. Essential hospitals often serve communities disproportionately affected by climate change. Rising temperatures have been shown to impact low-income, previously redlined, or otherwise marginalized communities at significantly higher rates than higher-income, privileged communities. It also has been proved that people of color encounter substantially more pollution than white people.

With support from the Kresge Foundation, America's Essential Hospitals proudly shares this update on our members' progress toward mitigating climate change. Essential hospitals are the primary sources of routine care and lifesaving services for underrepresented people and underserved communities across the country. This document is a timely update to our 2019 report, *The State of Climate Resilience and Mitigation Efforts at Essential Hospitals*. It presents perspectives on member activities and how to enhance sustainability for their hospitals and health systems, as well as recommendations for future work.

Providing care for our members' communities means caring for the environments in which they are located. This report revisits essential hospitals' climate change mitigation perspectives and efforts and suggests future steps to support members and their communities, all with an eye toward the urgent need for action to protect our changing climate. Thank you for letting us share this story.

Bruce Siegel, MD, MPH
President and CEO
America's Essential Hospitals
September 2022



INTRODUCTION

Climate change is among our most urgent global health threats. The effects of climate change directly impact the health of people around the world in a variety of ways, including increased rates of heart disease, asthma and chronic obstructive pulmonary disease symptoms, dehydration and heat exhaustion due to warmer temperatures and worsening air quality,^{1,2} and reduced life expectancy for those who live in areas prone to extreme heat waves.³ In addition to these individual health threats, climate change also has a direct impact on the functionality and stability of the health care sector overall. As temperatures increase, hospitals will experience greater pressure on their resources to treat patients presenting with climate-caused or -related symptoms.

Climate change affects all people but takes its greatest toll on low-income, previously redlined, or otherwise marginalized communities. In the United States, previously redlined neighborhoods are an average of 5 degrees hotter during the summer than other areas of the same cities.⁴ Of counties that experience increased heat rates, two-thirds have high numbers of people without insurance, living in poverty, or identified as highly vulnerable.⁵ Black people experience a higher-than-average concentration of pollution exposure.⁶ The legacy of racist housing policies, among other things, has forced city-dwelling people of color into areas with minimal green space, causing them to suffer more from urban heat.⁷

The populations facing these disproportionate impacts from climate change are the same populations essential hospitals most often serve. Members of America's Essential Hospitals are vital anchor institutions profoundly connected to the well-being of the people and communities they serve; these communities often are our most disadvantaged and historically marginalized. In communities the association's members serve, 15.8 million people live below the poverty line, and nearly 11 million lack health insurance (Figure 1). Also in those communities, more than 370 thousand experience housing insecurity, and 7.5 million people have limited access to healthy food (Figure 2).⁸ Providing more than 27 percent of all charity care nationally and with people of color accounting for 54 percent of their discharges

in 2020 (Figure 3),⁹ essential hospitals serve those who suffer most from the effects of climate change.

While the health care sector provides care and treatment in response to the health impacts of climate change, it also contributes to the underlying causes of the crisis. Hospital buildings use 2.6 times more energy per square foot than office buildings.¹⁰ Health care also is responsible for an estimated 8.5 percent of carbon emissions nationally.¹¹ Decarbonization, sustainability, and resilience efforts improve lives and can help reduce climate-related costs.

As the climate crisis drives changes to the lived environment of these communities, essential hospitals are understanding their role as part of the problem and embracing their role as part of the solution. They have started mitigating their contribution to the climate crisis by developing goals and measuring and reducing waste, energy and water use, and toxins. Examples of these efforts are detailed in a 2019 report from Essential Hospitals Institute, *The State of Climate Resilience and Climate Mitigation Efforts at Essential Hospitals*.¹² The Institute, the research and education arm of America's Essential Hospitals, publishes this report as an update to that 2019 document.

That earlier report and this publication stem from an Institute project, started in 2018 and supported by the Kresge Foundation, to raise awareness of hospitals' roles in combating climate change. The project also

Figure 1: Economic Needs in Essential Communities

Members of America's Essential Hospitals, 2020



15.8 MILLION

PEOPLE IN OUR COMMUNITIES LIVE BELOW THE POVERTY LINE



10.8 MILLION

PEOPLE IN OUR COMMUNITIES HAVE NO HEALTH INSURANCE

Source: U.S. Census Bureau. *Poverty Status in the Past 12 Months, 2016-2020 American Community Survey 5-year Estimates, 2021.*

U.S. Census Bureau. *Selected Characteristics of the Uninsured in the United States, 2016-2020 American Community Survey 5-year Estimates, 2021; as presented in Essential Data 2022: Our Hospitals, Our Patients, essentialdata.info.*

A community is defined using data from the 2018 CMS Hospital Service Area File as ZIP codes in which approximately 80 percent of a hospital's Medicare cases reside.

Figure 2: Social Needs in Essential Communities

Members of America's Essential Hospitals, 2020



370,000

PEOPLE ARE EXPERIENCING HOMELESSNESS IN OUR COMMUNITIES



7.5 MILLION

PEOPLE SERVED BY ESSENTIAL HOSPITALS HAVE LIMITED ACCESS TO HEALTHY FOOD

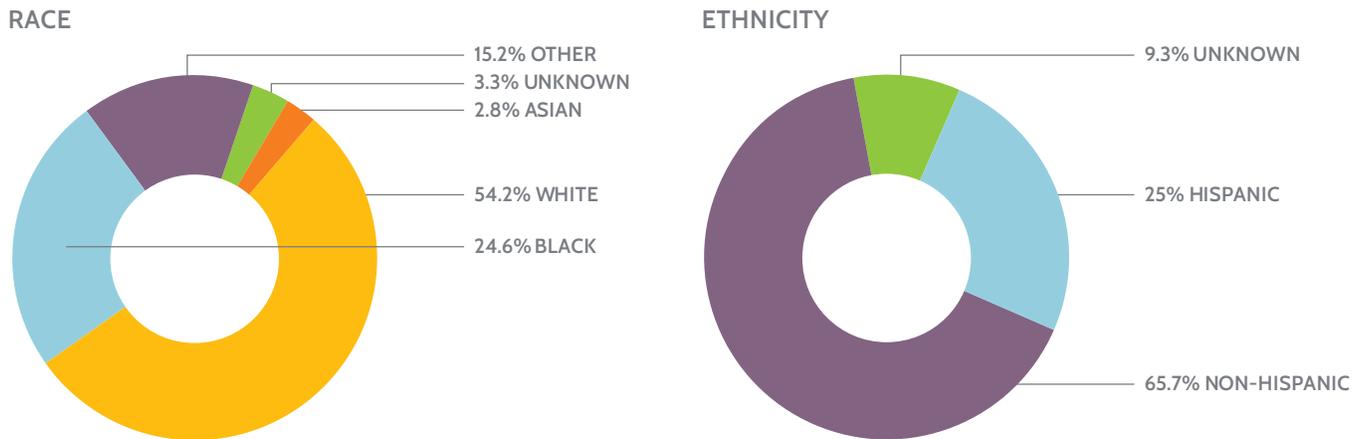
Source: U.S. Department of Housing and Urban Development. *2020 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S. 2021.* <https://www.huduser.gov/portal/datasets/ahar/2020-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html>. Accessed July 3, 2022.

U.S. Department of Agriculture. *Food Access Research Atlas Data Download 2019, 2021.* <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>. Accessed July 25, 2022; as presented in *Essential Data 2022: Our Hospitals, Our Patients, essentialdata.info.*

Limited access to healthy food was defined as low-income individuals who live more than one mile from a supermarket in urban areas and more than 10 miles in rural areas.

Figure 3: Inpatient Discharges by Race and Ethnicity

Members of America’s Essential Hospitals, 2020



Note: Numbers might not add up to 100 percent due to rounding

Source: America’s Essential Hospitals. 2020 America’s Essential Hospitals Characteristics Survey. 2022; as presented in Essential Data 2022: Our Hospitals, Our Patients, essentialdata.info.

has included Institute-led convenings on climate resiliency at the 2018 and 2022 annual conferences of America’s Essential Hospitals. In the project’s second stage, the Kresge Foundation has helped the Institute provide grant funding to three hospital members of America’s Essential Hospitals to implement operational interventions that lower their rate of carbon emissions. The project’s grantees are St. Luke’s Health System, in Boise, Idaho, University of Arkansas for Medical Sciences (UAMS), in Little Rock, Arkansas, and the University of California San Francisco (UCSF) Medical Center, in San Francisco.

Sources of information for this report include interviews with each of the three grantees and their reports; perspectives from executive leaders during the association’s 2022 annual conference (in particular, audience engagement during a climate luncheon at the event); interactions with member hospitals at Health Care Without Harm’s and Practice Greenhealth’s annual CleanMed conference; a moderated session, led by America’s Essential Hospitals President and CEO Bruce Siegel, MD, MPH, at the American College for Healthcare Executives annual congress on sustainability; and information gathered from online media and

publications featuring member sustainability and climate resilience activities (see Appendix I for a full description of sources).

REVISITING THE FIVE KEY RECOMMENDATIONS

This report revisits and updates these five key recommendations for policymakers and funders from the 2019 report on climate resilience at essential hospitals:

- Educate leadership and governance.
- Set goals for sustainability and resilience practices.
- Invest in climate resilience and sustainability.
- Identify practices with immediate return on investment.
- Promote coalitions and partnerships.

In the sections that follow, we describe what we have learned since the 2019 report and new information regarding each recommendation, and we conclude with updated recommendations as a road map for future climate resiliency and mitigation activities.

The 2019 report, *The State of Climate Resilience and Climate Mitigation Efforts at Essential Hospitals*,¹³ recommended targeting hospital leadership for raising awareness of the need to build climate resiliency and the link between climate and health. Since then, activities and discussions with members have indicated more nuanced needs related to leadership education, including for targeted resources, low-cost options, and clearly communicated links between climate change mitigation and public health.

Hospital leaders and staff expressed a need for targeted guidance on tools, approaches, and resources to begin their journey toward mitigating climate change.

Often, the problem is not that hospital leaders do not understand the link between health and climate. Rather, they understand the link but need more guidance and tools, tailored to their available resources, to begin the journey toward resiliency and mitigating climate change. One member summarized the need this way: “I don’t know what questions to ask or where to start.”

A suitable tool kit would recognize resource disparities, with some tools for hospitals with substantial resources and others for hospitals with medium or low levels of resources. Tools specifically requested included a readiness assessment and tools to impact the supply chain, which accounts for more than 80 percent of health care’s impact on climate change.¹⁴ Many members indicated a substantial need for even the most basic tools and guidance. For example, one participant was unaware the anesthetic gas desflurane can have a substantial negative environmental impact.

The perception that improving sustainability carries a high cost suggests a need to educate hospital leaders about low-cost options for reducing emissions and waste.

Multiple hospital leaders reported the perception that to combat the climate crisis, hospitals must fund large and prohibitively expensive projects, such as building entirely new facilities. At the same time, members were unclear about what financially feasible actions they could

take to improve sustainability at their organizations. As one leader noted, “It makes sense to build a LEED-certified building, but the immediate funding isn’t there.” Another member noted that the cost of updating an aging hospital can be a multimillion-dollar proposition, making sustainability upgrades financially untenable. Given their concerns about the potentially high cost of reducing waste and emissions, member hospital leaders expressed a need for tools and resources that do not require substantial investments.

There is an ongoing need to emphasize how climate change affects historically and structurally marginalized populations—the same populations essential hospitals serve.

Notably, leaders said highlighting the public health angle of climate change and its disparate impacts on people of color and other underrepresented groups would help other leaders understand the importance of making changes. Marginalized populations, often already living with poor air quality and/or polluted water, will increasingly suffer the ill effects of climate change and be less resilient to its challenges. As noted previously, the hottest urban areas tend to be in low-income communities and, often, in communities of color. Essential hospitals serve such communities, which have higher rates of poverty, significant racial and ethnic diversity, and many individuals with complex clinical needs.

Yet, even with this clear link between climate change and essential hospitals’ communities, one grantee noted a need to carefully frame discussions about the environment and sustainability to win leadership buy-



The University of California San Francisco Medical Center team worked to reduce anesthesia gas emissions using a clinical decision support tool in its operating rooms.

in. “‘Sustainability’ at this hospital means finances, so we couldn’t use that word,” the grantee said. “‘Environmental’ applies to waste haulers. So, we put together ‘environmental sustainability’ because no one had used it before. ‘Climate’ is a tricky term, so

we stayed away from this political word.” Thus, using unambiguous and unbiased language to help hospital leaders understand the link between their organization’s mission and mitigating climate change will be critical to prioritizing climate efforts.

BACKGROUND

Greening the Operating Room: University of California San Francisco Medical Center (San Francisco, California)

The University of California San Francisco (UCSF) Medical Center used its grant funding to track energy usage at its hospital, which revealed an opportunity to shift clinical practices, specifically in the operating room, to increase sustainability. UCSF has implemented a clinical decision support (CDS) tool within the Epic Anesthesia Information Management System to alert providers when fresh gas flow (FGF) is high during maintenance anesthesia to encourage adoption of low FGF. This CDS tool can be integrated into any hospital’s Epic electronic health records system, and UCSF is developing a sustainable practice tool kit to help other hospitals do that.



In a second aspect of its grant work, UCSF measured and delineated scope 2 emissions from operating rooms at its Mission Bay location and created an “energy map” of the sources of emission, with a focus on heating, ventilating, and air conditioning (HVAC); lighting; and surgical appliances. It will use project energy savings to engage stakeholders to create a facility-based scheme for HVAC settings that is feasible, energy-efficient, and effective.



Set Goals for SUSTAINABILITY AND RESILIENCE PRACTICES

Increased goal-setting in climate resilience and sustainability has been a growing trend in recent years – from government agencies to individual hospitals and health systems to local community groups and coalitions. But setting goals, especially for unfunded mandates, can challenge an essential hospital. Grantees suggest starting with small, specific goals for aspects of a hospital’s operation for which ample data exists and leveraging the experience of peers and collaboration within an organization.

Government calls to action can motivate leaders but also prompt concerns about unfunded mandates to reduce greenhouse gases—and requests for financial support.

Some essential hospitals signed the U.S. Department of Health and Human Services (HHS) Health Care Sector Climate Pledge,¹⁵ and many others are at various stages of their respective journeys to consider their effect on climate. These national-level goals prompted interest and outreach among many association members. In turn, America’s Essential Hospitals worked with staff from the HHS Office of Climate Change and Health Equity to develop a webinar detailing the climate pledge and expectations for organizations that commit to it. Some hospital leaders reported being motivated by the national call for an improved carbon footprint for the health care sector. But many expressed concern about the idea of prescriptive steps to answer that call without financial support from the federal government. As one leader lamented, “At one time, the government paid for building hospitals.”

Goals help to define organizational and departmental approaches to sustainability, but developing goals is daunting.

Some essential hospital leaders have developed organization-wide goals to improve sustainability and reduce emissions. But more commonly, leaders and staff conveyed being unclear about where to begin. One grantee noted that having a clear set of goals and approach at the leadership level can lead to an enhanced systemwide focus and reduced emissions. For example, UCSF Medical Center falls under its parent university’s

pledge to achieve carbon neutrality by 2025, a goal the university established in 2013.¹⁶ Staff of UCSF Medical Center cited this early, visible, high-aiming commitment as key to attaining status as a national leader in this space.

Frequently, staff and leaders alike who expressed interest in sustainability and climate change mitigation work report feeling overwhelmed by and unclear about defining goals. Like the need for a practical guide to sustainability actions, leaders seek guidance on developing specific and winnable goals. One grantee recommended a “top-down and bottom-up” approach to the daunting task of developing goals, meaning the best efforts are supported by energy from staff at all levels and from all perspectives. This grantee recommended starting with a known concern and developing a goal for that, because meeting a specific, achievable goal will lay the groundwork for future, larger goals.

Data can be used to measure levels of waste and progress toward goals.

Two grantees who conducted a waste audit explained that understanding the status of the element they hoped to improve was crucial in setting goals for it. “That’s the beauty of an audit: You can actually confirm what’s actually being done. So, there’s been some clarity driven into the organization,” one grantee said.

Waste audits are just one example of data collection as a means of level-setting and clearing a path to greater sustainability. One member, while serving on an expert panel, explained that data collection is key to establishing strong goals in sustainability in medicine.

“That’s the beauty of an audit: You can actually confirm what’s actually being done. So, there’s been some clarity driven into the organization.”

The data serve not only as a progress tracker but also can support a continuing commitment to sustainability.

For hospitals beginning their journey toward improved sustainability, develop reachable goals that, when met, are broadcast widely to support future goals.

Based on media accounts and reviews of member activities, we found many essential hospitals have set goals in recent years to reduce their carbon footprint through changes to the supply chain, physical plant, and waste management. This growing enthusiasm for improving sustainability in the health care sector is encouraging, and these examples demonstrate the value of clear goals and developing actionable strategies to meet them.

All three grantees in our project’s most recent phase presented intervention plans that suggested that one way to face the challenge of goal-setting head-on is to start small and specific. Choosing a discrete aspect of a hospital’s operation with sufficient data on its emissions impact provides an opportunity for a focal point to win

support from leadership and build out a broader strategy to reach a goal for it.

In addition to starting small and building out, grantees emphasized the benefits of sharing information widely and cultivating exchanges with peers to better inform sustainability work. “Do not reinvent the wheel,” one grantee’s representative said. “Learn from other organizations as a starting point.” When individuals and organizations collaborate as they develop goals, they pave the way for greater awareness of the capability of hospitals to contribute to climate mitigation.



An internal waste audit saved \$75,000 in contractor costs and helped staff divert 40 percent of waste at St. Luke’s Health System, in Boise, Idaho.

BACKGROUND

Internal Waste Auditing: St. Luke’s Health System (Boise, Idaho)

St. Luke’s Health System conducted a waste audit to better understand what contributes to its emissions and identify opportunities to adjust clinical practices to increase sustainability and decrease waste output. The waste audit allowed St. Luke’s to establish areas of focus to discuss with other departments and generate ideas for additional sustainability projects.

St. Luke’s conducted its waste audit internally rather than hiring consultants, an approach that provided numerous benefits, including engaging hospital staff in managing the audit process. As the health system team conducted its waste audit, it held systemwide meetings to share lessons and further engage staff in learning about waste outcomes. This, in turn, increased staff involvement and pride in their ability to reduce waste and better their environment. Also, by conducting the waste audit internally, St. Luke’s was able to divert nearly 40 percent of its waste and save \$75,000 in audit costs. The health system is developing a tool kit to share its experience with other hospitals and help them take similar actions to save money and foster employee pride.





Invest in CLIMATE RESILIENCE AND SUSTAINABILITY

Essential hospitals operate with margins substantially smaller than those of other hospitals.¹⁷ For hospital leaders, this can create an insurmountable barrier to investments in operational changes to increase sustainability. But discussions with members and reflections by grantees throughout their interventions have shown that initial investments can yield significant improvements in climate resilience and sustainability – and cost savings. At the same time, members sought institutional support while recognizing the substantial resource limitations hospitals currently are experiencing.

Reasonable initial investments often can lead to meaningful returns, new investments in sustainability endeavors, and enhanced visibility for sustainability work.

As noted earlier, some hospital leaders and staff perceive that reducing energy, waste, and greenhouse gas emissions is prohibitively expensive, especially when their organizations already are struggling financially. Yet, member actions have proved that beginning with reasonable, achievable targets can set the stage for future, broader actions.

For example, the University of Vermont’s main campus, in Burlington, saved \$431,083, including a total operating room savings of \$175,028, through participation in a medical device reprocessing program.¹⁸ Another member, Stony Brook Medicine, in Stony Brook, New York, adjusted its recycling program and began to use recycled and properly fitted paper towels to replace previously ordered paper towels that had been too small for the dispenser and, therefore, fell out, unused, more frequently. Once the issue was identified and the paper towels were replaced, the change yielded an annual savings of \$46,000.¹⁹

Through the Kresge Foundation’s support, the Institute awarded each of the three grantees up to \$75,000 to implement a project within six months aimed at reducing waste, energy use, and/or greenhouse gases. While all grantees began their journey earlier and received some internal support, these investments drove visibility and support for future work. The projects, including waste audits, software changes, changes in clinical practices, and mechanical adjustments, placed limited

“You can start this work at the grassroots level, but you will get much further with the support of the C-suite.”

demands on labor, resources, and time. Despite this modest approach, grantees still yielded positive returns in their sustainability levels and cost savings. For example, UAMS already has realized savings in elevator maintenance and labor costs due to its sustainability work. Grantees St. Luke’s Health System and UAMS said the visibility the grant created among leadership and other funders allowed them to elevate the work and generate additional funding. For example, UAMS grantees said visibility with leadership led to additional internal funding to examine greenhouse gas emissions.

St. Luke’s Health System grantees analyzed whether they should conduct an audit themselves or use a contractor. By conducting the audit themselves, they saved \$75,000 in contractor costs and an additional 25 percent of costs through waste-reducing changes guided by their audit. The internal audit also led to increased engagement and interest among different departments involved. Their audit toolkit can be used in the future in other departments and in other hospitals to identify and reduce waste and costs.

Many members cited the need for institutional support while recognizing the substantial resource limitations hospitals currently are experiencing.

“Resources are very, very tough right now for any hospital, particularly an essential hospital, just based on health care. We continue to struggle mightily; the nursing market nationally right now is just causing tons of heartburn”

As noted earlier, hospital leaders cited the need for direct support from the federal government to offset the substantial projected costs of reducing hospital greenhouse emissions. But member representatives—typically staff at essential hospitals—also pointed to a need for institutional support in resources and staffing to perform sustainability work. When sustainability is added to an employee’s existing and unrelated responsibilities rather than managed by staff dedicated to the task, it can take a back seat to other work.

Many hospital members voiced a need for leadership to appoint appropriate staff to designated climate roles because they cannot do this work in addition to their regular duties. One grantee stated, “You can start this work at the grassroots level, but you will get much further with the support of the C-suite.” One grantee noted that before her institution created a dedicated position for this work, sustainability activities took up to 60 percent of her time but were not part of her role. Two grantees who have formal roles reported being unable to carry out additional activities because of staff shortages, with one stating, “Resources are very, very tough right now for any hospital, particularly an essential hospital, just based on health care. We continue to struggle mightily; the nursing market nationally right now is just causing tons of heartburn.”

BACKGROUND

Strategic Elevator Energy Monitoring and Usage: University of Arkansas for Medical Sciences (Little Rock, Arkansas)

In its quest for energy savings, the University of Arkansas for Medical Sciences (UAMS) came to understand that not all its systems operate on a 24/7 schedule. For example, some elevators saw little use for many hours of the day but still used lighting and cooling. So, with the grant support of the project described in this report, UAMS audited its elevator energy use and calculated the potential return on investment from configuring lighting to turn on only when an elevator is in use.



UAMS retrofitted 30 elevators with sensors to trigger lighting while in use and found, during this work, that this technology already existed in nine elevators but had not been activated. The UAMS team has tracked the energy and cost savings from these changes as a reportable example of the benefits of up-front investing in sustainability and climate resilience. By conducting the audit, making small changes to reduce energy, and tracking energy use, UAMS achieved savings it can apply toward new steps to reduce energy, waste, and emissions.



Identify Practices with IMMEDIATE RETURN ON INVESTMENT

Essential hospitals operate with margins a fraction of their peers, and the financial pressure this creates has grown worse as COVID-19 causes workforce shortages and high labor costs. So, in this environment, essential hospitals must consider return on investment (ROI) with every decision they make. Association members emphasized this, stating that a clear ROI was necessary to confidently engage in sustainability work. Members emphasized starting with investments in small, winnable changes and reframing ROI to include returns in financial, environmental, and staff engagement gains.

Begin with small, achievable actions that show progress, and broadcast the win widely.

Members expressed how starting sustainability work can be daunting for hospital leadership and staff when the ROI is not immediately clear. Thus, as noted earlier, many leaders perceive the cost of creating a sustainable hospital as prohibitively expensive. Two grantees noted that with their small project, they were able to gain more visibility with leadership. As noted earlier, St. Luke's Health System saved \$75,000 in contractor costs by conducting an audit internally and, within six months, using its findings to reduce waste and lower costs by 25 percent. The UAMS project to optimize elevator lighting led the hospital to realize some elevators had technology for automatic optimization but that the function had not been activated. This quick win also made them realize other technology likely could be optimized to improve sustainability.

Reframe ROI to include financial, environmental, and staff engagement returns.

There was a clear, common sentiment among members: Evidence for financial returns is necessary for investment. But, as one grantee said, hospital leadership also should consider more than the financial impact of climate resilience and sustainability work. "We must begin looking at sustainability from a value perspective. This work will help from an environmental perspective, financial perspective, and social perspective."

"We must begin looking at sustainability from a value perspective. This work will help from an environmental perspective, financial perspective, and social perspective"

All three grantees noted that the opportunity to educate clinical staff about the benefits of sustainable interventions can create momentum for the work and interest in it among individual team members. Two grantees said affording staff an opportunity to participate in audits created increased awareness to improve operational sustainability and gave staff a social return. Staff interest in and dedication to hospitals' sustainability is crucial, as much of this work starts with volunteer staff who have taken a personal interest in climate resilience and sustainability. This engagement by staff beyond the grant-supported team led to more visibility for the project among leadership, which led to recognition from the greater community and created momentum for the organization's sustainability and climate resilience efforts overall—and opportunities for growth, both in sustainability and funding.



Our 2019 climate report cited the promotion of coalitions and partnerships as a key recommendation, noting that many hospitals lacked sustainability expertise internally and collaborated with other entities to obtain promising practices, identify measurement tools, and, sometimes, to purchase renewable resources. When evaluating the experiences of our three grantees, we noticed that the need for collaboration was just as necessary but a challenge. In addition, since our 2019 publication, internal partnerships and collaborations are included, as they were identified as critical to the work of the grantees.

Engaging with the community could enhance the visibility of health care's efforts and encourage more active participation.

One grantee worked with other local organizations and city leaders to develop a four-part educational series to educate and involve more providers and community members in enhancing sustainability. The series addressed climate change, its impact on the community and patient care, decarbonizing health care, and working with the community and leading organizations to mitigate the effects of climate change.²⁰

Peer networking was identified as a valuable resource to enhance knowledge and increase motivation.

Beyond partnering with contractors and utility organizations, grantees frequently mentioned the value of peer networking to enhance knowledge and sustain, if not increase, motivation. Specifically, more than one grantee mentioned the benefits of participating in member organizations, such as Practice Greenhealth, America's Essential Hospitals, and the Association of Healthcare Executives, to connect with other hospitals with shared goals. Members were able to connect with other organizations through attendance at annual conferences to discuss their progress and learn from others about additional actions to consider.

While challenging, collaboration among different departments and with staff outside the sustainability team improved interest, adoption, and, ultimately, outcomes.

The importance of collaboration between departments and offices was a consistent theme as grantees reflected on their implementation processes. Grantees emphasized the importance of consulting and engaging every person with an interest in sustainability to get traction in reducing waste, energy, and emissions. Grantees also emphasized that collaboration would allow for a better understanding of what the organization already is doing regarding sustainability and climate resiliency.

One grantee spoke of the waste audits serving as an opportunity to connect more directly with clinical staff, who were experiencing the buildup of medical waste firsthand. This connection between waste management and clinical operations provided a bridge for departments to come together over the goal-setting process, leading to better decisions and outcomes. To gather those perspectives, the grantee hosted casual events with a diverse group of employees.

A physician grantee lead highlighted how, via a clinician-led activity, they could connect clinical staff with the interests and efforts of the operations staff in sustainability initiatives, to benefit the implementation process. Direct interaction with medical waste gives clinical staff insight into how operational adjustments can meet the needs of staff as they provide patient care. It can also lead staff to become more deeply invested in seeing that waste is reduced.

“We’ve run into a snag with recycling—we have talked to two different hospitals, and both hospitals have a strong desire to do it, but they do not have the staffing to do it.”

The ongoing workforce crisis in the health care sector has a major impact on collaborative efforts.

With an estimated 35 to 54 percent of nurses and physicians and 45 to 60 percent of medical students and residents reporting symptoms of burnout even before the COVID-19 pandemic, it is safe to say health care professionals are feeling the pressure of high demand on their resources and services, as it is. Grantees with hospital operations-focused projects reported that the extremely limited capacity of clinical staff strained their ability to connect with them in their work, as they were unable to provide compensation for their collaboration. One could not begin other, basic, sustainability projects because of staffing, “We’ve run into a snag with recycling—we have talked to two different hospitals, and both hospitals have a strong desire to do it, but they do not have the staffing to do it.”



As part of their sustainability work, staff at St. Luke’s Health System identified reusable waste.



CONCLUSION

The opportunity to fund members of America’s Essential Hospitals to explore how additional financial support can increase the potential for sustainability initiatives opened a door to understanding the benefits of initial investments in sustainability work.

While coexisting challenges, such as workforce shortages and limited operating margins, can hinder initial investments by essential hospitals in sustainability, our grantee organizations proved a little can go a long way. That said, essential hospitals cannot do the work of climate resilience and sustainability alone—they need

the support of larger institutions and the greater community. After compiling learnings from our Kresge Foundation grantees and other member hospitals, we have identified these recommendations for policymakers and funders interested in supporting essential hospitals in this work:

1

EDUCATE HOSPITAL LEADERSHIP AND GOVERNANCE. Hospital leaders and staff new to sustainability efforts need tailored and nuanced education. While hospitals have heard the call to reduce emissions, some leaders suggested emphasizing the connection between climate change and their mission of serving communities with high rates of poverty, systemic and structural marginalization, and many people with complex clinical needs. Create a tool kit for organizations new to this journey with practical guidance, such as where to start, options for actions, what to measure, and how to measure. To correct the perception that reducing emissions is prohibitively expensive, the tool kit should share low-cost options to reduce emissions and waste.

2

SET SPECIFIC, ACHIEVABLE GOALS FOR SUSTAINABILITY AND RESILIENCE PRACTICES. To provide direction to staff in hospitals new to sustainability efforts and those concerned about meeting the goals, promote development of achievable goals through peer networking among hospital leadership. Supporting the development of small, specific, and winnable goals will enable hospitals to build on early results.

3

INVEST IN CLIMATE RESILIENCE AND SUSTAINABILITY. As essential hospitals face slim operating margins and other financial pressures, investments in climate resilience and sustainability might seem out of reach. Providing examples of investments that show meaningful cost saving and facilitating peer networking among leaders will help them identify potential investments for their organizations and how they can use those cost savings for future investments.

4

IDENTIFY PRACTICES WITH IMMEDIATE RETURN ON INVESTMENT. Begin with small, achievable actions that show progress. Once progress is achieved, broadcast this win widely to build momentum for future work. Also, rather than focusing solely on financial returns, reframe ROI to include environmental and staff engagement, as well as financial, returns.

5

PROMOTE COALITIONS AND PARTNERSHIPS. Sharing knowledge and learnings developed from sustainability efforts helps to foster connections within hospitals and externally. Internally, collaboration across departments will build the necessary strength and cohesion to identify and achieve appropriate goals. Among essential hospitals, identify and support networking opportunities to promote sharing of best practices and enhance motivation. Leverage the experience gained from working with utility companies and local governments to promote partnering with community organizations to increase engagement in hospital and community-wide efforts, both internally and with the community.

Appendix I: INFORMATION SOURCES



This report updates recommendations in the Institute's 2019 report, *The State of Climate Resilience and Climate Mitigation Efforts at Essential Hospitals*,²² and includes member input from these sources in 2022:

- **Interviews and reports from each of the three grantees.** Through funding from the Kresge Foundation, the Institute supported efforts by three member hospitals to mitigate their impact on climate change. The grantees received opportunities for technical assistance and to present their interventions and results to other association members at a climate luncheon at the association's annual conference, VITAL2022, in June 2022. Institute staff interviewed representatives from each of the grantee member hospitals. These interviews focused on the grantee's organizational background and prior experience in climate resilience; initial approach to developing its intervention; examples and priorities set by the grantee's organizational leadership; its growth throughout the project period; challenges in implementation; and internal and external collaboration efforts.
- **Grantee presentations and audience engagement at the June 2022 climate luncheon, also supported by the Kresge Foundation.** This luncheon included 47 participants from member hospitals.
- **Association and Institute interactions with member hospitals during this project.** Beyond the interactions at the annual conference, this included other meetings with members.
- **Presentations and interpersonal exchanges during conferences.** This included the 2022 CleanMed conference, hosted by Health Care Without Harm and Practice Greenhealth; and a moderated session, led by America's Essential Hospitals President and CEO Bruce Siegel, MD, MPH, at the American College for Healthcare Executives annual congress on sustainability.

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